NYSERDA 2022 OFFSHORE WIND SOLICITATION ORECRFP22-1

Chapter 2 Appendices

Public version

Community Offshore Wind LLC

Lease OCS-A 0539

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2-1 National Grid Annual Report 2021

nationalgrid

Annual Report and Accounts 2020/21

Bring Energy to Life

PRINCIPAL PARTNER
UN CLIMATE CHANGE CONFERENCE UK 2021
IN PARTNERSHIP WITH ITALY

Annual Report
and Accounts 2020/21

Interactive PDF

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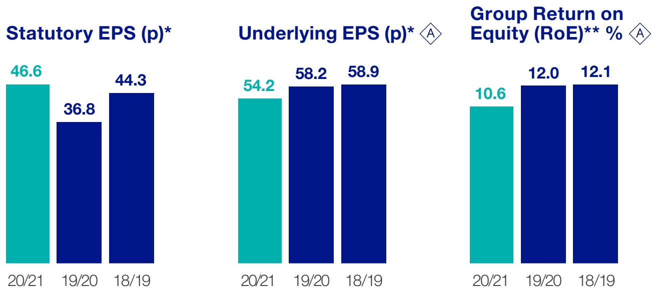
Bring Energy to Life

National Grid operates at the heart of the energy system, connecting millions of people safely, reliably and efficiently to the energy they use every day.

Highlights

We have continued to make strategic and operational progress while maintaining excellent safety levels across all our networks. We have retained a focus on our environmental sustainability record and employee engagement.

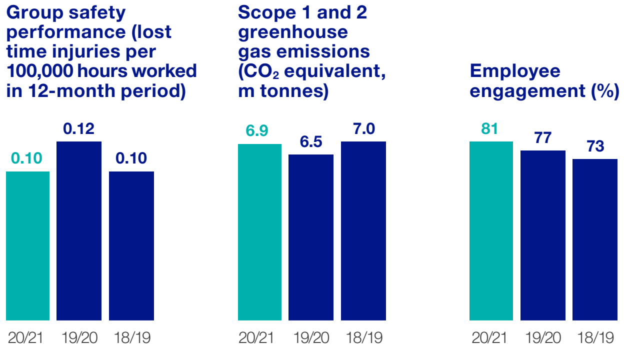
Group financial highlights



* From continuing operations.

** Group RoE in 2018/19 and 2019/20 has been recalculated to reflect the revision to decrease the comparative goodwill balances (see note 1F on page 137 for details).

Group operational highlights



Further reading

Online report
The PDF of our Annual Report and Accounts 2020/21 includes a full search facility. You can find the document by visiting the 'About us' section at nationalgrid.com/about-us/annual-report-and-accounts.

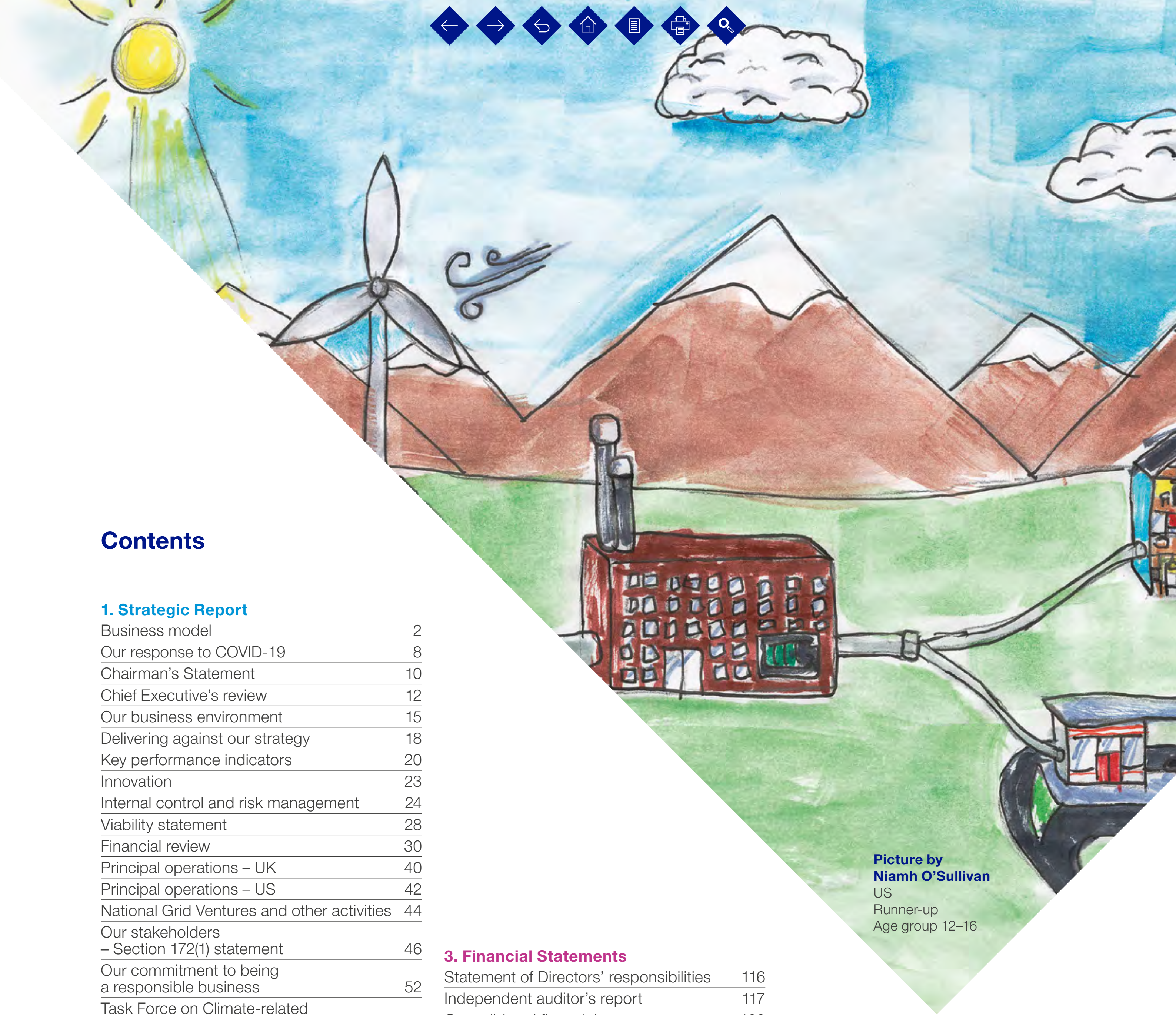
QR codes
Throughout the report there are QR codes that you can scan to easily view content online. Simply open your camera app on your smartphone device to scan the code.

More detail
Throughout this report you can find links to further detail within this document.

Responsible business
National Grid has published its first annual Responsible Business Report (RBR). The RBR reports progress on the responsible business agenda, including against the commitments made in our Responsible Business Charter (RBC). You can find both documents by visiting nationalgrid.com/responsibility.

Front cover
We're excited to be a principal partner for COP26. COP stands for Conference of the Parties. We're getting behind the conference because it's a unique chance to call for a more ambitious action towards a clean energy future.

For more information
nationalgrid.com/responsibility/environment/cop26



Picture by
Niamh O'Sullivan
US
Runner-up
Age group 12–16

Contents

Reporting currency

Our financial results are reported in sterling. We convert our US business results at the weighted average exchange rate during the year, which for 2020/21 was $1.34 to £1 (2019/20: $1.29 to £1).

Alternative performance measures A

In addition to IFRS figures, management also use a number of 'alternative measures' to assess performance. Definitions and reconciliations to statutory financial information can be found on pages 250 – 259. These measures are highlighted with the symbol above.

Business model

Our business at a glance

National Grid plc is one of the world's largest investor-owned energy utilities, committed to delivering electricity and gas safely, reliably and efficiently to the customers and communities we serve.

Key:
- UK Electricity Transmission (including ESO)
- UK Gas Transmission
- US Regulated (New England and New York)
- National Grid Ventures and other activities

Statutory operating profit (%)

Underlying operating profit (%) Ⓐ

RAV, rate base and other assets (%) Ⓐ

National Grid owns a range of high-quality, long-term assets with low commercial risk profiles, typically supported by long-term contracts or stable regulatory arrangements. Our current operating model comprises our core regulated businesses, being UK Electricity Transmission, including the UK Electricity System Operator, UK Gas Transmission and our US Regulated business, which together generated over 90% of our operating profits this year. Alongside these, we also own a diverse and growing portfolio of commercial energy operations which form our National Grid Ventures business, and are reported on together with certain other non-core activities of the Group.

Our new operating model

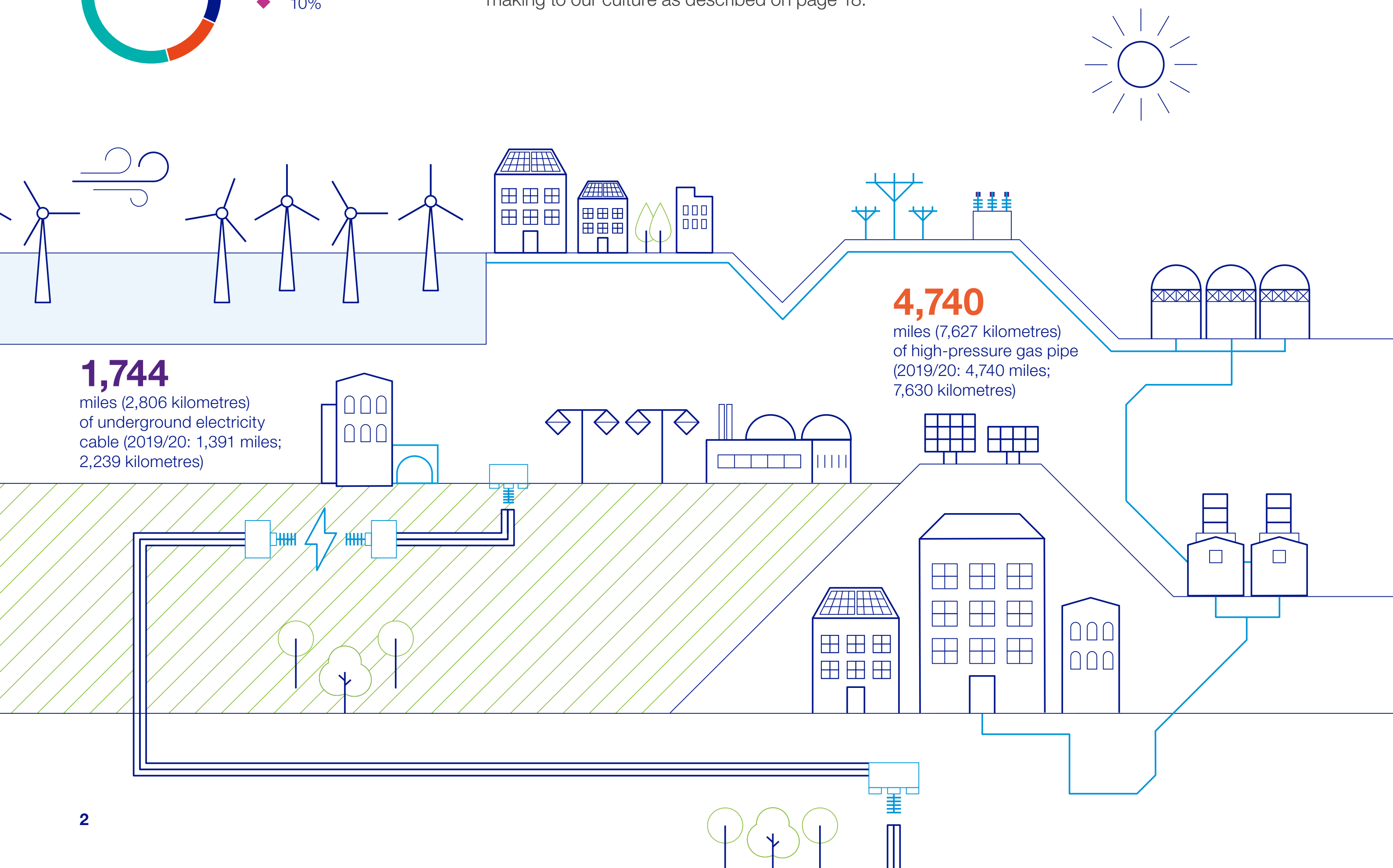
National Grid's vision is to be at the heart of a clean, fair and affordable energy future in an industry sector where the pace of change is accelerating with increasing focus on decarbonisation, digitalisation and decentralisation. Faced with this, and in order to ensure we can effectively and efficiently deliver the financial, customer and regulatory outcomes that will help us on our journey towards net zero, building on the opportunities offered by digitalisation, from 1 April 2021, we are changing our operating model as a company, alongside the changes we are making to our culture as described on page 18.

The building blocks of this new operating model will be six business units, being:
- UK Electricity Transmission;
- the UK Electricity System Operator;
- UK Gas Transmission;
- New England;
- New York; and
- National Grid Ventures and other activities

which will each be run as end-to-end enterprises within the Group portfolio.

On 18 March 2021, National Grid announced it had agreed to buy Western Power Distribution (WPD) from PPL Corporation. At the same time, and conditional on the WPD Acquisition, we agreed to sell our Rhode Island electricity and gas distribution business to PPL and we announced that we will be initiating a process for the sale of a majority stake in our UK Gas Transmission and metering business later this year.

Conditional on completion of the purchase, WPD will form an additional UK business unit.



UK Electricity Transmission

Electricity Transmission

We own the high-voltage electricity transmission (ET) network in England and Wales. We are responsible for ensuring electricity is transported safely and efficiently from where it is produced, reaching homes and businesses reliably. We also facilitate the connection of assets to the transmission system.

Electricity System Operator

Since 1 April 2019, the Electricity System Operator (ESO) operates as a separate company within National Grid. We are responsible for making sure supply and demand of electricity is balanced in real time across Great Britain (GB). While we operate as the ESO across GB, we do not own the transmission assets in Scotland.

Although the ESO is legally separate from ET, for 2020/21, its results are still presented to the Board as part of the UK ET segment.

4,496

miles (7,236 kilometres) of overhead electricity lines (2019/20: 4,481 miles; 7,212 kilometres)

UK Gas Transmission

Our UK Gas Transmission (GT) business comprises both the gas transmission assets and an integrated gas system operator.

We own and operate the high-pressure gas transmission network in Great Britain. We are responsible for making sure the country's gas is transported safely and efficiently from where it is produced to where it is consumed.

As the Gas System Operator, we are responsible for ensuring that supply and demand are balanced in real time on a day-to-day basis.

On 18 March 2021, we announced that we will be initiating a sale process later this year for a majority stake in this business (including our UK metering business which currently forms part of NGV).

8,972

miles (14,439 kilometres) of electricity transmission overhead lines (2019/20: 9,109 miles; 14,659 kilometres)

73,010

miles (117,498 kilometres) of electricity distribution circuit miles (2019/20: 73,004 miles; 117,488 kilometres)

US Regulated

New England

Electricity

We own and operate transmission facilities and distribution networks across Massachusetts, New Hampshire, Vermont and Rhode Island. Conditional on completion of the WPD Acquisition and certain regulatory approvals, we have agreed to sell our Rhode Island electricity transmission and distribution business to PPL. The sale is expected to complete in the first quarter of 2022.

Gas

We own and operate gas distribution networks across Massachusetts and Rhode Island. We have also agreed to sell our Rhode Island gas distribution business to PPL.

New York

Electricity

We own and operate transmission facilities and distribution networks across upstate New York. We also own and operate electricity generation facilities on Long Island, although under the new operating model they form part of NGV.

Gas

We own and operate gas distribution networks across upstate New York, in New York City and on Long Island.

National Grid Ventures and other activities

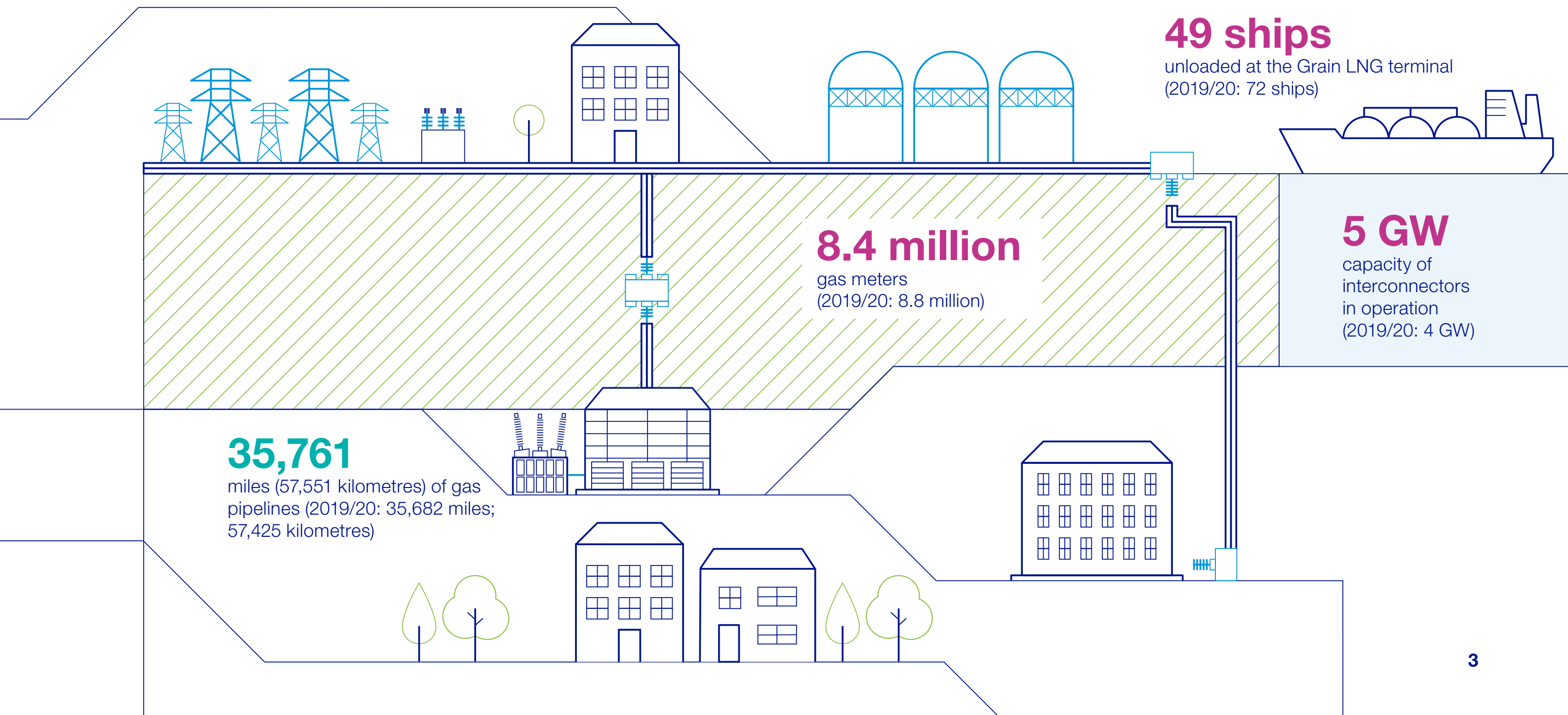
National Grid Ventures (NGV) manages our diverse portfolio of energy businesses that are complementary to our core regulated operations. This operating segment represents our main strategic growth area outside our regulated core business, in competitive markets across the US and the UK. The business comprises commercial operations in energy metering, electricity interconnectors, renewables development and the storage of liquefied natural gas (LNG) in the UK.

In the US, NGV includes National Grid Renewables (which includes the renewables development company formerly known as Geronimo), a leading wind and solar developer in North America, and partners with companies including NextEra, SunRun and RWE to develop and own high-quality renewable energy assets. It also owns non-controlling stakes in joint ventures including New York Transco and the Millennium Pipeline Company.

Our other activities that do not form part of any of our core regulated businesses or NGV, primarily relate to our UK property business together with insurance and corporate activities in the UK and US, and the Group's investments in technology and innovation companies, through National Grid Partners (NGP).

49 ships

unloaded at the Grain LNG terminal (2019/20: 72 ships)



8.4 million

gas meters (2019/20: 8.8 million)

5 GW

capacity of interconnectors in operation (2019/20: 4 GW)

35,761

miles (57,551 kilometres) of gas pipelines (2019/20: 35,682 miles; 57,425 kilometres)

Business model continued

How we operate

We rely on our internal resources and our strong relationships which we use to do business, drawing on our technical expertise and culture in order to deliver value for our stakeholders and for wider society.

What we rely on

The key internal resources that we rely on to do business are:

- our physical assets that move the energy;
- appropriate funding that allows us to invest in our colleagues and assets; and
- our talented colleagues who ensure energy is moved efficiently and reliably.

We also rely on maintaining strong relationships with a number of key external stakeholder groups to ensure we best meet their needs and maintain our licence to operate (see pages 46 – 51).

Internal resources

Physical assets

We own electricity and gas networks that transmit energy over long distances from where it is produced. In the US, we also distribute it locally to where it is consumed. These networks are built to last for many decades. Such networks account for the vast majority of our asset base. We also own four subsea electricity interconnectors, with two further subsea cables under construction as well as LNG importation facilities.

Funding

We fund our business through a combination of shareholder equity and long- and short-term debt. We maintain an appropriate mix of the two and manage financial risks prudently.

Colleagues

Our highly skilled, dedicated colleagues have a strong public service ethos. They manage and maintain the physical energy infrastructure, and assist and develop the many stakeholder relationships that are crucial to the Company's success.

As we support the changes needed to build a net zero energy system, we are providing employment opportunities and supporting our colleagues to build the skills necessary to support these changes. By attracting and retaining the people capable of supporting the journey to net zero in the energy sector, we can help the places where we operate reach their emissions targets.

Strong relationships

Customers

In the UK we do not own the energy that flows through our electricity cables and gas pipes. This energy is owned by our customers, such as electricity generators and gas shippers. These industrial customers, together with domestic consumers through a small portion of their energy bills, pay to use our networks. In the US, we have almost seven million residential and commercial accounts.

Contractors and suppliers

We work in partnership with our supply chain, which has complementary experience, skillsets and resources. We agree mutually beneficial contractual arrangements and, wherever possible, leverage economies of scale and use sustainable and global sourcing opportunities.

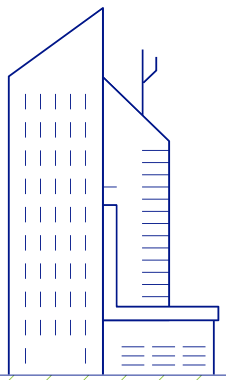
Communities and governments

The societal impact of our activities means that a range of stakeholders have a legitimate interest in and influence on the work we do. These include national and regional governments, local communities, our supply chain, and business and domestic consumers of the energy we transport.

Economic, health, safety and environmental regulators

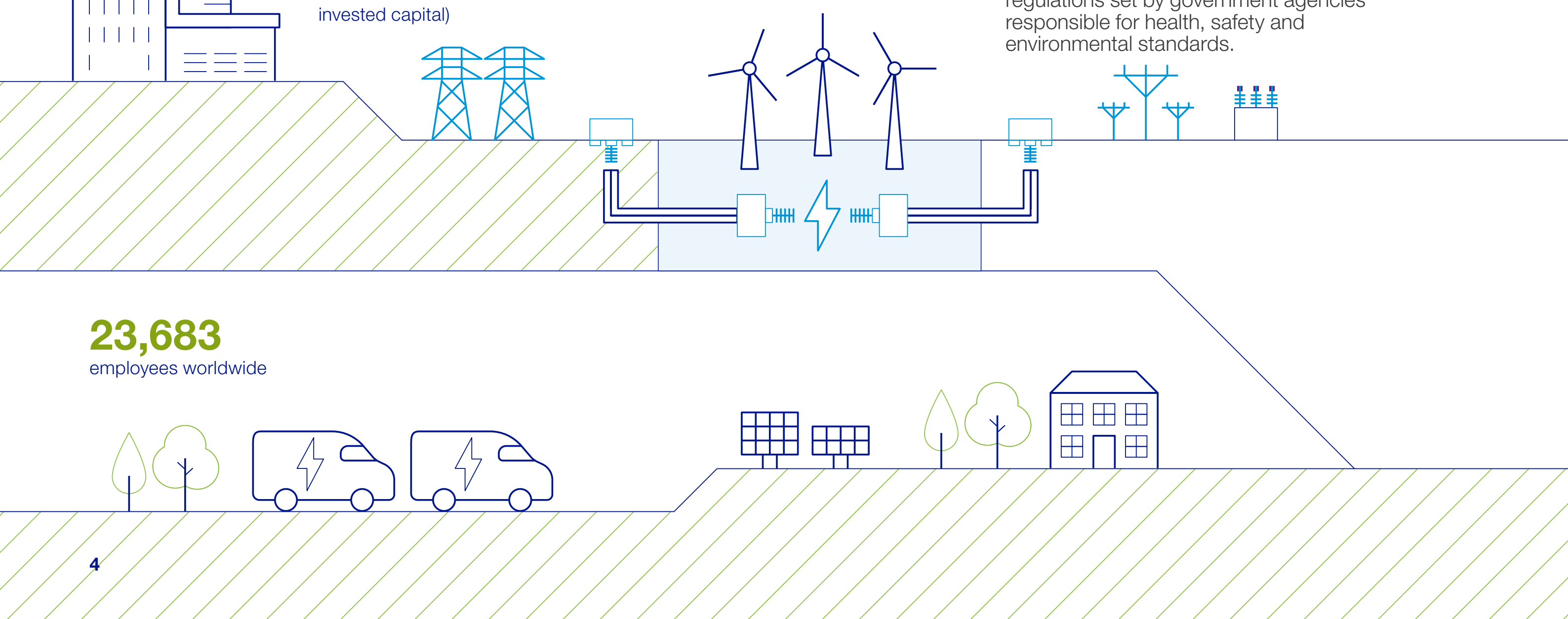
We are subject to economic regulation by bodies that are entirely independent of the Company. These economic regulators set the prices we can charge for providing an economic, efficient and non-discriminatory service. Our regulated revenue therefore covers day-to-day running costs, financing capital expenditures to renew and extend our networks, and incentives or penalties relative to performance targets. It also affords our shareholders a fair return on their investment.

The energy we transport and the activities we undertake are intrinsically hazardous; therefore our operations have to comply with laws and regulations set by government agencies responsible for health, safety and environmental standards.



65% Ⓐ
regulatory gearing (net debt as a proportion of the value of regulatory assets and other invested capital)

c.£5.0bn p.a. Ⓐ
average investment in our assets over the past three years (on a constant currency basis)



23,683
employees worldwide

How we do business

We combine these internal resources and strong relationships with our technical expertise to achieve our purpose and strategic objectives.

We do all of this in accordance with our culture and values, which guide everything that we do.

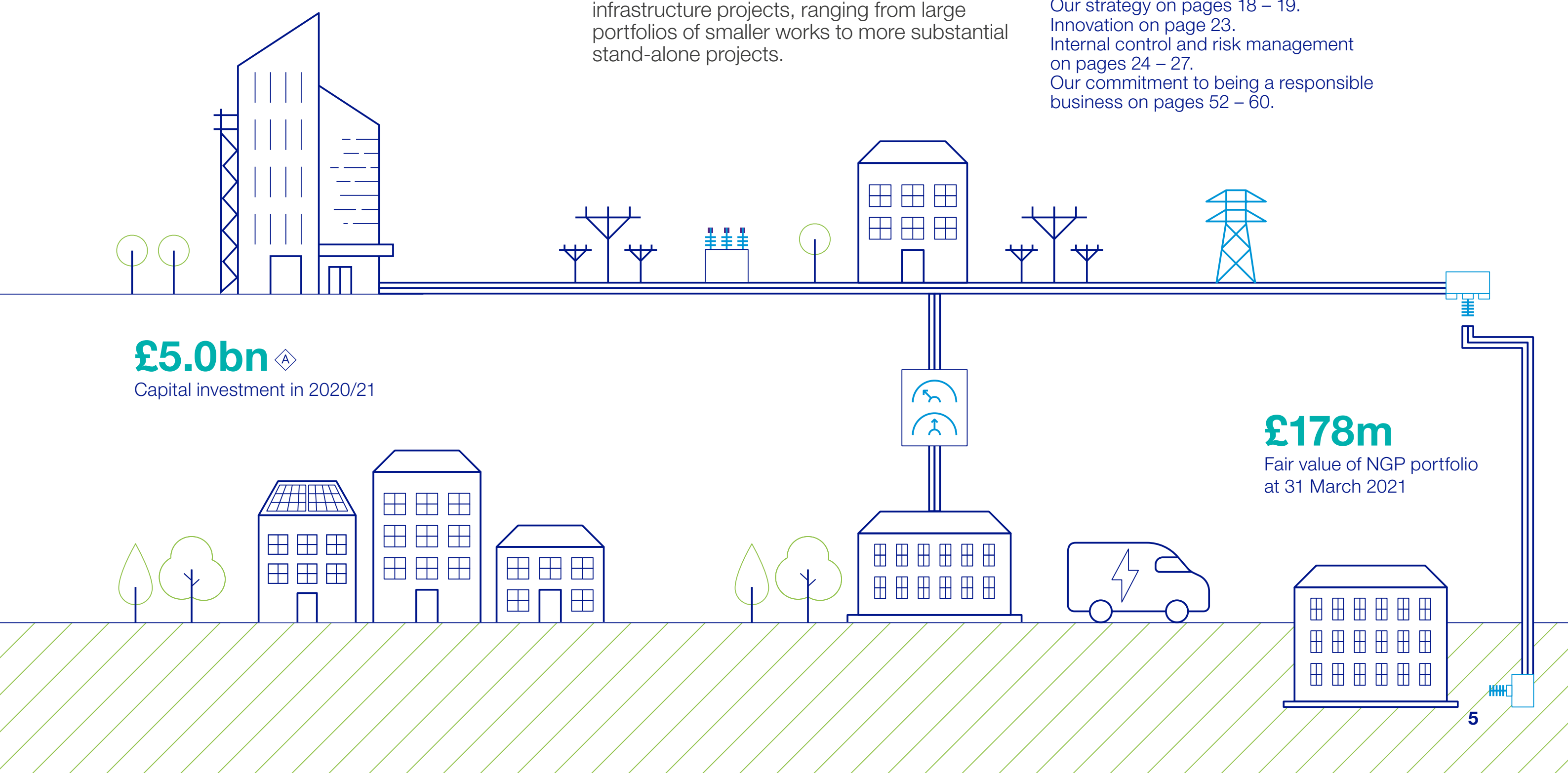
Our strategy is designed to deliver our vision, while being supported by robust governance and risk management processes.

Our innovation activities are focused on future-proofing the business for our customers as the energy landscape changes.

5.6%
Asset growth 2020/21

£5.0bn
Capital investment in 2020/21

£178m
Fair value of NGP portfolio at 31 March 2021



Our technical expertise

Over the many decades in which we have played a vital role connecting people to the energy they use, National Grid has built safe and reliable networks. We continue in our efforts to develop a well-respected and trusted reputation for engineering excellence.

We combine our extensive skills, knowledge and capabilities with innovation to ensure our core competencies continuously create value for shareholders and wider stakeholders alike.

We are recognised for our excellence in:

Asset management

We invest in and maintain our assets across their life as cost-effectively as possible.

Our focus ensures efficient management of our assets across their lifetime.

Engineering

The skills of our engineers are vital in delivering safe, efficient, reliable and sustainable performance for all our businesses. Our colleagues strive to:

- find practical and innovative solutions to complex problems;
- employ risk-based decision-making; and
- adopt common approaches and continuous improvements.

Our engineering expertise supports the delivery of a reliable network.

Capital delivery

We add value for our stakeholders by ensuring safe and effective delivery of large and complex infrastructure projects, ranging from large portfolios of smaller works to more substantial stand-alone projects.

Our culture

National Grid's culture is the values, beliefs and behaviours that characterise our Company and guide our practices.

As the energy transition accelerates, our strategic priorities will determine how we respond and shape our business over the next decade. To ensure success, we are working to change our current culture to one with a greater sense of purpose, strengthening our focus on results and performance, with leaders who empower, steer and act decisively.

We maintain high standards of ethical business. We also promote the right behaviours that are aligned with our values and culture by recognising our employees through a company-wide reward system that supports both what they achieve and how they have delivered their achievements.

Strategy and risk management

As the energy industry continues its transition to a cleaner future, we have evolved our strategy so that it clearly articulates our priorities, while positioning our business to continue to deliver long-term economic benefits in the regions in which we operate.

We have well-established governance structures that include comprehensive risk management, strong controls and financial discipline.

Further reading

Our strategy on pages 18 – 19.
Innovation on page 23.
Internal control and risk management on pages 24 – 27.
Our commitment to being a responsible business on pages 52 – 60.

Business model continued

How we operate continued

We provide the energy systems that help economies grow in a sustainable, affordable and reliable way. We continue to work with partners and customers on the technologies required to make net zero a reality.

The value we create

We deliver value for our stakeholders, which include our customers, as well as financial value for shareholders, by:

- **operating within our regulatory frameworks, and thereby being efficient and compliant;**
- **performing well against our regulatory incentives, delivering customer benefits and good returns;**
- **managing our cash flow requirements and securing low-cost funding; and**
- **maintaining a disciplined approach to investment in our networks and in development opportunities that are complementary to our core businesses.**

Investors

We aim to be a low-risk investment proposition, focused on generating shareholder value through dividends, supported by asset growth from investing in essential assets under primarily regulated market conditions, and servicing long-term sustainable consumer-led demands.

10.6% A

Group Return on Equity 2020/21

For stakeholders and wider society

Our colleagues

We seek to create an environment in which our colleagues can make a positive contribution, develop their careers and reach their full potential.

Customers

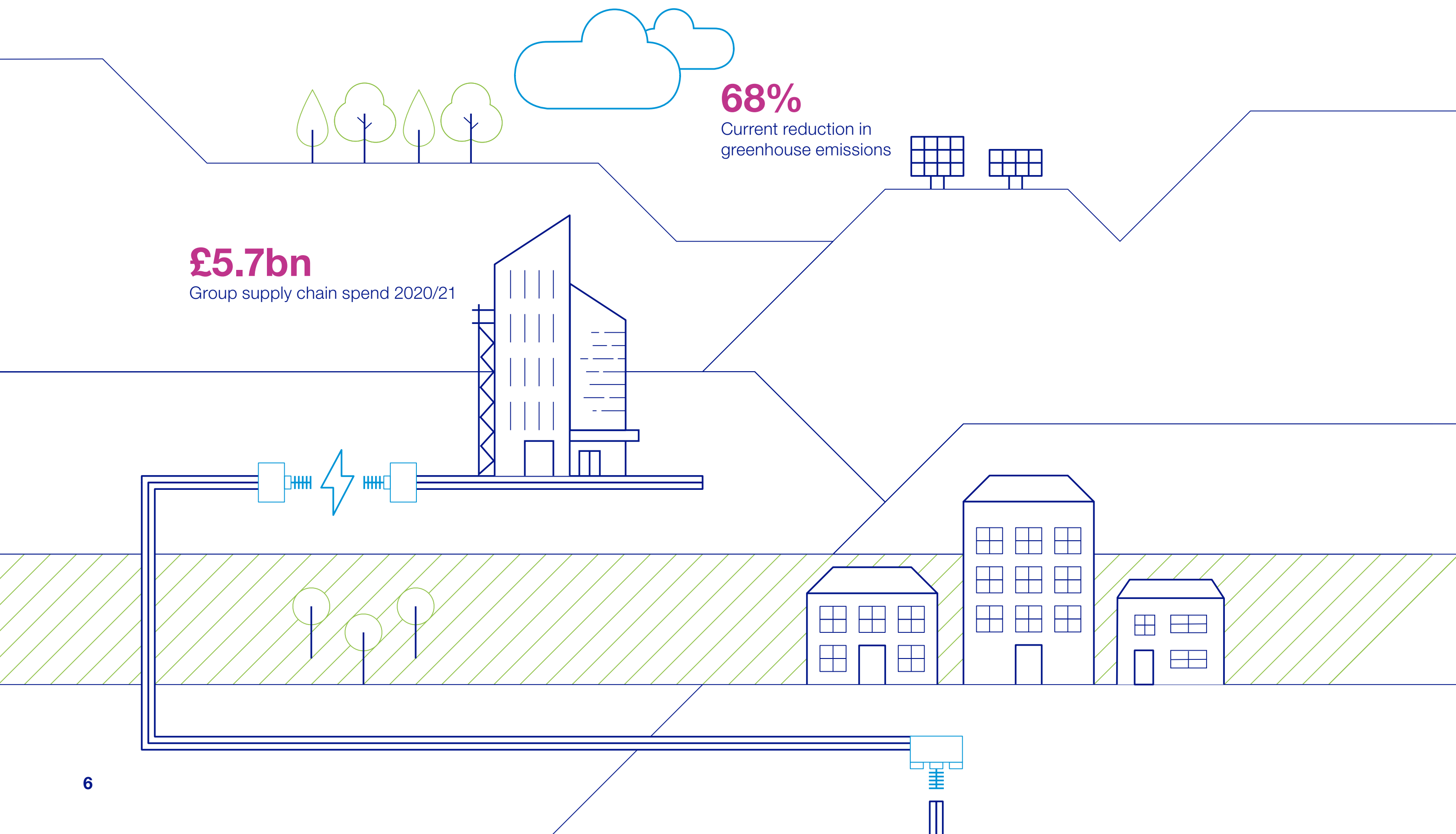
By delivering the energy they need and dealing with them in a transparent and responsive manner, we seek to build trusted relationships with our customers as we deliver services to them.

Contractors and suppliers

We maintain responsible and efficient supply chains in which our interests and those of our suppliers are aligned with the interests of customers.

Communities and governments

We help national and regional governments formulate and deliver their energy policies and commitments. The taxes we pay help fund essential public services. We have an important role to play in sustainability, enabling the transition to a low-carbon future.



Economic, health, safety and environmental regulators

Through constructive, transparent engagement and consistent, reliable delivery of our commitments, we build trust with our regulators.

Financial value

The chart below describes how our businesses create financial value. Further detail can be found in our financial review on pages 30 – 39.

1 Revenue and profits

The vast majority of our revenues are set in accordance with our regulatory agreements (see pages 30 – 39), and are calculated based on a number of factors including investment in network assets, performance against incentives, allowed returns on equity and cost of debt, and customer satisfaction.

2 Cash flows

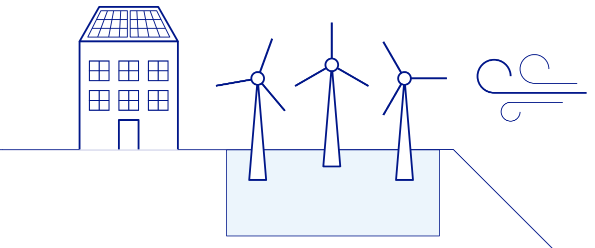
Our ability to convert revenue to profit and cash is important. By managing our operations efficiently, safely and for the long term, we generate substantial cash flows. Coupled with long-term debt financing, as well as additional capital generated through the take-up of the shareholder scrip dividend option during periods of higher investment, we are able to invest in growing our asset base and fund our dividends.

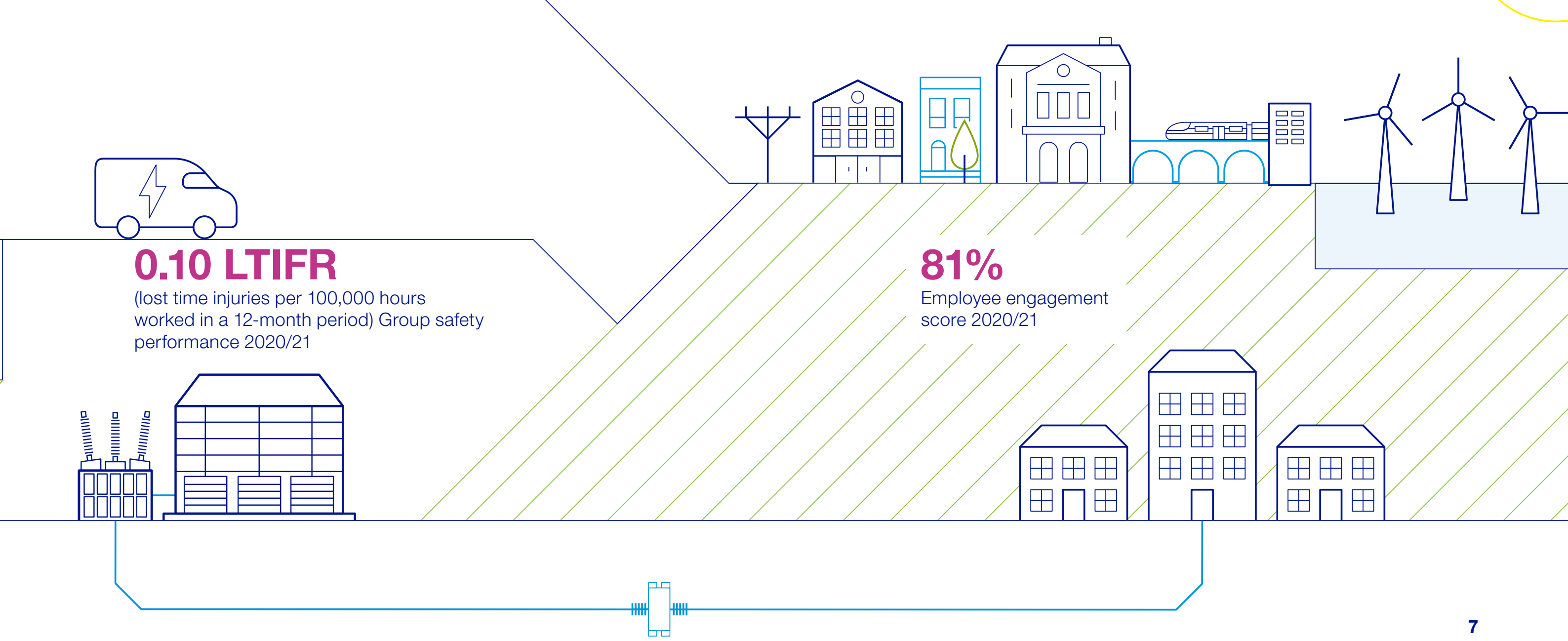
3 Investment

We invest efficiently in our networks to deliver strong and sustainable growth in our regulated asset base over the long term. We continually assess, monitor and challenge investment decisions so we can continue to deliver safe, reliable and cost-effective networks.

Capital allocation

Our capital allocation is determined by the need to deliver the investments and outputs required under our regulatory frameworks in the UK and US (which accounted for over 90% of our capital expenditure in 2020/21), balanced with the desire to invest in our other businesses, such as NGV and NGP, which may deliver higher growth. The investments we make seek a balance between growth through investments, such as the WPD Acquisition, investments into our higher-growth NGV businesses and through NGP, and the continued growth of our steady cash flow core regulated operations, while ensuring that we continue to deliver a consistent and reliable dividend to our shareholders.





0.10 LTIFR

(lost time injuries per 100,000 hours worked in a 12-month period) Group safety performance 2020/21

81%

Employee engagement score 2020/21

Our response to COVID-19

Throughout the financial year, we have continued to prioritise our stakeholders, maintain reliable and safe networks and protect against financial implications due to COVID-19.

Considering our stakeholders

The COVID-19 pandemic has impacted all of our stakeholders since it began in March 2020. We have sought to work with them to address the challenges they faced as these have evolved over the last year.

Further reading
our section 172 statement detailed summary pages 46 – 51

Our commitment to being a responsible business is central to the way in which we operate. This has been the governing principle behind our Board's response to the COVID-19 pandemic. We have had to think through and debate on the choices and actions we need to consider over the coming months to position us best for success in the medium to long term taking account of the impact on our key stakeholders. The Board has continued to monitor its responsibilities to the Company's different stakeholder groups. Good engagement has been crucial in understanding the views of our stakeholders in order to make informed decisions during this period of crisis. For example, the Company has been seeking regular feedback from employees that has helped to shape its response to the COVID-19 pandemic.

Colleagues

From the outset our focus has been on ensuring we remain in communication with our colleagues and ensure they are kept informed, whether by presentations and question and answer sessions with senior leadership or through other channels, on the actions being taken to keep them safe and to equip them for work as well as to address their wider wellbeing. This is the case whether they are key workers out on site keeping gas and electricity flowing, or colleagues able to work from home.

Communities and governments

Our colleagues have been supporting our communities by volunteering and providing their time and expertise to support charities and the most vulnerable, and we have set up Grid for Good to help play our part in addressing the economic impacts of COVID-19 in the UK and US, including rising youth unemployment. In total National Grid has made donations of around £2.5 million to help those affected by COVID-19, as well as grants and other financial support.

Investors

Having stress-tested the finances of the Company against a number of potential COVID-19 scenarios, the Board recommended a final dividend for 2019/20 and interim dividend for 2020/21 in line with policy. On 2 March, the Company announced its updated policy of growing the dividend per share annually in line with CPIH with effect from financial year 2021/22.

Customers, regulators and suppliers

We suspended our debt collection and customer termination activities across our US jurisdictions resulting in lower customer collections and additional provisioning for bad and doubtful debts. In the UK, we actively supported Ofgem's measures to protect customers by relaxing network charge payment terms for suppliers and shippers facing cash flow challenges as a result of COVID-19.

Our response to the COVID-19 pandemic

April

May

June

- The Board met weekly throughout April to review the COVID-19 situation and to understand the impact on our stakeholders and operations
- Onsite accommodation was set up for control room staff in both the US and UK, with established shift patterns, to protect ongoing operations
- Wellbeing pulse surveys were introduced to get feedback from employees; 70% of our employees responded
- The Company upgraded the provision of gas to a college gym in Long Island to turn it into a 1,000-bed hospital in just 7 days
- The Company was signatory to an open letter from UK business leaders to the government calling for the alignment of economic recovery plans with the country's wider environmental and climate goals
- National Grid Partners (NGP) became an official investor partner in 2020 Clean Fight New York with the aim of supporting energy start-ups with goals of building back better after COVID-19, providing clean energy jobs for the region

July

August

September

- Our upstate New York business submitted a request for new delivery prices beginning in July 2021 with up to $50 million in COVID-19 relief to support our most economically vulnerable residential customers
- The Company demonstrated a strong response, despite the COVID-19 impact, to Tropical Storm Isaias, rapidly restoring power to 95% of 440,000 customers within 55 hours
- We worked to facilitate the safe return to office locations of colleagues across offices, making offices COVID-19 secure and establishing protocols
- The ESO launched 'Dynamic Containment' to facilitate faster acting frequency response in the face of lower inertia and larger, more numerous losses than usual arising from the effects of the pandemic
- Our US business donated $100,000 to Feeding America for its Hunger Action Month, helping tackle food insecurities across Massachusetts, New York and Rhode Island

2020 2021

Delivering safe, reliable networks through the pandemic

Throughout the COVID-19 pandemic the Group has adapted to new ways of working. We have delivered safe, reliable networks, while managing through all the new regulations and restrictions.

UK

The March 2020 lockdown meant that there was a suspension for a few weeks of our capital programmes, but once they resumed, we saw minimal delays. We worked closely with our contractors across all projects to minimise delays associated with COVID-19, including on major projects such as the London Power Tunnels 2 and Hinkley Point projects.

At times, during the summer, electricity demand fell to 20% below expected levels and zero-carbon sources made up their largest ever share of the power mix. For our ESO business, this meant our control room engineers had to take more actions, on more days, increasing and decreasing sources of power to keep the system stable and secure.

Despite the combined challenges of Brexit and COVID-19, NGV successfully implemented alternative trading arrangements to ensure there was no impact to the interconnector portfolio.

US

In the US, our COVID-19 Health and Safety Plan served as a guideline for all employees and contractors throughout the year. We ensured that safety expectations were made clear for new ways of working, including reduced size teams and single occupancy vehicles, allowing us to deliver our critical investment, while limiting the impact of the pandemic on our capital delivery programme.

Allowing for higher storm replacement costs, our electricity business delivered its full capital investment programme for the year. Our gas distribution business was impacted for longer, but recovered in the second half of the year, with expenditure only slightly below plan. Its work included our leak-prone pipe replacement programme, which this year saw a further 350 miles of pipeline replaced, above our target of 300 miles, despite the impact of COVID-19.

We conducted more than 32,000 virtual home energy assessments in New England when in-person home energy assessments were suspended due to COVID-19.

Estimated financial impact

The ongoing financial impact of COVID-19 is largely in line with our expectations, with increased provisions for bad and doubtful debts being incurred.

Group

During the year, the estimated impact of COVID-19 on our operating profit has been £296 million, compared to market guidance of around £400 million. The reduction is largely due to regulatory recovery of some of the US bad debt and the impact of better cost savings than expected. The impact has been more significant in our US businesses than our UK businesses, primarily due to the large US retail customer base. The operating profit impact is driven by the following broad areas:

- the most significant impact on our results is due to approximately £179 million (2020: £117 million) COVID-19-related increase in our provision for bad and doubtful debts, with our total bad debt charges for the period rising from £234 million last year to £326 million this year for the Group as a whole, of which the majority relates to our US business. The additional bad debt charges largely reflect the impacts of moratoria over collection and termination activities that remained in place for residential customers in the US throughout the year;
- our revenues were adversely impacted by approximately £78 million, mainly due to the suspension of late payment fees in the US, lower UK incentives and fewer US customers requesting 'protected status' due to the moratoriums on disconnections; partly offset by a recognition of a timing under-recovery in the US relating to allowed revenue of some of the bad debts, through regulatory mechanisms already in place;
- delay in updating rates in our NIMO, KEDNY and KEDLI businesses at the start of COVID-19 of approximately £70 million; and
- estimated incremental costs of £97 million (2019/20: £10 million) incurred related to enabling safe working (PPE, cleaning, sequestering staff, IT for remote access) and costs associated with delays to a number of planned capex works, as a direct consequence of the pandemic. These incremental costs have been partly mitigated by around £69 million of cost savings as a result of customer-facing workplan reductions, the pause in collections activities and lower travel and other costs.

For 2021/22, we expect some continuing impact, driven largely by our US operations where we are expecting further risk of bad debt, although lower than we have experienced in 2020/21 and 2019/20. In the longer term, we expect the impact of COVID-19 on our business to be limited on the basis that the majority of COVID-19-related costs will be recovered through our regulatory mechanisms. However, until the exact mechanism and timing for the regulatory recovery are finalised, we will still experience cash flow impacts from COVID-19 in the shorter term. In the US, we remain confident that we will recover the majority of our COVID-19 related costs relating to bad and doubtful debts through our regulatory mechanisms, either through the usual course of rate filing negotiations such as recovering revenue deferrals, or through separate filings, which we have already commenced in New York, Massachusetts and Rhode Island.

The estimated impact of COVID-19 on our cash flows for the full year is £600–£750 million, lower than our market guidance of up to £1 billion. The incremental cash flow impact beyond the operating profit impact described above results from the weaker demand and lower revenues that we expect to be recovered as usual through regulatory true-ups in later years, lower levels of cash collections from our US customers and revenue deferrals related to Balancing System Use of Charges and other timing differences in the UK that we will recover next year.

October / **November** / **December**

- Notwithstanding Centre for Disease Control (CDC) restrictions, our US business delivered a strong response to the third most impactful storm in the last 15 years, reconnecting, within 72 hours, 95% of 550,000 customers who lost power in New York
- In the final quarter of 2020, a Cogent Valuation report scored National Grid 7.22 out of 10, 5th out of 25 eastern US utilities, for its response to the pandemic
- Putting the spirit of giving into action, our Alliance of Black Professionals (ABP) members volunteered at Soco Restaurant in Brooklyn, New York for their Thanksgiving turkey giveaway event at a time when food insecurity was expected to rise by 38% throughout New York City in 2020, as a result of the pandemic
- In the UK, £83,000 was donated to the Trussell Trust at Christmas, in addition to £18,000 raised from colleagues' personal contributions

January / **February** / **March**

- Despite the challenges presented by COVID-19, the IFA2 subsea interconnector between the UK and France was launched in January
- In the UK, partnering with Restore Technology and several charities, we continued to provide laptops to schools as the second lockdown forced children to work from home, bringing the total number donated during the pandemic to around 1,400
- The Company has encouraged everyone who is able to have the COVID-19 vaccine to do so as soon as they are eligible, to protect themselves and their family, colleagues and communities, but, in line with industry peers, has not mandated vaccination
- In our US business, the Bill Payment and Customer Assistance Program Management Office continues its targeted customer outreach strategy, focussing on bill payment options, payment assistance programmes, community initiatives, scam awareness and safety protocols with the aim of helping customers maintain their bill health through assistance programmes and energy savings

◆ 2020 ◆ 2021

Chairman's Statement

"Amidst all the change, it's the dedication of our people that has allowed us to navigate challenging times and emerge stronger."

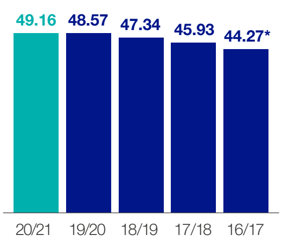
Sir Peter Gershon
Chairman

Final dividend of

32.16p

per share proposed to be paid on 18 August 2021

Full year dividend (pence per share)



*excludes a special dividend of 84.375p.

The 2021 Annual General Meeting (AGM) of National Grid plc will be held at 11.30am on Monday 26 July 2021. More details on the arrangements of this year's AGM and how to view the live webcast of the AGM can be found on our website in the Investor section at: nationalgrid.com/investors.

Over the past year, the COVID-19 pandemic has had a far-reaching and deep impact across the whole world. But through it all, we have delivered good operational performance and have begun a major strategic pivot for the Group.

So, I want to begin by thanking those who have worked tirelessly across our business, as they played their part in keeping our networks running and the energy flowing to hospitals, care homes, businesses and homes. Amidst all the change, it's the dedication of our people that has allowed us to navigate challenging times and emerge stronger.

I am also pleased that we are able to use our extensive resources to help support the communities we serve to get through and recover from the pandemic. Although the Company has implemented a number of measures to limit discretionary external spending, it has not relied on government support.

Strategy

As the Board has said on many occasions, our vision at National Grid is to be at the heart of a clean, fair and affordable energy future.

We'll do this through the execution of our strategic priorities, which are to deliver for our customers efficiently, to grow our organisational capabilities, to empower colleagues for great performance and to enable the energy transition for all.

It's with this vision in mind that we announced three significant and connected transactions:

- the proposed acquisition of WPD in the UK from PPL Corporation;
- the sale of our Rhode Island business in the US to PPL Corporation; and
- the commencement of a process later this year for the sale of a majority stake in our UK GT and metering businesses.

These transactions will significantly improve National Grid's strategic positioning while enhancing our long-term growth prospects, put National Grid at the heart of delivering net zero across the UK electricity sector, and deliver attractive financial returns for our shareholders.

Following the vote at a General Meeting in April, I'm delighted that our shareholders strongly supported the proposed acquisition of WPD.

Safety
Safety is incredibly important to us and we're pleased we maintained a world class benchmark performance with an injury frequency rate of 0.10 during the year. Despite the strong performance, in November 2020, a contractor in New York suffered a fatal injury. An investigation was launched, resulting in further assurance checks being developed. It's absolutely imperative that we continue to focus on encouraging good safety behaviours across the entire workforce.

Dividend
The Board has recommended an increase in the final dividend to 32.16 pence per ordinary share ($2.2812 per American Depository Share) which will be paid on 18 August 2021 to shareholders on the register of members as at 4 June 2021. If approved, this will bring the full year dividend to 49.16 pence per ordinary share, an increase of 1.21% over the 48.57 pence per ordinary share in respect of the financial year ended 31 March 2020. This is in line with the increase in average UK RPI inflation for the year ended 31 March 2021 as set out in our previous dividend policy. In March 2021, we announced that from 2021/22, the dividend policy will aim to deliver annual dividend per share growth in line with the rate of CPIH inflation.

Regulatory issues
We continue an open dialogue with our regulators. In the UK, following a detailed analysis of Ofgem's RIIO-2 Final Determination, we submitted a technical appeal to the Competition and Markets Authority (CMA) on two points.

We welcomed the government's consultation into energy system operation, and we have been working closely with the government, regulator and industry to explore what changes will be needed to achieve net zero.

We also welcome the Prime Minister's 10 Point Plan and the government's very recent announcement to set a new target of 78% reduction in greenhouse gas (GHG) emissions by 2035, compared with 1990 levels.

Similarly, the US pledged to cut carbon emissions by 50–52% below 2005 levels by 2030. This new target almost doubles their previous promise and is a welcome step forward.

In the US, we filed a proposal for review with the Massachusetts Department of Public Utilities to increase gas distribution rates for our Massachusetts gas customers. The total impact of $139 million would be spread across our customer base. This rate case is still underway and if approved, these new rates would come into effect in November 2021.

Our upstate New York three-year rate agreement expired in April 2021, and in July we submitted a request for new delivery prices beginning in July 2021.

Performance
The International Financial Reporting Standard (IFRS) technical requirements make reporting some of the performance measures that we use as a regulated business challenging. We provide additional information, on page 34, about both our significant assets and liabilities that do not form part of our audited accounts, to help our investors gain a fair, balanced and understandable view of our business. Where practicable, we reconcile these with our statutory measures in 'Other unaudited financial information' on pages 250 – 259.

How we generate and preserve value
During the year, we published our Responsible Business Charter (RBC), setting out what our responsibility means for us and commitments and ambitions over the coming years. It's important that we are open and transparent for all our stakeholders, and that's why we are reporting on our progress in our new annual Responsible Business Report (RBR).

It's also why this year we want shareholders to have their say on how the Company is tackling net zero. As a result, we are making a commitment at this year's AGM to bring our climate transition plan to be voted on by our shareholders at our AGM in July 2022. Engagement with our key stakeholders has been a crucial part of defining our net zero commitments and ambition. It has helped us better understand their expectations to develop a path we believe is consistent with the Paris Agreement and consistent with the Task Force on Climate-related Financial Disclosures (TCFD).

Culture, Inclusion & Diversity
In 2020, the Board agreed a new approach to the way it monitors culture, inclusion and diversity to enable it to assess progress. We have made progress in a number of areas, pointing towards real change. In particular, our business leaders have demonstrated the ability to change behaviours and ways of working in the face of the pandemic and insight gleaned from our internal communication and engagement channels shows our colleagues have responded positively to the human and authentic way we have led over the last 12 months.

I am pleased that our commitments have been recognised with a number of external awards including the FT's Diversity Leaders List. As a result of our continued dedication and focus on inclusion and diversity, our ONE employee resource group was awarded the title of Top Network Group at the 2020 Ethnicity Awards, and we were placed in the top 10 in the Outstanding Employer category. This is in addition to the numerous individual awards across the business.

We are making progress, but the Board recognises that we have more work to do. This is important now, more than ever.

Appointments and Board changes
You can read more details of all our Board members' experience and the Committees they support in the Corporate Governance review on pages 72 – 73.

This has been my last year as Chairman as I stepped down on 31 May after over nine years in the role, and I am delighted to be handing over to Paula Rosput Reynolds as the new Chair.

During my time as Chairman, there has been significant transformation in the energy sector, and I am optimistic about the direction of travel. I believe innovative and transformational engineering will continue to be critical to tackling climate change. I am also pleased that over this period, our Total Shareholder Return has averaged just over 9% compared with the FTSE 100 average of just over 6%.

I have great confidence that, as Paula takes up her role, National Grid will continue to lead the way to a clean, fair and affordable energy future.

Finally, it is with great pride that I would like to take this opportunity to express my thanks to colleagues across our business who are tackling the impacts of climate change with huge professionalism and commitment and finding innovative engineering solutions in the pursuit of net zero goals.

Sir Peter Gershon
Chairman

Chief Executive's review

"We will enhance our role in the energy transition and drive long-term shareholder value."

John Pettigrew
Chief Executive

Key highlights in 2020/21

10.6%
RoE

£5bn
investment in critical infrastructure

1,000
economically disadvantaged young people helped through Grid for Good programme

Our vision is for National Grid to be at the heart of a clean, fair and affordable energy future. It's with this vision in mind that in March, we announced three transformational deals that will significantly change National Grid's positioning and give us an even greater role to play on the journey to net zero.

Our acquisition of WPD, the UK's largest electricity distribution network operator, for an equity value of £7.8 billion, selling our Rhode Island gas and electricity business for an equity value of $3.8 billion (£2.7 billion) and initiating a sale process for a majority stake in our UK GT and metering business, will enhance our role in the energy transition and drive long-term shareholder value.

With increased exposure to the UK's electricity sector, we will be able to take a more holistic approach, helping the UK's wider net zero ambitions.

For example, with renewable generation, our high- and low-voltage engineers will be able to share their knowledge and experience, to efficiently deliver increasing levels of renewables connections, both large and small.

We will also be able to share best practice across engineering and customer solutions, to help drive a more effective roll-out of the infrastructure needed for electric vehicles. While we are working to deliver ultra-fast charging infrastructure at a national level, WPD is looking to deliver over 200,000 charging points across its territory by 2023.

When all three transactions are completed, nearly 70% of group assets will be focused on electricity, up from around 60% today. That's very significant at a time when electricity demand is expected to rise substantially in the years ahead. The UK Committee on Climate Change expects a 70% increase in UK electricity demand by 2050. As the largest electricity transmission and distribution owner and operator in the UK, we will play a pivotal role in enabling growing levels of electrification.

These transactions will transform National Grid's positioning and strengthen our core ambition to be at the heart of a clean, fair and affordable energy future.

Increasing political will

It has been a significant year with climate change continuing to rise up the agenda, despite the challenges posed by the COVID-19 pandemic. We have seen businesses, governments, regulators and stakeholders come together with the shared ambition of reaching net zero by 2050. We welcome the important progress that has been made across all our jurisdictions.

National Grid applauded the new US administration's decision to rejoin the Paris Agreement on President Biden's first day in office and the package of executive orders signed, which aim to put the US on the path to reducing its share of emissions. The Energy Act of 2020 was passed by US Congress in December 2020, extending financial support to key decarbonisation technologies and infrastructure through tax credits, research and development funding, and loan guarantees.

Both Massachusetts and Rhode Island launched the Transportation & Climate Initiative, which commits to cutting GHG emissions from motor vehicles by 26% between 2022 and 2032 and investing $300 million per year in equitable low-carbon transport. In July 2020, New York issued an EV 'Make Ready' Order, authorising public utilities to invest $700 million by 2025 to build out beneficial EV charging infrastructure.

In the UK, we welcomed the Energy White Paper, setting out the steps the government will take over the next 10 years to cut emissions from industry, transport and buildings, while creating new jobs. We were also pleased that the UK government confirmed funding for the ultra-fast charging network needed to enable the large-scale take-up of electric vehicles.

Alongside this, I'm pleased that 2020 was the greenest year on record for Britain's electricity system including almost 68 days with coal-free generation. Record-breaking levels of power from zero carbon sources were key factors in reducing 2020's carbon intensity – while record low electricity demand during the nation's lockdown also contributed. In the US, our energy efficiency programmes, the largest in the country, have saved more than 4.2 tonnes of carbon since 2015.

2021 will be a crucial year as the UK prepares to host COP26, where we are a principal partner. It is a unique opportunity to drive more ambitious change and show that with the right policy and regulatory frameworks in place, we can take huge strides forward to reach net zero.

Investing in our infrastructure

During the year, investment in critical infrastructure remained strong, with capital expenditure at £5 billion. This was driven predominantly by continued investment in large capital programmes in our UK Electricity Transmission business, continued high levels of US capital expenditure, much of it mandated on safety spend, and investment in National Grid Ventures as we progress our interconnector projects. This has driven asset growth of 5.6%.

Across our US gas businesses, we invested $1.77 billion, including the replacement of more than 350 miles (563 kilometres) of leak-prone pipe. And in our electricity business, in New York, we energised two new substations to deliver continued safe, reliable electricity to customers. National Grid's three newest substations in the region represent a total investment of $42.5 million.

Looking forward, National Grid will continue to work with stakeholders to develop infrastructure projects. For example, National Grid is a co-participant to build the Northern New York Priority Transmission Project (NNYPTP), a major transmission line rebuild project that will help unlock existing renewable energy resources such as wind and hydro power in the region, and will also lead to emissions reductions of 1.2 million tonnes of CO_2 and save $447 million in transmission congestion costs. The project is expected to begin construction next year and be completed by the end of 2025.

In the UK, we invested just over £1.2 billion across Electricity and Gas Transmission. Major electricity projects included the 21-mile (34-kilometre) London Power Tunnels 2 project and the 29-mile (47-kilometre) Hinkley Point connection. In our gas business, we've completed the tunnelling of the Feeder 9 pipeline and secured our place in the Guinness World Records for the world's longest hydraulically inserted pipeline at 3 miles (5 kilometres).

NGV's capital investment decreased, principally due to a net decrease in interconnectors under construction and lower investment on IFA2, the interconnector between the UK and France, which successfully went into operation in January. With a capacity of 1,000 MW, the 149-mile (240-kilometre) subsea power cable can provide enough energy to power 1 million British homes. Since construction began in 2018, IFA2 has seen more than 1,000 engineers and specialists work a total of more than 3 million hours.

Within National Grid Renewables in the US, we signed a power purchase agreement with Basin Electric Power Cooperative for a large solar project in South Dakota, which is expected to generate 128 MW of clean power from 2022. We also signed power purchase agreements with Big Rivers Electric Corporation for the 160 MW Unbridled Solar Project in Kentucky and started construction for the 40 MW MiSolar Portfolio in Michigan which, when completed later this year, will power around 8,000 homes. We have also started construction on the 200 MW Prairie Wolf Solar Project in Illinois. The project will remove 285,000 metric tonnes of CO_2 from entering the atmosphere annually, which is the equivalent of fuelling 34,321 homes' energy use for one year.

Innovations and new technology

Our commitment to net zero continues to shape our innovation strategy. And I'm very proud of the innovative solutions that our teams are working on, which are focused on the advancement of products, systems and work methods that prepare the way for more efficient and safer networks that further facilitate the integration of renewables.

Towards the end of this year, we will open the Deeside Centre for Innovation. We hope it will become a globally recognised centre for innovations and collaborations in all green technologies. It will be the first test centre in Europe where testing can be carried out at voltages of up to 600 kV at an off-grid substation, bridging the gap between laboratory testing and installation in a connected and operational substation.

We've continued to advance efforts to decarbonise our gas network for a clean energy future. In the UK, Ofgem's Network Innovation Competition approved a first-of-its-kind offline hydrogen research facility to understand how transmission assets could be used to transport hydrogen in the future to heat homes and deliver green energy to industry. Similarly, the US Department of Energy awarded $12.4 million to facilitate research and development in accelerating hydrogen blending into the transmission infrastructure. Separately, we've partnered with Standard Hydrogen Corporation to demonstrate the US's first multi-use, renewable hydrogen-based energy storage/delivery system in New York's Capital Region, with completion expected by late 2022.

Scan here to view our story

Green collar jobs: Julia Gold – growing up green

I'm Principal Strategy and Policy Analyst – Clean Transportation, covering Massachusetts, New York and Rhode Island.

I help to accelerate the adoption of electric vehicles and prepare the grid for our evolving transportation system. This includes designing programmes for our customers, collaborating with stakeholders, developing public policy priorities and coordinating with state regulators.

The transportation sector, which is responsible for almost 40% of the greenhouse gas emissions in the Northeast, is an essential part of shaping our path forward. My role is to help accelerate this transition.

I grew up in a family of environmental activists – sustainability has always been a big part of my life.

Chief Executive's review
continued

On asset health innovation, we are developing valve clean-up techniques and looking at drone technology for inspection, flying drones beyond visual line of sight to inspect large areas of our network and assets.

And in the US, National Grid Partners has a growing portfolio of 23 companies and four fund investments at a fair value of £178 million. It is investing in a smarter energy future, with artificial intelligence (AI) playing a central role. For example, this year, we invested in Silicon Valley-based AiDash, which uses satellite imaging and AI to protect transmission and distribution grids from overgrown vegetation.

Delivering for our customers efficiently

We continue an open dialogue with our regulators. In the UK, following a detailed analysis of Ofgem's RIIO-2 Final Determinations, we accepted the overall package for the ESO, and broadly accepted the majority of the package for the ET and GT businesses. Whilst we welcome the significant movement from Ofgem's Draft Determinations in total expenditure allowances and greater flexibility around future net zero investment for ET and GT, we have submitted a technical appeal to the Competition and Markets Authority (CMA) regarding Ofgem's proposed cost of equity and outperformance wedge. The CMA has accepted our appeal on both points and expects to reach a decision in the autumn.

In the US, we filed a proposal to increase gas distribution rates for our Massachusetts gas customers. This rate case is still underway and if approved, these new rates would come into effect in November 2021. Separately, our upstate New York three-year rate agreement expired in April 2021, and in July we submitted a request for new delivery prices beginning in July 2021. And in May, we reached an agreement on a joint proposal with New York PSC Staff for new rates in KEDNY and KEDLI, our downstate New York gas businesses, which provides funding for research into hydrogen blending, and geothermal and natural gas projects. The NYPSC's final decision is expected later this summer.

As we invest to decarbonise the energy system, driving operational excellence and financial discipline to keep bills affordable for customers is more important than ever.

That's why, in the UK, we launched ConnectNow, a one-stop portal for electricity connection customers, which received high direct customer satisfaction feedback.

Customer performance remains a key metric for National Grid, and so I'm pleased we've seen a steady increase in our customer satisfaction scores for ET and GT. In the US, customer sentiment has improved over the past year and we have appointed a Chief Customer Officer. I am confident that they will help to further improve customer satisfaction and make it easier for our customers to engage with us.

In both the UK and US, we continued to maintain high levels of reliability on all our networks. We successfully managed low levels of demand, particularly in the UK, with the ESO developing new flexibility tools to maintain security of supply. And in the US we've responded to some of the most impactful storms we've seen in almost 20 years. Hurricane Isaias was one of the most severe weather events to affect our customers. Despite COVID-19 adjustments made early on to accommodate Center for Disease Control (CDC) and other restrictions, our storm response performance has remained focused and steady. Our efforts around recovery and response continue to be recognised across the industry, receiving multiple awards in 2020, including from the Edison Electric Institute and the North Atlantic Mutual Assistance Group.

Optimising performance

The UK regulated businesses delivered a weighted average RoE of 12.6%, consistent with the return achieved in the prior year. US RoE decreased to 7.2%.

Enabling the energy transition for all

In October, we published our Responsible Business Charter (RBC), which set out ambitious future priorities for the business.

We are publishing for the first time a separate Responsible Business Report alongside the Annual Report to report annually against the commitments set out in our Charter.

Our carbon emission reduction targets are aligned to a well below 2°C pathway and have been officially verified by the Science Based Targets initiative (SBTi).

Empowering colleagues for great performance

As we look ahead at the significant changes needed across our industry, the politics and regulations to enable the decarbonisation of the economies in which we operate, it is important that we are set up in the best possible way to deliver against the challenges of a clean energy future.

That's why we are evolving our operating model in both the US and the UK. We need to continue to drive efficiency through innovation to meet the changing needs of our customers and will do so through a programme of changes over the next 18–24 months.

In our RBC, we set specific and sustainable targets for diversity across the organisation for the next 5–10 years in order to achieve the inclusive culture and diversity we seek. We want our workforce to reflect the diversity of the communities we serve and are committed to providing an inclusive, equal and fair working environment. I am delighted that we have appointed a Chief Diversity Officer for the first time, this year. This will help us achieve our ambitions.

Against the backdrop of the COVID-19 pandemic, when young people are facing one of the toughest job markets for generations, there is a huge opportunity to support and leverage motivated young minds through apprenticeship programmes.

Unemployment and social exclusion amongst young people existed before the COVID-19 pandemic, but the economic downturn in the UK and US has seen youth unemployment double, pushing young people even further away from the job market. That's why we set up Grid for Good, a flagship energy industry programme to deliver a positive impact to socio-economically disadvantaged young people. The scheme sees us working with our supply chain partners and charities to provide training and employment opportunities for 16–24 year olds, who come from disadvantaged backgrounds. We've already helped 1,000 young people through our pilots and trials, and in our first year, this will encompass 12,000 volunteering hours from our colleagues.

Looking ahead

I would like to welcome Paula Rosput Reynolds as our new Chair. Paula joins us as the first female Chair at National Grid. She brings a wealth of board-level experience leading global companies in the energy and financial sectors. Her experience within international and US companies and insight into strategic and regulatory issues will be an asset to the Board, and I look forward to working alongside her.

Our outgoing Chair, Sir Peter Gershon, has made an exceptional contribution to the business and I would like to thank him on behalf of the Board for his wise counsel and strategic direction.

Finally, I would like to extend my personal thanks to all my colleagues who have shown such dedication and commitment to delivery and ensuring the networks keep running as efficiently and safely as ever through a uniquely challenging time.

John Pettigrew
Chief Executive

Scan here to view our video

Or visit:
nationalgrid.com/about-us/annual-report-and-accounts

Our business environment

As well as managing through the COVID-19 pandemic, our societal ambition remains to achieve net zero. We are committed to working with governments and regulators in the UK and US to help them meet their own carbon reduction targets in a fair and affordable way.

Net zero

The COVID-19 pandemic has contributed to an increase in climate action by many stakeholders this year, including: investors, companies and governments. This global focus on the 'critical decade' (2020-2030) has created a drive for action which has been supported by UK and US governments.

68%

National Grid's reduction in Scope 1 & 2 carbon emissions since 1990.

Net zero

by 2050

We are continuing to progress towards our own net zero commitment to reduce our greenhouse gas (GHG) emissions to net zero by 2050. As well as our own direct emissions, we are also committed to working with governments and regulators in the UK and US to help them meet their own carbon reduction targets. As a principal partner for COP26, we will be playing our part to show how we can achieve net zero, utilising the technologies we have today and developing opportunities for the future.

Stimulating a 'green economic recovery', with an emphasis on jobs and skills for the future, will be key as economies are rebuilt in the wake of COVID-19. At National Grid, we are focused on how to manage the energy transition whilst balancing key societal issues for the regions in which we operate.

2020/21 developments

UK

Following the UK's binding commitment to net zero emissions by 2050, further developments towards decarbonising the economy have been seen throughout 2020.

2020 was the greenest year on record for Great Britain's electricity system, with record-breaking levels of power from zero-carbon sources aided by low electricity demand during the nation's lockdown.

The publication of the Prime Minister's Ten Point Plan and the Energy White Paper in late 2020 has committed the UK to delivering clean energy and transport with support for: increased offshore wind capacity, hydrogen trials, nuclear and CCUS investment, roll-out of electric vehicles and charging infrastructure, greener maritime trials, and targets to decarbonise our homes.

US

Early actions by the Biden Administration signal climate change as a top priority for the federal government over the next four years. Executive Orders were issued re-joining the Paris Climate Agreement and directing all federal agencies to review, revise and add policies to mitigate climate change and bolster environmental justice.

The Energy Act of 2020 was passed by US Congress in December 2020, extending financial support to key decarbonisation technologies and infrastructure through tax credits, research and development funding and loan guarantees.

The Accelerated Renewable Energy Growth and Community Benefit Act was passed in April 2020, which granted the New York Power Authority (NYPA) the authority to designate priority transmission projects (PTPs) in order to expedite New York State's green energy policy objectives pursuant to the Climate Leadership and Communities Protection Act.

Massachusetts proposed its Clean Energy and Climate Plan to 2030, which provides details on the actions the state will undertake through the next decade to ensure the 2030 emissions limit is met. Both Massachusetts and Rhode Island launched the Transportation & Climate Initiative, which commits to cutting GHG emissions from motor vehicles by 26% between 2022 and 2032 and investing $300 million per year in low-carbon transport. In July 2020, New York issued an EV 'Make Ready' Order, authorising public utilities to invest $700 million through to 2025 to build out EV charging infrastructure.

Our response

- We have been announced as a COP26 principal partner and are working closely with the UK government and other sponsors to create a successful and ambitious climate change conference in November 2021.
- In April 2021, National Grid joined the SBTi, with our commitments to reduce our emissions in line with climate science approved by SBTi. The targets we have set are consistent with the reductions required to keep warming to well below 2°C.
- For the fifth consecutive year we received the prestigious climate change 'A' score from CDP Climate Change for our actions in corporate sustainability for cutting emissions and moving towards a low-carbon economy.
- This year, we are presenting our shareholders with our intention to share our climate transition action plan ahead of the Company's 2022 AGM and for an annual vote on our climate change-related net zero commitment and associated targets such as our 2030 net zero target.
- We are strategically pivoting our UK portfolio towards electricity, to be at the heart of the energy transition. On 18 March 2021 National Grid announced that it had agreed to acquire WPD from PPL subject to certain regulatory approvals. The proportion of the Group's assets in electricity will increase from around 60% to around 70% subject to completion of the WPD Acquisition, the NECO Sale and the proposed sale of a majority stake in our UK GT business.
- Our UK GT business got approval for £9 million of funding via the Network Innovation Competition (NIC) for FutureGrid, a project to test the possibilities of using hydrogen on the National Transmission System (NTS).
- We joined 11 leading organisations in the £75 million bid to create the world's first net zero industrial cluster in the Humber region in the UK.
- We helped secure $12 million funding from the US Department of Energy to facilitate research and development in accelerating hydrogen blending into the transmission infrastructure, working with six national laboratories, 20 industry leaders and leading academic institutions.
- The innovative 'Home Energy Savings Program' has been launched in Central New York in cooperation between the New York State Energy and Research Development Authority (NYSERDA) and National Grid. The programme supports clean energy jobs and offers energy bill savings. This also supports Governor Cuomo's nation-leading goals of an 85% reduction in greenhouse gases by 2050.
- NYPA announced National Grid as its selected co-participant to move forward with the Northern New York PTP, a major transmission line rebuild that will harden the resilience of New York's power grid. The project includes rebuilding transmission lines and rebuilding and expanding several substations along the impacted transmission corridor, and will help unlock existing renewable energy sources in the region and is expected to bring hundreds of clean energy construction jobs.
- A power purchase agreement with Basin Electric Power Cooperative has been published for a large solar energy project in South Dakota. It is expected to generate 128 MW of clean power from 2022, provide support for the local community, and offer around $500,000 of charitable funds to The Wild Springs Education Fund.
- The 40 MW Michigan Solar Portfolio has started construction to power around 8,000 homes.
- The New York Energy Solution, being developed by New York Transco and our NGV business joint venture, continued to progress through New York State's Article VII permit application process to modernise the electricity grid. The project is expected to start construction in 2022.
- National Grid Partners became an official investor partner of 2020 The Clean Fight New York with the aim of supporting clean energy startups with goals of building back better after COVID-19 and providing clean energy jobs for the region.

The future of heat:
The UK Climate Change Committee's (CCC) 6th Carbon Budget report in 2020 highlights there will be a combination of solutions required to decarbonise heat. These solutions will include both mature and nascent technologies of electrification, hydrogen, biofuels and carbon capture utilisation and storage. As a result, we currently continue to believe that our gas assets will have useful purpose in supporting the transition to clean gases. However, the scale of the networks will be dependent on technological developments and policy choices of governments and regulators.

The future of power:
The UK CCC's 6th Carbon Budget report in 2020 highlights the importance of electrification across power, heat, and transport, for meeting net zero. As large-scale renewable resources play an essential role in the low-carbon future, we are excited to help connect these clean resources to our communities. We recognise the need for continued investment in our transmission and distribution assets to make this a reality.

The future of transport:
We will continue to promote both EV adoption and charging infrastructure, preparing for 'make ready' investments to reinforce our infrastructure across the UK and US.

Our business environment continued

	2020/21 developments	Our response
Fairness and Affordability National Grid delivers energy safely, reliably and affordably to the communities we serve. As well as affordability, we will play our role in ensuring that no one is left behind in the short term during the COVID-19 crisis, or in the longer-term transition to clean energy. **#1** #1 Ranked US electric utility for energy efficiency by American Council for an Energy-Efficient Economy. **3%** UK electricity transmission network costs per average household dual fuel bill.	**UK** Cost of energy and the lowest cost transition to net zero continues to be a key priority, evidenced by Ofgem's RIIO-2 Final Determinations to reduce network costs in energy bills and the plans set out by BEIS in the Energy White Paper to keep energy bills out to 2030 in line with 2019. Advisors such as the Climate Change Committee continue to stress the importance that net zero is delivered in a fair way as a 'just transition' across society, with vulnerable consumers protected, and have provided analysis on how both net zero and affordable energy bills can be achieved. **US** COVID-19 has brought serious economic hardship to many of our customers, elevating affordability concerns even further. Each of our US jurisdictions last year ordered extended moratoria on disconnection for non-payment. The crisis also saw increased prioritisation and deferral of utility spend to alleviate economic distress during the pandemic.	• In October, across our UK and US businesses, we launched our Responsible Business Charter, committing to have a real impact across five key areas: the environment, our communities, our people, the economy, and our governance. • We have set up Grid for Good to help play our part in addressing the effects of the economic downturn in the UK and US which has seen youth unemployment double in the wake of the pandemic. • National Grid was one of 200 signatories to an open letter from UK business leaders to government calling for the alignment of economic recovery plans with the UK's wider environmental and climate goals, including a quote from John Pettigrew calling for 100,000 jobs to be created in the energy sector as we work towards net zero. • In the UK, we donated £83,000 to the Trussell Trust, following a £100,000 donation to the Trust previously to support its network of 1,200 food bank centres providing emergency food and compassionate, practical support to people in crisis. • In the US, we deferred our New York rate increases and established special COVID-19 payment plans to relieve pressure on customers during the challenging COVID-19 period. • In our US business, we partnered with Feeding America for Hunger Action Month in September to donate $100,000 for helping tackle food insecurities across Massachusetts, New York, and Rhode Island. • In the US, we filed a customer assistance proposal for NIMO with our New York regulator that would provide up to $50 million in financial assistance to support economically vulnerable residential customers as well as businesses that are struggling because of the pandemic's financial impact. • More than $760,000 funding has been given in economic development grants for seven Western New York initiatives to grow the regional economy. • $500,000 support funding was provided to customers with health impacts, financial hardships and disruption caused by COVID-19, helping communities across Massachusetts, New York and Rhode Island. • Via National Grid Renewables we established a Community Fund for its 200 MW Crocker Wind Farm in South Dakota. The Community Fund will provide an estimated $800,000 in charitable funding to benefit surrounding communities over the first 20 years of the project's operation.
Decentralisation The energy system continues its transition from high to low carbon. This change coincides with a shift to more decentralised generation, including renewables and battery storage. As the volume of this intermittent and distributed generation increases, a more resilient and flexible system will be required; one that makes best use of available energy resources to meet consumers' needs in a balanced, efficient and economical way. **28%** of generation in the UK is now connected at the distribution level or behind the meter.	**UK** There is continued support for developing decentralised electricity systems, supported by developments in smart systems and flexibility solutions, and local initiatives to develop decarbonisation pathways. The BEIS Energy White Paper shines a light on the growing importance of a smarter, more flexible system, which has the potential to unlock savings of up to £12 billion per year by 2050 compared to a system with low levels of flexibility. This in turn will lower costs for customers of the future as it means less generation and network need to be built. **US** The state of Massachusetts expanded its incentive programme ('SMART') in April 2020 to support the development of solar energy, doubling capacity eligible for incentives to 3,200 MW and including adders for paired storage. New York State regulators approved plans to install advanced metering infrastructure which will allow future customer-centric solutions and services.	• The WPD Acquisition will further enable us to be at the heart of the energy transition and further support the development of decentralised electricity systems in the UK. • In the UK, the first small-scale generator was connected to our Nursling substation via the tertiary winding on our super grid transformers. • National Grid announced the transition to a new operating model effective from April 2021. As a result, US business operations will be aligned to New York and New England to be more customer focused. • Following acquisition of Geronimo Energy, a leading wind and solar developer in North America, last year, we expanded our onshore portfolio and launched National Grid Renewables. • Our partner Sunrun, the leading home solar, battery storage and energy services company in the US, recently announced the launch of two pilot programmes to aggregate home batteries to act as virtual power plants in Southern California and New York. The programmes will enable approximately 300 customers in each state to create distributed solar-plus-storage networks through Sunrun's Brightbox home energy systems that local utilities can then call on to provide peaking capacity.

	2020/21 developments	Our response
Digitalisation As the COVID-19 pandemic accelerated the migration to digital, utilities continued to advance their digital capabilities. Customers are benefiting from more access to digital information to support their decision making and more digital ways of engaging. Through the power of sensor data, advanced analytics and Artificial Intelligence (AI) we are improving the way we manage our assets and by providing omni-channel digital tools we are able to enhance the productivity and engagement of our employees. **150** New digital substations to be built in the next 10 years by National Grid on its electricity networks. A digital substation leverages the latest technology to enable better control of the electrical system, providing more real-time data for predictive maintenance, enhanced network reliability and savings for customers.	Even before COVID-19, an energy consultancy, DNV, had found that 40% of the 1,919 energy professionals they surveyed considered digitalisation to be at the core of their corporate strategies. The impetus to accelerate digital transformation has only grown since then, with the research group International Data Corporation, expecting a 27% increase in comprehensive digital roadmap strategies to 75% of all organisations by 2023 in their most recent forward-looking predictions. Utilities across the globe are facing greater pressure than ever to decarbonise and democratise our energy resources. That will only be possible through effective digital transformations that put forward our best digital innovations and drive widespread cultural change across the organisation. Advancements in AI, machine learning, the internet of things, cloud computing, and digital workflow automation will drive greater efficiencies and better decision-making for all energy stakeholders while we push for a cleaner and fairer future.	• In the UK, we introduced a brand-new Interconnector Monitoring and Response Centre (IMRC) across our North Sea Link and Viking Link interconnectors, currently under construction. The IMRC will deliver numerous benefits such as increased resilience, a closer relationship between the operators and the commercial teams as well as increased efficiency. It will also provide unique opportunities for our IMRC operators to develop as they work across both NSL and Viking Link. • In the US, we have invested in a data-driven work plan optimisation product that will deliver eight-figure capital and operational expenditure savings within four years. This product delivers an optimised work, budget and resource plan. • Re-imagined and launched a new billing experience for our large commercial and industrial customers that manage several hundred bills monthly for large mutli-building and multi-facility organisations. This intuitive and easy to use interface has improved customer satisfaction by 63% for this segment as well as increased e-bill and e-pay enrolment by 50% which helps save on paper and mailing costs. • Leveraging satellite imagery along with computer vision AI, we are directing our vegetation management teams to focus on areas of the network that carry the greatest risk of vegetation-driven outages. This replaces traditional time-based vegetation management with real-time, AI-driven, optimised decision-making, reducing operational costs, and improving the reliability of the electricity network. • Our Digital Acceleration Team has been working with our UK ET business to implement two innovative digital products – ConnectNow, which lets new customers research, apply for and track connection applications online, and Connect3D, which will digitise our connections design process, reducing lead times and enabling cost savings through standardisation across customer and asset replacement projects. • National Grid Partners has invested $6 million in two artificial intelligence startups (Aperio Systems and AiDash) to secure critical network infrastructure and reduce costs for customers.

Case study – Gas

The future of clean gas across the UK and US

UK – Landmark study reviews current technology that could help roll out hydrogen across the UK gas network

National Grid, in collaboration with Cadent, Northern Gas Networks, SGN and Wales & West Utilities, has completed a feasibility study that could promote an earlier and more flexible conversion to hydrogen for certain areas of the UK gas network. The first-of-its-kind project examined the application of hydrogen deblending technologies within a network to control the gas blend that a customer might receive. Hydrogen deblending would allow for a varying mix of hydrogen and natural gas to flow through the network, and then separating the two gases so a controlled blend can be supplied to the customer. The deblending feasibility study has shown that the UK gas networks could use the concept of deblending as a tool to aid the transition to a green gas network which could help facilitate the decarbonisation of industry, heating, transport and green power generation.

US – Accelerating hydrogen blending to decarbonise heat

National Grid helped secure $12.45 million in funding from the US Department of Energy to facilitate research and accelerate the potential of hydrogen blending, working with six national laboratories, 20 industry leaders and leading academic institutions to support the research on blending hydrogen into natural gas distribution systems. This work will directly support National Grid's pathway to net zero, including unlocking the true potential for hydrogen as a renewable source of energy that can serve multiple sectors of the economy, including heat.

Case study – Electricity

The future of electric transport across the UK and US

UK – Supporting the roll-out of high-power electric vehicle (EV) chargers across the motorway network

National Grid is actively engaging with the wider transport industry to support transport decarbonisation, from heavy goods vehicles (HGV) and rail, through to the maritime and aviation sectors. With a focus on passenger transport, National Grid has been working alongside the UK distribution companies to support the roll-out of high-power chargers (>150kW) across the motorway network, called the Rapid Charging Fund. Recently, the Rapid Charging Fund received £950 million of government funding, to support the necessary connection infrastructure to facilitate this roll-out. This covers transmission and distribution connections across the UK, targeting at least six high-power chargers by 2023, aiming for 6,000 by 2035. This will enable drivers to be within 30 miles of a high-power charger across the motorway network, thus reducing range anxiety, supporting the wider uptake and deployment of passenger EVs and improving air quality.

US – Launching scalable vehicle-to-grid (V2G) electric school buses

Over the last year, National Grid partnered with Highland Electric Transportation and the City of Beverly in Massachusetts to deliver a V2G electric school bus and accompanying charging infrastructure to Beverly Middle School. The project is the first-of-its-kind to lease the electric bus to a school at the cost of a standard diesel bus. Highland was able to achieve this through grants and by participating in National Grid's and ISO-New England's demand response programmes such as V2G energy storage, which will begin this summer. The project has generated a great deal of interest in electric school buses throughout the rest of National Grid's territory and has been critical in enabling Highland to secure a $253 million venture capital investment and a contract with Montgomery County Schools in Maryland for 326 electric school buses. This innovative business model demonstrates the opportunity for V2G to improve electric bus project economics, accelerating the uptake of electric transport.

Delivering against our strategy

To own and operate large, long-life energy assets in networks and renewables that deliver fair returns and high societal value. Our portfolio of mainly regulated assets in stable geographies will be underpinned by a strong and efficient balance sheet.

Our purpose

To Bring Energy to Life.

Our vision

To be at the heart of a clean, fair and affordable energy future.

Our values

Every day we … do the right thing, find a better way, and make it happen.

Taken together, these values guide our actions and behaviours as a responsible business and help us create a culture where colleagues become less cautious and take greater ownership. At National Grid, we expect our leaders to be role models and engage all colleagues to demonstrate our values:

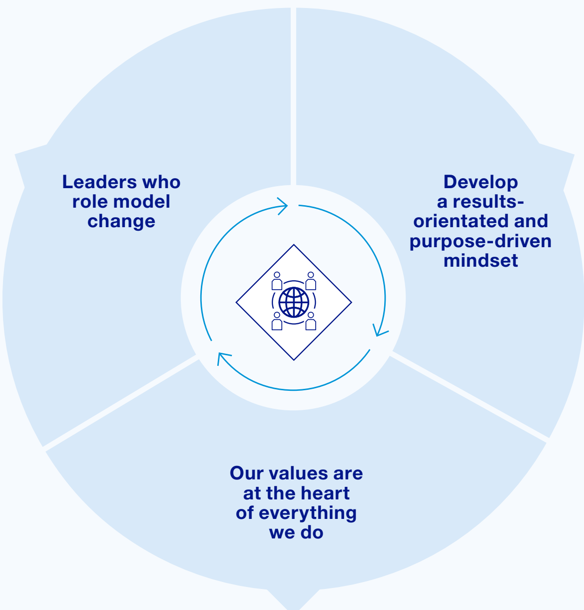
"Do the right thing" means we act safely, inclusively and with integrity. We support and care for each other, and ensure it is safe for colleagues to speak up.

"Find a better way" is all about working as one team to find solutions, embracing learning and new ideas.

"Make it happen" means being bold and acting with passion and purpose, taking ownership to deliver for customers and focusing on progress over perfection.

Our culture

- Change is owned and led by leaders who empower colleagues to make decisions and take ownership
- Measured feedback for all leaders to adjust and align behaviour and increase accountability
- Leaders act safely, inclusively and with integrity



- Greater ownership and accountability
- Deliver at a greater pace for our customers and continue to drive efficiency
- Embrace bold thinking and new ideas
- One team, focused on finding solutions

- Colleagues are recognised for living our new values
- Encourage sharing stories demonstrating how change is taking place; empowering colleagues to challenge and speak up where our values are not being lived
- Our values are instilled into our people, processes, policies and ways of working

Strategic priority

Enable the energy transition for all

Deliver for customers efficiently

Grow our organisational capability

Empower colleagues for great performance

What this means | **2020/21 achievements** | **Looking ahead**

Enable the energy transition for all

What this means

We will **increase the positive impact we make on society**, environmentally and socially, primarily through enabling a transition to a clean energy future. By innovating to decarbonise our networks, investing for a changing climate, and influencing policy and regulation, we will enable clean electricity, heat and transport, and **champion better outcomes for all**; outcomes where skills are developed and where no one is left behind.

Business environment link:

2020/21 achievements

- In the UK, our GT business secured Ofgem innovation funding to deliver FutureGrid – a hydrogen transmission test facility, and announced Project Union, an ambitious plan to develop a UK hydrogen backbone
- In the UK, our ET business has been working alongside the UK electricity distribution companies to support the roll-out of high-power chargers (>150kW) across the motorway network
- The ESO published the Offshore Coordination Project Phase 1 report to facilitate offshore wind's contribution to the net zero target and reduce the environmental and social impact of onshore connections
- US service areas were ranked among the top five states in energy efficiency in the 2020 State Energy Efficiency Scorecard
- National Grid Renewables got approved investment in the 200 MW Prairie Wolf Solar project in Illinois, which is expected to begin operations in 2021

5,147
coal-free hours in the UK in 2020 (3,666 hours in 2019)

Looking ahead

- We will support the decarbonisation of the communities we serve, migrating to cleaner energy solutions across the board
- We will enable a fully decarbonised electricity grid through grid modernisation and increased flexibility, and connect renewables quickly and efficiently
- We will lead the way in the decarbonisation of gas, by investing in a range of solutions like renewable natural gas, blending hydrogen in our networks and carbon offsetting

Deliver for customers efficiently

What this means

Delivering **safe, reliable, resilient and affordable energy for customers in our communities** has always been at the heart of what we do. As we invest to decarbonise the energy system, driving **operational excellence** and **financial discipline** to **keep bills affordable** for customers is more important than ever.

Business environment link:

2020/21 achievements

- Our ET business launched ConnectNow, a one-stop portal for electricity connection customers, which received direct customer satisfaction feedback of 8.8/10
- The ESO launched a new wider access Application Programming Interface that allows smaller providers to interface more easily and cost-effectively with the balancing mechanism
- ISO-New England selected the Ready Path Solution, developed by National Grid and Eversource in the first ever FERC Order 1000 Solicitation in New England, to maintain grid reliability when the Mystic Generating Station retires in 2024

£5bn
investment in energy infrastructure

Looking ahead

- We will continue to deliver safe, reliable and affordable energy for our customers around the clock no matter the weather
- We will do this by driving operational excellence and financial discipline through every part of our business and continuing to build relationships with regulators and policy-makers that strengthen partnerships and unlock added value

Grow our organisational capability

What this means

In the context of a rapidly changing energy sector, we will need to build on and evolve our organisational capabilities. We will **digitally transform** our processes, strengthen our **customer focus**, and sharpen our **commercial edge**. To successfully make this transformation and deliver results, our **ability to implement change effectively** will be paramount.

Business environment link:

2020/21 achievements

- We implemented a new group operating model focusing on six business units across the UK and US to improve the quality of our customer and stakeholder relationships; to evolve our behaviours and ways of working, instilling a culture of ownership and accountability; and to drive a step change in the efficiency and effectiveness of our organisation
- We established an agile transformation office in the UK, which is responsible for accelerating National Grid's transition to agile delivery and enabling teams across the business to deliver rapid, high-quality change
- We designed a new digital product, 'On My Way', for the US electricity field force to receive, update, and close out work digitally in real time. The tool is expected to deliver $8–$13 million in savings

70%
of required artefacts and

50%
of stage gates removed to streamline our software development process

Looking ahead

- We will build strong leadership and teaming capabilities to create a generation of leaders who empower, take accountability and act decisively
- We will create an organisation built on fully accountable business units that optimise delivery for local stakeholders supported by a thin (US/UK) regional layer

Empower colleagues for great performance

What this means

All our people shape the culture and **ways of working** needed to deliver performance and outcomes that will exceed all our stakeholders' expectations including customers, communities, regulators and investors.

Our leaders will empower our people to be at their best at each moment that matters to them. From attracting **diverse talent**, **developing** our people and **recognising great achievement**, we will ensure that our colleagues are engaged and enabled to work towards a clean energy future.

Business environment link:

2020/21 achievements

- Our ONE employee resource group (ERG) was awarded the title of Top Network Group at the 2020 Ethnicity Awards for its support in rolling out education and mandatory training in the UK
- Through the Responsible Business Charter, we committed to achieving 50% diversity in senior leadership and our new talent programmes by 2025
- Chris Cleveland, leader in Safety, Health, Environmental, Assurance Risk and Resilience team in National Grid Metering, has been named as one of the Top 30 future leaders and selected to be on the mentoring programme from Safety4Good outside of National Grid

38.5%
women on our Board and

42.9%
women on our Group Executive Committee

(33% for both women on our Board and our Group Executive Committee in 2019/20)

Looking ahead

- We will embed our purpose, vision and values, and reinforce our new third value 'make it happen'
- We will strategically manage our people; simplify our banding structure to minimise hierarchy and align talent management and reward structures to employee performance

Key performance indicators

The Board uses a range of metrics, reported periodically, against which we measure Group performance. These metrics are aligned to our strategic priorities.

Link to strategy

Enable the energy transition for all

Grow our organisational capability

Deliver for customers efficiently

Empower colleagues for great performance

A Indicates an alternative performance measure

Link to remuneration

Remuneration of our Executive Directors, and our employees, is aligned to successful delivery of our strategy. We use a number of our KPIs/alternative performance measures as specific measures in determining the Annual Performance Plan (APP) and Long Term Performance Plan (LTPP) outcomes for Executive Directors. While not explicitly linked to APP and LTPP performance outcomes, the remaining KPIs and wider business performance are considered. For further detail, please see our Directors' Remuneration Report, on pages 92 – 113.

Further reading:

You can find out additional detail to support some of these KPIs in our Responsible Business Report. This document can be found by visiting: nationalgrid.com/responsibility

Business-unit-level measures that are specific to our strategic priorities are set out within our Principal Operations review, on pages 40 – 45.

Our non-financial KPIs detailed on pages 21 and 22 do not include data from Geronimo, the National Grid Renewables (NGR) business, acquired in July 2019.

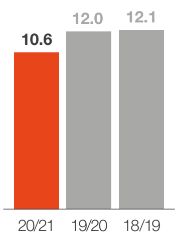
Financial measures

Strategy link | **KPI and performance** | **Progress in 2020/21**

Group Return on Equity (RoE, %) A

We measure our performance in generating value for shareholders by dividing our annual return by our equity base. This calculation provides a measure of whole Group performance compared with the amounts invested in assets attributable to equity shareholders.

Target: 11–12.5% each year



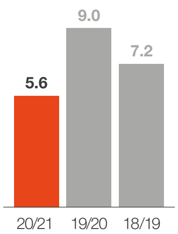
Group RoE of 10.6% was lower than 2019/20 (12.0%), principally due to the impact of COVID-19, higher storms and the retention of the £2 billion Cadent proceeds, which was used to finance asset growth in our US business.

Group RoE in 2018/19 and 2019/20 has been recalculated to reflect the revision to decrease the comparative goodwill balances (see note 1F on page 137 for details).

Total regulated asset growth (%) A

Maintaining efficient growth in our regulated assets ensures we are well positioned to provide consistently high levels of service to our customers and increases our future revenue allowances. This includes investment for a changing climate, enabling clean electricity, heat and transport.

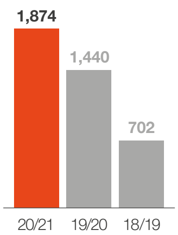
Target: 5–7% growth each year



Asset growth during the year was 5.6% (2019/20: 9.0%). This was primarily driven by lower UK RAV growth of 2.2% (2019/20: 3.8%) due to lower inflation and a slower rate of US rate base growth of 8% (2019/20: 12%). Asset growth in 2019/20 included £209 million for the acquisition of NGR in NGV.

Cumulative investment in delivering new low-carbon energy sources (£m)

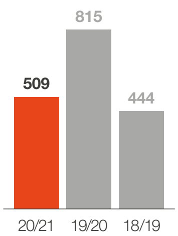
We invest in new low-carbon energy sources primarily through our interconnector businesses (North Sea Link, IFA2 and Viking Link), investments in and partnerships with, companies delivering low-carbon energy sources (for example, our partnership with Sunrun) and investments into large-scale renewables (for example, our new investment in NGR).



Investment in delivering new low-carbon energy sources decreased by £304m (41%) in 2020/21 compared to 2019/20. This is primarily due to the initial investment into the acquisition of NGR in 2019/20. Excluding the acquisition of NGR of £209 million in 2019/20, investment in new low-carbon sources decreased by around £100 million. This is primarily due to a decrease in interconnectors under construction, investment driven by timing of cable and convertor milestone activity, and lower investment on IFA2 as it became operational in January 2021.

NGV capital investment (£m) A

NGV is focused on investment in a broad range of energy businesses across the UK and US, including our interconnector business, large-scale renewable generation, LNG storage and regasification, and energy metering.



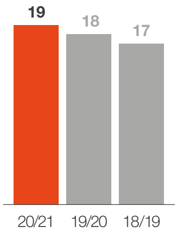
NGV capital investment has decreased year-on-year by £306 million (38%). This is principally due to the acquisition of NGR in July 2019 and a net decrease in interconnectors under construction, investment driven by timing of cable and convertor milestone activity, and lower investment on IFA2 as it became operational in January 2021.

Non-financial measures

Strategy link | **KPI and performance** | **Progress in 2020/21**

Cumulative low-carbon generation connected to our UK network (GW)

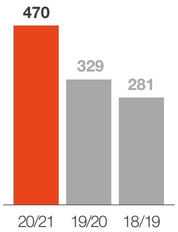
Low-carbon generation supported by our network to date.



A total of 19.0 GW of low-carbon generation is currently connected to our network, following additional offshore wind capacity connecting at Triton Knoll (+360 MW) and Burbo Bank Extension (+4 MW). The government's offshore wind sector deal and continued cost reductions observed in the latest Contracts for Difference (CfD) allocation round, indicate further increases in capacity over the coming years. Additionally, we have seen connections of Tees Renewable Energy Plant (+285 MW of Biomass-fired generation) and increased capacity at Sizewell B Nuclear plant (+7 MW).

Connections of renewable schemes to US electric distribution network (MW)

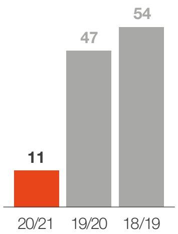
The table represents the amount of customer-owned renewable energy capacity installed on our distribution network across our US footprint. Given the variability and unpredictability of customer-driven projects, the Company does not presently have a MW target. Current targets primarily focus on regulatory compliance and customer need date attainment.



The Company interconnected 470 MW of distributed renewable energy resources in 2020/21 across our service territory, an all-time high and a 37% increase compared to 2019/20. Massachusetts and New York installed a record amount of capacity (207 MW and 177 MW, respectively) and Rhode Island experienced a slight decline in customer-ready projects to interconnect. The Company continues to make progress in Massachusetts and Rhode Island to enable greater renewable energy integration and has completed 637 MW area-wide transmission and distribution studies for non-residential systems and 314 MW was still in progress in 2020/21. While these systems have represented less than 5% volume of connected applications, they have accounted for 78% of the installed capacity over the last three years.

Contribution of our corporate responsibility work (£m)

Working with communities is important for creating shared value.

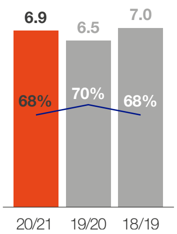


We use the Business for Societal Impact (previously London Benchmarking Group) measurement framework to provide an overall community investment figure which includes education (but excludes investment in university research projects). While we have no specific target, our overall aim is to ensure we add value to society to enable communities to thrive.

In the UK, the overall contribution of our activities was valued at over £3.7 million. In the US, our contribution was just over £7.5 million. This gives us a combined Group-wide contribution of over £11 million. This was lower than prior years because some events were cancelled due to COVID-19.

Climate change – Scope 1 and 2 emissions

This is a measure of our reduction of Scope 1 and Scope 2 emissions of the six primary Kyoto greenhouse gases. Our target is to reduce our greenhouse gas emissions by 80% by 2030, 90% by 2040 and to net zero by 2050, compared with our 1990 emissions of 21.6 million tonnes. The percentages in the adjacent chart reflect a reduction in our emissions from a 1990 baseline.



We seek to continuously improve our environmental performance, in instances going beyond regulatory requirements, through implementation of our ISO 14001-certified Environmental Management System and Environmental Sustainability Standard.

Further reading
You can read more about the Task Force on Climate-related Financial Disclosures and our wider sustainability activities and performance on pages 62 – 66.

Our Scope 1 greenhouse gas emissions for 2020/21 equate to 4.7 million tonnes of carbon dioxide equivalent (2019/20: 3.9 million tonnes) and our Scope 2 emissions (including electricity line losses) equate to 2.2 million tonnes (2019/20: 2.6 million tonnes). This is a total of 6.9 million tonnes of carbon dioxide equivalent for Scope 1 and 2 emissions. These figures include line losses and are equivalent to an intensity of around 467 tonnes per £1 million of revenue (2019/20: 447 tonnes). Our Scope 3 emissions for 2020/21 were 28.9 million tonnes of carbon dioxide equivalent (2019/20: 30.8 million tonnes). In accordance with the greenhouse gas protocol, we have enhanced our measurement of Scope 3 emissions which has resulted in a consistent adjustment to all Scope 3 emissions presented in this report.

Our underlying energy use is 2,602 GWh where the UK and US are responsible for 1,627 GWh and 975 GWh respectively. This excludes fuels consumed for power generation in the US (16,155 GWh) and system losses (11,154GWh).

We measure and report in accordance with the World Resources Institute and World Business Council on Sustainable Development Greenhouse Gas Protocol. 100% of our Scope 1, 2 and 3 emissions are independently assured against ISAE 3410 Assurance Engagements on Greenhouse Gas Statements. This data complies with the UK government's Streamlined Energy and Carbon Reporting (SECR) requirements. For further detail, please see page 57.

Network reliability

We aim to deliver reliability by planning our capital investments to meet challenging demand and supply patterns, designing and building robust networks, having risk-based maintenance and replacement programmes, and detailed and tested incident response plans. We measure network reliability separately for each of our business areas. The table below represents our performance across all our networks in terms of availability.

%	2020/21	2019/20	2018/19
UK Electricity Transmission	**99.99997**	99.99997	99.99998
UK Gas Transmission	**100.00000**	99.99960	99.98963
US Electricity Transmission	**99.95429**	99.95511	99.95207
US Electricity Distribution	**99.91977**	99.94242	99.95046
Interconnector availability			
IFA interconnector	**95.4**	91.4	93.9
IFA2 interconnector	**96.5**	–	–
BritNed interconnector	**75.1**	98.6	98.2
NEMO Link interconnector	**99.2**	96.1	–

In both the UK and US, we continued to maintain high levels of reliability on all our networks.

US Electricity Distribution data has been re-stated for years prior to 2020/21, to reflect financial year information in comparison to calendar year.

BritNed suffered two offshore cable faults resulting in the asset being offline from December to February and again in March. The IFA2 interconnector started commercial operations in January 2021.

Key performance indicators continued

Non-financial measures continued

Strategy link | KPI | Performance | Progress in 2020/21

Customer satisfaction

We measure customer and stakeholder satisfaction, while also maintaining engagement with these groups and improving service levels.

	2020/21	2019/20	2018/19	Target
UK Electricity Transmission (/10)	**8.4**	8.2	7.9	**6.9**
UK Electricity System Operator (/10)	**7.5**	7.6	–	**8.2**
UK Gas Transmission (/10)	**8.2**	8.0	7.8	**6.9**
US Residential – Customer Trust Advice survey (%)	**66.2**	59.8	58.7	**61.6**
Metering NPS score (index)	**+61**	+40	+44	**–**

Our UK customer satisfaction (CSAT) KPI comprises Ofgem's electricity and gas transmission customer satisfaction scores. Figures represent our baseline targets set by Ofgem for reward or penalty under RIIO (maximum score is 10).

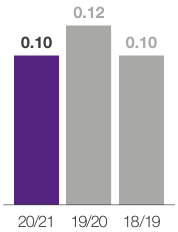
The US metric measures customers' sentiment with National Grid by asking customers their level of trust in our advice to make good energy decisions. The metric, which is tied to the value customers feel they receive from National Grid, has improved over the past year.

NPS scores reported represent the UK metering business.

Group lost time injury frequency rate (LTIs per 100,000 hours worked)

This is the number of worker lost time injuries per 100,000 hours worked in a 12-month period (including fatalities) and includes our employee and contractor population.

Target: < 0.1 LTIs

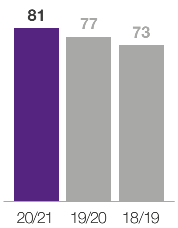


As at 31 March 2021, our Group lost time injury frequency rate (LTIFR) was 0.10, which is in line with the Group target. This is a combined employee and contractor LTI rate, which reflects our continued focus on encouraging good safety behaviours across the entire workforce.

The majority of lost time injuries are a result of individual issues such as slips, trips and falls, and soft tissue injuries from inappropriate tooling, lifting and carrying. We continue to address these and other incidents by implementing best practice injury prevention techniques that mitigate potential for harm factors.

Employee engagement index (%)

This is a measure of how engaged our employees feel, based on the percentage of favourable responses to questions repeated annually in our employee engagement survey. Our target is to increase engagement compared with the previous year.



We measure employee engagement through our employee engagement survey (EES) called Grid: Voice.

Our engagement score was 81%, which is four points ahead of the 2019/20 results.

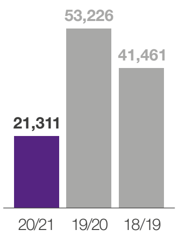
Workforce diversity (%)

We measure the percentage of women and ethnic minorities in our workforce. We aim to develop and operate a business that has an inclusive and diverse culture (see page 59).

During 2020/21, the representation of our ethnic minority groups has increased to reflect in-year changes. Prior year data has also been re-stated as a result of a correction that was made in our data systems. We continue to build our diverse talent pipeline.

Education, skills and capabilities (>1 hour interactions)

We support the development of young people's skills and capabilities through skills-sharing employee volunteering. In particular, we focus on STEM subjects as these support our future talent recruitment and our desire to see young people gain meaningful employment.



We measure quality (>1 hour) interactions with young people from all backgrounds on STEM subjects and broader industry skills development. In the UK, in 2020/21, we have had 921 quality interactions with young people in these categories. We had 20,390 interactions in the US. Overall we have seen a total of 21,311 interactions with young people, a decrease of 31,955 resulting from the impacts of the COVID-19 pandemic. Whilst levels of interactions dropped we were able to run some of our skills, training and education initiatives virtually.

Innovation

Our commitment to net zero continues to shape our innovation strategy. Our innovation and Research and Development (R&D) portfolio enables us to identify and target carbon savings for our own operations and we are also developing innovation projects to ensure we are prepared and play a pivotal role in the decarbonisation of energy for power, heat, transport and industry. We place a high value on collaboration to inform, generate ideas and solve the challenges we see ahead of us, and we work with technical organisations, academia and suppliers in the energy sector that align with our goals and objectives.

Innovation in our principal operations

The UK electricity transmission project portfolio has been developed around the themes of delivering cleaner and cheaper energy. We are focused on decarbonising our own operations and have worked on projects investigating ways to eliminate greenhouse gases from our gas-insulated equipment, replacing diesel generators with low-carbon alternatives for backup at our substations and reducing our carbon footprint in relation to our construction work. Our work with Smart Wires (see page 40) looks to use modular power flow control devices to increase renewable power transfer capability on our network. Following stakeholder engagement our research programme has focused on optimised asset management to help deliver cheaper energy as well as the monitoring and digitisation of operational technology, and in particular cyber security. We are aiming to open our Deeside Centre for Innovation to wider industry use in October 2021 as a key enabler for future innovation.

The ESO has delivered a diverse innovation portfolio that supports our role in keeping electricity supplies safe, reliable and efficient, while pushing the boundaries to enable a net zero energy future. Our innovation projects continue to explore how we work in ground-breaking areas such as blockchain and machine learning, as well as state-of-the-art technologies such as Virtual Synchronous Machines. We refresh our strategy and innovation priorities annually, based on consultation with our stakeholders, and this ensures we continue to focus innovation funding only on the most effective projects which can deliver consumer benefits.

Our UK gas transmission business continues to lead our research on transitioning to a hydrogen future. Our Hydrogen in the NTS programme includes hydrogen deblending, allowing for the separation of hydrogen in a natural gas mix, (see also the case study on page 17) and we have been working with the Institute of Gas Engineers and Managers to overhaul the gas technical standards to meet hydrogen specifications as well as securing funding to build a hydrogen test facility from decommissioned assets. Two key projects for methane emissions include developing a fugitive emission detection system and looking at reducing emissions from rotating gas equipment. On asset health innovation, we are developing valve remediation techniques and looking at drone technology for inspection, flying drones beyond visual line of sight to inspect large areas of our network and assets.

In Massachusetts, under the Company's Solar Phase I, II and III programmes, comprising approximately 35 MW of photovoltaics (PV) and 6.2 MW of energy storage, we continue to explore new technologies that can help reduce the interconnection cost and time of solar energy as well as researching how to move from interconnection of distributed energy resource (DER) to integration of it.

In New York, several Reforming the Energy Vision (REV) pilots are underway, testing market solutions in support of demand reduction programmes, smart city opportunities and renewable heating technologies to provide us with the knowledge and experience to evolve our systems for the grid of the future. These projects involve working with customers to manage usage and reduce energy bills and demand during peak times. We are also moving ahead with the procurement of energy storage projects. As part of our Niagara Mohawk rate case, we have proposed a distributed communications project to investigate greater integration of DER into our networks.

In our US gas businesses, our innovation continues to prioritise increasing public safety, protecting our workforce, reducing the cost of the work we perform and reducing our impact on the environment. We have several programmes exploring the introduction of renewable natural gas and alternative low-carbon heating solutions for our customers, as well as blending hydrogen into natural gas distribution systems, as referenced in the case study on page 17.

National Grid Partners

NGP, our corporate investment and innovation arm, continued delivering impact to the Group. Faced with the challenges of COVID-19, NGP focused on activities to keep the Company more secure and resilient by investing in emerging technologies such as artificial intelligence (AI), data security and cybersecurity, and embedding these innovations across our US and UK core operations. NGP's portfolio as at 31 March 2021 comprises 23 companies and four fund investments at a fair value of £178 million.

During the past fiscal year, NGP invested in six new start-ups – AccuKnox, AiDash, Aperio, Copper Labs, Linevision and Panaseer – as well as The Hive, a venture studio that helps entrepreneurs and corporations launch AI start-ups. NGP also led a $110 million Series C round in existing portfolio company Dragos – the most substantial investment ever in industrial control system cybersecurity.

NGP continues to build use cases of its portfolio innovations across our core businesses. In collaboration with NGP portfolio company Urbint, for example, National Grid is using AI to focus our damage prevention resources with increased precision; this has the potential to save millions of dollars annually in avoided damage and to minimise disruption to critical networks.

In July, NGP joined NYSERDA and other corporate and investor partners in sponsoring The Clean Fight New York, which helps scale up clean energy startups and innovators throughout New York State. Additionally, NGP launched the NextGrid Alliance (NGA), a consortium of 60+ utilities where best practices and technology innovations are shared. NGP held the inaugural NGA meeting in September and has been heads-down since then, working on issues like modernising utility infrastructure and keeping power grids safe from cyber threats. Later this year, NGP plans to host its first NGA Summit in the UK as part of COP26.

Also in 2020, NGP's Innovation team created a dashboard that, for the first time, tracks company-wide innovation efforts of all stages and sizes using common criteria. A three-member Innovation Reporting team devised the dashboard to help senior leadership better prioritise innovation and quantify its impact on the bottom line. The team engaged with more than 100 stakeholders and identified 399 discrete innovation activities. This new approach to innovation will be updated every six months to help leaders see trends across the organisation and seek out areas of collaboration.

NGP will continue to deliver strategic and financial value to our core businesses and looks forward to delivering on our mandate to invest in valuable startup technologies; tackling innovation and business development projects that can improve our company performance; and acting as a catalyst for change across the broader Group.

More details can be found at ngpartners.com including details of each of our portfolio investments.

Scan here to view our story

Strategy in action

Case study – Spot the robot dog

At National Grid we're always looking to the future, exploring new innovations and efficient ways of working, while ensuring our employees stay safe. Spot the robot dog is part of the new guard, conducting essential safety inspections at one of our US electricity substations.

Further reading
Further details about our R&D and innovation activities can be found in Additional Information on pages 247 – 249.

Internal control and risk management

The Board is committed to protecting and enhancing our reputation and assets, while safeguarding the interests of our shareholders.

Managing our risks

National Grid is exposed to a variety of uncertainties that could have a material adverse effect on the Group's financial condition, our operational results, our reputation and the value of our shares.

The Board oversees the Company's risk management and internal control systems. As part of this role, the Board sets and monitors the amount of risk the Company is prepared to seek or accept in pursuing our strategic objectives – our risk appetite. The Board assesses the Company's principal risks and monitors the risk management process through risk review and challenge sessions twice a year.

Risk management process

Overall risk strategy, policy and process are set at Group level with implementation owned by the business. Our Enterprise Risk Management (ERM) process provides a framework through which we can consistently identify, assess, prioritise, manage, monitor and report risks. The process is designed to support the delivery of our vision, strategy and business model as described on pages 2 – 7. During 2020/21 a Group-wide transformation programme has driven further improvements in the risk and controls framework, focusing on quality and completeness of risk and controls, increased capability and accountability within the business and effective assurance activities.

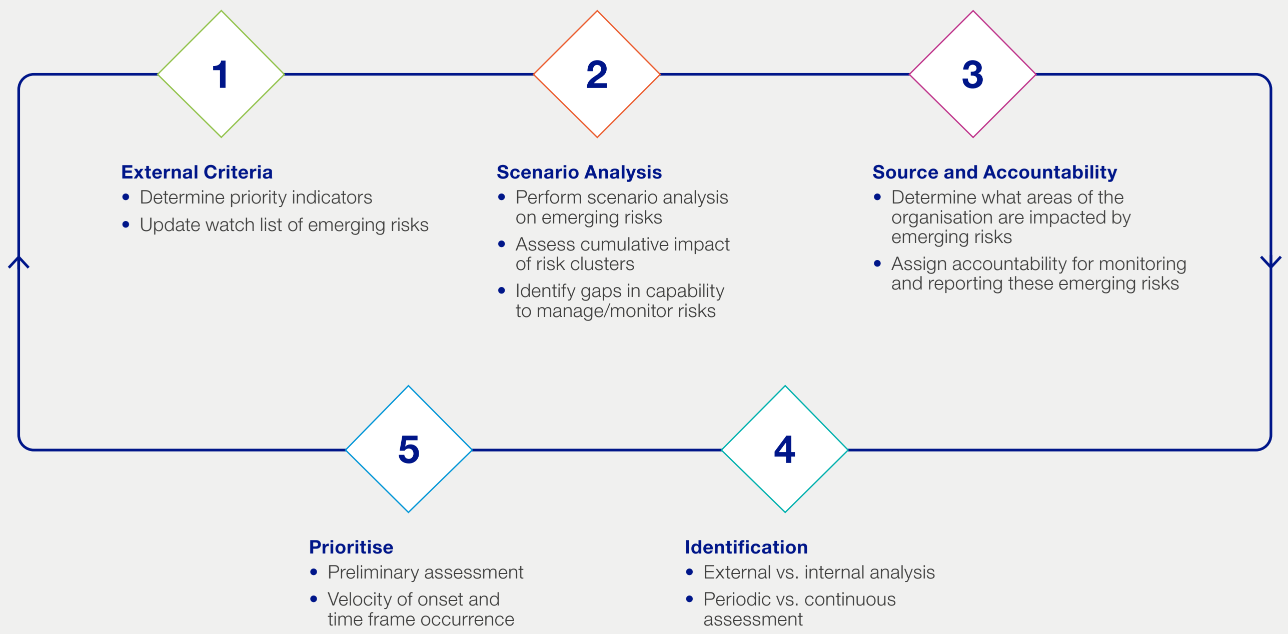
Our corporate risk profile contains the principal risks that the Board considers to be the main uncertainties currently facing the Group as we endeavour to achieve our strategic objectives. These top risks are agreed through discussions on the Group's risk profile with the Group Executive Committee and the Board. The risks are reported and debated with the Group Executive Committee and the Board every six months.

When determining what our principal risks should be, a broad range of factors are considered. We test principal risks annually to establish their impact on the Group's ability to continue operating and to meet its liabilities over the assessment period. We test the impact of these risks on a reasonable worst-case basis, alone and in clusters, over a five-year assessment period. This work informs our viability statement (see pages 28 – 29). The five-year period was carefully considered in light of the nature of our businesses, our business planning cycles, and risk profile. The Board considered that this period remained appropriate for our stable regulated business model. The Board and Group Executive Committee discuss the results of the annual principal risk testing at the end of the year.

Top-down, bottom-up assessment

Risk management activities take place through all levels of our organisation. Through a 'top-down, bottom-up' approach, all business areas identify the main risks to our business model and our business objectives. For each risk the effectiveness of our internal controls is assessed when calculating the financial, operational and reputational impacts, and how likely the risk is to materialise. Where current risk levels are outside of agreed target scores and our risk appetite, the business area identifies and implements actions to close the gap. These are collated and reported at functional and regional levels on a regular cadence. The most significant risks for the UK, US and NGV businesses are highlighted in regional risk profiles. Additionally, the Group Executive Committee and the Board may also identify and assess other principal risks. These risks and any associated management actions are cascaded through the organisation as appropriate.

Continuous cycle to identify and manage emerging risks:



Emerging risks

We have an established process to identify and monitor emerging risks. The process is designed to ensure adequate steps are taken to prevent the occurrence or manage the impact of surprises.

The ERM process monitors management information from a wide variety of internal and external sources when considering emerging risks.

Changes during the year

The Company's risk profile has been developed drawing upon the most significant risks across our business profiles. In March 2021, we announced our agreement to acquire WPD, sell our Rhode Island business, along with our intention to sell a majority stake in the UK GT business; these transactions will strategically pivot our UK business portfolio towards electricity. A failure to generate the anticipated value from the successful integration of WPD, separation of Rhode Island, and the intended sale of a majority stake in the UK GT business has been added as a new principal risk. 11 principal risks are now carried at Group Executive Committee and Board level as detailed below. All principal risks were reviewed at least twice across the year, including an assessment of the key controls, the Key Risk Indicators (KRIs), risk scores, alignment to risk appetite, and future mitigation actions.

In 2020/21, we developed new ways of working to deal with the significant impact of the COVID-19 pandemic across our operations. We have continued to deliver our critical services, minimising the impact to our customers and reducing the risk to our workforce with new COVID-19 operating procedures and controls. We have continually assessed its impact on our workforce, finances and all aspects of our operations, with regular reports provided to the Board. The risk associated with regulatory outcomes has reduced in the UK with the final determinations from RIIO-2. We have accepted the ESO's RIIO-2 package; for the ET and GT businesses we are broadly accepting most of the package but have submitted a technical appeal to the CMA on the cost of equity and outperformance wedge. Outside of the CMA appeal, the UK business is now focused on successfully delivering against the new RIIO-2 price controls.

The operating environment in New York (NY) continues to present risk and challenges. The Company continues to execute and comply with the settlement entered in November 2019 that resolved the Order to Show Cause issued following the moratorium in downstate NY. The independent monitor appointed pursuant to that settlement continues to oversee compliance with the settlement and gas supply operations. Following significant storms and delays in restoration efforts for other utilities in NY, significant legislation has been proposed that would require reimbursements to customers, result in increased penalties, and impose storm preparation and restoration requirements among other things. Positively, the Company has reached an agreement in principle with Department of Public Service (DPS) Staff regarding the KEDNY and KEDLI rate cases and Niagara Mohawk Power Corporation settlement negotiations are progressing to plan. Regulatory scrutiny in Rhode Island (RI) continues to increase, with particular focus and scrutiny on cost recovery and gas supply plans. The final audit report for the Massachusetts (MA) Management Audit, conducted by FTI Consulting Co., was issued on 29 March 2021 and there are no significant new issues and the recommendations are largely constructive. The MA Management Audit encompassed all National Grid MA businesses including Massachusetts Electric, Boston Gas, and New England Power (NEP). MA has issued material clean energy policy statements and the Company is working collaboratively to respond.

Our principal risks and uncertainties

Accepting that it is not possible to identify, anticipate or eliminate every risk that may arise, and that risk is an inherent part of doing business, our risk management process aims to provide reasonable assurance that we understand, monitor and manage the main uncertainties that we face in delivering our objectives. This aim includes considering inherent risks, which in turn exist because of the nature of day-to-day operations in our industry, including financial risks, which exist because of our financing activities. Our principal risks, and a summary of actions taken by management, are provided in the table below. We have provided an overview of the key inherent risks we face on pages 236 – 238, and specifically our key financial risks, which are incorporated within note 32 to our consolidated financial statements on pages 190 – 202. Risk trends reported below take into account controls, any additional mitigation actions and may be influenced by internal or external developments.

People risks

It is through the high-quality work of our employees that we will achieve our vision, respond to the changing needs of our stakeholders and create a competitive advantage. Building and fostering an engaged and talented team that has the knowledge, training, skills and experience to deliver our strategic objectives is vital to our success. We must attract, integrate and retain the talent we need at all levels of the business. These risks link to our strategic priority to 'Empower colleagues for great performance'.

Risks	Actions taken by management
There is a risk of failure to build capability and leadership capacity (including effective succession planning) required to deliver our vision and strategy. ***Risk trend: Neutral (19/20 Neutral)** * Risk trends are assessed to include any external factors outside our control as well as the strength and effectiveness of our controls and additional mitigations as reviewed by management up to 31 March 2021.	We have embedded strategic workforce planning in our US and UK organisations. This process helps to effectively inform financial and operational business planning, as well as human resourcing needs. Our entry-level talent development schemes (graduate training and apprenticeships) are a potential source of competitive advantage in the marketplace. We are involved in a number of initiatives to help secure the future engineering talent we require, including the UK annual residential work experience week and the US Pipeline and Graduate Development Programmes. We also continue to develop the rigour of our succession planning and development planning process, particularly at senior levels. It is now being applied deeper into the organisation as well as continued attention in relation to the ethnic diversity of both our management and field force population. There are multiple activities underway to drive this agenda, including 'neutral' talent and selection processes, development interventions and a global review of our inclusion and diversity strategy and resources including the appointment of a Chief Diversity Officer during the year.

Financial risks

While all risks have a direct or indirect financial impact, financial risks are those which relate to financial objectives and performance. Financial risk management is a critical process used to make investment decisions and aims to maximise investment returns and earnings for a given level of risk.

Our key financial risks are described in note 32 to our financial statements on pages 190 – 202.

Internal control and risk management
continued

Strategic and regulatory risks

Strategic risk is the risk of failing to achieve the Company's overall strategic business plans and objectives, as well as failing to have the 'right' strategic plan. We intentionally accept some risk so we can generate the desired returns from our strategy.

Management of strategic risks focuses on reducing the probability that the inherent risk would materialise, while improving the Company's ability to effectively respond to the risk should it occur. The risk owners, executive leaders, and their teams develop and monitor actions to control the risks. These risks link to our strategic priorities of 'enable the energy transition for all' and 'deliver for customers efficiently'. The political climate and policy decisions of our regulators were key considerations in assessing our risks.

The climate change related risk is classed as a strategic and regulatory risk but is also an operational risk, in particular as regards weather-related events in the northeastern US (where storm planning and preparation are key to what we do), flood defence in both the UK (where flood resilience works are being developed) and the US (where flood contingency plans are in place) and the investigation of the impact of rising temperatures and widening temperature ranges on the performance and operation of our networks.

Risks	Actions taken by management
There is a risk that we fail to identify and/or deliver upon actions necessary to address the physical and transitional impacts of climate change on our business and demonstrate our leadership of climate change within the energy sector. **Risk trend: Neutral (19/20 Increasing Risk)**	Putting in place measures to: • evolve our environmental sustainability metrics to better reflect our strategy, measure our impact and track our progress; • address our greenhouse gas (GHG) emissions and deliver on our sustainability commitments, including net zero by 2050, hosting our first environmental, social and governance (ESG) investor seminar, including the publishing of our Responsible Business Charter setting out what responsibility means for us and our commitments and ambitions over the coming years; annual progress will be reported in our inaugural Responsible Business Report to be published in June 2021; • advocate for legislative and policy changes that advance decarbonisation, while proposing and delivering actions in the regions we operate to accelerate decarbonisation for the public and our customers. This work is wide-ranging from system improvements to supporting renewable generation connections, electric vehicle (EV) proposals, oil to gas/electricity heat conversions, energy efficiency, interconnectors, thought leadership and investment in new and emerging areas. Note that a number of the above measures also address the physical impacts of climate change on our operations; • address physical impacts through flood contingency plans, winter preparedness planning, and storm hardening; and • regularly assess the potential range of net zero pathways and future impact on our gas assets, including evaluation of new and evolving technologies and alternative fuel sources (e.g. hydrogen). We have committed to full compliance with the Task Force on Climate-related Financial Disclosures (TCFD) requirements including physical and transitional scenario analysis (see pages 61 – 66). Ongoing work to address transition risks and opportunities includes: • ensuring our electricity network is reliable and able to actively support and contribute to a future where renewables and intermittency of supply are increasing; • supporting the charging infrastructure required for increased use of EVs; • promoting energy efficiency programmes for customers in the US; • facilitating decarbonisation in the US and UK including zero-carbon operation of the GB electricity system through ESO in the UK; and • continuing work on programmes to develop skills in our current and future workforce.
There is a risk that we fail to influence future energy policies and secure satisfactory regulatory agreements. **Risk trend: Neutral (19/20 Increasing Risk)**	In both the UK and the US, we strive to maintain a good understanding of the regulatory agenda and emerging issues, so that robust, public interest aligned responses can be selected and developed in good time. Our reputation as a competent operator of important national infrastructure is critical to our ability to do this. We have plans and governance structures in place to address specific issues such as RIIO-2 and US rate case filings. Ongoing work to support our regulatory relationships includes: • our internal teams focused on activities around gas capacity, large-scale renewables, utilities of the future and EVs; • research and development on the role of hydrogen as a substitute for natural gas; • establishment of US and UK Regulatory Steering Committees; and • increased focus on understanding the needs and expectations of all our stakeholders through regulatory relationship surveys, investor surveys and review of media sentiment.
There is a risk of reputational damage because we fail to respond to shifts in societal and political expectations and perceptions. **Risk trend: Increasing due to current political environment (19/20 Increasing Risk)**	Processes and resources are in place to review, monitor and influence perceptions of our business and our reputation by: • enhancing and consolidating our digital roadmap and social channels; • developing an internal forum to increase management of stakeholder and media reputational issues; • delivering on our commitment to be a responsible business (see pages 52 – 60); and • promoting partnerships and discussions of decarbonisation across the jurisdictions where we operate. Considerations on emerging risks such as the economic downturn due to COVID-19 impacts and mergers and acquisitions (M&A) strategies have also been addressed as part of financial and reputational impact assessments. These processes, along with twice-yearly Board strategy discussions, are reviewed regularly to ensure they continue to support our short- and long-term strategy. We regularly monitor and analyse market conditions, competitors and their potential.
There is a risk that we fail to adequately anticipate, respond to, minimise the impact or take advantage because of disruptive forces such as technology and innovation. **Risk trend: Neutral (19/20 Neutral)**	NGP, our central innovation function, leads our strategy with regards to new technology and monitoring disruptive technology and business model trends, acting as a bridge for emerging technology into the core regulated businesses and business development teams. In addition, NGP is investing in emerging startup companies and venture funds, and the NGV function will further the focus on new strategies, business development and technology and innovation.

There is a risk that we fail to generate anticipated levels of value from the WPD integration, Rhode Island separation and intended sale of a majority stake in the UK GT business. **Risk trend: N/A (New this year)**	• Extensive pre-transaction due diligence undertaken on WPD • Both transactions evaluated to assess alignment to overall strategic objectives • A discrete WPD integration plan established and is being overseen by new internal governance procedures • Post-acquisition performance will be monitored and assessed • Highly capable sale and separation teams established for the UK GT business disposal • Extensive separation plans are being developed for the Rhode Island and UK GT businesses, based on our experience from the disposal of Cadent in 2016/17.

Operational risks

Operational risks relate to the losses resulting from inadequate or failed internal processes, people and systems, or due to external events. These risks normally fall within our low-risk appetite level as there is no strategic benefit from accepting the risk, as it will not be in line with our vision and values.

Our operational principal risks have a low inherent likelihood of occurring. However, should an event occur, without effective prevention or mitigation controls, it would be likely to have a high level of impact. The risk owners, executive leaders, and their teams develop and monitor actions to control the risks. Operational risks are managed through policy, standards, procedure-based controls, active prevention and monitoring. The operational risks link to our strategic priority to 'Deliver for customers efficiently'. Principal risk assessment includes reasonable worst-case scenario testing i.e. gas transmission pipeline failure, loss of licence to operate, cyber security attack – and the financial and reputational impact should a single risk or multiple risks materialise.

Risks	Actions taken by management
There is a risk that we fail to prepare and respond to significant disruptive factors caused by the COVID-19 pandemic. **Risk trend: Decreasing**	The COVID-19 pandemic impacted multiple areas of our business, and we responded with a comprehensive plan, supporting the safety of our workforce and customers. • As vaccinations are rolled out across the UK and the US we are carefully assessing the risk, alongside relevant regulations and guidelines to determine the impact on our operations, and the implementation of transition plans to reopen our offices to non-operational employees. • Throughout 2020/21 we have actively monitored effects on our people, operations, strategic objectives, regulatory and political engagement, and financial implications. Our approach has been proactive to ensure our business can continue to serve its customers appropriately.
A catastrophic cyber incident caused by the abuse of our digital systems because of a malicious action by an external or internal party. **Risk trend: Increasing due to the dynamic nature of the cyber security threat (19/20 Increasing)**	We are committed to providing secure and resilient services and continue to commit significant resources and financial investment to maintain the security of our systems and our data. Our approach is holistic and includes: • close partnerships with UK and US government agencies including the Department for Business, Energy and Industrial Strategy (BEIS), the Centre for Protection of National Infrastructure (CPNI), The Department of Energy and the Department for Homeland Security. To understand risks and collaborate on risk management activities; • utilisation of good practice frameworks including the National Institute of Standards and Technology Cyber Security Framework to ensure National Grid can identify, protect, detect, respond and recover from cyber security threats; and • a strong focus on compliance with our regulatory obligations including the European Union (EU) Directive on Security of Network and Information Systems Regulation (NIS-R) and US North American Electric Reliability Corporation critical infrastructure protection (NERC CIP).
There is a risk of a catastrophic asset failure resulting in a significant safety and/or environmental event. **Risk trend: Neutral (19/20 Neutral)**	We continue to focus on risk mitigation actions designed to reduce the risk and help meet our business objectives; including: • putting a Group-wide process safety management system in place to make sure a robust and consistent framework of risk management exists across our higher hazard asset portfolio, with safety-critical assets clearly identified on the asset register; • implementing asset management and data management standards with supporting guidelines to provide clarity around what is expected, with a strong focus on what we need in place to keep us safe, secure and legally compliant; and • in support of this, we have an established capability framework to make sure our workforce have the appropriate skills and expertise to meet the performance requirements in these standards.
There is a risk that we fail to predict and respond to a significant disruption of energy. **Risk trend: Increasing (19/20 Increasing)**	We continue to apply a holistic approach encompassing preventative and mitigating actions including pre-emptive measures to maintain network reliability such as: • flood contingency plans for substations; • system operator supply and demand forecasting; • our UK GT Winter Preparedness Plan; • US gas mains replacement programmes; • US storm hardening programme; and • diversity of suppliers in our US gas procurement. Should energy flow disruptions occur: • business continuity and emergency plans are in place and practised, including Black Start testing; and • critical spares are maintained to ensure we can quickly and effectively respond to a variety of incidents – storms, physical and cyber-related attacks, environmental incidents and asset failures. • The ESO considered the significant impact on the UK power networks on responding to the unprecedented decrease in energy consumption and demand during the COVID-19 restrictions.
There is a risk of failure to adequately identify, collect, utilise and keep private the physical and IT data required to support company operations and future growth. **Risk trend: Neutral (19/20 Decreasing)**	Controls for our IT processes have been redefined and are aligned to the National Institute of Standards and Technology (US) and the Network Information Framework and System Regulations (UK). We continue to progress and improve our data management processes including: • implementation of our data and other related business management standards; • privacy impact assessments carried out across business areas affected by General Data Protection Regulation (GDPR) and California Consumer Privacy Act (CCPA) legislation; • data governance councils for UK and US regions; and • increased levels of data leadership and capability with the recruitment of a Chief Data Officer and establishment of an associated function. The increase of home-working due to COVID-19 has led to new protocols for data handling and restrictions around data distribution.

Viability statement

The Board's consideration of the longer-term viability of the Company is an extension of our business planning process. The process includes financial forecasting, a robust risk management assessment, regular budget reviews as well as scenario planning incorporating industry trends, considering any emerging issues and economic conditions. Our business strategy aims to enhance our long-term prospects by making sure our operations and finances are sustainable.

Utilising our established top-down/bottom-up risk management framework, the principal risks facing the Company as described on pages 24 – 27 are identified, monitored and challenged. The Board considers the preventative and mitigating controls and risk management actions in place and discusses the potential financial and reputational impact of the principal risks against our ability to deliver the Company's business plan. Specifically, the Board considers the principal risks shown in the table below in detail.

The assessment of the potential impact of our principal risks on the longer-term viability of the Company tests the significant solvency and liquidity risks involved in delivering our business objectives and priorities. After careful consideration of the risk landscape and other considerations including: our long-term business model; high-quality, long-term assets and stable regulatory arrangements; the Board's stewardship responsibilities; and the Company's ability to model a range of severe but plausible reasonable worst-case scenarios, the Board concludes that it remains appropriate to consider a five-year timeframe over which we should assess the long-term viability of the Company.

Operational impacts

Scenario 1 – A significant cyber-attack.

Scenario 2 – Significant supply disruption event occurring in the US leading to loss of licence.

Scenario 3 – A significant process safety gas pipeline failure in the US.

Scenario 4 – Significant physical damage due to climate change event, along with a failure to meet stakeholder expectations on our climate commitments.

Performance impacts

Scenario 5 – The breach of personal data information.

Scenario 6 – Poor outcome of future US rate case filings, and low performance under RIIO-2.

Scenario 7 – A breach of compliance rules for onshore competition in electricity transmission by NGET. NY legislation and political relationships leading to loss of NY licences.

Scenario 8 – Inability to recover US COVID-19 related bad debts through future regulatory agreements.

Scenario 9 – Anticipated value from our business acquisition and disposals is not fully realised.

Cluster impacts

Scenario 10 – A significant cyber-attack, resulting in a significant data breach and a catastrophic asset failure, causing a significant disruption of energy supply, leading to loss of operator licence for our NY Gas business.

The following factors have been taken into account in making this decision:

- we have reasonable clarity over a five-year period, allowing an appropriate assessment of our principal risks to be made;
- in order to test the five-year period, the Board considers whether there are specific, foreseeable risk events relating to the principal risks that are likely to materialise within a five- to ten-year period, and which might be substantial enough to affect the Company's viability and therefore should be taken into account when setting the assessment period. No risks of this sort were identified; and
- each principal risk was considered for inclusion within the testing and, where appropriate, a reasonable worst-case scenario was identified and assessed for impacts on operations and/or financial performance over the five-year assessment time period as detailed below.

National Grid entered into a series of business acquisition and disposal agreements prior to year end that are yet to be finalised: these include the proposed acquisition of WPD in the UK, the disposal of our Rhode Island business in the US, and we announced our intention to initiate the sale of a majority stake in our UK GT business. We have considered these future transactions during our risk testing and our viability assessment and do not believe they impact the Company's viability or the risk testing scenarios for 2020/21. The transactions support the future delivery of our strategic priorities. Our financial and operational diligence has shown that the performance, management, values and culture of WPD are closely aligned to the existing National Grid group. The transactions are subject to various shareholder and regulatory approvals.

In addition to testing individual principal risks, the impact of a cluster of the principal risks materialising over the assessment period was also considered. For our theoretical reasonable worse-case scenario on risk clusters we identified a scenario of a significant cyber-attack, resulting in a significant data breach and a catastrophic asset failure, causing a significant disruption to our energy supply, that in turn causes us to lose our NY Gas business operator licenses. For this scenario we have assumed it occurs in the US and the cascade of risks occurs within our US Gas business.

The reputational and financial impacts for each scenario were considered. The principal risks relating to leadership capacity and disruptive forces were not tested, as the Board did not feel they would threaten the viability of the Company within the five-year assessment period.

The Board assessed our reputational and financial headroom and reviewed principal risk testing results against that headroom. The testing of the risk cluster also included an assessment of the impact upon the business plan. No principal risk or cluster of principal risks was found to have an impact on the viability of the Company over the five-year assessment period. Preventative and mitigating controls in place to minimise the likelihood of occurrence and/or financial and reputational impact are contained within our assurance system.

In assessing the impact of the principal risks on the Company, the Board has considered the fact that we operate in stable markets and the robust financial position of the Group, including the ability to sell assets, raise capital and suspend or reduce the payment of dividends.

Each Director was satisfied that they had sufficient information to judge the viability of the Company. Based on the assessment described above and on pages 24 – 27 the Directors have a reasonable expectation that the Company will be able to continue operating and meet its liabilities over the period to May 2026.

Principal risk	Viability scenario	Matters considered and overseen by the Board
Catastrophic cyber security incident: catastrophic cyber security breach of business, operational technology and/or Communications, Navigation and Identification (CNI) systems/data.	**Scenario 1** – A terror-related cyber-attack. Included in the risk cluster testing of **Scenario 9.**	**The Board reviewed and discussed cyber security reports in:** • July 2020; and • December 2020. • Cyber security training was also delivered in June and December 2020.
Significant disruption of energy: failure to predict and respond to a significant disruption of energy that adversely affects our customers and/or the public.	**Scenario 2** – Significant supply disruption event occurring in US leading to loss of license. Included in the cluster testing of **Scenario 9**.	**Two Board Strategy sessions were held during the year covering:** • bi-annual overviews; • reviews of the gas business strategy; • external reviews of operational issues within the US Gas business; and • review of the sequence of events that resulted in the partial UK power outage on Friday 9 August 2019.

Principal risk	Viability scenario	Matters considered and overseen by the Board
Safety or environmental incident (asset failure): catastrophic asset failure resulting in a significant safety and/or environmental event.	**Scenario 3** – A significant process safety gas pipeline failure in the US. Included in the cluster testing of **Scenario 9**.	**The Board reviewed and evaluated the current safety performance of the Company at each meeting during the year. In addition:** • safety is a fundamental priority and is discussed in detail by the Safety, Environment and Health Committee (SEH Committee) who have delegated authority from the Board; and • our Electricity and Gas Engineering Reports to the SEH Committee also provide progress updates on our asset management improvements.
Data Management: failure to adequately identify, collect, use and keep private the physical and digital data required to support Company operations and future growth.	**Scenario 5** – The breach of personal data information. Included in the cluster testing of **Scenario 9**.	**Data Management is a principal risk discussed by the Board at least annually, as well as:** • bi-annual updates on the Company's information systems.
Capability and leadership: failure to build sufficient leadership capability and capacity (including succession planning) required to deliver our vision and strategy.	N/A	**Capability and Leadership is an integral part of the Board's vision and strategy. The Board's approach included:** • bi-annual updates on people matters; • considered capabilities to support the delivery of strategic priorities; and • Nominations Committee: considers the structure, size and composition of the Board and committees and succession planning. It identifies and proposes individuals to be Directors and establishes the criteria for any new position.
Political and societal expectations and perceptions: failure to deliver any customer, investor and wider stakeholder propositions due to increased political and economic uncertainty.	**Scenario 7** – A breach of compliance rules for onshore competition in electricity transmission by NGET. NY legislation and political relationships leading to loss of NY licenses. Included in the cluster testing of **Scenario 9**.	**The Board received updates and reviews of:** • the impact of Hard Brexit and access to the Internal Energy Market; • implementation of measures to strengthen ability to obtain fair price for UK assets if potential threat of state ownership materialised; and • UK and US regulatory strategies. These scenarios were evaluated for potential impact on the business.
Satisfactory regulatory outcomes: failure to influence future energy policy and secure satisfactory regulatory agreements.	**Scenario 6** – Poor outcome of future US rate case filings, and low performance under RIIO-2.	**The Board received updates and performed reviews of:** • US regulatory strategy; • UK regulatory strategy; • UK ESO regulatory strategy; • key regulatory policy issues for 2019/20; and • RIIO-2.
Adverse impact – disruptive forces: failure to respond to the asset failure resulting in a significant safety and/or environmental event.	N/A	**The Board evaluated:** • bi-annual updates from National Grid Partners in April 2020 and November 2020; and • Board strategy sessions that considered digital strategy as well as technology and innovation.
COVID-19: failure to respond to disruptive factors caused by the COVID-19 pandemic resulting in an impact on our networks, our people and our financial targets.	**Scenario 8** – Inability to recover US bad debt through future regulatory agreements.	• Board briefings including a weekly update from the Chief Executive (CEO) and Chief Financial Officer (CFO) on our crisis management response; • COVID-19 updates on operational issues, people absences and wellbeing to the Board; and Finance Committee consideration of liquidity; • review of our Business Continuity Planning response and effectiveness of the Crisis Management controls to the SEH Committee; and • briefings from the CFO and finance team on possible financial impacts including a range of scenario modelling and planning.
Climate Change: failure to respond to physical and transitional impacts of climate change and demonstrate our leadership within the energy sector.	**Scenario 4** – Failure to deliver on our climate commitments.	• Board briefings reviewing our sustainability metrics to reflect and track our impact and progress; • committed to reduction of Scope 1 and 2 emissions – 80% by 2030, 90% by 2040 and to net zero by 2050; • committed to reduction of carbon emission (Scope 3) – 37.5% by 2033/34; • reviewed and approved the publication of the Responsible Business Charter; and • disclosures with TCFD including physical and transitional scenario analysis.
Transaction Value: failure to generate anticipated levels of value from the integration of WPD, the separation of Rhode Island and the intended sale of a majority stake in the UK GT business.	**Scenario 9** – Anticipated value from our business acquisition and disposals is not fully realised.	• Board briefings on pre-acquisition due diligence of WPD; • Board assessed the transactions against pre-determined performance, operational, and financial measures and for strategic alignment; and • reviewed and approved the transactions.

Financial review

Summary of Group financial performance

Performance management framework

In managing the business, we focus on various non-IFRS measures which provide meaningful comparisons of performance between years, monitor the strength of the Group's balance sheet as well as profitability and reflect the Group's regulatory economic arrangements. Such alternative and regulatory performance measures are supplementary to, and should not be regarded as a substitute for, IFRS measures, which we refer to as statutory results. We explain the basis of these measures and, where practicable, reconcile these to statutory results in 'Other unaudited financial information' on pages 250 – 259.

Specifically, we measure the financial performance of the Group from different perspectives:

- **Capital investment and asset growth:** Currently we expect to invest c. £5 billion per year.
- **Accounting profit:** In addition to statutory IFRS measures we distinguish between adjusted results, which exclude exceptional items and remeasurements, and underlying results, which further take account of: (i) volumetric and other revenue timing differences arising from our regulatory contracts; and (ii) major storm costs, which are recoverable in future periods, neither of which give rise to economic gains or losses. In doing so, we intend to make the impact of such items clear to users of the financial information in this Annual Report.
- **Economic profit:** Measures such as Return on Equity (RoE) and Value Added take account of the regulated value of our assets and of our regulatory economic arrangements to illustrate the returns generated on shareholder equity.
- **Balance sheet strength:** Maintaining a strong investment grade credit rating allows us to finance our growth ambitions at a competitive rate. Hence, we monitor credit metrics used by the major rating agencies to ensure we are generating sufficient cash flow to service our debts.

This balanced range of measures of financial well-being informs our dividend policy, which from 2021/22 is to grow the dividend per share at least in line with rate of CPIH each year.

Assessment of the estimated impact of the COVID-19 pandemic on the Group's position and results

The COVID-19 pandemic has adversely impacted our reported results in 2020/21. We have experienced a more significant impact in our US businesses than in our UK businesses, mainly due to our large US customer base. During 2020/21, we made a further provision for bad and doubtful debts of approximately £179 million (2019/20: £117 million) in respect of COVID-19. The higher US charge reflects the impact of moratoriums in response to regulatory instructions as requested by regulatory authorities in the US states in which we operate, along with other macroeconomic factors, which limited our ability to collect outstanding debts. We remain committed to continuing to supply our customers, debt collection activities have been curtailed and termination of customer connections has been cancelled.

Our revenues suffered an adverse impact of £78 million, mainly the suspension of late payment fees in the US, lower UK incentives and lower 'hardship recoveries' in Massachusetts, due to fewer US customers re-certifying 'protected status' due to the moratoriums on disconnections. In our underlying results, we have recognised some additional revenue in the US related to allowances for recovery of some of the bad debts through regulatory mechanisms already in place. Incremental COVID-19-related costs of £97 million (2019/20: £10 million), mainly in the US, have been incurred related to enabling safe working (PPE, cleaning, sequestering staff, IT for remote access) and costs associated with delays to a number of planned capex works, as a direct consequence of the pandemic. These incremental costs were partly mitigated by £69 million of cost savings as a result of customer-facing workplan reductions, the pause in collections activities and lower travel and other costs.

In NGV & Other, the pandemic has not caused a significant adverse impact on financial performance in 2020/21, but the disruption from COVID-19 has caused some delays, resulting in £50 million lower than planned capital investment in 2020/21.

For 2021/22, we expect some continuing impact, driven largely by our US operations where we are expecting further risk of bad debt, although lower than we have experienced in 2020/21 and 2019/20. Given our regulatory mechanisms and precedents, we expect to recover a large part of the total bad debt arising as a result of COVID-19. We continue to work with regulators to provide support to our customers. This may lead to cash flow impacts in 2021/22. While COVID-19 may continue to impact earnings and cash flow in the short term, we currently anticipate limited economic impact longer term. However, there could be a range of impacts on cash flows and earnings, which could be different from our current assessment.

Summary of Group financial performance for the year ended 31 March 2021

Financial summary for continuing operations

£m	2020/21	2019/20	Change
Statutory results:			
Operating profit	**2,895**	2,780	4 %
Profit after tax	**1,641**	1,274	29 %
Earnings per share (pence)	**46.6 p**	36.8 p	27 %
Dividend per share (pence), including proposed final dividend	**49.16 p**	48.57 p	1 %
Capital expenditure	**4,931**	5,079	(3)%
Alternative performance measures:			
Underlying operating profit	**3,283**	3,454	(5)%
Underlying profit after tax	**1,911**	2,015	(5)%
Adjusted earnings per share (pence)	**46.4 p**	55.2 p	(16)%
Underlying earnings per share (pence)	**54.2 p**	58.2 p	(7)%
Underlying dividend cover	**1.1**	1.2	(0.1)
Capital investment	**5,047**	5,405	(7)%
Retained cash flow/adjusted net debt	**6.6 %**	9.2 %	-260bps
Regulatory performance measures:			
Asset growth	**5.6 %**	9.0 %	-340bps
Group Return on Equity[1]	**10.6 %**	12.0 %	-140bps
Value Added	**1,808**	2,040	(11)%
Regulatory gearing	**65 %**	63 %	200bps

1. Group RoE for 2019/20 recalculated to reflect the revision to decrease the comparative goodwill balance (see note 1F for details).

We explain the basis of these alternative performance measures and regulatory performance measures and, where practicable, reconcile them to statutory results on pages 250 – 259.

The Group's statutory results for the year were impacted by exceptional charges. The impact on statutory EPS as a result of these charges is presented after each item. These included costs associated with the implementation of our new operating model (1.2p) and transaction costs associated with the acquisition of Western Power Distribution (WPD) and the sale of NECO expected to take place in 2021/22 (0.7p). Last year's statutory results were adversely impacted by additional environmental provisions, a reduction in the discount rate applied to certain provisions across the Group (8.6p) and a deferred tax charge due to the reversal of the expected reduction in the UK corporation tax rate originally enacted by the Finance Act 2016 (5.6p). The 2020/21 statutory results include an exceptional credit of (0.3p) for the £14 million release of environmental provisions relating to one of our US Superfund sites, where this was originally treated as an exceptional item.

Statutory operating profit was favourably impacted by commodity remeasurement gains of £34 million in 2020/21 (2019/20: £125 million losses) from mark-to-market movements on derivatives which are used to hedge the cost of buying wholesale gas and electricity on behalf of our US customers.

Underlying operating profit was down 5% (down 3% at constant currency) as higher rate case revenues in US Regulated and increased net revenues in UK Gas Transmission and NGV were more than offset by increased costs, including £103 million increase in US bad debt costs (with an estimated £67 million of this increase being COVID-19-related), and higher depreciation and amortisation, along with and lower levels of sales in our property business. The combination of these factors was partly offset by lower net financing costs, driven by lower inflation on RPI-linked debt and new borrowings issued at lower interest rates, partly offset by higher non-debt interest charges. A lower contribution was made by our joint ventures and associates and the tax charge was higher primarily due to reduction in tax credits relating to prior years. Underlying profit after tax decreased by 5% and, combined with a higher share count, resulted in a 7% decrease in underlying EPS to 54.2p.

Capital investment of £5.0 billion helped increase our asset growth to 6%. We delivered Value Added (our measure of economic profit) of £1.8 billion in 2020/21, lower than in 2019/20. Group RoE of 10.6% was lower than 12.0% for 2019/20, reflecting the impact of COVID-19 (excluding bad debts), higher level of non-deferrable storms in the US and lower level of property sales in the UK. RCF/net debt at 6.6% was lower than 9.2% in 2019/20. The recommended full-year dividend per share of 49.16p is in line with the policy of increasing in line with RPI inflation and is covered 1.1 times by underlying EPS. In March 2021, we announced that from 2021/22 onwards, the dividend policy will aim to deliver annual dividend per share growth in line with UK CPIH inflation.

Profitability and earnings

The table below reconciles our statutory profit measures for continuing operations, at actual exchange rates, to adjusted and underlying versions.

Reconciliation of profit and earnings from continuing operations

	Operating profit			Profit after tax			Earnings per share		
£m	2020/21	2019/20	Change	2020/21	2019/20	Change	2020/21	2019/20	Change
Statutory results	**2,895**	2,780	4 %	**1,641**	1,274	29 %	**46.6 p**	36.8 p	27 %
Exceptional items	**65**	402		**57**	491		**1.6 p**	14.2 p	
Remeasurements	**(34)**	125		**(64)**	148		**(1.8)p**	4.2 p	
Adjusted results	**2,926**	3,307	(12)%	**1,634**	1,913	(15)%	**46.4 p**	55.2 p	(16)%
Timing	**207**	147		**166**	102		**4.7 p**	3.0 p	
Major storm costs	**150**	—		**111**	—		**3.1 p**	— p	
Underlying results	**3,283**	3,454	(5)%	**1,911**	2,015	(5)%	**54.2 p**	58.2 p	(7)%

Exceptional income/(expense) from continuing operations

	Impact on operating profit		Impact on profit after tax		Impact on EPS	
£m	2020/21	2019/20	2020/21	2019/20	2020/21	2019/20
Changes in environmental provision	**14**	(402)	**11**	(299)	**0.3 p**	(8.6)p
Transaction costs	**(24)**	—	**(24)**	—	**(0.7)p**	— p
New operating model implementation costs	**(55)**	—	**(44)**	—	**(1.2)p**	— p
Deferred tax arising on the reversal of the reduction in UK corporation tax rate	**—**	—	**—**	(192)	**— p**	(5.6)p
Total	**(65)**	(402)	**(57)**	(491)	**(1.6)p**	(14.2)p

This year we have classified the following items as exceptional:

- **Changes in environmental provisions:** a £14 million credit in relation to a reduction in the environmental provision booked in 2019/20 as exceptional;
- **Transaction costs:** £24 million of transaction costs associated with the acquisition of Western Power Distribution (WPD) and the sale of NECO expected to take place during 2021/22; and
- **New operating model implementation costs:** £55 million of costs in relation to the design and implementation of our new operating model that is designed to transform our operating framework and will be built on a foundation of six business units, as described further on page 2.

In the prior year we classified the £402 million of environmental costs (comprising a £326 million increase in the provision for clean-up related to former manufacturing gas plant facilities, formerly owned or operated by the Group or its predecessor companies and £76 million for the impact of a reduction of 0.5% in the real discount rate applied to the environmental provisions across the Group); and a £192 million impact on deferred tax as a result of the reversal of the provisions of The Finance Act 2016 which reduced the UK corporation tax rate to 17% with effect from April 2020.

We also exclude certain unrealised gains and losses on mark-to-market financial instruments from adjusted profit; see notes 5 and 6 to the financial statements for further information. Net remeasurement gains of £34 million on commodity contract derivatives were incurred in addition to net remeasurement gains of £72 million on financing-related instruments and a further £8 million of remeasurement losses related to our share of post-tax results of joint ventures.

Financial review continued

Timing over/(under)-recoveries

In calculating underlying profit, we exclude regulatory revenue timing over- and under-recoveries and major storm costs (as defined below). Under the Group's regulatory frameworks, most of the revenues we are allowed to collect each year are governed by regulatory price controls in the UK and rate plans in the US. If more than this allowed level of revenue is collected, an adjustment will be made to future prices to reflect this over-recovery; likewise, if less than this level of revenue is collected, an adjustment will be made to future prices in respect of the under-recovery. We also collect revenues from customers and pass these on to third parties (e.g. NYSERDA). These variances between allowed and collected revenues and timing of revenue collections for pass-through costs give rise to over- and under-recoveries.

The following table summarises management's estimates of such amounts for the two years ended 31 March 2021. All amounts are shown on a pre-tax basis and, where appropriate, opening balances are restated for exchange adjustments and to correspond with subsequent regulatory filings and calculations. All amounts are translated at the current year average exchange rate of $1.34:£1.

£m	2020/21	2019/20
Balance at start of year (restated)	261	384
In-year (under)/over-recovery	**(207)**	(137)
Balance at end of year	54	247

In 2020/21, we experienced timing under-recoveries of £88 million in UK Electricity Transmission, £96 million in UK Gas Transmission and £23 million in US Regulated. In calculating the post-tax effect of these timing recoveries, we impute a tax rate, based on the regional marginal tax rates, consistent with the relative mix of UK and US balances.

Major storm costs

We also take account of the impact of major storm costs in the US where the aggregate amount is sufficiently material in any given year. Such costs (net of certain deductibles) are recoverable under our rate plans but are expensed as incurred under IFRS. Accordingly, where the total incurred cost (after deductibles) exceeds $100 million in any given year, we exclude the net costs from underlying earnings. In 2020/21, we experienced around double the number of storm events compared to the prior year, resulting in $201 million of deferrable storm costs, which are eligible for future recovery. In 2019/20 we experienced $98 million of deferrable storm costs. This value fell just below the $100 million threshold and as such was not excluded from our underlying results, even though these costs are also eligible for future recovery.

Segmental operating profit

The tables below set out operating profit on adjusted and underlying bases.

Adjusted operating profit

£m	2020/21	2019/20	Change
UK Electricity Transmission	1,034	1,320	(22)%
UK Gas Transmission	342	348	(2)%
US Regulated	1,313	1,397	(6)%
NGV and Other activities	237	242	(2)%
Total	**2,926**	3,307	(12)%

Underlying operating profit

£m	2020/21	2019/20	Change
UK Electricity Transmission	1,122	1,174	(4)%
UK Gas Transmission	438	402	9 %
US Regulated	1,486	1,636	(9)%
NGV and Other activities	237	242	(2)%
Total	**3,283**	3,454	(5)%

The statutory operating profit increased in the year primarily as a result of the £402 million exceptional charges made in 2019/20, partly offset by adverse movements on timing under-recoveries and higher storm costs. The reasons for the movements in underlying operating profit are described in the segmental commentaries below. Unless otherwise stated, the discussion of performance in the remainder of this financial review focuses on underlying results.

UK Electricity Transmission

£m	2020/21	2019/20	Change
Revenue	3,992	3,702	8 %
Operating costs	(2,965)	(2,386)	24 %
Statutory operating profit	**1,027**	1,316	(22)%
Exceptional items	7	4	75 %
Adjusted operating profit	**1,034**	1,320	(22)%
Timing	88	(146)	(160)%
Underlying operating profit	**1,122**	1,174	(4)%
Analysed as follows:			
Net revenue	1,930	2,174	(11)%
Regulated controllable costs	(291)	(306)	(5)%
Post-retirement benefits	(45)	(48)	(6)%
Other operating costs	(53)	(31)	71 %
Depreciation and amortisation	(507)	(469)	8 %
Adjusted operating profit	1,034	1,320	(22)%
Timing	88	(146)	(160)%
Underlying operating profit	**1,122**	1,174	(4)%

Although ESO is a separate legal entity from National Grid Electricity Transmission plc, we continue to report these two businesses in aggregate, within our UK Electricity Transmission segment.

UK Electricity Transmission statutory operating profit was £289 million lower in the year, mainly due to timing movements. In 2020/21, there were £7 million of exceptional costs related to establishing our new operating model, compared to £4 million of environmental charges in the prior year. Timing under-recoveries of £88 million in 2020/21 compared to over-recoveries of £146 million in 2019/20 are primarily due to lower half-hourly volumes, lower collection of prior year balances and under-recovery of balancing services costs in ESO due to the Balancing Services Use of System (BSUoS) COVID-19 support scheme.

Adjusted operating profit reduced by £286 million (22%), predominantly driven by £234 million adverse year-on-year timing movements. Underlying operating profit decreased by 4%. Net revenues (adjusted for timing) were relatively flat, with higher incentives income, legal settlements, diversion income and the RPI uplift, being offset by the lower re-opener allowances for cyber and data centres and funding for ESO legal separation in 2019/20. Regulated controllable costs were lower, with efficiency savings and the absence of prior period one-off costs partly offset by higher IT costs and COVID-19-related costs. Other costs were higher, mainly relating to customer diversion costs which are offset by higher revenue.

The increase in depreciation and amortisation charges reflects continued investment including a full year charge for Western Link and a benefit from the release of provisions in 2019/20.

UK Gas Transmission

£m	2020/21	2019/20	Change
Revenue	904	927	(2)%
Operating costs	(567)	(580)	(2)%
Statutory operating profit	**337**	347	(3)%
Exceptional items	5	1	400 %
Adjusted operating profit	**342**	348	(2)%
Timing	96	54	78 %
Underlying operating profit	**438**	402	9 %
Analysed as follows:			
Net revenue	671	685	(2)%
Regulated controllable costs	(122)	(127)	(4)%
Post-retirement benefits	(18)	(19)	(5)%
Other operating costs	(24)	(20)	20 %
Depreciation and amortisation	(165)	(171)	(4)%
Adjusted operating profit	**342**	348	(2)%
Timing	96	54	78 %
Underlying operating profit	**438**	402	9 %

UK Gas Transmission statutory operating profit decreased £10 million in the year. In 2020/21 there were £5 million of exceptional costs related to establishing our new operating model, compared to £1 million of environmental charges in the prior year. Timing under-recoveries of £96 million in 2020/21 compared to £54 million in the prior year primarily as a result of under-collections relating to the new gas capacity charging regime and lower demand, partly offset by a lower return of prior period over-recoveries.

Adjusted operating profit reduced by £6 million (2%), including £42 million year-on-year adverse timing under-recoveries. Underlying operating profit increased by 9%. Net revenue (adjusted for timing) was higher, reflecting the impact of prior year return of Fleetwood allowances and the RPI uplift, partly offset by re-opener allowances (in 2019/20) for cyber and data centres and lower incentives income. Regulated controllable costs were £5 million lower, mainly driven by efficiency savings. Other costs were higher principally due to increased asset decommissioning costs.

US Regulated

£m	2020/21	2019/20	Change
Revenue	**9,195**	9,205	— %
Operating costs	**(7,851)**	(8,325)	(6)%
Statutory operating profit	**1,344**	880	53 %
Exceptional items	**3**	392	(99)%
Remeasurements	**(34)**	125	(127)%
Adjusted operating profit	**1,313**	1,397	(6)%
Timing	**23**	239	(90)%
Major storm costs	**150**	—	n/a
Underlying operating profit	**1,486**	1,636	(9)%
Analysed as follows:			
Net revenue	**5,942**	5,745	3 %
Regulated controllable costs	**(1,905)**	(1,871)	2 %
Post-retirement benefits	**(97)**	(95)	2 %
Bad debt expense	**(325)**	(231)	41 %
Other operating costs	**(1,414)**	(1,296)	9 %
Depreciation and amortisation	**(888)**	(855)	4 %
Adjusted operating profit	**1,313**	1,397	(6)%
Timing	**23**	239	(90)%
Major storm costs	**150**	—	n/a
Underlying operating profit	**1,486**	1,636	(9)%

US Regulated statutory operating profit increased by £464 million, partly as a result of the £159 million year-on-year favourable movements in commodity contract remeasurements and adverse exchange rate movements, but mainly from the non-recurrence of exceptional charges booked in the prior year. In 2020/21, exceptional charges were lower comprising £17 million of costs related to establishing our new operating model and transaction costs, mostly offset by a £14 million environmental credit (reversal of cost previously booked as exceptional). In 2019/20, £392 million of exceptional charges were incurred for environmental costs related to the clean up of former manufacturing gas plant facilities. Timing under-recoveries of £23 million in 2020/21 compared to timing under-recoveries of £239 million in 2019/20, driven by revenue decoupling, commodity recoveries, partly offset by a higher return of NYSERDA and transmission wheeling prior period balances. Storm costs (deferrable and non-deferrable) were £142 million higher year-on-year. These factors, along with an adverse impact from COVID-19 disruption and a weaker US dollar, resulted in an overall increase in statutory operating profit, but a decrease in adjusted operating profit.

Adjusted operating profit decreased by £84 million (6%), despite £216 million year-on-year favourable timing under-recoveries. In 2020/21, we experienced higher total storm costs compared to 2019/20. In 2020/21, we incurred £150 million of deferrable storm costs, which exceeded our $100 million threshold to qualify as major and be excluded from our underlying results. In 2019/20 we incurred £76 million of deferrable storm costs, which fell below this threshold. Underlying operating profit decreased by 9%. Net revenues (adjusted for timing) increased by £223 million (at constant currency) from the benefits of rate case increments (including Niagara Mohawk and Mass Electric), capital trackers and higher revenues in wholesale networks, but were offset by a £242 million adverse impact from foreign exchange movements. A weaker US dollar decreased underlying operating profit by £66 million in the year. US Regulated controllable costs increased as a result of higher IT costs, inflation, incremental COVID-19 costs, partly offset by cost mitigations and efficiencies. Provisions for bad and doubtful debts increased by £94 million, driven by a further £179 million (2019/20: £117 million) additional provision for receivables related to the impact of COVID-19. Depreciation and amortisation increased due to the growth in assets. Other costs were higher due to increased property taxes and higher non-deferrable storm costs partly offset by lower cost of removal.

NGV and Other activities

£m	2020/21	2019/20	Change
Statutory operating profit	**187**	237	(21)%
Exceptional items	**50**	5	900 %
Adjusted operating profit	**237**	242	(2)%
Timing	**—**	—	n/a
Underlying operating profit	**237**	242	(2)%
Analysed as follows:			
NGV	**298**	269	11 %
Property	**22**	63	(65)%
Corporate and Other activities	**(83)**	(90)	(8)%
Underlying operating profit	**237**	242	(2)%

NGV's statutory operating profits were £29 million higher than 2019/20, with lower depreciation driven by the extension of asset lives at our LNG import terminal at Grain, commencement of operations at our second interconnector (IFA2) between England and France and fair value gains in our US Ventures business. These were partly offset by lower prior year one-off benefits in our legacy French interconnector (IFA1), lower revenues from our declining meter population and a £2 million exceptional charge in relation to establishing our new operating model, compared to a £1 million charge for environmental costs in 2019/20.

In 'other' activities, we incurred an exceptional charge of £25 million related to establishing our new operating model and £24 million of transaction costs for the acquisition of WPD and the sale of NECO, both expected to take place during 2021/22, compared to a £3 million charge for environmental costs in the prior year. In 2020/21, underlying operating profit included net costs of £61 million (including corporate costs), compared to £27 million in 2019/20. The underlying performance of the property business was £41 million lower than prior year reflecting a lower volume of sales compared to 2019/20.

Financing costs and taxation

Net finance costs

Net finance costs (excluding remeasurements) for the year were 10% lower than last year at £942 million, with the £107 million decrease driven by the impact of lower inflation on our RPI-linked debt, new debt issued at lower rates, a higher net debt as a result of asset growth, termination fees incurred in the prior year and favourable foreign exchange movements, partly offset by higher interest on pension and OPEB liabilities and a higher benefit from interest on tax settlements in 2019/20. The effective interest rate of 3.2% on net debt was 90bps lower than the prior year rate of 4.1%.

Joint ventures and associates

The Group's share of net profits from joint ventures and associates reduced by £22 million compared to 2019/20 mainly as a result of lower contributions from BritNed (due to an unplanned outage caused by a cable fault) and lower sales in our St William property joint venture. Our Nemo Link interconnector and National Grid Renewables both showed improved performances.

Tax

The underlying effective tax rate of 21.2% was 130bps higher than last year. The tax charge for 2019/20 benefited from a higher release of reserves following settlement of tax audits relating to earlier years. The Group's tax strategy is detailed later in this review.

Discontinued operations

Last year, we completed the sale of a 39% interest in Quadgas HoldCo Limited (Quadgas), the holding company for Cadent. As described in note 10 to the financial statements, we treated all items of income and expense relating to the disposal of Quadgas within discontinued operations.

Financial review continued

Capital investment, asset growth and Value Added

Value Added is a measure that reflects the value to shareholders of our dividend and the growth in National Grid's regulated and non-regulated assets (as measured in our regulated asset base, for regulated entities), net of the growth in overall debt. It is a key metric used to measure our performance and underpins our approach to sustainable decision-making and long-term management incentive arrangements.

A key part of our investor proposition is growth in our regulated asset base. The regulated asset base is a regulatory construct, representing the invested capital on which we are authorised to earn a cash return. By investing efficiently in our networks, we add to our regulatory asset base over the long term and this in turn contributes to delivering shareholder value. Our regulated asset base comprises our regulatory asset value in the UK, plus our rate base in the US. We also invest in related activities that are not subject to network regulation and this further contributes to asset growth.

Capital investment

Capital investment comprises capital expenditure in critical energy infrastructure, equity investments, funding contributions and loans to joint ventures and associates, the acquisition of Geronimo during 2019/20 and, in the case of National Grid Partners, investments in financial assets.

	At actual exchange rates			At constant currency		
£m	2020/21	2019/20	Change	2020/21	2019/20	Change
UK Electricity Transmission	**1,072**	1,043	3 %	**1,072**	1,043	3 %
UK Gas Transmission	**176**	249	(29)%	**176**	249	(29)%
US Regulated	**3,223**	3,228	— %	**3,223**	3,098	4 %
NGV and Other activities	**576**	885	(35)%	**576**	867	(34)%
Total	**5,047**	5,405	(7)%	**5,047**	5,257	(4)%

Investment in UK Electricity Transmission increased primarily due to Hinkley-Seabank, London Power Tunnels 2 and Smartwires spend. In UK Gas Transmission, investment reduced due to completion of the Feeder 9 gas pipeline replacement project and Peterborough and Huntingdon compressor stations. In the US, investment was up 4% on a constant currency basis, reflecting increased capital expenditure in our US New York electric businesses, mainly damage repair driven by storm activity and accelerated spend in REV (New York's 'Reforming the Energy Vision' programme) and Grid Modernisation; increased investment in wholesale networks (including line and cable relocation in NECO, higher LNG spend and also asset refurbishment in New England Power) and higher IT spend and lease additions, partly offset by reduced investment in downstate New York (gas pipe replacement and mandated gas works) which were impacted by disruptions due to COVID-19. Investment in NGV was significantly lower due to the £209 million acquisition of Geronimo in the prior year, lower investment in IFA2, which became operational this year, reduced cable and converter spend on North Sea Link (Norway), but increased investment in Viking Link (Denmark). In addition, a total amount of £38 million (including joint ventures) was invested by National Grid Partners in 2020/21, compared to £68 million in the prior year.

Asset growth and Value Added

To help readers' assessment of the financial position of the Group, the table below shows an aggregated position for the Group, as viewed from a regulatory perspective. The measures included in the table below are calculated in part from financial information used to derive measures sent to and used by our regulators in the UK and US, and accordingly inform certain of the Group's regulatory performance measures, but are not derived from, and cannot be reconciled to, IFRS.

There are certain significant assets and liabilities included in our IFRS balance sheet, which are treated differently in the analysis below, and to which we draw readers' attention. The UK RAV is higher than the IFRS value of property, plant and equipment and intangibles, principally because of the annual indexation (inflationary uplift) adjustment applied to RAV, compared to the IFRS value of these assets (held at amortised cost). In addition, under IFRS we recognise liabilities in respect of US environmental remediation costs, and pension and OPEB costs. For regulatory purposes, these are not shown as obligations because we are entitled to full recovery of costs through our existing rate plans. The impact of US tax reform in 2017/18 which resulted in a reduction in IFRS deferred tax liabilities, and from a regulatory perspective remains as a future obligation, results in a regulatory liability within US rate base (£1.6 billion at 31 March 2021). In our Value Added calculation, we have recognised an asset to reflect expected future recovery of £282 million COVID-19 related provision for bad and doubtful debts that we have included in 2019/20 and 2020/21. Regulatory IOUs which reflect net over- or under-recoveries compared to our regulatory allowances are treated within this table as obligations but do not qualify for recognition as liabilities (or assets) under IFRS. Adjusted net debt movements exclude the beneficial proceeds from the Cadent disposal in 2019/20 and movements on derivatives which are designated in cash flow hedging arrangements and for which there is no corresponding movement in total assets and other balances. Within our Value Added calculation, total assets and other balances, goodwill and adjusted net debt movement all exclude the impact of reclassifications to held for sale for NECO in 2020/21.

	2020/21			2019/20		
£m	31 March 2021	31 March 2020	Change	31 March 2020	31 March 2019	Change
UK RAV	**20,872**	**20,431**	**2%**	20,431	19,692	4%
US rate base	**20,041**	**18,598**	**8%**	20,644	18,407	12%
Total RAV and rate base	**40,913**	**39,029**	**5%**	41,075	38,099	8%
NGV and Other	**4,458**	**3,942**	**13%**	4,105	3,351	23%
Total assets	**45,371**	**42,971**	**6%**	45,180	41,450	9%
UK other regulated balances[1]	**(160)**	**(368)**		(357)	(302)	
US other regulated balances[2]	**1,974**	**1,613**		1,791	1,987	
Other balances	**(336)**	**(514)**		(514)	(679)	
Total assets and other balances	**46,849**	**43,702**	**3,147**	46,100	42,456	3,644
Increase in goodwill			**–**			81
Cash dividends			**1,413**			892
Adjusted net debt movement			**(2,752)**			(2,577)
Value added			**1,808**			2,040

1. Includes totex-related regulatory IOUs of £310 million (2020: £411 million), under-recovered timing balances of £150 million (2020: £24 million over-recovered) and under-recovered legacy balances related to previous price controls of £nil (2020: £78 million).
2. Includes assets for construction work-in-progress of £1,639 million (2020: £1,510 million), other regulatory assets related to timing and other cost deferrals of £806 million (2020: £642 million) and net working capital liabilities of £471 million (2020: £361 million).

Figures relating to prior periods have, where appropriate, been re-presented at constant currency, for opening balance adjustments following the completion of the UK regulatory reporting pack process in 2020 and finalisation of US balances.

During 2020/21, our combined regulated asset base and NGV and Other businesses' assets grew by £2.4 billion or 6% on a constant currency basis compared to an increase of 9% in the prior year. UK RAV growth was 2.2% including RPI indexation of 1.5% while US rate base grew strongly by 8%.

Value Added, which reflects the key components of value delivery to shareholders (i.e. dividend and growth in the economic value of the Group's assets, net of growth in net debt) was £1.8 billion in 2020/21. This was slightly lower than last year's £2.0 billion, with lower US returns and the impact of COVID-19 and higher storm costs, offset by lower interest and improved NGV performance. Of the £1.8 billion value added, £1.4 billion was paid to shareholders as cash dividends and £0.4 billion was retained in the business. The 2019/20 measure excluded any benefit arising from the sale of our 39% interest in Quadgas HoldCo Limited. Value Added per share was 51.3p compared with 58.9p in 2019/20.

Cash flow, net debt and funding

Net debt is the aggregate of cash and cash equivalents, borrowings, current financial and other investments and derivatives (excluding commodity contract derivatives) as disclosed in note 29 to the financial statements. 'Adjusted net debt' used for the RCF/adjusted net debt calculation is principally adjusted for pension deficits and hybrid debt instruments. For a full reconciliation see page 255.

The following table summarises the Group's cash flow for the year, reconciling this to the change in net debt.

Summary cash flow statement

£m	2020/21	2019/20	Change
Cash generated from continuing operations	**4,618**	4,914	(6)%
Cash capital expenditure and acquisition of investments	**(4,920)**	(5,098)	(3)%
Dividends from joint ventures and associates	**80**	75	7 %
Business net cash flow from continuing operations	**(222)**	(109)	104 %
Net interest paid	**(819)**	(884)	(7)%
Net tax paid	**(157)**	(199)	(21)%
Ordinary dividends	**(1,413)**	(892)	58 %
Other cash movements	**14**	10	40 %
Net cash flow from continuing operations	**(2,597)**	(2,074)	25 %
Quadgas sale proceeds	**—**	1,965	n/a
Discontinued operations	**—**	(91)	n/a
Net cash flows from other investing and financing transactions	**2,692**	17	n/a
Increase/(decrease) in cash and cash equivalents	**95**	(183)	(152)%
Reconciliation to movement in net debt			
Increase/(decrease) in cash and cash equivalents	**95**	(183)	(152)%
Less: net cash flows from other investing and financing transactions	**(2,692)**	(17)	n/a
Cash and borrowings reclassified to held for sale	**1,119**	—	n/a
Other non-cash movements in net debt	**1,522**	(1,387)	(210)%
Increase in net debt	**44**	(1,587)	(103)%
Net debt at start of year	**(28,590)**	(26,529)	8 %
Impact of adoption of IFRS 16	**—**	(474)	n/a
Net debt at end of year	**(28,546)**	(28,590)	(0.2)%

Cash flow generated from continuing operations was £4.6 billion, £296 million lower than last year, mainly due to adverse timing and increased storm costs, lower cash collections, lower revenues and incremental costs as a result of COVID-19, higher spend on provisions, the impact of year-on-year exchange rate movements, offset by favourable working capital inflows on payables. Cash expended on investment activities decreased as a result of lower investment in UK Gas Transmission and NGV (including last year's acquisition of Geronimo) and movements in capex prepayments and accruals. Net interest paid decreased in spite of the growth in net debt as a result of lower rates and hybrid termination fees incurred in 2019/20. The Group made net tax payments of £157 million during 2020/21. A 17% scrip take-up in the year reduced the cash dividend to £1,413 million, but this was £521 million higher than in 2019/20, when the scrip take-up was 46%. In 2019/20, proceeds of £1,965 million (plus £6 million of interest) from the Quadgas HoldCo Limited disposal, were partly offset by outflows for residual provisions and accruals classified within discontinued operations. Non-cash movements primarily reflect changes in the sterling-dollar exchange rate, accretions on index-linked debt, finance lease additions and other derivative fair value movements. Closing net debt of £28.5 billion excludes £1.1 billion of net debt in NECO which was reclassified as held for sale on 31 March 2021.

During the year we raised over £5.6 billion of new long-term senior debt to refinance maturing debt and to fund a portion of our significant capital programme.The new bonds issued include further borrowings under our Green Financing Framework. We also used this framework to agree £539 million of ECA financing for our Viking interconnector. As at 30 April 2021, we have £6.0 billion of undrawn committed facilities available for general corporate purposes, all of which have expiry dates beyond June 2023.

In March 2021, Moody's, S&P and Fitch all downgraded the senior unsecured credit ratings of National Grid plc and the majority of our rated operating subsidiaries by one notch. This action reflected the agencies' assessment that Group cash flow metrics would, for several years, no longer meet the thresholds previously expected. This reflected the combined impacts of the COVID-19 pandemic, increased levels of capital investment, delays to rate increases in our US operations and the cash flow impacts of the new RIIO-2 price control in the UK.

The Board has considered the Group's ability to finance normal operations as well as funding a significant capital programme, in light of the disruption caused by COVID-19. This includes stress-testing of the Group's finances under a 'reasonable worst case' scenario, assessing the impact of the acquisition of WPD (and any penalties if the transaction did not proceed), the timing of the NECO and National Grid Gas plc transactions, and the further levers at the Board's discretion to ensure our businesses are adequately financed. As a result, the Board has concluded that the Group will have adequate resources to do so.

Financial position

The following table sets out a condensed version of the Group's IFRS balance sheet.

Summary balance sheet

£m	31 March 2021	31 March 2020	Change
Goodwill and intangibles[1]	**6,031**	7,007	(14)%
Property, plant and equipment[1]	**47,043**	49,762	(5)%
Assets and liabilities held for sale	**1,989**	—	n/a
Other net assets/(liabilities)	**(328)**	(414)	(21)%
Tax balances[1]	**(4,817)**	(4,365)	10 %
Net pension asset/(liabilities)	**715**	(953)	(175)%
Provisions	**(2,227)**	(2,654)	(16)%
Net debt	**(28,546)**	(28,590)	(0.2)%
Net assets	**19,860**	19,793	— %

1. Comparative amounts have been revised as described in note 1F.

Financial review continued

Property, plant and equipment increased as a result of the continuing capital investment programme, offset by foreign exchange losses and reclassifications to held for sale. Assets held for sale comprises assets and liabilities of NECO, which we expect to sell during 2021/22 (see note 10 to the financial statements). Net pension liabilities reduced in the US as a result of higher asset valuations and foreign exchange movements, partly offset by lower net pension assets in the UK as a result of lower discount rates. Provisions decreased principally as a result of continued spend against environmental and other provisions recognised in previous years and foreign exchange movements. Other movements are largely explained by net working capital inflows and changes in the sterling-dollar exchange rate.

Regulatory gearing, measured as net debt as a proportion of total regulatory asset value and other business invested capital, was 65% as at 31 March 2021. This was up from 63% at the previous year-end. Taking into account the benefit of our hybrid debt, adjusted gearing as at 31 March 2021 was 63% and remains appropriate for the current overall Group credit rating of BBB+/Baa1 (S&P/Moody's).

Retained cash flow as a proportion of adjusted net debt was 6.6%. This is slightly below the long-term average level of 7% indicated by Moody's, as consistent with maintaining our current Group rating, although the metric this year has been impacted by a below average level of uptake of the scrip dividend option, alongside increased costs related to the COVID-19 pandemic, timing outflows and high levels of storm costs. The funds from operations to debt metric was 11.7%, in the middle of the target range for the current rating.

Off-balance sheet items

There were no significant off-balance sheet items other than the commitments and contingencies detailed in note 30 of the financial statements.

Economic returns

In addition to Value Added, one of the principal ways in which we measure our performance in generating value for shareholders is to divide regulated financial performance by regulatory equity, to produce Return on Equity (RoE).

As explained on page 255, regulated financial performance adjusts reported operating profit to reflect the impact of the Group's various regulatory economic arrangements in the UK and US. In order to show underlying performance, we calculate RoE measures excluding exceptional items of income or expenditure.

Group RoE is used to measure our performance in generating value for our shareholders by dividing regulated and non-regulated financial performance, after interest and tax, by our measure of equity investment in all our businesses, including the regulated businesses, NGV and Other activities and joint ventures.

Regulated RoEs are measures of how the businesses are performing compared to the assumptions and allowances set by our regulators. US and UK regulated returns are calculated using the capital structure assumed within their respective regulatory arrangements and, in the case of the UK, assuming 3% RPI inflation. As these assumptions differ between the UK and the US, RoE measures are not directly comparable between the two geographies. In our performance measures, we compare achieved RoEs to the level assumed when setting base rate and revenue allowances in each jurisdiction.

Return on Equity

£m	2020/21	2019/20	Change
UK Electricity Transmission	**13.9%**	13.5%	40bps
UK Gas Transmission	**9.6%**	9.8%	-20bps
UK weighted average	**12.6%**	12.4%	20bps
US Regulated	**7.2%**	9.3%	-210bps
Group Return on Equity[1]	**10.6%**	12.0%	-140bps

1. Group RoE in 2019/20 has been recalculated as 12.0% (previously 11.7%), reflecting the revision to decrease the comparative goodwill balance (see note 1F for details).

The overall weighted average RoE for the two UK transmission businesses was 12.6%, representing 250bps outperformance of the base allowed return. Electricity Transmission performance increased in the year with improved incentives performance and legacy recoveries, partly offset by a marginally lower totex performance than in 2019/20. Gas Transmission return decreased by 20bps due to reduced totex performance, with higher than allowed costs incurred for delivering key projects.

During the year, the financial performance of the US regulated business was impacted by additional costs of COVID-19, and a greater number of storms, with our achieved RoE decreasing by 210bps to 7.2% (excluding COVID-19 related bad debts). The achieved RoE represents 76% of the weighted average allowed return across all jurisdictions. US returns are not affected by the COVID-19-related bad debt provisions recognised in 2020/21 and include an adjustment reflecting our expectation for future recovery of these bad debt costs.

Overall Group RoE, which incorporates Property, Corporate and Other, and financing performance was 10.6%, lower than 2019/20.

Tax transparency

As a responsible taxpayer, we have voluntarily included additional tax disclosures, which we believe are of significant interest to many of our stakeholders.

Tax strategy

National Grid is a responsible taxpayer. Our approach to tax is consistent with the Group's broader commitments to doing business responsibly and upholding the highest ethical standards. This includes managing our tax affairs, as we recognise that our tax contribution supports public services and the wider economy. We endeavour to manage our tax affairs so that we pay and collect the right amount of tax, at the right time, in accordance with the tax laws in all the territories in which we operate. We will claim valid tax reliefs and incentives where these are applicable to our business operations, but only where they are widely accepted through the relevant tax legislation such as those established by government to promote investment, employment and economic growth. We do not have operations in tax havens or low tax jurisdictions without commercial purpose.

We have a strong governance framework and our internal control and risk management framework helps us manage risks, including tax risk, appropriately. We take a conservative approach to tax risk. However, there is no prescriptive level or pre-defined limit to the amount of acceptable tax risk.

Our financial statements, including the tax note have been audited. The figures in the tax transparency disclosures in the Annual Report and Accounts have been taken from our financial systems, which are subject to our internal control framework.

We act with openness and honesty when engaging with relevant tax authorities and seek to work with tax authorities on a real-time basis. We engage proactively in developments of external tax policy and engage with relevant bodies where appropriate. Ultimate responsibility and oversight of our tax strategy and governance rests with the Finance Committee, with executive management delegated to our Chief Financial Officer who oversees and approves the tax strategy on an annual basis. For more detailed information, please refer to our published global tax strategy on our website.

Country-by-country reporting summary

We have disclosed in the table below data showing the scale of our activities in each of the countries we operate in. This allows our stakeholders to see the profits earned, taxes paid and the context of those payments.

2020/21	Revenue					
Tax jurisdiction	Unrelated party £m	Related party[1] £m	Total £m	Profit/(loss) before income tax[2] £m	Income tax accrued – current year[3] £m	Tangible assets[4]/(liabilities) other than cash and cash equivalents £m
United Kingdom	5,482	106	**5,588**	1,718	213	20,796
United States	9,297	43	**9,340**	341	3	26,247
Isle of Man	—	15	**15**	23	—	—
Luxembourg	—	—	**—**	1,667	—	—
Netherlands	—	52	**52**	1	—	—
Cross-border consolidation	—	—	**—**	(1,667)	—	—
Total	14,779	216	**14,995**	2,083	216	47,043

2019/20	Revenue					
Tax jurisdiction	Unrelated party £m	Related party[1] £m	Total £m	Profit/(loss) before income tax[2] £m	Income tax accrued – current year[3] £m	Tangible assets[4]/(liabilities) other than cash and cash equivalents £m
United Kingdom	5,282	113	**5,395**	1,821	179	19,940
United States	9,258	82	**9,340**	(82)	(2)	29,822
Ireland	—	—	**—**	—	—	—
Isle of Man	—	16	**16**	3	—	—
Luxembourg	—	—	**—**	—	—	—
Netherlands	—	55	**55**	12	—	—
Total	14,540	266	**14,806**	1,754	177	49,762

1. Related party revenue only includes cross-border transactions.
2. Profit/(loss) before income tax from continuing operations after exceptionals.
3. See the tax charge to tax paid reconciliation below for further information.
4. Tangible assets are comprised of property, plant and equipment.

Our Hong Kong entity is UK tax resident, our entities in Australia and Canada are dormant and our entities in Ireland and Jersey are in liquidation. Therefore, those jurisdictions have not been included in the table above.

Our Isle of Man company is a captive insurance company which is treated as a controlled foreign company for UK tax purposes and as such UK corporation tax is paid on its profits by National Grid. In the Netherlands, we have a finance company which raised external finance for the Group and is taxed on its profits in the Netherlands at the corporate tax rate of 25%.

As part of our response to the Labour Party's proposal to nationalise nearly all of National Grid's UK assets we implemented measures, which included a Luxembourg holding company, in order to strengthen our ability to get a fair value for the assets in the event of a nationalisation. This holding company's profits consist of dividends offset by impairments both of which are not taxable, and these are being eliminated for Group purposes in the row 'cross-border consolidation'.

Transfer pricing is not a significant issue for the Group since there are limited transactions between Group companies, but any transactions between related parties are made on an arm's-length basis and aligned to OECD principles.

Group's total tax charge to tax paid

The total tax charge for the year disclosed in the financial statements in accordance with accounting standards and the equivalent total corporate income tax paid during the year will differ.

The principal differences between these two measures are as follows:

Reconciliation of Group's total tax charge to tax paid

£m	2020/21	2019/20
Total Group tax charge	**442**	480
Adjustment for Group non-cash deferred tax	**(218)**	(348)
Adjustments for Group current tax (charge)/credit in respect of prior years	**(8)**	45
Group current tax charge	**216**	177
Group tax instalment payments payable in respect of the prior year	**—**	78
Group tax instalment payments (repayable)/payable in the following year	**(7)**	5
Tax recoverable offset against current tax payments due[1]	**(55)**	47
Group tax refunds in respect of prior years paid in the current year	**(8)**	(113)
Group tax payments relating to tax disclosed elsewhere in the financial statements	**11**	5
Group tax paid	**157**	199
Profit before income tax[2]	**2,083**	1,754
	%	%
Effective cash tax rate	**7.5**	11.3
Effective tax rate (note 7)	**21.2**	27.4

1. Tax recoverable offset against current tax payments due relates to reduced current year UK instalment payments to utilise overpayments in prior years.
2. Profit/(loss) before income tax from continuing operations after exceptionals.

Effective cash tax rate

The effective cash tax rate for the Group is 7.5%. The difference between this and the accounting effective rate of 21.2% (see note 7 on page 152) is due to the following factors.

National Grid is a capital-intensive business, across both the UK and the US, and as such invests significant sums each year in its networks. In 2020/21 total capital expenditure was £4,931 million. To promote investment, tax legislation allows a deduction for qualifying capital expenditure at a faster rate than the associated depreciation in the statutory accounts. The impact of this is to defer cash tax payments into future years.

In the current period, the US federal taxable income was offset by brought-forward Net Operating Losses which primarily arose from deductions for qualifying capital expenditure incurred by National Grid in earlier years. Hence no significant federal tax payments were made in the current period.

In the current year, we made reduced cash tax payments in the UK (£158 million) to utilise tax recoverable from earlier years.

The Group continued to make significant payments into the UK defined benefit pension schemes, National Grid UK Pension Scheme and National Grid Electricity Group of the Electricity Supply Pension Scheme during the course of the year. These payments have further reduced the overall cash tax paid in the UK.

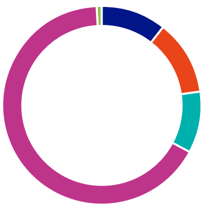
Financial review continued

Group's total tax contribution

The total amount of taxes we pay and collect globally year-on-year is significantly more than just the tax which we pay on our global profits. To provide a full picture we have disclosed the Group's global total tax contribution.

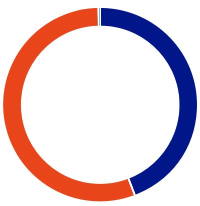
Group's total tax contribution 2020/21 (taxes paid/collected)

Taxes borne



Key:	£m
People	168
Product	189
Profit	157
Property	1,041
Miscellaneous	10
Total	**1,565**

Taxes collected



Key:	£m
People	563
Product	709
Miscellaneous	2
Total	**1,274**

2020/21	Tax contribution					
Tax jurisdiction	Income tax paid/ (repaid) on cash basis[1] £m	Property taxes £m	Other taxes borne £m	Taxes collected £m	**Total tax contribution £m**	Number of employees[2] as at 31 March 2021
United Kingdom	158	225	58	672	**1,113**	6,657
United States	(1)	816	309	602	**1,726**	17,026
Ireland	—	—	—	—	**—**	—
Isle of Man	—	—	—	—	**—**	—
Luxembourg	—	—	—	—	**—**	—
Netherlands	—	—	—	—	**—**	—
Total	157	1,041	367	1,274	**2,839**	23,683

1. See the tax charge to tax paid reconciliation above for further information.
2. Number of employees is calculated as the total National Grid workforce across all parts of the business including Non-executive Directors and Executive Directors. All are active, permanent employees as well as both full-time and part-time employees.

2019/20	Tax contribution					
Tax jurisdiction	Income tax paid/ (repaid) on cash basis[1] £m	Property taxes £m	Other taxes borne £m	Taxes collected £m	**Total tax contribution £m**	Number of employees[2] as at 31 March 2020
United Kingdom	306	226	57	586	**1,175**	6,321
United States	(107)	850	303	573	**1,619**	16,748
Ireland	—	—	—	—	**—**	—
Isle of Man	—	—	—	—	**—**	—
Luxembourg	—	—	—	—	**—**	—
Netherlands	—	—	—	—	**—**	—
Total	199	1,076	360	1,159	**2,794**	23,069

1. See the tax charge to tax paid reconciliation above for further information.
2. Number of employees is calculated as the total National Grid workforce across all parts of the business including Non-executive Directors and Executive Directors. All are active, permanent employees as well as both full-time and part-time employees.

For 2020/21 our total tax contribution globally was £2,839 million (2019/20: £2,794 million), taxes borne were £1,565 million (2019/20: £1,635 million) and taxes collected were £1,274 million (2019/20: £1,159 million). Our total tax contribution has increased in the year due to higher tax collected in 2020/21 in respect of both people and product taxes. The total taxes borne by the Group have fallen slightly, due to a fall in profit taxes.

Two thirds of the tax borne by the Group continues to be in relation to property taxes, of which £816 million are paid in the US across over 1,100 cities and towns in Massachusetts, New Hampshire, New York, Rhode Island and Vermont. These taxes are the municipalities' principal source of revenue to fund school districts, police and fire departments, road construction and other local services.

In the UK we participate in the 100 Group's Total Tax Contribution Survey. The survey ranks the UK's biggest listed companies in terms of their contribution to the total UK government's tax receipts. The most recent results of the survey for 2019/20 ranks National Grid as the 19th highest contributor of UK taxes (2018/19: 21st), 11th in respect of taxes borne (2018/19: 18th) and 6th in respect of capital expenditure (£1,663 million) on fixed assets (2018/19: 5th). Our ranking in the survey is proportionate to the size of our business and capitalisation relative to the other contributors to the survey.

However, National Grid's contribution to the UK and US economies is broader than just the taxes it pays over to and collects on behalf of the tax authorities.

Both in the UK and the US we employ thousands of individuals directly. We also support jobs in the construction industry through our capital expenditure, which in 2020/21 was £4,931 million, as well as supporting a significant number of jobs in our supply chain.

Furthermore, as a utility we provide a core essential service which allows the infrastructure of the country/states we operate in to run smoothly. This enables individuals and businesses to flourish and contribute to the economy and society.

Development of future tax policy

We believe that the continued development of a coherent and transparent tax policy across the Group is critical to help drive growth in the economy.

We continue to engage on consultations with policymakers where the subject matter of which impacts taxes borne or collected by our business, with the aim of openly contributing to the debate and development of tax legislation for the benefit of all our stakeholders.

To ensure that the needs of our stakeholders are considered in the development of tax policy we are a member of a number of industry groups which participate in the development of future tax policy, such as the Electricity Tax Forum and CBI Employment Taxes Working Group, together with the 100 Group in the UK, which represents the views of Finance Directors of FTSE 100 companies and several other large UK companies. We undertake similar activities in the US, where the Group is an active member in the Edison Electric Institute, the American Gas Association, the Global Business Alliance, the American Clean Power Association, the Energy Storage Association and the Solar Energy Industries Association.

Feedback from these groups, such as the results of the 100 Group Total Tax Contribution survey, and consideration of third party reporting frameworks like the GRI (Global Reporting Initiative) helps to ensure that we consider the needs of our stakeholders and are engaged at the earliest opportunity on tax issues which affect our business.

Pensions

In 2020/21, defined benefits pensions and other post-retirement benefits operating costs remained broadly flat year on year at £197 million (2019/20: £196 million). Employer contributions during the year were £274 million (2019/20: £327 million), including £88 million (2019/20: £86 million) of deficit contributions.

During the year, our pensions and other post-retirement benefit schemes moved from being in a net deficit position of £953 million at 31 March 2020 to a net surplus position of £715 million at 31 March 2021. This was principally the result of actuarial gains on plan assets of £2.6 billion (as a result of higher investment returns), partly offset by actuarial losses on plan liabilities of £1.1 billion (reflecting lower discount rates from corporate bond yields and higher expectations for long-term RPI inflation) and exchange rate movements. As at 31 March 2021, the total UK and US assets and liabilities and the overall net IAS 19 (revised) accounting surplus (2019/20: deficit) is shown below. Further information can be found in note 25 to the financial statements.

Net pension and other post-retirement obligations

	UK	US	Total
Plan assets (£m)	14,680	9,708	24,388
Plan liabilities (£m)	(13,645)	(10,028)	(23,673)
Net surplus/(deficit) (£m)	1,035	(320)	715

As at 31 March 2021, we recognised £1,109 million of UK pension assets, £371 million of US pension assets and £267 million of US other post-retirement benefit plan assets.

In December 2020, the Trustees of the NGUKPS exchanged £0.8 billion (2020: £4.4 billion) of gilts for a buy-in transaction. This follows two similar arrangements entered into in the previous year. These policies provide bulk annuities in respect of some pensioner and dependant members of NGUKPS and were funded by existing assets. All policies are held by the Trustee. For each transaction, the pricing of the policies was highly competitive; however, under IAS 19 the methodology for calculating the value of the buy-ins (as an asset held by the pension plan) differs from the price paid. This resulted in the recognition of actuarial losses on purchase of £0.1 billion (2020: £0.7 billion), recorded within the consolidated statement of other comprehensive income.

Dividend

The Board has recommended an increase in the final dividend to 32.16p per ordinary share ($2.2812 per American Depository Share) which will be paid on 18 August 2021 to shareholders on the register of members as at 4 June 2021. If approved, this will bring the full year dividend to 49.16p per ordinary share, an increase of 1.2% over the 48.57p per ordinary share in respect of the financial year ended 31 March 2020. This is in line with the increase in average UK RPI inflation for the year ended 31 March 2021 as set out in our previous dividend policy. In March 2021, we reconfirmed our dividend policy, but with an amended aim of growing the ordinary dividend per share from 2021/22 at least in line with the rate of CPIH inflation each year.

At 31 March 2021, National Grid plc had £9.9 billion of distributable reserves, which is sufficient to cover more than four years of forecast Group dividends. If approved, the final dividend will absorb approximately £1,141 million of shareholders' funds. This year's dividend is covered approximately 1.2x by underlying earnings.

The Directors consider the Group's capital structure and dividend policy at least twice a year when proposing an interim and final dividend and aim to maintain distributable reserves that provide adequate cover for dividend payments.

New accounting standards

We did not adopt any new accounting standard in 2020/21. Amendments to certain existing accounting standards were adopted during the year, but these had no material impact on the Group's results or financial statement disclosures.

Post balance sheet events

In the period between 1 April 2021 and 19 May 2021, there have been no significant post balance sheet events.

Principal operations – UK

Our UK business performed well in 2020/21 as we maintained our focus on safe, customer-led, reliable, innovative and efficient operations.

Our UK performance

Measure	2020/21	2019/20	2018/19
Return on Equity (%) Ⓐ	**12.6**	12.4	12.4
Statutory operating profit (£m)	**1,364**	1,663	1,045
Underlying operating profit (£m) Ⓐ	**1,560**	1,576	1,433
Adjusted operating profit (£m) Ⓐ	**1,376**	1,668	1,318
RIIO-T1 customer savings (£m)	**120**	128	101

Capital expenditure (£m) Ⓐ	**1,248**	1,292	1,233
Asset growth (%) Ⓐ	**2.2**	3.8	3.6

Customer satisfaction: ET
(out of 10)
8.4
(2019/20: 8.2)

Customer satisfaction: ESO
(out of 10)
7.5
(2019/20: 7.6)

Customer satisfaction: GT
(out of 10)
8.2
(2019/20: 8.0)

Highlights

Our UK business performed well in 2020/21 as we maintained our focus on safe, customer-led, reliable, innovative and efficient operations.

Our safety ambition is to always do the right thing regarding safety. Our strategy is to be proactive in our safety management by engaging our leaders and employees and implementing a consistent and simple risk-based approach. To support this ambition, we are focusing more on leading indicators that measure our positive efforts on safety management to help prevent incidents, while continuing to track more traditional lagging indicators. Our Safety Survey results demonstrate that we have made excellent progress towards our safety ambition.

As at 31 March 2021, our LTIFR was 0.04. This is better than our UK target of <0.10 and is our best ever LTIFR performance. Our Gas Capital Delivery business worked nearly two years, over two million person hours of complex construction activity, without having an LTI. This outstanding result was driven by a relentless focus on the work we do and commitment to keeping one another safe.

Our operations during the year have taken place against a backdrop of responding to the global COVID-19 pandemic, ensuring that the UK business, at all levels, had the necessary information and safeguards in place. We have enabled our non-operational employees who can work from home to do so and ensured our operational teams are able to work in COVID-secure environments. Working with the government, Public Health England, our health care provider and trade unions, we protected the welfare and health of our workers while maintaining safe networks.

We installed living pods at our Warwick campus and colleagues in our Transmission Network Control Centre moved into the accommodation to minimise the risk of exposure to COVID-19 and to keep the country's power going during the pandemic.

We delivered a good year of returns, with a Return on Equity of 12.6%. Statutory operating profit and underlying operating profit were lower at £1,364 million and £1,560 million respectively.

Enable the energy transition for all

We have committed to reducing our direct emissions to net zero by 2050 and to increase our influence to support the overall industry-wide transition to a low-carbon future. We have developed solutions to enable the rollout of a strategic backbone for electric vehicles throughout the UK and are working in partnership with industry to develop CCUS solutions.

Our original RIIO-2 business plans were developed following our largest ever engagement exercise to date, with customers, industry stakeholders, businesses and household bill payers across the country. Our plans included investment to maintain network reliability and provide flexibility and optionality for the UK to achieve net zero greenhouse gas emissions by 2050. Final Determinations were published by Ofgem in December 2020 and we broadly accepted the majority of the package for the Electricity and Gas Transmission businesses. We have submitted a technical appeal to the Competition and Markets Authority (CMA) regarding Ofgem's proposed cost of equity and outperformance wedge. The CMA has given permission for our appeal on both points and expects to reach a decision later in 2021.

Deliver for our customers efficiently

We work with our customers to meet their needs and deliver successful outcomes for all parties. We were pleased to see continued improvement in our CSAT scores in our ET and GT businesses, achieving scores of 8.4 (2019/20: 8.2) and 8.2 (2019/20: 8.0) respectively. For the ESO, our CSAT score in 2020/21 was 7.5 (2019/20: 7.6).

Gas started flowing through our Feeder 9 pipeline under the Humber Estuary in December 2020. The pipeline is a vital piece of infrastructure, transporting around a quarter of UK gas supplies. It also entered the Guinness Book of Records as the world's longest hydraulically inserted pipeline at 4.96km. Ofgem is minded to approve the vast majority of the funding for our Peak East Visual Impact Provision project, subject to further consultation. This is a project to remove eight pylons and approximately 2km of existing overhead lines.

In November 2019, our ET business awarded a five-year framework agreement to a US power flow control technology company, Smart Wires. We will be the first electricity transmission utility in the world to use this technology. We are working with Smart Wires to install 48 SmartValve devices at three substations on five circuits on the electricity transmission network. This agreement will help to decarbonise the UK electricity network by enabling greater volumes of renewable energy to be efficiently transferred to customers using modular power flow control technology to increase power transfer capability by making better use of its existing network. This is done with minimal impact on communities and the environment. It allows National Grid to deliver more clean and affordable energy to customers, reflecting our efforts to lead the way in supporting net zero ambitions through harnessing innovative solutions.

Grow our organisational capability

We launched ConnectNow, a new innovative online application and project management system, streamlining the process of connection to the grid. We worked closely with customers to build and launch the one stop customer portal for electricity connection customers, providing a clear, intuitive, real-time interface whilst also providing transparency throughout their connection journey.

The Western Link, the submarine HVDC link between England and Scotland operated with our Joint Venture partner Scottish Power Transmission, transmitted 6,245 GWh of green energy with a total energy availability of 92%. The link was unavailable for 653.9 hours as a result of a single onshore transmission cable fault during February 2021. In January 2021, Ofgem announced that it had launched an investigation to review the performance of the Joint Venture in delivering the cable and examine potential breaches relating to the operation of the cable. We continue to fully engage with Ofgem in relation to the investigation.

Scan here to view our story

Green collar jobs: Faris Jaweed – Greening up the gas network

I'm part of the team working on the Gas Ten Year Statement. In it we discuss and set out how we intend to operate the gas transmission network over the next decade, which should lead to changes that will play a part in ensuring a safe, secure and sustainable energy future for Great Britain. It considers ways to use our assets to meet net zero – this is a major focus of the initiative.

You won't find many other careers that offer the same level of satisfaction while being incredibly interesting and challenging, and helping to create a cleaner energy UK.

Faris' green life changes: more cycling and less eating meat and fish.

Empower colleagues for great performance

The wellbeing of our workforce is important to us. 32% of our UK employees have undertaken mental health related training courses to date, an increase of 4% since last year.

Our ONE employee resource group (ERG) was awarded the title of Top Network Group at the 2020 Ethnicity Awards. ONE has been commended for its inclusion and diversity education and training, the many initiatives and events it has organised, and for growth of membership in a difficult year. We were also placed in the top 10 in the Outstanding Employer category. The awards are a prime example of the positive impact our ERGs have. Our Enabling ERG supported the Purple Light Up events, organised by our EmployAbility interns as part of a global effort to highlight the economic contribution of employees with disabilities.

Looking ahead

The Energy White Paper will be critical to providing further policy detail needed to ensure we can get on with the delivery of net zero. We are pleased to see the progression on what is needed to deliver the important ambitions on offshore wind, interconnectors, hydrogen, CCUS heat and transport decarbonisation: delivering ambitious electricity commitments through a commitment to deliver 40 GW of offshore wind by 2030, including 1 GW of floating wind; investing £1 billion in state-of-the-art carbon capture storage by 2030; and kick-starting the hydrogen economy by working with industry to aim for 5 GW of production by 2030, backed up by a new £240m net zero Hydrogen Fund for low-carbon hydrogen production.

We were pleased to receive £9 million of funding through Ofgem's Network Innovation Competition for our FutureGrid programme, which will test the possibilities of using hydrogen on the gas transmission system. The programme aims to build a hydrogen test facility, carry out initial hydrogen testing, explore ways to separate hydrogen from natural gas and demonstrate the impact of hydrogen on compressors.

On 18 March 2021, National Grid announced that it had agreed to acquire WPD from PPL subject to certain regulatory approvals and that it will commence a process later this year for the sale of a majority stake in National Grid Gas plc, the owner of the national gas transmission system, which would be expected to complete in the second half of 2022.

national**gridESO**

As the legally separate Electricity System Operator (ESO) for Great Britain, we are in a privileged position at the heart of the energy system, balancing electricity supply and demand second by second.

In response to COVID-19, we took a number of measures to protect our control room colleagues in critical roles, introducing new layouts, enforcing social distancing, adding new hygiene measures and new shift patterns with teams permanently split across different sites. Our non-operational colleagues have adapted to working remotely and these steps have further increased the resilience of our operations, meaning that throughout the pandemic we have been able to protect our colleagues and fulfil our critical role.

Societal changes due to COVID-19, coinciding with 2020 having the sunniest spring on record in the UK, led to significant impacts on electricity in Great Britain. At times, demand fell to 20% below expected levels and zero-carbon sources have made up their largest ever share of the power mix, meaning keeping the power system stable required more interventions than ever before. High levels of generation and low demand can raise the risk of oversupply and reduce the system's resilience to sudden changes in frequency. To overcome these challenges, we developed a series of new electricity market services to help balance the system. In May 2020, we launched Optional Downward Flexibility Management – a temporary marketplace to manage reduced demand and in October 2020, Dynamic Containment went live – a new fast frequency response service. In collaboration with industry, we made progress on our Pathfinder projects, identifying how we can replace the voltage, stability and constraint management services provided by fossil fuel generation with new, greener approaches.

2020 was the greenest year on record for the electricity system, with average carbon intensity reaching a new low. Great Britain saw its longest run of generating electricity without using coal since the industrial revolution, almost 68 days (1,630 hours) between 10 April and 16 June 2020. May 2020 was the greenest month on record with average carbon intensity of 143 gCO_2/kWh and the lowest carbon intensity ever seen on the system – 46 gCO_2/kWh on 24 May 2020. The record for highest ever level of wind generation was broken on 13 February 2021 at 17.5 GW, and on 26 August 2020, wind contributed to 59.9% of the electricity mix, the highest ever. On 20 April 2020, solar power set new records for its highest ever level of generation (9.7 GW) and its highest share in the mix (34%).

We are pleased that Ofgem recognised our RIIO-2 business plan as ambitious and agreed to fund us for the activities we want to deliver, approving £504m (98%) of the costs we set out for the first two years. Ofgem has listened to our feedback and our stakeholders' feedback and made changes to the regulatory framework that will set us up to transform our role, deliver our ambitious plans and facilitate the transition to a zero-carbon electricity system. Over the five-year RIIO-2 period, the activities set out in our business plan will generate net benefits of around £2 billion for consumers, lowering average annual consumer bills by around £3.

On 21 January 2021, Ofgem published its Review of GB energy system operation. We are working closely with the government, regulator and industry to explore what changes will be needed to achieve net zero.

Following the closure of the Energy Emergency Executive Committee and Ofgem investigations into the events of 9 August 2019, the ESO has been working to deliver the recommendations outlined by both reports.

In 2017, the ESO did not meet its obligation to provide accurate and unbiased 7-day-ahead electricity demand forecasts. Following an investigation by Ofgem, the ESO made a payment of £1.5 million into Ofgem's voluntary redress fund to support vulnerable energy consumers and innovation.

Principal operations – US

In the US, in 2020/21 we performed well despite the widespread effects of COVID-19, the political divide and social unrest transpiring across the country. We renewed our focus on safety and storm response and progressed toward a clean energy future.

Our US performance

Measure	2020/21	2019/20	2018/19
Return on Equity (£m)	**7.2**	9.3	8.8
Statutory operating profit (£m)	**1,344**	880	1,425
Underlying operating profit (£m)	**1,486**	1,636	1,594
Adjusted operating profit (£m)	**1,313**	1,397	1,724

Capital expenditure (£m)	**3,223**	3,228	2,650
Asset growth (%)	**7.8**	12.2	9.2
Rate base* (£m)	**20,041**	20,644	17,565

* US rate base is as previously reported at historical exchange rates.

US Residential – Customer Trust Advice

66.2%

(2019/20: 59.8%)

Highlights

In the US, in 2020/21 we performed well despite the widespread effects of COVID-19, the political divide and social unrest transpiring across the country. We renewed our focus on safety and storm response, progressed toward a clean energy future, set goals for operating as a responsible business, and reinvested in an inclusive culture and a fully diverse workforce.

We met the challenge of enabling our employees to continue working safely during the pandemic, while providing the energy services our customers depend upon. Implementing COVID-19 safety procedures, technology advances and employee guidance helped employees navigate safely through these unprecedented times. A safe work guide and weekly severity level summaries were provided to safely continue operations throughout the pandemic. Technology improvements were made by deploying programmes like Microsoft Teams, Zscaler and document sharing, which enabled collaborative work environments from the safety of our homes. While many organisations decided not to proceed with their internship and hiring programmes due to the pandemic, we found innovative ways to make virtual hiring, onboarding and internships work.

COVID-19 compelled us to provide more support to the communities we serve. National Grid and The National Grid Foundation collectively provided nearly $3 million in COVID-19 relief throughout the communities where we live and work. We were also able to stimulate the local economy through our Manufacturing Productivity Program, which provided funding to companies across New York helping fight the virus. By awarding over $100,000 in grants to various New York manufacturers like Applied DNA Sciences and Precision Valve and Automation, these producers were able to retool their businesses in order to produce critical equipment, therapeutics and diagnostics for health care workers and patients.

We have experienced some of the most impactful storms we have seen in almost 20 years. Hurricane Isaias and the October Micro-Burst/Tornado/Derecho took their place on the US National Grid Top Ten storm list as some of the most severe weather events to affect our customers. Even after taking into account COVID-19 adjustments made early on to accommodate the Center for Disease Control (CDC) and other restrictions, our storm response performance has remained focused and steady. Our efforts around recovery and response continued to be recognised across the industry, receiving multiple awards in 2020 from the Edison Electric Institute and the North Atlantic Mutual Assistance Group.

Safety continues to be a critical pillar of our daily operations and we are fully committed to the wellbeing and safety of our workforce and customers alike. In order to conduct operations safely during the pandemic, we had to adjust early on to comply with CDC guidelines and other restrictions. We also closely monitored each state's COVID-19 plans, rules, restrictions and re-opening guidelines as they directly impact our efforts as an essential workforce. A tragic incident took the life of one of our contractor employees in November. Safety is our most important responsibility and incidents like this reminded us to continue striving to 'find a better way' to improve our safety culture. We encourage transparency and discussion around incidents that occur both in the US and UK and use these lessons as an opportunity to make the work environment safer. As of 31 March 2021, our LTIFR was 0.12. We have focused safety culture transformation programmes to engage our workers on hazard and risk awareness, and implemented controls to prevent safety incidents. We have asked our employees and contractors to direct their attention to the safety of themselves and their colleagues every day.

We have identified specific actions in the US business to support us reaching net zero by 2050. These are: reducing demand through energy efficiency and demand response; decarbonising the gas network with renewable natural gas and hydrogen; reducing methane emissions from our own gas network while working with the industry to reduce emissions through the entire value chain; integrating innovative technologies to decarbonise heat; interconnecting large-scale renewables with a 21st century grid; enabling and optimising distributed generation; utilising storage; eliminating SF6 emissions; advancing clean transportation; and investing in large-scale carbon management.

Enable the energy transition for all

Ensuring more electric vehicles are on the road is a key part of our net zero by 2050 plan, because we recognise that transport is the single biggest source of greenhouse gas emissions in our US service territory. That is why we will convert to a 100% electric fleet by 2030 for our light-duty vehicles while also pursuing the replacement of our medium- and heavy-duty vehicles with zero-carbon alternatives.

In late 2020, we completed a first-of-its-kind distributed generation interconnection cluster study to evaluate and assess the impacts of unprecedented solar saturation on the network in areas of New England. The study identified the upgrades required to ensure reliability of the system, and we proposed an innovative cost allocation proposal to potentially ease the burden on solar developers in Massachusetts. To date, the Company has interconnected over 2,000 MW of solar across its Northeast US service territory.

We have continued to advance efforts to decarbonise our gas network for a clean energy future. Our belief is that hydrogen can transform the energy industry, and it is time to start the groundwork to integrate hydrogen into the overall energy system – which is why, in New York, we are excited to be participating in a hydrogen blending study, in conjunction with NYSERDA and The Stony Brook Institute. The project will explore the performance and use of our existing gas infrastructure to integrate and store renewable hydrogen into our system. We have also recently helped secure over $12 million in funding from the US Department of Energy (DOE) to facilitate research and accelerate the potential of hydrogen blending. In addition, in 2020/21 we invested $1.77 billion in the gas infrastructure across our US service area, including the replacement of more than 350 miles (563 kilometres) of leak-prone pipe.

Deliver for our customers efficiently

Our customers are at the heart of everything we do, and the Chief Customer Officer role is crucial to our continued success as a business. In November, we appointed our new Chief Customer Officer due to her strong track record of improving and increasing customer satisfaction from the fourth to first quartile. Our new Chief Customer Officer's expertise in leading customer functions at regulated and deregulated energy companies will help make it easier for our customers to work with us.

We conducted more than 32,000 no-cost virtual home energy assessments in New England when in-person home energy assessments were suspended due to COVID-19. Through video chats, phone calls and digital pictures to assess areas for savings opportunities, energy specialists were able to provide energy-saving guidance safely and remotely. After the completed assessment, customers were sent energy-saving products like low-flow shower heads and smart plugs. They were also eligible for offers like 75% or more off approved insulation and air sealing. Our new virtual home assessments allowed us to safely provide this valuable energy efficiency programme to assist our customers with energy savings that are needed now more than ever.

In November, we filed a proposal for review with the Massachusetts Department of Public Utilities to increase gas distribution rates for our Massachusetts gas customers. The total impact of $139 million would be spread across our customer base. This rate case is still underway and if approved, these new rates would be effective from 1 October 2021. However, to avoid customer confusion and billing hold, we will be changing the rates charged to customers on 1 November 2021 to align with our gas rate changes.

Our upstate New York three-year rate agreement expired in April 2021 and in July 2020, we submitted a request for new delivery prices beginning in July 2021. We also proposed up to $50 million in COVID-19 relief to support our most economically vulnerable residential customers as well as businesses that are struggling because of the financial impact of the pandemic. This rate case is still underway.

Grow our organisational capability

Our Customer Experience Products team recently implemented several upgrades to our customer digital channels. My Business Account is an enhanced customer-facing digital billing and payment platform for our large commercial and industrial customers. This platform was built to support our customers to self-serve through digital billing and payment programmes. It provides interactive historical cost comparisons, billing snapshots and allows for bulk payments. This platform went from a mere concept on paper to production in less than a year and is now supporting over 37,000 accounts within its pilot phase.

Our Outage Communications programme has made it easier for customers to check electric outages online or through text message. For Hurricane Isaias, we saw a fundamental shift to digital with 61% of customers reporting and checking on the status of outages online or through text. This reduced contact centre volume by 75% and resulted in higher Outage Communications Satisfaction scores for customers receiving outage information through this programme. These scores are currently above target for 2020/21, with nearly a 10-point increase over 2019/20.

Empower colleagues for great performance

During the early summer of 2020, we were reminded that racism and intolerance still exists throughout the US. This was an opportunity for companies across the country, including National Grid, to take a hard look at how we can recommit ourselves to pursuing long-lasting change. Since then, we have created an Inclusion and Diversity Action Plan with a goal of creating a more inclusive environment for our colleagues, our customers, and the communities where we live and work.

Immediate actions we've taken in the US have been providing increased access to racial dialogue sessions and training for all colleagues, as well as committing to ongoing transparency on diversity metrics. We have dedicated additional full-time resources to support our inclusion and diversity efforts, which included appointing our new Chief Diversity Officer, based in the US. In addition, we've begun to set specific and sustainable targets for diversity across the organisation for the next 5–10 years in order to achieve the inclusive culture and diversity we seek.

In November, we officially unveiled our Grid for Good initiative, which is designed to increase the social mobility and employment opportunities for young people from underserved communities across our regions. Through the Grid for Good programme, colleague volunteers work with young people aged 16 to 24 and teach them basic business skills and technical skills needed in today's competitive job market.

Our Enterprise Change Network was also launched, where colleagues take on leadership roles, creating a feedback loop of all colleague voices, and identifying opportunities for colleague engagement.

Scan here to view our story

Green collar jobs: Ryan Cote – acting to improve the environment

I'm a Senior Program Manager for electric transportation and my role is all about encouraging more people to drive electric in Rhode Island.

Right now, I oversee our Fleet Advisory Services Program that provides business customers with a roadmap on how to electrify their fleets. I also manage a residential 'Off-Peak Charging Rebate' study that incentivises participants to charge their electric vehicles (EVs) at night and I support the roll-out of our EV charging station infrastructure.

Helping our customers realise these benefits and making it easier for people to travel emission-free is at the heart of my green collar job.

Ryan's green life

When I'm not working, I try to promote EVs to friends and family. My family and I recycle whenever possible, have installed all LEDs and smart thermostats at home, and are as efficient as possible in our day-to-day activities.

This group drives awareness and understanding of any changes and supports the Company's purpose-driven journey on behalf of our customers.

Looking ahead

On 18 March, National Grid announced that it had agreed to acquire WPD from PPL subject to certain regulatory approvals. In parallel, PPL expressed its interest to expand its presence in the US, which led to an agreed sale of NECO, our Rhode Island business, which, conditional on completion of the WPD Acquisition and certain US regulatory approvals, is expected to complete in the first quarter of calendar year 2022. NECO includes our electricity transmission and distribution operations and our gas distribution operations in the state. We are confident that our Rhode Island colleagues, customers, communities and regulators will be well served by PPL. The US remains a critical growth driver of the business and we will continue to make investments in the US that will get us closer to a clean, fair, affordable energy future.

Future efforts to decarbonise our gas network for a clean energy future include being selected as co-participant with the New York Power Authority to build the Northern New York Priority Transmission Project. This project will lead to emissions reductions of 1.2 million tonnes of CO_2 and save $447 million in transmission congestion costs. The project is expected to begin construction next year and be completed by the end of 2025.

The new US operational model is essentially a move to a stronger jurisdictional structure so that we can simplify our business with clear accountabilities and goals aligned to the needs of each region. This change will help us deliver on our vision of achieving a clean, fair, affordable energy future for customers. In addition, by executing our net zero by 2050 Plan, we are doing our part to create a better world for our customers, communities, and for our children who inherit it.

National Grid Ventures and other activities

NGV and other activities performed well despite managing the impacts of COVID-19 and the Brexit transition. We maintained our focus on safety and asset reliability, while developing and delivering new clean energy projects to support the energy transition across the US and UK.

Statutory operating profit

£187m

(2019/20: £237m)

Underlying operating profit

£237m

(2019/20: £242m)

Adjusted operating profit

£237m

(2019/20: £242m)

Interconnector capacity by 2024

7.8 GW

LNG storage capacity by 2025

1.2m cubic metres

Highlights

This section relates to NGV, non-regulated businesses and other commercial operations not included within the business segments.

NGV, which operates separately from our core regulated units, is focused on investment in a broad range of energy businesses that operate in competitive markets across the UK and US. Its portfolio includes electricity interconnectors, LNG storage and regasification, energy metering, large-scale renewable generation and competitive transmission. Our UK metering business will form part of the GT sale process described on page 3.

Our other activities comprise NGP, the venture investment and innovation arm of National Grid plc, as well as UK property, US non-regulated businesses, LNG operations and corporate costs.

Despite challenges presented by COVID-19 in the US and UK, NGV businesses performed well again in 2020/21, including the launch of the IFA2 subsea interconnector between the UK and France, and the start of construction of the Prairie Wolf Solar project in Illinois. NGV also successfully implemented alternative trading arrangements to ensure our interconnector portfolio continued to operate following the UK's exit from the EU's Internal Energy Market as part of Brexit.

The safety and wellbeing of colleagues continues to be a key priority across NGV. As at 31 March 2021, NGV's LTIFR was 0.15. NGV LTIFR has risen from 0.05 in 2019/20, due to three minor site incidents, and the NGV business is working to bring this rate in line with the Group target of 0.10.

In aggregate, the NGV and other segment delivered £187 million of statutory operating profit, £237 million underlying operating profit and accounted for £576 million of continuing investment in 2020/21.

Enable the energy transition for all

NGV plays an important role for the National Grid Group in developing, constructing, operating and investing in infrastructure to support the energy transition in both the UK and the US.

In the UK, NGV is the leading developer and operator of electricity interconnectors, which are high-voltage subsea electricity cables that connect the UK with neighbouring markets. They allow the UK to trade excess power, such as renewable energy created by the sun, wind and water, with other European countries. The UK government in its Energy White Paper has set an ambition for 18 GW of flexible interconnector capacity by 2030 to enable the integration of renewables. NGV already has interconnectors linking the UK to France, Belgium and the Netherlands and each year they power five million homes with clean energy. By 2030, 90% of the energy imported by NGV's interconnectors will be from zero-carbon energy sources.

NGV is part of two consortia developing CO_2 transportation and storage technology. The first consortium, Zero Carbon Humber, is developing what could be the world's first zero-carbon industrial cluster. In addition, NGV is part of the Northern Endurance Partnership, which aims to transport carbon emissions from the Humber and Teesside industrial clusters for storage deep under the Southern North Sea. Combined, these projects can reduce UK industrial emissions up to 40% and protect up to 55,000 jobs across the Humber region, while making the UK a world leader in CCUS.

In the US, NGV completed the launch of its new US large-scale renewables brand, National Grid Renewables, which includes the renewables development company formerly known as Geronimo. Project highlights include the start of construction for the 200 MW Prairie Wolf Solar Project in Illinois, as well as the completion of construction of two portfolios of smaller solar projects – the 40 MW MiSolar Portfolio in Michigan and the 15 MW Nordic Solar III Portfolio in Minneapolis, which brings the Nordic solar portfolio to approximately 70 MW in total.

The National Grid Renewables team achieved a record year of origination activity in 2020/21, with over 2 GW of signed contracts, including power purchase agreements with leading utility and corporate buyers, as well as project sale agreements to enable our utility partners to provide renewable energy for their customers, positioning the business for growth in the years ahead. The business also drove strong performance for its operating wind farms in SPP (Southwest Power Pool) and solar projects in MISO (Midcontinent Independent System Operator), which is now held in a joint venture and operated by National Grid.

NGV is part owner of New York Transco, which operates electricity transmission assets that save money for electricity consumers and offer better access to clean energy, supporting the retirement of traditional power generation. The assets include the Ramapo to Rock Tavern 345 kV Line, Frasers-Coopers Corner 345 kV Line and Staten Island Unbottling. NGV is also a 50-50 joint venture partner with NextEra Energy Resources in two battery energy storage systems on Long Island. These include two 5 MW, 40 MWh battery energy storage systems in East Hampton and Montauk, New York. The batteries, which serve as an alternative to building new transmission or fossil-fired peaking capacity, enable energy peak-shaving during the busy summer months on the eastern end of Long Island.

National Grid established NGP to 'disrupt itself' and advance the energy systems of tomorrow. This includes incubating and investing in startups at the intersection of energy and emerging tech; launching new businesses from scratch; business development; and infusing an entrepreneurial culture into National Grid. NGP's portfolio as at 31 March 2021 comprises 23 companies and 4 fund investments at a fair value of £178 million.

Deliver for our customers efficiently

In 2020/21, a number of COVID-19 measures were put in place to ensure the continued availability of our assets for our customers across the UK and US, while ensuring a safe environment for our colleagues.

In the UK, NGV's interconnector portfolio comprises 5 GW of operational capacity. In January 2021, National Grid and France's Réseau de Transport d'Electricité (RTE) started commercial operations on IFA2, the second interconnector connecting France and Great Britain. The 1 GW HVDC cable stretches 149 miles (240 kilometres) across the English Channel. The England France interconnector (IFA), the first interconnector to France, is a 2 GW HVDC cable with ownership also shared between National Grid and RTE. In 2020/21, IFA's availability was 95.4%. BritNed is an independent joint venture between National Grid and TenneT, the Dutch transmission system operator. It owns and operates a 1 GW HVDC link between GB and the Netherlands. In 2020/21, BritNed's availability was 75.1%. BritNed suffered two offshore cable faults resulting in the asset being offline from December to February and again in March. Nemo Link is an independent joint venture between National Grid and Elia, the Belgian transmission system operator. It owns and operates a 1 GW HVDC link between GB and Belgium. In 2020/21, Nemo Link's availability was 99.2%.

NGV's Brexit contingency planning ensured that its customers were able to continue to buy interconnector capacity following the completion of the Brexit transition period and the UK's exit from Europe's internal energy market on 31 December 2020.

NGV's Grain LNG is one of three LNG importation facilities in the UK. It operates under long-term take or pay contracts with customers and provides importation services of ship berthing, temporary storage, ship reloading and regasification into the NTS. Utilisation of terminal capacity was 20.5% in 2020/21, down from 30.8% in 2019/20. Grain LNG's road tanker loading also offers the UK's transport and off-grid industrial sector a more environmentally friendly alternative to diesel or heavy fuel oil. The facility allows tanker operators to load and transport LNG in bulk across the UK via road or rail.

National Grid Metering (NGM) provides installation and maintenance services to energy suppliers in the UK's regulated market. It maintains an asset base of around 8.4 million domestic, industrial and commercial meters, down from 8.8 million in 2019/20.

In the US, NGV is a part-owner of Millennium Pipeline, which provides consumers in the northeastern US with additional natural gas infrastructure to meet growing consumer demand for cleaner and more reliable energy. It is strategically positioned to serve utility and power plant loads across New York State and into New England.

New York Transco continued to progress its New York Energy Solution (NYES) project, which was selected by the New York Independent System Operator to provide transmission upgrades that will relieve congestion of New York's bulk electric power system, while enhancing reliability and facilitating upstate clean energy resources to the downstate demand centres. The upgrades will take place on an existing 54.5-mile (88-kilometre) utility corridor and on utility-owned land. New York Transco has started construction on the NYES project, which remains on track for a late 2023 service date.

National Grid Property deals with the management and regeneration of National Grid's brownfield surplus estate in the UK. The specialist team works with our communities to return these redundant sites back into beneficial use to provide new homes and employment opportunities across the UK. In 2020/21, National Grid Property disposed of 41 sites and exchanged contracts on a further four land sales, to facilitate the delivery of thousands of new homes across the UK. Its joint venture with Berkeley Group, called St William Homes, has entered its seventh year and recorded a second year of profit in 2020/21 despite the challenges posed by COVID-19. Around 7,000 homes are already under construction across London and the South East.

Grow our organisational capability

NGV businesses introduced a number of measures to grow organisational capability in 2020/21. NGV's interconnector team implemented a new organisational structure to drive value across what will be a portfolio of six interconnectors by 2023/24. National Grid Metering digitised and automated key operational processes, including the deployment of new field engineering commmunications technology. It also entered long-term partnerships for the delivery of field engineering works to provide better service levels for its customers across the UK.

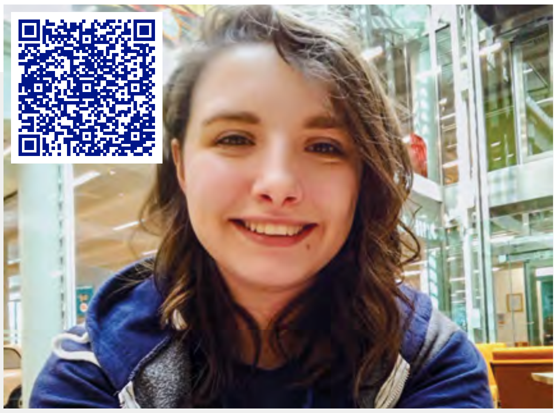
Empower colleagues for great performance

As the COVID-19 pandemic hit, organisations needed to quickly develop new ways of working and support the wellbeing of their colleagues. NGV developed a hub to provide its people across the US and UK with self-help material and signposts to improve confidence, wellbeing and emotional health. The new virtual wellbeing hub draws on a wealth of internal and external resources to support colleagues communicate more effectively with each other, while also providing a range of tools to take better care of themselves and their colleagues.

Looking ahead

In the UK, NGV will grow its interconnector portfolio by 2.8 GW in the next three years, with new subsea power links to Norway and Denmark. North Sea Link (NSL) will connect Great Britain and Norway. Developed between National Grid and the Norwegian transmission system operator Statnett, NSL will be 447 miles (719 kilometres). The 1.4 GW link is expected to be operational in 2021/22. Construction is also underway on the Viking Link interconnector. Developed together with Danish transmission system operator Energinet, Viking Link will be a 1.4 GW 475-mile (764-kilometre) long subsea link connecting Great Britain and Denmark. NGV will have 7.8 GW of operational interconnector capacity when Viking Link becomes operational in 2023/24.

Scan here to view our story



Louise Guthrie – engineering for net zero

I'm a net zero Strategy Lead at National Grid Ventures. Engineering runs in my family – my dad, both grandads and twin brother are all engineers while our younger brother has just started an engineering degree.

There's never been a more exciting time to work in energy, now that we're moving away from traditional processes, looking to the future and actively seeking out new, environmentally conscious technologies.

In my last graduate placement I worked on the Viking Link interconnector project, one of the world's longest electricity interconnectors from Denmark to the UK. In my current job, I'm formulating plans to hit renewable energy targets for 2030 and 2050. One day, I'd like my legacy to be that I've been a leader in an environmentally conscious company – to be able to think 'I helped solve carbon emissions'.

In 2020, NGV's Grain LNG and Qatar Terminal Limited (QTL), a subsidiary of Qatar Petroleum, signed a 25-year agreement that will provide the Qatari company with storage and redelivery capacity at Grain LNG from 2025. Grain LNG will expand its storage capacity from 1 million m^3 to 1.2 million m^3 by 2025.

NGV will continue to progress the development of CCUS in the UK through its participation in the Zero Carbon Humber project and the Northern Endurance Partnership. NGV has also signed an agreement with TenneT to develop a vision for multi-purpose interconnectors, which aim to connect clusters of offshore wind farms to neighbouring markets simultaneously with interconnectors.

In the US, National Grid Renewables plans the start of commercial operations for several large-scale renewable energy projects across the country in 2021/22, including the Prairie Wolf Solar Project, as well as the construction of other projects.

NGV and RWE Renewables, one of the world's leading renewable energy companies, signed a joint venture partnership agreement to explore the development of offshore wind projects in the coastal region of the Northeast US. Additionally, NGV is supporting the Revolution Wind offshore wind project, which is being developed by Ørsted and Eversource. Between the two initiatives, NGV is now working with the top two offshore wind developers in the world.

St William, our joint venture with The Berkeley Group, has completed the construction of around 230 new homes across London. St William continues to grow and is expected to deliver around 20,000 new homes across London and the South East. In March 2020, National Grid Property entered into a new joint venture agreement with Places for People, one of the largest regeneration, development, and property management companies in the UK and a registered provider of affordable housing. As part of the venture, called National Places, National Grid Property has identified the first 12 sites that can deliver much-needed housing across the UK.

Our stakeholders

The Board recognises the responsibility to all our different but interrelated stakeholder groups and wider society. We endeavour to ascertain the interests of our stakeholders and reflect them in the decisions that we make. We recognise that in balancing those different perspectives, it isn't always possible to achieve each stakeholder's preferred outcome and that consideration of each stakeholder group varies depending on the subject in question.

You can find out more about our key stakeholders and their interests, how we engaged with them and how this influenced decision-making in our section 172(1) statement that follows. For more details on how our Board operates, including the matters it discussed and debated during the year, see pages 76 – 77.

Engagement with our stakeholders

All of our Directors are briefed on their duties as set out in the Companies Act 2006 during the onboarding process, including their responsibility to promote the success of the Company in accordance with section 172.

In doing so, our Directors must have regard to our stakeholders and the other matters set out in section 172. Pages 46 – 51 comprise our section 172(1) statement, which describes how the Directors have had regard to these matters when performing their duty. In line with the Companies Act 2006, below we provide a high-level summary of the matters of importance to our stakeholders and how our Directors engaged with them and had regard to their interests when setting the Company's strategy and taking decisions concerning the business.

We recognise that effective engagement with a broad range of our stakeholders is essential to the long-term success of the business and we aim to create value for our stakeholders every day by maintaining levels of business conduct that are aligned to our values and our purpose.

Further information on our values can be found on page 18.

Our approach

Our approach to stakeholder engagement has continued in the same format we reported last year as we believe this remains effective; however, it is also shaped by the types of decisions and discussions that need to be made during the year.

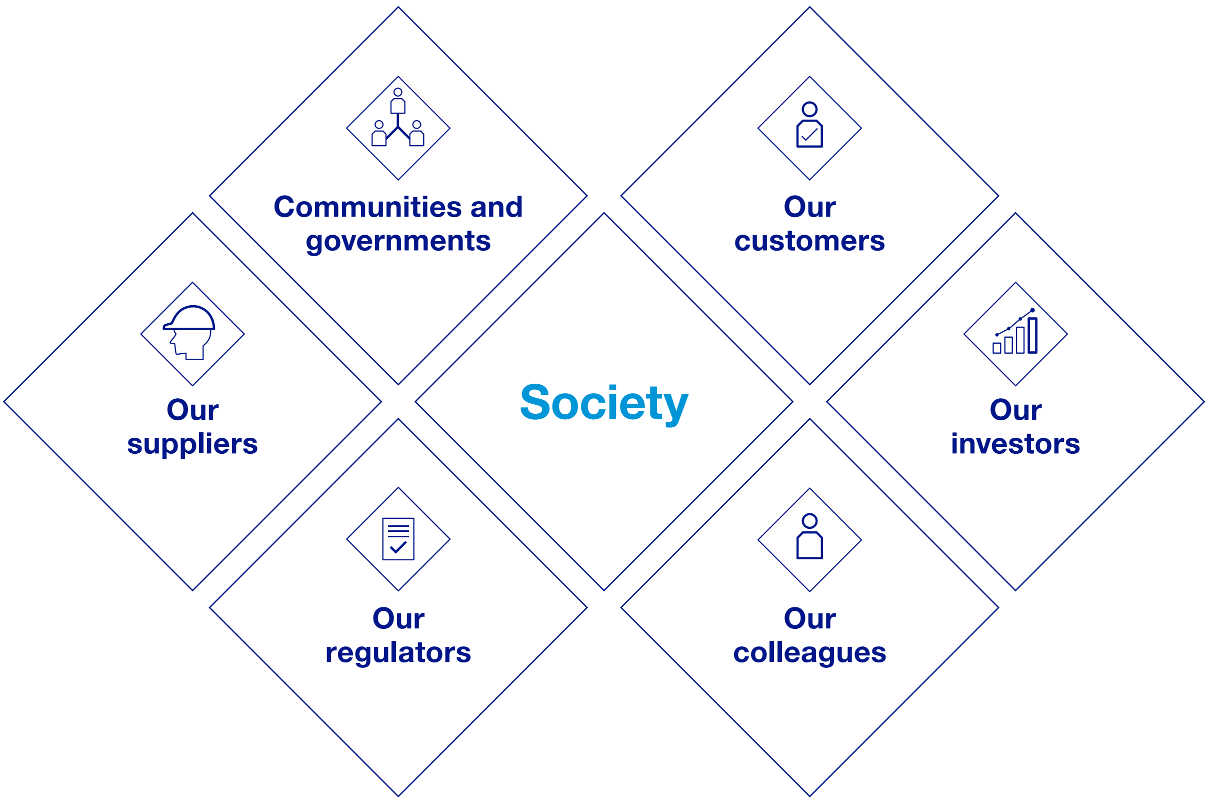
Reporting and monitoring: our engagement has continued to build on existing reporting mechanisms, whereby information on stakeholder interests is collated at a business level, so that informed decisions can be made in the most appropriate forum. An overview of these developments and business-level decisions is reported on a regular basis to the Board or a Board Committee. The cadence of these reports to the Board is considered bi-annually as part of the forward business review by the Chairman, Chief Executive and Group General Counsel & Company Secretary to ensure that sufficient consideration is given to the most pertinent issues and impacted stakeholders.

Direct engagement: our approach to direct engagement has adapted this year due to the COVID-19 pandemic. Although most of our engagement with key stakeholders is carried out by the management teams, the Board engages directly with shareholders, colleagues and investors, and engagement this year has taken place virtually. This has enabled the Non-executive Directors in particular to gain direct exposure to additional business areas and a broader cross section of colleagues. Further information can be found on page 79.

Section 172 statement

Although we recognise there are many ways for the Directors to promote the success of the Company, our section 172(1) statement focuses on stakeholder engagement undertaken this year. On these pages, we have grouped our stakeholders into six categories that the Board considers key. We note that the categories and examples included are not exhaustive in summarising all of our stakeholder considerations. We have integrated our reporting on how these key stakeholders have been considered throughout this report, and our statement should be read in conjunction with the following sections:

- information on our key stakeholders and why they are important to us, see pages 4 – 7;
- matters considered by the Board, see pages 76 – 77; and
- our response to COVID-19, see pages 8 – 9.



COVID-19

The COVID-19 pandemic has impacted on all of our stakeholders. Further information on stakeholder impact and how we have responded as a Company can be found on pages 8 – 9.

Stakeholder group	Stakeholder engagement	Looking ahead
Investors	Having stress-tested the finances of the Company against a number of potential COVID-19 scenarios throughout the year, the Board recommended a final dividend for 2019/20 and interim dividend for 2020/21 in line with its policy. The Finance Committee has held ad hoc meetings to consider the short- and longer-term liquidity of the Company in a range of different COVID-19-related scenarios. Following some delays during the early stages of the pandemic, the Company delivered on its substantial investment programme by investing £5.047 billion across our networks. The Board recognises the importance of the AGM as an opportunity to engage with shareholders. However, due to the government restrictions in place as at the date of the meetings, both the 2020 AGM and the General Meeting in April 2021 took place virtually. Shareholders were invited to watch a live webcast, which included a business presentation from the Chairman and CEO and were able to submit questions via an online portal in advance of the meeting. A full transcript of the Q&As for both the 2020 AGM and April 2021 General Meeting are available to view on our website.	We have renegotiated and/or extended our debt facilities to maintain strong liquidity over the next few years. The Company has now confirmed a policy of growing the dividend per share annually in line with CPIH. We are encouraging shareholders not to attend the 2021 AGM due to the unpredictable circumstances of the COVID-19 restrictions easing. Instead we encourage shareholders to participate via Proxy and to pre-register questions via our website. This year we are seeking shareholder approval to permit hybrid meetings.
Colleagues	From the outset our focus has been on keeping colleagues safe, equipping them well and providing regular communication, whether from senior leadership or through other channels, on the actions being taken. The early stages of the pandemic saw the rapid roll-out of Zscaler and Microsoft Teams to support colleagues working remotely, and we ensured key workers going out on site during lockdown to keep gas and electricity flowing benefitted from enhanced safety protocols. The Company has enhanced mental health programmes and increased employee engagement, for example with virtual wellbeing sessions to minimise any strain caused by virtual working. No pay reductions, furlough or redundancies were implemented for a number of months. Absenteeism as a result of COVID-19 has remained within the norms for UK and US geographies. Employee pulse surveys were carried out to gauge sentiment of employees during the pandemic. The pulse survey showed that 90% of respondents felt supported by team members with 81% confirming that they had the necessary resources in place to do their job properly. 86% felt that the Company shows care and concern for its employees, which represented a 29% increase since the full annual engagement survey carried out pre-pandemic. Colleagues highlighted that further information would be helpful on managing workload while balancing caring responsibilities. The Company has since adopted a flexible working hours policy. While many organisations decided not to carry on internship and hiring programmes due to the pandemic, we found innovative ways to make virtual hiring, onboarding and internships work.	We are monitoring progress of how the Company can accommodate employees returning safely to offices, and how we can build on some of the positive changes in our culture and ways of working as the restrictions are lifted again. Our communications confirm our support for colleagues to take up vaccination, but we recognise there could be circumstances, for example medical or religious reasons, where this is not possible or practicable. Further information on colleague engagement can be found on page 79.
Communities	Our employees have been supporting our communities by volunteering and providing their time and expertise to support charities and the most vulnerable. As part of this we have set up Grid for Good to help play our part in addressing the effects of the economic downturn in the UK and US which has seen youth unemployment double in the wake of the pandemic. In total, National Grid has made donations of £400,000 to National Emergency Fund and £183,000 to Trussell Trust UK. In addition, NGV has made a £100,000 donation to University Hospitals Birmingham for 400 tablet devices. We have provided more than $760,000 of funding in economic development grants to seven Western New York initiatives to grow the regional economy after the COVID-19 pandemic. Financial donations have been made in response to concerns received, which have helped to support hunger relief and human services for people in need and struggling due to the impacts of the pandemic. National Grid US continued to give back to the community, donating a further $100,000 to Feeding America's Hunger Action Month. This was a partnership with Feeding America, who support over 45 food banks across Massachusetts, New York and Rhode Island and is an example of the Company's ongoing efforts to support local communities. More than $2 million in charitable donations has been given in the US since the pandemic began.	National Grid was one of 200 signatories to an open letter from UK business leaders to government calling for the alignment of economic recovery plans with the UK's wider environmental and climate goals, including a quote from John Pettigrew calling for 100,000 jobs to be created in energy sector as we work to net zero. NGP became an official investor partner in 2020 Clean Fight New York with the aim of supporting clean energy startups with goals of building back better after COVID-19 and providing clean energy jobs for the region.
Customers, regulators & suppliers	Throughout the pandemic, the Company has considered ways to help customers manage their bills. In the US we suspended our debt collection and customer terminations resulting in lower customer collections and additional provisioning for doubtful debts. As part of our upstate New York rate plan filing for new delivery prices beginning in July 2021, we proposed up to $50 million in COVID-19 relief to support our most economically vulnerable residential customers as well as businesses that are struggling because of the financial impact of the pandemic. Our response to the COVID-19 pandemic has led to measurable improvements in customer satisfaction. The Cogent Syndicated 2020 Report, a nationally syndicated survey of 140 US utilities' customers scored us 7.22 on a 10-point scale on our response to the pandemic, specifically ranking us fifth out of 25 large electric/combination eastern US utilities. In the UK, we actively supported Ofgem's measures to protect customers by relaxing network charge payment terms for suppliers and shippers facing cash flow challenges as a result of COVID-19. The procurement team have kept in regular contact with our critical suppliers to ensure early identification of potential supply chain issues and to ensure the necessary support is available where required.	We continued the development and tender of future work for our suppliers, giving longer-term visibility and greater certainty of income. We further decided to postpone the filing of the US Niagara Mohawk rate case which could have resulted in bill increases in 2021. In the UK we continue to focus on managing the impacts of COVID-19 on our suppliers and supply chain, looking to ensure the successful delivery of supply contracts to support the RIIO-2 period.

Our stakeholders continued

How we create value for our stakeholders

We have provided some examples of how particular outcomes were considered by the Board below, noting that these examples are not exhaustive in summarising all our stakeholder considerations. Within each example, when outlining how the Board considered the impact on a particular stakeholder group, we also list the broader range of stakeholders the Board considered as part of its discussions.

Stakeholder group	Stakeholder engagement	Outcomes and actions
Investors (individual and institutions)	**How we engage across the Company** In October 2020, we held an ESG virtual seminar event which provided an opportunity for investors to hear from management across our UK, US and NGV businesses on ESG achievements to date and our ambitions for the future. The session covered the five pillars of responsible business activity and showcased activity, commitments and ambitions across the business. The seminar provided an opportunity for two-way interaction via Q&A sessions. The Chairman, two Non-executive Directors and Executive Directors participated in the session, and the recording can be viewed via the investors section of our website. Engagement has also taken place this year as part of the Company's results announcements and business presentations. In January 2021, we commenced our annual investor programme with the launch of Grid Guide to the future of gas event. The event was attended by over 500 people with 50% of the share register represented and included large investors, analysts, ESG experts, regulators, government departments, industry bodies and rating agencies. The session provided an update to the market on the progress we have made with different fuel technologies in both the UK and US and how these would help us achieve our net zero ambition, and provided an opportunity for investors to ask questions of those experts involved. The Company continued with its asset reunification programme to try and engage with our retail shareholders throughout the year. **How we engage at Board level** Regular investor updates are provided to the Board as part of the reporting cycle, which includes feedback on investor perceptions, business strategy and market environment. In December 2020, the Board received the results of an independent audit of investor perceptions from 20 different institutions, which together represented almost 20% of the Company's share capital. Interviews were carried out with investors to establish their views on performance of the business and management. Updates from Company-level engagement with shareholders are provided to the Board as appropriate. The Remuneration Committee Chair is engaged with shareholders throughout the year on key remuneration topics.	The seminar reconfirmed how engaged our investors are in the Company's performance while operating in a responsible way and creating a positive social impact. Questions focused on key areas of our strategy, including the energy transition and decarbonisation of heat. It was clear that looking ahead, our strategy needs to include pathways that are both practical and affordable. This series of events focuses in on specific topics, across all ESG themes, aiming to give a deeper understanding of the projects the Company is working on, and how we can make a real difference to the energy transition. Since the first future of gas event, there has been a follow up 'future of gas…extra event', as well as our 'Grid Guide to' podcast. The next topic in the series will be focusing on our role in the decarbonisation of transport and is planned for later in the year. As reported last year, we commenced an asset reunification programme in January 2020 which provided us with an opportunity to re-unite as many shareholders as possible with their unclaimed dividends. As at the date of this report, approximately £40 million was reunited with the relevant shareholders and we have re-engaged approximately 35,000 dormant shareholders. Our Articles permit any unclaimed dividend greater than 12 years to be forfeited and as a Company, we will be looking to put any unclaimed funds towards charitable causes, including Grid for Good. The investor perception study highlighted that senior management was held in high regard. The results noted that investors were generally comfortable with the Company's approach on ESG issues, but that there was a need for even greater integration of ESG in the Company's communications. The Board noted that the ESG narrative would be embedded further using the momentum from the ESG event. Examples of how this would be actioned include: • via 'Our Grid Guide to' series already launched; • via the Responsible Business Report; • building on our interactions with third-party ESG rating agencies to deliver the information they need to rate the Company accurately; and • continued investor engagement. **Views of other stakeholder groups considered**

Case study:

Agreed acquisition of WPD from PPL (subject to certain regulatory approvals) and strategic portfolio repositioning

Stakeholders considered in accordance with s.172

A significant proportion of the Board's time at the latter end of the financial year was spent discussing the Company's strategic repositioning, including the likely consequences of the decision in the long term and ensuring the balance of the needs and expectations of all our stakeholders in its decision to strategically pivot the UK portfolio towards electricity, together with the proposed sale of NECO and majority stake in NGG. This decision is strongly aligned with the Company's net zero ambition and its strategy. See pages 56 – 57 for more details.

Timeline

- **End of 2020 into 2021** – Board, Finance and Audit Committee meetings took place to discuss the strategy. The Board approved the establishment of a sub-committee. See pages 76, 85 and 88 for more detail.
- **March 2021** – Final decision taken by the Board on the strategy and announcement made.
- **22 April 2021** – General Meeting took place and shareholders approved the WPD Acquisition.
- **April 2021 onwards** – Constructive engagement with Ofgem and policymakers to agree on how best to achieve these common goals in the best interests of all our customers and wider stakeholders.

Colleagues – engagement on day of announcement

- three UK town halls took place with circa 1,700 colleagues in attendance, with a similar approach taken in the US. Various other team meetings took place across the Company.
- communications will continue with colleagues to ensure they are kept well informed of the changes.
- in the UK and US, trade unions were notified and management will continue to engage these leaders.

Customers, regulators and suppliers – engagement on day of announcement

- in the UK, approximately 240 stakeholders were engaged, including the government, Ofgem, key MPs, customers and suppliers.
- in the US, management met with the Rhode Island Governor and RIPUC Chair. Extensive regulatory and government stakeholder outreach was completed across Massachusetts and Rhode Island.
- the US customer response team monitored calls.

Investors

- 420 external participants from 23 countries joined the investor call on the morning of the announcement.
- significant engagement continues with investors.
- shareholders had the opportunity to engage with the Board in a shareholder webcast, where Q&As could be submitted and answered by the Board prior to the General Meeting.

Stakeholder group	Stakeholder engagement	Outcomes and actions
Our colleagues Further information on our colleagues can be found on page 59. Information related to our colleagues and COVID-19 can be found on page 47.	**How we engage across the Company** Engagement with our colleagues takes many forms and enables us to create an inclusive company culture and positive working environment. Examples of engagement with our colleagues this year included virtual town halls, leadership calls, operational team meetings, Q&A calls, committee meetings and team hubs. The annual employee Grid:voice survey also provides an invaluable opportunity to gain insights on what is important to employees. Once the results have been collated, action plans are put in place to address any issues raised by our colleagues. We have recently incorporated an inclusion index into the survey. We know there is always more we can do to improve inclusion and diversity, but we are pleased with the great progress made so far. See page 59 for examples of engagement on diversity. The Company also engaged closely with our colleagues following the death of George Floyd in the US to ensure that messages of support were shared and commitment to diversity across the organisation was reaffirmed. This year we also held a live interactive event with the Group Executive Committee. The session provided an opportunity for employees in both the UK and US to ask questions on matters most important to them. Themes included: the new organisational design; the safe return to offices and ways of working going forward; decision making within the business; diversity at senior leadership level; the remit of the Chief Diversity Officer and how meaningful change will be driven; the impact of RIIO-2 in the UK and the role of natural gas in the energy transition. **How we engage at Board level** The annual Grid:voice survey provides senior leadership, the Group Executive Committee and the Board with an insight into how our employees are feeling about the Company and its strategy. Action plans are developed to progress any areas of improvement that are identified. The Non-executive Directors have participated in a wide range of virtual employee engagement opportunities throughout the year, including a US employee resource group session. They also met virtually with employee representatives from trade unions based in the UK and the New England and New York regions of the US.	Employee engagement forms one of our non-financial KPIs – you can read more about this on page 22. 81% of our colleagues completed the 2021 Grid:voice survey and the overall results showed a positive trend. The Enablement Index scored 74% which was a significant 6% improvement on last year. We were pleased to have received positive feedback around people, wellbeing and development, and the response to the COVID-19 pandemic, as colleague wellness has been a priority of the past 12 months. The support for continued flexible working arrangements post pandemic will be considered as our offices start to reopen. Improvement themes included communication, decision-making and resources, all of which are linked to the culture programme and will be a continued area of focus this year. Areas of improvement identified in the 2020 Grid:voice survey included enablement and the challenges around change and decision-making. An important first step towards overcoming these limitations was the introduction of our new value 'make it happen', which together with our values 'do the right thing' and 'find a better way' is shaping the behaviours that will underpin our long-term success in the future. We were pleased to report in January 2021 that we appointed a Chief Diversity Officer, who will lead our newly created Diversity, Equality and Inclusion (DEI) team. A key focus will be to improve the DEI strategy in both the short term and long term. Workforce diversity is another one of our non-financial KPIs – you can read more about this on page 22. Feedback and resulting actions from these sessions were collated and shared with the Executive Directors. Further information on the Board employee engagement programme can be found in the Corporate Governance Report on page 79. **Views of other stakeholder groups considered**
Our regulators	**How we engage across the Company** In the UK, regular interactions with regulators including Ofgem and the Health and Safety Executive (HSE) take place, as delivering for consumers and in particular protecting vulnerable customers is a key area of focus across all sectoral regulators. The Company also organises stakeholder forums and consultations around specific projects. We also work with other networks and organisations outside of the energy industry to identify good practice. Extensive engagement has also taken place this year with BEIS and Ofgem on the proposal for a greater separation of the ESO, as well as the ESO RIIO-2 price control. Details of engagement during the RIIO-2 settlement can be found on page 51. In the US, engagement takes place with both federal and state regulators, and customers on a regular basis as part of the ongoing rate case filing process. Examples include stakeholder engagement in the pre-filing programme, the build up to, and during the rate case process. **How we engage at Board level** The Board receives regular updates on issues impacting our regulators at its meetings and this year, a large amount of time has been spent discussing RIIO-2 and our relationship with Ofgem and on US regulation, including with each State that we operate in and on rate filings. In September 2020 the Board received an update on the execution of the gas supply settlement as a response to the ongoing feedback from the independent monitor on how the Company was addressing the downstate New York (DNY) gas demand and supply imbalance.	In the UK, discussions with our regulators have contributed to a number of business decisions including the decision to appeal two specific aspects of the RIIO-2 Final Determinations. The Board discussed the future direction of the ESO in detail at its meeting in November 2020. In December 2020, the Board considered the outcome of the ESO RIIO-2 Final Determinations and agreed the recommendation not to appeal any part of the package to the CMA. This year engagement has continued in relation to settlement discussions for the KEDNY and KEDLI rate case filings submitted in January 2019. A settlement was reached in April 2021 with the NYPSC staff and certain intervenors for a three-year rate agreement, which started on April 2020, with an option to extend for a fourth year. We have continued to make progress across all elements of the DNY settlement, particularly in relation to winter readiness. The Company has taken the opportunity to show how we are delivering new and innovative ways to serve our customers in DNY and give confidence to demand response and energy efficiency, and non-pipe alternatives. Recommendations from our internal review of Gas Supply Planning following the Board's lessons learnt review are being implemented on process, governance and modelling improvements. Looking forward, these improvements will bring new capabilities to all jurisdictions in the next few years. **Views of other stakeholder groups considered**

Our stakeholders continued

How we create value for our stakeholders continued

Stakeholder group	Stakeholder engagement	Outcomes and actions
Communities and governments	**How we engage across the Company** Our Policy and Public Affairs team has continued to maintain and build relationships across governments and with wider political stakeholders. Engagement has taken place via discussions and satisfaction surveys. Management has also engaged with the government throughout the year on a range of topics, including COVID-19, RIIO-2, net zero and green recovery. Engagement with local communities has taken place via consultations, primarily during the construction phases of our projects. Engagement has also taken place with local authorities, who are involved in endorsing our STEM fund among schools and promoting adult skills courses. The local authorities direct us to the area of greatest need and promote the sessions through their job seeker networks. We also regularly liaise with land owners and wider communities where the Company has assets, and we have established dedicated teams to manage these relationships. For example we had to replace an underground electricity cable at Bredbury, which after 60 years had come to the end of its working life. We worked closely with the council to determine the best access route, balancing factors such as traffic management, community impact and future plans for the area, as well as engineering considerations. A comprehensive stakeholder mapping exercise was carried out for the Trawsfynydd Transformer Delivery Project to identify key businesses and groups, local MPs, local district and ward councillors, parish councils, and a distribution area of local properties which may have been impacted by the delivery of the transformer. As a company, we have a critical role to play in enabling the energy transition to a low-carbon future. Following our commitments to reach net zero for our own emissions by 2050, we continue to invest in projects which are aligned to our strategic ambitions and the expectations of the communities in which we operate. Further information on our net zero commitments can be found on page 63. **How we engage at Board level** The Board has received regular updates on a number of key topics this year, including the aftermath of Brexit and the Responsible Business Charter (the RBC). The RBC was created with the goal of applying a Total Societal Impact (TSI) lens to everything the Company does as a business.	We received positive feedback on our response to COVID-19 which was reported as best in class. Our Hinkley Connection Project Education Fund was named Community Investor at the 2020 Utility Week Virtual Awards. The Fund supports communities impacted by the construction of the Hinkley Connection. So far, the project has: • supported 213,663 young people, including 41,469 disadvantaged pupils through its STEM education fund with 862 grants to local schools. 49% of the pupils who have benefitted from the STEM education fund are female; • contributed over £520,000 for community, charity and environmental projects; • delivered £405,000 worth of training for almost 200 local individuals struggling to find sustainable employment – 49% of trainees have secured employment; and • reinvested over £3 million in the community by hiring local contractors to work on the project. Stakeholders were kept informed via letter drops, dedicated information lines, on-site and media support on the day of delivery, contact card dissemination and a real-time text notification service. The engagement activities undertaken supported the delivery to site, and led to positive feedback and coverage of the delivery. This year we announced our 50:50 joint venture with Places for People, a large UK registered social landlord and property developer taking a commercial approach to delivering social outcomes, including affordable housing. In the US the 200 MW Prairie Wolf solar project was approved by the Investment Committee and Joint Venture Board. Prairie Wolf is a clean solar energy project which is expected to reduce an estimated 285,000 metric tonnes of carbon dioxide emissions per annum. **Views of other stakeholder groups considered**
Our suppliers	**How we engage across the Company** The Company regularly interacts with suppliers via the procurement team. The Company also engages with our top 250 suppliers annually to complete the CDP supply chain climate change disclosure. Members of our US leadership team meet with our key gas and electricity construction suppliers on a regular cadence to discuss strategic developments in the industry, opportunities for innovation as well as overall performance. In the UK, members of the UK Group Executive Committee meet with our key construction suppliers on a regular cadence, including the CEO forum to discuss similar items. **How we engage at Board level** Annual reports relating to our suppliers were submitted to the Group Executive Committee and to the Board. The Board also receives an annual update on the approach taken to address the risk of modern slavery on our supply chains and the proposed commitments for the following year.	We strive to work with businesses who comply with our code of conduct and we continue to work closely with our suppliers and peers to build on our knowledge and promote best practice in the industry. For RIIO-2, new framework contracts are being established and to support this, supplier onboarding sessions are taking place throughout our Vendor Management approach. We held three additional sub-committees of the Board to discuss the Costain and the Peterborough compressor station contract in more detail. In November 2020, the Board received an update on the London Power Tunnels (Phase 2). The two remaining contracts for Cable Installation and Substations were issued for tender in October 2020. It was announced that a contract was agreed with Murphy Group and HOCHTIEF to deliver Phase 2, a six-year project that will see construction of a 20 mile (32.5 kilometre) tunnel that will house transmission cables 30 metres underground. The Board approves the Modern Slavery Statement on an annual basis and shows support for the evolving commitments. **Views of other stakeholder groups considered**

Stakeholder group	Stakeholder engagement	Outcomes and actions

Our customers

How we engage across the Company

US Customers – The 'voice of our customer' feedback is collected throughout the US business via customer surveys. These are conducted on a tracking and an ad hoc basis to measure sentiment across residential, commercial and wholesale customers. Clean energy has remained a key focus for the voice of our customer.

We track customer response to our 'Are we doing the right thing?' belief statement bi-monthly, and insights from this research support our outreach activities.

UK Customers – Engagement with our UK customers takes place via a range of forums including liaison meetings, market research, stakeholder events and interactive customer listening sessions. Customer experience continues to be a top priority and we monitor progress in accordance with our strategy.

NGV Customers – This year customer engagement has taken place via market research and a range of questionnaires assessing overall satisfaction. The survey asked customers to rate key metrics and provide feedback on how further support could be provided. Maintaining effective communications with our customers has been key, and this has been strongly endorsed by our customers.

A virtual event took place in October 2020 which was attended by over 190 customers from 19 different countries. The event included presentations from the IFA team and their partners, a Q&A session with panel guests across Europe, a virtual exhibition hall showcasing the interconnectors and partners, and a networking lounge where attendees could discuss particular topics in focus groups.

How we engage at Board level

This year the Board received bi-annual updates on the UK, US and NGV customer performance, which included progress on deliverables aligned to our strategic priorities. The Group Executive Committee and the Board also received regular updates on the US rate case filings.

Outcomes and actions

Overall customer satisfaction scores for both our electric and natural gas utilities have continued their upward trend of improvement.

We recognise that improving our customer experience and reducing our long-term operating costs will require deployment of new, robust data and customer information systems. We appointed a new Chief Customer Officer in the US in December 2020 and are committed to achieving this goal.

As of 11 November 2020, 79% of our commercial customers and 72% of our residential customers said they agreed that National Grid was doing the right thing during the pandemic. In New England we conducted more than 32,000 virtual home energy assessments when in-person home energy assessments were suspended.

We have received an Honourable Mention (only granted to finalists) in Edison Electric Institute's 2020 Customer Advocacy Awards.

Key learnings from the RIIO-T1 period have included the importance of aligning strategy with customer ambition, looking across end-to-end customer/employee journeys to break down silos and the need to ensure data and technology roadmaps are aligned and coordinated across journeys. Beyond RIIO-T1, we need to reclarify our customer ambition and agree the pace of improvement in line with the RIIO-2 arrangement.

As a result of feedback received, a new customer engagement strategy was developed which included new methods of engaging virtually. This has increased the number of customer meetings per week.

Views of other stakeholder groups considered

Case study: RIIO-2 Final Determinations

Stakeholders considered in accordance with s.172

Timeline

- **Jan – May 2020** – focus on enhancing the understanding and interrogation of our business plan submission through:
  - extensive engagement with Ofgem via meetings and formal supplementary questions; and
  - broad programme of engagement with our stakeholders, including meetings, workshops and newsletters.
- **July – Sept 2020** – focus on responding to Ofgem's Draft Determinations through:
  - analysing the content and producing an evidence-based response across all topics; and
  - engaging with stakeholders to articulate the consequences of the Draft Determinations on our stakeholders' priorities.
- **Sept – Nov 2020** – focus on exploring our Draft Determinations response with Ofgem ahead of Final Determinations through:
  - open meetings to discuss or responses to the Draft Determinations;
  - extensive engagement with Ofgem via meetings and supplementary questions; and
  - engagement with Whitehall and Parliament to ensure that the right framework was in place to support the economic recovery and net zero.
- **Dec 2020** – Final Determinations published.
- **Jan 2021** – recommendations made as to whether to accept or appeal aspects of the price control. The impact of this was considered for each stakeholder group including Ofgem, government, investors and the media.
- **March 2021** – final decision taken by the Board to broadly accept the majority of the package and submit a technical appeal to the CMA regarding cost of equity and outperformance wedge.
- **April 2021** – RIIO-2 starts.

Examples of the engagement work

Gas regional workshops to inform our stakeholders of the content of our business plan (Jan – Feb 2020):

- given the extensive stakeholder input to building our plans, this was the opportunity to share the final content of our business plan and how it delivered their priorities with customers, suppliers, local community representatives, consumer representatives, trade bodies, regulators; and
- attended by 85 stakeholders in Edinburgh, London, Cardiff, Hull, St. Fergus and Bacton.

Ofgem engagement and supplementary questions to explore the content of our business plan ahead of the publication of Draft Determinations (Jan – June 2020):

- through an extensive programme of regular meetings and a formal supplementary question process; and
- across GT, ET and ESO we responded to a total of 871 supplementary questions from Ofgem.

Consumer research (July – Aug 2020)

- to ensure our business plan proposals continue to be aligned with the needs of consumers, we undertook a nationally representative survey of 4,018 members of the public; and
- we sought views on the importance of investment or cutting costs with regards to potential priorities in the energy sector; which investment/cost-saving priorities are most important; and the level of support or opposition for changes in energy bills to support investment priorities.

A series of webinars across the year open to all interested parties on: the content of our business plan, the content of the Draft Determinations and our response to the Draft Determinations

- open to our full distribution list of interested parties, attended by customers, suppliers, local community representatives, consumer representatives, trade bodies, regulators and investors;
- separate sessions held with internal colleagues; and
- providing the opportunity to inform stakeholders of the latest developments and the impact on their priorities, coupled with Q&A sessions.

Our commitment to being a responsible business

We have conducted a comprehensive review of our approach to being a responsible business, focusing on where we can create the most positive impact for society.

Responsibility at National Grid

Our purpose is to 'Bring Energy to Life' and we do this through the delivery of the electricity and gas that powers our customers and communities; safely, reliably, fairly and affordably, and this is the core of our role as a responsible citizen. It is also vital to focus on *how* we fulfil our purpose, minimising negative impacts and enhancing our overall contribution to society.

During 2019/20, we undertook a comprehensive review of our approach to responsible business, involving extensive stakeholder engagement and benchmarking. The results of this review reconfirmed priority issues, for example the health, safety and wellbeing of our employees, but also the need to accelerate our programme in other areas. This includes our commitment to achieving net zero by 2050 but also a series of new commitments in our Responsible Business Charter (RBC), published in October 2020, which will be updated on a regular basis. We are embedding the commitments identified in the RBC into our business plans under five headings: the environment, our communities, our colleagues, the economy and our governance. Performance is being assessed regularly.

Our approach to reporting

We have published a separate Responsible Business Report (RBR) for 2020/21 which has been guided by internationally recognised reporting standards. The RBR contains information relating to our material focus areas and provides detail on our management approach, performance, and the new commitments set out in the RBC. Certain metrics are subject to independent external assurance.

This section of our Annual Report provides a high-level summary of our approach to responsible business and meets regulatory requirements with regard to certain responsible business-related topics.

Our principles of responsible business

"We have published our responsible business charter and our first responsible business report."

Our approach to managing responsible business matters

Our overall approach to responsible business can be summarised as:

- identifying our key stakeholders, understanding how they interact with our operations, activities and value chain, and the issues that are relevant to them;
- adopting a logical process for prioritising those issues, to identify the most material matters; and
- responding to the priorities by developing appropriate strategies, policies, programmes, targets and performance indicators, and reporting regularly and transparently on our progress.

In establishing our priorities we are also guided by recognised frameworks such as the United Nations Global Compact Principles and Sustainable Development Goals.

Over the years we have developed a series of processes and policies to ensure responsibility issues are managed effectively, and we are now updating these to ensure we deliver on our new RBC commitments. Our management approach to responsible business includes the following components:

Our policies and related governance

Descriptions of the policies and the outcomes pursued in relation to the matters listed on page 60, are discussed, where material, throughout this section and our RBR. A full list of our policies, and our Code of Ethics, can be found online, at nationalgrid.com/about-us/corporate-governance.

In addition to our policies, we have a suite of Business Management System (BMS) standards. These standards define the minimum requirements for the high value and risk activities most important to our business and deliver benefit by mitigating risk, enhancing best-practice sharing, standardising processes and simplifying our approach to doing business.

A non-exhaustive list of BMS standards, summarised for the purpose of the Non-Financial Information Statement, can be seen below.

Policies and documentation

People

- our Code of Ethics for employees: protects our reputation and helps ensure we maintain stakeholder confidence.
- the Wellbeing and Health BMS Standard: enables our business to manage health risks.
- the Occupational Safety BMS Standard: helps to ensure a consistent and high level of protection for employee and contractor safety.
- the Process Safety BMS Standard: helps to protect people and the environment from the risk of major accidents.
- the Human Resources BMS Standard: sets out expectations of leaders when managing employees across the employment lifecycle.
- the Performance Excellence BMS Standard: sets out how we 'find a better way', supporting continuous improvement.

Environment

- the Environmental Sustainability BMS Standard: establishes environmental compliance and environmental sustainability performance requirements for all operational and non-operational activities.

Society

- the Stakeholder Engagement BMS Standard: defines consistent performance requirements for external stakeholder engagement.
- Code of Ethics and Anti-Financial Crimes Policy.
- Procurement Standard: defines how to improve efficiency within our supply chain expenditure.
- Global Supplier Code of Conduct.

Case study – Grid for Good

Grid for Good will deliver social mobility for disconnected young people in the communities we serve by facilitating upskilling and employment opportunities in our sector. This also helps to address the net zero skills gap and improve workforce diversity.

Grid for Good aims to deliver ambitious upskilling targets in our RBC and focuses on 16–24-year-olds who have left school and face significant barriers to entering the workforce.

Candidates will be provided with opportunities such as peer networking, upskilling and mentorship. Our charity partners will engage and connect young people to the programme and support them through the process. At 31 March 2021, 1,261 young people were progressing along this pathway – made up of 792 in the UK and 469 in the US, and five young people had been employed at National Grid through Grid for Good.

We also encourage employees to volunteer to support the programme and during the year 6,207 hours of volunteering were delivered, mainly relating to mentoring opportunities.

Our commitment to being a responsible business continued

Our communities

Engaging with our communities

We seek regular feedback from our customers and communities and take action to improve performance.

Our approach to responsibility in our communities has been to go beyond providing the safe, resilient energy systems society expects, and work to ensure our economic and social role has the greatest possible impact. This involves developing infrastructure and helping consumers use energy more efficiently but also includes partnering with charity organisations and encouraging employees to volunteer in the community.

Core service delivery

The technological and environmental benefits of the clean energy transition should benefit everyone, and we will play our role in ensuring that no-one is left behind. A fully decarbonised transportation infrastructure, for example, should be accessible by everyone across the communities we serve. Part of this role includes protecting vulnerable customers, and in the US we already do this through low-income programmes, bill discounts and free energy efficiency advice. COVID-19 has brought serious economic hardship to many of our customers and each of our US jurisdictions last year ordered extended moratoria on disconnection for non-payment, which we upheld.

Our RBC commitments

- Deliver energy in a fair and affordable way to the communities we serve.
- Play our role in ensuring no-one is left behind in the transition to clean energy. The associated benefits should be enjoyed by all.
- Continue to reinvest in energy infrastructure at approximately £5 billion each year.
- Report transparently on energy costs throughout the energy transition – on average costs per household for our UK transmission networks and for our US electric and gas distribution businesses.

In the UK, we established a £150 million Warm Homes Fund (WHF) designed to support local authorities and others to help approximately 50,000 households suffering from fuel poverty. At the beginning of the year, approximately £26 million of the WHF remained unallocated, but this has now been earmarked across a range of projects, including programmes with National Energy Action, Connect for Help and the Fuel Bank Foundation.

We are helping customers to manage their energy use better, reducing cost and carbon emissions. We are a leading utility for energy efficiency in the US, and our Massachusetts Electric utility energy efficiency programme was ranked top by the American Council for an Energy-Efficient Economy.

As we transition to an increasingly complex electricity system, managing intermittent renewables and two-way power flows, we must maintain customers' expectations for reliable energy supply. Climate change will place stress on networks, and we will need to be prepared for extreme weather events. In the US, our recovery and response to Hurricane Isaias and the October Micro-Burst/Tornado/Derecho received multiple awards in 2020 from the Edison Electric Institute and the North Atlantic Mutual Assistance Group. You can read more about this on page 42, and find out how we manage our operational risks on pages 24 – 27.

Our UK and US networks continue to maintain excellent reliability, and our performance can be seen on page 21.

Supporting communities to thrive

We partner with community organisations to enhance our programmes. We have engaged with a series of societal issues and support a broad range of causes, relating mainly to educational and environmental programmes in the communities we serve through our core business, or those impacted by our capital projects. In 2020 we sharpened our focus.

Our RBC commitments

- Develop skills for the future, with a focus on lower-income communities, providing access to skills development for 45,000 people by 2030. Through upskilling young people with STEM skills, we will positively impact lives and help to grow the future energy workforce needed to enable the clean energy transition.
- Achieve 500,000 employee volunteering hours by 2030. Through volunteering, our people will help equip the next and future generations to participate in the clean energy transition.

Unemployment and social exclusion amongst young people existed before the COVID-19 pandemic, but the economic downturn in the UK and US has seen youth unemployment rise steeply. At the same time our research indicates a potential skills gap of 400,000 people to complete the clean energy system transition. We have linked these two factors and committed to supporting disadvantaged young people to build careers in the energy sector. We are showing this support for communities in the US and the UK through our flagship programme Grid for Good, described in the case study on page 53.

> **"We have launched our flagship community investment programme – Grid for Good."**

In the UK, we also support communities affected by our infrastructure projects, where grants are available for local projects, which deliver social, economic or environmental benefits. In addition, as part of capital delivery projects, we partner with third-party organisations to deliver community benefits at scale.

In the US, we support the National Grid Foundation, a non-profit charitable organisation. The Foundation awards grants to non-profit organisations to improve the lives of the underserved in the communities where we operate, focused on educational and environmental challenges. The Foundation currently disburses approximately $2 million per annum. The US business also provides funding of approximately $7 million per annum through centrally led programmes in support of organisations such as the Red Cross, City Year and Girls Inc., and programmes led more locally, identified by management teams in New York, Massachusetts and Rhode Island.

During the year, we recorded over 18,050 hours volunteered by our colleagues in support of a variety of causes, including Grid for Good. This is good progress but we are aware we will need to reinforce and innovate our programmes in order to meet our 2030 commitment above.

The economy

We help national and regional governments formulate and deliver their energy policies and commitments. Our approach to regulatory consultation is to seek a framework that puts consumers at the centre of our price control, while enabling the clean energy transition which will be key in protecting future economic growth, safety and wellbeing in society.

Our RBC commitments

- Maintain reinvestment in our infrastructure and demonstrate the social benefits of our capital delivery programmes.
- Continue to invest in developing technologies and innovations that benefit our customers and wider society.
- Work across our supply chains to ensure that, together, we reflect the diversity of the communities we serve and respond to the economic needs of those communities.
- Continue to influence our supply chain to operate as responsible businesses.

Our economic contribution to society comes primarily through the delivery of safe and reliable energy but also through our role as an employer, a tax contributor, a business partner, and community partner.

During the year, we invested £5 billion in our energy infrastructure (see page 19). We published our green financing framework in November 2019, and since then have issued bonds from our UK and US electricity businesses, most recently in June 2020, funding projects to enable the transition to clean energy. We also issued, in April 2020, the first ever multi export credit agency covered green loan in relation to the construction of the Viking Link interconnector. More information is available in our first Green Financing Report.

National Grid Partners ('NGP') is the venture investment and innovation arm of National Grid with a portfolio which comprises 23 companies and four fund investments at a fair value of £178 million at the close of the fiscal year. NGP investments and innovation projects include initiatives which directly support the goals of our RBC. Further details are provided in the RBR and on page 23.

Our approach to tax is part of our commitment to being a responsible business, and is guided by our values. We are committed to a coherent and transparent tax strategy and details of this are set out on page 36.

We aim to build partnerships with small and local businesses, and all suppliers who set clear ambitions related to the environment, diversity, economic wellbeing and governance. We are fair to our suppliers and committed to paying them promptly. In the UK and US, over 90% of supplier payments were made to contractual terms.

We also influence our supply chain to operate as responsible businesses, requiring all suppliers to share our commitment to respecting, protecting and promoting human rights. Through our Global Supplier Code of Conduct we expect our suppliers to comply with all applicable local, state, federal, national and international laws or regulations including the UK Bribery Act 2010 and the US Foreign Corrupt Practices Act 1977. We also require them to adhere to the Principles of the United Nations Global Compact, the International Labour Organisation minimum standards, the Ethical Trading Initiative Base Code, the US Victims of Trafficking and Violence Protection Act 2000 and, for our UK suppliers, the requirements of the Living Wage Foundation.

"49% of our top 250 suppliers have set climate change targets."

We provide specific guidance and briefings for high-risk areas, to reduce the risk that contractors, agents and others who are acting on behalf of National Grid, engage in any illegal or improper conduct. We expect all our suppliers to be compliant with the UK Modern Slavery Act and to publish a Statement. Each year, we update our own Statement and publish this on our Company website in line with the Modern Slavery Act's requirements and this provides details on our relevant policies and processes, such as pre-qualification screening. We continue to actively support the United Nations Global Compact Modern Slavery Working Group, Gangmasters Labour Abuse Authority Construction Protocol, the Supply Chain Sustainability School and the Slave Free Alliance, where we helped to establish the Utilities Sector Modern Slavery Working Group.

Innovation to improve reliability and reduce costs

In the US, before contractors carry out excavations, they must call '811' so that utility operators can identify buried infrastructure and thus prevent damage and injury. Given the potential safety, reliability and cost impacts from excavation damage, National Grid US maintains active 'Damage Prevention' teams to monitor inbound '811 tickets', find contractors who haven't obtained tickets, and stop accidents before they happen.

In downstate New York we reduced the damages for nearly a decade before plateauing. Colleagues had to identify higher-risk excavations by 'feel' as there were insufficient resources to manually assess 600,000 tickets per year.

In 2016, we partnered with Urbint, to drive the rate lower. Urbint's AI-powered software, 'Lens for Damage Prevention', examines historical incident data as well as the age, type, and location of assets. It combines this with a representation of forces that impact underground assets including soil conditions, elevation, weather, population density, and construction and assigns risk scores to 811 tickets.

Results showed most damages were coming from a small percentage of tickets, with one of the strongest predictors being the contractor doing the work. By targeting problem excavators and proactively intervening on risky job sites, we reduced our damage rate by 37% from 2016 to 2020 and improved our relationships with excavators.

Recognising the power of innovation to improve our service capabilities, National Grid Partners, our strategic investment and innovation arm, invested in Urbint in 2019.

Our commitment to being a responsible business continued

The Environment

We recognise that, as a result of our activities, we create negative impacts on the environment and understand that a damaged environment has broader consequences for the health and wellbeing of society. Climate change is the defining challenge of this generation and in our role at the heart of the energy system we understand the critical role we need to play. The markets in which we operate have announced ambitious carbon reduction targets and further legislative actions are anticipated as indicated on page 15.

The biggest contribution we can make is through enabling an economy-wide clean energy transition, but we must also reduce our own impact on the environment.

Supporting the clean energy transition

Our RBC sets out how we aim to play a leading role in enabling and accelerating the transition to a clean energy system; balancing decarbonisation, affordability and reliability of supply. Working closely with government and other stakeholders and partners around the world, we focus on the technical and commercial solutions that will help achieve net zero for the energy sector. Initiatives include:

- electricity – connecting renewables as quickly and efficiently as possible, investing in grid modernisation, enhancing demand-side management through our energy efficiency and demand-side response programmes and continuing to develop interconnectors to bring low-carbon energy to the UK;
- renewables – continuing to grow our renewables business in the US from the foundation provided by our wind and solar generation business, National Grid Renewables;
- transport – supporting development of vehicle charging infrastructure in the UK and US, and low-carbon alternatives, such as hydrogen, for heavy transport;
- heat – working with our customers and regulators on this challenging issue to enable a range of potential solutions, including heat pumps, and renewable natural gas and hydrogen in our networks, as well as helping consumers switch from the most polluting heating fuels, such as oil;
- natural gas – continuing to help develop and deploy new technologies to decarbonise at scale in the years ahead – such as hydrogen networks and carbon capture, utilisation and storage (CCUS).

Reducing our own environmental impacts

In 2012, we developed our environmental sustainability strategy, 'Our Contribution', to set a framework for embedding sustainable decision-making into our business operations. We focused on three key areas – climate change, responsible use of natural resources and caring for the natural environment – and set targets to deliver progress through to the end of 2020. This programme has now been superseded by our new, more ambitious, commitments in the RBC.

Climate change

We generate GHG emissions across Scope 1 (direct emissions from our operational activities), Scope 2 (indirect emissions from our purchase and use of gas and electricity) and Scope 3 (other indirect emissions from activities and sources outside of our ownership or control). Our RBC sets out a number of ambitious climate-related commitments, the most significant of which is to achieve net zero by 2050. Through this commitment we will reduce Scope 1 and 2 emissions by 80% by 2030, 90% by 2040, and to net zero by 2050, from a 1990 baseline. A key GHG target from 'Our Contribution' was for a 45% reduction in GHG emissions by 2020, from a 1990 baseline. At the end of 2020/21, we have achieved a 68% reduction.

In recent months, we have worked closely with the Science Based Targets initiative (SBTi) to increase the ambition of our Scope 3 target and this now covers emissions across our entire value chain – not just the energy we sell – with a commitment to reduce the carbon emissions by 37.5% by financial year 2034 (from a financial year 2019 baseline). Our interim Scope 1, 2 and 3 emission reduction targets are verified by the SBTi, demonstrating a clear, credible commitment to deliver our longer-term net zero strategy in line with a well below 2°C pathway. Other commitments, including those relating to reductions in SF_6 emissions and increasing the proportion of electric vehicles in our own fleet, are set out in the RBC.

We have announced our intention to put our climate transition plan before shareholders and seek a non-binding advisory vote on our net zero commitment and associated Scope 3 target, and the action plan to achieve the interim 2030 net zero target. In this way, we will be directly accountable to shareholders for our progress on tackling climate change.

We are working to reduce our business travel emissions by changing to alternative fuel vehicles and reducing business flights. The response required by COVID-19 (see page 8) has resulted in more flexible ways of working and has reduced business travel. We will reduce the energy consumed in our buildings and procure green energy where possible.

Electrification of transport

In the US, we have actively supported transportation electrification for over ten years by installing and managing charging stations, and providing support and incentives for our customers to enable adoption and deployment. By the end of March 2021, we had enabled 2,500 EV charging ports across our jurisdictions. Our main programmes include:

- making sites ready for customers to easily and cheaply install EV charging stations, including all of the infrastructure needed to support EV chargers or EV supply equipment, and in some states we even provide rebates for the charger itself;
- assisting customers to plan for large-scale fleet electrification, including an electricity bill impact analysis, a site feasibility analysis, vehicle assessments, and a comprehensive roadmap to electrification; and
- providing off-peak charging incentives to our residential customers in Massachusetts and Rhode Island to gather information on EV charging behaviour to help us design better charging incentives for future programmes.

We aim to lead by example and have invested more than $1.8 million for Company vehicle electrification in 2020, including heavy equipment such as excavators, forklifts and backhoe diggers. We continue to make progress towards electrification of 100% of the light-duty vehicles by 2030, and project that more than 50% of our fleet passenger cars in the US will be electric within 12 months. Since our EV Central programme launched in April 2018, 484 employees have taken advantage of financial incentives to purchase or lease an EV.

Our Scope 1 emissions were 4,727 ktCO_2e, a 21.1% increase on the prior year (3,903 ktCO_2e). Of this, 86% arose in the US, 14% in the UK. The increase resulted mainly from generation emissions exceeding projected levels due to increased LIPA operating hours, required to replace shortfalls in off-island generation and transmission.

Scope 2 emissions are reported on a market basis and location basis:

- market basis – 2,264 ktCO_2e, a 13.7% reduction on the prior year
- location basis – 2,216 ktCO_2e, a 14.1% reduction on the prior year.

Approximately 61% of Scope 2 emissions (location basis) were generated in the UK, with the remainder through US operations. Reduction in Scope 2 emissions was mainly due to a reduction in emissions from line losses, resulting from a reduction in grid electricity carbon intensity.

Our combined Scope 1 and Scope 2 (location-based) emissions are now 68% below our 1990 baseline.

Our total Scope 3 emissions are calculated as 28,948 ktCO_2e for the year, a reduction of 6.2% on the prior year.

The sources of Scope 1, 2 and 3 emissions are detailed in the RBR. We have also published a document, 'Reporting Methodology', which details the methodologies and protocols used for calculating key responsible business metrics.

Strategy in action

Case study – involvement in COP26

National Grid is a principal partner for COP26, the annual global climate change summit to be hosted in the UK in November 2021. COP26 is arguably the most important climate event since the 2015 Paris Agreement, as governments around the world will be reporting back on progress and agreeing new actions to cut carbon emissions. We are working closely with the UK government in planning for COP26, as well as hosting and participating in events and exhibition spaces in the Blue and Green Zones at the two-week summit. We are excited to play our part in supporting the UK government, along with our fellow partners and many others, to deliver a successful COP26 which encourages and inspires ambitious action to tackle climate change in this critical decade.

Understanding National Grid's greenhouse gas emissions

We monitor and report our greenhouse gas emissions in accordance with the World Resources Institute and World Business Council on Sustainable Development Greenhouse Gas Protocol.

Scope 1: Direct Emissions from the operational activities of National Grid.

Scope 2: Indirect Emissions from gas and electricity purchased and used by National Grid.

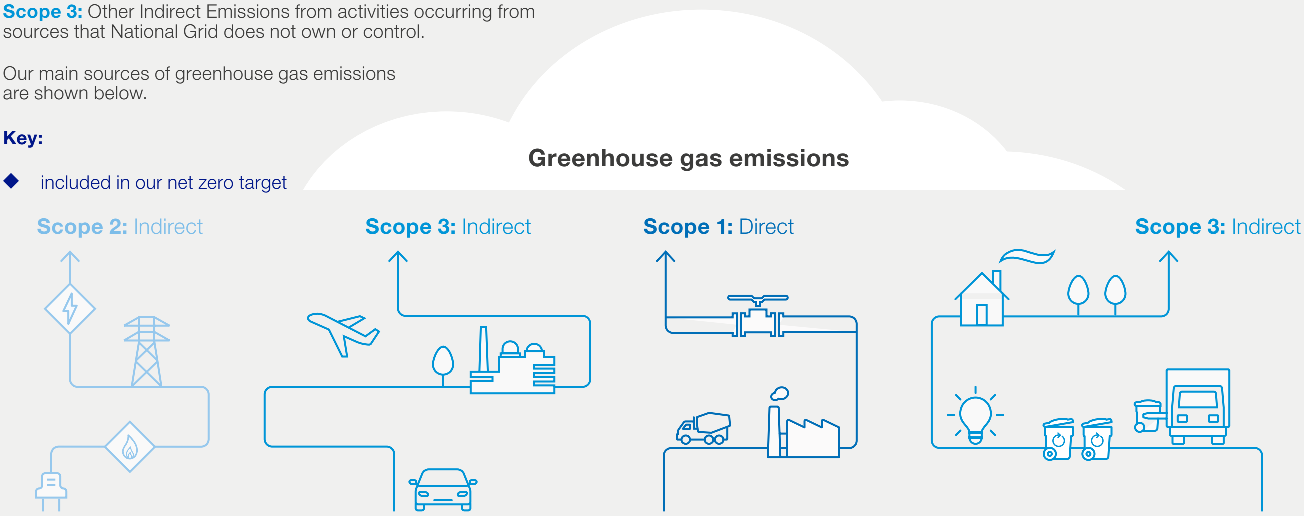
Scope 3: Other Indirect Emissions from activities occurring from sources that National Grid does not own or control.

Our main sources of greenhouse gas emissions are shown below.

We have committed to achieving net zero emissions for our Scope 1 and 2 emissions by 2050. Most of our Scope 3 emissions are emitted from two key business activities: the sale of gas and electricity to customers in the US and the purchase of goods and services.

Key:

◆ included in our net zero target



Upstream

Scope 2 ◆

- Line losses from our electricity transmission and distribution lines
- Energy purchased for use at our facilities
- Use of electric drive compressors in our gas business

Scope 3

- Purchased goods and services
- Business travel
- Employee commuting

Our operations

Scope 1 ◆

- LIPA electricity generation
- Leaks and venting from our gas transmission and distribution systems
- SF_6 leaks from our electric equipment
- Fleet vehicle use
- Gas-fired compressor use

Downstream

Scope 3

- Use of 'sold product' or emissions from our customers' use of the gas and electricity we purchase on their behalf
- Waste management

Our commitment to being a responsible business continued

Energy consumption

Our energy consumption is a key area of focus as this, in turn, drives our carbon emissions.

Our energy consumption consists of both fuel consumed and energy purchased from third parties, including renewable energy. Total energy consumption was 2,602 GWh (9,367,585 Gj), a decrease of 16.5% on the previous year. Of this, 99% was from non-renewable sources, with no significant change from the previous year.

Operational energy use was 1,409 GWh (2019/20 – 1,676 GWh), our transport energy use was 378 GWh (2019/20 – 384 GWh), electricity purchased was 659 GWh (2019/20 – 922 GWh) and heating was 156 GWh (2019/20 – 133 GWh).

Electricity consumption includes the energy consumed in operating the generation assets in the US. Total energy does not include fuels consumed for power generation on behalf of LIPA, the contracting body, amounting to 16,155 GWh (net of energy required to operate the generation assets), a 28% increase on the prior year. Transport covers business travel, including our own fleet, hire cars and personal car use for business. In addition to energy consumed, we calculate that system losses accounted for a further 11,154GWh, of which 52% occurred in the US. This was a 9% decrease on the previous year.

The comparative data, previously reported in the 2019/20 Annual Report, has been restated to account for a minor misstatement and a change in reporting methodology.

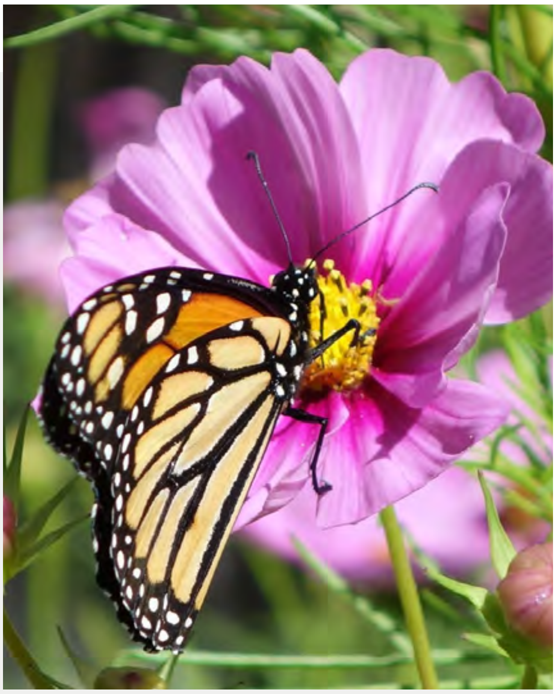
Responsible use of natural resources

Waste is generated from a range of activities and sources, including office and warehouse waste, waste from distribution and transmission gas pipe and electricity line laying, repair and maintenance, some capital project delivery and power generation. Our reporting currently excludes certain predominantly non-hazardous civil wastes managed by contractors as part of large-scale capital projects e.g. tunnelling, where the data cannot yet be captured reliably. We now redirect all office waste from landfill, and almost 80% of the waste we can record is either reused or recycled.

Caring for the natural environment

We must also address the challenge of restoring the natural environment. Using our own land and working with partners, we have an opportunity to cut carbon and restore nature at the same time. We are improving the natural environment on our own land by protecting habitats and increasing biodiversity using best practice methods, such as natural capital evaluation, so we can make sure we create the most benefit. In our RBC we have committed to improve the natural environment by 10% on the land we own, by 2030.

More detailed information on our environmental impacts and programmes are presented in the RBR.



Supporting the monarch butterfly

In the US, we have enrolled in the Monarch Candidate Conservation Agreement with Assurances (CCAA), which is a voluntary conservation programme on energy and transportation lands that will result in a net benefit to monarch butterflies. This is a partnership between the U.S. Fish & Wildlife Service and energy and transportation entities across the country, with a nationwide goal of enrolling up to 26 million acres of land and contributing over 300 million stems of milkweed and 2.3 million acres of monarch foraging habitat. Our commitment relates to conservation measures across over 100,000 acres, include seeding and planting to restore or create habitat and conservation mowing and scrub clearance to enhance floral resource habitat.

Our colleagues

We are reliant on our colleagues to deliver success for the business. We aim to attract and retain the best people by striving to be recognised as an employer of choice. People are attracted to work for businesses which can demonstrate a clear purpose that benefits society. It is important for us to match their aspirations, and we work towards going beyond delivery on the core aspects of the employer/employee relationship, to create a culture focused on the value we can add to society.

Engaging with our colleagues

We engage extensively with our colleagues and conduct an annual independently managed survey, the Grid:voice survey, to help us identify areas that employees believe we need to improve. You can read more about this on pages 22 and 49, and in the RBR.

Health, safety and wellbeing

We have a fundamental duty of care to ensure our employees are kept safe at work, and that their health is not impacted as a result of their employment. The health, safety and wellbeing of employees and contractors is our primary concern. Any safety incident is one too many, and we work to improve our performance through effective policies, standards, procedures and training. It is therefore with deep regret that we report that, in November 2020 in the US, a tragic event took the life of one of our contractor colleagues.

We measure safety performance through a combination of leading and lagging indicators and Lost Time Injury Frequency Rate is one of the core KPIs of the business (see page 22). We take a proactive, risk-based approach to managing health and wellbeing and have documented standards relating to occupational health and safety, process safety and wellbeing and health. Incidents are reported to the highest level, and the SEH Committee of the Board undertakes regular deep dives on safety-related topics (see page 89).

COVID-19 has dominated the year for our employees, and the full story of our response is reported on page 8.

Investing in our colleagues

Responsibility towards our people also means training and (re)skilling them for the evolving needs of our businesses. We have identified the need to enhance skills relating to the clean energy transition, for example, implementing new energy technologies, such as renewables and heat pumps. This need for new skills will be partly met through our community initiatives such as Grid for Good (see page 16). We operate training centres in the US and UK providing specialist technical, safety, refresher and new starter development programmes, and a leadership academy. All training programmes have been affected by the COVID-19 situation, and we have adapted our training approach accordingly. Further information on employee development is provided in our RBR.

Living wage and gender pay gap

We believe that everyone should be appropriately rewarded for their time and effort. In the UK, we are accredited by the Living Wage Foundation, a commitment which extends to our contractors and the work they do on our behalf. We also go above the Living Wage requirements and voluntarily pay our trainees the Living Wage. We undertake a Living Wage review each year to ensure continued alignment and increase individual salaries as required and also promote the commitment to our suppliers.

We review gender and ethnicity pay gaps annually in both the UK and US, and further information is provided in the RBR.

Promoting an inclusive and diverse workforce

Our RBC commits us to be as transparent as possible internally and externally on gender and ethnicity. We have a commitment to achieve 50% diversity, in our Senior Leadership Group and in all our new talent programmes, by 2025. For these purposes a diverse employee is defined as a colleague who identifies as female, as a person with a disability, as gay, bi-sexual or lesbian or from an under-represented ethnic or racially diverse background. We aim for our workforce to reflect the diversity of the communities we serve and are committed to providing an inclusive, equal and fair working environment.

We have appointed a Chief Diversity Officer, who will partner with senior executives across the business to develop a new inclusion and diversity strategy and drive progress. We have 16 Employee Resource Groups (ERGs) (11 in the US; 5 in the UK), which are all highly active and visible across the business.

“Our employee engagement score has increased”

Grid:voice engagement score

81%

(2019/20: 77)

We continue to be recognised in awards and benchmarks including being listed, in the US, as one of the Best Places to Work for LGBTQ Equality (Human Rights Campaign), one of the Best Employers for Diversity 2020 (Forbes) and one of our UK ERGs was awarded ‘Top Network Group’ at The Ethnicity Awards in 2020. We have close partnerships with external best practice organisations and are active members of sector- and industry-wide groups which ensure we are sharing best practice and campaigning at a sector-wide level for greater inclusion for all.

Our policy is that people who identify as having a disability should be given fair consideration for all vacancies against the requirements for the role. Where possible, we make reasonable accommodations and provide additional resources for employees who identify as having a disability. We are committed to equal opportunity in recruitment, promotion and career development for all colleagues, including those with disabilities.

The gender demographic table below shows the breakdown in numbers of employees by gender at different levels of the organisation. We have included information relating to subsidiary directors, in accordance with the Companies Act 2006 (Strategic Report and Directors’ Reports) Regulations 2013. ‘Senior management’ is defined as those managers who are at the same level, or one level below, the Group Executive Committee. Our definition also includes those who are directors of subsidiaries, or who have responsibility for planning, directing or controlling the activities of the Group, or a strategically significant part of the Group, and are employees of the Group. For further, more detailed information and relating to our approach and performance on gender and ethnic diversity, please see our RBR.

Gender demographic as at 31 March 2021

	Our Board[1]	Senior management[2]	Whole company[3]
	number	number	number
Male	8	167	17,737
Female	5	89	5,810
Total	**13**	**256**	**23,547[4]**
Male (%)	61.5%	65.2%	75.3%
Female (%)	38.5%	34.8%	24.7%

1. ‘Board’ refers to members as defined on the Company website.
2. ‘Senior management’ refers to Band A/B employees as well as subsidiary directors.
3. This measure is also one of our Company KPIs. For more information, see page 22.
4. Does not include data from our National Grid Renewables business.

Our commitment to being a responsible business continued

Governance

Adopting the right approach to governance is critical to the success of our business. This encompasses everything from adopting the correct structures for Board oversight, to how we listen to the voices of our stakeholders, manage risk and ensure we maintain an appropriate culture and the highest ethical standards. Our RBC commits us to applying a corporate governance model that supports all our responsible business commitments and ambitions and applies our responsible business framework to everything we do.

The gender diversity of our Board is currently 38.5% (see page 72).

> **"Board gender diversity is 38.5%."**

Stakeholder engagement

We prioritise our responsibilities to our different but interrelated stakeholder groups and wider society. We have extensive and detailed processes to ensure we understand the interests of our stakeholders and reflect them in the decisions we make. Stakeholder engagement plays an important role in how our Board ensures responsibility in governance. This includes listening to our stakeholders' views, inviting external guests to meetings, and using independent research to bring the voice of the customer and other stakeholders into the boardroom. Further information is provided on pages 46 – 51, and in our RBR.

Highest ethical standards – ethical business conduct

We regard the potential for bribery and corruption as a significant risk to the business and have established policies and governance that set and monitor our approach to preventing financial crimes, fraud, bribery and corruption, including our Code of Ethics (covering anti-bribery and anti-corruption). We have a Company-wide framework of controls designed to prevent and detect bribery.

Our Code sets out the standards and behaviours we expect from all employees to meet our values of 'do the right thing', 'find a better way' and 'make it happen'. The document is issued to all employees and is supported by a global communication and training programme to promote a strong ethical culture. Our UK and US Ethics and Compliance Committees (ECC) oversee the Code of Ethics and associated awareness programmes. We operate an e-learning course for all employees so they can adequately understand the Company's zero-tolerance approach to fraud, bribery or corruption of any kind.

We also have an Anti-Financial Crimes policy which applies to all employees and those working on our behalf. It sets out our zero-tolerance approach to bribery, fraud, money laundering, tax evasion and other corrupt business practices. To ensure compliance with the UK Bribery Act 2010 and other relevant legislation, we operate an anti-financial crime risk assessment process across the Company to identify higher-risk areas and make sure adequate procedures are in place to address them.

Any cases alleging bribery are referred immediately to the relevant ECC so the members can satisfy themselves that cases are managed effectively, including ensuring any lessons learnt are communicated across the business. We investigate all allegations of ethical misconduct thoroughly and take corrective action and share learnings. We also record trends and metrics relating to such allegations.

Additionally, we provide briefings for high-risk areas of the business, such as procurement. Our Code is reviewed every three years and was last updated in November 2020, and this is supported by our Ethics Business Management Standard which provides a framework around our ethics programme and describes what is expected of the business.

Each of our business areas is required to consider its specific risks and maintain a compliance framework, setting out the controls it has in place to detect and prevent bribery. Business areas self-assess the effectiveness of controls and provide evidence that supports reported compliance. Each year, all function heads are asked to certify the compliance in their area, and to provide details of any exceptions. This culminates in the presentation of a Certificate of Assurance from the Chief Executive to the Board (following consideration by the Audit Committee). You can read more about the Audit Committee's role, including its ongoing assessment of the adequacy of our anti-bribery and anti-corruption policies and processes, on pages 83 – 87. None of our investigations over the last 12 months have identified cases of bribery.

Highest ethical standards – human rights

Respect for human rights is incorporated into our employment practices and our values, which are integral to our Code of Ethics. This is vital in maintaining our reputation as a company that our stakeholders want to do business with, and that our employees want to work for.

Although we do not have specific policies relating to human rights, slavery or human trafficking, we do cover these issues through related policies and procedures such as our approach to diversity, anti-discrimination, privacy, equal opportunity and, in addition, our Global Supplier Code of Conduct integrates human rights into the way we screen and interact with our supply chain. For more information see page 245, and our RBR.

Whistleblowing

We have a confidential internal helpline, and an external 'Speak-Up' helpline that is available at all times in all the regions where we operate. We publicise the contact information to our colleagues and on our external website so concerns can be reported anonymously. Our policies make it clear that we will support and protect whistleblowers and any form of retaliation will not be tolerated.

We have again been recognised by Ethisphere as one of 2020's World's Most Ethical Companies.

Non-financial information

This section provides information as required by regulation in relation to:

- environmental matters – pages 56 – 58;
- our employees – page 59;
- social matters – pages 53 – 55;
- human rights – page 60 and page 245; and
- anti-corruption and anti-bribery – page 60 (see also pages 83 and 86.

In addition, other information describing the business relationships, products and services which are likely to cause adverse impacts in relation to the matters above, can be found as follows:

- business model – pages 4 – 7;
- KPIs – pages 20 – 22;
- principal risks – pages 25 – 27; and
- Audit Committee Report (our due diligence) – pages 83 – 87.

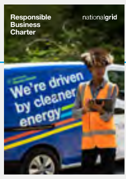
Task Force on Climate-related Financial Disclosures (TCFD)

National Grid has committed to implementing the recommendations of the TCFD in full, and this is our fourth disclosure. We are committed to developing a business model that is consistent with the objectives of the Paris Agreement, and therefore set a commitment in November 2019 to reduce our Scope 1 and 2 emissions to net zero by 2050. The details of the interim targets that we have set to achieve this are included in our Responsible Business Charter (RBC) that we published in October 2020. This year, alongside the Annual Report and Accounts (ARA), we are publishing our first Responsible Business Report (RBR) which details our progress against the commitments set out in our RBC.

This year we have continued to make strong progress on full compliance with the recommendations of the TCFD. In last year's disclosure, we outlined actions that we planned to progress during 2020/21. To address those actions, we have progressed our scenario analysis of the physical risks to our assets using updated climate scenarios, developed our RBR and updated our Company strategy to incorporate our net zero commitments. For the fifth consecutive year we received the prestigious climate change 'A' score from CDP Climate Change.

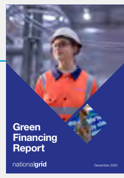
Highlights of the year:

Publication of Responsible Business Charter



CDP A rating for 5th year in a row

Publication of our first Green Financing Report



Published science-based targets for our Scope 1, 2 and 3 emissions

Good progress on our physical impacts from climate change scenarios

Announced acquisition of WPD and proposed disposals of NECO and National Grid Gas plc

Continued development of net zero strategy throughout the Group and as reflected in RIIO-2 Final Determinations and US rate cases

Held ESG virtual seminar and session on future of gas; principal partner for COP26

Governance of climate-related risks and opportunities

The Board's oversight

The Board of Directors is responsible for the oversight of climate-related risks and opportunities impacting the Group. They in turn delegate some elements of their responsibility to their various sub-committees, as set out in the diagram below:

Board of Directors: There has been an increased focus on climate-related matters at the Board level as the landscape continues to evolve with further regulatory developments and changes in stakeholder expectations. Board members presented alongside management at environment, social and governance (ESG) investor presentations during the year, including an ESG virtual seminar event in October 2020 and a follow-up session on the future of gas in January 2021. The expertise of the Board on ESG-related matters continues to be enhanced through regular interactions with management, regulators and government bodies on matters such as our net zero strategy. The Board will also be actively involved in COP26 taking place in Glasgow in November, for which National Grid is a principal partner. In addition, the Board was involved in the following discussions relevant to climate change:

- reviewed and approved the climate change principal risk as part of the annual risk review and challenge process. This risk is now owned by Justine Campbell, the Group General Counsel & Company Secretary and a member of the Group Executive Committee, having first been elevated to a principal risk in Autumn 2019;
- RIIO-2 Final Determinations which reflect our investment proposition for supporting the UK energy transition;
- quarterly reviews of performance on our environmental sustainability metrics and targets; and
- approved the acquisition of WPD to achieve a scale position in electricity distribution in the UK, which is expected to see a high level of asset growth as a result of the energy transition.

The **Audit Committee** remains responsible for reviewing and approving the content of our TCFD disclosures. The Audit Committee considered papers in March and May 2021 on the financial reporting and disclosure considerations in respect of climate change. The Audit Committee also oversees the development of the assurance model for our RBR and recommends to the Board the approval of the disclosures in our first RBR.

The **Finance Committee** is responsible for overseeing our financing strategy, including the issuance of our first Green Bonds in National Grid Electricity Transmission and Niagara Mohawk Power Corporation (NMPC). The Finance Committee also considers the financial impact of environmental factors on our credit metrics and relevant considerations with regards to debt investors.

The **Safety, Environment and Health Committee** (SEH Committee) is responsible for assessing the Group environmental sustainability strategy and performance, as well as how the Company adapts its business strategy considering potential climate change risks and opportunities. The SEH Committee monitors our environmental sustainability performance quarterly and approves updates to our environmental sustainability strategy and targets annually.

The **Remuneration Committee** is responsible for determining our remuneration policy, including how ESG factors are considered in the policy, and how they are taken into consideration in determining the final incentive pay decisions. For further detail on how such factors feature in executive remuneration, please refer to the Directors' Remuneration Report on pages 92 – 113.

The **Nominations Committee** is responsible for Board appointments and succession planning. In 2019, the Nominations Committee approved the appointments of Jonathan Silver, whose previous experience included leading the US Federal government's clean energy investment fund and Earl Shipp, who brings significant experience in safety, environmental and sustainability from his executive career.

A **TCFD steering group** comprised of representatives from Group Financial Reporting, Safety, Health and Sustainability, Corporate Strategy and Investor Relations oversees progress against the TCFD recommendations and the publication of our annual disclosure, and reports to the Chief Financial Officer. In addition, a new **Responsible Business steering group**, chaired by the Interim Group Corporate Affairs Director, has been set up to provide oversight of the integration of responsible business into National Grid, including the development of ESG targets and future ESG strategy. The steering group also provides oversight over ESG-related external reporting, including TCFD disclosures and is comprised of the Interim Group Corporate Affairs Director, Chief Financial Officer, Group General Counsel & Company Secretary and the Chief People and Culture Officer. Standing attendees include the Head of Responsible Business, Head of Safety, Sustainability, Health and Environment and the Group Financial Controller.

A **Green Financing Committee** chaired by the Group Treasurer, provides governance over our Green Financing Programme. In December 2020, the Green Financing Committee approved the publication of our first Green Financing Report, which provided an analysis of how we utilised the proceeds from our portfolio of Green Bonds and their environmental impact.

Task Force on Climate-related Financial Disclosures (TCFD) continued

Management's role
Management is responsible for managing on a day-to-day basis the climate-related risks and opportunities faced by the Group and for delivering the roadmaps to achieve the net zero strategy set by the Board.

Responsibility for asset investment and maintenance planning, implementation of the net zero strategy and overseeing the development of the RBC is delegated by the Board to the **Group Executive Committee** which further delegates responsibility to the core operational businesses.

Our businesses are responsible for and held accountable for determining their local roadmaps for achieving net zero, including tracking and monitoring net zero metrics and targets at a local level:

- UK and US core businesses – responsible for managing the impacts of climate change on the assets within their businesses and working with local regulators to develop regulatory frameworks that enable the transition to net zero;
- Electricity System Operator – responsible for working with the energy industry to adapt the Great Britain (GB) electricity system to keep electricity flowing reliably with increasing renewable sources;
- National Grid Ventures (NGV) – responsible for identifying clean energy investment opportunities, such as large-scale renewables like wind and solar. NGV is also responsible for investing in our interconnector portfolio which is expected to import energy that is 90% zero carbon by 2030; and
- National Grid Partners (NGP) – responsible for incubating and investing in technology startups that can help National Grid achieve the energy transformation.

Our functions are responsible for supporting the businesses in achieving their net zero pathways:

- Corporate Affairs – responsible for external communications in regard to our net zero strategy, including the publication of the RBC and RBR;
- Group Finance – responsible for supporting the businesses to understand the financial impacts of net zero plans and producing external ESG metric reporting and disclosures, executing green financing and managing ESG investor communications;
- Safety, Health and Environment – responsible for assessing the Group environmental sustainability strategy and performance, monitoring our environmental sustainability performance quarterly and implementing the annual updates to our environmental sustainability strategy and targets; and
- Group Human Resources – responsible for integrating ESG targets into remuneration frameworks for approval by the Remuneration Committee.

Our role in the energy transition continues to be an area of increasing focus at all levels of the organisation, from Company-wide calls led by the Chief Executive on the commitments published in our RBC, to bespoke sessions run locally to develop and communicate the roadmaps for each business' contribution to achieving net zero. Previous training has been delivered in the US about how our role is changing on the pathway to 80% reduction by 2030. More formal training programmes in the UK which were paused due to the ongoing pandemic are currently being designed for roll-out throughout the business next year. Bespoke training has been delivered to specific roles where they need knowledge and skills to deliver against our targets.

Case Study: ESG virtual seminar

National Grid hosted an ESG virtual seminar on 5 October 2020, led by Chairman Sir Peter Gershon and Chief Executive John Pettigrew. The event provided an opportunity to hear from management across our UK, US and NGV businesses on our ESG achievements to date, and our ambitions for the future in areas such as the decarbonisation of electricity, transport and heat and the hydrogen studies that we are carrying out. Other Board members including Jonathan Dawson and Therese Esperdy also presented.

Following on from this seminar, in January 2021 we launched our 2021 ESG programme, the 'Grid Guide to…' series. These are short, virtual sessions giving the market a deeper understanding of the key themes and the innovative projects we're working on. The first event of the series was held on 21 January 2021 and focused on the future of gas.

Our strategy for responding to climate change

Overview of our climate-related risks and opportunities

The scale of ambition and speed of change required to meet net zero emission targets, along with the changes in temperature and weather patterns present both risks and opportunities to our business. These risks and opportunities, along with a summary of the work we are doing to address them, are presented in the table below. Short-, medium- and long-term timeframes are defined in our risk methodology as one year or less, one to three years and three or more years respectively, and this is reflected in the table below.

Risk/opportunity type and description	Our response
Markets Commercial opportunities from the transition towards net zero will continue to shape our portfolio and strategy. **Timeframe:** Short, medium and long-term **Impacted businesses:** Group-wide	The decarbonisation of transport and expansion of EV-charging infrastructure presents significant growth opportunities and was a driver behind our decision to increase our electricity footprint in the UK. We have also developed a strategy to enable the building of charging stations across our US jurisdictions and UK highways and NGET are looking at the decarbonisation of Heavy Goods Vehicles (HGVs), ensuring that all viable technologies are considered, refining the 2030 pathway for decarbonising transport based on industry feedback. The decarbonisation of heat presents significant opportunities for our electric businesses as electric heating solutions are sought for homes, offices and buildings. While the shift to electric heating provides a downside risk to our gas businesses, there are opportunities for our gas networks to be used to transport hydrogen. With the Committee on Climate Change expecting a 70% increase in UK electricity demand by 2050, our acquisition of WPD will enable us to play a pivotal role in enabling that growth. In both the UK and US, we continue to work with our regulators on decarbonisation plans as described below and have developed a dedicated programme to understand what is required to incorporate hydrogen into the gas supply, and in the UK we have developed a hydrogen trial where we will assess the impact of hydrogen on our existing assets. We also continue to invest in other technology, and in the Humber region in the UK we are leading the development of CCUS technology to support this area to become the first zero-carbon region in the world by 2040. In 2019, we acquired Geronimo, a leading developer of wind and solar generation assets based in Minneapolis, Minnesota. Geronimo was subsequently expanded and rebranded to NG Renewables and will help us to develop and grow a large-scale renewable business in the US. This is strengthened by the constant growth of NGV US Business Development and their investment in battery energy storage and medium- to large-scale renewable projects. We continue to invest in our interconnector portfolio which will form an important part of UK decarbonisation. Once Viking Link becomes commercially operational in 2023/24, NGV will hold 7.8 GW of interconnector capacity and the focus will switch to multi-purpose interconnectors which will increase interconnection and facilitate the construction and expansion of wind farms within the North Sea. We continue to invest in energy technology startups via our venture capital investment and innovation business NGP, having invested over $220 million in 25 companies and four external venture capital funds at the intersection of energy and emerging technologies.
Markets Regulatory outcomes/approval of funding affect our ability to deliver on our investment programme and in turn our net zero commitments. **Timeframe:** Short and medium-term **Impacted businesses:** ET, GT, US Regulated	Our ability to support the energy transition in the jurisdictions that we operate in is dependent on the funding approved by our regulators. We therefore work closely with our regulators and other stakeholders to develop investment plans in line with their net zero commitments while managing the costs to consumers. In the UK, we received a final package from Ofgem for RIIO-2 that will allow the critical investment required to maintain the resilience and reliability of our networks. We were also pleased to see greater flexibility in the mechanisms that will enable further investment required to deliver the energy transition; the suite of net zero and innovation mechanisms provides opportunity to access funding to develop net zero pathways. In the US, we filed for new rates for KEDNY and KEDLI in April 2019, for NMPC in July 2020 and our Massachusetts Gas companies in November 2020. Each case included proposals in support of the respective state's climate objectives, for example our KEDNY and KEDLI filing included a future of heat proposal, which featured expanded energy efficiency and demand response programmes, RNG interconnection investments, and a hydrogen blending study. Our NMPC filing included various investments linked to climate change and the new energy landscape, and in November 2020, the NYPSC approved NMPC's proposal for full deployment of Advanced Metering Infrastructure throughout its service territory which will enable clean energy initiatives and presents an opportunity to align policy goals like those set forth in the NY Climate Leadership and Community Protection Act. For the Massachusetts Gas companies, the rate case focused on both the regulatory frameworks and specific future of heat proposals to start the path of decarbonising our natural gas networks and the heating sector. Massachusetts Electric Company (MECO) will commence the third year of a five-year rate plan on 1 October 2021. The approved rate case order included several paths forward on the state's climate objectives including a climate change mitigation and adaptation plan, off-peak rebate programme for EV owners, approval of up to $50 million in energy storage, and a path forward for a significant investment in EV-charging infrastructure in 2021. In Rhode Island, the Narragansett Electric (and gas) Company (NECO) will continue operating under the third year of a three-year rate plan, and is anticipating the next rate case to be filed in November 2021. As part of the acquisition of WPD, we announced the sale of NECO to PPL which is expected to complete in early 2022.
Markets There is a risk that we are unable to deliver against our net zero targets in the UK and US, impacting our reputation, business model and in turn hindering others' ability to meet net zero targets. **Timeframe:** Short, medium and long-term **Impacted businesses:** Group-wide	The broader economy-wide net zero transition will impact our ability to meet our interim greenhouse gas (GHG) emission goals over the next 10 to 20 years; and equally our ability to rapidly deliver key infrastructure changes directly affects progress against net zero targets in the UK and US. Associated with this is a risk of failure to respond to shifts in societal and political expectations and perceptions of our role in decarbonising the economy and society. Facilitating the transition to a low-carbon economy is central to our purpose as a business and we are taking certain key actions in relation to decarbonisation. These include advocacy on legislative and policy changes that advance decarbonisation (for example the green recovery and a principal partner of COP26), campaigns targeted at relevant areas such as the future of heat and actions in the regions we operate in to accelerate decarbonisation for the public and our customers (for example, supporting renewable generation connections and investment in new and emerging areas).

Task Force on Climate-related Financial Disclosures (TCFD) continued

Risk/opportunity type and description	Our response
Markets Disruptive forces and changes in supply and demand for existing and new technologies may act as competition, require change of business model or services and/or present new opportunities. **Timeframe:** Short/Medium and Long-term **Impacted businesses:** Groupwide	Achieving net zero will depend on new technologies and we are investing in our own transformational innovation capability such as in the UK, the Deeside Innovation Centre (Electricity) and FutureGrid Hydrogen Test Facility (Gas); diversifying our propositions and partners, and working with industry groups and partners to develop and upscale technology. In the US we are aggressively replacing leak-prone pipe in our gas infrastructure, which will reduce GHG emissions by 207 KT CO_2e per year by 2030. Additionally, we are pursuing various initiatives related to hydrogen and renewable natural gas, including the HyBlend initiative of the US Department of Energy that will address technical barriers of hydrogen blending into the gas network and a $50 million investment in the Newtown Creek (New York) renewable natural gas (RNG) project that will utilise wastewater and food waste for the production of RNG. As the transition to renewable generation continues, we will work with the Long Island Power Authority (LIPA) to transform our generation fleet by responding to future requests for proposal (RFPs). Under our existing contracts which extend through 2028, LIPA determines their reliability and sustainability needs and which units are operated, retired or transformed.
Security and reliability Changes to the supply and demand of energy impacts on how we deliver electricity grid and gas grid reliability and year-round operation. **Timeframe:** Short/Medium and Long-term **Impacted businesses:** ESO and UK GT	With growth in renewables increasing intermittency on the network, and electrification of transport and heat likely, we are working with our stakeholders to ensure that grid reliability and operability is understood, managed and planned at appropriate levels. In the UK, the ESO Operability Strategy Reports outline the way in which this is being done, for example last year we launched a new superfast frequency response product called dynamic containment. This is a revolutionary step which will have profound consequences in network operation and is critical to facilitating a decarbonised grid. Further, to facilitate the ESO's ambition to be able to operate the system safely and securely at zero carbon whenever there is sufficient renewable generation online and available to meet the total national load, the ESO has agreed to contracts with five parties, worth £328 million over a six-year period, in a world-first approach to managing the stability of the electricity system. Also, our UK Gas transmission business is exploring a range of innovative technologies to investigate how the Gas Transmission network could enable the UK to achieve net zero at least cost and disruption to consumers. This includes investigating whether the NTS could be used to transport hydrogen to customers in the future. This continues to be integral to the future of the gas assets, to demonstrate how existing Gas Transmission assets can be repurposed for hydrogen and will continue after the sale of our UK Gas Transmission business.
Extreme weather Physical impacts from extreme weather events such as storms and flooding. **Timeframe:** Short/Medium and Long-term **Impacted businesses:** Groupwide	We continue to address the physical risks from extreme weather-related events, with a focus on flooding events (in both the UK and US) and storm hardening (in the US). As this work continues, it will be informed by not only the weather patterns we are experiencing, but also the results of the ongoing scenario testing. By the end of RIIO-T1 we will have invested £113 million in flood defences with deferred works of a further £45 million for work to be completed early in RIIO-2 with a total investment in resilience on 52 sites. NGET's RIIO-2 (2021 – 2026) plans aim to protect up to a further 100 sites from surface-level flooding and recommend further investments to manage the risks posed from the secondary impacts of flooding, such as erosion and subsidence to our tower and cable routes.
Changing weather conditions Increased frequency of weather incidents and changing long-term trends leading to asset damage/compromise and operational risks. **Timeframe:** Short/Medium and Long-term **Impacted businesses:** Groupwide	The scenario testing underway is examining trends across seasonal average temperature and precipitation, as well as sea level risk. The businesses will consider whether our design standards are still appropriate under different scenarios, for example, a wider temperature range.
Changing weather conditions Changes in supply of and demand for gas and electricity as a result of changing weather conditions. **Timeframe:** Short/Medium and Long-term **Impacted businesses:** Groupwide	The ESO is undertaking Mapping Impacts and Visualisation of Risks (MIVOR) of extreme weather on system operation to evaluate the impacts of extreme weather events on system operation up to 2050 under Representative Concentration Pathway (RCP) 4.5. The results will enhance the accuracy of energy system impact modelling and will also focus on the impacts of the whole supply chain, renewable generation, network assets, and demand, ensuring that the learnings produced are relevant to the whole energy system.

Impact of the climate-related risks and opportunities on our strategy

Climate change is the defining challenge of this generation and in our role at the heart of the energy system we understand the critical role we need to play. The markets in which we operate have announced ambitious carbon reduction targets and further legislative actions are anticipated. In response, in March 2021 we announced a strategic portfolio repositioning, announcing the acquisition of WPD, the largest electricity distribution network operator in the UK, the sale of NECO in the US and our intention to sell a majority stake in our UK Gas Transmission business. The acquisition of WPD provides a one-off opportunity to gain a scale position in the UK electricity distribution market, enabling National Grid to play a pivotal role in enabling the growing role of electricity in the energy landscape in the UK. Upon successful completion of the announced transactions, the contribution of electricity to National Grid's portfolio will be around 70% of the Group.

Across all of our businesses we aim to play a leading role in enabling and accelerating the transition to a clean energy system, balancing decarbonisation, affordability and reliability of supply. Working closely with governments and other stakeholders and partners around the world and through our work for COP26, we focus on the technical and commercial solutions that will help achieve net zero for the energy sector. While the biggest impact we can have is in enabling the economy-wide clean energy transition, we must also reduce our own direct impact on the environment and strengthen our resiliency to risks that we have less control over. To accomplish this, our RBC commitments to reduce Scope 1 (direct emissions from our operational activities), Scope 2 (indirect emissions from our purchase and use of gas and electricity) and Scope 3 (other indirect emissions from activities and sources outside of our ownership or control) emissions align with the requirements of the Paris Agreement and Science Based Targets initiative (SBTi). These commitments, along with our overall suite of environmental sustainability initiatives, are reviewed in accordance with our quarterly business reviews and reported accordingly to the Group Executive Committee and Board.

Our climate change scenario analysis

Transition Risk Analysis

To further understand the risk that climate change could have on our business, we undertook a high-level scenario analysis, where we considered scenarios out to 2030. We used two scenarios:

- The first assumed that the global response to the threat of climate change is enough to limit global average temperature increases to no more than 1.5ºC above pre-industrial levels (as set out in the Paris Agreement) by 2100 **(the 1.5ºC scenario)**. In this scenario, rapid changes are made to progress decarbonisation goals: coordinated policy, regulation and customer behaviour favours bans on polluting technologies, and support for low-carbon solutions. We have assumed that transition impacts in this scenario would be focused around technological shifts to support decarbonisation, with the main impacts being a trend towards more large-scale renewables in the generation mix, a trend towards electrification and public pressure against the use of gas.
- The second scenario assumed that the 1.5ºC target is missed by some margin, comparable to a 4ºC global average temperature increase **(the 4ºC scenario)**. In this scenario, changes are less rapid and less comprehensive, and emissions remain high, so that the physical ramifications of climate change are more apparent by 2030. In rationalising this slower global progress, our 4ºC scenario assumed fragmented and ad hoc policy (within the Group's operating territories and globally). The main impacts of this scenario were increased weather events of escalating severity and frequency, which could increase disruption to our assets and our customers, less coordinated policy and regulation in pursuit of decarbonisation, resulting in an increase in overall system costs and reduced visibility over the network and inequality of access where some decarbonisation activities have the potential to leave some sectors of society behind.

Our analysis showed that, without action, both scenarios presented risks to us. However, while these would need to be managed, some of these changes represent material opportunities. Our next refresh of our scenario analysis will reflect the developments in our strategy as well as advancements in technology and in the wider market.

Physical Risk Scenario Analysis

To further understand the risk that climate change could have on our business, we are undertaking a high-level assessment of the physical climate change risks to assets across our UK and US business under a 2°C and 4°C scenario at future time periods of the 2030s, 2040s, 2050s and 2070s. This is important in order to mirror the longevity of our assets, even if the levels of uncertainty can increase the further ahead in time you look. The exercise is not yet complete (the project start date was delayed due to the COVID-19 pandemic), and therefore only initial results and the approach are shared in this year's disclosure.

Our approach

Our analysis on physical climate risks is aligned with recognised climate scenarios, specifically the Intergovernmental Panel on Climate Change's (IPCC) Representative Concentration Pathway (RCP) scenarios which provide a uniform framework for exploring potential climate changes and related impacts. RCPs are used globally for climate modelling and give access to a wide range of peer-reviewed and accepted climate datasets, as well as allowing consistency across our UK and US territories. We prioritised climate data sources according to confidence and readiness for use to support a consistent risk assessment across our UK and US territories. We relied on the most up-to-date and robust data from recognised national or local sources such as UKCP18 and NCA4.

We have considered the full portfolio of assets across our businesses, grouped into 12 asset types to assess vulnerability to these hazards. An assessment of risk, along with indication of confidence, will be provided by the combination of climate hazard, asset vulnerability and asset exposure for each hazard (Figure 1). The hazard assessment is drawn from geospatial analysis of climate model data, which will be co-located with our assets within the full risk assessment during 2021.

Initial insights from the modelling

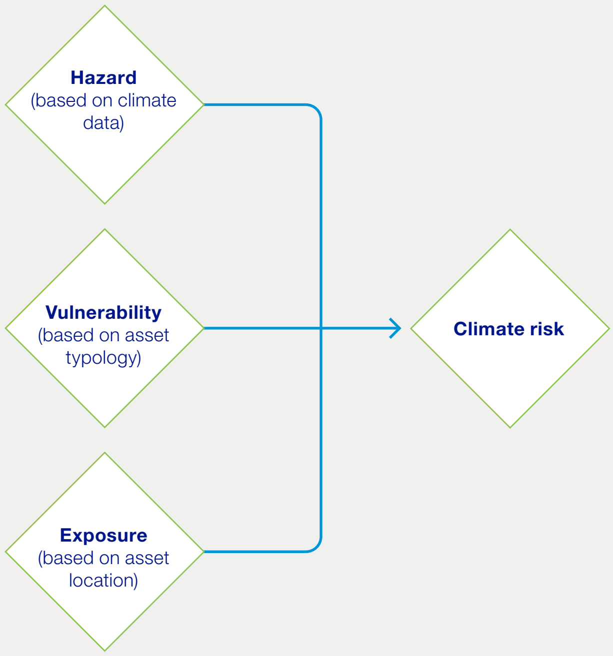
We identified eight priority climate hazards expected to have a material impact on our business, and so have focused on these hazards for this scenario analysis. Table 1 shows the climate indicators we use to represent each of the eight hazards, together with a high-level indication of the overall direction of change across the US and UK under a 4°C scenario.

Alongside the hazard assessment, our asset vulnerability assessment shows that:

- coastal and inland flooding remain the hazards which have potential to impact the widest range of asset types, depending on location.
- temperature-related hazards (very hot or very cold days, and rapid changes) can have significant impacts, but on a smaller range of asset types.
- generation assets have high vulnerability to both flood-related hazards and high temperatures.
- underground assets are protected from the direct impacts of some climate hazards (such as high winds, storms, lightning) but may experience indirect impacts such as erosion and ground movement.

Vulnerability to hazards does not mean that risks will be realised. Whether vulnerability translates into risk depends on the exposure (location) of individual assets relative to projected changes in climate hazards, as well as any site-specific resilience measures in place. The full quantified hazard and risk assessment is due later in 2021 and will provide insights through comparison of scenarios, timeframes and aggregation of results by asset type, territory or business. We are developing an interactive visualisation to allow each business to make more tailored use of the scenario analysis.

Figure 1 Components of climate risk assessment



A key feature of our approach to scenario analysis is ongoing engagement across the Group, with representatives of each National Grid business involved in prioritisation of hazards and vulnerability assessment. In turn, every business has a stake in the outcome and is identifying how the assessment will be used in strategic planning and investment choices. This is supported by an action on our principal climate change risks to develop a climate change adaptation strategy/action plan.

Task Force on Climate-related Financial Disclosures (TCFD) continued

Table 1 Summary of climate hazard assessment

Climate hazard	Indicator	Potential change by 2070s (4°C scenario)	Level of confidence in assessment
Coastal flooding	Extent of flooding for various return period events (e.g. 1-in-30, 1-in-100, 1-in-1000)	Considerable increase in frequency and/or magnitude	Moderate
Inland flooding	Extent of flooding for various return period events (e.g. 1-in-30, 1-in-100, 1-in-1000)	Considerable increase in frequency and/or magnitude	Moderate
Storm	Combinations of high wind speed and precipitation: frequency of days when wind speed above threshold value (e.g. 55 mph) and rainfall daily amount also above threshold value (e.g. 25 mm/day)	Slight increase in frequency and/or magnitude	Low
High wind speeds	Frequency of days with wind speed above threshold value (e.g. 76 mph (34 m/s))	May increase or decrease	Low
Lightning	Frequency of lightning occurrence (qualitative)	Slight increase in frequency and/or magnitude	Low
Increased extreme temperatures	Frequency of days with maximum temperature above 35°C (95°F)	Considerable increase in frequency and/or magnitude	High
Low temperatures (icing)	Frequency of days with maximum temperature below 0°C (32°F)	Slight decrease in frequency and/or magnitude	High
Freeze-thaw cycles	Frequency of days with minimum temperature below 0°C (32°F) and maximum temperature above 0°C (in the same day)	May increase or decrease	Moderate

Risk management of climate-related risks

Process for identifying and managing climate-related risks

In autumn 2019, a Group-level climate change principal risk was developed and added to our Group risk register. The climate change principal risk is underpinned by our enterprise risk management process which is the framework through which the Group identifies, assesses, prioritises, manages, monitors and reports risks. This process, which is described on page 24 of the ARA, includes the identification of a series of Group-wide controls and actions to mitigate the climate change principal risk (this is further described on page 26).

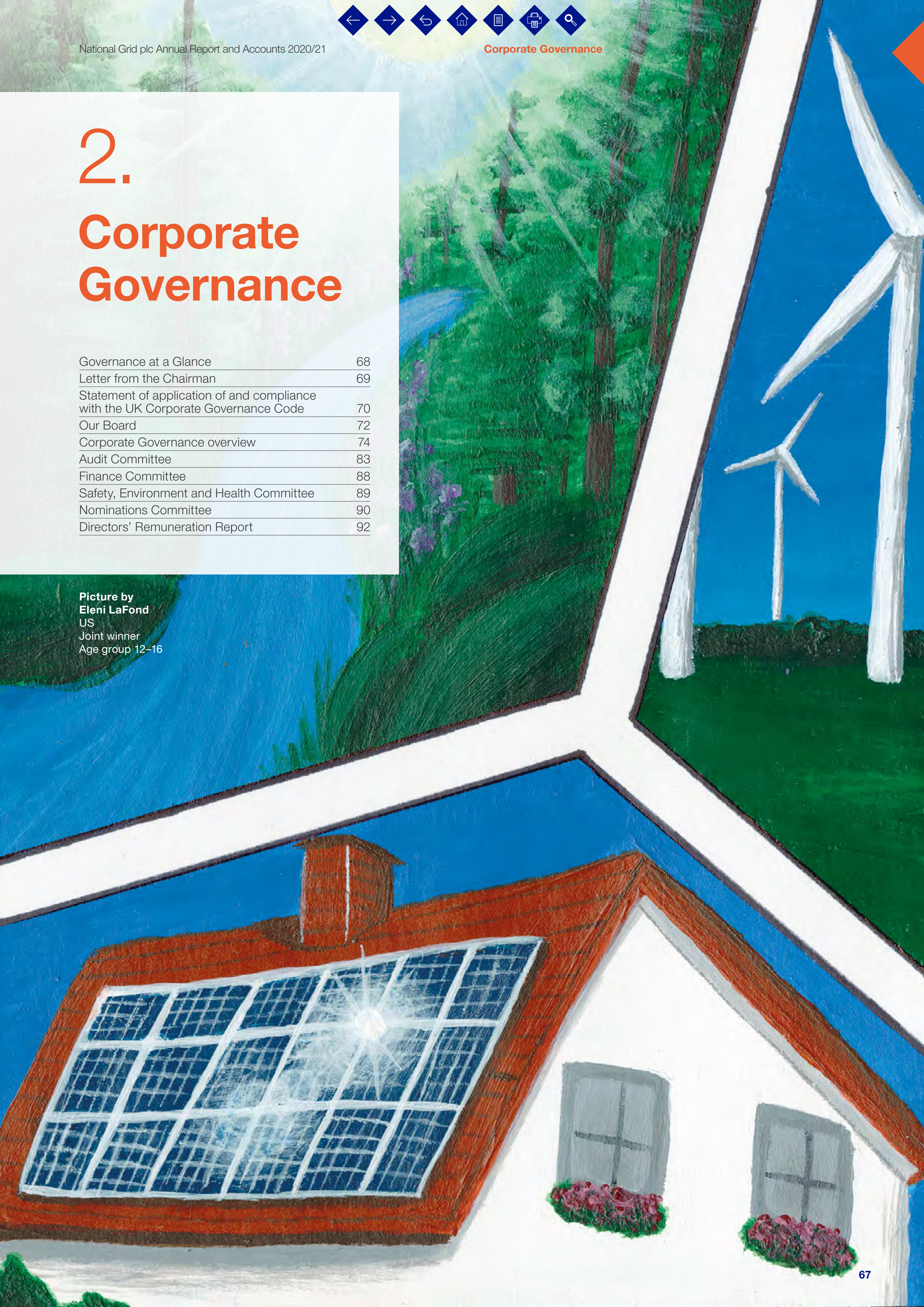
The controls for our climate change principal risk have evolved in line with our strategy and regulatory frameworks and all are in progress. They include controls on governance (for example, Board and Group Executive Committee sign-off on strategy and oversight of delivery against net zero action plans), investment plans (bringing to scale new technologies), leadership and climate adaptation. Controls related to the climate change risk are also reflected throughout other relevant risks, for example disruptive forces, regulatory outcomes, political and societal expectations. Progress has continued against specific UK and US business risks on climate change as well as US risks embedded in climate change threats that support the Group risks. The Secretary of State in the UK requires our UK Electricity Transmission and UK Gas Transmission businesses to report on what we are doing to adapt to climate change. Our most up-to-date report will be published in 2021. This covers a much wider qualitative assessment of potential risks.

Metrics and targets

We have metrics and targets that allow us to measure our impact on the environment, demonstrate our commitment and monitor our performance. These were published in October 2020 within our RBC and, on an annual basis, our RBR will report our progress against those targets. As previously discussed, the cornerstone of our suite of metrics is our commitment to reducing our impact by achieving net zero for our Scope 1 and 2 emissions by 2050, with interim targets of an 80% reduction by 2030 and a 90% reduction by 2040. Numerous underlying metrics support and complement this goal as part of our broader sustainability ambition, including reducing the carbon footprint of our operating facilities, enhancing the natural value of our properties, recycling and/or reusing our recovered assets and reducing our office waste. These are discussed in more detail on pages 56 – 58 and in our RBR. The metrics are comprised of several business unit level metrics that are then tracked and monitored by business unit, and presented to senior management on a quarterly basis, with accountability at the local level.

We continually review our metrics and targets, as needed, to ensure that the data we are measuring is meaningful, aligns with our strategy, and is providing the information the business and our stakeholders need to effectively monitor our performance and demonstrate our progress. In 2021/22, we will be laying out our pathway to achieve our net zero by 2050 emission reductions. Our GHG emissions reduction targets have been approved by the SBTi criteria, including a more ambitious Scope 3 emissions reduction target of a 37.5% reduction by FY 2034 from a FY 2019 baseline year.

We have also included enhanced disclosures in the financial statements prepared under IFRS to explain how we have considered the financial impacts of climate change, in particular evaluating the impact of new net zero commitments in our territories, and the effect this has had on judgements and estimates such as the useful economic life of our gas assets. See notes 1 and 13 to the financial statements for details. This remains a recurring area of focus for the Audit Committee.



2. Corporate Governance

Picture by
Eleni LaFond
US
Joint winner
Age group 12–16

Governance at a Glance

The Board remains committed to the highest standards of corporate governance and views good governance as key to the long-term success of National Grid. Governance is embedded throughout the business and in the work that we do to generate value for our stakeholders.

Major Board decisions

In accordance with section 172 of the Companies Act 2006 (see page 46) the Board has consistently factored the needs, concerns and potential impacts on our stakeholders into its decision-making process. The Board continues to consider all factors in the decision-making process including the long-term consequences of any decision and the need to maintain high standards of business conduct. Major decisions taken by the Board include:

- approval of the Company's Business Plan and re-affirmed its support for the strategy approved by the Board in 2020;
- approval of the 2020/21 Annual Report and Accounts;
- endorsement of proposed changes to the new organisational design;
- approval of the Company's Responsible Business Charter and Responsible Business Report, to achieve the goal of applying a Total Societal Impact lens to everything National Grid does as a business and approval of the decision to put the Company's climate transition plan before shareholders for a non-binding advisory vote;
- following significant scrutiny, approval of the 2020/21 interim and final dividends and the announcement on growing the dividend in line with UK CPIH from 2021/22 onwards;
- after detailed analysis of Ofgem's RIIO-2 Final Determinations, accepted the overall package for ESO and most of the package for ET and GT with the approval of the submission of a technical appeal to the Competition and Markets Authority in relation to the proposed cost of equity and outperformance wedge;
- approval of the Company's acquisition of WPD from PPL subject to certain regulatory approvals and shareholder circular;
- approval of the sale of NECO to PPL, conditional on completion of the WPD Acquisition; and
- approval to commence the process to sell a majority stake in National Grid Gas plc, expected to commence later this year and complete in the second half of 2022.

Key activities and matters considered by the Board are detailed on pages 76 and 77.

Key governance events

- A General Meeting was held on 22 April 2021 where shareholders approved the proposed acquisition of WPD and an increased borrowing limit. The General Meeting was held as a closed meeting due to COVID-19 restrictions and in line with government guidelines. A shareholder webcast was made available ahead of the General Meeting where the Chairman, Chief Executive and Chief Financial Officer answered questions posed by shareholders.
- A full Group Executive Committee led virtual town hall with the global employee base was held in September 2020. There were 7,150 estimated attendees and the Company announced its new value 'make it happen'.
- The 2020 Annual General Meeting was held on 27 July 2020 as a closed meeting due to COVID-19 restrictions and in line with the Corporate Insolvency and Governance Act 2020.
- A virtual shareholder engagement event was held immediately following the 2020 AGM, including a live Q&A session with the Board.
- Inaugural ESG virtual seminar for investors led by the Chairman and Chief Executive on 5 October 2020.
- Launch of 'Grid Guide To' virtual series for investors focusing on ESG themes. Led by the Chief Executive and subject matter experts.

Key highlights

97%
Board and Committee meeting attendance
for the year ended 31 March 2021

38.5%
Female representation on our Board
As at date of report

1
Board member from non-white ethnic minority
As at date of report

67%
Average % of Issued Share Capital Voted
at 27 July 2020 AGM
(3% increase from 2019)

81%
Employee engagement score for 2020/21

49.16p
Dividend per ordinary share in 2020/21
Increase of 1.21% on prior year

6/13
Board members with less than 4 years' tenure

21
Extra Board and Committee meetings to focus on key priorities: (COVID-19, RIIO-2 and WPD Acquisition)

Letter from the Chairman

Sir Peter Gershon
Chairman

Dear shareholders,

I am pleased to present to you my final Corporate Governance Report as Chairman, for 2020/21.

The year in review

The COVID-19 pandemic has continued to have a significant impact around the world, requiring companies to be versatile and responsive. Good governance through times of crisis is crucial and as a Board we have closely monitored the developments of COVID-19 and the impact on the Company. We have been impressed by the commitment and resilience of our colleagues to continue to operate effectively in such unprecedented circumstances. Despite the restrictions which have prevented meetings in person we have effectively maintained continuity of governance and adapted to work well in a virtual way. As a Board we have utilised the ability to meet virtually ensuring effective engagement and collaboration has continued with each other as well as with our key stakeholders. I have been especially pleased that as a Board we have been able to continue to participate in a number of virtual engagement sessions with a range of different stakeholders to continue the solid progress in this area. In many circumstances holding the event virtually has broadened the diversity and reach of individuals we have been able to engage with where time zones and physical locations may have previously hindered this. Please see pages 79 and 80 to read further about Board engagement activities.

Focus for the Board

Outside of the unprecedented external influences created by the pandemic, it has been an incredibly busy year which has included the Final Determinations from Ofgem on the RIIO-2 price control, review of US strategy and regulatory landscape, a revised Group operating model and the approval of a new dividend policy. The Board also spent significant time discussing strategy and in particular potential strategic opportunities resulting in the proposed acquisition of Western Power Distribution (WPD) and the related sale of our Rhode Island energy business, which was approved by shareholders at a General Meeting (GM) on 22 April 2021.

Culture has been a key focus for the Board over the last few years and the COVID-19 pandemic has brought our purpose, culture and values into sharp focus, requiring the Company and the Board to demonstrate resilience through strong and decisive governance and risk management. The successful execution and implementation of our new operating model and the integration of WPD into the Group over the next year will be crucial in implementing and continuing the desired culture change. To read further about the Board's culture journey go to page 78.

Stakeholders

We devoted additional time to consider the impact of COVID-19 on the Company's stakeholders in its decision-making processes and held additional Board meetings during the year to ensure we were keeping any impact on our stakeholders in view. You can read more about how we have carried out our duties under section 172 of the Companies Act on page 46. We were disappointed to not be able to hold our 2020 AGM or 2021 GM in person; however, we were pleased to be able to offer virtual shareholder engagement sessions for both where shareholders were able to submit questions for answering by the Board. At the time of writing it is uncertain if we will be able to revert to a more 'normal' meeting for 2021; however virtual engagement will be available to ensure shareholders are able to engage with the Board. A resolution to amend our Articles to include the ability to allow for hybrid meetings to take place in the future is also being proposed at the 2021 AGM.

Climate Change

Climate change is an area that we regularly engage with our stakeholders on and has received increased attention year on year. The Company has been working towards an ambitious plan to reach net zero by 2050 and we are proud of the commitment the Company has made in its RBC and the challenging interim targets that have been set. Due to the importance of this area and the significant work that the Company is doing to meet its net zero ambition we wanted to go one step further this year to enable shareholders to have their say on how the Company is tackling this issue. As a result we are pleased to be making a commitment at this year's AGM to bring our climate transition plan to be voted on by shareholders at our 2022 AGM and progress against the plan to be reported annually.

Board succession and diversity

I am delighted that following a thorough search process Paula Rosput Reynolds was identified as my successor as Chair and joined the Board on 1 January 2021 as Non-executive Director and Chair Designate. A comprehensive induction process has been in place and Paula is well prepared to step into the role of Chair following my retirement from the Board on 31 May 2021. For further information on Paula's appointment process see page 91, and, for information on the induction process, page 82.

Maintaining a diverse culture on the Board is crucial and I am pleased that Paula's appointment as Chair will make National Grid one of only a small number of FTSE 100 companies with a female chair. Diversity is crucial to improving effectiveness, encouraging constructive debate, delivering superior performance and enhancing the success of the Company, and with Paula's appointment we have increased our gender diversity to 38.5% women on the Board. We also currently meet the Parker Review target for ethnic diversity on FTSE 100 boards. You can read more on how we strive towards our refreshed Board Diversity Policy objectives on page 91.

There have been a number of Committee changes during the year with Liz Hewitt becoming Chair of the Audit Committee in November 2020 and Earl Shipp becoming Chair of the Safety, Environment and Health Committee from 1 April 2021. As I signalled in last year's report, Paul Golby will not stand for re-election and will retire from the Board at the conclusion of the 2021 AGM, Mark Williamson is also due to retire later in the year upon reaching his nine-year term. I thank Paul and Mark for their significant contributions and the value that they have added to the Board during their tenures. Justine Campbell also joined the Company, succeeding Alison Kay as Group General Counsel & Company Secretary from 1 January 2021.

Looking Forward

It is clear that Paula will be taking over as Chair at a time of considerable activity, with the next 12–18 months a crucial time for the Company. As we enter into the new RIIO-2 regulatory period, start to see the recovery of the economy from the constraints of the COVID-19 pandemic and the integration of WPD into the Group proceeds, the Board will continue to closely monitor the impacts of these events on the Company. With a number of Directors reaching their nine-year term there will also be a period of change for the Board and the opportunity for a refreshed set of skills which will ensure that the Board is well placed to react to the changing needs of the Company and the repositioning of the Company's portfolio to achieve its vision to put National Grid at the heart of a clean, fair and affordable energy future.

Sir Peter Gershon
Chairman

Paula Rosput Reynolds
Chair Designate

I am honoured to be taking over the role of Chair from 31 May 2021. I am looking forward to working with John Pettigrew and the rest of the Board and engaging with National Grid employees and key stakeholders. Sir Peter has given over nine years of devoted Chairmanship to the Company and I will ensure strong continuity of governance while imparting my experience and knowledge to lead a refreshed Board that is able to add significant value and provide effective stewardship over the Company. I look forward to reporting on the progress made in my first year as Chair in next year's Annual Report.

Statement of application of and compliance with the UK Corporate Governance Code

UK Corporate Governance Code – 2020/21 Compliance Statement

The Company is subject to the principles and provisions of the UK Corporate Governance Code (the Code), which have been consistently applied. The table below outlines how the Group has structured the Governance section of the Annual Report around the principles of the Code.

For the year ended 31 March 2021, the Board considers that it has complied in full with the provisions of the Code with the exception of provision 19, which has been a short-term departure from the Code. Provision 19 of the Code outlines that the Chair of a company should not remain in post beyond nine years from the date of first appointment. The Code allows for an extension of the Chair's tenure for a limited time to support effective succession planning and development of a diverse board.

The Company outlined in the 2018/19 and 2019/20 Annual Report that Sir Peter Gershon's tenure would be extended to conclude the RIIO-2 process and allow a smooth transition to the new Chair. Sir Peter will be stepping down on 31 May 2021 at which point we will comply in full with provision 19. Further detail on the Chair succession process can be found on page 91.

Disclosure Guidance and Transparency Rules

We comply with the Corporate Governance Statement requirements pursuant to the FCA's Disclosure Guidance and Transparency Rules by virtue of the information included in this Governance section of the Annual Report together with information contained in the Shareholder Information section on pages 240 – 244.

Principles of the Code

1. Board Leadership and Company Purpose

Company Purpose

National Grid's vision is to be at the heart of a clean, fair and affordable energy future. This vision is intrinsic to our purpose to Bring Energy to Life. National Grid operates at the heart of the energy system, connecting millions of people safely, reliably and efficiently to the energy they use every day. The Board is collectively responsible for the oversight and long-term success of the Company and champions the purpose and vision ensuring consistency with our workforce policies and practices. To deliver our vision, the Board has set its strategy through four key strategic priorities to create long-term value for our stakeholders. This is underpinned by the values and behaviours that shape the culture of National Grid and how we operate. This is detailed on page 18.

Culture

We recognise that how we do things is as vital as what we do. Culture sets the tone and as a result the right culture leads to a motivated and productive workforce. The Board is responsible for influencing and monitoring culture throughout the Company to ensure the desired beliefs and behaviours both in and outside the boardroom are embedded. During the year the Board has continued its journey to mould and implement the right culture across the business. Our culture journey is detailed on page 78.

Engagement

The Board remains committed to engaging with the workforce and view it as a key element of understanding the culture issues and challenges across the business. The COVID-19 pandemic presented some challenges, but engagement has continued effectively due to the ease of virtual sessions and lack of geographical barriers. The Board actively engages with all stakeholders and regularly reviews the type of engagement; further information on this can be found on pages 46 – 51.

2. Division of Responsibilities

The Chairman, who was independent on appointment, is responsible for the leadership and management of the Board and its governance. National Grid has a clear governance framework that is detailed on page 74. The Board supports the separation of the roles of the Chairman and Chief Executive. The key responsibilities are clearly documented and reviewed when appropriate; the matters reserved for the Board schedule is available on our website. The Chairman makes sure the Board is effective in its role by promoting a strong culture of openness and debate. This helps facilitate contribution from all Directors and maintain relations between the Executive and Non-executive Directors.

All of the Non-executive Directors detailed on pages 72 and 73 are considered independent by the Company and the Chair Designate upon appointment was considered independent; this is detailed on page 91. Non-executive Directors are advised of the time commitment and travel expected from them on appointment. External commitments, which may impact existing time commitments, must be agreed with the Chairman prior to appointment and approved by the Board during their tenure.

As part of the Chairman's succession, potential candidates are notified of the expected time commitment at the beginning of the process. Independent of management, our Non-executive Directors bring diverse skills and experience vital to providing strategic guidance, constructive challenge and debate.

The Group General Counsel & Company Secretary ensures that the Board has access to the necessary policies, processes and resources required to operate effectively and efficiently. She is also responsible for ensuring that timely information is provided and advises and supports the Chairman and the Board on all governance matters.

3. Composition, Succession and Evaluation

Composition

The Board believes it operates effectively with an appropriate balance of independent Non-executive and Executive Directors who have the right balance of skills, experience, independence and knowledge of the Company. Details of our Board, their biographies and Committee membership are set out on pages 72 and 73. Board and Committee attendance during the year to 31 March 2021 is set out on page 75.

The size and composition of the Board and its Committees is kept under review by the Nominations Committee to ensure the appropriate balance of skills, experience, independence and knowledge. The Committee also monitors the expertise of the Board and will recommend further appointments. The appointment of Paula Rosput Reynolds in January 2021 ensures the Board has a Non-executive Director and Chair Designate with the required capabilities and expertise to succeed as Chair. The independence of the Non-executive Directors is considered at least annually along with their character, judgement, commitment and performance on the Board and Board Committees. The Board took into consideration the Code and indicators of potential non-independence, including length of service. Following due consideration, the Board determined that all Non-executive Directors were independent in character and judgement. Although Paul Golby reached nine years' tenure on 1 February 2021, the Board determined that the 6 months extension past nine years did not have any effect on his independence and he was therefore determined to remain independent.

Succession

The Nominations Committee, which comprises the Chair Designate and Non-executive Directors, leads the process for Board appointments and makes recommendations to the Board. The Nominations Committee also has responsibility for ensuring that plans are in place for orderly succession to both the Board and senior management positions as well as overseeing the development of the talent pipeline to ensure that the future leadership needs of the Company are considered and these fit the culture and forward-looking strategy of the Company. This has been a key focus in the year and more detail is outlined on page 90.

Following Board approval, Justine Campbell was appointed as Group General Counsel & Company Secretary in January 2021; the detailed process is outlined on page 91.

Each Director is subject to election at the first AGM following their appointment, and re-election at each subsequent AGM. Following recommendations from the Nominations Committee, the Board considers whether all Directors continue to be effective, committed to their roles and have sufficient time available to perform their duties. The Chairman held meetings with each Board member at the end of the year to discuss their contribution and performance. Following these meetings he confirmed to the Nominations Committee that he considered that each Director continued to be effective. In April 2021 it was confirmed that all Directors continued to perform their duties in accordance with the principles of the Code. Succession planning is ongoing for those members of the Board who are approaching the nine-year term.

Evaluation

The 2020/21 performance evaluation of the Board, Board Committees and individual Directors was carried out internally with consideration given to composition, diversity, skills, and effectiveness. You can read more about this on page 81.

4. Audit, Risk and Internal Control

The Company recognises the importance and benefits of the independence of both the internal audit function and the external auditor. The Board is satisfied that the current policies and procedures in place ensure their independence and effectiveness. See pages 83 – 87 for further details.

The Board is responsible for presenting the Annual Report and Accounts that when taken as a whole is considered fair, balanced and understandable in its assessment of the Company's position and prospects. The Audit Committee has a robust process to ensure this is the case, outlined on pages 84 and 86. The statement of Directors' responsibilities is set out on page 116.

The Board delegates responsibility to the Audit Committee which oversees the Group's system of risk management and internal control. The Board considered both principal and emerging risks facing the Company during the year as detailed on pages 24 – 27.

The Company's risk appetite is set by the Board alongside internal controls and the risk management processes. The Audit Committee assists the Board with its responsibilities relating to risk and assurance and these activities are set out on pages 84 – 86.

5. Remuneration

The Remuneration Committee is comprised entirely of independent Non-executive Directors. The Committee is responsible for the development and implementation of the Remuneration Policy and determining the remuneration for Executives and senior management; including alignment to the Company's purpose, culture, values and long-term strategy. Our policy is reviewed against workforce remuneration and performance and is designed to reflect our stakeholders' interests.

The Directors' Remuneration Report on pages 92 – 113 sets out the work of the Remuneration Committee, its activities during the year and further details on how our Remuneration Policy is implemented.

During 2020/21, the Remuneration Committee ran a successful tender and appointed new remuneration consultants. Further detail is set out on page 111.

No Director is involved when determining their own remuneration outcome. Each Director exercises independent judgement and discretion as part of any decision made by the Remuneration Committee.

Our Board

Committee membership key

- A Audit Committee
- F Finance Committee
- N Nominations Committee
- R Remuneration Committee
- S Safety, Environment and Health Committee
- E Group Executive Committee
- Chair of the Committee

Biographies as at 19 May 2021

Other changes during the year:

- Alison Kay stepped down as Group General Counsel & Company Secretary on 31 December 2020

Sir Peter Gershon CBE FREng (74)
Chairman

Appointed: 1 August 2011 as Deputy Chairman and Chairman with effect from 1 January 2012

Tenure: 9 years

Skills and competencies: Sir Peter is an experienced leader, having held senior board-level positions in the computer, defence and telecommunications industries. He has served as a Managing Director in several high-profile organisations and was previously Chairman of Tate and Lyle plc. Sir Peter is committed to engaging with employees, for example, through site visits in the UK and US. He annually hosts the Chairman's Awards, an excellent opportunity to appreciate employees at National Grid; and further engages through the recent employee engagement sessions. Sir Peter brings external insight, understanding of diverse issues and the strong corporate governance expertise required to create and lead an effective Board.

External appointments:

- Chairman of the Dreadnought Alliance Leadership Board;
- Trustee of the Sutton Trust;
- Trustee of the Education Endowment Foundation;
- Advisory Board member of the Reform Research Trust;
- Chairman of Join Dementia Research (JDR) Partnership Board; and
- Board member of the Investor Forum.

E F

John Pettigrew FEI FIET (52)
Chief Executive

Appointed: 1 April 2014 and Chief Executive with effect from 1 April 2016

Tenure: 7 years

Skills and competencies: John joined the Group as a graduate in 1991 and has progressed through many senior management roles. John brings significant know-how and commerciality to his leadership of the executive team and management of the Group's business.

John continues to lead the implementation of the Group's strategy. This year a new group operating model was introduced under John's leadership, in order to improve customer and stakeholder relationships; evolve our ways of working and culture; and to ensure a step change in efficiency and effectiveness. Recently, he led on a strategic pivot, including the WPD Acquisition and to commence the process to sell a majority stake in our UK Gas Transmission business.

External appointments:

- Member of the UK government's Inclusive Economy Partnership;
- Member of the Electric Power Research Institute Board;
- Member of the CBI's President's Committee;
- Member of the Edison Electric Institute Executive Committee; and
- Non-executive Director and Senior Independent Director of Rentokil Initial plc.

R F N

Jonathan Dawson (69)
Non-executive Director; Independent

Appointed: 4 March 2013

Tenure: 8 years

Skills and competencies: Jonathan, through his broad range of expertise within the finance and pensions sector, brings significant in-depth understanding in remuneration and financial matters to his role as Chair of the Remuneration Committee. Jonathan previously held positions as Chairman of the Remuneration Committee and Senior Independent Director of Next plc and Chairman of the Audit & Risk Committee and Senior Independent Director at Jardine Lloyd Thompson Group plc.

As a Non-executive Director, Jonathan brings an innovative perspective, scrutiny, constructive challenge and independent oversight to the Board.

External appointments:

- Chairman of River and Mercantile Group plc; and
- Chairman and a founding partner of Penfida Limited.

E

Nicola Shaw CBE (52)
Executive Director, UK

Appointed: 1 July 2016

Tenure: 4 years

Skills and competencies: Nicola's career, in the UK and overseas, has included several senior operational and commercial roles in regulated businesses. She has a strong leadership track record, which has included Chief Executive Officer of HS1 and Managing Director of the UK Business Division at FirstGroup plc.

Her broad range of experience working with the UK government, the European Commission and Parliament and industry regulators, as well as leading large regulated businesses, enables Nicola to implement Board decisions and lead our UK business with the requisite experience, knowledge and leadership expertise.

External appointments:

- Non-executive Director of International Consolidated Airlines Group, S.A.;
- Director of Major Projects Association;
- Director of Energy Networks Association Limited; and
- Director of Energy UK.

E F

Andy Agg (51)
Chief Financial Officer (CFO)

Appointed: 1 January 2019

Tenure: 2 years

Skills and competencies: Andy trained and qualified as a chartered accountant with PricewaterhouseCoopers and is a member of the ICAEW. He has significant financial experience, having held a number of senior finance leadership roles across the Group, including Group Financial Controller, UK CFO and Group Tax and Treasury Director. Andy brings in-depth knowledge of National Grid, both in the UK and US, and his broad experience across operational and corporate finance roles led to a smooth transition into his role. He contributes broadly on a wide range of topics at Board, Finance and Audit Committee meetings.

External appointment:

- Member of the 100 Group Main Committee and Chair of the Tax Committee.

E

Justine Campbell (50)
Group General Counsel & Company Secretary

Appointed: 1 January 2021

Skills and competencies: Justine has held senior executive positions at several multinational companies and is an experienced lawyer with particular expertise in regulated sectors.

She is responsible for safety, legal, risk, compliance and governance activities across the Group, the effective operating of National Grid plc's Board and Committees and advising on key issues of corporate governance.

External appointment:

- Member of the GC100 Group Executive Committee.

A N S

Amanda Mesler (57)
Non-executive Director; Independent

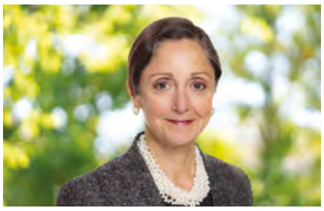
Appointed: 17 May 2018

Tenure: 3 years

Skills and competencies: Amanda brings to the Group extensive international leadership and general management experience from the technology and fintech sectors. She has over 26 years of experience at senior management and Board level at large international companies. She led a $1 billion global practice at Electronic Data Services and has experience sitting on audit, risk and remuneration committees. Amanda provides an entrepreneurial perspective to the Board and valuable insight into the Company's increasingly important technical evolution.

External appointment:

- Chief Executive Officer of CashFlows Europe Limited.



F A N

Therese Esperdy (60)
Non-executive Director; Independent

Appointed: 18 March 2014. Appointed to the Board of National Grid USA from 1 May 2015

Tenure: 7 years

Skills and competencies: Therese has significant international investment banking experience, having held a variety of leadership roles spanning 27 years. Her career began at Lehman Brothers and in 1997 she joined Chase Securities and subsequently JPMorgan Chase & Co., where she held a number of senior positions. With a distinguished career in the investment banking sector, Therese brings significant banking, strategic and international financial management expertise and knowledge of financial markets to the Board and to her role as Chair of the Finance Committee.

Therese's specialist knowledge combined with her sharp and incisive thinking enables her to contribute and constructively challenge on a wide range of Board debates.

External appointments:

- Chair of Imperial Brands PLC; and
- Non-executive Director of Moody's Corporation.

S A N

Dr Paul Golby CBE FREng, FIET, FIMechE, FEI, FCGI (70)
Non-executive Director; Independent

Appointed: 1 February 2012

Tenure: 9 years

Skills and competencies: Paul is a Chartered Engineer and has a lifelong passion for engineering and innovation, having spent his career in the energy and regulatory sectors. He brings a valuable engineering and industry perspective to the Board as well as the attributes of an experienced Chairman and Chief Executive to his role as a Non-executive Director. Paul's deep understanding and specialised experience in safety and risk management combined with his deep insight into regulatory issues faced by the Group, particularly in the UK, is crucial to his role as a member of the Safety, Environment and Health Committee.

External appointments:

- Chairman of Costain Group plc;
- Director of the Electrical Research Association (ERA) Foundation; and
- Chairman of NATS Holdings Limited.

A N S

Liz Hewitt (64)
Non-executive Director; Independent

Appointed: 1 January 2020

Tenure: 1 year

Skills and competencies: Liz qualified as a chartered accountant with Arthur Andersen & Co. In her executive career she worked in private equity for 3i Group plc, Gartmore Investment Management Limited and Citicorp Venture Capital Ltd gaining insights into a wide variety of industries. Her work at Smith & Nephew gave her global insight. She was seconded for a year to HM Government. In November 2020 Liz was appointed as Chair of the Audit Committee. She has extensive experience as an Audit Committee Chair and as a member of nominations and remuneration committees. She is considered to be a financial expert in the context of Audit Committee work. Her broad industrial and global experience and her financial knowledge bring a wide perspective to Board discussions and decision-making.

External appointment:

- Senior Independent Director and Chair of the Audit Committee at Melrose Industries plc.

N

Paula Rosput Reynolds (64)
Chair Designate & Non-executive Director; Independent

Appointed: 1 January 2021 as Chair Designate and Chair with effect from 31 May 2021

Tenure: Less than 1 year

Skills and competencies: Paula's strong business acumen can be demonstrated by her impressive track record of leading complex international businesses. In her board and leadership roles, Paula has demonstrated her decisive and pioneering nature which will be crucial in moving National Grid's vision forward, as it embarks on its journey to clean energy and net zero by 2050. Her knowledge of the energy market and experience supporting organisations through transitional periods will be an asset to the Board as National Grid continues to grow and embrace opportunities. Upon joining the Board, Paula stepped into the role of Chair of the Nominations Committee, which will be pivotal in ensuring that the succession and composition of the Board matches the culture, strategy and leadership needs of the Company. These skills combined with her insight into strategic and regulatory issues will enable her to lead and govern an effective Board.

External appointments:

- Senior Independent Director and Chair of the Remuneration Committee at BP plc;
- Non-executive Director of General Electric;
- President and CEO of PreferWest LLC; and
- Chair of Seattle Cancer Care Alliance.

S N R

Earl Shipp (63)
Non-executive Director; Independent

Appointed: 1 January 2019

Tenure: 2 years

Skills and competencies: With an extensive career in the chemicals industry and having held a senior leadership role in a safety-critical process environment, Earl brings significant safety, project management, environmental, sustainability and strategic expertise to the Board and Committees particularly in relation to safety management. This, along with his innovative way of thinking, enables Earl to contribute on a wide range of issues to Board and Committee debates and to effectively chair the Safety, Environment and Health Committee.

External appointments:

- Non-executive Director of Olin Corporation; and
- Non-executive Director of CHI St. Luke's Health System of Texas.

F N R

Jonathan Silver (63)
Non-executive Director; Independent

Appointed: 16 May 2019

Tenure: 2 years

Skills and competencies: Jonathan has considerable knowledge of the US-regulated energy environment, experience and understanding of integrating public policy and technology into a utility as well as a strong background in finance. Previously, Jonathan was the head of the US government's $40 billion clean energy investment fund. He is currently the Managing Partner of Tax Equity Advisors LLC, which manages investment in large-scale renewable projects and was recognised as one of the 'Top 10 Green Tech Influencers' in the US. Jonathan's strong background in finance and government policy along with his long career at the intersection of policy, technology, finance, and energy brings innovative and positive insight to the Board's policy discussions and to its interaction with management.

External appointments:

- Independent Director of EG Acquisition Corp.;
- Senior Advisor to Guggenheim Partners;
- Non-executive Director of Peridot Acquisition Corp.;
- Director of Plug Power, Inc; and
- Director of Intellihot, Inc.

N R

Mark Williamson (63)
Non-executive Director & Senior Independent Director

Appointed: 3 September 2012

Tenure: 8 years

Skills and competencies: As a qualified chartered accountant, Mark brings considerable financial and general managerial experience to the Company. His previous roles as Chief Financial Officer of International Power plc, Non-executive Director and Senior Independent Director of Alent plc and Chairman of Imperial Brands PLC cement his extensive financial experience and give him a deep understanding of the utilities sector. Mark stepped down as Chair and member of the Audit Committee in November 2020, offering guidance and support to Liz, as she succeeded him as Chair of the Audit Committee. In his role as Senior Independent Director, Mark brings an excellent understanding of investor expectations as well as providing significant insight into managing relationships with investor and financial communities.

External appointment:

- Chairman of Spectris plc.

Corporate Governance overview

Board

Our Board is responsible collectively for the effective oversight of the Company and its businesses. It determines the Company's strategic direction and objectives, business plan, dividend policy, viability and governance structure to help achieve long-term success and deliver sustainable shareholder value. The Board also plays a major role in setting and leading the Company's culture and wider sustainability goals. It considers key stakeholders in its decision-making and, in doing so, ensures that Directors comply with their duty under section 172 of the Companies Act 2006.

To operate efficiently and give the right level of attention and consideration to relevant matters, the Board delegates authority to its Board Committees. Each Committee Chair reports to the Board on their Committee's activities after each meeting.

Key matters considered by the Board include:

- the Company's strategy and long-term strategic objectives;
- risk appetite and determination of principal risks;
- overall corporate governance arrangements, systems of internal control and risk management;
- annual business plan and budget;
- significant changes in capital structure;
- succession planning for Board and senior management;
- half-year and full-year results statements, Annual Report and Accounts and other statutory announcements;
- oversight of the Company's response to major crises and other significant challenges; and
- determination of the framework or policy for the remuneration of the Chairman, Chief Executive, Executive Directors, Group General Counsel & Company Secretary, and direct reports to the Chief Executive, following recommendation from the Remuneration Committee.

Board Committees

Audit Committee:

- Financial reporting.
- Internal controls.
- Processes for risk management.
- Internal audit.
- External auditor.

Nominations Committee:

- Board and Committee composition.
- Succession planning.
- Board appointments.

Remuneration Committee:

- Policy.
- Consideration of exercise of discretion.
- Implementation of policy.
- Incentive design and setting of targets.

Finance Committee:

- Financing policies and decisions.
- Credit exposure.
- Hedging.
- Foreign exchange transactions.
- Tax strategy and policy.
- Guarantees and indemnities.

Safety, Environment and Health (SEH) Committee:

- SEH strategy and policies.
- Performance targets.
- Sustainability.

Group Executive Committee

Led by the Chief Executive, the Committee oversees the safety, operational and financial performance of the Company. It is responsible for making the day-to-day management and operational decisions it considers necessary to safeguard the interests of the Company and to further the strategy, business objectives and targets established by the Board.

The Committee members have a broad range of skills and expertise that are updated through training and development. Some members also hold external non-executive directorships, giving them valuable board experience. Those members of the Committee who are not Directors regularly attend Board and Committee meetings for specific agenda items.

Other management committees

Disclosure Committee; Investment Committee; Share Schemes Sub-Committee.

Our Group Executive Committee

Three Executive Directors are members of the Group Executive Committee, as well as being on the Board. The Group General Counsel & Company Secretary is also a member of the Group Executive Committee. See their biographies on page 72.

Full biographies for the Group Executive Committee are available at: nationalgrid.com

Governance structure

The schedule of matters reserved for the Board and terms of reference for each Board Committee are available in our Board Governance Document at: nationalgrid.com

Reports from each of the Board Committees, together with details of their activities, are set out on pages 83 – 94.

Board attendance and skills

Board and Committee membership and attendance

The table below sets out the Board and Committee attendance during the year to 31 March 2021. Attendance is shown as the number of meetings attended out of the total number of meetings possible for the individual Director during the year.

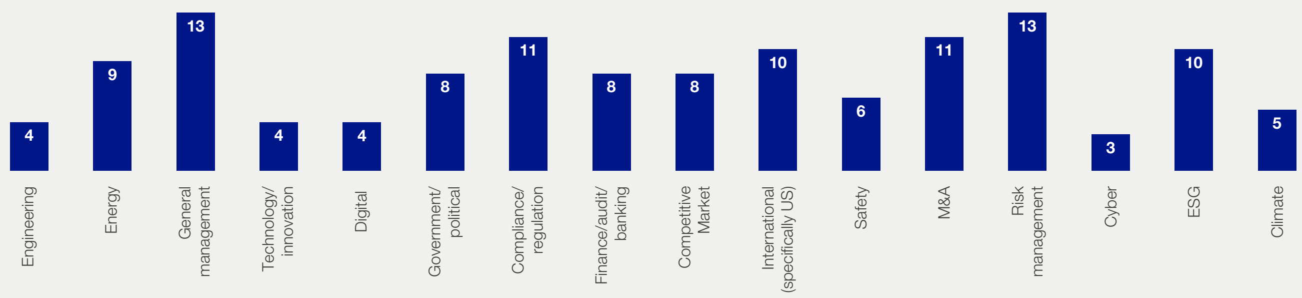
Director	Board	Audit	Finance	Nominations	Remuneration	Safety, Environment and Health
Sir Peter Gershon	◆ 19 of 19	–	–	4 of 4[4]	–	–
John Pettigrew	19 of 19	–	7 of 7	–	–	–
Andy Agg	19 of 19	–	7 of 7	–	–	–
Nicola Shaw	19 of 19	–	–	–	–	–
Jonathan Dawson	19 of 19	–	7 of 7	6 of 6	◆ 10 of 10	–
Therese Esperdy	19 of 19	6 of 6	◆ 7 of 7	5 of 6[1]	–	–
Paul Golby	19 of 19	6 of 6	–	6 of 6	–	◆ 4 of 4
Liz Hewitt	18 of 19[3]	◆ 6 of 6[5]	–	6 of 6	–	3 of 4[3]
Amanda Mesler	17 of 19[1]	6 of 6	–	6 of 6	–	4 of 4
Earl Shipp	19 of 19	–	–	5 of 6[2]	10 of 10	4 of 4
Jonathan Silver	18 of 19[1]	–	7 of 7	6 of 6	9 of 10[1]	–
Mark Williamson	19 of 19	4 of 4[5]	–	6 of 6	9 of 10[1]	–
Paula Rosput Reynolds – Appointed on 1 January 2021	5 of 5	–	–	◆ 1 of 1[4]	–	–

◆ Board/Committee chair

1. A number of meetings this year were ad hoc and held at short notice. The Directors noted were unable to join due to short notice and/or conflicting commitments. Where possible all Board/Committee members who were unable to attend a meeting provided comments to the relevant Chair in advance of the meeting.
2. Earl Shipp was unable to attend the April 2020 Nominations Committee meeting due to a conflicting commitment.
3. Liz Hewitt was unable to attend the September 2020 Board and Safety, Environment and Health Committee meetings due to travel disruption.
4. Sir Peter Gershon stepped down as Chair and member of the Nominations Committee on 1 January 2021 following the appointment of Paula Rosput Reynolds as Chair Designate and Chair of the Nominations Committee with effect from the same date. Sir Peter Gershon was not required to attend one of the Nominations Committee meetings this year as it was held to discuss his succession.
5. Mark Williamson stepped down as Chair and member of the Audit Committee with effect from 10 November 2020. Liz Hewitt stepped into the role as Chair with effect from the same date.

Board skills and experience

This diagram sets out the number of Board members with specific skills and experience as a way of demonstrating the different aspects the Directors bring to the Board.



Corporate Governance overview continued

Examples of Board focus during the year include:

Strategy

Strategy remained a key focus throughout 2020/21. In addition to Board meetings held during the year, the Board participated in an interactive strategy session held in September 2020. Topics of discussion included: recap of the Company's strategy; the next 12 months; decisions needed in the next 6 months to roll out the new operating model by April 2021; and US, UK and NGV strategy delivery.

UK RIIO-2 price control

The Board has continued to scrutinise and challenge the UK regulatory strategy throughout the year, providing feedback, guidance and support for its ongoing development.

The Board spent a considerable amount of time discussing the RIIO-2 price control this year and an additional meeting was held in January 2021. Matters considered included:

- various scenarios for Draft Determination positioning prior to the publication of the Draft Determinations in July 2020;
- how the UK business was responding to the draft proposals, its approach and key arguments;
- the Company's engagement and communications strategy;
- how the RIIO-2 performance plans had evolved, how risk and change impact of the plans was being managed;
- the outcome of the Final Determinations and possible areas of appeal to the Competition and Markets Authority (CMA);
- approval of the two technical areas of appeal to the CMA; and
- regular updates from the Chairman and Chief Executive on conversations with key stakeholders.

In January 2021, the Board agreed the recommendation to accept the overall package for the Electricity System Operator and not to pursue an appeal on any area to the CMA.

US strategy and regulatory landscape

The Board has continued to focus on developing business plans, strategies and advocacies to reposition the Company to align with the new reality. Considerations included:

- designing a simpler, more streamlined business, leading to a more efficient and effective organisation;
- embedding more of a customer focus in core operations;
- improving the way we engage with a broad range of stakeholders;
- focusing on the long-term objectives of implementing innovative regulatory frameworks, including rate plans;
- providing opportunities for investments in clean energy for the US business; and
- working with regulators and external stakeholders to set up new customer assistance programmes and regulatory pathways for recovery of incremental impacts associated with COVID-19.

The implementation action plan was approved by the Board in April 2020 and execution progressed well with two thirds of the actions now complete. The four actions behind track were due to COVID-19.

Agreed acquisition of WPD from PPL (subject to certain regulatory approvals) and strategic portfolio repositioning

This year the Board has spent a significant proportion of time discussing the strategic position of the Company to ensure its net zero ambition and overarching strategy could be achieved. In March 2021, the Board decided to proceed and strategically pivot the UK portfolio towards electricity. The decision was also taken to proceed with the sale of NECO and the majority stake in NGG.

Stakeholder analysis was undertaken during the decision-making process and further information can be found on page 48.

Stakeholders considered

Business Plan and financial performance

Business Plan

The Board discussed the ongoing financial strategy and focused on developing a Business Plan that meets the Group's requirements, aligned to the Company's purpose, vision and values.

The Board received an update on the emerging Business Plan to provide an early view given the interlinked strategic financial decisions required in 2021. In January 2021, the Board supported the suggested amendment to the financing strategy considered by the Finance Committee and approved the delegation of final approval to a sub-committee.

Stakeholder analysis had been undertaken and the impact of the Business Plan on non-investor stakeholders considered. Following a more detailed impact analysis at the March 2021 Board meeting, the Board approved the Company's Business Plan.

Financial performance

The Board receives monthly updates on the Group's financial performance. This year the Board has reviewed and scrutinised the Group trading performance, budget and financing strategy. Share price has also been considered throughout the financial year.

Dividend

The Board considered the dividend policy at its May and June 2020 meetings. The Board approved the proposed interim and final dividend payments and approved the updated dividend policy in January 2021.

The Board also reviewed the Group's dividend policy in light of the decision on Ofgem's RIIO-2 Final Determinations and the Company's Business Plan. It was announced on 2 March 2021 that from FY2021/22 onwards, the policy will aim to deliver annual dividend per share growth in line with UK CPIH inflation.

Stakeholders considered

Organisation and culture

New operating model

Following input from the Nominations Committee, the Board has provided input on the proposed changes to the new operating design. The overarching aim of the project is to build a sustainable operating model to underpin our vision and strategic priorities, and to adapt our business to a rapidly changing external context. Following a clear articulation of the expected outcomes and the impact on the business, the Board endorsed the proposed changes in May 2020.

Diversity

The Board received updates on the ambitious diversity and inclusion targets at the March and April 2021 meetings.

Stakeholders considered

Our Stakeholders

Colleagues
Investors
Regulators
Communities
Customers
Suppliers

COVID-19

The Board has considered the impact of COVID-19 across all areas of the business via Board papers and meeting updates.

Throughout the peak of the pandemic, Board meetings were held weekly to discuss internal and external implications, and particularly the impact on our:

- people;
- operations;
- regulatory developments; and
- financials.

This was supported by the consideration of a number of actions to mitigate any negative impacts.

As the pandemic continued into the summer months, the meetings became fortnightly with weekly briefing notes circulated to the Board.

Our workforce remains a key focus as we continue to navigate the impact of the COVID-19 pandemic. We are pleased to report that none of our employees were furloughed during the period. A survey was conducted across the workplace to gauge both the level of business need, but also personal need, for a priority return to the workplace. The Board recognised the importance to support and prioritise a return for those who were facing the most challenges in working from home. The health and safety of our employees remains paramount and all policies have been in accordance with government guidelines.

Stakeholders considered

Other

The Board has also spent time this year considering the following matters:

- implications of the 2020 US presidential election;
- deep dives on the performance of the business and digital strategy execution;
- the strong performance of the UK and US commercial property portfolio;
- the future of the ESO; and
- culture and the implementation of the new operating model, further details of which can be found on the prior page.

Stakeholders considered

Sustainability

Responsible Business Charter

Following the recommendation last year to develop and implement a new Responsible Business framework for the Company, the Charter was created with the goal of applying a Total Societal Impact lens to everything the Company does as a business.

Extensive internal and external engagement has taken place. The Board reviewed and provided input on the Responsible Business Charter. The Board reviewed and approved the new Responsible Business Report in September 2020. A copy of the report is available at nationalgrid.com/responsibility. See pages 52 – 53 for further information.

COP26

This year the Board was pleased to report that the Company would be a principal partner of COP26. The Board received an update on the Company's aims and objectives for sponsoring COP26, the scope of the Company's campaign and core engagement components and timeline. The Board discussed the Company's ambitions and the engagement of key stakeholders during the campaign. The Board recently approved the addition of climate change as a principal risk. The Group's principal risks are reviewed and discussed by the Board bi-annually. Further information can be found in the TCFD section on page 61.

Following an update on COP26 in January 2021, the Board confirmed its support for the principle of taking a climate change advisory non-binding vote to the Annual General Meeting. In March 2021, the Board noted the climate change action plan and approved the external announcement. The Board received a further update on the Company's environmental, social and governance (ESG) positioning in April 2021.

National Grid Renewables

The Board considered the integration of Geronimo into NGV and the launch of the new National Grid Renewables brand.

Stakeholders considered

Looking forward

The Board's focus for next year is expected to include:

- US and UK regulatory strategy;
- implementation of RIIO-2;
- rate case filings;
- responsible business and ESG strategy;
- future of the ESO;
- organisational culture, bench strength and talent;
- effectiveness of the new operating model;
- stakeholder engagement strategies in the UK and US;
- long-term financing strategy; and
- integration of WPD into the Group and updates on the Rhode Island and NGG sale processes.

Our Stakeholders

Colleagues | Investors | Regulators
Communities | Customers | Suppliers

Corporate Governance overview continued

Our culture journey

Our culture determines how we behave, how we make decisions and our attitude towards risk and how it aligns with the Group's purpose, vision and values. The Board has been on a journey over the last few years to create the right culture throughout the Company, to ensure our workforce are embracing positive and inclusive behaviours and values in everything we do. This year, considerable time was spent reviewing organisational culture as we continue to evolve for the future.

We are pleased to report that the Board has progressed the culture-related activities reported last year. COVID-19 has impacted on the way our colleagues work and new ways of working have accelerated the implementation of our culture change programme following a positive response from our colleagues.

More information on our culture can be found on page 18.

January – March 2020
The Nominations Committee considered the need to evolve our operating model to underpin the delivery of our strategy and to ensure progress was being made towards the Company's goal of being purpose led. It was agreed that there was a need to evolve our culture and ways of working to create substantial change across the organisation and to achieve a results-orientated culture. Following input from the Board, Group Executive Committee, and evaluated learnings from external benchmarks and utility peers, a programme of work was designed and initiated by Human Resources.

April **May**

April – May 2020
The Board received the annual culture scorecard update devised to monitor culture at Group level with the aim of providing the Board with the information required to fulfil its role in influencing and monitoring culture. The scorecard had been updated to include additional analysis highlighting the change in culture and ways of working experienced during the COVID-19 pandemic.

A colleague engagement survey had also been undertaken, prior to the pandemic, to gain a more common understanding of the Company's culture and how this impacted behaviours and ways of working within the Company. The survey concluded that the current culture was highly consistent with the Board's view of culture and that 'order' and 'safety' had ranked as two of the top cultural behaviours and the results were also consistent with the themes seen in the annual survey.

The Board received an update on the early stages of the new operating model, considering the key milestone plan and the four key process stages.

The Board considered the culture and colleague engagement survey in May, which had been updated to reflect the feedback on the scale of ambition and provided tangible measures to support the assessment of progress. The Board noted the updated distillation of the new cultural ambition, which was one of the four overarching programme objectives from the wider operating model review. The proposed targets were agreed, which included a 10% increase in the overall organisation outcome score over the next 12 months.

December **September**

September – December 2020
The Board considered how the organisational design programme was being rolled out, the progress to date and the forward plan.

Programme momentum continued to accelerate with a strong focus on design and implementation. The Board also received an update on the material progress made on culture initiatives and the design and cascaded communication of the new organisation and operating model. The programme became 'Leading the Energy Future' as it symbolised the transition from running a change programme towards an operationalisation of our strategy across the Group. Each of the objectives are directly linked to our strategic priorities and quantified with programme targets. You can read more about our strategic priorities on page 10.

February **April**

February – April 2021
In February 2021, Spencer Stuart facilitated a culture diagnostic survey for the second year, which was completed by the Senior Leadership team, Non-executive Directors and a sample of colleagues from across the business. The aim of the survey was to see if the views of senior leadership corresponded to the views of the wider team and to establish if, from their perspective, any progress had been made on the culture journey.

In March 2021, the Board received an update on our response to the Black Lives Matter movement from the Chief Diversity Officer. Good progress had been made against the 'call to action' commitments and on inclusion and diversity in the Company. The transparency of diversity data had also increased. The Board endorsed the priorities for the next six months in the inclusion and diversity sphere.

In April 2021, an update on the progress of the culture journey was provided to the Board, along with the results of our annual Grid:voice employee survey. Good progress was seen across our organisational and leadership metrics, which exceeded our target outcomes. 81% of our colleagues completed the Grid:voice survey and the overall results were positive and reflected the considerable work we have done this year on developing our culture and our response to the pandemic.

2021 and beyond

2021 and beyond
Our leading indicators on culture change show we have multiple areas of progress being made that point toward a real change being underway. The primary focus for 2021 will be ensuring the successful execution and implementation of our new operating model including the integration of WPD into the Group and managing the proposed sale of a majority stake in Gas Transmission in the UK and the sale of NECO in the US. The acquisition will bring great people and experience to the Group and we will consider how to best incorporate the customer-centric culture. Focus will also be on reviewing and monitoring the impact on culture of the COVID-19 pandemic and ensuring that the improved communications and momentum of change activity continue as colleagues start returning to offices. Looking at the next 6–12 months, the programme will focus on delivering broadly across several initiatives with a key focus across five key priorities:

1. Implement our new organisation across the Group
2. Stand up new components of the operating model
3. Deliver planned/in-flight technology programmes
4. Capture the first wave of functional and business process efficiencies
5. Make key portfolio decisions and incorporate these into target operating design model

Colleague engagement

Throughout the year we have continued with our 'Full Board Employee Voice' approach to workforce engagement, which utilises and enhances existing colleague engagement methods and communication channels to ensure meaningful engagement between the Board and our workforce across all locations.

In April 2020, the Board considered how the COVID-19 pandemic would impact the Board's ability to undertake a significant proportion of the planned activity for 2020/21. The colleague engagement plan was reviewed and updated to include a list of virtual colleague engagement opportunities across our businesses. The virtual colleague engagement sessions, designed to fit around other commitments, have enabled the Non-executive Directors to gain exposure to additional business areas and a broader cross section of employees where previously there may have been logistical constraints. A good example of this was the meeting with the US Trade Unions which would only logistically work virtually given the locations these members are situated in. We will continue to undertake some virtual sessions to ensure this broad engagement continues.

Examples of fuller Board engagement:

Details of the actions can be found below (see page 80).

Employee Resource Group (ERG) Sessions

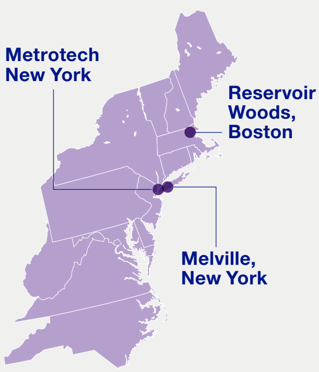
In September 2020, the Non-executive Directors met with nine US ERG Chairs and leads virtually for an informal session. Discussions focused on: inclusion and diversity; communication in middle management; COVID-19; and Board accountability.

Virtual engagement opportunities

Examples of virtual engagement opportunities that took place included:

19 video conference sessions

2,598 participants



Session	Attendees
All NGV call	525
Electricity transmission leadership Q&A call	81
Ethics and psychological safety webinar	189
Finance committee engagement session	12
Interconnector call	7
Investment management meeting	29
NGV leadership call	139
UK finance town hall	160
UK land and property town hall	124
UK leadership call	30
UK town hall	180
UK trade union session	6
US ERG session with NEDs	9
US gas safety performance functional meeting	50
US HR call	150
US leadership calls	600
US strategy & regulation meeting	97
US trade union session with NEDs	10
Virtual Chairman's awards	200

Trade Union Sessions

In October 2020, the Non-executive Directors met virtually with 10 colleagues from the US trade unions who provided a local perspective on the New England, upstate New York, and downstate New York regions. Discussions centred on safety performance; outsourcing; communication; COVID-19; and inclusion and diversity.

In November 2020, the Non-executive Directors met virtually with colleagues from the UK trade unions and discussed COVID-19; the outcome of RIIO-2; health and safety; ethics and business policy; and the protection and integrity of the network.

Communications

A key focus this year and throughout the COVID-19 pandemic has been around maintaining colleague communications across a variety of channels and forums to ensure our workforce were kept informed of the engagement activities being undertaken and the progress of any actions.

Our approach to colleague communications has strengthened and we launched a series of videos of the Non-executive Directors introducing themselves on a Company social media platform. The videos have helped employees to learn more about who our Board members are, their role, and why it is important that they meet and interact with colleagues. These videos combined with the engagement sessions have helped raise the visibility of the breadth of activity undertaken and of the role of Non-executive Directors on the Board. Feedback received confirmed that colleagues valued the Non-executive Directors taking time out to do the videos and to join engagement sessions to meet and talk with our colleagues.

Feedback and decision-making

We continue to track activity, feedback and actions taken. The Board is informed of progress against the actions bi-annually and this provides an opportunity for the Board to consider the arrangements in place. The Board also allocates time at each Board meeting to discuss key outcomes, discussions and any actions from recent engagement activities they have attended.

The Black Lives Matter update to the Board was a positive example of how discussion impacted a Board decision. In July 2020, the Board had the opportunity at a Board meeting to meet with two employees to discuss their views on diversity in the Company and the Black Lives Matter movement. As a result, a 'call to action' campaign document was made available and discussed at a subsequent Board meeting. The campaign identified six areas for the Company's increased focus. In November 2020, the Board received an update on progress and was pleased to see the momentum of change, including the appointment of a new Chief Diversity Officer, increased transparency of diversity data through communications, the roll-out of new leadership training including mandatory unconscious bias training – which was also made available to the Board, and the inclusion of ambitious diversity targets in the Responsible Business Charter which the Board approved. See our website nationalgrid.com/responsibility for more detail.

A further update on diversity was brought back to the Board in March 2021 where the new Chief Diversity Officer presented the progress made against the commitments, what had been done to improve inclusion more broadly, and the areas of focus for the year ahead.

Further information on what we have heard and what we have done can be found below.

Looking ahead

Following the success of the virtual engagement sessions and the continuation of remote working, the number of colleague engagement opportunities continues to grow.

We periodically review the effectiveness of the activity undertaken to ensure our chosen approach remains appropriate and that the engagement continues to evolve following feedback from Board members and colleagues. A more holistic review will be undertaken later this year.

Corporate Governance overview continued

Colleague engagement continued

What we heard in 2020/21:	What have we done?
During the colleague engagement virtual activity, some of the areas we heard about were:	
• commitment to inclusion and diversity within the Company in the long term. Further information was also requested on what was being done to diversify the Board in terms of gender, race and sexuality. Colleagues raised concern that diversity surveys were limited and not shared outside each ERG group.	• Focus remains on our long-term goal of our workforce being representative of the communities we serve. In January 2021, we appointed a new Chief Diversity Officer, who is working with inclusion and diversity managers to create a Global Diversity, Equality and Inclusion (DEI) function. The new function will remain as part of the People function, but will have an elevated reporting line, independence and importance, which is reflective of the Company's commitment to inclusion and diversity. • Aligned to our commitment to improve transparency on gender and race, we now publish data to show the percentage of women and ethnically diverse people against our total population, the communities we serve, by region and global band. In the future, we aim to report on broader diversity measures such as sexual orientation, social mobility and disability, however in order to do so we continue to strongly encourage self-declaration, so we can improve measurement and track progress. • We have also updated our commitments to diversity following the publication of our Responsible Business Charter. Further information can be found within the Nominations Committee Report on page 90. • HR have shared the data from the March 2021 employee diversity survey with the ERG groups. The results have also been shared with the Chief Diversity Officer.
• colleagues suggested that communication could be improved through line managers and safety advocates in relation to safety performance and messaging. Concerns were also raised in relation to a perceived weaker safety performance amongst contractors compared to employees.	• Our internal intranet was piloted to field colleagues in February 2021 and includes a designated space for safety performance. • The Safety, Environment and Health Committee plan to review the safety performance data to see if there is any correlation.
What we heard in 2019/20:	**What have we done?**
More needs to be done to create ethnic and gender diversity within the Company and to ensure that senior roles are representative.	• Following the introduction of a new inclusion and diversity category at the Chairman's Awards, the winner of the award was the Allyship When it Matters Training. The training was developed in the aftermath of the death of George Floyd and the civil unrest in the US as there was a desire from National Grid colleagues to understand what they could do to support their colleagues from diverse backgrounds further. Many employees wanted to 'do the right thing' but were uncertain as to how to go about it. The US and UK ERGs got together and hosted the virtual webinar Allyship When it Matters. Nearly 2,000 UK and US employees joined the webinar, with an additional 1,500 later viewing the recording. The webinar explained what an ally is, why allies are necessary, allyship best practices and how to go from ally to advocate. The response to the session was overwhelmingly positive with a score of 4.96/5 on the feedback survey. The true value of the webinar was that we offered an opportunity for employees to come together and understand that in acting as an ally they could contribute to addressing the unjustices that have recently been highlighted across the world. Racism and all forms of discrimination were discussed using personal stories of employees to illustrate the devastating impact discrimination causes and educated others on how they can be part of the solution. • When considering the recruitment of new Directors, the Nominations Committee adopts a formal and transparent procedure with due regard to the skills, knowledge and level of experience required, as well as to diversity. All Board appointments are recommended on merit.

Performance evaluation

2020/21 Internal Board evaluation

In accordance with the UK Corporate Governance Code the 2020/21 Board evaluation was conducted internally. Our annual evaluation provides the Board and its Committees with an opportunity to consider and reflect on the quality and effectiveness of their decision-making, and for each member to consider their own contribution and performance. The approach we took this year was to explore further the themes and open questions from last year's evaluation to understand where improvements had been made and where further focus was needed.

Structure

With Paula Rosput Reynolds joining the Board in January 2021 as Chair Designate the evaluation provided an opportunity for feedback to be provided that Paula would be able to review and take forward as appropriate once she stepped into the position of Chair of the Board. In accordance with the Code, National Grid's annual evaluation of Board effectiveness is facilitated by an independent third party at least once every three years; the next externally facilitated evaluation will take place in 2021.

The evaluation process was led by the Chair Designate and supported by the Group General Counsel & Company Secretary. The proposed structure of the evaluation survey and the questions were agreed in December 2020 and presented to the Board for approval in January 2021. The questions were formulated to build on the open questions from last year's evaluation and were largely forward-looking.

Process

In February 2021 the Board received an effectiveness evaluation survey for completion. The questions were focused around the following areas:

- Board effectiveness and information to the Board;
- Committee effectiveness;
- Board dynamics; and
- opportunities/concerns.

Individual performance review meetings were held with the Chairman during the first few months of 2021.

In April 2021, the results of the evaluation survey were presented to the Board and key areas of focus were agreed.

Areas identified to enhance the Board's effectiveness for 2021/22

The Board discussed the results of the evaluation in April 2021 and identified key areas of focus for the coming year including: Board and Committee reporting; and Board dynamics and effectiveness in light of a number of Board member changes. The areas identified in this year's evaluation will feed in to the external evaluation which is due to take place later this year.

Progress against actions for the Board agreed in the 2019/20 internal evaluation

Action	Progress made
More effective discussion and decision-making through streamlined and targeted papers to the Board and its Committees.	• This is an ongoing process. The agenda format and most papers have allowed for more effective discussions and decision-making throughout the year. • Paper templates and information being provided up to the Group Executive Committee and Board will be reviewed again later in the year following an action from the Group Executive Committee to review the content of information going to that forum.
External perspectives to be brought forward to the Board to bolster management expertise including in the areas of cyber, climate change, customer and developments in energy policy and energy technology.	• Unconscious bias training (employee training) rolled out in October 2020 to all Directors. • Digital training – undertaken by the full Board in December 2020. • Proposals for UK/US customer voice are planned to be brought back to the Board at the appropriate time.
Continue with and enhance the effectiveness of employee engagement sessions to ensure a clearer alignment between these sessions and discussions/decisions made by the Board and its Committees.	• Extensive arrangements put in place for 2020/21, including US and UK trade union sessions and a session with our ERGs. The Non-executive Directors have all joined various town halls/leadership meetings/team calls throughout the year and have engaged with a wider variety of employees. • In July 2020, following the Black Lives Matter (BLM) movement, the Board invited two employees to the Board to provide their views on BLM and what more the Company could be doing. The Board discussed a 'call to action' document and has been kept informed of updates to the actions.
Devote more time to the discussion of strategic priorities at Board meetings.	• This year, the Board's focus on strategic items has been appropriate and reflects the strategy and focus of the Board during the year. Approximately 35 hours of the Board's time in 2020/21 was spent on strategic topics, with the top three areas of discussion being: the acquisition of WPD; RIIO-2; financing, dividend and Business Plan. • All 'for information' papers are included in the board packs but only discussed if a member of the Board has specifically asked to raise a concern/comment with the Chairman prior to the meeting.

Corporate Governance overview continued

Directors' induction and training

Directors' induction programme

Following appointment to the National Grid Board, each new Director receives a comprehensive induction programme tailored to their experience, background and the requirements of the role. Consideration is also given to Committee appointments, and the Group General Counsel & Company Secretary assists the Chairman in designing and facilitating the individual programmes. They are primarily designed with the purpose of onboarding and familiarising the new Directors with our business, vision, values, governance and people.

Non-executive Director induction examples

Liz Hewitt and Paula Rosput Reynolds have undertaken a tailored induction programme covering a range of areas of the business including governance, finance, audit and stakeholder matters. They have both met with senior management from key business areas and functions as well as members of the workforce across the UK, US and NGV businesses. They also both separately received a briefing from our legal advisors which included: directors' duties; the Market Abuse Regulation; and listing and disclosure obligations. On appointment both received a comprehensive Director induction pack with important background information on the Company along with corporate information, details on the Board and Committees including up-to-date corporate governance guidance as well as key internal policies and codes.

A detailed summary of Liz Hewitt's and Paula Rosput Reynolds' inductions can be found below.

Liz Hewitt

Due to Liz's position on appointment as successor to Chair of the Audit Committee, focus was given to matters pertinent in preparing Liz to step into her role as Chair of the Audit Committee in November 2020.

Audit Committee	Liz met with Mark Williamson, the outgoing Audit Committee Chair, to gain an understanding of the Company's internal controls and risk management relating to operations as well as an overview of the responsibilities of the Committee. In order for a smooth transition into her role as Chair of the Audit Committee, Mark has provided ongoing support and guidance to Liz to ensure she had access to all the relevant information she needed to effectively chair the Committee.
Colleagues and external advisors	Liz met with several key employees and external advisors in relation to audit and finance including: Deloitte's Lead Audit Partner, which involved an open dialogue in relation to the Company's audit process; and Andy Agg, Chief Financial Officer, who provided an overview of the finance function, the key roles and individuals of our operating model, our Finance Ambition as well as discussing ongoing strategy projects.
Safety, Environment and Health Committee	As part of her induction to the Safety, Environment and Health (SEH) Committee, Liz met with the Group Director of Safety, Health and Environment to discuss our SEH framework and was briefed on the Company's carbon reduction and climate change strategy, wellbeing and sustainability ambitions.
Site visits	Liz visited the central control room in Wokingham, UK; however, due to COVID-19, further planned site visits in the UK and US were postponed. We are planning virtual and in-person site visits this year in line with government guidelines.

Paula Rosput Reynolds

As Chair Designate, Paula's induction aimed to provide a holistic view of National Grid and the environment it operates in. She therefore focused on meeting with the following key external and internal stakeholder groups:

Regulators and governments	National Grid operates in a complex regulatory environment both in the UK and US. To develop her understanding of the intricate nature of our regulatory landscape, Paula held over 20 meetings with key external regulatory, government and system representatives, including with Ofgem, BEIS, Rhode Island Public Utilities and New York Public Service Commission.
Investors, analysts, brokers and technical experts	Before joining the Board, Paula engaged with several investment bankers to gain awareness of their perception and opinions of the Company, including with Morgan Stanley, Robey Warshaw LLP, Guggenheim Partners and Gleacher Shacklock LLP. Further to this, she met with numerous institutional investors including Capital Research, The Olayan Group and Royal London Asset Management. More than 30 meetings were held with analysts, brokers and external technical experts including training from external lawyers at Herbert Smith Freehills, which focused on the legal context for a Chair of a UK listed company, the Listing Rules and the UK Market Abuse Regulations.
Suppliers UK and US trade associates	The external business environment we operate in is changing rapidly and therefore Paula was keen to meet with UK and US trade and other associates. Multiple meetings were held including with Edison Electric Institute, American Gas Association, City and Guilds and RenewableUK.
Colleagues	Individual one-to-one meetings were held with members of the Group Executive Committee along with monthly meetings scheduled for the year with Andy Agg, Chief Financial Officer. Further to this, meetings are being arranged with senior management from a wide variety of functions such as, individuals involved in reporting to the Finance and Audit Committees; individuals who deal with HR, remuneration and safety functions; individuals who head up the legal and risk functions; individuals with senior operational and customer-centric roles; and individuals involved in IT, digital, and cyber security.

Director development and training

The Chairman has overall responsibility for ensuring that our Non-executive Directors receive suitable ongoing training to enable them to remain an effective Board member. Individual training requirements are reviewed and agreed annually on a one-on-one basis. As our internal and external business environment continues to change, it is important to ensure that Directors' skills and knowledge are refreshed and updated regularly. In addition to individual tailored training, updates on corporate governance, legal and regulatory matters are also provided by way of briefing papers and presentations at Board meetings. Non-executive Directors receive details of training and development opportunities offered by external advisors on various topics including cyber security, and climate change and technical updates on a regular basis and we encourage and monitor attendance. During the year, Non-executive Directors attended in-depth training on cyber security in energy, as well as taking part in the Company's unconscious bias training for diversity and fair ethical decision-making. The training received on unconscious bias had also been circulated to employees as a foundation to build on our understanding of how unconscious bias can affect people in the workplace.

Audit Committee

Liz Hewitt
Committee Chair

Key areas of focus in 2020/21:

- Ongoing review and impact of COVID-19 on the half-year and year-end financial statements and internal controls;
- Financial due diligence and circular financial disclosures and assurance for the WPD transaction;
- Alternative Performance Measures (APMs) and Regulatory Performance Measures (RPMs);
- Climate-change-related financial disclosures and responsible business reporting;
- Cyber security and cyber audit outcomes;
- UK regulatory developments and impact on the Committee;
- Audit Committee Chair transition; and
- Finance leadership changes.

Key areas of focus in 2021/22:

- UK regulatory developments and impact on the Committee including Audit Reform;
- WPD Acquisition accounting and integration, including impacts on financial reporting, risk management and internal controls;
- Development of an Audit and Assurance Plan;
- Go-live of new general ledger system in the UK (MyFinance);
- Overall framework for risk management, internal controls and assurance, including the impacts of the new operating model; and
- ESG reporting and related climate and financial disclosures.

Composition of the Audit Committee

The Committee is made up of four independent Non-executive Directors*:

- Liz Hewitt (Committee Chair);
- Therese Esperdy;
- Paul Golby; and
- Amanda Mesler.

*Mark Williamson stepped down as Committee Chair and member of the Audit Committee on 10 November 2020.

The Board is satisfied that the Chair, as a chartered accountant with significant board-level financial and audit experience, is suitably qualified and has recent and relevant financial experience. The Committee as a whole is deemed to have competence relevant to the sector in which the Company operates.

Role of the Committee

The work of the Audit Committee has never been more important: investors, other stakeholders and regulators require ever more informative and reliable reporting, not just of the results and financial position, but of resilience, risk management and the Company's Environmental, Social and Governance (ESG) reporting. The Audit Committee supports the Board in its corporate governance responsibilities by providing oversight of the financial reporting including key accounting judgements and estimates, the effectiveness of internal controls, risk management and compliance frameworks, the Company's governance framework, assurance processes and internal and external audit. The Committee also oversees the appropriate procedures and evaluates the Company's approach to the prevention of fraud and bribery, and oversees the appropriate whistleblowing mechanisms.

In January 2021 management completed a detailed review of the Audit Committee's effectiveness against an overarching framework. Outcomes of the review were discussed with the Committee Chair and it was confirmed that the Audit Committee are operating effectively and in line with external guidance.

Review of 2020/21

During the financial year the Committee met four times as part of the standard schedule of meetings. Following the decision to defer the 2019/20 Group results announcement by a month in light of the COVID-19 pandemic there was an ad-hoc meeting on 15 June 2020 to approve the 2019/20 Annual Report and Accounts and a second ad-hoc meeting on 8 March 2021 to review the WPD Acquisition. The attendance of the meetings by members can be viewed on page 75.

The year-end financial reporting process is a busy period for the Group and 2020/21 presented challenges for management, including judgemental and complex accounting issues, changes in work processes, and continued uncertainty in the regulatory landscape both in the UK and US. In executing their governance and oversight responsibilities, the Committee has regularly engaged with management.

The Committee also performed an active role on the WPD Acquisition, with the Board delegating responsibility to the Committee to oversee that a robust financial due diligence process had been undertaken. The Committee was also delegated responsibility for overseeing the financial disclosures in the shareholder circular, including receiving the assurance report from Deloitte and for reviewing management's Financial Position and Prospects (FPP) procedures risk mitigation plan, which was developed to maintain continued compliance with listing rule requirements, following completion of the transaction.

The Committee oversaw the Company's response to the letter received from the FRC following their review of the Company's Annual Report and Accounts for the year-ended 31 March 2020. The letter, received in February 2021, was responded to within the 28-day deadline with no follow-up questions subsequently received.

The Committee maintains an extensive and detailed agenda focusing on audit, compliance and risk processes within the Company, working closely with management, the external auditor, global internal audit, the finance and legal teams. Key items of business considered during the year are set out on page 85.

Despite restrictions caused by the pandemic I was pleased to hold a virtual question and answer session with members of the Risk and Compliance teams from both the UK and US. This was a key part of the wider stakeholder engagement focus for the Board which is detailed on page 79 and I plan to hold more of these sessions with other key teams and the Audit Committee throughout 2021/22.

Following the 9 November 2020 Committee meeting Mark Williamson stepped down as Committee Chair and member of the Audit Committee. I would personally like to thank Mark Williamson for his service to the Committee and his time spent in ensuring a handover to me during last year. My thanks also to the Finance and Company Secretariat teams for their help and support during a busy year.

Liz Hewitt
Committee Chair

Further reading
You can view the Committee's Terms of Reference here: nationalgrid.com

Statement of compliance with the Competition and Markets Authority (CMA) Order – the Company confirms that it has complied with The Statutory Audit Services for Large Companies Market Investigation (Mandatory Use of Competitive Tender Processes and Audit Committee Responsibilities) Order 2014 (Article 7.1), including with respect to the Audit Committee's responsibilities for agreeing the audit scope and fees and authorising non-audit services.

Audit Committee continued

Significant issues/judgements relating to the financial statements

In considering the financial results announcements and the financial results contained in the Annual Report and Accounts, the Committee reviewed the significant issues and judgements made by management in determining those results.

The significant issues and judgements considered for the year ending 31 March 2021 are set out in the following table.

In addition, the Committee and the external auditor discussed the significant issues addressed by the Committee during the year. You can read more in the Independent Auditor's Report on pages 117 – 128.

Matter considered	Factors and reasons considered, including financial outcomes
COVID-19-related matters	• The Committee continued its oversight of the accounting, reporting and internal control implications of the COVID-19 pandemic. In particular, the Committee evaluated management's assessment on the recoverability of bad and doubtful debts for our retail customers in the US, evaluating the impact of reduced collection activities as a result of moratoriums issued by state regulators. Other macroeconomic factors were also considered including the impact of unemployment rates and the level and availability of government stimulus and support. During the year ended 31 March 2021, these factors contributed to a total bad debt charge of £326 million, of which an estimated £179 million was considered to be as a result of the pandemic.
Going concern	• In November 2020 and May 2021, the Committee evaluated papers prepared by management setting out the evidence to support the going concern basis of accounting. Management's analysis included a reasonable worst-case scenario and a further stress test. The reasonable worst-case scenario and the stress test assumed further adverse cash flow impacts from the COVID-19 pandemic, for example periods of additional, strict lockdown restrictions, further restrictions on US customer collection activities and additional working capital requirements to fund payment term extensions and charge deferrals in the UK. The Committee evaluated the impact of the scenarios on the level of headroom available to existing cash and debt facilities and evaluated management's analysis of the mitigating actions available to improve the position if the debt capital markets were not accessible. • Having considered management's analysis and the evidence provided to support the availability of debt financing, noting the issuance achieved throughout the year, along with the disclosures made in note 1 to the financial statements, the Committee concluded that adopting the going concern basis of accounting was appropriate in both the half-year and year-end financial statements.
Application of the Group's Exceptional Items Framework	• In September 2020, the Committee approved revisions to the Group's Exceptional Items Framework to reflect updates to IAS 1 Presentation of Financial Statements and the latest guidance from the Financial Reporting Council (FRC) and other regulators. Throughout the year, the Committee considered papers from management setting out how the updated Framework had been applied to certain events and transactions over the period, as set out in note 5 to the financial statements. • For each item, the Committee has considered the judgements made by management, considering each item in isolation as well as the aggregate view of the impact on adjusted profit and adjusted earnings per share. • In line with the revised Framework, the Committee concluded that the release of £14 million of environmental provisions relating to one of our US Superfund sites should be treated as exceptional, in line with the treatment of the original provision. • The Committee further concluded that £55 million of new operating model costs should be treated as exceptional, consistent with the treatment of such costs of a similar nature in prior years, and £24 million of transaction costs related to the WPD Acquisition. Whilst the transaction costs were not sufficiently material to warrant classification as exceptional in isolation, when aggregated with the costs expected to be incurred on completion of the transaction next year, the Committee concluded they should be classified as exceptional in order that all transaction costs were treated in a consistent manner across both years.
Gas Transmission and Gas Distribution asset lives in the context of climate change	• The Committee considered management's judgement, that notwithstanding the regulatory and legislative commitments to net zero in the jurisdictions that we operate in, that there will be a role for our gas networks beyond 2050 in a range of possible scenarios and that nothing at present suggested the asset lives should be shortened at this point. The Committee concurred with management, that consistent with the prior year and in light of the evolving legislative developments and increasing investor attention, additional disclosures should be made in the notes to the financial statements, namely, disclosure of a key judgement in relation to the impact of changes in legislation, disclosure of the useful economic lives of gas assets as a key estimate and appropriate sensitivity analysis on the depreciation charge were shorter asset lives presumed.

Fair, balanced and understandable

It is vital that our financial statements are fair, balanced and understandable. We also place priority on making sure the information provided is necessary for shareholders to assess the Group's position, performance, outlook and strategy. The Committee undertook a full and formal review of the content in the 2020/21 Annual Report and Accounts and recommended the approval of the half- and full-year financial statements and Annual Report and Accounts to the Board. The Company's fair, balanced and understandable statement can be found on page 86.

1. Senior leadership and core reporting team involved throughout the process, including regular steering group meetings of key stakeholders.
2. Clear guidance and instruction to all contributors.
3. Monitoring of regulatory reporting requirements throughout each draft with regard to:
   - The FRC end-of-year letter to CEOs, CFOs and Audit Committee Chairs in November 2020; and
   - FRC's COVID-19 guidance for companies.
4. Validation of management's representations to Deloitte.

   Review and approval of management's assessment of the risk of misstatement in financial reporting.
5. Thorough process of review, evaluation and verification of the information provided by each business unit and contributor, including APMs and RPMs to ensure accuracy of information presented in the 2020/21 Annual Report and Accounts.

   Committee consider and challenge as appropriate.
6. Engagement with the Chair of the Committee who reviews drafts at regular intervals providing comments.

   Committee oversight of the quality and integrity of the Group's financial reporting and accounting policies and practices.

   Committee recommend to the Board.

Key matters considered by the Committee

The key matters considered by the Committee during the course of the year ended 31 March 2021 are set out below:

Matter considered	Factors and reasons considered, including financial outcomes
Financial reporting	• In addition to the matters highlighted on page 84 with regards to matters assessed against the Exceptional Items Framework; the useful economic lives of gas assets in the context of climate change and the provisioning of bad and doubtful debts for our retail customers in the US, the Committee also considered the accounting treatment of the RIIO-2 Draft and Final Determinations; the revision of prior year financial statements; the classification of NECO as held for sale as at 31 March 2021 and management's approach to setting the long-term RPI assumption when valuing our UK pensions liabilities following the UK government's announcement of the change in benchmark rate. • Monitored and reviewed the integrity of the Group's financial information and other formal documents relating to its financial performance, including the appropriateness of accounting policies, going concern and viability. • In September 2020 performed a review of the Group's APMs and RPMs, including the underlying methodologies, process and controls. In March 2021 the Committee agreed an amended policy for changes to methodologies and key judgements taken, and management operated that control for the year ended 31 March 2021. • Recommended to the Board the key accounting judgements and key sources of estimation uncertainty related to pensions and environmental provisions, made by management for the 2020/21 half- and full-year financial statements, going concern and other reports filed with the SEC containing financial information. • Approved the Company's response to the FRC following the FRC's review of the Company's Annual Report and Accounts for the year ended 31 March 2020.
WPD Acquisition	• Held an ad-hoc meeting in March 2021 to consider the WPD Acquisition. • Reviewed and approved the scope and output of the financial due diligence undertaken by third-party advisors, including discussing matters relating to cyber risks and mitigations. • Reviewed and approved the financial disclosures in the shareholder circular, including the pro-forma information, historical financial information and working capital statement. The Committee also received the results of Deloitte's assurance. • Reviewed management's FPP Risk Mitigation Plan and Deloitte's FPP commentary report. • The Chair of the Audit Committee also separately met with members of Deloitte, third-party advisors and the Acquisition sponsor team. Following the announcement of the transaction the Chair further met with management to discuss planning for completion and the oversight to be provided by the Audit Committee.
Internal controls	• Received regular updates on progress towards the Group's annual US regulatory attestation. • In September 2020 and March 2021, the Committee received updates on management's structured programme of work to strengthen the maturity of the Group's risk and controls framework. • In September 2020 the UK Chief Financial Officer presented an update on the UK Finance team, the MyFinance implementation and progress of the roll-out.
Risk and viability statement	• Oversaw risk in relation to the COVID-19 pandemic. As detailed on pages 25 – 27, this became a principal risk in March 2020. • Received regular updates on the actions being taken to manage the risk in line with the Group's risk appetite. • Received confirmation from each of the businesses and functions that risks are managed appropriately and continue to consider external influence and matters outside of the Group's control. • Monitored the internal control processes and reviewed and challenged the going concern and viability statements, including testing for 'reasonable worst-case' scenarios. • Satisfied itself that the Board and management's risk management processes were functioning effectively and provided sufficient assurance.
External auditor	• Received an update report at each meeting, including updates on the status of, and results from, the annual audit process. • Considered the external auditor's report on the 2020/21 half- and full-year results. • Considered throughout the year the external audit plan, including monitoring the approach, scope and risk assessments contained within. This included regular updates regarding the adapted ways of working due to COVID-19. • Assessed the effectiveness and independence of Deloitte, as well as continued review and oversight of non-audit services from Deloitte. • Continued to hold private meetings with Deloitte and maintained dialogue throughout the year. • Engaged with Deloitte regularly on the forward planning and succession planning for the lead Audit Partner. • Received an update from Deloitte on the Company's first 'remote audit'. • Recommended the re-appointment of Deloitte as the Company's external auditor to the Board.
Corporate audit	• Received an update on the new Chartered Institute of Internal Auditors (CIIA) Code of Practice, The IA Code, which included a gap analysis review and a proposed implementation plan. • Received regular updates on the 2020/21 audit plan and the significant findings, and approved the audit plan for 2021/22. • Approved the Corporate Audit Charter which had been updated to reflect best practice and recent corporate governance developments. • Approved the appointment of a new Group Head of Internal Audit, following the incumbent taking up the role of Chief Risk Officer.
Compliance, governance and disclosure matters	• Reviewed and approved the updated Terms of Reference for the Committee. • Received updates on ethics and business conduct, including whistleblowing to support the oversight, management, and mitigation of business conduct issues as part of the controls framework. • Discussed the whistleblowing procedures in place and confirmed internal procedures remained effective, noting the communications during the year to employees and planned communications during 2021. • Received bi-annual updates in September 2020 and March 2021 of compliance with external laws and regulations, including any non-compliance issues and steps being taken to improve compliance across the Group. • Received an update on the key elements of the FRC consultation on the future of corporate reporting including the Brydon, CMA and Kingman reviews and the BEIS consultation. • Received an update on the preparations for the Responsible Business Report and the Company's fourth TCFD disclosure. • Recommended approval of the Responsible Business Report to the Board following review of PwC's external assurance report.

Audit Committee continued

Financial Reporting

Going concern and viability

The Committee, in conjunction with the Finance Committee, reviewed the Group's going concern and viability statements (as set out on pages 28 and 29) and the supporting assessment reports prepared by management. In conjunction with the Finance Committee, during 2020/21 there has been continued review of the Group's going concern and viability in line with the ongoing COVID-19 pandemic.

During 2020/21, significant work was undertaken to consider the Company's viability from additional perspectives. In May and June 2020, the Committee reviewed and challenged the viability statement and considered the period of assessment used, considering COVID-19 events and other external factors including benchmarking the approach adopted by other companies. It also considered individual risk testing, cluster testing and the impact of the Company's response to COVID-19 on business plans and financial models. As the pandemic has continued throughout 2020/21, consideration has continued to be given to going concern and after due consideration by the Committee in May 2021 the going concern and viability statement was recommended to the Board for approval. The financial statements are prepared on a going concern basis such that the Company and the Group have adequate resources to remain in operation as per National Grid's Group Treasury Policy.

Statutory reporting framework policy

The Board has ultimate responsibility for effective management of risk for the Group including determining its risk appetite, identifying key strategic and emerging risks, and reviewing the risk management and internal control framework. The Committee, in supporting the Board to assess the effectiveness of risk management and internal control processes, relies on a number of Company-specific internal control mechanisms to support the preparation of the Annual Report and Accounts and the financial reporting process. This includes both the Board and Committees receiving regular management reports to include analysis of results, forecasts and comparisons against last year's results, and assurance from the external auditor.

With the regulatory environment evolving quickly, the Committee is kept fully informed of all new legislation, FRC advice and best practice and the requirements of the UK Corporate Governance Code 2018 and Disclosure and Transparency Rules. During 2020/21, the Committee has been kept up to date with changes to legislation and regulatory reviews and has had oversight of the potential impacts.

The Audit Committee and Board receives, in advance of the full-year results, a periodic SOX report on management's opinion on the effectiveness of internal control over financial reporting. This report concerns the Group-wide programme to comply with the requirements of SOX and is received directly from the Group SOX and Controls team.

In relation to the financial statements, the Company has specific internal mechanisms that govern the financial reporting process and the preparation of the Annual Report and Accounts. The Committee oversees that the Company provides accurate, timely financial results and implements accounting standards and judgements effectively, including in relation to going concern and viability. Our financial processes include a range of system, transactional and management oversight controls. Our businesses prepare detailed monthly management reports that include analysis of their results, along with comparisons to relevant budgets, forecasts and the previous year's results. Quarterly business reviews, attended by the Chief Executive and Chief Financial Officer, supplement these reports. Each month, the Chief Financial Officer presents a consolidated financial report to the Board.

Risk management and internal control

Risk management

Risk management is the responsibility of the Board and is key to achieving our strategic priorities. The system of risk management is established by the Board, sets risk appetite and maintains the system of internal controls to manage risk within the Group. The Audit Committee has delegated responsibility from the Board for the oversight of the Group's system of internal control and risk management systems. This includes policies, compliance, legislation including compliance with SOX and the UK Bribery Act 2010, appropriateness of financial disclosures, procedures, business conduct and internal audit. As part of the framework across the Group, National Grid's values – 'do the right thing', 'find a better way' and 'make it happen' – continue to communicate and promote a culture of integrity across the business. During the year, the Board reviewed the principal risks facing the Group (as set out on pages 24 – 27). The Committee provided oversight and reviewed the risk management process to ensure that processes are in place to manage risk appropriately.

Internal control and risk management effectiveness

We continually monitor the effectiveness of our internal controls and risk management processes to make sure they continue to be effective, robust and remain fit for purpose. Controls are in place to either reduce the likelihood or impact of any risk once it has occurred. Following the review over the year the Committee recommended to the Board that the processes had the correct authority, expertise and independence and provided sufficient assurance to the Company.

This review includes financial, operational and compliance controls. The Committee also monitors and addresses any business conduct issues or compliance issues. The Certificate of Assurance (CoA) process operates via a cascade system and takes place annually in support of the Company's full-year results.

During the year the Company internally appointed a Chief Risk Officer to lead on the Group's risk management processes. Corporate Audit also supports the Group's risk management and internal controls processes. They deliver an independent and objective approach to evaluate and push forward processes.

The Global Head of Audit has responsibility for the internal audit function, attends all Committee meetings and has access to the Committee Chair as necessary. The appointment of the Global Head of Audit is a matter for the Audit Committee. The Committee received regular updates from the Chief Financial Officer on the process and approved the appointment in May 2021.

At each of the Committee's meetings, progress of the Internal Audit process is reviewed including significant outstanding actions. The Committee notes timelines and where actions are overdue, these are challenged by the Committee. Corporate Audit is responsible for developing the Audit Plan including engaging in major change programmes across the business. The Committee approved the review of the Corporate Audit Charter in November 2020 following agreement from the Safety, Environment and Health Committee. The Committee also approved the plan for the next Internal Quality Assessment to take place in 2021/22 as a further control that Corporate Audit is operating effectively.

Fair, balanced and understandable

The Committee was satisfied that the Annual Report and Accounts, taken as a whole, is fair, balanced and understandable and provides the necessary information for shareholders to assess the Company's position and performance, business model and strategy. This was recommended to the Board at its meeting in May 2021. For more information on the assessment of fair, balanced and understandable, see page 84.

External audit

The Committee is responsible for overseeing the relationship with the external auditor. Liz Hewitt meets with the external auditor prior to each meeting and outside the meeting cycle on a regular basis.

- Deloitte is the external auditor to the Company.
- Appointed in 2017 following a formal tender process.
- Reappointed at the 2020 AGM for the year ended 31 March 2021.
- Audit Committee was authorised by shareholders to set Deloitte's remuneration at the 2020 AGM.
- Current lead Audit Partner is Doug King and 2020/21 was the fourth year of his term.

Under the independence requirements, 2021/22 will be the last year where Doug King, Lead Audit Partner, oversees the statutory audit. The Committee is working closely with Deloitte and Doug King, to put in place a clear rotation plan for his successor.

Following consideration of the auditor's independence and objectivity, the audit quality and the auditor's performance, the Committee was satisfied with the effectiveness, independence and objectivity of Deloitte and recommended to the Board its reappointment for the year ended 31 March 2021.

A resolution to reappoint Deloitte and give authority to the Audit Committee to determine their remuneration will be submitted to shareholders at the 2021 AGM. The Committee anticipates that the next competitive tender will be conducted no later than 2026 in accordance with current regulation that requires a tender every 10 years.

Effectiveness, quality and performance

As part of the Committee's responsibilities, consideration is regularly given to the effectiveness of the external auditor to verify that the quality, challenge, and output of the external audit process is sufficient. Throughout the year the Committee also looks at the quality of the auditor's reports and considers its response to accounting, financial control and audit issues as they arise. To maintain high levels of quality the Committee review and challenge where appropriate the external audit plan prior to approval.

The Committee also regularly engages and receives the views of senior management and members of the finance team in forming conclusions on auditor effectiveness. The Committee also meets with Deloitte at least twice a year without management present, providing the external auditor with the opportunity to raise any matters in confidence and have an opportunity for open dialogue. This meeting also gives the Committee a chance to monitor the performance of the lead Audit Partner both inside and outside of Committee meetings.

During the year, the Committee:

- reviewed the quality of audit planning including approach, scope, progress and level of fees;
- reviewed the outcome of recommendations from the Deloitte Management Letter in 2019/20;
- received the Deloitte Management Letter for 2020/21;
- held private meetings with Deloitte where management was not present; and
- confirmed that the external audit process by Deloitte had been delivered effectively.

Auditor independence and objectivity

The independence of the external auditor is essential to the provision of an objective opinion on the true and fair view presented in the financial statements.

The Committee considered the safeguards in place, including the annual review by Corporate Audit, to assess the external auditor's independence. The external auditor reported to the Committee in May 2021 that it had considered its independence in relation to the audit and confirmed that it complies with UK regulatory and professional requirements, SEC regulations and Public Company Accounting Oversight Board (PCAOB) standards and that its objectivity is not compromised. The Committee took this into account when considering the external auditor's independence and concluded that Deloitte continued to be independent for the purposes of the external audit and confirmed that this recommendation was free from third-party influence and restrictive contractual clauses.

Non-audit services

In line with the FRC's Ethical Standard and to maintain the external auditor's objectivity and independence, we have a policy governing Deloitte's provision of non-audit services.

The cap on the total fees that may be paid to the external auditor for non-audit services in any given year is 70% of the average audit fees paid in the last three financial years.

The provision of any non-audit service by the external auditor requires prior approval, with the exception of pre-approved services where we believe there is no threat to the auditor's independence and objectivity, the service has been reviewed by the Chief Financial Officer, and where fees do not exceed £50,000. These services are limited to:

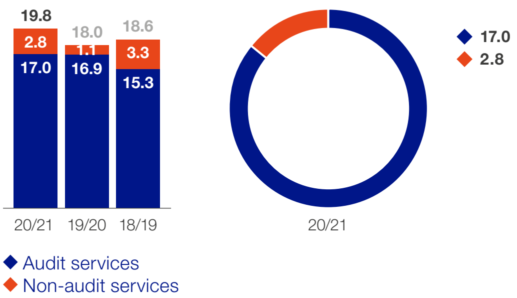
- audit, review or attest services. These are services that generally only the external auditor can provide, in connection with statutory and regulatory filings. They include comfort letters, statutory audits, attest services, consents and assistance with review of filing documents; and
- other areas, such as provision of access to technical publications.

Management present a list of all non-audit work requests to the Committee to ensure the Committee is monitoring all non-audit services provided. Non-audit service approvals during 2020/21 principally related to assurance work performed on the Class 1 Circular for the WPD Acquisition and for comfort letters issued in support of debt issuances.

External auditor fees

The amounts payable to the external auditor, Deloitte, in the past two years were:

Audit and non-audit services (£m)

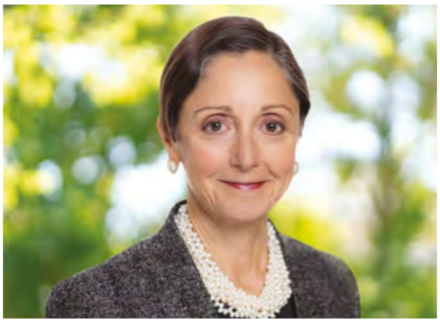


Total billed non-audit services provided by Deloitte during the year ended 31 March 2021 were £2.8 million, representing 14% of total audit and non-audit fees. In 2019/20, non-audit services totalled £1.1 million (7% of total audit and non-audit fees).

Further information on the fees paid to Deloitte for audit, audit-related and other services is provided in note 4 to the financial statements on page 145.

Total audit and non-audit fees include the statutory fee and fees paid to Deloitte for other services that the external auditor is required to perform, such as regulatory audits and SOX attestation. Non-audit fees represent all non-statutory services provided by Deloitte.

Finance Committee



Therese Esperdy
Committee Chair

Key areas of focus in 2020/21:

- Oversight and monitoring of COVID-19 market, financial and balance sheet impacts including scenario planning;
- Financing strategy across the portfolio including updated dividend policy and credit rating strategy – taking account of the impact of RIIO-2 and consideration of strategic opportunities;
- Review of management of financial risk against the Company's financial risk appetite;
- Financing of the WPD Acquisition;
- Green Financing Framework;
- Insurance risk appetite and renewal strategy; and
- Pensions de-risking transactions.

Key areas of focus in 2021/22:

- Continued oversight of market, financial and balance sheet impacts of COVID-19;
- Financial implications of RIIO-2 and US rate case settlements;
- Completion of the WPD Acquisition, sale of NECO and commencement of process to sell majority stake in National Grid Gas plc;
- Bond issuance;
- Implications of proposed changes to UK and US tax legislation;
- Review of management of financial risk against the Company's financial risk appetite; and
- Continued focus on insurance renewal strategy, taking account of the hardening market.

Review of the year

The Committee met on four scheduled occasions during the year to undertake its responsibility of monitoring the financial risk of the Group, focusing on key areas such as treasury, tax, pensions, insurance, investments and commodities. The Committee also convened for two additional meetings in April and May 2020 to discuss the COVID-19 strategic response, financial scenarios and going concern in relation to the delayed results announcement. There was one further ad-hoc meeting in December 2020 to discuss the Company's financing strategy to accompany the portfolio repositioning of the Group.

An area of key focus for the Committee during the year has been on any potential COVID-19 impact on the Company, considering scenarios and risk mitigation. The Committee has kept any possible impact on the Company's going concern under review, considering cash flow outcomes, undrawn borrowing facilities, long-term debt markets, and short-term cash positioning. The Committee will continue to receive regular updates on these areas as the pandemic continues.

Alongside reacting to the evolving pandemic, key focus in the year was given to Ofgem's Final Determinations in relation to RIIO-2 and the Company's financing strategy across the portfolio. This included oversight of the impact on National Grid's credit ratings, the future dividend policy and other potential financial risks such as pension implications.

Throughout the year the Committee received regular updates on the credit rating outlook of the Group, noting the rating agencies' determinations and subsequent rating downgrade linked to the regulatory determinations within the Group in the UK and US.

The Committee also reviewed the financing strategy to enable the portfolio repositioning of the Group, taking account of the Group's successful bid to acquire WPD from PPL and its related bridge financing and the agreed sale of NECO to PPL, both subject to certain regulatory approvals, and the intention to commence a process later this year to sell a majority stake in National Grid Gas plc.

Despite the restrictions on in-person meetings, caused by the pandemic, the Committee was pleased to be able to continue its workforce engagement. In December 2020, the Committee members hosted a virtual informal question and answer session with colleagues from the Tax, Pensions, Treasury and Insurance teams from both the UK and US. This was a key part of the workforce engagement detailed on page 79 and has enhanced the information flow between the Committee and colleagues. We plan to make these sessions regular events alongside the Committee calendar.

Treasury

The Committee has the responsibility for providing oversight of management's decision-making and execution of financial risk. In November, the Committee reviewed the Company's management of the Group's financial risk appetite. This review also took the opportunity to consider how risk appetite had changed as a result of the COVID-19 pandemic.

During the year, the Committee has had oversight of the potential market impacts and outcomes of Brexit and the US Election. Following the outcomes of both, the Committee was updated on the macro-economic events noting minimal impact. In January 2021 the Committee also received an update on the Treasury management system project, the implementation of a new automated and efficient end-to-end process designed to support business efficiencies, which is expected to go live at the start of 2022/23.

The Committee received regular updates from management on the execution of new bonds during the year, recognising that bond markets remained functioning as normal. The Committee was pleased to see the issuances in September 2020 and January 2021 of National Grid plc's first and second senior bond issue since 2011.

Following the launch of the Green Financing Framework in November 2019, there were further updates to the Committee in relation to issuances from the Framework, and the Committee was pleased to see the issuance by NGNA of the first ever multi-ECA green loan in April 2020 and the $600 million green bond issued by NIMO in June 2020. The Committee also noted the publication of National Grid's first Green Financing Report that detailed the allocation of the green bonds' proceeds and their environmental impact.

Insurance

The Committee has received regular insurance updates which considered the current insurance market and the impact that COVID-19 has had on the market approach to premiums and the Company's policy coverage. In November 2020 the Committee focused on the insurance risk appetite and the insurance renewal strategy for 2021, and approved the approach given the hardening market.

The Committee was pleased to receive an update from the Company's insurance brokers on cyber insurance at its January 2021 meeting.

Tax

The Committee continued to monitor any tax impacts on the Company throughout the year. In November 2020 as part of a wider deep dive of Brexit preparedness the Committee noted the impact of Brexit from a tax perspective ahead of the UK's exit from the EU on 31 December 2020. Following the US Election results an update was also received considering any potential impact on the Company's tax position.

Pensions

The Committee remains committed to supporting the long-term strategy of the Company to reduce the level of risk within its pension arrangements, and significant progress has been made in recent years. In April 2020 the Committee considered the Company's UK and US pension arrangements and discussed any impact of COVID-19 on pension schemes. In addition, external advisors presented to the Committee on the US pension landscape, considering ESG in relation to the investment strategy for UK and US pension arrangements.

In November 2020, the Committee reviewed further plans to de-risk the Company's pension arrangements and approved a proposal for the National Grid UK Pension Scheme to enter into a further buy-in arrangement with Rothesay Life, covering £800 million of pension liabilities.

Looking forward

As the global COVID-19 pandemic continues to evolve, the Committee will remain focused on ensuring the Company is effectively managing financial risk while monitoring the Company's response to external regulatory, political and economic impacts, as appropriate.

Thérèse Esperdy

Therese Esperdy
Committee Chair

Safety, Environment and Health Committee

Paul Golby
Committee Chair until 1 April 2021

Key areas of focus in 2020/21:

- The impact of COVID-19, including employee health and wellbeing;
- Safety;
- Gas safety and reliability;
- Liquefied Natural Gas (LNG) and Compressed Natural Gas (CNG); and
- Sustainability and climate change.

Key areas of focus in 2021/22:

- The impact of COVID-19, including employee health;
- Gas safety and reliability;
- Group safety performance and safety culture;
- Sustainability and climate change;
- SEH risks and mitigation; and
- Monitor the potential impacts on SEH in relation to the integration of WPD.

Further reading
For more information on the Company's work on Task Force on Climate-related Financial Disclosures (TCFD) requirements see pages 61 – 66.

Review of the year

The Committee met four times during the year to undertake its oversight responsibilities reviewing the strategies, policies, risk exposure, targets and performance of the Company in relation to safety, environment, health and wellbeing.

Employee health and wellbeing and the impacts of COVID-19

The impact of the COVID-19 pandemic on the health and wellbeing of our workforce has been a significant concern for the Committee during the year. The Committee has monitored the approach taken by the Company to pro-actively manage this risk, including the introduction of lateral flow testing; COVID-19 secure workplaces; and the sequestering of Control Room personnel on site contributing to the effective mitigation of COVID-19 transmission and infection risk amongst our people.

In January 2021, the Committee reviewed the Company's health and wellbeing strategy in relation to COVID-19. As a consequence of the move to working from home for the majority of our office-based staff, an increased focus has been given to mental health; chronic disease; and occupational illnesses. New risk areas were identified including continued resilience as well as fatigue.

The Committee is acutely aware of the potential mental health implications of the pandemic and has been pleased with the extent of work being undertaken by the Company in this area, including suicide awareness and mental health crisis response training; developing people management skills and training to spot early signs of mental health issues; Employee Assistance Programme referrals in the UK; and onsite trauma counselling sessions in the US were also closely monitored.

The Committee will continue to exercise oversight in this area to ensure that the Company's strategy in response to COVID-19 remains appropriate.

Safety

The Company's annual safety survey results revealed an improvement within each business area this year, demonstrating the continued progress being made. The survey results highlighted key themes and areas to develop and progress further, particularly around safety leadership and simplification. These themes along with a detailed action plan will be monitored by the Committee as the Company works towards its benchmark target of achieving a proactive safety culture. With the acquisition of WPD and integration into the Group, the Committee will also monitor any potential safety, environmental or health-related impacts from the acquisition and the related transactions as part of its regular reporting as the Company works to ensure cultural alignment and mitigate any SEH risks related to organisational change.

The Committee was pleased to see that the Company maintained its world-class benchmark performance with an injury frequency rate of 0.1 during the year. Despite the strong performance of the Company and the extensive work done to ensure the safety and wellbeing of all our workforce, in November 2020 the Committee was saddened to learn the tragic news that a contractor working on behalf of the Company suffered a fatal injury while working at one of the Company's facilities in New York. An investigation was launched and in January 2021 the Committee reviewed the final report. Although none of the contributing factors or corrective actions identified in the report were attributable to National Grid, the processes and procedures for contractor monitoring were reviewed, resulting in further assurance checks being developed.

Gas safety and reliability

Gas safety and reliability in the US remained a priority this year. The Committee was satisfied with the progress made and was pleased to see improvement across the areas identified for focus in January 2020. There had however been challenges to the rate of progress in certain areas due to COVID-19, in particular around backlogs, which had impacted the ability of the Company to complete work requiring entry to customers' homes. Risks associated with backlogs were being mitigated, and the Committee will continue to monitor progress in this area.

Liquefied Natural Gas (LNG) and Compressed Natural Gas (CNG)

During the year, the Committee also received updates on the Company's risk assessment associated with LNG and CNG assets. An update was provided on additional LNG site-specific studies and the Committee discussed the findings and noted the updated LNG investment plan. The Committee will continue to review this subject on an annual basis.

Sustainability and climate change

Climate change and sustainability remain a key focus and the Committee was hugely supportive of the introduction of climate change as a new principal risk to the Company's risk register as well as the Company becoming a principal partner of the COP26 summit in the UK.
The Committee receives reports on this area annually including the Company's sustainability strategy and its greenhouse gas emissions performance. Last year the Company publicly committed to reducing its Group Scope 1 and 2 greenhouse gas (GHG) emissions to net zero by 2050, with ambitious interim targets to reduce its direct emissions by 80% by 2030 and 90% by 2040. The Committee has been pleased to see that the Company has surpassed its 2020 target with a 68% decrease in Scope 1 and 2 GHG emissions from, a 1990 baseline, and is on track to meet both its interim and 2050 targets. The Committee discussed and challenged the timeline of the targets and the commitment in the Responsible Business Charter to reduce Scope 3 GHG emissions of the gas the Company sells to customers and will continue to monitor and challenge the progress being made in relation to net zero.

Looking forward

I will be stepping down from the Board at the conclusion of the 2021 AGM and this is therefore my last report as Chair of the Committee. I am encouraged by the progress made and delighted that Earl Shipp has been appointed to succeed me as Chair of the Committee with effect from 1 April 2021.
I am confident that his significant experience will leave him well placed to lead the Committee into the future.

Paul Golby
Committee Chair

Nominations Committee

Paula Rosput Reynolds
Committee Chair and Board Chair Designate

Key areas of focus in 2020/21:
- Chair succession and onboarding;
- Succession planning and leadership changes; and
- Board and Committee composition.

Key areas of focus in 2021/22:
- Board Committee governance structure and composition;
- Diversity policy; and
- Senior leadership succession.

This is my first report as Nominations Committee Chair, following my appointment to the Board in January 2021. Since the Committee met four times prior to my arrival, this report covers, in part, the work undertaken under the chairmanship of Sir Peter Gershon. In those meetings, the Committee focused on the appointment of a new Group General Counsel & Company Secretary, executive succession, and Board composition. Since Sir Peter's nine years as Board Chair elapsed during 2021, our Senior Independent Director, Mark Williamson, led the search process for Sir Peter's replacement, a process in which all Directors participated.

Directors' tenure

Sir Peter generously offered me chairmanship of this committee immediately upon my induction. He noted that there were several Directors who were at or near the end of nine years of service and, in line with the UK Corporate Governance Code, they were due to retire. I would have the responsibility and opportunity to refresh the Board, even as I faced the loss of significant knowledge and wisdom with these impending retirements. Sir Peter thus gave me a free hand to work with my colleagues to reconsider the composition of the Board.

COVID-19 has debunked that myth under which we have all operated – namely, that it's essential to meet in person to conduct corporate business. My own appointment to the National Grid Board is emblematic of the fact companies can make leadership changes without rounds of face-to-face meetings. Nevertheless, while individuals may pledge to remain together in cyberspace, the virtual world is not the ideal place to cultivate relationships that are intended to last many years. Thus, to give proper time to identify Board members who can help position National Grid to be at the heart of the energy transition, I've asked those Directors who are at or nearing the ends of the terms to be somewhat flexible about their departure dates. Last year, we reported that Paul Golby would remain on the Board for a limited extension beyond 1 February 2021. Paul, whose deep operating experience and wisdom is truly irreplaceable, has kindly agreed to stay on the Board for several additional months to ease my transition; he will step down at the upcoming AGM. Similarly, Mark Williamson and Jonathan Dawson, both of whom will reach their nine years of service within the upcoming financial year, have agreed to serve until their replacements are appointed.

Board refreshment

It has become standard practice for nominations committees to conduct 'deep dives' into the balance of skills and experience across the Board and its Committees. In January, our Committee considered areas of strength, current gaps and any potential areas of weakness. Having had a robust discussion, we collectively decided that, for the moment, we would not seek new directors using narrow definitions such as 'financial expert' or 'cyber security expert'. While these are important skills, our first priority is to identify a diversity of seasoned and respected leaders with strong commercial skills, whose experience is born of challenging situations, who have led in companies with strong values, and who are deeply engaged in the world at large. The Board is actively in the process of meeting candidates; as I assume the role of Chair of National Grid, I look forward to announcing appointments of individuals who will enrich the deliberations of the Board in the future. Rest assured that we will monitor board and committee effectiveness and effectiveness of Directors on an ongoing basis. As the Company repositions its business model to prosper in the net zero world, we must be mindful that the Board will need to evolve as National Grid's needs change.

Sir Peter commissioned one last Board effectiveness review early in 2021. The results suggest that there are improvements that can be made to our governance processes – among them, making the Board's processes fit for a world in which decisions must be taken with greater urgency and where large amounts of data must be quickly assimilated and presented incisively. I have asked our General Counsel & Company Secretary, Justine Campbell, to undertake a full review of the appropriateness of the Board Committee structure, Committee Terms of Reference, and overall effectiveness, with the intention of refreshing elements of how the Board operates in the upcoming financial year.

Senior succession planning and leadership changes

The Committee has continued to deepen its understanding of executive talent requirements and the capabilities needed to ensure the effectiveness in driving our culture transformation forward (see page 78 for further information). Attention has focused on the process used to support our succession planning and talent decisions, including the talent bench strength of our senior leadership team; the performance of the senior leadership team; and the risk profile across talent in relation to the likelihood of vacancies and succession options. Succession planning is like painting the Forth Bridge; it's never completed. Thus we will be continuing this work in a meaningful way in the times ahead, and ensuring that the lens of diversity figures prominently in the workforce of the future.

During the course of the year, the Committee affirmed the appointment of Justine Campbell as Group General Counsel & Company Secretary and the appointment of Cordi O'Hara, who has served as Chief Operating Officer of US Gas to the role of President of National Grid Ventures. Both individuals joined the Group Executive Committee. Barney Wyld stepped down as a member of the Group Executive Committee in August 2020.

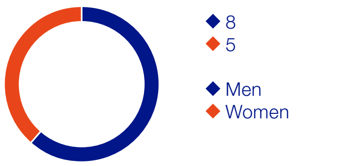
Board Diversity Policy and objectives

National Grid remains committed to supporting diversity and inclusion throughout our organisation and our policy applies to the Board, Group Executive Committee and direct reports to the Group Executive Committee as well. In April 2021, the Committee refreshed our diversity objectives to align with the Company's Responsible Business Charter, which had been published in October 2020. But more broadly, we are at a crossroads in society at large where the long-postponed demands for social and economic justice must be addressed. Thus, a further detailed review of the Board Diversity Policy and objectives will take place later in the year and we will redouble our efforts to be more representative of and responsive to the world of tomorrow.

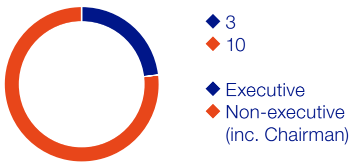
Paula Rosput Reynolds
Committee Chair and Board Chair Designate

Our Board diversity

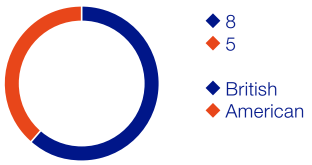
Board gender



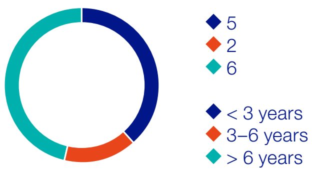
Executive and Non-executive Directors



Board members by nationality



Tenure



Refreshed Diversity Policy objectives – progress update
The Nominations Committee approved the refreshment of the two existing objectives and the addition of an objective to align with the Company's Responsible Business Charter.

Objectives	Progress
The Board aspires to meet and ultimately exceed the target of 33% of Board and the CEO's direct report positions, to be held by women.	There are currently five female Directors on the Board resulting in 38.5% women on the Board. We currently have 51.9% female direct reports to the CEO.
The Board aspires to meet and ultimately exceed the Parker Review target for FTSE 100 boards to have at least one Director from a non-white ethnic minority by 2021.	We currently have one Director from a non-white ethnic minority on the Board and we aspire to exceed this target.
The Board aspires to achieve 50% diversity* on the Board**.	We currently have 46.2% diversity on the Board.

* Diversity of the Board is defined, in this context, as females and non-white ethnic minorities.
** This new objective was approved at the April 2021 Nominations Committee.

As set out in the Policy:
- all Board appointments and succession plans are made on merit and objective criteria, in the context of the skills and experience that are needed for the Board to be effective and to guard against 'group think';
- we will only engage executive search firms who have signed up to the UK Voluntary Code of Conduct on Gender Diversity; and
- we will continue to make key diversity data, both about the Board and our wider employee population, available in the Annual Report and Accounts.

We will continue to review our progress against the Policy annually and report on progress against our objectives (as set out above) in the Annual Report and Accounts.

Examples of the initiatives to support inclusion and diversity throughout our Company are set out on page 59.

Appointment process and talent pipeline

When considering the recruitment of new directors, the Committee adopts a formal and transparent procedure which takes into account the skills, knowledge and level of experience required as well as diversity. The Committee recognises the importance for the Board to anticipate and prepare for the future and to ensure that the skills, experience, knowledge and perspectives of individuals reflect the changing demands of the business.

In January 2020, the Committee discussed succession planning for a new Group General Counsel & Company Secretary to succeed Alison Kay when she stepped down in January 2021. A detailed role specification was formulated, which considered the experience and technical knowledge required for the position. A list of potential candidates from diverse backgrounds was produced which also included internal candidates, who would be benchmarked against the candidates from the external search. Having been interviewed by a number of Non-executive Directors, the Committee agreed the preferred candidate for recommendation to the Board.

We have a strong talent pipeline, which considers the core competencies and capabilities for potential future leaders, with many high-performing individuals. A talent grid was developed which enabled the Committee to differentiate the performance and potential of the talent pipeline within the Company, including strengths and areas for development. The Group Executive Committee continues to meet regularly to discuss the succession pipeline and health of the talent pool further down the organisation.

Mark Williamson
Senior Independent Director

Chair succession

On 30 January 2020, we announced that after nearly nine years at the Company, Sir Peter Gershon had informed the Board of his intention to step down as Chair and that the Board had started the process to find a successor. As we reported last year, the Committee determined that it was in the Company's best interests for Sir Peter to stay beyond the nine-year term identified in the Code in order to maintain continuity of knowledge and experience during the conclusion of the RIIO-2 process.

The Committee developed and agreed a job specification for the role of Chair which included key leadership characteristics, experience in the energy sector and the extensive knowledge required to lead the Board on both UK and US issues. Russell Reynolds, who do not have any other connection with the Company or individual Directors, were appointed to support the recruitment of this role in November 2019. As Senior Independent Director, I led the selection process for the role.

January 2020
The Committee reviewed the longlist of 51 potential candidates, and it was requested that Russell Reynolds broaden the candidate pool. Following feedback from the meeting, John Pettigrew and I met informally with five potential candidates, to gauge the appetite for the role, likely cultural fit, experience and location/availability considerations. The Committee agreed that a sub-group of the Committee members and attendees made up of John Pettigrew, Earl Shipp, Liz Hewitt, Therese Esperdy, Jonathan Dawson and I would form the appointment panel.

July 2020
The panel interviewed the shortlisted candidates throughout the summer months of 2020. In July 2020, the panel recommended three candidates who were taken forward to meet with other members of the Board.

September 2020
Following recommendation from the Committee, the Board approved the appointment of Paula Rosput Reynolds as a Non-executive Director and Chair Designate with effect from 1 January 2021. The Board was pleased to welcome Paula, who brings a wealth of Board-level experience leading global companies in the energy and financial sectors. Her experience within international and US companies and insight into strategic and regulatory issues will be an asset to the Company.

Paula met the independence requirements as set out in the 2018 UK Corporate Governance Code on appointment. In accordance with our external appointment policy, a comprehensive conflicts check was carried out and the Board was satisfied that any potential conflicts, particularly in relation to Paula's appointment at BP, would be manageable and not material. The Board noted that Paula would step down from her role as Non-executive Director at BAE Systems plc on 31 December 2020.

Sir Peter stepped down as Chair of the Nominations Committee with effect from 1 January 2021 and Paula was appointed as Chair of the Committee with effect from the same date. Sir Peter will step down as Chair of the Board and Non-executive Director with effect from 31 May 2021.

Directors' Remuneration Report

Annual statement from the Remuneration Committee Chair

Jonathan Dawson
Committee Chair

Key areas of focus in 2020/21:

- Items related to the appointment of the new Board Chair and Group Executive Committee members;
- Impact of evolving corporate governance standards, including pension arrangement for existing UK-based Executive Directors; and
- Impact of RIIO-2 determinations.

Key area of focus in 2021/22:

- New remuneration policy with focus on latest corporate governance developments and shareholder expectations.

At National Grid's 2020 AGM our Directors' Remuneration Report received 96.92% votes in favour. The Remuneration Committee and the whole Board are grateful to shareholders for their support in respect of our approach to remuneration. As a company, our aim is to ensure transparency with our shareholders and all stakeholders in what we do, particularly with regard to governance and remuneration. The Committee fully recognises the central importance of these areas for National Grid's reputation, and the strong interest of shareholders in our standards and performance. As with last year, we are not seeking approval of a new policy, although through the annual advisory vote we are seeking your support for our implementation of the policy during 2020/21. Our original intention had been to seek approval for a new policy at this AGM but, having reviewed our policy last autumn, we concluded that it remained fit for purpose for its final, third year. We also concluded that we could take the opportunity of the third year to undertake a comprehensive review of our policy to enable us to take account of:

- the impact of RIIO-2 on corporate returns and profitability;
- the extensive business portfolio reshaping that was announced in March and approved by shareholders in a General Meeting held in April;
- the latest developments in investors' thinking around appropriate incentive structures; and
- how best to incorporate appropriate environmental, social and governance (ESG) aspects in our arrangements.

We will therefore be working over the course of this year on our proposals for the next remuneration policy. We will consult with our leading institutional investors towards the end of 2021 and during the first quarter of 2022 and we will put our proposals formally to shareholders at the Company's AGM in July 2022.

The Board continues to engage with the workforce on a variety of topics including remuneration (more details on the 'Full Board Employee Voice' approach that includes our virtual colleague engagement sessions can be found on page 79).

The LTPP rules expire in July 2021 and we are seeking shareholder approval at the 2021 AGM for the new LTPP rules. The new rules are substantially in line with the existing rules, updated to reflect developments in market practice and good governance especially around malus and clawback provisions.

Review of decisions made during the year

Overview

National Grid has again had a successful year in terms of both financial performance and strategic development. Group underlying Profit before Tax was £2,407 million, underlying Earnings per Share (EPS) was 54.2 pence, and Group Return on Equity (RoE) was 10.6%. Despite COVID-19's far-reaching and deep impact across the whole world, National Grid has delivered good operational performance and has initiated a number of major strategic transactions.

As announced in March and subsequently approved by shareholders in April this year National Grid will be acquiring WPD, the UK's largest electricity distribution business, as well as selling our gas and electric businesses in Rhode Island in the US and a majority stake in our UK-based Gas Transmission business. Taken together, these transactions are a significant evolution of the Group's strategy and in the UK a major pivot towards electricity. Whilst the transactions and strategic pivot are key elements in National Grid's future growth and prospects, they have not had any impact on the Group's financial performance in respect of the past year.

Annual Performance Plan (APP)

The Group financial measures for the APP (impacting the CEO and CFO) were 78.9% of maximum and the financial outcome for the Executive Director, UK was 80.1%. APP outcomes are determined by financial results, with technical adjustments made, including, in respect of currency adjustments, unbudgeted pension costs, scrip dividend dilution and storm damage repair costs, in line with past practice. A discretionary adjustment has been applied to Group EPS to exclude the operating profit benefit in NGV linked to lower costs due to COVID-19, reducing the outcome by 0.5 pence.

The performance against individual objectives resulted in outturns ranging from 78.0% to 94.0% of the maximum for the individual portion. Although the Board does not agree with Ofgem's decision to charge a penalty for the RIIO-2 business plans, the Remuneration Committee has decided to reduce the outcomes of the individual component of the APP leading to an adjusted outturn range of 68.0% to 84.0%.

Taking both financial and individual performance together, the overall APP awards to Executive Directors on the Board at 31 March 2021 range from 76.5% to 80.4% of the maximum award, which amounts to awards of 95.6% to 100.5% of salary. In reaching its overall decisions on the APP, the Committee took account of the broader performance of the Company as described above and ESG considerations, noting in particular that, as in 2019/20, no employees have been furloughed, no compulsory redundancies or pay reductions have been made, especially in the context of COVID-19, and trade union agreements have been honoured.

Looking ahead to 2021/22, we have updated within the framework of the current remuneration policy the components of the APP to focus on financial measures (60%), operational/strategic measures (20%) and individual objectives (20%). This compares with the current year's financial and individual weighting of 70% and 30% respectively. The inclusion of the operational/strategic measures is to focus the Group Executive Committee around group-wide non-financial outcomes that are key for the Company, and are leading indicators of sustained performance over the long-term. For 2021/22, these include effectively managing the completion of the WPD transaction and the separation of the RI business to the satisfaction of the Board, and delivering ESG performance that is of strategic importance to National Grid.

Long Term Performance Plan (LTPP)
The performance period for the 2018 LTPP ended on 31 March 2021, with a vesting outcome of 68.0% of the maximum potential (350% of base salary for the CEO and 300% of base salary for other Executive Directors). This outturn was based on our performance measures of Group RoE of 11.3% and Group Value Growth of 12.3% across the three-year period, resulting in outcomes of 36.0% and 100.0% of their maxima, respectively. These outcomes are lower than the actual outcomes of 11.6% and 12.5%, respectively, but the Committee exercised negative discretion in excluding upward adjustments of 30 and 20 basis points to our Group RoE and Group Value Growth respectively, resulting from the revisions described in Note 1F to the consolidated financial statements. As last year, the Group Value Growth outturn includes an element of the value created from the sale of the residual interest in the UK Gas Distribution business in 2019 and revised timing of UK tax payments in 2019/20. For the 2018 LTPP award the weighting was split equally between Group RoE and Group Value Growth.

The Committee reviewed whether there were any factors which might cause it to reduce the vesting levels, including compliance with the dividend policy, but concluded after careful consideration that the vesting levels fairly reflected ESG and broader performance factors over the performance period.

As discussed in last year's report, for the in-flight 2019 award the weighting is one-third Group RoE and two-thirds Group Value Growth; for the in-flight 2020 award the weighting is one-sixth Group RoE and five-sixths Group Value Growth. After reviewing the final RIIO-2 regulatory arrangements for the UK, the Committee decided that for the 2021 LTPP award the weighting would revert to half for Group RoE and half for Group Value Growth.

The Committee set the performance range for the 2020 LTPP to reflect the business outlook. As a result, the Group RoE range is 8.25% to 9.75% and the Group Value Growth range is 8.0% to 10.5%. More details on the performance measures are set out on page 106.

Annual salary review
With regard to Executive Directors' annual salaries, save in respect of Andy Agg, the CFO, the Committee has awarded a salary increase of 2.3% which is the increase budget awarded across the UK employee population. Andy Agg was appointed to his role as CFO in January 2019 and, in line with our normal practice he was awarded a base salary that was set significantly below the assessed market rate for the role and with the intention, as stated in last year's report, of increasing his salary progressively toward the assessed market rate, subject to his performance and growth in his new role. The Committee, with input from the CEO, has assessed Andy Agg's performance as strong and that he has continued through the year to make a significant contribution to the Group. A particular focus has been steering the organisation through implications of the COVID-19 pandemic, providing strong support to the business in the agreement of a new UK regulatory framework, as well as coordinating the substantial work associated with the transactions involving WPD, Rhode Island and UK Gas Transmission. As a result, the Committee has awarded him a salary increase of 6.5%. On the basis of the Committee's assessment of the market rate for his role and based on data input from our advisers, the Committee expects, subject again to performance and progress, to make a further and final additional award to Andy Agg next year after which time he will have broadly achieved the assessed market rate.

As already announced, Paula Rosput Reynolds was appointed Chair Designate on 1 January 2021 and will assume the position of Chair from 31 May 2021 following Sir Peter Gershon stepping down from the role. The Committee has set Paula Rosput Reynolds' annual fee at £700,000 without any benefits following a market review and recruitment process, and taking into consideration that she is US-based.

Environmental, Social and Governance measures
Hitherto we have incorporated some individual objectives that are related to ESG, such as delivery of the Responsible Business Charter and progress on emissions reductions. Additionally, we always consider ESG factors generally before making final reward decisions. For example, we reduced the APP payments following a fatality in 2016/17. We concluded that this year there were no circumstances that should result in any adjustment to outturns in respect of ESG considerations.

For 2021/22, we have strengthened our focus on ESG by incorporating group-wide environmental and diversity measures into the APP.

Pension
As reported last year, our previously appointed UK-based Executive Directors agreed to reduce their pension allowance from 30% of base salary to 20% by the end of 2022, without compensation.

Additionally, I wrote last year that we recognised and acknowledged expectations from leading institutional shareholders to the effect that companies were expected to develop a credible plan to align incumbent directors' pension contribution rates with the majority of the wider UK workforce by the end of 2022. The Committee has been thinking carefully about this issue and confirms that all UK-based Executive Directors' pension contribution rates will be reset to 12% with effect from 1 April 2022 thereby ensuring alignment with the rate available to the majority of the UK workforce, notwithstanding executives' current contractual terms of employment.

What is our remuneration policy seeking to achieve?
We are very clear as to our objectives when setting senior executives' pay and incentives. Our aim is to ensure that how we structure remuneration and how we make decisions on annual and long-term reward plans:
- attract and motivate senior executives;
- ensure we pay our senior executives in a way that incentivises stretching financial and operational performance, within the risk appetite set by the Board;
- are fully aligned to the way National Grid earns its returns for shareholders; and
- actively support our strategy, ethics, values and contribution to society in the territories and communities where we operate.

In addition, in order to ensure internal alignment and common purpose, we apply the same broad architecture to the remuneration of our senior management team below the Executive Directors.

How do we achieve this?
1. Heavy weighting towards share-based pay
Nearly three quarters of John Pettigrew's variable pay opportunity is represented by the LTPP. We continue to put a much higher weight on this element compared with the APP to reflect the nature and duration of National Grid's businesses and asset lives. It is important, therefore, that day-to-day operations and longer-term investment decisions are executed in line with this strategy. Longer-term alignment is also reinforced through:
- some 85–87% of Executive Directors' variable pay potential (both annual and long-term) is delivered in National Grid's shares;
- a two-year holding period for any vested LTPP awards is mandatory;
- a very high minimum shareholding requirement is set for senior executives (500% of salary in the case of John Pettigrew – equivalent to some nine times his after-tax salary); and
- a post-employment shareholding is required for all senior executives.

Directors' Remuneration Report continued

Annual statement from the Remuneration Committee Chair continued

This approach has been the basis of our remuneration strategy since 2014 and the Committee considers that its principles ensure an alignment of interest between senior executives' remuneration, how the Company earns its returns, and the longer-term returns to private and institutional shareholders. Senior executives will therefore gain if the share price increases and share the consequences of share price falls. Moreover, as a company which distributes significant dividend payments, we also believe our senior management, not just Executive Directors, should view the dividends paid on shares they earn as part of their overall remuneration arising from National Grid, rather than focusing solely on the annual capital value.

We have noted recent governance developments and shareholder expectations that the post-employment shareholding requirement should be at the same level as the in-employment shareholding requirement. We also, however, take account of the fact that our in-employment shareholding requirement is at the top end of market practice with at least 500% of salary for the CEO and 400% for other Executive Directors. We will review this matter as part of our consultation for the Directors' remuneration policy vote in 2022.

2. Variable pay is linked directly to performance
At the heart of our approach to remuneration is a simple premise – reward should be aligned to the financial and operational performance of the Company and to shareholder interests. As set out in the Strategic Report, a number of our financial KPIs directly align to our APP and LTPP rewards. In addition, and as referred to above, non-financial KPIs and wider business performance are also taken into account, and discretion applied if appropriate, when determining an executive's performance against individual objectives and in confirming overall final payouts (APP) and/or vesting outcomes (LTPP). This year we provide greater detail on our wider ESG performance in our Responsible Business Report. In our policy review for the 2022 AGM we will be further considering the role that ESG should play in remuneration.

3. We apply our judgement and discretion as a Committee to assess overall remuneration outcomes
Each year the Committee considers carefully whether to apply discretion when assessing remuneration outcomes for Executive Directors. Before approving any payments under either the APP or LTPP, we reflect on:

- the underlying financial and wider business performance of the Company;
- the wider performance of the Company in terms of its societal contribution, relations with regulators, and its overall reputational standing with all our stakeholders; and
- the performance of each Executive Director and members of the Group Executive Committee against their individual objectives set for them at the start of the year and their demonstration of leadership qualities and our values.

Whilst the underlying financial performance of the Company is a material factor in our assessments, the Committee has shown and will continue to demonstrate a willingness to apply discretion to adjust final payments in the light of all factors that we consider relevant.

In addition to applying discretion to final payment levels, the Committee considers whether there might be any basis for applying malus and/or clawback to awards made and/or payments already received by an individual where subsequent events or factors justify taking such steps.

Fair and appropriate
When making remuneration decisions for the Executive Directors and other senior executives, the Remuneration Committee takes account of the remuneration arrangements and outcomes for the wider workforce, statistical information, such as the CEO pay ratio and gender pay gap data, employee views on executive pay as part of our employee voice process, and our Company values.

This year, the median CEO pay ratio for UK-based employees is 81:1, a change from 86:1 last year. Our Group-wide median ratio was 53:1 last year and is 54:1 this year. The lower Group-wide ratio reflects the higher general level of wages in the US compared with the UK, and especially in the regions of the US where the Company operates. It is also important to recognise some three quarters of our employees are in the US.

In terms of the UK gender pay gap, the mean has reduced from 3.7% to 1.5%, with a small increase in the median from 2.6% to 3.2%. This year, we are also voluntarily disclosing in our Responsible Business Report additional data related to pay gaps. More details can be found in the 'Our Colleagues' section of the Annual Report on page 59 and the Responsible Business Report.

Changes to the Committee
There were no changes to the membership of the Committee during the last financial year.

Developments for 2021/22
The key focus for the year will be the development of a new remuneration policy and associated consultation with our major institutional investors and proxy agencies. The key elements of this review will reflect:

- the impact of RIIO-2 on National Grid's returns and therefore our remuneration structure;
- the implications for remuneration of the strategic transactions referred to earlier;
- evolving requirements of our investors, and society more generally, with regard to ESG performance (taking into account National Grid's trajectory along its publicly stated Responsible Business pathway); and
- National Grid's contribution towards enabling the wider societal evolution towards new and renewable energy sources and networks.

Our proposals will be presented to shareholders at the AGM in 2022.

Conclusion
The Committee has carefully reviewed the performance of the senior executive team during the year and the prior three years to assess whether the level of APP and LTPP payments/vesting were aligned with the Company's performance over the period and concluded that the arrangements set out in this Remuneration Report are a fair reflection of their individual and collective performance. Accordingly, on behalf of the Committee, I commend this Directors' Remuneration Report to you and ask for your support at the Annual General Meeting.

Jonathan Dawson

Jonathan Dawson
Remuneration Committee Chair

At a glance – 2020/21

Our 'At a glance' highlights the performance and remuneration outcomes for our Executive Directors for the year ended 31 March 2021. Further detail is provided in the Statement of implementation of remuneration policy in 2020/21.

Annual Report on remuneration

A comparison of the 2020/21 single total figure of remuneration, with the maximum remuneration if variable pay had vested in full, is set out below for the Executive Directors, Andy Agg, John Pettigrew and Nicola Shaw. Each Executive Director is UK-based.

Total remuneration

Executive Director	Maximum if variable pay vested in full £'000	2020/21 single total figure of remuneration £'000	Split by component (%)			
Andy Agg	2,625	2,122	36.8%	29.1%	29.5%	4.6%
John Pettigrew	6,557	5,071	27.9%	20.4%	44.7%	7.0%
Nicola Shaw	3,231	2,490	29.2%	21.6%	42.6%	6.6%

Key: ◆ Fixed ◆ APP ◆ 2018 LTPP – face value ◆ 2018 LTPP – share appreciation and dividend equivalent values

Notes:

1. For each Executive Director the share price has increased between grant date of the LTPP awards in 2018 and the estimated share price value at vesting, being the three months' average preceding 31 March 2021. Comparing the share price at grant of 837.41p versus the estimated average share price for the period 1 January 2021 to 31 March 2021 of 855.04p, there is an increase of 17.63p (2.1%) per share. This results in an estimated increase in value (net of dividend equivalents) of £14,914 in total for Andy Agg, £54,074 for John Pettigrew, and £25,281 for Nicola Shaw. Overall, the percentage growth in value over the three-year period due to dividend income per share is 13%, and this will increase further subject to a final dividend to be included on the vesting date.

	Key features of remuneration policy (adopted 2019)	Implementation of policy in 2020/21
Salary	• Target broadly mid-market against FTSE 11–40 for UK-based Executive Directors and general industry and energy services companies with similar revenue for US-based Executive Directors.	• The Committee decided to exercise restraint against the background of the COVID-19 pandemic and so no salary increases were made with respect to John Pettigrew and Nicola Shaw; and • Salary increase of 6.5% for Andy Agg (July 2020). This increase was awarded in line with the remuneration policy to move his salary closer to the market rate and given strong individual performance.
Annual Performance Plan (APP)	• Maximum opportunity is 125% of salary; • 50% paid in cash, 50% paid in shares which must be retained until the later of two years and meeting the shareholding requirement; and • Subject to both malus and clawback.	• 70% based on financial measures and 30% based on individual objectives; • Financial measures for CEO and CFO comprise 35% underlying EPS and 35% Group Value Added; • Financial measures for Executive Director, UK, comprise 23.3% UK Underlying Operating Profit, 23.3% UK RoE and 23.3% UK Capex; • Individual objectives cover stakeholder/customer engagement, business and finance strategy including delivery on RIIO-2 regulatory framework and risk management, organisation capability including our workforce/culture agenda and external leadership within the energy sector; and • 2020/21 APP payouts as a percentage of maximum opportunity: 79% for Andy Agg, 80% for John Pettigrew and 76% for Nicola Shaw.
Long Term Performance Plan (LTPP)	• Maximum award level is 350% of salary for CEO and 300% for other Executive Directors; • Vesting is subject to long-term performance conditions over a three-year performance period; • Shares must be retained until the later of two years from vesting and meeting the shareholding requirement; and • Subject to both malus and clawback.	• 2020 LTPP award: 16.67% Group RoE and 83.33% Group Value Growth; and • Overall the 2018 LTPP vested at 68.0% of the maximum and is based on the performance of two equally weighted measures of Group RoE and Group Value Growth achieving 36.0% and 100.0% respectively.
Pension and other benefits	• Eligible to participate in a defined contribution plan (or defined benefit if already a member); • Pensionable pay is salary only in UK; and • Other benefits as appropriate.	• UK cash allowance for John Pettigrew and Nicola Shaw, 26.7% of pensionable pay (reducing to 23.4% on 1 April 2021 and 12% on 1 April 2022) and for Andy Agg, 20% of pensionable pay (reducing to 12% on 1 April 2022); • Other benefits include private medical insurance, life assurance, and for UK-based Executive Directors either a fully expensed car or a cash alternative, and a car and driver when required; and • The Committee agreed in November 2019 that newly appointed UK-based Executive Directors will receive pension contributions of up to 12% of base salary for the Defined Contribution plan (or cash supplement in lieu); this is in line with the level for new joiners across the rest of the UK-based workforce.
Shareholding requirement	• 500% of salary for CEO; • 400% of salary for other Executive Directors; and • Post-employment shareholding requirement of 200% of salary for two years.	• Shareholdings for Andy Agg, John Pettigrew and Nicola Shaw are 209%, 718% and 310% respectively; • John Pettigrew has met his shareholding requirement. Nicola Shaw is expected to meet her shareholding requirement in 2021, after the vesting of her 2018 LTPP award. Andy Agg has not met his shareholding requirement due to a relatively short time in role; and • Andrew Bonfield and Dean Seavers have each met their post-employment shareholding requirement as at 31 March 2021.

Directors' Remuneration Report continued

Directors' remuneration policy – approved by shareholders in 2019

Key aspects of the current Directors' remuneration policy, along with elements particularly applicable to the 2020/21 financial year, are shown on pages 96 – 99 for ease of reference only. The current policy was approved for three years from the date of the 2019 AGM, held on 29 July 2019. A shareholder vote on the remuneration policy is not required in 2021. A copy of the full remuneration policy is available within the 2018/19 Annual Report and Accounts on the Company's investor website (nationalgrid.com/investors).

From time to time, the Committee may consider it appropriate to apply some judgement and discretion in respect of the approved policy. This is highlighted where relevant in the policy, and the use of discretion will always be in the spirit of the approved policy.

Our peer group

The Committee reviews its remuneration policy against appropriate peer groups annually to make sure we remain competitive in the relevant markets. The primary focus for reward market comparisons is the FTSE 11–40 for UK-based Executive Directors and general industry and energy services companies with similar levels of revenue for US-based Executive Directors. These peer groups are considered appropriate for a large, complex, international and predominantly regulated business.

Approved policy tables – Executive Directors

Salary

Purpose and link to business strategy: to attract, motivate and retain high-calibre individuals, while not overpaying.

Operation	Maximum levels	Performance metrics, weighting and time period applicable
Salaries are generally reviewed annually and are targeted broadly at mid-market of our peer group. However, a number of other factors are also taken into account: • business performance and individual contribution; • the individual's skills and experience; • scope of the role, including any changes in responsibility; and • market data, including base pay and total remuneration opportunity in the relevant comparator group.	No prescribed maximum annual increase although increases are generally aligned to salary increases received by other Company employees and to market movement. Increases in excess of this may be made at the Committee's discretion in circumstances such as a significant change in responsibility, progression if more recently appointed in the role and broad alignment to mid-market.	Not applicable.

Benefits

Purpose and link to business strategy: to provide competitive and cost-effective benefits to attract and retain high-calibre individuals.

Operation	Maximum levels	Performance metrics, weighting and time period applicable
Benefits provided include: • company car or a cash alternative (UK only); • use of a car and driver when required; • private medical insurance; • life assurance; • personal accident insurance (UK only); • opportunity to purchase additional benefits (including personal accident insurance for US) under flexible benefits schemes available to all employees; and • opportunity to participate in HMRC (UK) or Internal Revenue Service (US) tax-advantaged all-employee share plans, currently: Sharesave: UK employees may make monthly contributions from net salary for a period of three or five years. The savings can be used to purchase shares at a discounted price, set at the launch of each plan period. Share Incentive Plan (SIP): UK employees may use gross salary to purchase shares. These shares are placed in trust. Employee Stock Purchase Plan (ESPP) (423(b) plan): eligible US employees may purchase ADSs on a monthly basis at a discounted price. Other benefits may be offered at the discretion of the Committee.	The cost of providing benefits will vary from year to year in line with market. Participation in tax-approved all-employee share plans is subject to limits set by the relevant tax authorities from time to time.	Not applicable.

Pension

Purpose and link to business strategy: to reward sustained contribution and assist attraction and retention.

Operation	Maximum levels	Performance metrics, weighting and time period applicable
Externally hired Executive Directors will participate in a Defined Contribution (DC) arrangement. UK-based Executive Directors may alternatively choose to receive cash in lieu. In cases of internal promotion to the Board, the Company will recognise legacy DB pension arrangements of existing employees in both the UK and US where these have been provided under an existing arrangement. In line with market practice, pensionable pay for UK-based Executive Directors includes basic salary only and for US-based Executive Directors it includes basic salary and APP award.	UK DC: annual contributions for new appointments of up to 20% of basic salary. Existing Executive Directors may receive annual contributions of up to 30% of basic salary. Executive Directors may take a full or partial cash supplement in lieu. See footnote below the table. Life assurance of four times basic salary and a dependant's pension of one third of basic salary is provided. Executives with HMRC pension protection may be offered lump sum life assurance only, equal to four times basic salary. UK DB: a pension generally payable from age 60 or 63. DB benefits are subject to capped increases in pensionable salary. No enhancement is provided on promotion to the Board. Funded DB benefits are subject to HMRC maximum allowances and limits. On death in service, a lump sum of four times pensionable salary and dependant's pension of two-thirds of the Executive Directors' pension is provided. DB pension plans were closed to new members by April 2006. US DC: annual contributions of up to 9% of basic salary plus APP award with additional 401(k) plan match of up to 4%. US DB: an Executive Supplemental Retirement Plan provides for an unreduced pension benefit at age 62 (this plan is closed to new participants from 1 January 2015). For retirements at age 62 with 35 years of service, the pension benefit would be approximately two thirds of pensionable salary. DB final average pay plan is subject to capped increases in pensionable pay. Upon death in service, the spouse would receive 50% of the pension benefit (100% if the participant died while an active employee after the age of 55).	Not applicable. None of the current Executive Directors are active members of a defined benefit plan.

Pension footnote: The Remuneration Committee agreed in November 2019 (i.e. after the July 2019 AGM Policy vote) that newly appointed Executive Directors would receive annual contributions of up to 12% of basic salary for the DC pension scheme or cash in lieu. The Remuneration Committee further agreed in November 2020 that all existing Executive Directors would receive 12% of basic salary for the DC scheme or cash in lieu effective from 1 April 2022.

Annual Performance Plan (APP)

Purpose and link to business strategy: to incentivise and reward the achievement of annual financial measures and strategic non-financial measures including the delivery of annual individual objectives and demonstration of our Company leadership qualities and values.

Operation	Maximum levels	Performance metrics, weighting and time period applicable
The APP comprises reward for achievement against financial measures and achievement against individual/strategic objectives. Financial performance measures and targets are normally agreed at the start of each financial year and are aligned with strategic business priorities. Targets are set with reference to the budget. Individual objectives and associated targets are normally agreed also at the start of the year. APP awards are paid in June. 50% of the APP award is paid in shares, which (after any sales to pay associated income tax) must be retained until the shareholding requirement is met, and in any event for two years after receipt. Awards are subject to malus and clawback provisions as set out in the paragraph overleaf.	The maximum award is 125% of basic salary in respect of a financial year.	At least 50% of the APP is based on performance against financial measures. The Committee may use its discretion to set financial measures that it considers appropriate in each financial year and has the flexibility to modify the amount payable, to reflect wider financial and business performance, demonstration of leadership qualities and our values, or to take account of a significant event. The payout levels at threshold, target and stretch performance levels are 0%, 50% and 100%, respectively.

APP footnote: For 2021/22, a portion of the APP will be allocated to strategic non-financial measures which are consistent for all Executive Directors.

Directors' Remuneration Report continued

Directors' remuneration policy – approved by shareholders in 2019 continued

Long Term Performance Plan

Purpose and link to business strategy: to drive long-term business performance, aligning Executive Director incentives to key strategic objectives and shareholder interests over the longer term.

Operation	Maximum levels	Performance metrics, weighting and time period applicable
Awards of shares may be granted each year, with vesting subject to long-term performance conditions. The performance measures have been chosen as the Committee believes they reflect the Executive Directors' creation of long-term value within the business. Targets are set for each award with reference to the business plan. Participants may receive ordinary dividend equivalent shares on vested shares, from the time the award was made, at the discretion of the Committee. Participants must retain vested shares (after any sales to pay tax) until the shareholding requirement is met, and in any event for a further two years after vesting. Awards are subject to malus and clawback provisions as set out in the paragraph below.	The maximum award for the CEO is 350% of salary and it is 300% of salary for the other Executive Directors based on salary at the time of the award.	The performance measures are Group Value Growth and Group RoE for all Executive Directors. For awards made in financial year 2019/20: Group Value Growth measured over three years (2019/20, 2020/21 and 2021/22) and Group RoE measured over two years (2019/20 and 2020/21) such that Group Value Growth represents two thirds and Group RoE represents one third of the total vesting outcome. For awards made in financial year 2020/21: Group Value Growth measured over three years (2020/21, 2021/22 and 2022/23) and Group RoE measured over one year (2020/21) such that Group Value Growth represents five sixths and Group RoE represents one sixth of the total vesting outcome. For awards made in 2017 and 2018 which will vest in 2020 and 2021 respectively, the performance measures were Group Value Growth and Group RoE, equally weighted, for all Executive Directors. All awards have a three-year performance period. For each performance measure, threshold performance will trigger only 20% of the award to vest; 100% will vest if maximum performance is attained. Notwithstanding the level of award achieved against the performance conditions, the Committee may use its discretion to modify the amount vesting to reflect wider financial and business performance and take account of a significant event and/or compliance with the dividend policy.

Malus and clawback

The Committee has discretion to determine whether exceptional circumstances exist which justify whether any or all of an award should be forfeited, even if already paid. Examples of exceptional circumstances include, but are not limited to, material misstatement, misconduct of the participant, a significant environmental, health and safety or customer issue, failure of risk management, and if certain other facts emerge after termination of employment. The Committee also has a prescribed process to follow when determining whether and how to apply this discretion.

Approved policy table – Non-executive Directors (NEDs)

Fees for NEDs

Purpose and link to business strategy: to attract NEDs who have a broad range of experience and skills to oversee the implementation of our strategy.

Operation	Maximum levels	Performance metrics, weighting and time period applicable
NED fees (excluding those of the Chairman) are set by the Group Executive Committee in conjunction with the Chairman. The Chairman's fees are set by the Committee. **Fee structure:** • Chairman fee (all inclusive); • Basic fee, which differs for UK- and US-based NEDs; • Committee chair fee; • Committee membership fee; and • Senior Independent Director fee. No additional fees are paid for membership/chair of the Nominations Committee. Fees are reviewed every year taking into account those in companies of similar scale and complexity. The Chairman is covered by the Company's private medical and personal accident insurance plans, and has the use of a car and driver, when required. NEDs do not participate in incentives, pension or any other benefits. However, they are eligible for reimbursement for all Company-related travel expenses. In instances where these costs are treated by HMRC as taxable benefits, the Company also meets the associated tax cost to the Non-executive Directors through a PAYE settlement agreement with HMRC. NEDs who also sit on National Grid subsidiary boards may receive additional fees related to service on those boards.	There are no prescribed maximum fee levels although fees are generally aligned to salary increases received by other Company employees and market movement for NEDs of companies of similar scale and complexity. The cost of benefits provided to the Chairman is not subject to a predetermined maximum since the purchase cost will vary from year to year.	Not applicable.

Shareholding requirement – in employment

The requirement of Executive Directors to build up and hold a significant value of National Grid shares ensures they share a significant level of risk with shareholders and aims to align their interests. Executive Directors are required to build up and retain shares in the Company. The level of holding required is 500% of salary for the CEO and 400% of salary for the other Executive Directors. Unless the shareholding requirement is met, Executive Directors will not be permitted to sell shares, other than to pay income tax liabilities on shares just vested or in exceptional circumstances approved by the Remuneration Committee.

Shareholding requirement – post employment

The requirement of Executive Directors to continue to hold National Grid shares after leaving ensures they continue to share a risk with shareholders and maintain alignment with shareholders' interests. Executive Directors will be required to hold 200% of base salary calculated at their leave date, or maintain their actual holding percentage if lower, expressed as a number of shares and held for a period of two years. This calculation excludes the value of any awards not yet vested for 'good leavers' that will vest according to the normal schedule and which in any event must be held for a two-year period. The calculation will include recently vested LTPP awards or APP awards paid as shares which are subject to respective two-year holding periods, even after employment. Unless the post-employment shareholding requirement is met, Executive Directors will not be permitted to sell shares, other than to pay income tax liabilities on shares just vested or in exceptional circumstances approved by the Remuneration Committee.

Policy on payment for loss of office

The contracts contain provisions for payment in lieu of notice, at the sole and absolute discretion of the Company. Such contractual payments are limited to payment of salary only for the remainder of the notice period. In the UK, such payments would be phased on a monthly basis, over a period not greater than 12 months, and the Executive Director would be expected to mitigate any losses where employment is taken up during the notice period. In the US, for tax compliance purposes, the policy is to make any payment in lieu of notice as soon as reasonably practicable, and in any event within two and a half months of the later of 31 December and 31 March immediately following the notice date.

In the event of a UK Director's role becoming redundant, statutory compensation would apply and the relevant pension plan rules may result in the early payment of an unreduced pension.

On termination of employment, no APP award would generally be payable. However, the Committee has the discretion to deem an individual to be a 'good leaver', in which case a pro-rata discretionary payment could be paid, based on financial performance (as measured at the end of the financial year) and the achievement of individual objectives during the financial year up to termination. In the UK, the discretionary payment would generally be paid at the normal time. In the US, the payment would be made earlier if required for tax compliance purposes, in which case the Committee would apply discretion to determine an appropriate level of financial performance. Examples of circumstances, while not exhaustive, which could trigger 'good leaver' treatment include redundancy, retirement, illness, injury, disability and death. The Committee will apply discretion to determine if the pro-rata discretionary payment should be made sooner than it would normally be paid, for example, in the case of death.

On termination of employment, outstanding awards under the share plans will be treated in accordance with the relevant plan rules approved by shareholders. Unvested share awards would normally lapse. 'Good leaver' provisions apply at the Committee's discretion and in specified circumstances. Examples of circumstances, while not exhaustive, which could trigger 'good leaver' provisions, include: redundancy, retirement, illness, injury, disability and death, where awards will be released to the departing Executive Director or, in the case of death, to their estate. Long-term share plan awards held by 'good leavers' will normally vest subject to performance measured at the normal vesting date and will be reduced pro-rata for each completed month starting on the date of grant. Such awards would vest at the same time as for other participants, apart from circumstances in which the award recipient has died, in which case the awards vest as soon as practicable (based on a forecast of performance).

At the Committee's discretion, the Company may also agree other payments such as an agreed amount for legal fees associated with the departure of the Executive Director and outplacement support.

No compensation is payable to the Chairman or Non-executive Directors if they are required to stand down or are not re-elected at the AGM.

Service contracts/letters of appointment

In line with our policy, all Executive Directors have service contracts which are terminable by either party with 12 months' notice. Non-executive Directors are subject to letters of appointment. The Chairman's appointment is subject to six months' notice by either party; for other Non-executive Directors, notice is one month. Both Executive Directors and Non-executive Directors are required to be re-elected at each AGM.

External appointments

The Executive Directors may, with the approval of the Board, accept one external appointment as a Non-executive Director of another company and retain any fees received for the appointment. Experience as a board member of another company is considered to be valuable personal development, which in turn is of benefit to the Company.

Please refer to the full remuneration policy within the 2018/19 Annual Report and Accounts on the Company's investor website (nationalgrid.com/investors) for our remuneration policy on Directors' recruitment, consideration of remuneration policy elsewhere in the Company, total remuneration opportunity and corporate and share capital events.

Directors' Remuneration Report continued

Statement of implementation of remuneration policy in 2020/21

Key

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Audited Information
Content contained within a blue box highlighted with an 'Audited' tab indicates that all the information in the panel is audited.

Role of Remuneration Committee

The Committee is responsible for recommending to the Board the remuneration policy for the Executive Directors, the other members of the Group Executive Committee and the Chairman, and for implementing this policy. The aim is to align the remuneration policy to the Company strategy and key business objectives, and ensure it reflects our shareholders', customers' and regulators' interests. The Committee receives input on policy implementation within the wider workforce before reaching decisions on matters such as salary increases and annual incentive payouts and closely reviews the appropriateness of pay positioning by reference to external measures (benchmarking remuneration packages) and internal review of Company performance and pay gaps (CEO pay ratios, gender and ethnicity pay gaps) and from this year, the relativity year on year of salary, benefits and annual performance incentives compared with the same for the rest of the workforce.

- **Clarity:** we identify and communicate a range of performance measures in incentives which clearly link to the successful execution of Company strategy; as explained in the Committee Chair's statement, the Board continues to engage with the workforce; we shall consult this year with major institutional investors and proxy agencies on our proposals for the new Directors' remuneration policy.
- **Simplicity:** elements of our remuneration framework and their purpose are clearly articulated within our market-standard remuneration policy and we believe this is understood by all our stakeholders.
- **Risk:** risk is managed in a number of ways and evidenced through our remuneration policy, for example by setting maximum levels for incentive plans; measures that are aligned to Company performance/success and shareholder interests; a focus on the long term and value creation through the LTPP; Remuneration Committee discretion to potentially override formulaic outcomes and malus and clawback provisions; a high shareholding requirement for senior executives.
- **Predictability:** full information on the potential values which could be earned are disclosed; our policy outlines threshold, target and maximum opportunity with varying actual incentive outcomes dependent on performance; all the checks and balances set out above under Risk are disclosed as part of the remuneration policy.
- **Proportionality:** whilst incentive plans reward executives' performance in successfully delivering the business strategy, there is also a focus on sustaining this through holding periods that apply to vested shares and annual incentives that are paid out as shares; all executives are also subject to significant shareholding and post-employment shareholding requirements; the policy does not reward poor performance and the range of potential payouts under the policy is appropriate.
- **Alignment to Culture and Strategy:** our culture recognises how we do things is as vital as what we do and this is reflected in the type of performance conditions used in our incentive plans. Both the measures themselves and the targets which are set aim to reinforce this approach.

Our policy has operated as intended in terms of Company performance and quantum; a review of key considerations and decisions pertaining to its implementation is provided in the Committee Chair's statement on pages 92 – 94. The members of the Remuneration Committee in 2020/21 were Jonathan Dawson (Chair), Earl Shipp, Jonathan Silver and Mark Williamson. Details of the Committee's activities during the year can be found at page 111.

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Single Total Figure of Remuneration – Executive Directors

The following table shows a single total figure in respect of qualifying service for 2020/21, together with comparative figures for 2019/20. All figures shown to £'000:

	£'000	Salary	Benefits in kind	Pension	Total fixed pay	APP	LTPP	Total variable pay	Total remuneration
Andy Agg	**20/21**	**624**	**32**	**125**	**781**	**618**	**723**	**1,341**	**2,122**
	19/20	595	23	119	737	525	436	961	1,698
John Pettigrew	**20/21**	**1,029**	**110**	**275**	**1,414**	**1,035**	**2,622**	**3,657**	**5,071**
	19/20	1,017	116	305	1,438	897	2,870	3,767	5,205
Nicola Shaw	**20/21**	**562**	**15**	**150**	**727**	**537**	**1,226**	**1,763**	**2,490**
	19/20	555	15	166	736	387	1,342	1,729	2,465

Notes:
Salary: Salary increases were not awarded for 2019/20 for John Pettigrew or Nicola Shaw in line with the Committee's decision to exercise restraint in light of the COVID-19 pandemic. Andy Agg was appointed as CFO in January 2019 on a salary significantly below the assessed market rate for the job, as explained on page 93, with the intention to increase his salary over a multi-year period subject to performance and progression in the role, and was awarded a 6.5% increase on 1 July 2020. John Pettigrew donated £50,000 to the Prince's Trust in May 2020. Andy Agg donated £20,000 to the Prince's Trust in July 2020.
Benefits in kind: Benefits in kind (BIK) include private medical insurance, life assurance and for UK-based Executive Directors, either a fully expensed car or a cash alternative to a car and the use of a car and a driver when required which, for John Pettigrew, amounted to approximately £89,000 for 2020/21 (and approximately £86,000 for 2019/20). A Sharesave option award was granted to Andy Agg on 24 December 2020 and the benefit (approximately £7,500) of this award is included. There were no Sharesave options granted to any of the other Executive Directors during 2020/21.
Pension: Pension contributions/cash in lieu for John Pettigrew and Nicola Shaw are 30% of salary for 2019/20 and reduced to 26.7% of salary for 2020/21 and for Andy Agg are 20% for both years. Contributions will fall to 23.4% of salary from April 2021 for John Pettigrew and Nicola Shaw and to 12% of salary for all Executive Directors from April 2022.
APP: John Pettigrew donated 20% of his 2019/20 APP (net of tax) to HELP USA, a charity involved in the emergency COVID-19 response in our US service territories.
LTPP: The 2018 LTPP is due to vest in July 2021. The average share price over the three months from 1 January 2021 to 31 March 2021 of 855.04p has been applied and estimated dividend equivalents are included. The 2019/20 LTPP figures have been restated because last year they were estimated using the average share price (January–March 2020) and they now include the actual share price on vesting and all dividend equivalent shares. Due to a lower share price at vesting of 903.8274p versus the estimate of 978.75p (and the additional dividend equivalent shares added for the dividend with a record date of 3 July 2020 with a dividend rate of 32.00p per share), the actual value at vesting was £17,775, £117,064 and £54,728 lower than for the estimate last year for Andy Agg, John Pettigrew, and Nicola Shaw, respectively.
Impact of share price change: The impact of share price appreciation/depreciation, comparing share prices at grant versus the estimated share prices upon vesting, is set out in the notes to the 2018 LTPP (vesting) table on page 105.

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Total pension benefits

Andy Agg, John Pettigrew and Nicola Shaw received a cash allowance in lieu of participation in a pension arrangement. There are no additional benefits on early retirement. The values of these benefits, received during this year, are shown in the single total figure of remuneration table.

John Pettigrew has, in addition, accrued defined benefit (DB) entitlements. He opted out of the DB scheme on 31 March 2016 with a deferred pension and lump sum payable at his normal retirement date of 26 October 2031. At 31 March 2021, John Pettigrew's accrued DB pension was £168,991 per annum and his accrued lump sum was £506,973. No additional DB entitlements have been earned over the financial year, other than an increase for price inflation due under the pension scheme rules and legislation. Under the terms of the pension scheme, if he satisfies the ill-health requirements, or he is made redundant, a pension may be payable earlier than his normal retirement date. A lump sum death in service benefit is also provided in respect of these DB entitlements.

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Annual Performance Plan (APP)

Performance against targets for APP 2020/21

APP awards are earned by reference to the financial year and this year will be paid in June. Financial measures determine 70% of the APP, and individual objectives determine 30% of the APP.

Payment of the APP award is made in shares (50% of the award) and cash (50%). Shares (after any sales to pay associated tax) must be retained until the shareholding requirement is met, and in any event for two years after receipt.

For financial measures, threshold, target and stretch performance levels are predetermined by the Committee and pay out at 0%, 50% and 100% of the maximum potential for each part and on a straight-line basis in between threshold and stretch performance, with the exception of Group Value Added that has an asymmetric range with a higher stretch target.

Target and stretch performance levels for the individual objectives are also predetermined by the Committee, and an assessment of the performance relative to the target and stretch performance levels is made at the end of the performance year on each objective.

The outcomes of APP awards earned for financial performance are summarised in the table below. Performance against individual objectives is set out on pages 102 and 103.

A discretionary adjustment has been made to Group EPS reducing the outcome by 0.5p. This is to exclude a benefit in operating profit in NGV linked to lower costs due to COVID-19.

Performance measure	Proportion of max opportunity	Threshold	Target	Stretch	Actual	Proportion of max achieved
CEO and CFO						
Underlying EPS (p/share) Ⓐ	35%	47.0	50.5	54.0	53.7	95.7%
Group Value Added (£m) Ⓐ	35%	1,684	1,774	1,914	1,808	62.1%
Executive Director, UK (excluding ESO performance)						
UK Capex (£m) Ⓐ	23.3%	1,249	1,189	1,129	1,160	74.2%
UK RoE (%) Ⓐ (Percentage points above average allowed regulatory return)	23.3%	1.94	2.24	2.54	2.39	75.0%
UK Underlying Operating Profit (£m) Ⓐ	23.3%	1,400	1,450	1,500	1,491	91.0%
All Executive Directors						
Individual objectives (%)	30%	Detail expanded in tables below				68–84%

Ⓐ Denotes an 'Alternative performance measure' as explained on page 250.

Notes:
Underlying EPS: Technical adjustments have been made increasing the target by 0.2p to reflect the net effect of currency adjustments, the impact of deferrable storm costs included in underlying targets but reported outside, US pension assumptions and scrip dividend uptake.
UK Underlying Operating Profit (excluding ESO): Technical adjustments have been made reducing the target by £9m to reflect normalisation of the impact of RPI (£5m) and update of assumptions on allocated costs between UK and ESO (£4m).

Directors' Remuneration Report continued

Statement of implementation of remuneration policy in 2020/21 continued

Individual Objectives

The individual objectives of the Executive Directors when taken together were designed to deliver against each of our 2020/21 business priorities. The Committee used a two-stage process to agree individual objectives. First it reviewed and provided feedback on the objectives, including consideration of the weighting based on business criticality of the objective, and then, at a second meeting, it completed a final review and approved the objectives. At the end of the year, an overall assessment was made taking account of the weighting and achievement of the respective individual objectives for each Director, and the degree to which each element of the objective was met against specific targets and stretch targets. As with the financial measures, the achievement of 'stretch' performance and 'target' performance overall results in 100% and 50% respectively of the maximum payout.

The below sets out 2020/21 individual objectives which include a focus on strategic operational goals underpinning company performance and ESG objectives together with associated performance commentaries and the Committee's assessment of the performance outcome. The Committee has applied discretion to reduce the total individual performance outcome as explained in the summary line for each Director.

Andy Agg

Individual objective and performance commentary	Weighting	Outcome
Successfully deliver financing strategy despite challenges of COVID-19 pandemic • Achieved financial performance in line with initial guidance to market in June 2020 despite challenges of COVID-19 • Effectively managed the cash and funding implications of COVID-19, with clear guidance to investors • Established and communicated financing strategy including credit ratings approach, with positive reaction from investors	25%	25%
Secure appropriate financial arrangements in key regulatory arrangements • Provided financial plans for RIIO-2 which maintained earnings and protected credit metrics, sustaining strong relationships with stakeholders throughout the process • Delivered significant transaction support as part of rebalancing the portfolio • Supported US rate cases, though work was delayed due to COVID-19 impacts and therefore more work is to be done	25%	17%
Deliver Finance transformation programme • Delivered key Finance transformation programme milestones including operating model changes and leveraging of technology to enable better and more cost-effective delivery • Exhibited excellent leadership of the function through the changes in spite of COVID-19 related challenges	25%	23%
Lead implementation of revised investor proposition • Successfully engaged investors on renewed dividend policy and WPD acquisition, with positive feedback	25%	25%
Summary		
Andy achieved strong performance during the year. He successfully steered the organisation through implications of the COVID-19 pandemic and provided strong support to the business in the agreement of a new UK regulatory framework, and delivered ambitious milestones on the Finance transformation programme. Andy's strong leadership of the function enabled significant progress for the Company and its stakeholders despite challenging circumstances. As referenced in the Committee Chair's statement on page 93, the total outcome has been reduced from 90% to 80% to reflect Ofgem's decision to charge a penalty for the RIIO-2 business plans.	100%	80%

John Pettigrew

Individual objective and performance commentary	Weighting	Outcome
Deliver positive results for stakeholders despite challenges of COVID-19 pandemic • Delivered for our customers, in particular exceeding US customer satisfaction target by +5 points and progressing new construction work in the UK • Managed security of supply for our customers through US storms and low-demand challenges in the UK successfully, leading to positive feedback from members of government in the US and the UK • Delivered +5 point and +6 point increases in colleague engagement and enablement respectively, and demonstrated strong leadership as evidenced by very positive feedback from colleague pulse surveys, including a +14 point increase in care and concern	25%	25%
Execute updated business strategy • Reviewed and confirmed applicability of strategy despite COVID-19 pandemic and communicated and embedded strategy across organisation successfully • Executed acquisition of WPD and disposal of RI business (subject to shareholder vote), resulting in rebalancing to electricity • Delivered good progress on organic growth in non-regulated businesses and developed sound business plans for strong organic asset growth in the regulated businesses (8.2% in the US and 5.3% in Electricity Transmission) • Fostered strong relationships with key external stakeholders to enable continued progress against strategy going forward	25%	25%

John Pettigrew continued

Individual objective and performance commentary continued	Weighting	Outcome
Grow organisational capabilities through new operating model and culture change • Implemented new operating framework successfully with new ways of working, resulting in positive internal and external feedback • Made progress towards cultural ambitions as evidenced through 17.6% improvement in colleague culture diagnostic survey • Enhanced senior leadership capability and diversity through recruitment and new development programmes; more to achieve in diversity organisation-wide	25%	22%
Demonstrate organisational leadership in energy sector • Published Responsible Business Charter on 1 October, with positive feedback received internally and externally including an ESG day held on 5 October, and embedded processes for tracking Responsible Business measures • Made progress against emissions reductions including plan for 'well-below 2°C' pathway, partnered with COP26, announced plan for advisory vote at AGM on climate transition plan, and promoted electric vehicles in the UK, with £950m allocated to the charging infrastructure on the strategic road network • Demonstrated thought leadership in the UK and the US through specific policy actions and initiatives, including gas decarbonisation, a successful FutureGrid Network Innovation Competition Bid to better understand the role H2 has to play in the future of the UK Energy System, a US research programme to reduce gas emissions, and a 'multi-purpose interconnector' concept	25%	22%
Summary		
John's excellent performance over the year and strong leadership led to the Company progressing some significant strategic priorities and delivering for our stakeholders in spite of the COVID-19 pandemic. In particular, he delivered increases in customer and colleague scores, fostered strong relationships, communicated and embedded an updated business strategy and operating framework, progressed cultural ambitions, and demonstrated progress in organisational capabilities and leadership in the energy sector. As referenced in the Committee Chair's statement on page 93, the total outcome has been reduced from 94% to 84% to reflect Ofgem's decision to charge a penalty for the RIIO-2 business plans.	100%	84%

Nicola Shaw

Individual objective and performance commentary	Weighting	Outcome
Deliver positive results for stakeholders despite challenges of COVID-19 pandemic • Successfully adapted processes quickly to ensure reliability and resilience for our customers • Intensified communications and health and wellbeing support to colleagues and communities given the COVID-19 pandemic	25%	25%
Establish effective risk management controls and compliance framework • Successfully delivered milestones, including a thorough risk assessment and review of emerging risks, and implementation of a new risk committee	25%	20%
Successfully execute on UK business regulation priorities • Achieved RIIO-2 framework agreement that provides the right levels of capital expenditure and adjustment mechanisms required • Although all aspects of Ofgem's Final Determinations were accepted, apart from two technical aspects which are being appealed to the CMA, the outcome did not quite satisfy the Board's aspirations	25%	10%
Grow organisational capability • Strengthened succession pipeline • Increased diversity of leaders with females now representing more than half of leaders, and 62.5% of all colleagues self-identified as diverse for gender, ethnicity, disability and/or sexual preference • Significantly increased the number of chartered engineers and fellowships in the business with 30 new designations completed and 20 nearing designation at the end of the year	25%	23%
Summary		
Overall, Nicola has had a good year delivering on most of her objectives. In particular, Nicola showed strong leadership during COVID-19 with world-class safety and reliability delivered as well as the overall capital investment programme. During the year she has successfully led changes in the organisation to position the business for the energy transition and the new regulatory price control. With regards to RIIO-2, she was able to deliver a framework that provides the right levels of capital expenditure and adjustment mechanisms to meet the challenges ahead. As referenced in the Committee Chair's statement on page 93, the total outcome has been reduced from 78% to 68% to reflect Ofgem's decision to charge a penalty for the RIIO-2 business plans.	100%	68%

Directors' Remuneration Report continued

Statement of implementation of remuneration policy in 2020/21 continued

2020/21 APP as a proportion of base salary

The overall APP award and its composition based on financial performance and individual performance for each Executive Director is shown as a proportion of salary.

Executive Directors at 31 March 2021

AUDITED

LTPP performance

The LTPP value included in the 2020/21 single total figure relates to anticipated vesting in July 2021 of the conditional LTPP awards granted in 2018.

2018 LTPP

The 2018 award is determined by performance over the three years ended 31 March 2021 of Group RoE (50% weighting) and Group Value Growth (50% weighting), which is expected to vest on 1 July 2021. The financial components and weightings for this year's vesting, i.e., the 2018 LTPP awards, are the same for all Executive Directors.

The Group Value Growth outturn includes an amount to reflect the value added from the sale of the residual interest in the UK Gas Distribution business in 2019 and to adjust for revised timing of UK cash tax payments in 2019/20; both adjustments fall during the three-year performance period measured 2018–2021.

The Committee decided not to reflect the upward adjustments to Group RoE and Group Value Growth resulting from the revisions described in Note 1F to the consolidated financial statements.

The Committee considered the wider financial and business performance for the financial year including taking into account ESG performance and has decided not to apply any discretion for these factors.

Performance measure	Threshold – 20% vesting	Maximum – 100% vesting	Actual/expected vesting	Actual/expected proportion of maximum achieved
Group RoE (50% weighting) Ⓐ	11.0%	12.5% or more	11.3%	36.0%
Group Value Growth (50% weighting) Ⓐ	10.0%	12.0% or more	12.3%	100.0%

Ⓐ Denotes an 'Alternative performance measure' as explained on page 250

Note:
1. Based on the above financial results the overall vesting outcome for participants is 68.0%

AUDITED

2018 LTPP (vesting)

The 2018 LTPP is expected to vest on 1 July 2021. The amounts expected to vest under the 2018 LTPP for the performance period ended on 31 March 2021 and included in the 2020/21 single total figure are shown in the table below. The share price valuation is an estimate based on the average share price over the three months from 1 January 2021 to 31 March 2021 of 855.04p; the final dividend to be paid in August 2021 is excluded.

	Original number of share awards in 2018 LTPP	Overall vesting percentage (as % of max.)	Number of awards vesting	Number of dividend equivalent shares	Total value of awards vesting and dividend equivalent shares (£'000)
Andy Agg	109,886	68.0%	74,722	9,867	723
John Pettigrew	398,398	68.0%	270,910	35,774	2,622
Nicola Shaw	186,263	68.0%	126,658	16,725	1,226

Notes:
The total value of awards vesting and dividend equivalent shares are subject to a two-year holding period.
Andy Agg: Andy Agg was interim CFO at the time of receiving his 2018 LTPP award. The award is subject to the same performance conditions, performance period and vesting percentage/dividend equivalents estimates as other Executive Directors.
Impact of share price change: The 2018 LTPP awards were granted on 28 June 2018 with a share price of 837.4083p. The impact of share price change for the 2018 LTPP, comparing share price at grant versus the average share price for the period 1 January 2021 to 31 March 2021 of 855.04p, for each Executive Director is an increase of 17.63p (2.1%) per share. This results in an estimated increase in value (including dividend equivalents) of: £14,914 for Andy Agg; £54,074 for John Pettigrew; and £25,281 for Nicola Shaw. The impact of share price change is not included in the expected amounts to vest shown in the table above.

AUDITED

Single total figure of remuneration – Non-executive Directors

The following table shows a single total figure in respect of qualifying service for 2020/21, together with comparative figures for 2019/20:

	Fees £'000		Other emoluments £'000		Total £'000	
	2020/21	**2019/20**	**2020/21**	**2019/20**	**2020/21**	**2019/20**
Jonathan Dawson	**112**	111	**1**	0	**113**	111
Therese Esperdy	**142**	141	**0**	19	**142**	160
Sir Peter Gershon	**540**	538	**82**	86	**622**	624
Paul Golby	**104**	104	**1**	5	**105**	109
Liz Hewitt	**99**	23	**0**	1	**99**	24
Amanda Mesler	**91**	91	**0**	2	**91**	93
Paula Rosput Reynolds	**21**	n/a	**0**	n/a	**21**	n/a
Earl Shipp	**104**	103	**0**	17	**104**	120
Jonathan Silver	**104**	91	**0**	11	**104**	102
Mark Williamson	**122**	134	**0**	6	**122**	140
Total	**1,439**	1,336	**84**	147	**1,523**	**1,483**

Notes:
Receiving the US-based Board fee: Therese Esperdy, Earl Shipp, Paula Rosput Reynolds and Jonathan Silver.
Receiving the UK-based Board fee: Jonathan Dawson, Paul Golby, Liz Hewitt, Amanda Mesler and Mark Williamson.
Therese Esperdy: Fees include £25,000 for serving on the National Grid USA Board.
Sir Peter Gershon: Other emoluments comprise private medical insurance of approximately £1,000 and the use of a car and driver when required of approximately £81,000. Sir Peter will step down from the Board on 31 May 2021.
Paula Rosput Reynolds: Paula Rosput Reynolds joined the Board on 1 January 2021 as a Non-executive Director and will be appointed as Chair of the Board from 31 May 2021. She is not eligible for any benefits.
Other emoluments: In accordance with the Company's expenses policies, Non-executive Directors receive reimbursement for their reasonable expenses for attending Board meetings. In instances where these costs are treated by HMRC as taxable benefits, the Company also meets the associated tax cost to the Non-executive Directors through a PAYE settlement agreement with HMRC and these costs are included in the table above. For 2020/21 due to COVID-19 travel restrictions, most of the NEDs have not incurred travel-related expenses.

The total emoluments paid to Executive and Non-executive Directors in the year was £11.2 million (2019/20: £10.9 million).

Directors’ Remuneration Report continued

Statement of implementation of remuneration policy in 2020/21 continued

AUDITED

Other remuneration disclosures

2020 LTPP (conditional award) granted during the financial year

The face values of the awards are calculated using the volume weighted average share price at the date of grant. For the 2020 LTPP, due to the uncertainty in the context of COVID-19, the Committee decided to delay the usual LTPP award timing from late June to late August. The share price at the date of grant on 17 August 2020 was 889.18p per share. The number of awards were not adjusted downwards in the context of COVID-19 impact. As a utility business the Company continued to maintain operations, noting in particular that no employees have been furloughed, no compulsory redundancies or pay reductions have been made, and trade union agreements have been honoured.

	Basis of award	Face value £’000	Proportion vesting at threshold performance	Number of shares	Performance period end date
Andy Agg	300% of salary	1,901	20%	213,795	31 March 2023
John Pettigrew	350% of salary	3,603	20%	405,217	31 March 2023
Nicola Shaw	300% of salary	1,685	20%	189,452	31 March 2023

Note:
The 2020 LTPP grant will vest on 3 July 2023. The total value of awards vesting and dividend equivalent shares are subject to a two-year holding period.

AUDITED

Performance conditions for 2020 LTPP awards granted during the financial year

	Conditional share awards granted – 2020		
Performance measure	Weighting for all Executive Directors	Threshold 20% vesting	Maximum 100% vesting
Group RoE Ⓐ	16.67%	8.25%	9.75% or more
Group Value Growth Ⓐ	83.33%	8.00%	10.50% or more

Notes:
Group RoE: As disclosed in the Committee Chair’s statement for 2018/19, Group RoE is measured during the first year of the three-year performance period and will contribute one-sixth of the total vesting outcome. Vesting between threshold and maximum will be on a straight-line basis.
Group Value Growth: Group Value Growth is measured over the entire three-year performance period and will contribute five-sixths of the total vesting outcome. Vesting between threshold and 9% will be on a straight-line basis, 9% achievement will result in 60% vesting, and vesting between 9% and 10.5% or more will be on a straight-line basis.
Performance measures have not been adjusted in the context of COVID-19.

AUDITED

Payments for loss of office and payments to past Directors

There have been no payments made during 2020/21 for loss of office. This year we settled a payment of approximately £1,400 on a net of tax basis for a gift to Andrew Bonfield in recognition of his contributions to National Grid during his eight years of service which, Andrew had not been able to redeem until this year. There have been no other payments to past Directors during 2020/21.

Shareholder dilution

The Company has a number of all-employee share plans that provide employees with the opportunity to become, and to think like, a shareholder. These plans include Sharesave and the Share Incentive Plan (SIP) in the UK and the 401(k) and Employee Stock Purchase Plan in the US.

Where shares may be issued or treasury shares reissued to satisfy incentives, the aggregate dilution resulting from executive share-based incentives will not exceed 5% in any 10-year period. Dilution resulting from all incentives, including all-employee incentives, will not exceed 10% in any 10-year period. The Committee reviews dilution against these limits regularly and under these limits the Company, as at 31 March 2021, had headroom of 3.9% and 7.9% respectively.

AUDITED

Statement of Directors' shareholdings and share interests

The Executive Directors are required to build up and hold a shareholding from vested share plan awards. The following table shows how each Executive Director complies with the shareholding requirement and also the number of shares owned by the Non-executive Directors, including connected persons. The shareholding is as at 31 March 2021 and the salary used to calculate the value of the shareholding is the gross annual salary as at 31 March 2021.

John Pettigrew has met his shareholding requirement. Andy Agg is still relatively new in post and has not yet met his shareholding requirement but is expected to do so in 2023. Nicola Shaw is expected to meet her shareholding requirement in 2021, after the vesting of her 2018 LTPP award. These projections assume on-target performance/vesting outcomes. They will not be allowed to sell shares, except for covering associated tax liabilities, until their individual shareholding requirements are met. Non-executive Directors do not have a shareholding requirement.

Further shares have been purchased in each of April and May 2021 on behalf of each of Andy Agg, John Pettigrew and Nicola Shaw via the Share Incentive Plan (an HMRC tax-advantaged all-employee share plan), thereby increasing each of their beneficial interests by 33 shares. There have been no other changes in Directors' shareholdings between 1 April 2021 and 19 May 2021.

The expected vesting dates for the conditional share awards subject to performance conditions are 1 July 2021, 1 July 2022 and 3 July 2023 for the 2018 LTPP, 2019 LTPP and 2020 LTPP respectively.

Directors	Share ownership requirements (multiple of salary)	Number of shares owned outright (including connected persons)	Value of shares held as multiple of current salary	Number of options held under the Sharesave Plan	Conditional share awards subject to performance conditions (2018, 2019 & 2020 LTPP)
Executive Directors					
Andy Agg	400%	153,047	209%	4,316	537,680
John Pettigrew	500%	856,053	718%	4,219	1,235,584
Nicola Shaw	400%	201,737	310%	4,070	577,674
Non-executive Directors					
Jonathan Dawson	–	43,350	–	–	–
Therese Esperdy (ADSs)	–	1,587	–	–	–
Sir Peter Gershon	–	113,148	–	–	–
Paul Golby	–	2,291	–	–	–
Liz Hewitt	–	2,500	–	–	–
Amanda Mesler	–	1,500	–	–	–
Paula Rosput Reynolds (ADSs)	–	2,000	–	–	–
Earl Shipp (ADSs)	–	1,000	–	–	–
Jonathan Silver (ADSs)	–	0	–	–	–
Mark Williamson	–	47,460	–	–	–

Notes:
Andy Agg: On 31 March 2021 Andy Agg held 4,316 options granted under the Sharesave Plan with an exercise price of 695 pence per share and they can, subject to their terms, be exercised at 695 pence per share between 1 April 2026 and 30 September 2026. These options are discounted by 20%. The number of conditional share awards subject to performance conditions is as follows: 2018 LTPP: 109,886; 2019 LTPP: 213,999; 2020 LTPP: 213,795.
John Pettigrew: On 31 March 2021 John Pettigrew held 4,219 options granted under the Sharesave Plan with an exercise price of 711 pence per share and they can, subject to their terms, be exercised at 711 pence per share between 1 April 2025 and 30 September 2025. These options are discounted by 20%. The number of conditional share awards subject to performance conditions is as follows: 2018 LTPP: 398,398; 2019 LTPP: 431,969; 2020 LTPP: 405,217.
Nicola Shaw: On 31 March 2021 Nicola Shaw held 4,070 options granted under the Sharesave Plan with an exercise price of 737 pence per share and they can, subject to their terms, be exercised at 737 pence per share between 1 April 2022 and 30 September 2022. The number of conditional share awards subject to performance conditions is as follows: 2018 LTPP: 186,263; 2019 LTPP: 201,959; 2020 LTPP: 189,452.
Paula Rosput Reynolds: joined the Board on 1 January 2021.
Therese Esperdy, Paula Rosput Reynolds and Earl Shipp: Holdings are shown as ADSs and each ADS represents five ordinary shares.

Post-employment shareholding requirements

Past Executive Directors are required to continue to hold their shares/ADSs in line with our Directors' remuneration policy agreed at the AGM in 2019.

To enforce this the Executive Directors have agreed to give permission for the Company to periodically check with its third-party share scheme administrator whether the minimum shareholding requirement is being maintained. The Executive Directors have acknowledged that if they breach their post-employment shareholding requirement for any reason, the Company may enforce at its discretion one or more of the following processes: to request they repay to the Company an amount equivalent in value to the shareholding requirement that has not been met; the Company may withdraw/vary the vesting of any future shares granted under the LTPP; the Company may publish a public statement in a form as the Company may decide that the Director has failed to comply with the post-employment shareholding requirement. Executive Directors are reminded annually, when employed, of the post-employment shareholding requirement. At termination the minimum shareholding requirement is confirmed to the Director and checks are made by the Company at the 12-month and 24-month anniversary of leaving and at the financial year-end 31 March to ascertain if their post-employment shareholding requirement has been met.

At 31 March 2021, Andrew Bonfield and Dean Seavers, who stood down from the Board on 30 July 2018 and 5 November 2019 respectively, have each continued to meet their post-employment shareholding requirements.

Directors’ Remuneration Report continued

Statement of implementation of remuneration policy in 2020/21 continued

External appointments and retention of fees

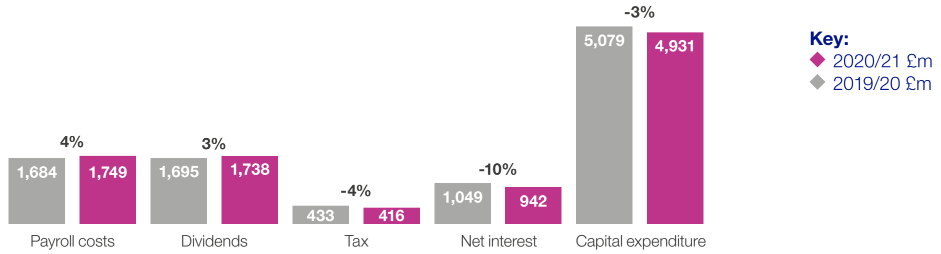
Experience as a board member of another company is considered to be valuable personal development, which in turn is of benefit to the Company. The table below details the Executive Directors (at 31 March 2021) who served as Non-executive Directors in other companies during the year ended 31 March 2021:

	Company	Retained fees
John Pettigrew	Rentokil Initial plc	£63,875
Nicola Shaw	International Consolidated Airlines Group S.A.	£85,609 (€100,500)

Note: For Nicola Shaw, fees have been converted using an exchange rate of 1EUR:0.85183GBP.

Relative importance of spend on pay

The chart below shows the relative importance of spend on pay compared with other costs and disbursements (dividends, tax, net interest and capital expenditure). Given the capital-intensive nature of our business and the scale of our operations, these costs were chosen as the most relevant for comparison purposes. All amounts exclude exceptional items and remeasurements.

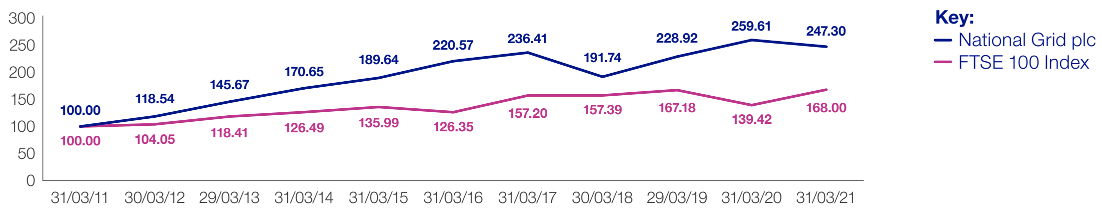


Notes:
1. The Dividends figure for 2019/20 has been restated at £1,695m (from £1,699m) to reflect the actual value of dividends paid.
2. Percentage increase/decrease of the costs between years is shown.

Performance graph

This chart shows National Grid plc’s 10-year annual Total Shareholder Return (TSR) performance against the FTSE 100 Index since 31 March 2011 and illustrates the growth in value of a notional £100 holding invested in National Grid on 31 March 2011, compared with the same invested in the FTSE 100 Index. The FTSE 100 Index has been chosen because it is a widely recognised performance benchmark for large companies in the UK. The TSR level shown at 31 March each year is the average of the closing daily TSR levels for the 30-day period up to and including that date. It assumes dividends are reinvested.

Total shareholder return



Data source: Datastream by Refinitiv

Chief Executive’s pay in the last ten financial years

Steve Holliday was CEO throughout the five-year period from 2011/12 to 2015/16. John Pettigrew became CEO on 1 April 2016.

	Steve Holliday					John Pettigrew				
	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Single total figure of remuneration (£’000)	3,539	3,170	4,801	4,845	5,151	4,623	3,648	4,651	5,205	5,071
Single total figure of remuneration including only 2014 LTPP (£’000)						3,931				
APP (proportion of maximum awarded)	68.67%	55.65%	77.94%	94.80%	94.60%	73.86%	82.90%	84.20%	70.58%	80.43%
PSP/LTPP (proportion of maximum vesting)	49.50%	25.15%	76.20%	55.81%	63.45%	90.41%	85.20%	84.20%	84.90%	68.00%

Notes:
Single total figure 2020/21: The figure for 2020/21 for John Pettigrew is explained in the single total figure of remuneration table for Executive Directors.
Single total figure 2019/20: The figure for 2019/20 has been restated to reflect actual share price for 2017 LTPP vesting in 2020 and all dividend equivalent shares, consistent with comparative figures shown in this year’s single total figure of remuneration table.
2014 LTPP: The 2016/17 single total figure of remuneration includes both the 2013 LTPP award and the 2014 LTPP award due to a change in the vesting period of four years (2013 LTPP) to three years (2014 LTPP).
PSP/LTPP plans: Prior to 2014, LTPP awards were made under a different LTI framework which incorporated a four-year performance period for the RoE element of the awards. The last award under this framework was made in 2013 and was fully vested in 2017. Awards made from 2014 are subject to a three-year performance period. The first of these awards vested in 2017.

Percentage change in remuneration for Executive Directors, Non-executive Directors and employee average

In previous years, we have shown the percentage change in the CEO's remuneration for salary, taxable benefits and APP with the average (mean) of each of those components of remuneration for our selected comparator group of non-unionised employees in the UK and the US. This year we have expanded our reporting to meet the requirements of the revised Shareholder Rights Directive (2019) and have included each Executive Director and Non-executive Director at 31 March 2021 to show the percentage changes for 2020/21 versus last year. The regulations cover employees of the Parent Company only and not across the group, and since we have very few people employed by our Parent Company (National Grid plc), we have voluntarily chosen a comparator group of all employees in the UK and the US to provide a representative comparison. In line with the regulations, we shall build this information to display a five-year history.

The Total Shareholder Return performance of National Grid plc over the last year and prior years is shown on page 108.

Percentage change in remuneration

	% change on last year for 2020/21		
	Salary	**Benefits**	**Bonus**
Executive Directors			
Andy Agg	4.9%	40.6%	17.7%
John Pettigrew	1.3%	-4.7%	15.4%
Nicola Shaw	1.3%	1.1%	38.8%
Non-executive Directors			
Jonathan Dawson	0.5%	37.1%	n/a
Therese Esperdy	0.4%	-100.0%	n/a
Sir Peter Gershon	0.5%	-5.5%	n/a
Paul Golby	0.5%	-87.5%	n/a
Liz Hewitt	334.8%	-100.0%	n/a
Amanda Mesler	0.5%	-100.0%	n/a
Paula Rosput Reynolds	n/a	n/a	n/a
Earl Shipp	0.5%	-100.0%	n/a
Jonathan Silver	14.3%	-100.0%	n/a
Mark Williamson	-8.6%	-100.0%	n/a
Employee median	2.8%	6.1%	40%

Notes:
Salary: Salaries for Executive Directors, and fees for Non-executive Directors, have been used. Overtime and allowances are excluded from the employee average base salary calculation.
Benefits: For Executive Directors and Non-Executive Directors the taxable benefits reported in the respective single total figure table of remuneration have been used and includes the benefit value of Sharesave options for John Pettigrew in 2019/20 of £7,475 and for Andy Agg in 2020/21 of £7,461. Excluding the benefit of Sharesave options, the percentage change on last year for benefits would be 8.1% and 1.9% for Andy Agg and John Pettigrew respectively. For all employees where eligible, taxable benefits include PMI and car allowance/job requirement cars and commercial vans (private use) pertaining to the UK employees and for the US, taxable insurance premiums and taxable portion of student loan repayment (this year only). Pension is excluded.
Bonus: For Executive Directors, APP values have been used. Non-executive Directors do not receive bonus payments. For all employees APP/annual performance payments relating to the prior year (2019/20) and APP/annual performance payment estimates for this year (2020/21) consistent with our CEO pay ratio analysis have been used. Long-term incentives are excluded.
Rounding: In all cases actual non-rounded numbers have been used rather than values rounded to nearest £'000 as expressed in the respective single total figure of remuneration tables.
Liz Hewitt: Joined the Board on 1 January 2020 and therefore fees received over 12 months for this year are compared with fees received over 3 months last year. In addition, Liz was appointed to the role of Committee Chair for the Audit Committee on 10 November 2020 and her fees were increased accordingly at this time.
Paula Rosput Reynolds: Joined the Board on 1 January 2021 and therefore a comparison with prior year fees is not applicable.
Jonathan Silver: Joined the Board on 16 May 2019 and therefore fees received over 12 months for this year are compared with fees received over 10.5 months last year.
Mark Williamson: Stepped down from the role of Committee Chair for the Audit Committee on 10 November 2020 and his fees were reduced accordingly at this time.
Employee median: Represents the percentage change in the median remuneration for each component on last year for 2020/21. Calculations are based on approximately 23,000 employees located in the UK and the US. Remuneration of Executive Directors and Non-executive Directors is excluded.
Exchange rate: US pay data has been converted based on the exchange rate of $1.341:£1

The percentage change data for salary/fees reflects that, other than for Andy Agg, there were no salary/fee increases for Directors during 2020/21. In contrast, the majority of managers and all those covered by trade union agreements were eligible to receive an annual salary increase during 2020/21. The average salary increase budget for the UK and the US employees, subject to performance review was 2.3% and 2.5% respectively. Budgets vary for employees covered by collective agreements depending on arrangements agreed with the respective trade unions. The Committee takes account of the general salary increase budgets available for managers/non-unionised employees when reviewing Directors' salaries/fees. Further alignment between Executive Director pay and arrangements available to the wider workforce is evidenced by the approach that all employees have the opportunity to receive a bonus which is linked to either a combination of individual and Company/business performance measures, or Company/business performance measures only, thus enabling employees as well as the Executive Directors to benefit in the Company's success annually.

Directors' Remuneration Report continued

Statement of implementation of remuneration policy in 2020/21 continued

CEO pay ratio

We have disclosed our CEO pay ratios comparing the CEO single total figure of remuneration to the equivalent pay for the lower quartile, median and upper quartile UK employees (calculated on a full-time equivalent basis), as well as the median Group-wide pay ratio.

		UK			Group-wide
Year	**Method**	**25th percentile pay ratio**	**Median pay ratio**	**75th percentile pay ratio**	**Median pay ratio**
2018/19 – voluntary	Option A	96:1	76:1	58:1	48:1
2019/20	Option A	111:1	86:1	66:1	53:1
2020/21	Option A	104:1	81:1	62:1	54:1

The comparison with UK employees is specified by the Companies (Miscellaneous Reporting) Regulations 2018 (as amended). US employees represent approximately 72% of our total employees. Our median pay ratio on a Group-wide basis is 54:1, calculated on the same basis as the UK pay ratios and an exchange rate of $1.341:£1.

Salaries at 31 March 2021 and estimated performance-based annual payments for 2020/21 have been annualised to reflect full-time equivalents. Performance payments have not been further adjusted to compensate where new employees have not completed a full performance year.

The CEO pay ratio has decreased to 81:1 at the median. The reduction is explained by the single total figure of remuneration for the CEO being approximately 5% lower compared with last year's calculation, broadly due to a lower estimated 2018 LTPP vesting outcome and a lower cash in lieu of pension allowance, as well as a salary freeze for the CEO. The pay and benefits of the median employee has increased by approximately 2%.

This year the 2018 LTPP vesting represents almost 52% (last year 56%) of the CEO's single total figure of remuneration. Excluding estimated 2018 LTPP vesting, our UK median pay ratio is 39:1. None of the employees for whom pay ratios apply are eligible for LTPP. Overall, approximately 2% of our UK employees are expected to receive 2018 LTPP vested awards this year and these all fall in the upper quartile of our ranked list. As employees advance through the Group, there will be the opportunity to receive higher rewards commensurate with increased accountability.

On a Group basis the median pay ratio has marginally increased to 54:1 which is driven mostly by an exchange rate difference versus last year. The lower Group median pay ratio versus the UK reflects the higher general level of wages in the US compared with the UK, and especially in the regions of the US where we operate. Almost three-quarters of our employees are US-based. Excluding LTPP the Group-wide median pay ratio is 26:1. The ratio of the pay of our Executive Director, UK, to the median UK employees is 40:1 and excluding LTPP is 20:1.

The total pay and benefits and the salary component of total pay and benefits for this year is set out below.

Pay data 2020/21	**Base salary**	**Total pay & benefits**
CEO remuneration	£1,029,461	£5,071,666
UK employee 25th percentile	£33,413	£48,657
UK employee 50th percentile	£57,000	£62,867
UK employee 75th percentile	£63,555	£81,548

Flexibility is provided to adopt one of three methods for calculating the ratios. We have chosen Option A, which is a calculation based on the pay of all UK employees on a full-time equivalent basis, as this option is considered to be more statistically robust. The ratios are based on total pay and benefits inclusive of short-term and long-term incentives applicable for the respective financial year 1 April – 31 March. The reference employees at the 25th, 50th and 75th percentile have been determined by reference to pay and taxable benefits as at the last day of the respective financial year, 31 March, though estimates have been used for the respective APP payouts and performance outcomes of the LTPP and dividend equivalents.

All employees are eligible for a performance-based annual payment. Our principles for pay setting and progression in our wider workforce are the same as for our executives – mid-market approach to total reward, being sufficiently competitive to attract and retain high-calibre individuals without over-paying and providing the opportunity for individual development and career progression. The pay ratios reflect how remuneration arrangements differ, as accountability increases for more senior roles within the organisation, and in particular the ratios reflect the weighting towards long-term value creation and alignment with shareholder interests for the CEO.

We are satisfied that the median pay ratio reported this year is consistent with our wider pay, reward and progression policies for employees. The median reference employee falls within our collectively bargained employee population and has the opportunity for annual pay increases, annual performance payments and career progression and development opportunities. While the CEO did not receive a pay increase during 2020/21 (due to restraint being exercised in the context of the COVID-19 pandemic) most managers and all those covered by trade union agreements did receive an annual salary increase.

The Committee's activities during the year

Meeting	Main areas of discussion
April	2019/20 individual objectives scoring for the Group Executive Committee Discussion on 2020/21 objectives for the Group Executive Committee Discussion on 2019/20 expected incentive plan outcomes Performance update for outstanding LTPP awards Discussion on remuneration alternatives in light of COVID-19
May	Provisional approval, in light of COVID-19, of 2020 salary increases and prior and future incentive awards Provisional approval of 2019/20 APP financial metrics Provisional approval of expected 2017 LTPP outcomes; performance update for outstanding LTPP awards Discussion on 2020 LTPP financial targets Final approval of 2019/20 individual APP outcomes and 2020/21 individual objectives for the Group Executive Committee
June	Final approval of pay decisions for the Group Executive Committee Review and approval of Chairman fees
July	Approval of 2020/21 APP targets and update on 2020 LTPP targets
September	Debrief of AGM season and remuneration trends Discussion on remuneration policy and incentive plan design Approval of one-year Group RoE targets for 2020 LTPP Approval of Chair fees for new appointment
November	Discussion on remuneration policy and incentive plan design Review of gender and ethnicity pay gaps Items related to new Group Executive Committee appointment
December	Items related to new Group Executive Committee role
January	Discussion on Group Value Growth target range for the 2020 LTPP Performance updates for outstanding LTPP awards and 2020/21 APP
February	Approval of Group Value Growth targets for the 2020 LTPP
March	Market data review of the Group Executive Committee remuneration and initial proposals for base salary increases Discussion on 2021/22 APP measures

Advisors to the Remuneration Committee

The Committee received advice during 2020/21 from independent consultants as follows: Willis Towers Watson provided advice until stepping down at the end of July 2020, and following a competitive tendering process, PricewaterhouseCoopers LLP (PwC) was selected by the Committee to become its independent advisor from 3 August 2020.

Both Willis Towers Watson and PwC are members of the Remuneration Consultants Group and have signed up to that group's code of conduct. The Committee is satisfied that any potential conflicts were appropriately managed.

Work undertaken by Willis Towers Watson and PwC in its role as independent advisor to the Committee has incurred fees of £22,895 and £88,917 respectively, on the basis of time charged to perform services and deliverables.

The Committee reviews the objectivity and independence of the advice it receives from its advisors each year. It is satisfied that both Willis Towers Watson and PwC provided credible and professional advice. Both Willis Towers Watson and PwC have provided general and technical remuneration services in their respective areas to the wider Company, in relation to employees below Board and Group Executive Committee level. This has included benchmarking support provided by Willis Towers Watson and benchmarking and data assurance services provided by PwC.

The Committee considers the views of the Chairman on the performance and remuneration of the Chief Executive Officer, and of the Chief Executive Officer on the performance and remuneration of the other members of the Group Executive Committee. The Committee is also supported by the Group General Counsel and Company Secretary, who acts as Secretary to the Committee; the Chief People and Culture Officer; the HR Director – Reward; and, as required, the Group Head of Pensions and Group Financial Controller. No other advisors have provided significant services to the Committee in the year.

Voting on Directors' Remuneration Policy adopted at the 2019 AGM

The voting figures shown refer to votes cast at the 2019 AGM and represent 63.86% of the voting share capital. In addition, shareholders holding 28.6 million shares abstained.

	For	Against
Number of votes	2,116,131,831	64,718,198
Proportion of votes	97.03%	2.97%

Voting on 2019/20 Directors' Remuneration Report at the 2020 AGM

The voting figures shown refer to votes cast at the 2020 AGM (in respect of the 2019 remuneration policy adopted at the 2019 AGM) and represent 66.76% of the voting share capital. In addition, shareholders holding 29.0 million shares abstained.

	For	Against
Number of votes	2,273,916,544	72,165,518
Proportion of votes	96.92%	3.08%

Directors' Remuneration Report continued

How our remuneration policy will be implemented in 2021/22

The remuneration policy adopted at the 2019 AGM will be implemented during 2021/22 as described below.

Salary

Salary increases will normally be in line with the increase awarded to other employees in the UK and the US, subject to performance. Higher salary increases may also be awarded for a change in responsibility. Additionally, in line with the policy on recruitment remuneration, salaries for new directors may be set below market level initially and aligned to market level over time (provided the increase is merited by the individual's contribution and performance).

As explained in the Remuneration Committee Chair's statement, for 2021 a salary increase of 6.5% for Andy Agg and 2.3% for each of John Pettigrew and for Nicola Shaw will be awarded, effective from July.

	From 1 July 2021	From 1 June 2020	Increase
Andy Agg	£675,000	£633,675	6.5%
John Pettigrew	£1,053,000	£1,029,461	2.3%
Nicola Shaw	£574,500	£561,524	2.3%

Pensions

The remuneration policy approved at the July 2019 AGM stated that new appointments would receive pension/cash in lieu contributions of up to 20% of base salary. In addition to this, John Pettigrew and Nicola Shaw agreed progressive reductions from 30% to 20% of base salary. The second year of implementing this agreement was effective 1 April 2021, resulting in cash in lieu of pension contributions for each of John Pettigrew and Nicola Shaw reducing to 23.4%. A further reduction to 20.0% was originally planned to take place at 1 April 2022; however, this has been reviewed and contributions will reduce instead to 12% at this time, without compensation, thereby ensuring alignment with the rate available to the majority of the UK workforce.

Andy Agg currently receives contributions of 20%, which was the approved policy maximum at the time of his appointment. Subsequently, the Committee agreed in November 2019 that newly appointed Executive Directors would receive annual contributions of up to 12% of basic salary for the DC pension scheme, or a cash supplement in lieu. Contributions for Andy Agg will reduce to 12% with effect from 1 April 2022, without compensation, thereby ensuring alignment with the rate available to the majority of the UK workforce.

APP measures for 2021/22

The APP measures and weightings for each Executive Director are shown in the table below. As explained in the Remuneration Committee Chair's statement, for 2021/22 the APP measures will be split across financial measures, operational/strategic measures (with an emphasis on ESG) and individual objectives, weighted 60%, 20% and 20% respectively. The APP targets are considered commercially sensitive and consequently will be disclosed in the 2021/22 Directors' Remuneration Report.

Andy Agg and John Pettigrew	Weighting
Group RoE	30%
Underlying EPS	30%
Operational/strategic measures	20%
Individual objectives	20%

Nicola Shaw	Weighting
UK RoE	20%
UK Underlying Operating Profit	20%
UK Regulated Controllable Costs	20%
Operational/strategic measures	20%
Individual objectives	20%

Performance measures for LTPP to be awarded in 2021

The 2021 LTPP performance measures and weightings, for all Executive Directors, are Group RoE (50%) and Group Value Growth (50%), each measured over the entire three-year performance period, 1 April 2021 – 31 March 2024. Awards are expected to be made towards the end of June. In light of the transactions involving Western Power Distribution, UK Gas Transmission and Rhode Island businesses, the Committee has opted not to finalise the threshold and maximum vesting targets at this time and will confirm these later in the year.

The LTPP rules expire in July 2021 and so we are seeking shareholder approval at the 2021 AGM for the new LTPP rules. The new rules are substantially in line with the existing rules, updated to reflect developments in market practice and good governance especially around malus and clawback provisions.

Fees for NEDs

Therese Esperdy was appointed as Non-executive Director to the National Grid USA Board in 2015 with an annual fee of £25,000 in addition to her current NED fees.

Paula Rosput Reynolds will assume the position of Chair from 31 May, with an annual fee of £700,000 without any benefits. This fee was set during the recruitment process and takes into account the market data and reflects the candidate being recruited from within the US market.

From this year, fee increases will be effective from 1 July 2021 to align with the annual salary review date applicable to the majority of our employees.

Role	1 July 2021 £'000	1 June 2020 £'000	Increase vs 2020
Chair (new fee level from 31 May 2021)	700.0	540.2	29.6%
Senior Independent Director	23.6	23.1	2.2%
Board fee (UK-based)	71.1	69.5	2.3%
Board fee (US-based)	84.4	82.1	2.8%
Chair Audit Committee	31.9	31.2	2.2%
Chair Finance Committee	24.4	23.9	2.1%
Chair Remuneration Committee	31.9	31.2	2.2%
Chair Safety, Environment and Health	24.4	23.9	2.1%
Committee membership fee	11.0	10.8	1.9%

Notes:
Other than for the Chair role, fees were last increased on 1 June 2019.
Chair/Committee fees are not applicable with respect to the Nominations Committee.

The Directors' Remuneration Report has been approved by the Board and signed on its behalf by:

Jonathan Dawson
Committee Chair
19 May 2021

3. Financial Statements

Picture by
Hadeeja Khan
UK
Runner-up
Age group 6 and under


Solar Tree
Owl School

Statement of Directors' responsibilities

The Directors are responsible for preparing the Annual Report and Accounts, including the Group financial statements and the Parent Company financial statements in accordance with applicable law and regulations.

Company law requires the Directors to prepare financial statements for each financial year. Under that law, the Directors are required to prepare the Group financial statements in accordance with International Accounting Standards in conformity with the requirements of the Companies Act 2006 and International Financial Reporting Standards (IFRS) adopted pursuant to Regulation (EC) No. 1606/2002 as it applies in the European Union. The financial statements also comply with IFRS as issued by the IASB. In addition, the Directors have elected to prepare the Parent Company financial statements in accordance with United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards and applicable law), including FRS 101 'Reduced Disclosure Framework'. Under company law, the Directors must not approve the accounts unless they are satisfied that they give a true and fair view of the state of affairs of the Group and Parent Company and of the profit or loss of the Group and Parent Company for that period.

In preparing the Group financial statements, International Accounting Standard 1 requires that Directors:

- properly select and apply accounting policies;
- present information, including accounting policies, in a manner that provides relevant, reliable, comparable and understandable information;
- provide additional disclosures when compliance with the specific requirements in IFRS are insufficient to enable users to understand the impact of particular transactions, other events and conditions on the entity's financial position and financial performance; and
- make an assessment of the Group's ability to continue as a going concern.

In preparing the Parent Company financial statements, the Directors are required to:

- select suitable accounting policies and then apply them consistently;
- make judgments and accounting estimates that are reasonable and prudent;
- state whether applicable UK Accounting Standards have been followed, subject to any material departures disclosed and explained in the financial statements; and
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Company will continue in business.

The Directors are responsible for keeping adequate accounting records that are sufficient to show and explain the Group and Parent Company's transactions and disclose with reasonable accuracy at any time the financial position of the Group and Parent Company on a consolidated and individual basis, and to enable them to ensure that the Group financial statements comply with the Companies Act 2006. They are also responsible for safeguarding the assets of the Parent Company and its subsidiaries and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The Directors are responsible for the maintenance and integrity of the Company's website. Legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

Having made the requisite enquiries, so far as the Directors in office at the date of the approval of this Report are aware, there is no relevant audit information of which the auditors are unaware and each Director has taken all reasonable steps to make themselves aware of any relevant audit information and to establish that the auditors are aware of that information.

Each of the Directors, whose names and functions are listed on pages 72 – 73, confirms that:

- to the best of their knowledge, the Group financial statements and the Parent Company financial statements, which have been prepared in accordance with IFRS as issued by the IASB and IFRS as adopted by the European Union and UK GAAP FRS 101 respectively, give a true and fair view of the assets, liabilities, financial position and profit of the Company on a consolidated and individual basis;
- to the best of their knowledge, the Strategic Report contained in the Annual Report and Accounts includes a fair review of the development and performance of the business and the position of the Company on a consolidated and individual basis, together with a description of the principal risks and uncertainties that it faces; and
- they consider that the Annual Report and Accounts, taken as a whole, are fair, balanced and understandable and provides the information necessary for shareholders to assess the Company's position and performance, business model and strategy.

This Responsibilities Statement was approved by the Board and signed on its behalf.

Directors' Report

The Directors' Report, prepared in accordance with the requirements of the Companies Act 2006 and the UK Listing Authority's Listing Rules, and Disclosure Rules and Transparency Rules, comprising pages 1 – 113 and 224 – 268, was approved by the Board and signed on its behalf.

Strategic Report

The Strategic Report, comprising pages 1 – 66, was approved by the Board and signed on its behalf.

By order of the Board

Justine Campbell
Group General Counsel
& Company Secretary

19 May 2021

Company number: 4031152

Independent auditor's report
to the members of National Grid plc

Report on the audit of the financial statements

1. Opinion

In our opinion:
- the financial statements of National Grid plc (the 'Parent Company') and its subsidiaries (the 'Group') give a true and fair view of the state of the Group's and of the Parent Company's affairs as at 31 March 2021 and of the Group's profit for the year then ended;
- the Group financial statements have been properly prepared in accordance with International Accounting Standards in conformity with the requirements of the Companies Act 2006, International Financial Reporting Standards (IFRS) as adopted by the European Union and IFRS as issued by the International Accounting Standards Board (IASB);
- the Parent Company financial statements have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice, including Financial Reporting Standard (FRS) 101 'Reduced Disclosure Framework'; and
- the financial statements have been prepared in accordance with the requirements of the Companies Act 2006.

We have audited the financial statements which comprise:

Group:
- the consolidated income statement;
- the consolidated statement of comprehensive income;
- the consolidated statement of changes in equity;
- the consolidated statement of financial position;
- the consolidated cash flow statement; and
- the related notes 1 to 39 to the consolidated financial statements.

Parent Company:
- the Parent Company accounting policies;
- the Parent Company balance sheet;
- the Parent Company statement of changes in equity; and
- the related notes 1 to 10 to the Parent Company financial statements.

The financial reporting framework that has been applied in the preparation of the Group financial statements is applicable law, International Accounting Standards in conformity with the requirements of the Companies Act 2006 and IFRS as adopted by the European Union and as issued by the IASB. The financial reporting framework that has been applied in the preparation of the Parent Company financial statements is applicable law and United Kingdom Accounting Standards, including FRS 101 'Reduced Disclosure Framework' (United Kingdom Generally Accepted Accounting Practice).

2. Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in section 10 of our report.

We are independent of the Group and the Parent Company in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the Financial Reporting Council's (the 'FRC's') Ethical Standard as applied to listed public interest entities, and we have fulfilled our other ethical responsibilities in accordance with these requirements. The non-audit services provided to the Group and Parent Company for the year are disclosed in note 4(e) to the financial statements. We confirm that the non-audit services prohibited by the FRC's Ethical Standard were not provided to the Group or the Parent Company.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

3. Summary of our audit approach

Key audit matters	The key audit matters that we identified in the current year were: • impact of COVID-19 including the recoverability of US trade and other receivables; • impact of climate change on property, plant and equipment; and • treasury derivative transactions. The following items were identified as key audit matters in the prior year but not in the current year: • environmental provisions has not been deemed to be a key audit matter in the current year, as unlike in the prior year, there has been no significant change in the provisions and the judgements used to derive them. Specifically, there is less judgement regarding the most significant of the three US former sites that represent more than half of the total provision and were identified by the Environmental Protection Agency (EPA) as sites of significant contamination (Superfund sites). This is due to the finalisation of design works in the period which has reduced the uncertainty in the expected cash outflows; • classification of exceptional items has not been deemed to be a key audit matter this year due to the low level of exceptional items and the reduced level of judgement in determining the FY21 exceptional items when compared to the prior year; • IT user access controls have not been deemed a key audit matter this year as the remediation programme in respect of the deficiencies in user access management was largely completed in the prior year. The remaining deficiencies have not prevented us from adopting a controls based approach this year; and • in the prior year, we identified net pension obligations as a key audit matter in part due to the increased uncertainty in relation to the valuation of unquoted assets, specifically the Schemes' property and alternative investment portfolios, with the latter having been based upon valuations performed prior to the significant economic impacts of the COVID-19 pandemic becoming fully clear. In addition, in the prior year the Group entered into two pension buy-in transactions of £2.8 billion and £1.6 billion involving a transfer of certain pension assets in the form of gilts and cash, in return for a bulk annuity policy. In the current year, we note that market volatility in respect of these portfolios has reduced, resulting in lower uncertainty in relation to their valuation. In addition, although the Group entered into one further buy-in policy, the quantum is much smaller and the accounting is consistent with the treatment for the prior year buy-ins. On the basis of these considerations, in FY21 we have not identified a key audit matter in respect of net pension obligations.
Materiality	The materiality that we used for our audit of the Group financial statements was £120 million which represents 5.9% of adjusted profit before tax (profit before tax excluding the impact of reported exceptional items and remeasurements) and 5.8% of statutory profit before tax.
Scoping	Our scope covered seven components of the Group in addition to procedures performed at the Group level. Of these, three were subjected to a full-scope audit whilst the remaining four were subject to specific procedures on certain account balances. Our scoping covered 98% of the Group's revenue; 99% of the Group's property, plant and equipment; and 99% of the Group's gross liabilities.

Independent auditor's report
to the members of National Grid plc continued

4. Conclusions relating to going concern

In auditing the financial statements, we have concluded that the Directors' use of the going concern basis of accounting in the preparation of the financial statements is appropriate.

Our evaluation of the Directors' assessment of the Group's and Parent Company's ability to continue to adopt the going concern basis of accounting included:
- assessing the financing facilities including the nature of facilities, repayment terms and covenants;
- enquiring of management regarding the assumptions used in the going concern models;
- testing the clerical accuracy and appropriateness of the model used to prepare the forecasts;
- assessing the assumptions used in the forecasts;
- assessing management's identified potential mitigating actions and the appropriateness of the inclusion of these in the going concern assessment;
- assessing the historical accuracy of forecasts prepared by management;
- reperforming management's sensitivity analysis; and
- evaluating whether the Group's disclosures in respect of going concern within the financial statements, meet the requirements of IAS 1.

The impact of National Grid's commitment to acquire Western Power Distribution (WPD) and to dispose of The Narragansett Electric Company (NECO) was considered in management's assessment. All of our work outlined above, addressed the implication of this commitment.

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the Group's and Parent Company's ability to continue as a going concern for a period of at least twelve months from when the financial statements are authorised for issue.

In relation to the reporting on how the Group has applied the UK Corporate Governance Code, we have nothing material to add or draw attention to in relation to the Directors' statement in the financial statements about whether the Directors considered it appropriate to adopt the going concern basis of accounting.

Our responsibilities and the responsibilities of the Directors with respect to going concern are described in the relevant sections of this report.

5. Key audit matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements of the current period and include the most significant assessed risks of material misstatement (whether or not due to fraud) that we identified. These matters included those which had the greatest effect on: the overall audit strategy, the allocation of resources in the audit; and directing the efforts of the engagement team.

Throughout the course of our audit, we identify risks of material misstatement ('risks'). We consider both the likelihood of a risk and the potential magnitude of a misstatement in making the assessment. Certain risks are classified as 'significant' or 'higher' depending on their severity. The category of the risk determines the level of evidence we seek in providing assurance that the associated financial statement item is not materially misstated.

These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

5.1. Impact of COVID-19 including the recoverability of US trade and other receivables

Key audit matter description

Account balances: Trade and other receivables. Refer to note 19 to the financial statements.

The COVID-19 pandemic has had a significant impact on the UK and US economies with consequences to the judgements and estimates made by the Group, principally in relation to the recoverability of US customer receivables. Refer to note 1 to the financial statements and the Audit Committee's discussion on pages 83 – 87.

The scale and impact of the COVID-19 pandemic on the markets in which the Group operates remains significant. The various lockdowns imposed throughout the year by the UK government and the US states in which the Group operates had a direct and severe impact on those economies as consumer spending decreased and unemployment rose. As set out on page 9 of the Annual Report and Accounts, this has impacted the FY21 results of the Group.

At the beginning of the financial year, management reassessed their controls framework, which encompassed a review of the ability to operate existing controls remotely and consideration of whether existing controls were suitable for addressing areas of new or increased risk. As a result of this assessment a COVID-19 entity-level control was implemented to assess the completeness of accounting considerations across the Group.

Management's assessment determined that the primary risk that arose from the COVID-19 pandemic related to the valuation of provisions for bad and doubtful debts in the US due to the increased uncertainty over customers' ability to settle amounts when they fall due.

In calculating bad and doubtful debts, the key judgement relates to the requirement to incorporate 'expected credit losses' into the provision. This requires management to make forward-looking estimates of the expected level of losses which will be incurred on any outstanding receivables. In the US, unlike in the UK, the Group has retail customers. Management has used the experience of cash collections since the start of the pandemic to inform their expected credit loss calculations.

Although a small proportion of US collection activities resumed in the year, for the most part regulator moratoriums continued to be enforced, prohibiting utilities from shutting off customer access to gas and electricity for non-payment, as well as introducing requirements to extend payment plans and waive late fees. The level of estimation uncertainty related to the bad debt calculation in respect of US trade receivables continues to be high and accordingly, we have identified this as an area of 'higher' audit risk.

Independent auditor's report
to the members of National Grid plc continued

5. Key audit matters continued

5.1. Impact of COVID-19 including the recoverability of US trade and other receivables

How the scope of our audit responded to the key audit matter	We assessed whether management appropriately considered the related impact of COVID-19 and remote working on existing controls and tested the incremental COVID-19 entity level control, and where there was a change in a control due to remote working, we challenged the appropriateness of the change and assessed the operating effectiveness of the control in light of the change. Further, we held discussions with our component engagement teams, with management and within the wider Deloitte network to identify the areas of risk to the financial statements as a result of the wider impacts of the pandemic. We used the outcome of these discussions to update our audit risk assessment and challenge management's impact assessment. In challenging management's assumptions related to the impact of the COVID-19 pandemic on the provision for bad and doubtful debts on US retail customers, we assessed the trend of cash collections during the year and specifically considered the cash received in respect of the balances recorded at 31 March 2020. We considered the economic outlook, including when disconnection moratoria are expected to be eased, forecast unemployment rates and government stimulus packages. We challenged management's judgement as to the point in the range of calculated possible outcomes which management determined to be their best estimate.
Key observations	Our testing confirmed the incremental COVID-19 specific control operated effectively. We concluded that management's judgements and estimates made in determining the incremental level of expected credit losses as a consequence of the COVID-19 pandemic are reasonable. We concluded that management's disclosures included in note 1E to the financial statements in respect of the key judgements and areas of estimation uncertainty are appropriate.

5.2. The impact of climate change on property, plant and equipment

Key audit matter description	**Account balance: Property, plant and equipment. Refer to notes 1E and 13 to the financial statements and the Audit Committee's discussion on pages 83 – 87.** The UK government and certain US states in which the Group operates have enacted legislation and established targets in respect of net zero carbon emissions by 2050. Accordingly climate change represents a strategic challenge for the Group, which has also set targets for reducing direct greenhouse gas emissions by the same date. Natural gas, when burned, emits carbon dioxide and is considered a greenhouse gas. Therefore, the strategic challenge relates to the potential future use of the Group's assets used to facilitate gas transmission services in the UK and gas distribution services in the US in the period approaching 2050 and beyond. The remaining useful economic life of the Group's gas assets is up to 50 years in the UK and 80 in the US, extending well beyond the 2050 net zero commitment date. As described in note 13 to the financial statements, the impact of changing the useful economic lives of all of the Group's gas assets, such that they would be fully depreciated by 2050, would be an increase in the annual depreciation expense of £195 million, and such that they would be fully depreciated by 2060, would be an increase in the annual depreciation expense of £82 million. As the continued use of natural gas as a primary energy source beyond 2050 appears to be in conflict with net zero targets and the impact of shortening the useful lives of the gas assets to 2050 has a material impact on annual depreciation, we identified a 'higher' risk related to the financial statement impact of those commitments, specifically pinpointed to management's judgement in determining the useful lives of gas assets in the context of the net zero commitments. As described in note 13 to the financial statements and in the Audit Committee Report (page 85), management performed a detailed assessment of the potential uses for the Group's gas assets as part of their consideration around whether developments in the UK and US towards binding carbon reduction targets should trigger any changes to National Grid's estimates, judgements or disclosures, especially regarding gas asset lives. Management's assessment included an overview of the legislative changes in the UK and US, and an evaluation of the possible future use of National Grid's networks in a net zero carbon energy system. Management's best estimate of the useful economic lives of US gas assets, across all states in which it operates, is based on the depreciable life identified through depreciation studies for each asset and are approved by the respective state regulator. Accordingly, in the US, the IFRS asset depreciable lives are identical to those agreed by the Group's regulators for regulatory purposes. Management concluded it is probable that there will be a role for its US gas networks post 2050 under a range of possible scenarios, and there is nothing at present to suggest that asset lives should be shortened at this point. In the UK, National Grid Gas Transmission (NGGT) owns and operates the National Transmission System (NTS). Pipelines represent the vast majority of the value that will be undepreciated by 2050. Having analysed the potential decarbonisation pathways, management has identified numerous potential uses for the Group's UK gas pipeline assets in a net zero energy system including for the continued transmission of natural gas as a back-up fuel or in order for the transmission of hydrogen or other low or zero carbon gases. Management concluded that the National Transmission System (NTS) pipeline assets in the UK will continue to have an economic use until 2070. Management operated an entity level control to assess the accounting and disclosure impacts associated with the transitional and reputational risks of climate change to ensure these are considered and reflected appropriately in external reporting. Management determined that disclosure of a key judgement in relation to the potential future use of the Group's gas assets post-2050 and disclosure of the gas asset lives as a key estimate (note 1E to the financial statements), with appropriate sensitivity analysis (note 13 to the financial statements), was appropriate.

5.2. The impact of climate change on property, plant and equipment continued

How the scope of our audit responded to the key audit matter	We tested management's internal control over the accounting for and disclosure of the potential impacts associated with the energy transition and climate change. We challenged management's judgement that the useful lives of the Group's gas assets extend beyond 2050 in light of the different goals, commitments and legislation relating to net zero in the UK and the US states in which the Group operates by: • assessing potential strategic pathways to achieve net zero targets; • obtaining and reading government plans in the US and UK for achieving net zero which we compared to the potential strategic pathways; • evaluating information from the Group's regulators, including price controls in the UK and rate cases in the US, to consider whether they presented any contradictory evidence; • performing an assessment of the likelihood of occurrence of alternative scenarios for achieving net zero targets; • considering the potential for re-purposing the Group's gas networks for alternative uses, and in particular for transporting hydrogen; and • reading a number of external reports including: The Sixth Carbon Budget, produced by the Committee on Climate Change; the UK's Climate Change White Paper, produced by the Department for Business, Energy & Industrial Strategy; and searching for contradictory evidence in respect of management's judgements. We utilised our sustainability specialists to review management's key assumptions and to challenge the viability of some of the technological advances presented within the strategic pathways. We also consulted with Deloitte specialists in other countries regarding the suitability of existing gas infrastructure for transporting hydrogen. We assessed the disclosures set out in note 1 to the financial statements and the sensitivity analysis set out in note 13 to the financial statements regarding the carrying value of the useful economic lives of the Group's gas assets.
Key observations	Our testing confirmed that the relevant controls over management's assessment of the impact of the energy transition and climate change operated effectively. We observe that whilst some indicators do exist suggesting that the useful economic lives of the Group's gas assets may be limited to 2050, these are mitigated by other statements by governments and advisory bodies which suggest gas, and therefore gas transmission and distribution assets, will continue to have a role beyond 2050. Furthermore, the emergence of a substantial hydrogen infrastructure could introduce another potential longer term role for National Grid gas assets past 2050, if technological developments allow the utilisation of existing assets in this infrastructure. Whilst the targets, goals and ambitions in respect of net zero have now been formalised in legislation in all jurisdictions in which the Group operates, there is widespread recognition that work needs to be done to define the possible future decarbonisation pathways. We note that whilst state energy policy in the US states in which the Group operates is codified by the legislature, it is the regulators who are charged with implementing state energy policies. We concluded it was reasonable to assume that there will be a valuable use for the Group's US gas assets beyond 2050 and in the absence of any determination by the Group's regulators, it continues to be reasonable to use the regulatory asset lives for the calculation of depreciation in accordance with IFRS. In the UK, we note that there is no alignment between the useful lives of the Group's gas assets for IFRS depreciation purposes, and the period of recovery of the regulatory asset value under regulation. Nevertheless, we conclude that it is reasonable to assume that there will be a valuable use for these assets until 2070. We consider the disclosures in note 1 to the financial statements and the sensitivity analysis in note 13 to the financial statements to be appropriate. We are satisfied that management's other disclosures in the Annual Report and Accounts relating to the uncertainty surrounding the future use of the Group's gas assets are consistent with the financial statements and our understanding of the business.

Independent auditor's report
to the members of National Grid plc continued

5. Key audit matters continued

5.3. Treasury derivative transactions

Key audit matter description	**Account balances: Derivative financial assets and derivative financial liabilities. Refer to notes 17 and 32 to the financial statements.** The Group mitigates the exposure to commodity, interest rate and foreign exchange rate risks with risk management activities including the use of derivatives such as forwards, cross-currency swaps and interest rate swaps. The Group designates derivatives in hedge relationships where they judge this to meet the requirements of IFRS 9. Due to the technical nature of this assessment, we have identified it as a 'higher' audit risk. At 31 March 2021 the Group had derivative financial assets of £999 million (31 March 2020: £1,342 million) and derivative financial liabilities of £899 million (31 March 2020: £1,334 million). The valuation of the derivative portfolio requires management to make certain assumptions and judgements in particular around the valuation methodologies adopted and the discount rate to be applied to forecast cash flows. The portfolio also includes net 'level 3' derivative financial liabilities of £195 million (31 March 2020: £233 million) for which unobservable inputs that are significant to the fair value measurement must be used in the valuation models. This results in management having to make estimates in relation to unobservable inputs, which increase the complexity and level of estimation uncertainty, and there is judgement involved in determining the methodology used to fair value these derivatives. Accordingly, we have identified this as an area of 'higher' audit risk.
How the scope of our audit responded to the key audit matter	We have tested the controls over the recording and valuation of derivative financial instruments. This has included testing of the review controls performed by management over the valuations and its challenge of the estimates made. In conjunction with our treasury specialists we have tested a sample of the valuation models used by management, including a challenge of the assumptions therein, to confirm the appropriateness of the valuation methodology adopted and the assumptions applied. Additionally, we have performed independent valuations. We have obtained third party confirmations to test the completeness and accuracy of the information held within the Group's treasury management system. We have assessed the appropriateness of the hedge documentation, eligibility of designations, hedge effectiveness testing performed by management and tested the disclosures within the financial statements.
Key observations	Our testing confirmed that the relevant controls over the recording and valuation of derivative financial instruments were effective. We concluded that the valuation of derivatives and the Group's use of hedge accounting is appropriate.

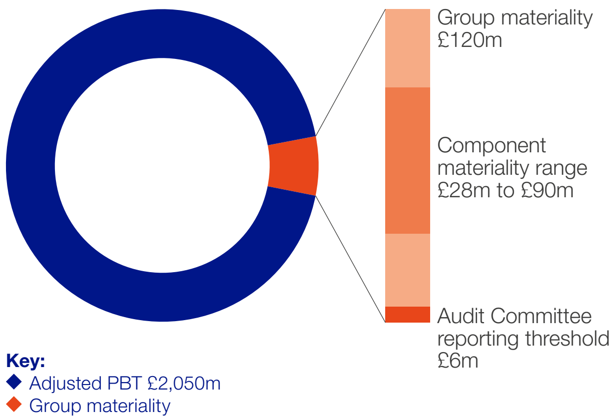
6. Our application of materiality

6.1. Materiality

We define materiality as the magnitude of misstatement in the financial statements that makes it probable that the economic decisions of a reasonably knowledgeable person would be changed or influenced. We use materiality both in planning the scope of our audit work and in evaluating the results of our work.

Based on our professional judgement, we determined materiality for the financial statements as a whole as follows:

	Group financial statements	Parent Company financial statements
Materiality	Materiality has been set at £120 million for the current year (2020: £120 million).	Materiality has been set at £100 million for the current year (2020: £100 million).
Basis for determining materiality	Our determined materiality represents 5.9% (2020: 5.1%) of adjusted profit before tax and 5.8% (2020: 6.8%) of statutory profit before tax. Adjusted profit before tax is profit before tax, exceptional items and remeasurements as disclosed in the consolidated income statement. Prior year materiality was determined on a similar basis.	We determined materiality for our audit of the Parent Company financial statements using 0.68% of net assets (2020: 1.17%). A significant increase in intercompany receivables accounts for most of the increase in net assets. Despite the increase in net assets, we have maintained the materiality consistent with prior year.
Rationale for the benchmark applied	We consider adjusted profit before tax to be an important benchmark of the performance of the Group. We consider it appropriate to adjust for exceptional items and remeasurements as these items are volatile and not reflective of the underlying performance of the Group. We conducted an assessment of which line items we understand to be the most important to investors and analysts by reviewing analyst reports and National Grid's communications to shareholders and lenders, as well as the communications of peer companies. This assessment resulted in us considering the financial statement line items above. Profit before tax is the benchmark ordinarily considered by us when auditing listed entities. It provides comparability against other companies across all sectors, but has limitations when auditing companies whose earnings are impacted by items which can be volatile from one period to the next, and therefore may not be representative of the volume of transactions and the overall size of the business in a given year, or where the impact of volatility may result in the recognition of material income or charges in a particular year. Whilst not an IFRS measure, adjusted profit is one of the key metrics communicated by management in National Grid's results announcements. It excludes some of the volatility arising from changes in fair values of financial assets and liabilities as well as exceptional items. It was also the key measure applied in the prior year.	As the Company is non-trading, operates primarily as a holding company for the Group's trading entities, and is not profit orientated, we believe the net asset position is the most appropriate benchmark to use.



Independent auditor's report
to the members of National Grid plc continued

6. Our application of materiality continued

6.2. Performance materiality

We set performance materiality at a level lower than materiality to reduce the probability that, in aggregate, uncorrected and undetected misstatements exceed the materiality for the financial statements as a whole. Group performance materiality was set at £96 million (2020: £92 million) or 80% of Group materiality (2020: 77%). We set performance materiality for our audit of the Parent Company financial statements at £80 million or 80% of Parent Company materiality, consistent with prior year. In determining performance materiality, we considered the following factors:

- our cumulative experience from prior year audits;
- the level of corrected and uncorrected misstatements identified;
- our risk assessment, including our understanding of the entity and its environment; and
- our assessment of the Group's overall control environment.

Notwithstanding the significant changes in the business environment due to the COVID-19 pandemic, we increased the percentage from that of our 2020 audit to reflect the improving control environment and the continuing low level of adjustments identified by our audit.

6.3. Error reporting threshold

We agreed with the Audit Committee that we would report to the Committee all audit differences in excess of £6 million (2020: £6 million), as well as differences below that threshold that, in our view, warranted reporting on qualitative grounds. We also report to the Audit Committee on disclosure matters that we identified when assessing the overall presentation of the financial statements.

7. An overview of the scope of our audit

7.1. Identification and scoping of components

Our audit was scoped by obtaining an understanding of the Group and its environment and assessing the risks of material misstatements at the Group level. We used data analytics tools and specialists to help inform our understanding of the business, identify key risk areas and evaluate the level of audit coverage required.

The UK Electricity Transmission (including National Grid Electricity System Operator), UK Gas Transmission and US Regulated were subject to a full-scope audit for Group reporting purposes, completed to the individual component materiality levels set out below.

In addition to the above components subject to full scope audit procedures by the component teams, we have identified four other business units which form part of National Grid Ventures and Other, within which there are specific balances identified for audit procedures to be performed. Our audit planning identified the following non-significant components where we consider there to be a reasonable possibility of material misstatement in specific items within the financial statements: Grain LNG, Metering, Interconnectors and UK Property. Accordingly, we have directed component auditors to perform specific audit procedures in relation to material account balances and analytical procedures on the respective income statements and statements of financial position for these components. The work on these components is carried out by the same component audit team as for the UK Electricity Transmission and UK Gas Transmission components. The Grain LNG, Metering and Interconnectors businesses are part of National Grid Ventures. The Property business is part of 'Other'.

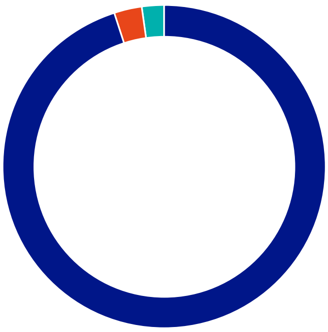
7.1. Identification and scoping of components continued

Business unit	Audit scope	Component materiality
UK Electricity Transmission (including National Grid Electricity System Operator)	Full scope audit	£52.8 million
UK Gas Transmission	Full scope audit	£48 million
US Regulated	Full scope audit	£90 million
Grain LNG	Audit of specified account balances	£28.8 million
Metering	Audit of specified account balances	£28.8 million
Interconnectors	Audit of specified account balances	£28.8 million
Property	Audit of specified account balances	£28.8 million

In addition to the work performed at a component level the Group audit team also performed audit procedures on the Parent Company financial statements, including but not limited to corporate activities such as treasury and pensions as well as on the consolidated financial statements themselves, including entity-level controls, litigation provisions, the consolidation, financial statement disclosures and risk assessment work on components not included elsewhere in the scope of our audit. The Group audit team also led the work in connection with the impact of climate change on the useful lives of the Group's gas assets and co-ordinated certain procedures performed on key areas, such as environmental provisions, where audit work is performed by both the Group and component audit teams as well as analytical reviews on out-of-scope components.

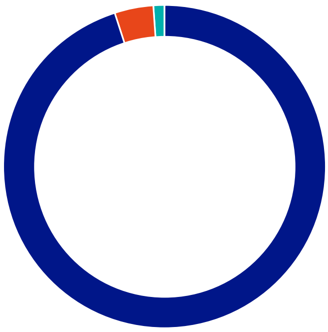
The scope and risk assessment of our audit is consistent with the prior year and our audit coverage of 'Revenue', 'Property, plant and equipment' and 'Gross liabilities' is materially the same as in the prior year.

Revenue (%)



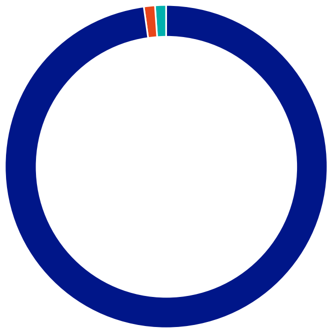
- Full audit scope 95%
- Specified audit procedures 3%
- Review at group level 2%

Property, plant and equipment (%)



- Full audit scope 95%
- Specified audit procedures 4%
- Review at group level 1%

Gross liabilities (%)



- Full audit scope 98%
- Specified audit procedures 1%
- Review at group level 1%

Independent auditor's report
to the members of National Grid plc continued

7. An overview of the scope of our audit continued

7.2. Our consideration of the control environment

Our audit approach was generally to place reliance on management's relevant controls over all business cycles affecting in scope financial statement line items. We tested controls through a combination of tests of inquiry, observation, inspection and re-performance.

In limited situations where we were not able to take a controls reliance approach due to controls being deficient and there not being sufficient mitigating or alternative controls we could rely on instead, we adopted a non-controls reliance approach. All control deficiencies which we considered to be significant were communicated to the Audit Committee. All other deficiencies were communicated to management. For all deficiencies identified, we considered the impact and updated our audit plan accordingly.

The Group's financial systems environment relies on a high number of UK and US applications. In the current year, we scoped 42 IT systems as relevant to the audit. These systems are all directly or indirectly relevant to the entity's financial reporting process.

We planned to rely on the General IT Controls (GITCs) associated with these systems, where the GITCs were appropriately designed and implemented, and these were operating effectively. To assess the operating effectiveness of GITCs, our IT audit specialists performed testing on access security, change management, data centre operations and network operations.

7.3. Working with other auditors

The Group audit team are responsible for the scope and direction of the audit process and provide direct oversight, review and coordination of our component audit teams.

As each of the financially significant components maintains separate financial records we have engaged component auditors from the Deloitte member firms in the US or the UK to perform procedures at these components on our behalf. This approach allows us to engage local auditors who have appropriate knowledge of local regulations to perform this audit work. We issued detailed instructions to the component auditors and directed and supervised their work.

We interacted regularly with the component Deloitte teams during each stage of the audit and reviewed key working papers. We maintained continuous and open dialogue with our component teams in addition to holding formal meetings to ensure that we were fully aware of their progress and results of their procedures.

Our oversight of component auditors focused on the planning of their audit work and key judgements made. In particular, our supervision and direction focused on the work performed in relation to key estimates and judgements made by management. As part of our monitoring of component auditors, we participated in key local audit meetings.

Due to the COVID-19 pandemic and the travel restrictions in place during the year, the senior statutory auditor and other Group audit partners were unable to conduct visits to meet in person with the component teams responsible for the full scope locations. As a result of this, we performed alternative virtual procedures which included attending planning meetings, discussing the audit approach and any issues arising from the component team's work, meetings with local management, and reviewing key audit working papers on higher and significant-risk areas to drive a consistent and high-quality audit. We are satisfied that the level of involvement of the lead audit partner and team in the component audits has been extensive, despite the restrictions from COVID-19 and the impact of remote working, and has enabled us to conclude that sufficient appropriate audit evidence has been obtained in support of our opinion on the Group financial statements as a whole.

8. Other information

The other information comprises the information included in the Annual Report and Accounts, other than the financial statements and our auditor's report thereon. The directors are responsible for the other information contained within the Annual Report and Accounts. Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion thereon.

Our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the course of the audit, or otherwise appears to be materially misstated.

If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether this gives rise to a material misstatement in the financial statements themselves. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact.

We have nothing to report in this regard.

9. Responsibilities of directors

As explained more fully in the directors' responsibilities statement, the directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the directors determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the directors are responsible for assessing the Group's and the Parent Company's ability to continue as a going concern, disclosing as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Group or the Parent Company or to cease operations, or have no realistic alternative but to do so.

10. Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

A further description of our responsibilities for the audit of the financial statements is located on the FRC's website at: www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditor's report.

11. Extent to which the audit was considered capable of detecting irregularities, including fraud

Irregularities, including fraud, are instances of non-compliance with laws and regulations. We design procedures in line with our responsibilities, outlined above, to detect material misstatements in respect of irregularities, including fraud. The extent to which our procedures are capable of detecting irregularities, including fraud is detailed below.

11.1. Identifying and assessing potential risks related to irregularities

In identifying and assessing risks of material misstatement in respect of irregularities, including fraud and non-compliance with laws and regulations, we considered the following:

- the nature of the industry and sector, control environment and business performance including the design of the Group's remuneration policies, key drivers for directors' remuneration, bonus levels and performance targets;
- the Group's own assessment of the risks that irregularities may occur either as a result of fraud or error;
- results of our enquiries of management, internal audit and the Audit Committee about their own identification and assessment of the risks of irregularities;
- any matters we identified having obtained and reviewed the Group's documentation of their policies and procedures relating to:
  - identifying, evaluating and complying with laws and regulations and whether they were aware of any instances of non-compliance;
  - detecting and responding to the risks of fraud and whether they have knowledge of any actual, suspected or alleged fraud; and
  - the internal controls established to mitigate risks of fraud or non-compliance with laws and regulations.
- the matters discussed among the audit engagement team including significant component audit teams and relevant internal specialists, including tax, valuations, pensions, IT and treasury specialists regarding how and where fraud might occur in the financial statements and any potential indicators of fraud. The engagement team includes audit partners and staff who have extensive experience of working with companies in the same sectors that National Grid operates in, and this experience was relevant to the discussion about where fraud risks may arise. The discussion was also carried out across the engagement team specific to the potential fraud implications of COVID-19 in relation to added financial pressures as well as in relation to increases in remote working.

In common with all audits under ISAs (UK), we are also required to perform specific procedures to respond to the risk of management override.

We also obtained an understanding of the legal and regulatory frameworks that the Group operates in, focusing on provisions of those laws and regulations that had a direct effect on the determination of material amounts and disclosures in the financial statements. The key laws and regulations we considered in this context included the UK Companies Act, UK Corporate Governance Code, IFRS as issued by the IASB and adopted by the EU, FRS 101, Listing Rules, pensions and tax legislation, US Securities Exchange Act 1934 and relevant SEC regulations, as well as laws and regulations prevailing in each country in which we identified a full scope component.

In addition, we considered provisions of other laws and regulations that do not have a direct effect on the financial statements but compliance with which may be fundamental to the Group's ability to operate or to avoid a material penalty. These included the Group's operating licences and environmental regulations.

11.2. Audit response to risks identified

As a result of performing the above, we did not identify any key audit matters related to the potential risk of fraud or non-compliance with laws and regulations.

Our procedures to respond to risks identified included the following:

- reviewing the financial statement disclosures and testing to supporting documentation to assess compliance with provisions of relevant laws and regulations described as having a direct effect on the financial statements;
- enquiring of management, the Audit Committee and in-house legal counsel concerning actual and potential litigation and claims;
- performing analytical procedures to identify any unusual or unexpected relationships that may indicate risks of material misstatement due to fraud; and
- reading minutes of meetings of those charged with governance, internal audit reports and reviewing correspondence with relevant regulatory authorities.

In addressing the risk of fraud through management override of controls our procedures included:

- making inquiries of individuals involved in the financial reporting process about inappropriate or unusual activity relating to the processing of journal entries and other adjustments;
- using our data analytics tools, we selected and tested journal entries and other adjustments made at the end of a reporting period or which identified activity that exhibited certain characteristics of audit interest;
- assessing whether the judgements made in making accounting estimates are indicative of a potential bias, and evaluating the business rationale of any significant transactions that are unusual or outside the normal course of business;
- performing analytical procedures to identify any unusual or unexpected relationships that may indicate risks of material misstatement due to fraud; and
- considering whether there were any significant transactions that are outside the normal course of business, or that otherwise appear to be unusual due to their nature, timing or size.

We also communicated relevant identified laws and regulations and potential fraud risks to all engagement team members including internal specialists and significant component audit teams, and remained alert to any indications of fraud or non-compliance with laws and regulations throughout the audit.

Independent auditor's report
to the members of National Grid plc continued

Report on other legal and regulatory requirements

12. Opinions on other matters prescribed by the Companies Act 2006

In our opinion the part of the directors' remuneration report to be audited has been properly prepared in accordance with the Companies Act 2006.

In our opinion, based on the work undertaken in the course of the audit:

- the information given in the strategic report and the directors' report for the financial year for which the financial statements are prepared is consistent with the financial statements; and
- the strategic report and the directors' report have been prepared in accordance with applicable legal requirements.

In the light of the knowledge and understanding of the Group and the Parent Company and their environment obtained in the course of the audit, we have not identified any material misstatements in the strategic report or the directors' report.

13. Corporate Governance Statement

The Listing Rules require us to review the directors' statement in relation to going concern, longer-term viability and that part of the Corporate Governance Statement relating to the Group's compliance with the provisions of the UK Corporate Governance Code specified for our review.

Based on the work undertaken as part of our audit, we have concluded that each of the following elements of the Corporate Governance Statement is materially consistent with the financial statements and our knowledge obtained during the audit:

- the directors' statement with regards to the appropriateness of adopting the going concern basis of accounting and any material uncertainties identified set out on page 135;
- the directors' explanation as to its assessment of the Group's prospects, the period this assessment covers and why the period is appropriate set out on pages 28 – 29;
- the directors' statement on fair, balanced and understandable set out on pages 84 and 86;
- the board's confirmation that it has carried out a robust assessment of the emerging and principal risks set out on page 25 – 27 and 29;
- the section of the Annual Report and Accounts that describes the review of effectiveness of risk management and internal control systems set out on page 24 – 27; and
- the section describing the work of the Audit Committee set out on pages 83 – 87.

14. Matters on which we are required to report by exception

14.1. Adequacy of explanations received and accounting records

Under the Companies Act 2006 we are required to report to you if, in our opinion:

- we have not received all the information and explanations we require for our audit; or
- adequate accounting records have not been kept by the Parent Company, or returns adequate for our audit have not been received from branches not visited by us; or
- the Parent Company financial statements are not in agreement with the accounting records and returns.

We have nothing to report in respect of these matters.

14.2. Directors' remuneration

Under the Companies Act 2006 we are also required to report if in our opinion certain disclosures of directors' remuneration have not been made or the part of the directors' remuneration report to be audited is not in agreement with the accounting records and returns.

We have nothing to report in respect of these matters.

15. Other matters which we are required to address

15.1. Auditor tenure

We became independent and commenced our audit transition on 1 January 2017. Following the recommendation of the Audit Committee, we were appointed by the Shareholders at the Annual General Meeting on 31 July 2017 to audit the financial statements for the year ending 31 March 2018 and subsequent financial periods.

The period of total uninterrupted engagement including previous renewals and reappointments of the firm is four years, covering the years ending 31 March 2018 to 31 March 2021.

15.2. Consistency of the audit report with the additional report to the Audit Committee

Our audit opinion is consistent with the additional report to the Audit Committee we are required to provide in accordance with ISAs (UK).

16. Use of our report

This report is made solely to the Company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the Company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Company and the Company's members as a body, for our audit work, for this report, or for the opinions we have formed.

Douglas King FCA (Senior statutory auditor)
For and on behalf of Deloitte LLP
Statutory Auditor
London, United Kingdom
19 May 2021

Consolidated income statement

for the years ended 31 March

2021	Notes	Before exceptional items and remeasurements £m	Exceptional items and remeasurements (note 5) £m	Total £m
Continuing operations				
Revenue	2(a),3	**14,779**	**–**	**14,779**
Provision for bad and doubtful debts	4	**(326)**	**–**	**(326)**
Other operating costs	4,5	**(11,527)**	**(31)**	**(11,558)**
Operating profit/(loss)	2(b)	**2,926**	**(31)**	**2,895**
Finance income	5,6	**35**	**23**	**58**
Finance costs	5,6	**(977)**	**49**	**(928)**
Share of post-tax results of joint ventures and associates	5,16	**66**	**(8)**	**58**
Profit before tax	2(b),5	**2,050**	**33**	**2,083**
Tax	5,7	**(416)**	**(26)**	**(442)**
Total profit for the year		**1,634**	**7**	**1,641**
Attributable to:				
Equity shareholders of the parent		**1,633**	**7**	**1,640**
Non-controlling interests from continuing operations		**1**	**–**	**1**
Earnings per share (pence)				
Basic earnings per share (continuing)	8			**46.6**
Diluted earnings per share (continuing)	8			**46.3**
Basic earnings per share (continuing and discontinued)	8			**46.6**
Diluted earnings per share (continuing and discontinued)	8			**46.3**

2020	Notes	Before exceptional items and remeasurements £m	Exceptional items and remeasurements (note 5) £m	Total £m
Continuing operations				
Revenue	2(a),3	14,540	–	14,540
Provision for bad and doubtful debts	4	(234)	–	(234)
Other operating costs	4,5	(10,999)	(527)	(11,526)
Operating profit/(loss)	2(b)	3,307	(527)	2,780
Finance income	5,6	70	(16)	54
Finance costs	5,6	(1,119)	(48)	(1,167)
Share of post-tax results of joint ventures and associates	5,16	88	(1)	87
Profit/(loss) before tax	2(b),5	2,346	(592)	1,754
Tax	5,7	(433)	(47)	(480)
Profit/(loss) after tax from continuing operations	5	1,913	(639)	1,274
Profit/(loss) after tax from discontinued operations	10	5	(14)	(9)
Total profit/(loss) for the year (continuing and discontinued)		1,918	(653)	1,265
Attributable to:				
Equity shareholders of the parent		1,917	(653)	1,264
Non-controlling interests from continuing operations		1	–	1
Earnings per share (pence)				
Basic earnings per share (continuing)	8			36.8
Diluted earnings per share (continuing)	8			36.6
Basic earnings per share (continuing and discontinued)	8			36.5
Diluted earnings per share (continuing and discontinued)	8			36.3

Consolidated income statement

for the years ended 31 March continued

2019	Notes	Before exceptional items and remeasurements £m	Exceptional items and remeasurements (note 5) £m	Total £m
Continuing operations				
Revenue	2(a),3	14,933	—	14,933
Provision for bad and doubtful debts	4	(181)	—	(181)
Other operating costs	4,5	(11,310)	(572)	(11,882)
Operating profit/(loss)	2(b)	3,442	(572)	2,870
Finance income	5,6	73	15	88
Finance costs	5,6	(1,066)	(91)	(1,157)
Share of post-tax results of joint ventures and associates	10	40	—	40
Profit/(loss) before tax	2(b),5	2,489	(648)	1,841
Tax	5,7	(488)	149	(339)
Profit/(loss) after tax from continuing operations	5	2,001	(499)	1,502
Profit/(loss) after tax from discontinued operations	10	57	(45)	12
Total profit/(loss) for the year (continuing and discontinued)		2,058	(544)	1,514
Attributable to:				
Equity shareholders of the parent		2,055	(544)	1,511
Non-controlling interests from continuing operations		3	—	3
Earnings per share (pence)				
Basic earnings per share (continuing)	8			44.3
Diluted earnings per share (continuing)	8			44.1
Basic earnings per share (continuing and discontinued)	8			44.6
Diluted earnings per share (continuing and discontinued)	8			44.4

Consolidated statement of comprehensive income

for the years ended 31 March

	Notes	2021 £m	2020 £m	2019 £m
Profit after tax from continuing operations		**1,641**	1,274	1,502
Other comprehensive income from continuing operations				
Items from continuing operations that will never be reclassified to profit or loss:				
Remeasurement gains/(losses) on pension assets and post-retirement benefit obligations	25	**1,408**	(724)	68
Net gains/(losses) on equity instruments designated at fair value through other comprehensive income		**46**	(9)	—
Net (losses)/gains on financial liability designated at fair value through profit and loss attributable to changes in own credit risk		**(11)**	(3)	7
Net losses in respect of cash flow hedging of capital expenditure		**(14)**	(17)	(13)
Tax on items that will never be reclassified to profit or loss	7	**(422)**	212	(15)
Total items from continuing operations that will never be reclassified to profit or loss		**1,007**	(541)	47
Items from continuing operations that may be reclassified subsequently to profit or loss:				
Exchange adjustments[1]		**(1,347)**	561	361
Net gains/(losses) in respect of cash flow hedges		**70**	(128)	(40)
Net gains/(losses) in respect of cost of hedging		**14**	(78)	(66)
Net gains/(losses) on investment in debt instruments measured at fair value through other comprehensive income		**80**	(15)	2
Share of other comprehensive income/(losses) of associates, net of tax		**1**	(5)	1
Tax on items that may be reclassified subsequently to profit or loss	7	**(8)**	35	12
Total items from continuing operations that may be reclassified subsequently to profit or loss		**(1,190)**	370	270
Other comprehensive (loss)/income for the year, net of tax from continuing operations		**(183)**	(171)	317
Other comprehensive income for the year, net of tax from discontinued operations[2]	10	**–**	6	36
Other comprehensive (loss)/income for the year, net of tax		**(183)**	(165)	353
Total comprehensive income for the year from continuing operations		**1,458**	1,103	1,819
Total comprehensive (loss)/income for the year from discontinued operations	10	**–**	(3)	48
Total comprehensive income for the year		**1,458**	1,100	1,867
Attributable to:				
Equity shareholders of the parent				
From continuing operations		**1,459**	1,101	1,815
From discontinued operations		**–**	(3)	48
		1,459	1,098	1,863
Non-controlling interests				
From continuing operations		**(1)**	2	4

1. Comparative amounts have been revised as described in note 1F.
2. The other comprehensive income from discontinued operations relates to the items of other comprehensive income of Cadent (investment through Quadgas HoldCo Limited). Refer to note 10 for details.

Consolidated statement of changes in equity

for the years ended 31 March

	Share capital £m	Share premium account £m	Retained earnings £m	Other equity reserves[1] £m	Total shareholders' equity £m	Non-controlling interests £m	Total equity £m
At 31 March 2018 (as previously reported)	452	1,321	21,599	(4,540)	18,832	16	18,848
Prior year adjustment[2]	—	—	185	—	185	—	185
Impact of transition to IFRS 9 and IFRS 15	—	—	(268)	72	(196)	—	(196)
At 31 March 2018 (as restated)	452	1,321	21,516	(4,468)	18,821	16	18,837
Profit for the year	—	—	1,511	—	1,511	3	1,514
Other comprehensive income for the year	—	—	89	263	352	1	353
Total comprehensive income for the year	—	—	1,600	263	1,863	4	1,867
Equity dividends	—	—	(1,160)	—	(1,160)	—	(1,160)
Scrip dividend-related share issue[3]	6	(7)	—	—	(1)	—	(1)
Issue of treasury shares	—	—	18	—	18	—	18
Purchase of own shares	—	—	(2)	—	(2)	—	(2)
Share-based payments	—	—	27	—	27	—	27
Cash flow hedges transferred to the statement of financial position, net of tax	—	—	—	(18)	(18)	—	(18)
At 1 April 2019	458	1,314	21,999	(4,223)	19,548	20	19,568
Profit for the year	—	—	1,264	—	1,264	1	1,265
Other comprehensive (loss)/income for the year	—	—	(509)	343	(166)	1	(165)
Total comprehensive income for the year	—	—	755	343	1,098	2	1,100
Equity dividends	—	—	(892)	—	(892)	—	(892)
Scrip dividend-related share issue[3]	12	(13)	—	—	(1)	—	(1)
Issue of treasury shares	—	—	17	—	17	—	17
Purchase of own shares	—	—	(6)	—	(6)	—	(6)
Share-based payments	—	—	19	—	19	—	19
Tax on share-based payments	—	—	3	—	3	—	3
Cash flow hedges transferred to the statement of financial position, net of tax	—	—	—	(15)	(15)	—	(15)
At 1 April 2020	470	1,301	21,895	(3,895)	19,771	22	19,793
Profit for the year	—	—	1,640	—	1,640	1	1,641
Other comprehensive income/(loss) for the year	—	—	1,001	(1,182)	(181)	(2)	(183)
Total comprehensive income/(loss) for the year	—	—	2,641	(1,182)	1,459	(1)	1,458
Equity dividends	—	—	(1,413)	—	(1,413)	—	(1,413)
Scrip dividend-related share issue[3]	4	(5)	—	—	(1)	—	(1)
Issue of treasury shares	—	—	17	—	17	—	17
Purchase of own shares	—	—	(2)	—	(2)	—	(2)
Share-based payments	—	—	27	—	27	—	27
Tax on share-based payments	—	—	(2)	—	(2)	—	(2)
Cash flow hedges transferred to the statement of financial position, net of tax	—	—	—	(17)	(17)	—	(17)
At 31 March 2021	**474**	**1,296**	**23,163**	**(5,094)**	**19,839**	**21**	**19,860**

1. For further details of other equity reserves, see note 28.
2. Comparative amounts have been revised as described in note 1F.
3. Included within the share premium account are costs associated with scrip dividends.

Consolidated statement of financial position

as at 31 March

	Notes	2021 £m	2020 £m	2019 £m
Non-current assets				
Goodwill[1]	11	**4,588**	5,712	5,372
Other intangible assets	12	**1,443**	1,295	1,084
Property, plant and equipment[1]	13	**47,043**	49,762	44,859
Other non-current assets	14	**293**	354	264
Pension assets	25	**1,747**	1,849	1,567
Financial and other investments	15	**755**	543	667
Investments in joint ventures and associates	16	**867**	995	608
Derivative financial assets	17	**542**	1,249	1,045
Total non-current assets		**57,278**	61,759	55,466
Current assets				
Inventories and current intangible assets	18	**439**	549	370
Trade and other receivables	19	**2,919**	2,986	3,153
Current tax assets		**67**	102	126
Financial and other investments	15	**2,342**	1,998	1,981
Derivative financial assets	17	**457**	93	108
Cash and cash equivalents	20	**157**	73	252
Assets held for sale	10	**3,557**	—	1,956
Total current assets		**9,938**	5,801	7,946
Total assets		**67,216**	67,560	63,412
Current liabilities				
Borrowings	21	**(3,737)**	(4,072)	(4,472)
Derivative financial liabilities	17	**(145)**	(380)	(350)
Trade and other payables	22	**(3,517)**	(3,602)	(3,769)
Contract liabilities	23	**(66)**	(76)	(61)
Current tax liabilities		**(75)**	(86)	(161)
Provisions	26	**(260)**	(348)	(316)
Liabilities held for sale	10	**(1,568)**	—	—
Total current liabilities		**(9,368)**	(8,564)	(9,129)
Non-current liabilities				
Borrowings	21	**(27,483)**	(26,722)	(24,258)
Derivative financial liabilities	17	**(754)**	(954)	(833)
Other non-current liabilities	24	**(843)**	(891)	(808)
Contract liabilities	23	**(1,094)**	(1,082)	(933)
Deferred tax liabilities[1]	7	**(4,815)**	(4,446)	(4,215)
Pensions and other post-retirement benefit obligations	25	**(1,032)**	(2,802)	(1,785)
Provisions	26	**(1,967)**	(2,306)	(1,883)
Total non-current liabilities		**(37,988)**	(39,203)	(34,715)
Total liabilities		**(47,356)**	(47,767)	(43,844)
Net assets		**19,860**	19,793	19,568
Equity				
Share capital	27	**474**	470	458
Share premium account		**1,296**	1,301	1,314
Retained earnings[1]		**23,163**	21,895	21,999
Other equity reserves[1]	28	**(5,094)**	(3,895)	(4,223)
Total shareholders' equity		**19,839**	19,771	19,548
Non-controlling interests		**21**	22	20
Total equity		**19,860**	19,793	19,568

1. Comparative amounts have been revised as described in note 1F.

The consolidated financial statements set out on pages 129 to 216 were approved by the Board of Directors on 19 May 2021 and were signed on its behalf by:

Sir Peter Gershon Chairman
Andy Agg Chief Financial Officer

National Grid plc
Registered number: 4031152

Consolidated cash flow statement

for the years ended 31 March

	Notes	2021 £m	2020 £m	2019 £m
Cash flows from operating activities				
Total operating profit from continuing operations	2(b)	**2,895**	2,780	2,870
Adjustments for:				
Exceptional items and remeasurements	5	**31**	527	572
Other fair value movements		**(22)**	–	–
Depreciation, amortisation and impairment		**1,672**	1,640	1,588
Share-based payments		**27**	19	27
Changes in working capital		**312**	269	40
Changes in provisions		**(195)**	(169)	(110)
Changes in pensions and other post-retirement benefit obligations		**(55)**	(92)	(123)
Cash flows relating to exceptional items		**(47)**	(60)	(400)
Cash generated from operations – continuing operations		**4,618**	4,914	4,464
Tax paid		**(157)**	(199)	(75)
Net cash inflow from operating activities – continuing operations		**4,461**	4,715	4,389
Net cash used in operating activities – discontinued operations	10	**–**	(97)	(71)
Cash flows from investing activities				
Acquisition of financial investments		**(99)**	(108)	(89)
Acquisition of National Grid Renewables (formerly Geronimo) and Emerald	38	**(26)**	(139)	–
Investments in joint ventures and associates		**(81)**	(82)	(143)
Loans to joint ventures and associates		**–**	–	(31)
Disposal of financial investments		**66**	63	18
Disposal of interests in Quadgas HoldCo Limited	10	**–**	1,965	–
Purchases of intangible assets		**(426)**	(317)	(306)
Purchases of property, plant and equipment		**(4,362)**	(4,583)	(3,635)
Disposals of property, plant and equipment		**8**	68	38
Dividends received from joint ventures and associates		**80**	75	68
Interest received		**16**	73	68
Net movements in short-term financial investments		**(436)**	7	822
Cash inflows on derivatives		**225**	58	17
Cash outflows on derivatives		**(81)**	(281)	(429)
Net cash flow used in investing activities – continuing operations		**(5,116)**	(3,201)	(3,602)
Net cash flow used in investing activities – discontinued operations	10	**–**	6	156
Cash flows from financing activities				
Proceeds from issue of treasury shares		**16**	16	17
Purchase of own shares		**(2)**	(6)	(2)
Proceeds received from loans	29(c)	**5,645**	4,218	2,932
Repayment of loans	29(c)	**(1,663)**	(3,253)	(1,969)
Payments of lease liabilities	29(c)	**(112)**	(121)	(70)
Net movements in short-term borrowings	29(c)	**(759)**	(424)	179
Cash inflows on derivatives	29(c)	**58**	62	221
Cash outflows on derivatives	29(c)	**(185)**	(249)	(186)
Interest paid	29(c)	**(835)**	(957)	(914)
Dividends paid to shareholders		**(1,413)**	(892)	(1,160)
Net cash flow from/(used in) financing activities – continuing operations		**750**	(1,606)	(952)
Net increase/(decrease) in cash and cash equivalents	29(b)	**95**	(183)	(80)
Reclassification to held for sale	10,29(b)	**(4)**	–	–
Exchange movements		**(7)**	4	3
Cash and cash equivalents at start of year		**73**	252	329
Cash and cash equivalents at end of year	20	**157**	73	252

Notes to the consolidated financial statements

1. Basis of preparation and recent accounting developments

Accounting policies describe our approach to recognising and measuring transactions and balances in the year. The accounting policies applicable across the financial statements are shown below, whereas accounting policies that are specific to a component of the financial statements have been incorporated into the relevant note.

This section also shows areas of judgement and key sources of estimation uncertainty in these financial statements. In addition, we have summarised new International Accounting Standards Board (IASB) and EU endorsed accounting standards, amendments and interpretations and whether these are effective for this year end or in later years, explaining how significant changes are expected to affect our reported results.

National Grid's principal activities involve the transmission and distribution of electricity and gas in Great Britain and northeastern US. The Company is a public limited liability company incorporated and domiciled in England and Wales, with its registered office at 1–3 Strand, London WC2N 5EH.

The Company, National Grid plc, which is the ultimate parent of the Group, has its primary listing on the London Stock Exchange and is also quoted on the New York Stock Exchange.

These consolidated financial statements were approved for issue by the Board on 19 May 2021.

These consolidated financial statements have been prepared in accordance with International Accounting Standards (IAS) and International Financial Reporting Standards (IFRS) and related interpretations as issued by the IASB and IFRS as adopted by the EU. They are prepared on the basis of all IFRS accounting standards and interpretations that are mandatory for periods ended 31 March 2021 and in accordance with the Companies Act 2006 applicable to companies reporting under IFRS adopted pursuant to Regulation (EC) No. 1606/2002 as it applies in the European Union. The comparative financial information has also been prepared on this basis.

The consolidated financial statements have been prepared on a historical cost basis, except for the recording of pension assets and liabilities, the revaluation of derivative financial instruments and certain commodity contracts and certain financial assets and liabilities measured at fair value.

These consolidated financial statements are presented in pounds sterling, which is also the functional currency of the Company.

The notes to the financial statements have been prepared on a continuing basis unless otherwise stated.

Our income statement and segmental analysis separately identify financial results before and after exceptional items and remeasurements. We continue to use a columnar presentation as we consider it improves the clarity of the presentation, and is consistent with the way that financial performance is measured by management and reported to the Board and the Executive Committee, and assists users of the financial statements to understand the results. The inclusion of total profit for the period from continuing operations before exceptional items and remeasurements is used to derive part of the incentive target set annually for remunerating certain Executive Directors and accordingly we believe it is important for users of the financial statements to understand how this compares to our results on a statutory basis and period on period.

A. Going concern

As part of the Directors' consideration of the appropriateness of adopting the going concern basis of accounting in preparing these financial statements, the Directors have considered both the impact of COVID-19 on the Group's operations alongside the impact of the acquisition of PPL WPD Investments Limited (WPD) (see note 38) and subsequent disposal of The Narragansett Electric Company (NECO) (see note 10) and the expected planned disposal of a majority stake of National Grid Gas plc. The Directors have assessed the principal risks discussed on pages 24 – 27, including by modelling both a base case and a reasonable worst case scenario.

Reasonable worst-case: The reasonable worst-case scenario covers the materially adverse cash flow impact associated with a further year of COVID-19 disruption across both the UK and US, with a subsequent phased return to normal operations, increased cash outflows from higher costs (e.g. storms), while still delivering our planned capital investment programme for the year ended 31 March 2022. The continuing economic impact of COVID-19 and the consequential impact on cash collections and capital programmes is the key judgement applied in the analysis. The main cash flow impacts identified in the reasonable worst-case scenario are:

- a significant reduction in cash collections driven by lower customer demand and increased bad debt in our US businesses;
- additional working capital required to fund payment term extensions and charge deferrals in the UK electricity market, intended to help customers and end-user consumers; and
- further increases in other costs such as cleaning, safety equipment and IT; offset by a continued reduction in discretionary spend across all areas (e.g. recruitment, travel and consultancy spend).

Impact of WPD acquisition: The cash flows associated with WPD have been based on historic actuals alongside information obtained as part of the financial due diligence process and associated discussions with WPD management. The Directors noted the impact of the transaction on the Group's financing position as below:

- a new bridge facility of £8.25 billion to finance the acquisition, with the first repayment of the bridge expected to be from the proceeds of the announced planned business disposals in 2022; and
- c.£1.1 billion of committed facilities to fund WPD working capital.

As part of their analysis, the Board also considered the following potential levers at their discretion to improve the position identified by the analysis if the debt capital markets are not accessible:

- the payment of dividends to shareholders;
- significant changes in the phasing of the Group's capital programme with elements of non-essential works and programmes delayed; and
- a number of further reductions in operating expenditure across the Group primarily related to workforce cost reductions in both the UK and the US.

Having considered the reasonable worst-case scenario, the impact of the acquisition of WPD (and any penalties if the transaction did not proceed), the timing of the NECO and National Grid Gas plc transactions, and the further levers at the Board's discretion, the Group continues to have headroom against the Group's committed facilities identified in note 33 to the financial statements.

In addition to the above, the ability to raise new financing was separately included in the analysis, and the Directors noted the c.£5.6 billion debt issuances completed in the period from 1 April 2020 to 31 March 2021 (disclosed in note 21 to the financial statements) as evidence of the Group's ability to continue to have access to the debt capital markets if needed. Other factors considered by the Board as part of their Going Concern assessment included the final determinations of the UK RIIO-2 price controls process, the Group's various ongoing rate case determinations in the US alongside inherent uncertainties in cash flow forecasts (such as the impact of storms in our US business).

Based on the above, the Directors have concluded the Group is well placed to manage its financing and other business risks satisfactorily and have a reasonable expectation that the Group will have adequate resources to continue in operation for at least 12 months from the signing date of these consolidated financial statements. They therefore consider it appropriate to adopt the going concern basis of accounting in preparing the financial statements.

Notes to the consolidated financial statements
continued

1. Basis of preparation and recent accounting developments continued

B. Basis of consolidation
The consolidated financial statements incorporate the results, assets and liabilities of the Company and its subsidiaries, together with a share of the results, assets and liabilities of joint operations.

A subsidiary is defined as an entity controlled by the Group. Control is achieved where the Group is exposed to, or has the rights to, variable returns from its involvement with the entity and has the power to affect those returns through its power over the entity.

The Group accounts for joint ventures and associates using the equity method of accounting, where the investment is carried at cost plus post-acquisition changes in the share of net assets of the joint venture or associate, less any provision for impairment. Losses in excess of the consolidated interest in joint ventures and associates are not recognised, except where the Company or its subsidiaries have made a commitment to make good those losses.

Where necessary, adjustments are made to bring the accounting policies used in the individual financial statements of the Company, subsidiaries, joint operations, joint ventures and associates into line with those used by the Group in its consolidated financial statements under IFRS. Intercompany transactions are eliminated.

The results of subsidiaries, joint operations, joint ventures and associates acquired or disposed of during the year are included in the consolidated income statement from the effective date of acquisition or up to the effective date of disposal, as appropriate.

Acquisitions are accounted for using the acquisition method, where the purchase price is allocated to the identifiable assets acquired and liabilities assumed on a fair value basis and the remainder recognised as goodwill.

C. Foreign currencies
Transactions in currencies other than the functional currency of the Company or subsidiary concerned are recorded at the rates of exchange prevailing on the dates of the transactions. At each reporting date, monetary assets and liabilities that are denominated in foreign currencies are retranslated at closing exchange rates. Non-monetary assets are not retranslated unless they are carried at fair value.

Gains and losses arising on the retranslation of monetary assets and liabilities are included in the income statement, except where the application of hedge accounting requires inclusion in other comprehensive income (see note 32(e)).

On consolidation, the assets and liabilities of operations that have a functional currency different from the Company's functional currency of pounds sterling, principally our US operations that have a functional currency of US dollars, are translated at exchange rates prevailing at the reporting date. Income and expense items are translated at the average exchange rates for the period where these do not differ materially from rates at the date of the transaction. Exchange differences arising are recognised in other comprehensive income and transferred to the consolidated translation reserve within other equity reserves (see note 28).

D. Disposal of The Narragansett Electric Company
As described further in note 10, on 17 March 2021, the Group signed an agreement to sell 100% of the share capital of a wholly owned subsidiary, The Narragansett Electric Company (NECO). The sale is expected to complete in early 2022 once all regulatory approvals are obtained.

As the sale is considered highly probable and is expected to complete within a year, the associated assets and liabilities have been presented as held for sale in the consolidated statement of financial position. However, the transaction has not met the criteria for classification as a discontinued operation and therefore its results for the period are not separately disclosed on the face of the income statement.

E. Areas of judgement and key sources of estimation uncertainty
The preparation of financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosures of contingent assets and liabilities, and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from these estimates. Information about such judgements and estimations is in the notes to the financial statements, and the key areas are summarised below.

Areas of judgement that have the most significant effect on the amounts recognised in the financial statements are as follows:

- categorisation of certain items as exceptional items or remeasurements and the definition of adjusted earnings (see notes 5 and 8). In applying the Group's exceptional items framework, we have considered a number of key matters, as detailed in note 5;
- the judgement that notwithstanding legislation enacted and targets committing the UK, New York State and Massachusetts to achieving net zero greenhouse gas emissions by 2050, these do not trigger a reassessment of the remaining useful economic lives of our gas network assets (see estimate below and note 13); and
- following the legal separation of the Electricity System Operator on 1 April 2019, we concluded that the Electricity System Operator acts as an agent in respect of certain Transmission Network Use of Service revenues, principally those collected on behalf of the Scottish and Offshore transmission operators, as detailed in note 3.

Key sources of estimation uncertainty that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are as follows:

- the valuation of liabilities for pensions and other post-retirement benefits (see note 25); and
- the cash flows applied in determining the environmental provisions, in particular relating to three US Superfund sites (see note 26).

In light of the current ongoing impact of the COVID-19 pandemic, valuations of certain assets and liabilities are necessarily more subjective. The main impact at 31 March 2021 is the consideration of the recoverability of customer receivables, particularly in relation to US retail customers, in light of the suspension of debt collection activities and customer termination activities (see note 19), which is an area of estimation uncertainty impacting the Group's position as at 31 March 2021.

In addition, we also highlight the estimates made regarding the useful economic lives of our gas network assets due to the length over which they are being depreciated, the potential for new and evolving technologies over that period, and the range of potential pathways for meeting net zero targets (see note 13 for details and sensitivity analysis).

In order to illustrate the impact that changes in assumptions for the valuation of pension assets and liabilities and cash flows for environmental provisions could have on our results and financial position, we have included sensitivity analyses in note 35. Information on what we believe a reasonably possible range of outcomes to be on the recoverability of customer receivables are included in note 19.

1. Basis of preparation and recent accounting developments continued

F. Comparative period revisions

During the year, we have revised the comparative balances primarily to reflect adjustments between property, plant and equipment and goodwill related to the accounting performed for acquisitions made by our US business between 2000 and 2007. The adjustments related to the treatment of certain regulatory liabilities recognised under US GAAP on the acquisition balance sheets under UK GAAP and IFRS. This resulted in an overstatement of goodwill and an understatement of property, plant and equipment. The adjustments had a resulting impact on the deferred tax balances that were recognised at the time of the acquisitions and therefore, these have also been updated for all periods presented, also taking into account any subsequent changes in tax rates. The translation reserve on consolidation of these subsidiaries was also updated.

There have been no income statement impacts (and therefore no impact on the previously reported earnings per share) for any of the periods presented. Opening retained earnings have increased to correct the income statement impact of amortising the overstated goodwill from the period after acquisition until the adoption of IFRS in 2005 and for the impact on deferred tax of the tax rate changes noted above. Any foreign exchange impacts are recorded within the translation reserve within other equity reserves.

Below we set out the impacted line items and the adjustments to our opening statement of financial position as at 1 April 2018. In addition, we set out the adjustments to previously presented balances as at 31 March 2019 and 31 March 2020 (with the only movement each period being as a result of foreign exchange movements):

	1 April 2018 £m	31 March 2019 £m	31 March 2020 £m
Goodwill	(460)	(497)	(521)
Property, plant and equipment	877	946	992
Deferred tax liability	232	250	262
Retained earnings	185	185	185
Translation reserve	—	14	24

G. Accounting policy choices

IFRS provides certain options available within accounting standards. Choices we have made, and continue to make, include the following:

- Presentational formats: we use the nature of expense method for our income statement and aggregate our statement of financial position to net assets and total equity. In the income statement, we present subtotals of total operating profit, profit before tax and profit after tax from continuing operations, together with additional subtotals excluding exceptional items and remeasurements as a result of the three columnar presentation described earlier. Exceptional items and remeasurements are presented in a separate column on the face of the income statement.
- Financial instruments: we normally opt to apply hedge accounting in most circumstances where this is permitted (see note 32(e)).

H. New IFRS accounting standards and interpretations effective for the year ended 31 March 2021

The UK's Financial Conduct Authority announced that the London Inter-bank Offered Rate (LIBOR) will cease to exist by the end of 2021, and will be replaced by alternative reference rates. In September 2019, the IASB amended IFRS 9 and IFRS 7 by issuing Phase I of Interest Rate Benchmark Reform, which modified certain hedge accounting requirements to allow hedge accounting to continue for affected hedges during the period of uncertainty before the hedged items or hedging instruments were amended as a result of the change in the reference rate. The amendments were endorsed in January 2020 for adoption in the EU. The Group early-adopted these changes to IFRS 9 and IFRS 7 with effect from 1 April 2019. Phase II was issued in August 2020 and endorsed in January 2021 for adoption in the EU, resulting in amendments to IFRS 9, IFRS 7 and IFRS 16. The Group has early-adopted these amendments with effect from 1 April 2020 as they enable the Company and its subsidiaries to reflect the effects of transitioning from LIBOR to alternative benchmark interest rates without giving rise to accounting impacts that would not provide useful information to users of the financial statements. There were no transition adjustments on adoption of either phase and the Group has not restated the prior period, but instead has applied the amendments prospectively. Refer to note 32(d) for further details on the contracts to be transitioned to the new alternative benchmark interest rate and for details of our migration project.

The Group has also adopted the following amendments to standards, which have had no material impact on the Group's results or financial statement disclosure:

- amendments to IFRS 16 'Leases – COVID-19 Related Rent Concessions';
- amendments to IFRS 3 'Business Combinations';
- amendments to IAS 1 and IAS 8 'Definition of Material'; and
- amendments to the References to the Conceptual Framework.

I. New IFRS accounting standards and interpretations not yet adopted

With effect from the period commencing 1 April 2021, the consolidated financial statements will be prepared in accordance with IAS and IFRS and related interpretations as adopted by the UK, instead of those adopted by the EU. As both sets of accounting standards are currently aligned, there will be no transitional adjustments required and comparative amounts will not be required to be restated.

The following new accounting standards and amendments to existing standards have been issued but are not yet effective or have not yet been endorsed by the EU:

- IFRS 17 'Insurance Contracts';
- amendments to IFRS 3 'Business Combinations';
- amendments to IAS 16 'Property, Plant and Equipment';
- amendments to IAS 37 'Provisions, Contingent Liabilities and Contingent Assets';
- amendments to IAS 1 'Presentation of Financial Statements';
- amendments to IAS 8 'Accounting Policies, Changes in Accounting Estimates and Errors'; and
- annual improvements to IFRS standards 2018-2020.

Effective dates will be subject to the UK endorsement process.

The Group is currently assessing the impact of the above standards, but they are not expected to have a material impact. The Group has not adopted any other standard, amendment or interpretation that has been issued but is not yet effective.

Notes to the consolidated financial statements
continued

2. Segmental analysis

This note sets out the financial performance for the year split into the different parts of the business (operating segments). The performance of these operating segments is monitored and managed on a day-to-day basis. Revenue and the results of the business are analysed by operating segment, based on the information the Board of Directors uses internally for the purposes of evaluating the performance of each operating segment and determining resource allocation between them. The Board is National Grid's chief operating decision maker (as defined by IFRS 8 'Operating Segments') and assesses the profitability of operations principally on the basis of operating profit before exceptional items and remeasurements (see note 5). As a matter of course, the Board also considers profitability by segment, excluding the effect of timing. However, the measure of profit disclosed in this note is operating profit before exceptional items and remeasurements as this is the measure that is most consistent with the IFRS results reported within these financial statements.

The results of our three principal businesses are reported to the Board of Directors and are treated as reportable operating segments. The following table describes the main activities for each reportable operating segment:

UK Electricity Transmission	The high-voltage electricity transmission networks in England and Wales and independent Great Britain system operator.
UK Gas Transmission	The high-pressure gas transmission networks in Great Britain and system operator in Great Britain.
US Regulated	Gas distribution networks, electricity distribution networks and high-voltage electricity transmission networks in New York and New England and electricity generation facilities in New York.

The UK Electricity Transmission segment also includes the independent Electricity System Operator (ESO). Although there is a separate governance structure (including a separate Executive Committee), the Board receives financial information on an aggregated UK Electricity Transmission basis, which includes the results of the ESO, and accordingly the ESO is included within the reportable segment.

National Grid Ventures (NGV) is our only other operating segment. It does not currently meet the thresholds set out in IFRS 8 to be identified as a separate reportable segment and therefore its results are not required to be separately presented. Instead, NGV's results are reported alongside the results of all other operating businesses on an aggregated basis as 'NGV and Other', with certain additional disclosure included in footnotes.

NGV represents our key strategic growth area outside our regulated core business in competitive markets across the US and the UK. The business comprises all commercial operations in metering, LNG at the Isle of Grain in the UK, electricity interconnectors and our investments in National Grid Renewables (formerly Geronimo) and Emerald Energy Venture LLC (Emerald).

Other activities that do not form part of any of the segments in the above table or NGV primarily relate to our UK property business together with insurance and corporate activities in the UK and US and the Group's investments in technology and innovation companies through National Grid Partners.

The segmental information is presented in relation to continuing operations only.

(a) Revenue

Revenue primarily represents the sales value derived from the generation, transmission and distribution of energy, together with the sales value derived from the provision of other services to customers. Refer to note 3 for further details.

Sales between operating segments are priced considering the regulatory and legal requirements to which the businesses are subject. The analysis of revenue by geographical area is on the basis of destination. There are no material sales between the UK and US geographical areas.

	2021			2020			2019		
	Total sales £m	**Sales between segments £m**	**Sales to third parties £m**	Total sales £m	Sales between segments £m	Sales to third parties £m	Total sales £m	Sales between segments £m	Sales to third parties £m
Operating segments – continuing operations:									
UK Electricity Transmission	**3,992**	**(10)**	**3,982**	3,702	(8)	3,694	3,351	(20)	3,331
UK Gas Transmission	**904**	**(16)**	**888**	927	(16)	911	896	(12)	884
US Regulated	**9,195**	**—**	**9,195**	9,205	—	9,205	9,846	—	9,846
NGV and Other[1]	**715**	**(1)**	**714**	736	(6)	730	876	(4)	872
Total revenue from continuing operations	**14,806**	**(27)**	**14,779**	14,570	(30)	14,540	14,969	(36)	14,933
Split by geographical areas – continuing operations:									
UK			**5,482**			5,282			5,045
US			**9,297**			9,258			9,888
			14,779			14,540			14,933

1. Included within NGV and Other is £636 million (2020: £608 million; 2019: £597 million) of revenue relating to NGV.

2. Segmental analysis continued

(b) Operating profit

A reconciliation of the operating segments' measure of profit to profit before tax from continuing operations is provided below. Further details of the exceptional items and remeasurements are provided in note 5.

	Before exceptional items and remeasurements			After exceptional items and remeasurements		
	2021 £m	2020 £m	2019 £m	**2021 £m**	2020 £m	2019 £m
Operating segments – continuing operations:						
UK Electricity Transmission	**1,034**	1,320	1,015	**1,027**	1,316	778
UK Gas Transmission	**342**	348	303	**337**	347	267
US Regulated	**1,313**	1,397	1,724	**1,344**	880	1,425
NGV and Other[1]	**237**	242	400	**187**	237	400
Total operating profit from continuing operations	**2,926**	3,307	3,442	**2,895**	2,780	2,870
Split by geographical area – continuing operations:						
UK	**1,612**	1,925	1,695	**1,550**	1,915	1,422
US	**1,314**	1,382	1,747	**1,345**	865	1,448
	2,926	3,307	3,442	**2,895**	2,780	2,870

Below we reconcile total operating profit from continuing operations to profit before tax from continuing operations. Total operating exceptional items and remeasurements of £31 million charge (2020: £527 million charge; 2019: £572 million charge) are detailed in note 5. This is comprised of a £7 million charge (2020: £4 million charge; 2019: £237 million charge) attributable to UK Electricity Transmission; £5 million charge (2020: £1 million charge; 2019: £36 million charge) to UK Gas Transmission; £31 million gain (2020: £517 million charge; 2019: £299 million charge) to US Regulated; and £50 million charge (2020: £5 million charge; 2019: £nil) to NGV and Other.

	Before exceptional items and remeasurements			After exceptional items and remeasurements		
	2021 £m	2020 £m	2019 £m	**2021 £m**	2020 £m	2019 £m
Reconciliation to profit before tax:						
Operating profit from continuing operations	**2,926**	3,307	3,442	**2,895**	2,780	2,870
Finance income	**35**	70	73	**58**	54	88
Finance costs	**(977)**	(1,119)	(1,066)	**(928)**	(1,167)	(1,157)
Share of post-tax results of joint ventures and associates	**66**	88	40	**58**	87	40
Profit before tax from continuing operations	**2,050**	2,346	2,489	**2,083**	1,754	1,841

1. Included within NGV and Other is £298 million (2020: £269 million; 2019: £263 million) of operating profit before exceptional items and remeasurements and £296 million of operating profit after exceptional items and remeasurements (2020: £268 million; 2019: £263 million), relating to NGV.

(c) Capital expenditure

Capital expenditure represents additions to property, plant and equipment and non-current intangibles but excludes additional investments in and loans to joint ventures and associates.

	Net book value of property, plant and equipment and other intangible assets			Capital expenditure			Depreciation, amortisation and impairment		
	2021 £m	2020 £m	2019 £m	**2021 £m**	2020 £m	2019 £m	**2021 £m**	2020 £m	2019 £m
Operating segments:									
UK Electricity Transmission	**14,379**	13,788	13,288	**1,072**	1,043	925	**(507)**	(469)	(628)
UK Gas Transmission	**4,531**	4,513	4,412	**176**	249	308	**(165)**	(171)	(181)
US Regulated[1,2]	**27,128**	30,615	25,488	**3,223**	3,228	2,650	**(888)**	(855)	(700)
NGV and Other[2,3]	**2,448**	2,141	2,755	**460**	559	438	**(112)**	(145)	(226)
Total from continuing operations[2]	**48,486**	51,057	45,943	**4,931**	5,079	4,321	**(1,672)**	(1,640)	(1,735)
Split by geographical area – continuing operations:									
UK	**21,352**	20,427	19,343	**1,708**	1,847	1,584	**(783)**	(784)	(931)
US[2]	**27,134**	30,630	26,600	**3,223**	3,232	2,737	**(889)**	(856)	(804)
Total from continuing operations[2]	**48,486**	51,057	45,943	**4,931**	5,079	4,321	**(1,672)**	(1,640)	(1,735)
Asset type:									
Property, plant and equipment[2]	**47,043**	49,762	44,859	**4,510**	4,727	4,015	**(1,476)**	(1,464)	(1,560)
Non-current intangible assets	**1,443**	1,295	1,084	**421**	352	306	**(196)**	(176)	(175)
Total from continuing operations[2]	**48,486**	51,057	45,943	**4,931**	5,079	4,321	**(1,672)**	(1,640)	(1,735)

1. In 2020, we transferred certain software assets and properties which are held outside the US rate base and operate for the benefit of our US Regulated businesses, that were previously included within the NGV and Other segment, to the US Regulated segment. These assets were included within NGV and Other in 2019, and had a net book value of £1,062 million, capital expenditure of £87 million and depreciation, amortisation and impairment of £102 million.
2. Comparative amounts have been revised as described in note 1F.
3. Included within NGV and Other are assets with a net book value of £2,396 million (2020: £2,080 million; 2019: £1,635 million), capital expenditure of £431 million (2020: £550 million; 2019: £317 million) and depreciation, amortisation and impairment of £92 million (2020: £124 million; 2019: £114 million) relating to NGV.

Notes to the consolidated financial statements
continued

3. Revenue

Revenue arises in the course of ordinary activities and principally comprises:
- transmission services;
- distribution services; and
- generation services.

Transmission services, distribution services and certain other services (excluding rental income but including metering) fall within the scope of IFRS 15 'Revenue from Contracts with Customers', whereas generation services (which solely relate to the contract with the Long Island Power Authority (LIPA) in the US) are accounted for under IFRS 16 'Leases' as rental income, also presented within revenue. Revenue is measured based on the consideration specified in a contract with a customer and excludes amounts collected on behalf of third parties and value added tax. The Group recognises revenue when it transfers control over a product or service to a customer.

Below, we include a description of principal activities, by reportable segment, from which the Group generates its revenue. For more detailed information about our segments, see note 2.

(a) UK Electricity Transmission
The UK Electricity Transmission segment principally generates revenue by providing electricity transmission services (both as transmission owner in England and Wales and independent system operator in Great Britain). Our business operates as a monopoly regulated by Ofgem, which has established price control mechanisms that set the amount of annual allowed returns our business can earn (along with the Scottish and Offshore transmission operators amongst others). The IFRS revenues we record are principally a function of volumes and price. Price is determined prior to our financial year-end with reference to the regulated allowed returns and estimated annual volumes. Where revenue received or receivable exceeds the maximum amount permitted by our regulatory agreement, adjustments will be made to future prices to reflect this over-recovery. No liability is recognised, as such an adjustment to future prices relates to the provision of future services. Similarly, no asset is recognised where a regulatory agreement permits adjustments to be made to future prices in respect of an under-recovery. As part of our regulatory agreements we are entitled to recover certain costs directly from customers (pass-through costs). These amounts are included in the overall calculation of allowed revenue as stipulated by regulatory agreements.

The System Operator earns revenue for balancing supply and demand of electricity on the transmission system, where it acts as principal. Revenue is recognised as the service is provided. The System Operator also collects revenues on behalf of transmission operators, principally National Grid Electricity Transmission plc and the Scottish and Offshore transmission operators, from users who connect to or use the transmission system. In this context, there is a judgement about whether the System Operator acts as a principal or agent in respect of the transmission network revenues collected on behalf of the Scottish and Offshore transmission operators (as set out in note 1). These amounts are paid to the transmission operators before the System Operator has collected payment from the users (electricity suppliers) and therefore the System Operator does hold some exposure to credit losses with electricity suppliers. However, the System Operator must set the charges paid by electricity suppliers by reference to the price control mechanism described above. That mechanism does not grant the System Operator with discretion to deviate from that mechanism. In addition, the transmission operators own and maintain the electricity network and receive direct feedback from electricity suppliers on the quality of the network they provide. As a result, we have concluded that the System Operator acts as an agent in respect of these transmission revenues and therefore records the attributable revenue net of operating costs.

The transmission of high-voltage electricity encompasses the following principal services:
- the supply of high-voltage electricity (including both transmission and system operator charges); and
- construction work (principally for connections).

For the supply of high-voltage electricity, revenue is recognised based on capacity and volumes. Our performance obligation is satisfied over time as our customers make use of our network. We bill monthly in arrears and our payment terms are up to 60 days.

For construction work relating to connections, customers can either pay over the useful life of the connection or upfront. Revenue is recognised over time, as we provide access to our network, and where the customer pays upfront, revenues are deferred as a contract liability and released over the life of the asset.

For other construction where there is no consideration for any future services, for example diversions (being the re-routing of network assets at our customers' request), revenues are recognised as the construction work is completed.

(b) UK Gas Transmission
The UK Gas Transmission segment of the Group principally generates revenue by providing gas transmission services to our customers (both as transmission owner and as system operator) in Great Britain. Similar to our UK Electricity Transmission business, our business operates as a monopoly regulated by Ofgem. The price control mechanism in place that determines our annual allowances is also similar, as is the way in which revenue is recorded.

The transmission of gas encompasses the following principal services:
- the supply of high-pressure gas (including both transmission and system operator charges); and
- construction work (principally for connections).

For the supply of high-pressure gas, revenue is recognised based on capacity and volumes. Our performance obligation is satisfied over time as our customers make use of our network, and we bill monthly in arrears with payment terms of up to 45 days.

For construction work relating to connections, customers pay for the connection upfront. Revenue is recognised over time, as we provide access to our network. As revenues are received upfront, they are deferred as a contract liability and released over the life of the connection.

For other construction where there is no consideration for any future services (such as diversions), revenues are recognised when the construction work is completed.

3. Revenue continued

(c) US Regulated

The US Regulated segment of the Group principally generates revenue by providing gas and electricity distribution services in New York and New England, high voltage electricity transmission services in New York and New England, and electricity generation in New York.

Distribution services

Provision of gas and electricity distribution services in New York and New England. This comprises the following principal services:

- Gas and electricity distribution: revenue is recognised based on usage by customers (over time) and billed monthly. Payment terms are 30 days; and
- Connections: revenue is recognised over time, as we provide access to our network. Where payments are made upfront, they are deferred as contract liabilities or customer contributions (where they relate to government entities) and released over the life of the connection.

Transmission services

Provision of electricity transmission services to customers and operation of electricity transmission facilities. Our principal services are:

- Electricity transmission: revenue is recognised based on usage by customers (over time) and billed monthly. Payment terms are 30 days; and
- Connections: revenue is recognised over time, as we provide access to our network. Where payments are made upfront, they are deferred as contract liabilities or customer contributions (where they relate to government entities) and released over the life of the connection.

Electricity generation

Provision of energy services and supply capacity to produce energy for the use of customers of the Long Island Power Authority (LIPA) through a power supply agreement where LIPA receives all of the energy and capacity from the asset until at least 2025. The arrangement is treated as an operating lease within the scope of the leasing standard, where we act as lessor with rental income being recorded as other income, which forms part of total revenue. Lease payments (capacity payments) are recognised on a straight-line basis and variable lease payments are recognised as the energy is generated.

(d) NGV and Other

NGV and Other generates revenue from electricity interconnectors, LNG at the Isle of Grain, National Grid Renewables, metering, our UK commercial property business, rental income and insurance.

The Group recognises revenue from transmission services through interconnectors and LNG at the Isle of Grain by means of customers' use of capacity and volumes. Revenue is recognised over time and is billed monthly. Payment terms are up to 30 days.

Other revenue in the scope of IFRS 15 principally includes revenues from our UK metering business and sales of renewables projects from National Grid Renewables to Emerald (see note 38). Revenue is recognised as it is earned. In the case of the UK metering business, revenue is billed monthly and payment terms are up to 30 days.

Other revenue, recognised in accordance with standards other than IFRS 15, includes property sales by our UK commercial property business (including sales to our St William joint venture) and rental income. Property sales are recorded at a point in time (when the sale is legally completed) and rental income is recorded over time.

(e) Disaggregation of revenue

In the following tables, revenue is disaggregated by primary geographical market and major service lines. The table reconciles disaggregated revenue with the Group's reportable segments (see note 2).

Revenue for the year ended 31 March 2021	UK Electricity Transmission £m	UK Gas Transmission £m	US Regulated £m	NGV and Other £m	Total £m
Revenue under IFRS 15					
Transmission	1,814	603	403	316	3,136
Distribution	–	–	8,317	–	8,317
System Operator	2,076	240	–	–	2,316
Other	67	12	15	302	396
Total IFRS 15 revenue	3,957	855	8,735	618	14,165
Other revenue					
Generation	–	–	376	–	376
Other	25	33	84	96	238
Total other revenue	25	33	460	96	614
Total revenue from continuing operations	3,982	888	9,195	714	14,779

Geographical split for the year ended 31 March 2021	UK Electricity Transmission £m	UK Gas Transmission £m	US Regulated £m	NGV and Other £m	Total £m
Revenue under IFRS 15					
UK	3,957	855	–	553	5,365
US	–	–	8,735	65	8,800
Total IFRS 15 revenue	3,957	855	8,735	618	14,165
Other revenue					
UK	25	33	–	59	117
US	–	–	460	37	497
Total other revenue	25	33	460	96	614
Total revenue from continuing operations	3,982	888	9,195	714	14,779

Notes to the consolidated financial statements continued

3. Revenue continued

(e) Disaggregation of revenue continued

Revenue for the year ended 31 March 2020	UK Electricity Transmission £m	UK Gas Transmission £m	US Regulated £m	NGV and Other £m	Total £m
Revenue under IFRS 15					
Transmission	1,992	649	425	309	3,375
Distribution	—	—	8,319	—	8,319
System Operator	1,610	214	—	—	1,824
Other	69	15	12	296	392
Total IFRS 15 revenue	3,671	878	8,756	605	13,910
Other revenue					
Generation	—	—	369	—	369
Other	23	33	80	125	261
Total other revenue	23	33	449	125	630
Total revenue from continuing operations	3,694	911	9,205	730	14,540

Geographical split for the year ended 31 March 2020	UK Electricity Transmission £m	UK Gas Transmission £m	US Regulated £m	NGV and Other £m	Total £m
Revenue under IFRS 15					
UK	3,671	878	—	567	5,116
US	—	—	8,756	38	8,794
Total IFRS 15 revenue	3,671	878	8,756	605	13,910
Other revenue					
UK	23	33	—	110	166
US	—	—	449	15	464
Total other revenue	23	33	449	125	630
Total revenue from continuing operations	3,694	911	9,205	730	14,540

3. Revenue continued

(e) Disaggregation of revenue continued

Revenue for the year ended 31 March 2019	UK Electricity Transmission £m	UK Gas Transmission £m	US Regulated £m	NGV and Other £m	Total £m
Revenue under IFRS 15					
Transmission	1,909	661	370	313	3,253
Distribution	—	—	8,941	—	8,941
System Operator	1,416	172	—	—	1,588
Other	—	—	—	284	284
Total IFRS 15 revenue	3,325	833	9,311	597	14,066
Other revenue					
Generation	—	—	367	—	367
Other	6	51	168	275	500
Total other revenue	6	51	535	275	867
Total revenue from continuing operations	3,331	884	9,846	872	14,933

Geographical split for the year ended 31 March 2019	UK Electricity Transmission £m	UK Gas Transmission £m	US Regulated £m	NGV and Other £m	Total £m
Revenue under IFRS 15					
UK	3,325	833	—	585	4,743
US	—	—	9,311	12	9,323
Total IFRS 15 revenue	3,325	833	9,311	597	14,066
Other revenue					
UK	6	51	—	245	302
US	—	—	535	30	565
Total other revenue	6	51	535	275	867
Total revenue from continuing operations	3,331	884	9,846	872	14,933

Contract liabilities (see note 23) represent revenue to be recognised in future periods relating to contributions in aid of construction of £1,160 million (2020: £1,158 million; 2019: £994 million). Revenue is recognised over the life of the asset. The asset lives for connections in UK Electricity Transmission, UK Gas Transmission, NGV and US Regulated are 40 years, 36 years, 15 years and up to 51 years respectively. The weighted average amortisation period is 19 years.

Future revenues in relation to unfulfilled performance obligations not yet received in cash amount to £4.8 billion (2020: £3.1 billion; 2019: £3.5 billion). £1.6 billion (2020: £1.5 billion; 2019: £1.6 billion) relates to connection contracts in UK Electricity Transmission which will be recognised as revenue over 26 years and £3.0 billion (2020: £1.5 billion; 2019: £1.8 billion) relates to revenues to be earned under Grain LNG contracts until 2045. The remaining amount will be recognised as revenue over 9 years.

The amount of revenue recognised for the year ended 31 March 2021 from performance obligations satisfied (or partially satisfied) in previous periods, mainly due to the changes in the estimate of the stage of completion, is £nil (2020: £nil; 2019: £nil).

Notes to the consolidated financial statements continued

4. Operating costs

Below we have presented separately certain items included in our operating costs from continuing operations. These include a breakdown of payroll costs (including disclosure of amounts paid to key management personnel) and fees paid to our auditors.

	Before exceptional items and remeasurements			Exceptional items and remeasurements			Total		
	2021 £m	2020 £m	2019 £m	**2021 £m**	2020 £m	2019 £m	**2021 £m**	2020 £m	2019 £m
Depreciation, amortisation and impairment	**1,672**	1,640	1,588	**–**	–	147	**1,672**	1,640	1,735
Payroll costs	**1,749**	1,684	1,703	**21**	–	149	**1,770**	1,684	1,852
Purchases of electricity	**1,181**	1,318	1,504	**(51)**	85	(50)	**1,130**	1,403	1,454
Purchases of gas	**1,233**	1,276	1,644	**17**	40	(2)	**1,250**	1,316	1,642
Property and other taxes	**1,193**	1,191	1,108	**–**	–	–	**1,193**	1,191	1,108
Balancing Services Incentive Scheme	**1,875**	1,317	1,196	**–**	–	–	**1,875**	1,317	1,196
Other	**2,624**	2,573	2,567	**44**	402	328	**2,668**	2,975	2,895
Other operating costs	**11,527**	10,999	11,310	**31**	527	572	**11,558**	11,526	11,882
Provision for bad and doubtful debts	**326**	234	181	**–**	–	–	**326**	234	181
Total operating costs	**11,853**	11,233	11,491	**31**	527	572	**11,884**	11,760	12,063
Operating costs include:									
Inventory consumed							**316**	328	415
Research and development expenditure							**17**	14	19

(a) Payroll costs

	2021 £m	2020 £m	2019 £m
Wages and salaries[1]	**2,282**	2,188	2,084
Social security costs	**172**	168	156
Defined contribution scheme costs	**77**	75	72
Defined benefit pension costs	**136**	135	232
Share-based payments	**27**	19	27
Severance costs (excluding pension costs)	**11**	1	76
	2,705	2,586	2,647
Less: payroll costs capitalised	**(935)**	(902)	(795)
Total payroll costs	**1,770**	1,684	1,852

1. Included within wages and salaries are US other post-retirement benefit costs of £43 million (2020: £45 million; 2019: £48 million). For further information refer to note 25.

(b) Number of employees

	31 March 2021	**Monthly average 2021**	31 March 2020	Monthly average 2020	31 March 2019	Monthly average 2019
UK	**6,657**	**6,517**	6,321	6,151	5,962	6,227
US	**17,026**	**16,821**	16,748	16,679	16,614	16,669
Total number of employees	**23,683**	**23,338**	23,069	22,830	22,576	22,896

4. Operating costs continued

(c) Key management compensation

	2021 £m	2020 £m	2019 £m
Short-term employee benefits	**7**	7	7
Compensation for loss of office	**—**	1	—
Post-employment benefits	**1**	1	1
Share-based payments	**4**	3	3
Total key management compensation	**12**	12	11

Key management compensation relates to the Board, including the Executive Directors and Non-executive Directors for the years presented.

(d) Directors' emoluments

Details of Executive Directors' emoluments are contained in the Remuneration Report on page 100 and those of Non-executive Directors on page 105.

(e) Auditors' remuneration

Auditors' remuneration is presented below in accordance with the requirements of the Companies Act 2006 and the principal accountant fees and services disclosure requirements of Item 16C of Form 20-F:

	2021 £m	2020 £m	2019 £m
Audit fees payable to the Parent Company's auditors and their associates in respect of:			
Audit of the Parent Company's individual and consolidated financial statements[1]	**2.5**	1.9	1.6
The auditing of accounts of any associate of the Company[2]	**8.1**	8.7	8.5
Other services supplied[3]	**6.4**	6.3	5.2
	17.0	16.9	15.3
Total other services[4]			
All other fees:			
Other assurance services[5]	**0.8**	0.6	1.1
Other non-audit services not covered above[6]	**2.0**	0.5	2.2
	2.8	1.1	3.3
Total auditors' remuneration	**19.8**	18.0	18.6

1. Audit fees in each year represent fees for the audit of the Company's financial statements and regulatory reporting for the years ended 31 March 2021, 2020 and 2019.
2. The 2019 comparative was updated in 2020 following finalisation of the 2019 audit fee with the Audit Committee in 2020.
3. Other services supplied represent fees payable for services in relation to other statutory filings or engagements that are required to be carried out by the auditors. In particular, this includes fees for reports under section 404 of the US Public Company Accounting Reform and Investor Protection Act of 2002 (Sarbanes-Oxley), audit reports on regulatory returns and the review of interim financial statements for the six-month periods ended 30 September 2020, 2019 and 2018 respectively.
4. There were no tax compliance or tax advisory fees and no audit related fees as described in Item 16C(b) of Form 20-F.
5. In all years, principally relates to assurance services provided in relation to comfort letters for debt issuances and, in 2021, also includes amounts related to capacity market auction monitoring services.
6. For 2021, includes the class 1 Circular in respect of the acquisition of WPD announced on 18 March 2021. In 2020, other assurance services include auction monitor work on Contracts for Difference, a review of controls over our data on New York customers and IT project assurance. In 2019, non-audit services primarily related to the UK Commercial Property business in respect of the evaluation of possible options for the use of property assets.

The Audit Committee considers and makes recommendations to the Board, to be put to shareholders for approval at each AGM, in relation to the appointment, re-appointment, removal and oversight of the Company's independent auditors. The Committee also considers and approves the audit fees on behalf of the Board in accordance with the Competition and Market Authority Audit Order 2014. The auditors' remuneration is then put to shareholders at each AGM. Details of our policies and procedures in relation to non-audit services to be provided by the independent auditors are set out on page 87 of the Corporate Governance Report.

Certain services are prohibited from being performed by the external auditors under the Sarbanes-Oxley Act. Of the above services, none were prohibited.

Notes to the consolidated financial statements
continued

5. Exceptional items and remeasurements

To monitor our financial performance, we use a profit measure that excludes certain income and expenses. We call that measure 'adjusted profit'. Adjusted profit (which excludes exceptional items and remeasurements as defined below) is used by management to monitor financial performance as it is considered that it aids the comparability of our reported financial performance from year to year. We exclude items from adjusted profit because, if included, these items could distort understanding of our performance for the year and the comparability between periods. This note analyses these items, which are included in our results for the year but are excluded from adjusted profit.

Exceptional items and remeasurements from continuing operations

	2021 £m	2020 £m	2019 £m
Included within operating profit			
Exceptional items:			
Changes in environmental provisions	**14**	(402)	–
New operating model implementation costs	**(55)**	–	–
Transaction costs	**(24)**	–	–
Cost efficiency and restructuring programmes	**–**	–	(204)
Massachusetts Gas labour dispute	**–**	–	(283)
Impairment of nuclear connection development costs	**–**	–	(137)
	(65)	(402)	(624)
Remeasurements – commodity contract derivatives	**34**	(125)	52
	(31)	(527)	(572)
Included within finance income and costs			
Remeasurements:			
Net (losses)/gains on financing derivatives	**(41)**	1	(40)
Net gains/(losses) on financial assets at fair value through profit and loss	**23**	(16)	15
Net gains/(losses) on financial liabilities at fair value through profit and loss	**90**	(49)	(51)
	72	(64)	(76)
Included within share of post-tax results of joint ventures and associates			
Remeasurements:			
Remeasurements – net losses on financial instruments	**(8)**	(1)	–
Total included within profit before tax	**33**	(592)	(648)
Included within tax			
Exceptional items – movements arising on items not included in profit before tax:			
Deferred tax charge arising on the reversal of the reduction in UK corporation tax rate	**–**	(192)	–
Tax on exceptional items	**8**	103	144
Tax on remeasurements	**(34)**	42	5
	(26)	(47)	149
Total exceptional items and remeasurements after tax	**7**	(639)	(499)
Analysis of total exceptional items and remeasurements after tax			
Exceptional items after tax	**(57)**	(491)	(480)
Remeasurements after tax	**64**	(148)	(19)
Total exceptional items and remeasurements after tax	**7**	(639)	(499)

5. Exceptional items and remeasurements continued

Exceptional items

Management uses an exceptional items framework that has been discussed and approved by the Audit Committee. This follows a three-step process which considers the nature of the event, the financial materiality involved and any particular facts and circumstances. In considering the nature of the event, management focuses on whether the event is within the Group's control and how frequently such an event typically occurs. In determining the facts and circumstances, management considers factors such as ensuring consistent treatment between favourable and unfavourable transactions, the precedent for similar items, the number of periods over which costs will be spread or gains earned, and the commercial context for the particular transaction.

Items of income or expense that are considered by management for designation as exceptional items include significant restructurings, write-downs or impairments of non-current assets, significant changes in environmental or decommissioning provisions, integration of acquired businesses, gains or losses on disposals of businesses or investments and significant debt redemption costs as a consequence of transactions such as significant disposals or issues of equity, and the related tax, as well as deferred tax arising on changes to corporation tax rates.

Costs arising from restructuring programmes include redundancy costs. Redundancy costs are charged to the consolidated income statement in the year in which a commitment is made to incur the costs and the main features of the restructuring plan have been announced to affected employees.

Set out below are details of the transactions against which we have considered the application of our exceptional items framework in each of the years for which results are presented.

2021

We have considered certain costs incurred in the period against our Exceptional Items Framework, and concluded £55 million of costs associated with the implementation of our new operating model, the £14 million release of environmental provisions for which the original provision was treated as exceptional and the £24 million of transaction costs associated with the acquisition of Western Power Distribution (WPD) and the sale of NECO should be treated as exceptional items in the current year.

New operating model implementation costs: The Group incurred £55 million of costs in relation to the design and implementation of our new operating model that is built on a foundation of six business units as described further in the Strategic Review. The costs recognised in the year ended 31 March 2021 primarily relate to professional fees incurred in designing the new operating model, alongside the redundancy provisions accrued in relation to those employees where announcements have been made that they will be leaving the organisation as a result of the changes. Whilst the costs incurred this year do not meet the quantitative threshold to be classified as exceptional on a standalone basis, we have concluded that the costs should be classified as exceptional in line with our exceptional items policy, in order to ensure that the costs are treated in a consistent manner with similar costs incurred previously. The total cash outflow for the year was £33 million.

Transaction costs: £24 million of transaction costs were incurred to date in relation to the acquisition of WPD (see note 38) and the sale of NECO (see note 10). The costs relate to legal fees, bankers' fees and professional fees. Whilst the costs incurred in the current year in isolation are not sufficiently material to warrant classification as an exceptional item, we are expecting further costs to be incurred next year, for example, in regards to success fees on completion of the acquisition. When taken in aggregate, the costs incurred over both years will be sufficiently material to be classified as exceptional in line with our policy. The total cash outflow for the year was £14 million.

Changes in environmental provision: In the US, the most significant component of our £1.5 billion environmental provision relates to several Superfund sites, and arose from former manufacturing gas plant facilities, formerly owned or operated by the Group or its predecessor companies. The sites are subject to both State and Federal law in the US. Under Federal and State Superfund laws, potential liability for the historical contamination may be imposed on responsible parties jointly and severally, without regard to fault, even if the activities were lawful when they occurred. The provisions and the Group's share of estimated costs are re-evaluated at each reporting period.

We have recognised an exceptional gain of £14 million relating to the release of environmental provisions relating to one of our US Superfund sites, for which the original provision was treated as an exceptional item. The reduction in the provision arose as a result of the re-evaluation of the Group's share of estimated costs following the finalisation of discussions on the scope of certain remediation work with government authorities. The release has been recorded as an exceptional item in line with the treatment of the original provision.

2020

We concluded that the increase in costs associated with the changes in our environmental provisions (£402 million) and the additional deferred tax charge reflecting the impact of the remeasurement of the Group's deferred tax liabilities as a result of a change in the substantively enacted UK corporation tax rate (£192 million) meet the criteria to be classified as exceptional.

A further £10 million of COVID-19 related costs incurred in the year ended 31 March 2020 were similarly not classified as exceptional in view of the quantum involved and all costs associated with the settlement reached with the State of New York in respect of the Downstate New York Gas Moratorium were also treated as part of adjusted profit.

Changes in environmental provisions: As a result of notices issued by governmental authorities and newly developed cost estimates prepared by third-party engineers in relation to our US Superfund sites, we re-evaluated our estimates of total costs and cost sharing allocations borne by the Company, and accordingly increased our provision by £326 million. Under the terms of our rate plans, we are entitled to recovery of environmental clean-up costs from rate payers, but under IFRS no asset can be recognised for this recovery.

Also included in the total environmental charge was the £76 million impact of the change in the real discount rate applied to the environmental provisions across the Group, of which £66 million related to the US and £10 million to the UK. Given the substantial and sustained change in gilts and corporate bond yields, we concluded it was appropriate to reduce the real discount rate from 1% to 0.5%. The weighted average remaining duration of our cash flows is now around 10 years.

Notes to the consolidated financial statements
continued

5. Exceptional items and remeasurements continued

2019

In assessing certain items of income and expenditure against our exceptional items framework, we concluded that the costs associated with the Massachusetts Gas labour dispute (£283 million), our cost efficiency and restructuring programme (£204 million) and impairments relating to two nuclear connection cancellations (£137 million) should be treated as exceptional (as described further below). We also considered whether the £95 million income from two legal settlements received in the period should be classified as exceptional. However, we concluded it was appropriate to recognise the income in earnings before exceptional items (within NGV and Other), in line with the treatment of the original costs.

Cost efficiency and restructuring programmes: Our UK and US businesses incurred restructuring charges as we reviewed organisational structures, operational activities and relevant roles and responsibilities to ensure we are able to operate more efficiently and to continue to drive outperformance for customers and shareholders. The cash outflow for the year was £93 million.

Massachusetts Gas labour dispute: Between June 2018 and January 2019, National Grid implemented a workforce contingency plan across its Massachusetts Gas business following the expiration of contracts for the 1,250 members of the existing workforce. The net incremental cost of the experienced contractors working alongside supervisors and workers from other areas of the business was £283 million, reflecting the financial performance of the US regulated business had the workforce contingency plan not been implemented. The total cash outflow related to the labour dispute was £320 million for the year.

Impairment of nuclear connection development costs: In 2018, Toshiba announced the cancellation of its NuGen project to build a new nuclear power station at Moorside in Cumbria, and NuGen terminated its connection agreement with UK Electricity Transmission. In February 2019, Hitachi terminated its connection agreements in respect of its Horizon projects at Wylfa and Oldbury. As there was no realistic prospect of these schemes continuing in their present form, we concluded that it was appropriate to impair the assets we had been developing for over 10 years. After deducting cash inflows relating to termination fees received of £13 million, the net impairment charge was £137 million.

Remeasurements

Remeasurements comprise unrealised gains or losses recorded in the consolidated income statement arising from changes in the fair value of certain of our financial assets and liabilities accounted for at fair value through profit and loss (FVTPL). Once the fair value movements are realised (for example, when the derivative matures), the previously recognised fair value movements are then reversed through remeasurements and recognised within earnings before exceptional items and remeasurements. These assets and liabilities include commodity contract derivatives and financing derivatives to the extent that hedge accounting is not available or is not fully effective.

The unrealised gains or losses reported in profit and loss on certain additional assets and liabilities treated at FVTPL are also classified within remeasurements. These relate to financial assets (which fail the 'solely payments of principal and interest test' under IFRS 9), the money market fund investments used by Group Treasury for cash management purposes and certain financial liabilities which we elected to designate at FVTPL. In all cases, these fair values increase or decrease because of changes in foreign exchange, commodity or other financial indices over which we have no control.

We report unrealised gains or losses relating to certain discrete classes of financial assets accounted for at FVTPL within adjusted profit. These comprise our portfolio of investments made by National Grid Partners, our investment in Sunrun Neptune 2016 LLC and the contingent consideration arising on the acquisition of National Grid Renewables (all within NGV and Other). The performance of these assets (including changes in fair value) are included in our assessment of adjusted profit for the relevant business units.

Remeasurements excluded from adjusted profit are made up of the following categories:

i. Net gains/(losses) on commodity contract derivatives represent mark-to-market movements on certain physical and financial commodity contract obligations in the US. These contracts primarily relate to the forward purchase of energy for supply to customers, or to the economic hedging thereof, that are required to be measured at fair value and that do not qualify for hedge accounting. Under the existing rate plans in the US, commodity costs are recoverable from customers although the timing of recovery may differ from the pattern of costs incurred;

ii. Net gains/(losses) on financing derivatives comprise gains and losses arising on derivative financial instruments used for the risk management of interest rate and foreign exchange exposures. These exclude gains and losses for which hedge accounting has been effective, and have been recognised directly in the consolidated statement of other comprehensive income or are offset by adjustments to the carrying value of debt (see notes 17 and 32);

iii. Net gains/(losses) on financial assets measured at FVTPL comprise gains and losses on the investment funds held by our insurance captives which are categorised as FVTPL (see note 15);

iv. Net gains/(losses) on financial liabilities measured at FVTPL comprise the change in the fair value (excluding changes due to own credit risk) of a financial liability that was designated at FVTPL on transition to IFRS 9 to reduce a measurement mismatch (see note 21); and

v. Unrealised net gains/(losses) on derivatives and other financial instruments within our joint ventures and associates.

Items included within tax

2020

The Finance Act 2016, which was enacted on 15 September 2016, reduced the main UK corporation tax rate to 17% with effect from 1 April 2020. Deferred tax balances were calculated at this rate for the years ended 31 March 2017 to 2019. On 17 March 2020, the UK Government utilised the Provisional Collection of Taxes Act 1968 to substantively enact a reversal of the reduction in the main UK corporation tax rate to 17% with effect from 1 April 2020, resulting in the rate remaining at 19%. Deferred taxes at 31 March 2020 were measured using enacted tax rates and reflected in these financial statements, resulting in a £192 million deferred tax charge, principally due to the remeasurement of deferred tax liabilities. The treatment of this charge as exceptional was consistent with the treatment for the year ended 31 March 2017 when the original reduction in the tax rate was substantively enacted, resulting in the recognition of an exceptional tax credit of £94 million.

6. Finance income and costs

This note details the interest income generated by our financial assets and interest expense incurred on our financial liabilities, primarily our financing portfolio (including our financing derivatives). It also includes the net interest on our pensions and other post-retirement assets. In reporting adjusted profit, we adjust net financing costs to exclude any net gains or losses on financial instruments included in remeasurements (see note 5).

Finance income and costs remeasurements include unrealised gains and losses on certain assets and liabilities now treated at FVTPL. The interest income, dividends and interest expense on these items are included in finance income and finance costs before remeasurements, respectively.

	Notes	**2021 £m**	2020 £m	2019 £m
Finance income				
Interest income on financial instruments:				
Bank deposits and other financial assets		**33**	48	54
Dividends received on equities held at fair value through other comprehensive income (FVOCI)		**2**	2	2
Other income		**—**	20	17
		35	70	73
Finance costs				
Net interest on pensions and other post-retirement benefit obligations	25	**(38)**	(23)	(22)
Interest expense on financial liabilities held at amortised cost:				
Bank loans and overdrafts		**(72)**	(73)	(72)
Other borrowings[1]		**(854)**	(997)	(970)
Interest expense on financial liabilities held at fair value through profit and loss (FVTPL)		**(20)**	(22)	(20)
Interest on derivatives		**7**	(39)	(43)
Unwinding of discount on provisions	26	**(78)**	(77)	(74)
Other interest		**(53)**	(10)	—
Less: interest capitalised[2]		**131**	122	135
		(977)	(1,119)	(1,066)
Remeasurements – Finance income				
Net gains/(losses) on FVTPL financial assets		**23**	(16)	15
		23	(16)	15
Remeasurements – Finance costs				
Net gains/(losses) on FVTPL financial liabilities		**90**	(49)	(51)
Net gains/(losses) on financing derivatives[3]:				
Derivatives designated as hedges for hedge accounting		**44**	(13)	(37)
Derivatives not designated as hedges for hedge accounting		**(85)**	14	(3)
		49	(48)	(91)
Total remeasurements – Finance income and costs		**72**	(64)	(76)
Finance income		**58**	54	88
Finance costs		**(928)**	(1,167)	(1,157)
Net finance costs from continuing operations		**(870)**	(1,113)	(1,069)

1. Includes interest expense on lease liabilities (see note 13 for details).
2. Interest on funding attributable to assets in the course of construction in the current year was capitalised at a rate of 3.1% (2020: 3.6%; 2019: 3.9%). In the UK, capitalised interest qualifies for a current year tax deduction with tax relief claimed of £13 million (2020: £15 million; 2019: £19 million). In the US, capitalised interest is added to the cost of plant and qualifies for tax depreciation allowances.
3. Includes a net foreign exchange gain on borrowing activities of £172 million (2020: £66 million gain; 2019: £264 million gain) offset by foreign exchange losses and gains on financing derivatives measured at fair value.

Notes to the consolidated financial statements
continued

7. Tax

Tax is payable in the territories where we operate, mainly the UK and the US. This note gives further details of the total tax charge and tax liabilities, including current and deferred tax. The current tax charge is the tax payable on this year's taxable profits. Deferred tax is an accounting adjustment to provide for tax that is expected to arise in the future due to differences in the accounting and tax bases.

The tax charge for the period is recognised in the income statement, the statement of comprehensive income or directly in equity, according to the accounting treatment of the related transaction. The tax charge comprises both current and deferred tax.

Current tax assets and liabilities are measured at the amounts expected to be recovered from or paid to the tax authorities. The tax rates and tax laws used to compute the amounts are those that have been enacted or substantively enacted by the reporting date.

The Group operates internationally in territories with different and complex tax codes. Management exercises judgement in relation to the level of provision required for uncertain tax outcomes. There are a number of tax positions not yet agreed with the tax authorities where different interpretations of legislation could lead to a range of outcomes. Judgements are made for each position having regard to particular circumstances and advice obtained.

Deferred tax is provided for using the balance sheet liability method, and is recognised on temporary differences between the carrying amount of assets and liabilities in the financial statements and the corresponding tax bases.

Deferred tax liabilities are generally recognised on all taxable temporary differences, and deferred tax assets are recognised to the extent that it is probable that taxable profits will be available against which deductible temporary differences can be utilised. However, deferred tax assets and liabilities are not recognised if the temporary differences arise from the initial recognition of goodwill or from the initial recognition of other assets and liabilities in a transaction (other than a business combination) that affects neither the accounting nor the taxable profit or loss.

Deferred tax liabilities are recognised on taxable temporary differences arising on investments in subsidiaries and joint arrangements except where the Company is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred tax is calculated at the tax rates that are expected to apply in the period when the liability is settled or the asset is realised, based on the tax rates and tax laws that have been enacted or substantively enacted by the reporting date.

The carrying amount of deferred tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the deferred tax asset to be recovered. Unrecognised deferred tax assets are reassessed at each reporting date and are recognised to the extent that it has become probable that future taxable profits will allow the deferred tax asset to be recovered.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities and when they relate to income taxes levied by the same tax authority and the Company and its subsidiaries intend to settle their current tax assets and liabilities on a net basis.

Tax charged/(credited) to the consolidated income statement – continuing operations

	2021 £m	2020 £m	2019 £m
Tax before exceptional items and remeasurements	**416**	433	488
Exceptional tax on items not included in profit before tax (note 5)	**–**	192	–
Tax on other exceptional items and remeasurements	**26**	(145)	(149)
Total tax reported within exceptional items and remeasurements	**26**	47	(149)
Total tax charge from continuing operations	**442**	480	339

Tax as a percentage of profit before tax

	2021 %	2020 %	2019 %
Before exceptional items and remeasurements – continuing operations	**20.3**	18.5	19.6
After exceptional items and remeasurements – continuing operations	**21.2**	27.4	18.4

7. Tax continued

The tax charge for the year can be analysed as follows:

	2021 £m	2020 £m	2019 £m
Current tax:			
UK corporation tax at 19% (2020: 19%; 2019: 19%)	**213**	179	132
UK corporation tax adjustment in respect of prior years	**23**	(4)	(12)
	236	175	120
Overseas corporation tax	**3**	(2)	8
Overseas corporation tax adjustment in respect of prior years	**(15)**	(41)	(40)
	(12)	(43)	(32)
Total current tax from continuing operations	**224**	132	88
Deferred tax:			
UK deferred tax	**63**	269	27
UK deferred tax adjustment in respect of prior years	**(26)**	6	2
	37	275	29
Overseas deferred tax	**174**	64	208
Overseas deferred tax adjustment in respect of prior years	**7**	9	14
	181	73	222
Total deferred tax from continuing operations	**218**	348	251
Total tax charge from continuing operations	**442**	480	339

Tax charged/(credited) to the consolidated statement of comprehensive income and equity

	2021 £m	2020 £m	2019 £m
Current tax:			
Cash flow hedges, cost of hedging and own credit reserve	**6**	–	3
Deferred tax:			
Investments at fair value through other comprehensive income	**12**	(1)	–
Cash flow hedges, cost of hedging and own credit reserve	**(2)**	(40)	(12)
Remeasurements of pension assets and post-retirement benefit obligations	**414**	(206)	12
Share-based payments	**2**	(3)	–
	432	(250)	3
Total tax recognised in the statements of comprehensive income from continuing operations	**430**	(247)	3
Total tax relating to share-based payments recognised directly in equity from continuing operations	**2**	(3)	–
	432	(250)	3

Notes to the consolidated financial statements
continued

7. Tax continued

The tax charge for the year after exceptional items and remeasurements, for the continuing business, is higher (2020: higher tax charge; 2019: lower tax charge) than the standard rate of corporation tax in the UK of 19% (2020: 19%; 2019: 19%):

	Before exceptional items and remeasurements 2021 £m	After exceptional items and remeasurements 2021 £m	Before exceptional items and remeasurements 2020 £m	After exceptional items and remeasurements 2020 £m	Before exceptional items and remeasurements 2019 £m	After exceptional items and remeasurements 2019 £m
Profit before tax from continuing operations						
Before exceptional items and remeasurements	**2,050**	**2,050**	2,346	2,346	2,489	2,489
Exceptional items and remeasurements	**—**	**33**	—	(592)	—	(648)
Profit before tax from continuing operations	**2,050**	**2,083**	2,346	1,754	2,489	1,841
Profit before tax from continuing operations multiplied by UK corporation tax rate of 19% (2020: 19%; 2019: 19%)	**390**	**396**	446	334	473	350
Effect of:						
Adjustments in respect of prior years[1]	**(9)**	**(11)**	(30)	(30)	(36)	(36)
Expenses not deductible for tax purposes	**19**	**30**	26	29	22	28
Non-taxable income[2]	**(9)**	**(9)**	(18)	(18)	(36)	(36)
Adjustment in respect of foreign tax rates	**42**	**42**	53	18	78	56
Deferred tax impact of change in UK tax rate	**—**	**—**	—	192	(3)	(3)
Adjustment in respect of post-tax profits of joint ventures and associates included within profit before tax	**(15)**	**(12)**	(17)	(17)	(8)	(8)
Other[3]	**(2)**	**6**	(27)	(28)	(2)	(12)
Total tax charge from continuing operations	**416**	**442**	433	480	488	339
	%	**%**	%	%	%	%
Effective tax rate – continuing operations	**20.3**	**21.2**	18.5	27.4	19.6	18.4

1. The prior year adjustments are primarily due to agreement of prior period tax returns.
2. Includes tax on chargeable disposals after the offset of capital losses.
3. Other primarily comprises the movement in the deferred tax asset on previously unrecognised capital losses and claims for land remediation relief.

Factors that may affect future tax charges

In the Spring Budget 2021, the UK government announced an increase in the main corporation tax rate from 19% to 25% with effect from 1 April 2023. Since this had not been substantively enacted at the balance sheet date, deferred tax balances as at 31 March 2021 have been calculated at the current main UK corporation tax rate of 19%.

We expect our future deferred tax liabilities to increase reflecting the impact of the rate change. If the amended tax rate of 25% had been used, the deferred tax liability would have been approximately £560 million higher.

US government and US states are also considering changes to federal and state tax rates respectively, but as no changes have been substantively enacted at the balance sheet date deferred tax balances as at 31 March 2021 have been calculated at the prevailing tax rates.

We will continue to monitor the developments driven by Brexit, the OECD's Base Erosion and Profit Shifting (BEPS) project and European Commission initiatives including fiscal aid investigations. At this time, we do not expect this to have any material impact on our future tax charges. Governments across the world including the UK and the US have introduced various stimulus/reliefs for businesses to cope with the impact of the COVID-19 pandemic, from which we do not currently expect there to be a material impact on our future tax charges.

7. Tax continued

Tax included within the statement of financial position

The following are the major deferred tax assets and liabilities recognised, and the movements thereon, during the current and prior reporting periods:

	Accelerated tax depreciation £m	Share-based payments £m	Pensions and other post-retirement benefits £m	Financial instruments £m	Other net temporary differences[1] £m	Total £m
Deferred tax liabilities/(assets)						
At 1 April 2019[2]	5,727	(9)	(170)	7	(1,340)	4,215
Exchange adjustments and other[2,3]	222	(30)	(28)	(3)	(27)	134
Charged/(credited) to income statement	613	(7)	44	(13)	(287)	350
(Credited)/charged to other comprehensive income and equity	—	(2)	(206)	(46)	1	(253)
At 1 April 2020[2]	6,562	(48)	(360)	(55)	(1,653)	4,446
Exchange adjustments and other[3]	(501)	4	51	4	174	(268)
Charged/(credited) to income statement	373	—	(12)	1	(147)	215
Charged to other comprehensive income and equity	—	2	414	6	—	422
At 31 March 2021	**6,434**	**(42)**	**93**	**(44)**	**(1,626)**	**4,815**

1. The deferred tax asset of £1,626 million as at 31 March 2021 (2020: £1,653 million) in respect of other net temporary differences primarily relates to net operating losses of £455 million (2020: £547 million), US environmental provisions of £453 million (2020: £529 million) and US bad debt provision of £184 million (2020: £124 million).
2. Comparative amounts have been revised as described in note 1F.
3. Exchange adjustments and other comprises foreign exchange arising on translation of the US dollar deferred tax balances. In 2020, it also included reclassification of £29 million from other temporary differences to share-based payments.

Deferred tax assets and liabilities are only offset where there is a legally enforceable right of offset and there is an intention to settle the balances net. The deferred tax balances (after offset) for statement of financial position purposes consist solely of deferred tax liabilities of £4,815 million (2020: £4,446 million). This balance is after offset of a deferred tax asset of £455 million (2020: £547 million) which has been recognised in respect of net operating losses (£440 million) and capital losses (£15 million).

Deferred tax assets in respect of some capital losses as well as trading losses and non-trade deficits have not been recognised as their future recovery is uncertain or not currently anticipated. The total deferred tax assets not recognised are as follows:

	2021 £m	2020 £m
Capital losses	**1,620**	1,626
Non-trade deficits	**1**	1
Trading losses	**7**	6

The capital losses arose in the UK on disposal of certain businesses or assets. They are available to carry forward indefinitely but can only be offset against future capital gains. The UK non-trade deficits arose prior to 1 April 2017 and therefore can only be offset against future non-trade profits.

At 31 March 2021 and 31 March 2020, there were no recognised deferred tax liabilities for taxes that would be payable on the unremitted earnings of the Group's subsidiaries or its associates as there are no significant corporation tax consequences of the Group's UK, US or overseas subsidiaries or associates paying dividends to their parent companies. There are also no significant income tax consequences for the Group from the payment of dividends by the Group to its shareholders.

Notes to the consolidated financial statements
continued

8. Earnings per share (EPS)

EPS is the amount of profit after tax attributable to each ordinary share. Basic EPS is calculated on profit after tax for the year attributable to equity shareholders divided by the weighted average number of shares in issue during the year. Diluted EPS shows what the impact would be if all outstanding share options were exercised and treated as ordinary shares at year end. The weighted average number of shares is increased by additional shares issued as scrip dividends and reduced by shares repurchased by the Company during the year. The earnings per share calculations are based on profit after tax attributable to equity shareholders of the Company which excludes non-controlling interests.

Adjusted earnings and EPS, which exclude exceptional items and remeasurements, are provided to reflect the adjusted profit sub-totals used by the Company. We have included reconciliations from this additional EPS measure to earnings for both basic and diluted EPS to provide additional detail for these items. For further details of exceptional items and remeasurements, see note 5.

(a) Basic EPS

	Earnings 2021 £m	EPS 2021 pence	Earnings 2020 £m	EPS 2020 pence	Earnings 2019 £m	EPS 2019 pence
Adjusted earnings from continuing operations	1,633	46.4	1,912	55.2	1,998	59.0
Exceptional items and remeasurements after tax from continuing operations	7	0.2	(639)	(18.4)	(499)	(14.7)
Earnings from continuing operations	1,640	46.6	1,273	36.8	1,499	44.3
Adjusted earnings from discontinued operations	–	–	5	0.2	57	1.7
Exceptional items and remeasurements after tax from discontinued operations	–	–	(14)	(0.5)	(45)	(1.4)
Earnings from discontinued operations	–	–	(9)	(0.3)	12	0.3
Total adjusted earnings	1,633	46.4	1,917	55.4	2,055	60.7
Total exceptional items and remeasurements after tax (including discontinued operations)	7	0.2	(653)	(18.9)	(544)	(16.1)
Total earnings	1,640	46.6	1,264	36.5	1,511	44.6

	2021 millions	2020 millions	2019 millions
Weighted average number of ordinary shares – basic	3,523	3,461	3,386

(b) Diluted EPS

	Earnings 2021 £m	EPS 2021 pence	Earnings 2020 £m	EPS 2020 pence	Earnings 2019 £m	EPS 2019 pence
Adjusted earnings from continuing operations	1,633	46.1	1,912	55.0	1,998	58.8
Exceptional items and remeasurements after tax from continuing operations	7	0.2	(639)	(18.4)	(499)	(14.7)
Earnings from continuing operations	1,640	46.3	1,273	36.6	1,499	44.1
Adjusted earnings from discontinued operations	–	–	5	0.1	57	1.7
Exceptional items and remeasurements after tax from discontinued operations	–	–	(14)	(0.4)	(45)	(1.4)
Earnings from discontinued operations	–	–	(9)	(0.3)	12	0.3
Total adjusted earnings	1,633	46.1	1,917	55.1	2,055	60.5
Total exceptional items and remeasurements after tax (including discontinued operations)	7	0.2	(653)	(18.8)	(544)	(16.1)
Total earnings	1,640	46.3	1,264	36.3	1,511	44.4

	2021 millions	2020 millions	2019 millions
Weighted average number of ordinary shares – diluted	3,540	3,478	3,401

(c) Reconciliation of basic to diluted average number of shares

	2021 millions	2020 millions	2019 millions
Weighted average number of ordinary shares – basic	3,523	3,461	3,386
Effect of dilutive potential ordinary shares – employee share plans	17	17	15
Weighted average number of ordinary shares – diluted	3,540	3,478	3,401

9. Dividends

Interim dividends are recognised when they become payable to the Company's shareholders. Final dividends are recognised when they are approved by shareholders.

	2021			2020			2019		
	Pence per share	**Cash dividend £m**	**Scrip dividend £m**	Pence per share	Cash dividend £m	Scrip dividend £m	Pence per share	Cash dividend £m	Scrip dividend £m
Interim dividend in respect of the current year	**17.00**	**348**	**249**	16.57	335	241	16.08	450	94
Final dividend in respect of the prior year	**32.00**	**1,065**	**54**	31.26	557	517	30.44	710	319
	49.00	**1,413**	**303**	47.83	892	758	46.52	1,160	413

The Directors are proposing a final dividend for the year ended 31 March 2021 of 32.16p per share that will absorb approximately £1,141 million of shareholders' equity (assuming all amounts are settled in cash). It will be paid on 18 August 2021 to shareholders who are on the register of members at 4 June 2021 (subject to shareholders' approval at the AGM). A scrip dividend will be offered as an alternative.

10. Discontinued operations and assets held for sale

The results and cash flows of significant assets or businesses sold during the year are shown separately from our continuing operations, and presented within discontinued operations in the income statement and cash flow statement. Assets and businesses are classified as held for sale when their carrying amounts are recovered through sale rather than through continuing use. They only meet the held for sale condition when the assets are ready for immediate sale in their present condition, management is committed to the sale and it is highly probable that the sale will complete within one year. Depreciation ceases on assets and businesses when they are classified as held for sale and the assets and businesses are impaired if the proceeds less sale costs fall short of the carrying value.

The Narragansett Electric Company

On 17 March 2021, the Group signed an agreement to sell 100% of the share capital of a wholly owned subsidiary, The Narragansett Electric Company (NECO). NECO is part of our US Regulated segment and is a retail distribution company providing electricity and gas to customers in Rhode Island. The expected sale proceeds are £2.8 billion ($3.8 billion), and the sale is expected to complete in March 2022 once all regulatory approvals are obtained.

As the sale is considered highly probable and is expected to complete within a year, the associated assets and liabilities have been presented as held for sale in the consolidated statement of financial position. However, as NECO does not represent a separate major line of business or geographical operations, it has not met the criteria for classification as a discontinued operation and therefore its results for the period are not separately disclosed on the face of the income statement.

The following assets and liabilities of NECO were classified as held for sale at 31 March 2021:

	2021 £m
Goodwill	**562**
Intangible assets	**3**
Property, plant and equipment	**2,713**
Trade and other receivables	**237**
Cash and cash equivalents	**4**
Other assets	**38**
Total assets held for sale	**3,557**
Borrowings	**(1,123)**
Pension liabilities	**(49)**
Other liabilities	**(396)**
Total liabilities held for sale	**(1,568)**
Net assets held for sale	**1,989**

No impairment losses were recognised upon remeasurement of the assets and liabilities prior to classification as held for sale. NECO generated profit after tax of £104 million (2020: £31 million; 2019: £137 million) for the year ended 31 March 2021. Current and deferred tax balances relating to NECO have not been included as held for sale on the basis that those balances will be retained by National Grid rather than transferring with the other assets and liabilities of NECO.

The Group also announced its intention to sell a majority stake in the UK Gas Transmission business. However, as the process is still at an early stage and is not expected to be marketed until later in the year, the business has not been classified as held for sale and has not met the criteria for classification as a discontinued operation as at 31 March 2021.

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10. Discontinued operations and assets held for sale continued

Quadgas HoldCo Limited

In June 2019, the Group sold its remaining 39% interest in Cadent (held through its holding in Quadgas HoldCo Limited (Quadgas)). This interest had been classified as held for sale from 30 June 2018 until the date of disposal, as detailed in the Annual Report and Accounts for the year ended 31 March 2019.

The aggregate carrying value of our investment in Quadgas at the disposal date was £1,956 million. This was comprised of the carrying value of the Group's equity interest in Quadgas of £1,494 million, a shareholder loan to Quadgas of £352 million and a derivative financial asset with a fair value of £110 million. The total sales proceeds were £1,965 million. The gain on disposal was £9 million.

We considered the disposal of our 39% investment in Quadgas as the final stage of the plan to dispose of our interest in the UK Gas Distribution business first announced in 2015, and accordingly treated the results and cash flows arising from Quadgas as a discontinued operation on the basis that the sale formed the final part of a 'single coordinated plan' to dispose of UK Gas Distribution. As a consequence, we classified the various elements of income, expense and cash flows within discontinued operations as set out below. Once the assets were treated as 'held for sale', equity accounting ceased for our investment in our associate. We therefore ceased to record our share of profits from 30 June 2018.

The summary income statement for discontinued operations is as follows:

	2020 £m	2019 £m
Revenue	–	–
Operating costs[1]	(23)	(1)
Operating loss	(23)	(1)
Net finance income	6	23
Share of post-tax results of joint ventures and associates[2]	–	(5)
(Loss)/profit before tax from discontinued operations	(17)	17
Tax from discontinued operations	(1)	(5)
(Loss)/profit after tax from discontinued operations	(18)	12
Gain on disposal	9	–
Total (loss)/profit after tax from discontinued operations[3]	(9)	12

1. Operating costs for the year ended 31 March 2020 related to final transaction costs and other expenses in relation to Quadgas.
2. For the year ended 31 March 2019, the amount presented is the net of £43 million impairment charge against the investment in Quadgas and £38 million share of Quadgas post-tax profits recognised prior to classification as held for sale.
3. For the year ended 31 March 2020, the £23 million of operating expenses and the £9 million gain on disposal are treated as exceptional. For the year ended 31 March 2019, the £43 million impairment charge against the investment in Quadgas, net operating costs of £1 million and the tax thereon are classified as exceptional items.

The summary statement of comprehensive income for discontinued operations is as follows:

	2020 £m	2019 £m
(Loss)/profit after tax from discontinued operations	(9)	12
Other comprehensive income		
Items that will never be reclassified to profit or loss:		
Share of other comprehensive income of associate, net of tax	–	36
Total items from discontinued operations that will never be reclassified to profit or loss	–	36
Items that may be reclassified subsequently to profit or loss:		
Net gains in respect of cash flow hedges	6	–
Total items from discontinued operations that may be reclassified subsequently to profit or loss	6	–
Other comprehensive income for the year, net of tax from discontinued operations	6	36
Total comprehensive (loss)/income for the year from discontinued operations	(3)	48

The summary cash flows for discontinued operations are as follows:

Cash flows used in operating activities of £97 million in 2020 (2019: £71 million) primarily related to cash outflows in respect of voluntary contributions totalling £66 million paid to the Warm Homes Fund, the utilisation of provisions and the payment of the final transaction fees incurred in the period.

Cash inflows from investing activities of £6 million in 2020 (2019: £156 million) were comprised of dividends received and interest received on the shareholder loan.

There were no cash flows for financing activities in 2020 or 2019.

11. Goodwill

Goodwill represents the excess of what we paid to acquire businesses over the fair value of their net assets at the acquisition date. We assess whether goodwill is recoverable by performing an impairment review annually or more frequently if events or changes in circumstances indicate a potential impairment.

Goodwill and fair value adjustments arising on the acquisition of a foreign entity are treated as assets and liabilities of the foreign entity and translated at the closing exchange rate. Goodwill is allocated to cash-generating units and this allocation is made to those cash-generating units that are expected to benefit from the acquisition in which the goodwill arose.

Impairment is recognised where there is a difference between the carrying value of the cash-generating unit and the estimated recoverable amount of the cash-generating unit to which that goodwill has been allocated. Any impairment is recognised immediately in the income statement and is not subsequently reversed. Any impairment loss is first allocated to the carrying value of the goodwill and then to the other assets within the cash-generating unit. Recoverable amount is defined as the higher of fair value less costs to sell and estimated value-in-use at the date the impairment review is undertaken. Value-in-use represents the present value of expected future cash flows, discounted using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted.

	Total £m
Net book value at 1 April 2019[1]	5,372
Exchange adjustments[1]	259
Acquisition of National Grid Renewables (note 38)	81
Net book value at 1 April 2020	5,712
Exchange adjustments	(562)
Reclassification to held for sale (note 10)	(562)
Net book value at 31 March 2021	**4,588**

1. Comparative amounts have been revised as described in note 1F.

There is no significant accumulated impairment charge as at 31 March 2021 or 31 March 2020.

The amounts disclosed above as at 31 March 2021 relate to the following cash-generating units: New York £3,004 million (2020: £3,334 million); Massachusetts £963 million (2020: £1,069 million); Rhode Island £nil (2020: £438 million); Federal £544 million (2020: £790 million); and National Grid Renewables £77 million (2020: £81 million). Following the announcement of the sale of NECO (see note 10), goodwill balances relating to the Rhode Island cash generating unit and a portion of the goodwill relating to the Federal cash generating unit were reclassified as held for sale in the period.

Goodwill is reviewed annually for impairment and the recoverability of goodwill has been assessed by comparing the carrying amount of our operations described above (our cash-generating units) with the expected recoverable amount on a value-in-use basis. In each assessment, the value-in-use has been calculated based on five-year plan projections that incorporate our best estimates of future cash flows, customer rates, costs (including changes in commodity prices), future prices and growth. Such projections reflect our current regulatory rate plans taking into account regulatory arrangements to allow for future rate plan filings and recovery of investment. The projections also take account of the costs associated with our net zero plans and the associated regulatory arrangements. Our plans have proved to be reliable guides in the past and the Directors believe the estimates are appropriate.

The future economic growth rate used to extrapolate projections beyond five years is 2.1% (2020: 2.1%). The growth rate has been determined having regard to data on projected growth in US real gross domestic product (GDP). Based on the position of our business in the underlying US economy, it is appropriate for the terminal growth rate to be based upon the overall growth in real GDP and, given the nature of our operations, to extend over a long period of time. Cash flow projections have been discounted to reflect the time value of money, using a post-tax discount rate of 5.0% (2020: 4.5%). The equivalent pre-tax discount rate is 5.3% (2020: 4.5%). The discount rate represents the estimated weighted average cost of capital of these operations.

In assessing the carrying value of goodwill, we have sensitised our forecasts to factor in a reduction in revenues and lower tax costs into our cash flow forecasts, but we have not reflected the impact of additional rate base growth on future earnings. While it is possible that a key assumption in the calculation could change, the Directors believe that no reasonably foreseeable change would result in an impairment of goodwill, in view of the long-term nature of the key assumptions and the margin by which the estimated value-in-use exceeds the carrying amount. This remains the case even after taking into account the short-term effects of COVID-19, the most significant of which is an increase in bad debt charges in the short term.

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12. Other intangible assets

Other intangible assets mainly comprise software which is written down (amortised) over the period we expect to receive a benefit from the asset. An amortisation expense is charged to the income statement to reflect the reduced value of the asset over time. Amortisation is calculated by estimating the number of years we expect the asset to be used (useful economic life or UEL) and charging the cost of the asset to the income statement equally over this period.

Identifiable intangible assets are recorded at cost less accumulated amortisation and any provision for impairment. Other intangible assets are tested for impairment only if there is an indication that the carrying value of the assets may have been impaired. Impairments of assets are calculated as the difference between the carrying value of the asset and the recoverable amount, if lower. Where such an asset does not generate cash flows that are independent from other assets, the recoverable amount of the cash-generating unit to which that asset belongs is estimated. Impairments are recognised in the consolidated income statement and are disclosed separately. Any assets which suffered impairment in a previous period are reviewed for possible reversal of the impairment at each reporting date.

Internally generated intangible assets, such as software, are recognised only if: i) an asset is created that can be identified; ii) it is probable that the asset created will generate future economic benefits; and iii) the development cost of the asset can be measured reliably. Where no internally generated intangible asset can be recognised, development expenditure is recorded as an expense in the period in which it is incurred.

Other intangible assets are amortised on a straight-line basis over their estimated useful economic lives. Amortisation periods for other intangible assets are:

	Years
Software	3 to 10

	Software £m	Assets in the course of construction £m	Total £m
Cost at 1 April 2019	1,784	384	2,168
Exchange adjustments	45	18	63
Additions	38	314	352
Reclassifications	159	(159)	—
Cost at 1 April 2020	2,026	557	2,583
Exchange adjustments	(102)	(43)	(145)
Additions	7	414	421
Disposals	(47)	(2)	(49)
Reclassifications[1]	255	(240)	15
Reclassification to held for sale (note 10)	(19)	—	(19)
Cost at 31 March 2021	2,120	686	2,806
Accumulated amortisation at 1 April 2019	(1,084)	—	(1,084)
Exchange adjustments	(28)	—	(28)
Amortisation charge for the year	(176)	—	(176)
Accumulated amortisation at 1 April 2020	(1,288)	—	(1,288)
Exchange adjustments	61	—	61
Amortisation charge for the year	(196)	—	(196)
Accumulated amortisation of disposals	44	—	44
Reclassification to held for sale (note 10)	16	—	16
Accumulated amortisation at 31 March 2021	(1,363)	—	(1,363)
Net book value at 31 March 2021[2]	**757**	**686**	**1,443**
Net book value at 31 March 2020	738	557	1,295

1. Reclassifications includes amounts transferred from property, plant and equipment (see note 13).
2. The Group has capitalised £298 million (2020: £240 million) in relation to the Gas Business Enablement system in the US, of which £82 million (2020: £30 million) is in service and is being amortised over 10 years, with the remainder included within assets in the course of construction. A further £117 million (2020: £59 million) in relation to our new UK general ledger system is also included within assets in the course of construction as at 31 March 2021, and is expected to be amortised over 10 years once it is commissioned in July 2021.

13. Property, plant and equipment

Property, plant and equipment are the physical assets controlled by us. The cost of these assets primarily represents the amount initially paid for them. This includes both their purchase price and the construction and other costs associated with getting them ready for operation. A depreciation expense is charged to the income statement to reflect annual wear and tear and the reduced value of the asset over time. Depreciation is calculated by estimating the number of years we expect the asset to be used (useful economic life or UEL) and charging the cost of the asset to the income statement equally over this period.

We operate an energy networks business and therefore have a significant physical asset base. We continue to invest in our networks to maintain reliability, create new customer connections and ensure our networks are flexible and resilient. Our business plan envisages these additional investments will be funded through a mixture of cash generated from operations and the issue of new debt.

Property, plant and equipment is recorded at cost, less accumulated depreciation and any impairment losses. Cost includes the purchase price of the asset; any payroll and finance costs incurred which are directly attributable to the construction of property, plant and equipment; and the cost of any associated asset retirement obligations.

Property, plant and equipment includes assets in which the Group's interest comprises legally protected statutory or contractual rights of use. Additions represent the purchase or construction of new assets, including capital expenditure for safety and environmental assets, and extensions to, enhancements to, or replacement of, existing assets. All costs associated with projects or activities which have not been fully commissioned at the period end are classified within assets in the course of construction.

Items within property, plant and equipment are tested for impairment only if there is some indication that the carrying value of the assets may have been impaired. Impairments of assets are calculated as the difference between the carrying value of the asset and the recoverable amount, if lower. Where such an asset does not generate cash flows that are independent from other assets, the recoverable amount of the cash-generating unit to which that asset belongs is estimated. Impairments are recognised in the income statement and if immaterial are included within the depreciation charge for the year.

(a) Asset useful economic lives

No depreciation is provided on freehold land or assets in the course of construction. Other items of property, plant and equipment are depreciated, on a straight-line basis, at rates estimated to write off their book values over their estimated useful economic lives. In assessing estimated useful economic lives, consideration is given to any contractual arrangements and operational requirements relating to particular assets. The assessments of estimated useful economic lives and residual values of assets are performed annually.

Unless otherwise determined by operational requirements, the depreciation periods for the principal categories of property, plant and equipment are, in general, as shown in the table below split between the UK and US, along with the weighted average remaining UEL for each class of property, plant and equipment (which is calculated by applying the annual depreciation charge per class of asset to the net book value of that class of asset).

	Years		
	UK	US	Weighted average remaining UEL
Freehold and leasehold buildings	up to 60	up to 100	9
Plant and machinery:			
Electricity transmission plant and wires	15 to 100	45 to 80	30
Electricity distribution plant	n/a	35 to 85	33
Electricity generation plant	n/a	20 to 93	10
Interconnector plant and other	5 to 60	5 to 50	16
Gas plant – mains, services and regulating equipment	10 to 65	47 to 95	45
Gas plant – storage	5 to 40	12 to 65	12
Gas plant – meters	7 to 30	14 to 40	20
Motor vehicles and office equipment	up to 10	up to 26	4

(b) Gas asset lives

The role that gas networks play in the pathway to achieving the greenhouse gas emissions reductions targets set in the jurisdictions in which we operate is currently uncertain. However, we believe the gas assets which we own and operate today will continue to have a crucial role in maintaining security, reliability and affordability of energy beyond 2050, although the scale and purpose for which the networks will be used is dependent on technological developments and policy choices of governments and regulators.

- In the UK, the useful economic life of gas mains, services and regulating assets relating to the National Transmission System (NTS) are frequently reviewed throughout the year and subject to a detailed review at the year end. The most material components of these are our pipeline assets, which are due to be fully depreciated by 2070, with other assets being depreciated over various periods between now and then. Those reviews considered a number of scenarios, which consider the implications of the UK's net zero by 2050 legislation for the NTS. Our most recent review concluded that the most likely outcome was for the NTS network assets to remain in use beyond 2050, including in those scenarios where the greenhouse gas emissions of gas networks were largely eliminated.
- With respect to our US gas distribution assets, asset lives are assessed as part of detailed depreciation studies completed as part of each separate rate proceeding. Depreciation studies consider the physical condition of assets and the expected operational life of an asset. We believe these assessments are our best estimate of the UEL of our gas network assets in the US.

  The weighted average remaining UEL for our US gas distribution fixed asset base is circa 50 years, however a sizeable proportion of our assets are assumed to have UELs which extend beyond 2080. We continue to believe the lives identified by rate proceedings are the best estimate of the assets' UELs, although we continue to keep this assumption under review as we learn more about possible future pathways towards net zero. Whilst the targets, goals and ambitions have now been formalised in legislation in the states in which we operate, there is widespread recognition that work needs to be done to define the possible future decarbonisation pathways. We continue to actively engage and support our regulators to enable the clean energy transition in a safe, reliable and affordable way.

  Asset depreciation lives feed directly into our US regulatory recovery mechanisms, such that any shortening of asset lives and regulatory recovery periods as agreed with regulators should be recoverable through future rates, subject to agreement, over future periods, as part of wider considerations around ensuring the continuing affordability of gas in our service territories.

Notes to the consolidated financial statements continued

13. Property, plant and equipment continued

Given the uncertainty described relating to the UELs of our gas assets, below we provide a sensitivity on the depreciation charge for our UK and US regulated segments were a shorter UEL presumed:

	Increase in depreciation expense for the year ended 31 March 2021		Increase in depreciation expense for the year ended 31 March 2020	
	UK regulated £m	US regulated £m	UK regulated £m	US regulated £m
UELs limited to 2050	35	160	37	151
UELs limited to 2060	12	70	13	66
UELs limited to 2070	1	28	—	26

Note that this sensitivity calculation excludes any assumptions regarding the residual value for our asset base and the effect shortening asset depreciation lives would be expected to have on our regulatory recovery mechanisms.

(c) Analysis of property, plant and equipment

	Land and buildings £m	Plant and machinery £m	Assets in the course of construction £m	Motor vehicles and office equipment £m	Total £m
Cost at 1 April 2019 (before transition to IFRS 16)[1]	3,338	53,829	5,049	930	63,146
Right-of-use assets recognised on transition to IFRS 16[2]	381	67	—	20	468
Cost at 1 April 2019 (as restated)	3,719	53,896	5,049	950	63,614
Exchange adjustments[1]	98	1,484	83	33	1,698
Additions	130	464	4,029	104	4,727
Disposals	(79)	(486)	(9)	(65)	(639)
Reclassifications[3,4]	29	4,251	(4,381)	14	(87)
Cost at 1 April 2020	3,897	59,609	4,771	1,036	69,313
Exchange adjustments	(213)	(3,308)	(130)	(73)	(3,724)
Additions	89	328	4,023	70	4,510
Disposals	(6)	(344)	(26)	(48)	(424)
Reclassifications[3]	96	3,007	(3,243)	77	(63)
Reclassification to held for sale (note 10)	(111)	(3,231)	(174)	(44)	(3,560)
Cost at 31 March 2021	3,752	56,061	5,221	1,018	66,052
Accumulated depreciation at 1 April 2019[1]	(778)	(16,918)	—	(591)	(18,287)
Exchange adjustments[1]	(16)	(329)	—	(20)	(365)
Depreciation charge for the year	(92)	(1,252)	—	(120)	(1,464)
Disposals	36	464	—	58	558
Reclassifications[3]	3	(7)	—	11	7
Accumulated depreciation at 1 April 2020	(847)	(18,042)	—	(662)	(19,551)
Exchange adjustments	37	698	—	46	781
Depreciation charge for the year	(90)	(1,270)	—	(116)	(1,476)
Disposals	—	339	—	48	387
Reclassifications[3]	2	(5)	—	6	3
Reclassification to held for sale (note 10)	22	798	—	27	847
Accumulated depreciation at 31 March 2021	(876)	(17,482)	—	(651)	(19,009)
Net book value at 31 March 2021	**2,876**	**38,579**	**5,221**	**367**	**47,043**
Net book value at 31 March 2020	3,050	41,567	4,771	374	49,762

1. Comparative amounts have been revised as described in note 1F.
2. On 1 April 2019, £468 million of additional right-of-use assets were recognised on transition to IFRS 16. See note 37 for details.
3. Represents amounts transferred between categories, (to)/from other intangible assets (see note 12), from inventories and reclassifications between cost and accumulated depreciation.
4. In 2020, comprised an £87 million reduction in the gross cost of assets in the course of construction in our UK Electricity Transmission business for costs previously capitalised and accrued as due to a supplier, that were subsequently no longer payable.

	2021 £m	2020 £m
Information in relation to property, plant and equipment		
Capitalised interest included within cost	2,233	2,118
Contributions to cost of property, plant and equipment included within:		
Trade and other payables	138	84
Non-current liabilities	400	428
Contract liabilities – current	66	76
Contract liabilities – non-current	1,093	1,082

13. Property, plant and equipment continued

(d) Right-of-use assets

The Group leases various properties, land, equipment and cars. With effect from 1 April 2019, new lease arrangements entered into are recognised as a right-of-use asset and a corresponding liability at the date at which the leased asset is available for use by the Group (see note 37). The right-of-use asset and associated lease liability arising from a lease are initially measured at the present value of the lease payments expected over the lease term. The lease payments include fixed payments, any variable lease payments dependent on an index or a rate, and any break fees or renewal option costs that we are reasonably certain to incur. The discount rate applied is the rate implicit in the lease or, if that is not available, then the incremental rate of borrowing for a similar term and similar security (which is determined based on observable data for borrowing rates for the specific group entity that has entered into the lease, with specific adjustments for the term of the lease and any lease-specific risk premium). The lease term takes account of exercising any extension options that are at our option if we are reasonably certain to exercise the option and any lease termination options unless we are reasonably certain not to exercise the option. Each lease payment is allocated between the liability and finance cost. The finance cost is charged to the income statement over the lease period using the effective interest rate method. The right-of-use asset is depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis. For short-term leases (lease term of 12 months or less) and leases of low-value assets (such as computers), the Group continues to recognise a lease expense on a straight-line basis.

The table below shows the net book value of right-of-use assets included within property, plant and equipment at 31 March 2021 and 31 March 2020, split by category. The associated lease liabilities are disclosed in note 21.

31 March 2021	Land and buildings £m	Plant and machinery £m	Assets in the course of construction £m	Motor vehicles and office equipment £m	Total £m
Net book value at 31 March 2021	**365**	**81**	**—**	**184**	**630**
Additions	**60**	**6**	**—**	**64**	**130**
Depreciation charge for the year	**(29)**	**(16)**	**—**	**(68)**	**(113)**

31 March 2020	Land and buildings £m	Plant and machinery £m	Assets in the course of construction £m	Motor vehicles and office equipment £m	Total £m
Net book value at 31 March 2020	364	95	—	225	684
Additions	10	1	—	73	84
Depreciation charge for the year	(29)	(16)	—	(72)	(117)

The following balances have been included in the income statement for the years ended 31 March 2021 and 31 March 2020 in respect of right-of-use assets:

	2021 £m	2020 £m
Included within net finance income and costs:		
Interest expense on lease liabilities	**(21)**	(26)
Included within revenue:		
Lease income[1]	**390**	404
Included within operating expenses:		
Expense relating to short-term and low-value leases	**(13)**	(12)

1. Included within lease income is £376 million (2020: £353 million) of variable lease payments, the majority of which relates to the power supply arrangement entered into with LIPA (see note 3).

The total of future minimum sublease payments expected to be received under non-cancellable subleases is £104 million (2020: £94 million).

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14. Other non-current assets

Other non-current assets include assets that do not fall into any other non-current asset category (such as goodwill or property, plant and equipment) where the benefit to be received from the asset is not due to be received until after 31 March 2022.

	2021 £m	2020 £m
Other receivables	45	35
Non-current tax assets	6	65
Prepayments	5	19
Accrued income[1]	237	235
	293	354

1. Includes accrued income in relation to property sales to the St William joint venture.

15. Financial and other investments

The Group holds a range of financial and other investments. These investments include short-term money market funds, quoted investments in equities or bonds of other companies, investments in our venture capital portfolio (National Grid Partners), bank deposits with a maturity of greater than three months, and investments that can not be readily used in operations, principally collateral deposited in relation to derivatives.

The classification of each investment held by the Group is determined based on two main factors:

- its contractual cash flows – whether the assets cash flows are solely payments of the principal and interest on the financial asset on pre-determined dates or whether the cash flows are determined by other factors such as the performance of a company; and
- the business model for holding the investments – whether the intention is to hold onto the investment for the longer term (collect the contractual cash flows), or to sell the asset with the intention of managing any gain or loss on sale or to manage any liquidity requirements.

The four categories of financial and other investments are as follows:

- Financial assets at amortised cost – debt instruments that have contractual cash flows that are solely payments of principal and interest, and which are held within a business model whose objective is to collect contractual cash flows, are held at amortised cost. This category includes our receivables in relation to deposits and collateral;
- FVOCI debt and other investments – debt investments, such as bonds, that have contractual cash flows that are solely payments of principal and interest, and which are held within a business model whose objective is both to collect the contractual cash flows and to sell the debt instruments, are measured at fair value through other comprehensive income (FVOCI), with gains or losses recognised in the consolidated statement of comprehensive income instead of through the income statement. On disposal, any gains or losses are recognised within finance income in the income statement (see note 6). Other investments include insurance contracts, measured at fair value, and held to back the present value of unfunded pension liabilities in note 25;
- FVOCI equity instruments – the Group has elected to measure equity instruments that are shares held as part of a portfolio of financial instruments which back some long-term employee liabilities at FVOCI on the basis that they are not held for trading and so recognising gains and losses on these investments in the income statement would not be representative of performance in the year. On disposal, any realised gains and losses are transferred to retained earnings (see note 28); and
- FVTPL investments – other financial investments are subsequently measured at fair value with any gains or losses recognised in the income statement (FVTPL). This primarily comprises our money market funds, insurance company fund investments and corporate venture capital investments held by National Grid Partners.

Financial and other investments are initially recognised on trade date. Subsequent to initial recognition, the fair values of financial assets that are quoted in active markets are based on bid prices. When independent prices are not available, fair values are determined using valuation techniques used by the relevant markets using observable market data where possible (see note 32(g) for further details).

15. Financial and other investments continued

	2021 £m	2020 £m
Non-current		
FVOCI debt and other investments	**416**	352
FVOCI equity investments	**99**	83
FVTPL investments	**240**	108
	755	543
Current		
FVTPL investments	**1,768**	1,278
Financial assets at amortised cost	**574**	720
	2,342	1,998
	3,097	2,541
Financial and other investments include the following:		
Investments in short-term money market funds	**1,412**	951
Investments held by National Grid Partners	**136**	97
Other investments	**103**	11
Balances that are restricted or not readily used in operations:		
Collateral[1]	**540**	685
Insurance company and non-qualified plan investments	**589**	542
Cash surrender value of life insurance policies	**283**	220
Other investments	**34**	35
	3,097	2,541

1. The collateral balance includes: £480 million (2020: £685 million) of collateral placed with counterparties with whom we have entered into a credit support annex to the International Swaps and Derivatives Association (ISDA) Master Agreement; £42 million (2020: £nil) of collateral paid by operating companies as required security deposits under the Connection and Use of System Code; and £18 million (2020: £nil) of restricted amounts allocated for specific projects within the National Grid Electricity System Operator.

FVTPL and FVOCI investments are recorded at fair value. The carrying value of current financial assets at amortised cost approximates their fair values, primarily due to short-dated maturities. The exposure to credit risk at the reporting date is the fair value of the financial investments. For further information on our credit risk, refer to note 32(a).

For the purposes of impairment assessment, the investments in bonds are considered to be low risk as they are investment grade securities; life insurance policies are held with regulated insurance companies; and deposits, collateral receivable and other financial assets at amortised cost are investment grade. All financial assets held at FVOCI or amortised cost are therefore considered to have low credit risk and have an immaterial impairment loss allowance equal to 12-month expected credit losses.

In determining the expected credit losses for these assets, some or all of the following information has been considered: credit ratings, the financial position of counterparties, the future prospects of the relevant industries and general economic forecasts.

No FVOCI or amortised cost financial assets have had modified cash flows during the period. There has been no change in the estimation techniques or significant assumptions made during the year in assessing the loss allowance for these financial assets. There were no significant movements in the gross carrying value of financial assets during the year that contribute to changes in the loss allowance. No collateral is held in respect of any of the financial investments in the above table. No balances are more than 30 days past due, and no balances were written off during the year.

16. Investments in joint ventures and associates

Investments in joint ventures and associates represent businesses we do not control but over which we exercise joint control or significant influence. They are accounted for using the equity method. A joint venture is an arrangement established to engage in economic activity, which the Group jointly controls with other parties and has rights to a share of the net assets of the arrangement. An associate is an entity which is neither a subsidiary nor a joint venture, but over which the Group has significant influence.

	2021			2020		
	Associates £m	Joint ventures £m	Total £m	Associates £m	Joint ventures £m	Total £m
Share of net assets at 1 April	**341**	**654**	**995**	291	317	608
Exchange adjustments	**(22)**	**(36)**	**(58)**	20	12	32
Additions	**6**	**75**	**81**	16	156	172
Capitalisation of shareholder loan to Nemo Link Limited	**—**	**—**	**—**	—	176	176
Share of post-tax results for the year	**30**	**28**	**58**	40	47	87
Share of other comprehensive income of associates, net of tax	**1**	**—**	**1**	1	—	1
Dividends received	**(31)**	**(49)**	**(80)**	(41)	(34)	(75)
Other movements[1]	**(96)**	**(34)**	**(130)**	14	(20)	(6)
Share of net assets at 31 March	**229**	**638**	**867**	341	654	995

1. Within associates, the other movements for the year primarily relates to the reclassification of an investment in an associate to financial investments.

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16. Investments in joint ventures and associates continued

A list of joint ventures and associates including the name and proportion of ownership is provided in note 34. Transactions with and outstanding balances with joint ventures and associates are shown in note 31. The joint ventures and associates have no significant contingent liabilities to which the Group is exposed, and the Group has no significant contingent liabilities in relation to its interests in the joint ventures and associates. The Group has capital commitments of £141 million (2020: £240 million) in relation to joint ventures.

At 31 March 2021, the Group had three material joint ventures, being its 50% equity stakes in BritNed and Nemo Link Limited (Nemo) and its 51% stake in Emerald Energy Venture LLC (Emerald). The Group has one material associate, being its 26.25% investment in Millennium Pipeline Company LLC. BritNed is a joint venture with the Dutch transmission system operator, TenneT, and operates the subsea electricity link between Great Britain and the Netherlands, commissioned in 2011. Nemo is a joint venture with the Belgian transmission operator, Elia, and is a subsea electricity interconnector between the UK and Belgium, which became operational on 31 January 2019. BritNed and Nemo have reporting periods ending on 31 December with monthly management reporting information provided to National Grid. Emerald is a joint venture with Washington State Investment Board and builds and operates wind and solar assets. Emerald was acquired on 11 July 2019. Millennium Pipeline Company LLC is an associate that owns a natural gas pipeline from southern New York to the Lower Hudson Valley.

Summarised financial information as at 31 March, together with the carrying amount of the investments, is as follows:

	BritNed Development Limited		Millennium Pipeline Company LLC		Nemo Link Limited		Emerald Energy Venture LLC	
	2021 £m	2020 £m	**2021 £m**	2020 £m	**2021 £m**	2020 £m	**2021 £m**	2020 £m
Statement of financial position								
Non-current assets	**409**	399	**795**	910	**536**	582	**559**	435
Cash and cash equivalents	**47**	54	**27**	33	**31**	26	**112**	66
All other current assets	**24**	4	**24**	26	**8**	5	**12**	6
Non-current liabilities	**(81)**	(45)	**(256)**	(315)	**(30)**	(29)	**(286)**	(232)
Current liabilities	**(22)**	(16)	**(38)**	(43)	**(19)**	(10)	**(27)**	(2)
Net assets	**377**	396	**552**	611	**526**	574	**370**	273
Group's ownership interest in joint venture/associate	**189**	198	**145**	160	**263**	287	**189**	139
Group adjustment: elimination of profits on sales to joint venture	**–**	–	**–**	–	**–**	–	**(23)**	(10)
Carrying amount of the Group's investment	**189**	198	**145**	160	**263**	287	**166**	129

	BritNed Development Limited		Millennium Pipeline Company LLC		Nemo Link Limited		Emerald Energy Venture LLC	
	2021 £m	2020 £m	**2021 £m**	2020 £m	**2021 £m**	2020 £m	**2021 £m**	2020 £m
Income statement								
Revenue	**72**	80	**199**	206	**66**	45	**28**	19
Depreciation and amortisation	**(15)**	(14)	**(43)**	(46)	**(24)**	(23)	**(14)**	(7)
Other costs	**(15)**	(10)	**(21)**	(20)	**(6)**	(8)	**(22)**	(10)
Operating profit/(loss)	**42**	56	**135**	140	**36**	14	**(8)**	2
Net interest expense	**(1)**	–	**(18)**	(22)	**–**	–	**–**	(3)
Profit/(loss) before tax	**41**	56	**117**	118	**36**	14	**(8)**	(1)
Income tax expense	**(11)**	(10)	**–**	–	**(14)**	(2)	**–**	–
Profit/(loss) for the year	**30**	46	**117**	118	**22**	12	**(8)**	(1)
Group's share of profit/(loss)	**15**	23	**31**	31	**11**	6	**(4)**	(1)
Group adjustment: tax charge	**–**	–	**(9)**	(9)	**–**	–	**1**	–
Group's share of post-tax results for the year	**15**	23	**22**	22	**11**	6	**(3)**	(1)

17. Derivative financial instruments

Derivatives are financial instruments that derive their value from the price of an underlying item such as interest rates, foreign exchange rates, credit spreads, commodities, equities or other indices. In accordance with policies approved by the Board, derivatives are transacted generally to manage exposures to fluctuations in interest rates, foreign exchange rates and commodity prices. Our derivatives balances comprise two broad categories:

- financing derivatives: These are used to manage our exposure to interest rates and foreign exchange rates. Specifically, we use these derivatives to manage our financing portfolio, holdings in foreign operations and contractual operational cash flows; and
- commodity contract derivatives: These are used to manage our US customers' exposure to price and supply risks. Some forward contracts for the purchase of commodities meet the definition of derivatives. We also enter into derivative financial instruments linked to commodity prices, including index futures, options and swaps, which are used to manage market price volatility.

Derivatives are initially recognised at fair value and subsequently remeasured to fair value at each reporting date. Changes in fair values are recorded in the period they arise, in either the consolidated income statement or other comprehensive income. Where the gains or losses recorded in the income statement arise from changes in the fair value of derivatives to the extent that hedge accounting is not applied or is not fully effective, these are recorded as remeasurements, detailed in notes 5 and 6. Where the fair value of a derivative is positive it is carried as a derivative asset, and where negative as a derivative liability.

The fair value of derivative financial instruments is calculated by taking the present value of future cash flows, primarily incorporating market observable inputs. The various inputs include foreign exchange spot and forward rates, yield curves of the respective currencies, currency basis spreads between the respective currencies, interest rate and inflation curves, the forward rate curves of underlying commodities, and for those positions that are not fully cash collateralised the credit quality of the counterparties.

Certain clauses embedded in non-derivative financial instruments or other contracts are presented as derivatives because they impact the risk profile of their host contracts and they are deemed to have risks or rewards not closely related to those host contracts.

Further information on how derivatives are valued and used for risk management purposes is presented in note 32. Information on commodity contracts and other commitments not meeting the definition of derivatives is presented in note 30.

The fair values of derivatives by category are as follows:

	2021			2020		
	Assets £m	**Liabilities £m**	**Total £m**	Assets £m	Liabilities £m	Total £m
Current	**457**	**(145)**	**312**	93	(380)	(287)
Non-current	**542**	**(754)**	**(212)**	1,249	(954)	295
	999	**(899)**	**100**	1,342	(1,334)	8
Financing derivatives	**942**	**(767)**	**175**	1,267	(1,134)	133
Commodity contract derivatives	**57**	**(132)**	**(75)**	75	(200)	(125)
	999	**(899)**	**100**	1,342	(1,334)	8

(a) Financing derivatives

The fair values of financing derivatives by type are as follows:

	2021			2020		
	Assets £m	**Liabilities £m**	**Total £m**	Assets £m	Liabilities £m	Total £m
Interest rate swaps	**325**	**(159)**	**166**	556	(337)	219
Cross-currency interest rate swaps	**601**	**(351)**	**250**	643	(514)	129
Foreign exchange forward contracts[1]	**16**	**(74)**	**(58)**	58	(39)	19
Inflation-linked swaps	**—**	**(183)**	**(183)**	—	(234)	(234)
Equity options	**—**	**—**	**—**	10	(10)	—
	942	**(767)**	**175**	1,267	(1,134)	133

1. Included within the foreign exchange forward contracts balance are £32 million (2020: £3 million) of derivative liabilities in relation to the hedging of capital expenditure and a deal-contingent foreign exchange forward contract liability of £9 million (2020: £nil) in relation to the disposal of NECO (see note 10).

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17. Derivative financial instruments continued

(a) Financing derivatives continued

The maturity profile of financing derivatives is as follows:

	2021 Assets £m	2021 Liabilities £m	2021 Total £m	2020 Assets £m	2020 Liabilities £m	2020 Total £m
Current						
Less than 1 year	**428**	**(70)**	**358**	62	(254)	(192)
	428	**(70)**	**358**	62	(254)	(192)
Non-current						
In 1 to 2 years	**10**	**(14)**	**(4)**	480	(51)	429
In 2 to 3 years	**24**	**(12)**	**12**	13	(5)	8
In 3 to 4 years	**62**	**(80)**	**(18)**	20	(28)	(8)
In 4 to 5 years	**4**	**(42)**	**(38)**	31	(109)	(78)
More than 5 years	**414**	**(549)**	**(135)**	661	(687)	(26)
	514	**(697)**	**(183)**	1,205	(880)	325
	942	**(767)**	**175**	1,267	(1,134)	133

The notional contract amounts of financing derivatives by type are as follows:

	2021 £m	2020 £m
Interest rate swaps	**(2,259)**	(3,101)
Cross-currency interest rate swaps	**(8,389)**	(8,097)
Foreign exchange forward contracts	**(4,651)**	(3,284)
Inflation-linked swaps	**(500)**	(500)
Equity options	**—**	(800)
	(15,799)	(15,782)

Derivatives with a notional value of £2,810 million, pay or receive cash flows that reference GBP LIBOR of £2,041 million (maturing between 2023 and 2040) or USD LIBOR of £769 million (maturing between 2023 and 2026). LIBOR is being replaced as an interest rate benchmark by alternative reference rates and therefore negotiations are underway to amend these contracts, with any related hedge documentation then being amended. At 31 March 2021, none of the contracts had yet been amended.

(b) Commodity contract derivatives

The fair values of commodity contract derivatives by type are as follows:

	2021 Assets £m	2021 Liabilities £m	2021 Total £m	2020 Assets £m	2020 Liabilities £m	2020 Total £m
Commodity purchase contracts accounted for as derivative contracts						
Forward purchases of gas	**44**	**(94)**	**(50)**	64	(108)	(44)
Derivative financial instruments linked to commodity prices						
Electricity capacity	**2**	**—**	**2**	—	—	—
Electricity swaps	**10**	**(33)**	**(23)**	4	(83)	(79)
Electricity options	**—**	**(1)**	**(1)**	—	—	—
Gas swaps	**1**	**(3)**	**(2)**	7	(8)	(1)
Gas options	**—**	**(1)**	**(1)**	—	(1)	(1)
	57	**(132)**	**(75)**	75	(200)	(125)

17. Derivative financial instruments continued

(b) Commodity contract derivatives continued

The maturity profile of commodity contract derivatives is as follows:

	2021			2020		
	Assets £m	**Liabilities £m**	**Total £m**	Assets £m	Liabilities £m	Total £m
Current						
Less than one year	**29**	**(75)**	**(46)**	31	(126)	(95)
	29	**(75)**	**(46)**	31	(126)	(95)
Non-current						
In 1 to 2 years	**7**	**(24)**	**(17)**	8	(35)	(27)
In 2 to 3 years	**7**	**(16)**	**(9)**	9	(24)	(15)
In 3 to 4 years	**7**	**(7)**	**—**	8	(12)	(4)
In 4 to 5 years	**6**	**(5)**	**1**	7	(1)	6
More than 5 years	**1**	**(5)**	**(4)**	12	(2)	10
	28	**(57)**	**(29)**	44	(74)	(30)
	57	**(132)**	**(75)**	75	(200)	(125)

The notional quantities of commodity contract derivatives by type are as follows:

	2021	2020
Forward purchases of gas[1]	**36m Dth**	102m Dth
Electricity swaps	**12,321 GWh**	12,836 GWh
Gas swaps	**47m Dth**	89m Dth
Gas options	**40m Dth**	26m Dth

1. Forward gas purchases have terms up to five years (2020: four years). The contractual obligations under these contracts are £104 million (2020: £128 million).

18. Inventories and current intangible assets

Inventories represent assets that we intend to use in order to generate revenue in the short term, either by selling the asset itself (for example, fuel stocks) or by using it to fulfil a service to a customer or to maintain our network (consumables).

Inventories are stated at the lower of weighted average cost and net realisable value. Where applicable, cost comprises direct materials and direct labour costs as well as those overheads that have been incurred in bringing the inventories to their present location and condition.

Emission allowances, principally relating to the emissions of carbon dioxide in the UK and sulphur and nitrous oxides in the US, are recorded as intangible assets within current assets. They are initially recorded at cost and subsequently at the lower of cost and net realisable value. A liability is recorded in respect of the obligation to deliver emission allowances, and emission charges are recognised in the income statement in the period in which emissions are made.

	2021 £m	2020 £m
Fuel stocks	**94**	151
Raw materials and consumables	**253**	265
Current intangible assets – emission allowances	**92**	133
	439	549

There is a provision for obsolescence of £10 million against inventories as at 31 March 2021 (2020: £21 million).

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19. Trade and other receivables

Trade and other receivables include amounts which are due from our customers for services we have provided, accrued income which has not yet been billed, prepayments, contract assets where certain milestones are required to be fulfilled and other receivables that are expected to be settled within twelve months.

Trade and other receivables are initially recognised at fair value and subsequently measured at amortised cost, less any appropriate allowances for estimated irrecoverable amounts.

	2021 £m	2020 £m
Trade receivables	**1,503**	1,571
Accrued income	**863**	849
Prepayments	**387**	408
Contract assets	**13**	—
Other receivables	**153**	158
	2,919	2,986

Trade receivables are non-interest-bearing and generally have a 30 to 90 days term. Due to their short maturities, the fair value of trade and other receivables approximates their carrying value. The maximum exposure of trade receivables to credit risk is the gross carrying amount of £2,152 million (2020: £2,063 million).

Provision for impairment of receivables

A provision for credit losses is recognised at an amount equal to the expected credit losses that will arise over the lifetime of the trade receivables and accrued income.

	2021 £m	2020 £m
At 1 April	**512**	394
Exchange adjustments	**(57)**	20
Charge for the year, net of recoveries	**326**	234
Uncollectible amounts written off	**(59)**	(136)
Reclassification to held for sale (note 10)	**(50)**	—
At 31 March	**672**	512

The trade receivables balance, accrued income balance and provisions balance split by geography are as follows:

	As at 31 March 2021			As at 31 March 2020		
	UK £m	US £m	Total £m	UK £m	US £m	Total £m
Trade receivables	**227**	**1,925**	**2,152**	227	1,836	2,063
Accrued income	**547**	**339**	**886**	461	408	869
Provision for impairment of receivables and accrued income	**(23)**	**(649)**	**(672)**	(40)	(472)	(512)

There are no retail customers in the UK businesses. A provision matrix is not used in the UK as an assessment of expected losses on individual debtors is performed, and the provision is not material.

In the US, £1,852 million (2020: £1,852 million) of the trade receivables and accrued income balance is attributable to retail customers. For non-retail US customer receivables, a provision matrix is not used and expected losses are determined on individual debtors.

The provision for retail customer receivables in the US is calculated based on a series of provision matrices which are prepared by regulated entity and by customer type. The expected loss rates in each provision matrix are based on historical loss rates adjusted for current and forecasted economic conditions at the balance sheet date. The inclusion of forward-looking information in the provision matrix setting process under IFRS 9 resulted in loss rates that reflect expected future economic conditions and the recognition of an expected loss on all debtors even where no loss event has occurred.

In March 2020, the Group's US distribution businesses ceased certain customer cash collection activities in response to regulatory instructions and to changes in State, Federal and City level regulations and guidance, and actions to minimise risk to the Group's employees as a result of COVID-19. The Group also ceased customer termination activities as requested by relevant local authorities. Certain collection activities did resume during the year where permitted, but this was a small proportion compared to normal levels.

In calculating our provision for impairment of receivables at 31 March 2021, we were able to incorporate the actual cash collection levels experienced since the start of the pandemic to determine the expected loss rates per category of outstanding receivable by operating company, which is summarised in the provision matrix shown below. For the year ended 31 March 2020, there was limited cash collection data available with regards to the impact that COVID-19 would have on collection of receivables. Therefore, in order to reflect the impact of COVID-19 into our calculation of the charge for the year, we considered the macroeconomic data including unemployment levels and our previous experience regarding debtor recoverability during and in the aftermath of the 2008/09 financial crisis (which impacted all of our service territories) and that following Superstorm Sandy in 2012 which impacted our downstate New York gas business specifically.

19. Trade and other receivables continued

Based on our review of these factors, we concluded that a reasonable range for the provisions recognised in the current year would be £320 million to £342 million ($440 million to $470 million), which considered the continued application of our previous experience regarding debtor recoverability in the aftermath of historical impactful events, as well as the collections experience seen since the start of the pandemic, and concluded that a total charge of £326 million represented our best estimate based on the information available. For the year ended 31 March 2020, we determined that the additional provision recognised in light of the cessation of customer terminations and collections following the moratoriums introduced would lie between £81 million and £161 million ($100 million and $200 million), and concluded an additional COVID-19 related charge of £117 million represented our best estimate based on the information available, primarily as this represented an impact twice as severe as Superstorm Sandy, adjusted to incorporate all service territories impacted.

The average expected loss rates and gross balances for the retail customer receivables in our US operations are set out below:

	2021 %	2021 £m	2020 %	2020 £m
Accrued income	**7**	**322**	5	395
0 – 30 days past due	**7**	**580**	5	651
30 – 60 days past due	**24**	**155**	14	194
60 – 90 days past due	**36**	**108**	29	109
3 – 6 months past due	**52**	**140**	47	121
6 – 12 months past due	**66**	**180**	63	105
Over 12 months past due	**71**	**367**	79	277
		1,852		1,852

US retail customer receivables are not collateralised. Trade receivables are written off when regulatory requirements are met. Write-off policies vary between jurisdictions as they are aligned with the local regulatory requirements, which differ between regulators. There were no significant amounts written off during the period that were still subject to enforcement action. Our internal definition of default is aligned with that of the individual regulators in each jurisdiction.

For further information on our wholesale and retail credit risk, refer to note 32(a).

20. Cash and cash equivalents

Cash and cash equivalents include cash balances, together with short-term investments with an original maturity of less than three months that are readily convertible to cash. Bank overdrafts are only shown net within cash and cash equivalents when there is a legal right to offset unconditionally and an intention to settle net has been demonstrated by the physical movement of cash.

Net cash and cash equivalents reflected in the cash flow statement are net of bank overdrafts, which are reported in borrowings. The carrying amounts of cash and cash equivalents and bank overdrafts approximate their fair values.

Cash at bank earns interest at floating rates based on daily bank deposit rates. Short-term deposits are made for periods varying between one day and three months, depending on the immediate cash requirements, and earn interest at the respective short-term deposit rates.

Cash and cash equivalents held in currencies other than sterling have been converted into sterling at year-end exchange rates. For further information on currency exposures, refer to note 32(c).

	2021 £m	2020 £m
Cash at bank	**117**	73
Short-term deposits	**40**	—
Cash and cash equivalents	**157**	73

Notes to the consolidated financial statements
continued

21. Borrowings

We borrow money primarily in the form of bonds and bank loans. These are for a fixed term and may have fixed or floating interest rates or are linked to RPI. We use derivatives to manage risks associated with interest rates, inflation rates and foreign exchange. Lease liabilities are also included within borrowings.

Our price controls and rate plans require us to fund our networks within a certain ratio of debt to equity or regulatory value and, as a result, we have issued a significant amount of debt. As we continue to invest in our networks, the value of debt is expected to increase over time. To maintain a strong balance sheet and to allow us to access capital markets at commercially acceptable interest rates, we balance the amount of debt we issue with the value of our assets, and we take account of certain other metrics used by credit rating agencies.

All borrowings are measured at amortised cost, with the exception of one current liability which is measured at fair value through profit and loss in order to eliminate a measurement mismatch.

Borrowings, which include interest-bearing, zero-coupon and inflation-linked debt, overdrafts and collateral payable, are initially recorded at fair value. This normally reflects the proceeds received (net of direct issue costs for liabilities measured at amortised cost). Subsequently, borrowings are stated either: i) at amortised cost; or ii) at fair value though profit and loss. Where a borrowing is held at amortised cost, any difference between the proceeds after direct issue costs and the redemption value is recognised over the term of the borrowing in the income statement using the effective interest method. For the liability held at fair value through profit and loss, interest is calculated using the effective interest method.

Where a borrowing or liability is held at fair value, changes in the fair value of the borrowing due to changes in the issuer's credit risk are recorded in the own credit reserve within equity (see note 28). All other changes in the fair value of the liability are recognised in the income statement within remeasurements (see notes 5 and 6).

	2021 £m	2020 £m
Current		
Bank loans	**1,022**	1,244
Bonds[1]	**1,987**	1,446
Commercial paper	**628**	1,269
Lease liabilities	**99**	112
Other loans	**1**	1
	3,737	4,072
Non-current		
Bank loans	**2,532**	2,819
Bonds	**24,209**	23,094
Lease liabilities	**586**	623
Other loans	**156**	186
	27,483	26,722
Total borrowings	**31,220**	30,794

1. Includes a liability held at fair value through profit and loss of £682 million (2020: £741 million).

21. Borrowings continued

Total borrowings are repayable as follows:

	2021 £m	2020 £m
Less than 1 year	**3,737**	4,072
In 1 to 2 years	**1,745**	2,212
In 2 to 3 years	**889**	1,664
In 3 to 4 years	**2,206**	757
In 4 to 5 years	**1,833**	2,122
More than 5 years:		
By instalments	**927**	870
Other than by instalments	**19,883**	19,097
	31,220	30,794

The fair value of borrowings at 31 March 2021 was £34,676 million (2020: £34,174 million). Where market values were available, the fair value of borrowings (Level 1) was £20,333 million (2020: £14,059 million). Where market values were not available, fair value of borrowings (Level 2) was £14,343 million (2020: £20,115 million), and calculated by discounting cash flows at prevailing interest rates. The notional amount outstanding of the debt portfolio at 31 March 2021 was £31,010 million (2020: £30,422 million). There have been no new issuances since the year end.

In 2020, the assets of the Colonial Gas Company were merged with the Boston Gas Company, and have been ringfenced post-merger. Certain gas distribution assets of NECO are subject to liens and other charges and are provided as collateral over borrowings totalling £67 million at 31 March 2021 (2020: £84 million), all of which have been classified as held for sale as at 31 March 2021 (see note 10).

Collateral is placed with or received from any derivative counterparty where we have entered into a credit support annex to the ISDA Master Agreement once the current mark-to-market valuation of the trades between the parties exceeds an agreed threshold. Included in current bank loans is £582 million (2020: £785 million) in respect of cash received under collateral agreements. For further details of our borrowing facilities, refer to note 33. For further details of our bonds in issue, please refer to the debt investor section of our website. Unless included herein, the information on our website is unaudited.

Certain borrowings, primarily some of our USD denominated bank loans and company car lease contracts, have payments that are linked to LIBOR. LIBOR is being replaced as an interest rate benchmark by alternative reference rates and therefore negotiations are underway to amend these contracts. At 31 March 2021, none of the contracts had yet been amended. £328 million of bank loans affected by GBP LIBOR, £59 million of bank loans affected by USD LIBOR and £173 million of lease liabilities affected by USD LIBOR will be impacted.

Financial liability at fair value through profit and loss

The financial liability designated at fair value through profit and loss is analysed as follows:

i. the fair value of the liability was £682 million (2020: £741 million), which includes cumulative changes in fair value attributable to changes in credit risk recognised in other comprehensive income, post tax of £1 million (2020: £10 million);
ii. the amount repayable at maturity in November 2021 is £684 million (2020: £759 million); and
iii. the difference between carrying amount and contractual amount at maturity is £2 million (2020: £18 million).

This liability has been reclassified in order to eliminate a measurement mismatch with derivatives which provide an economic hedge. The associated derivatives are collateralised and do not contain significant exposure to our own credit risk. The presentation of credit risk in other comprehensive income does not, therefore, create or enlarge an accounting mismatch in profit or loss.

The change in the fair value attributable to a change in credit risk is calculated as the difference between the total change in the fair value of the liability and the change in the value of the liability due to changes in market risk factors alone. The change in the fair value due to market risk factors was calculated using benchmark yield curves as at the end of the reporting period holding the credit risk margin constant. The fair value of the liability was calculated using observed market prices.

Notes to the consolidated financial statements
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21. Borrowings continued

Lease liabilities

The Group adopted IFRS 16 on 1 April 2019, which resulted in the recognition of £474 million of additional lease liabilities. Refer to note 37 for details.

Lease liabilities are initially measured at the present value of the lease payments expected over the lease term. The discount rate applied is the rate implicit in the lease or if that is not available, then the incremental rate of borrowing for a similar term and similar security. The lease term takes account of exercising any extension options that are at our option if we are reasonably certain to exercise the option and any lease termination options unless we are reasonably certain not to exercise the option. Each lease payment is allocated between the liability and finance cost. The finance cost is charged to the income statement over the lease period using the effective interest rate method.

	2021 £m	2020 £m
Gross lease liabilities are repayable as follows:		
Less than 1 year	**114**	132
1 to 5 years	**321**	361
More than 5 years	**464**	481
	899	974
Less: finance charges allocated to future periods	**(214)**	(239)
	685	735
The present value of lease liabilities are as follows:		
Less than 1 year	**99**	112
1 to 5 years	**267**	297
More than 5 years	**319**	326
	685	735

22. Trade and other payables

Trade and other payables include amounts owed to suppliers, tax authorities and other parties which are due to be settled within 12 months. The total also includes deferred amounts, some of which represent monies received from customers but for which we have not yet delivered the associated service. These amounts are recognised as revenue when the service is provided.

Trade and other payables are initially recognised at fair value and subsequently measured at amortised cost, with the exception of contingent consideration, which is subsequently measured at fair value.

	2021 £m	2020 £m
Trade payables	**2,165**	2,205
Deferred payables	**154**	137
Customer contributions[1]	**138**	84
Social security and other taxes	**140**	202
Contingent consideration (note 38)	**39**	30
Other payables	**881**	944
	3,517	3,602

1. Relates to amounts received from government-related entities for connecting to our networks, where we have obligations remaining under the contract.

Due to their short maturities, the fair value of trade payables approximates their carrying value.

23. Contract liabilities

Contract liabilities primarily relate to the advance consideration received from customers for construction contracts, mainly in relation to connections, for which revenue is recognised over the life of the asset.

	2021 £m	2020 £m
Current	**66**	76
Non-current	**1,094**	1,082
	1,160	1,158

Significant changes in the contract liabilities balances during the period are as follows:

	2021 £m	2020 £m
As at 1 April	**1,158**	994
Exchange adjustments	**(65)**	39
Revenue recognised that was included in the contract liability balance at the beginning of the period	**(96)**	(60)
Increases due to cash received, excluding amounts recognised as revenue during the period	**262**	185
Reclassification to held for sale (note 10)	**(99)**	—
At 31 March	**1,160**	1,158

24. Other non-current liabilities

Other non-current liabilities include deferred income and customer contributions which will not be recognised as income until after 31 March 2022. It also includes contingent consideration and other payables that are not due until after that date.

Other non-current liabilities are initially recognised at fair value and subsequently measured at amortised cost, with the exception of contingent consideration, which is subsequently measured at fair value.

	2021 £m	2020 £m
Deferred income[1]	**78**	101
Customer contributions[2]	**400**	428
Contingent consideration (note 38)	**18**	44
Other payables	**347**	318
	843	891

1. Principally the deferral of profits relating to the sale of property, which we expect to recognise in future years.
2. Relates to amounts received from government-related entities for connecting to our networks, where we have obligations remaining under the contract.

There is no material difference between the fair value and the carrying value of other payables.

Notes to the consolidated financial statements
continued

25. Pensions and other post-retirement benefits

All of our employees are eligible to participate in a pension plan. We have defined contribution (DC) and defined benefit (DB) pension plans in the UK and the US. In the US we also provide healthcare and life insurance benefits to eligible employees, post-retirement. The fair value of associated plan assets and present value of DB obligations are updated annually in accordance with IAS 19 (revised). We separately present our UK and US pension plans to show geographical split. Below we provide a more detailed analysis of the amounts recorded in the primary financial statements and the actuarial assumptions used to value the DB obligations.

National Grid's UK pension arrangements are held in separate Trustee administered funds. The arrangements are managed by Trustee companies with boards consisting of company- and member-appointed directors. In the US, the assets of the plans are held in trusts and administered by the Retirement Plans Committee comprised of appointed employees of the Company.

Defined contribution plans

These plans are designed to provide members with a pension pot for their retirement. The risks associated with these plans are assumed by the member.

Payments to these DC plans are charged as an expense as they fall due. There is no legal or constructive obligation on National Grid to pay additional contributions into a DC plan if the fund has insufficient assets to pay all employees' benefits relating to employee service in the current and prior periods.

In March 2021, National Grid announced its intention to move to a new DC plan from 1 April 2021.

The National Grid YouPlan (YouPlan)

Up until 31 March 2021, YouPlan was the qualifying UK pension plan that was used for automatic enrolment of new hires. National Grid paid contributions into YouPlan to provide DC benefits on behalf of employees, providing a double match of member contributions, up to a maximum Company contribution of 12% of salary as well as the cost of administration and insured benefits.

National Grid UK Retirement Plan (NGUKRP)

The NGUKRP is part of a Master Trust Arrangement managed by Legal & General and is National Grid's qualifying UK pension plan from 1 April 2021 and is used for the automatic enrolment of new hires. From April 2021, National Grid pays contributions into the NGUKRP to provide DC benefits on behalf of its employees, providing a double match of member contributions up to a maximum Company contribution of 12% of salary.

Defined benefit plans

On retirement, members of DB plans receive benefits whose value is dependent on factors such as salary and length of pensionable service. National Grid's obligation in respect of DB pension plans is calculated separately for each DB plan by projecting the estimated amount of future benefit payments that employees have earned for their pensionable service in the current and prior periods. These future benefit payments are discounted to determine the present value of the liabilities. Current service cost and any unrecognised past service cost are recognised immediately. The discount rate is set with reference to the yield curve on high-quality corporate bonds at the valuation date.

Advice is taken from independent actuaries relating to the appropriateness of the key assumptions applied, including life expectancy, expected salary and pension increases, and inflation. Comparatively small changes in the assumptions used may have a significant effect on the amounts recognised in the consolidated income statement, the consolidated statement of other comprehensive income and the net asset or liability recognised in the consolidated statement of financial position.

Remeasurements of pension assets and post-retirement benefit obligations are recognised in full in the period in which they occur in the consolidated statement of other comprehensive income.

The COVID-19 pandemic

The COVID-19 pandemic has had a global impact on economies, including on equity and bond markets. This directly affects the value of assets held in our pension schemes, as well as the value of National Grid's DB obligations. Our UK DB plans operate low-risk investment strategies with limited exposure to equities and other return-seeking assets, reducing the impact of investment volatility. Additionally, the large allocation to bonds leads to significant hedging against changes in the value of DB obligations that result from falling bond yields. Our US plans also hedge much of this market risk, however they do have larger asset allocations in return-seeking assets such as equities. Following the start of the pandemic, US equity markets have performed strongly and therefore our US DB plans have remained in a relatively strong funding position. The markets for unquoted investments are illiquid and therefore given the market volatility at 31 March 2020, there was a risk that the valuations provided by fund managers as at 31 March 2020 were based on valuation models that had unobservable inputs, making them subject to additional estimation uncertainty. Such uncertainty has reduced as at 31 March 2021.

UK pensions plans

The principal UK DB pensions plans are the National Grid UK Pension Scheme (NGUKPS) and the National Grid Electricity Group of the Electricity Supply Pension Scheme (NGEG of ESPS). In the US, we have four principal plans and various healthcare and life insurance plans.

National Grid UK Pension Scheme (NGUKPS)

NGUKPS consists of two legally and actuarially separate sections: Section A and Section B. This follows the transfer of Section C, a section supported by an unrelated third party, out of NGUKPS in September 2020. The plan closed to new hires on 1 April 2002.

25. Pensions and other post-retirement benefits continued

Scheme funding

The arrangements are subject to independent actuarial funding valuations at least every three years, and following consultation and agreement with us, the qualified actuary certifies the employers' contributions, which, together with the specified contributions payable by the employees and proceeds from the plans' assets, are expected to be sufficient to fund the benefits payable.

The results of the most recent actuarial valuations are shown below. See page 176 for the assumptions used for IAS 19 (revised) purposes.

	Section A of NGUKPS	Section B of NGUKPS	NGEG of ESPS
Latest full actuarial valuation	31 March 2019	31 March 2019	31 March 2019
Actuary	Willis Towers Watson	Willis Towers Watson	Aon Hewitt
Market value of plan assets at latest valuation	£6,551 million	£5,765 million	£3,144 million
Actuarial value of benefits due to members	£6,502 million	£5,831 million	£3,381 million
Market value as percentage of benefits	101%	99%	93%
Funding surplus/(deficit)	£49 million	(£66 million)	(£237 million)

Section A

Following the latest actuarial valuation at 31 March 2019, Section A remains in surplus, and so no deficit funding contributions are required. National Grid and the Trustees have agreed a schedule of contributions whereby the employers will continue to contribute 51.8% of pensionable salary, less member contributions, in respect of future benefit accrual.

Section B

The latest full actuarial valuation at 31 March 2019 determined that Section B was in deficit. To recover the deficit, National Grid paid recovery plan payments of approximately £34 million per annum over two years to September 2020. In addition, the employers contribute 51.4% of pensionable salary, less member contributions, in respect of future benefit accrual.

Investment de-risking transactions

In December 2020, the Trustees of the NGUKPS exchanged £0.8 billion of gilts from Section A for a buy-in transaction with Rothesay Life. This follows two similar arrangements entered into in the previous year. In Section A, £2.8 billion of gilts were exchanged for a buy-in policy with Rothesay Life, and in Section B, £1.6 billion of gilts were exchanged for a buy-in policy with Legal & General.

These policies provide bulk annuities in respect of some pensioner and dependant members of NGUKPS and were funded by existing assets. All policies are held by the Trustee. For each transaction, the pricing of the policies was highly competitive; however, under IAS 19 the methodology for calculating the value of the buy-ins (as an asset held by the pension plan) differs from the price paid. This resulted in the recognition of actuarial losses on purchase of £0.1 billion (2020: £0.7 billion), recorded within the consolidated statement of other comprehensive income.

National Grid Electricity Group of the Electricity Supply Pension Scheme

The last full actuarial valuation for the NGEG of the ESPS determined that the plan was in deficit. To recover the deficit, National Grid agreed to a payment plan of £54 million per annum over three years to 2022, and a final payment of £26 million in 2023, all adjusted for changes in the Retail Price Index (RPI). In addition, National Grid contributes 44% of pensionable salary, less member contributions, in respect of the ongoing service cost. The plan closed to new hires from 1 April 2006.

The plan holds a longevity insurance contract which covers improvements in longevity, providing long-term protection to the scheme, should some pensioner and dependant members live longer than currently expected.

Administration costs

National Grid pays additional contributions to Section B of NGUKPS and NGEG of ESPS in respect of the costs of plan administration and the Pension Protection Fund (PPF) levies. Section A of NGUKPS will fund these costs from the Section's assets. Up to 31 March 2020, National Grid was responsible for the costs of plan administration and the Pension Protection Fund (PPF) levies for both Sections A and B of NGUKPS and NGEG of ESPS.

Security arrangements

National Grid has also established security arrangements with charges in favour of the Trustees.

	Section A of NGUKPS	Section B of NGUKPS	NGEG of ESPS
Value of security arrangements at 31 March 2021	£186 million	£nil	£100 million
Principal supporting employers	National Grid plc and National Grid UK Limited	National Grid Gas plc (NGG)	National Grid Electricity Transmission plc (NGET)
Additional amounts payable[1] at 31 March 2021	n/a	A maximum of £175 million	A maximum of £500 million

1. These amounts are payable if certain trigger events occur which have been individually agreed between the plans and their relevant supporting employers.

All of the security is currently provided in the form of surety bonds, but may also be provided as letters of credit or cash. The assets held as security will be paid to the respective section or plan in the event that the relevant supporting employer is subject to an insolvency event or fails to make the required contributions; and applicable to NGEG of ESPS only, if NGET loses its licence to operate under relevant legislation. Counter indemnities have also been taken out to ensure the obligations will be fulfilled.

In addition, a guarantee of £1 billion has been provided to Section A of NGUKPS, with the payment contingent on insolvency or on failure to pay pension obligations to Section A and can be claimed against National Grid plc, National Grid Holdings One plc or Lattice Group Limited (up to £1 billion in total).

Notes to the consolidated financial statements
continued

25. Pensions and other post-retirement benefits continued

US pension plans

National Grid has multiple DC pension plans which allow employee as well as Company contributions. Non-union employees hired after 1 January 2011, as well as new hire represented union employees, receive a core contribution into the DC plan, irrespective of the employee's contribution into the plan.

National Grid sponsors four non-contributory qualified DB pension plans, which provide vested union employees, and vested non-union employees hired before 1 January 2011 with retirement benefits within prescribed limits as defined by the US Internal Revenue Service. National Grid also provides non-qualified DB pension arrangements for a section of current and former employees, which are closed to new entrants. Benefits under the DB plans generally reflect age, years of service and compensation and are paid in the form of an annuity or lump sum. An independent actuary performs valuations annually. The Company funds the DB plans by contributing no less than the minimum amount required, but no more than the maximum tax-deductible amount allowed under US Internal Revenue Service regulations. The range of contributions determined under these regulations can vary significantly depending upon the funded status of the plans. At present, there is some flexibility in the amount that is contributed on an annual basis. In general, the Company's policy for funding the US pension plans is to contribute the amounts collected in rates and capitalised in the rate base during the year, to the extent that the funding is no less than the minimum amount required. For the current financial year, these contributions amounted to approximately £110 million (2020: £153 million).

US retiree healthcare and life insurance plans

National Grid provides healthcare and life insurance benefits to eligible employees, post-retirement. Eligibility is based on certain age and length of service requirements, and in most cases, retirees contribute to the cost of their healthcare coverage. In the US, there is no governmental requirement to pre-fund post-retirement healthcare and life insurance plans. However, in general, the Company's policy for funding the US retiree healthcare and life insurance plans is to contribute amounts collected in rates and capitalised in the rate base during the year. For the current financial year, these contributions amounted to £26 million (2020: £18 million).

For the last few years, it has been the Company's policy to primarily direct contributions to the DB pension plans due to concerns over tax deductible limitations relating to the retiree and healthcare and life insurance plans.

Actuarial assumptions

The Company has applied the following financial assumptions in assessing DB liabilities:

	UK pensions		
	2021 %	2020 %	2019 %
Discount rate – past service	**2.00**	2.35	2.40
Discount rate – future service	**2.15**	2.35	2.45
Salary increases	**3.40**	2.90	3.50
Rate of increase in RPI – past service	**3.15**	2.65	3.25
Rate of increase in RPI – future service	**3.00**	2.45	3.20

At 31 March 2021 and 31 March 2020, single equivalent financial assumptions are shown above for presentational purposes, although full yield curves have been used in our calculations. In 2019, single equivalent financial assumptions were set which reflected the average duration for the aggregate past and future service obligations.

The discount rate is determined by reference to high-quality UK corporate bonds at the reporting date. The rate of increase in salaries has been set using a promotional scale where appropriate. The rates of increases stated are not indicative of historical increases awarded or a guarantee of future increase, but merely an appropriate assumption used in assessing DB liabilities. RPI is the key assumption that determines assumed increases in pensions in payment and deferment in the UK only.

	US pensions			US other post-retirement benefits		
	2021 %	2020 %	2019 %	**2021 %**	2020 %	2019 %
Discount rate	**3.25**	3.30	3.95	**3.25**	3.30	3.95
Salary increases	**4.30**	3.50	3.50	**4.30**	3.50	3.50
Initial healthcare cost trend rate	n/a	n/a	n/a	**7.10**	7.00	7.25
Ultimate healthcare cost trend rate	n/a	n/a	n/a	**4.50**	4.50	4.50

Discount rates for US pension liabilities have been determined by reference to appropriate yields on high-quality US corporate bonds at the reporting date based on the duration of plan liabilities. The healthcare cost trend rate is expected to reach the ultimate trend rate by 2030 (2020: 2030). The table below sets out the projected life expectancies adopted for the UK and US pension arrangements:

	2021		2020		2019	
	UK years	**US years**	UK years	US years	UK years	US years
Assumed life expectations for a retiree age 65						
Males	**21.8**	**21.6**	22.1	20.9	22.0	22.1
Females	**23.7**	**24.0**	23.8	23.4	23.6	24.2
In 20 years:						
Males	**23.1**	**23.2**	23.3	22.5	23.3	23.7
Females	**25.2**	**25.5**	25.3	25.1	25.2	25.9

25. Pensions and other post-retirement benefits continued

Maturity profile of DB obligations

The weighted average duration of the DB obligation for each category of plan is 14 years for UK pension plans; 14 years for US pension plans and 17 years for US other post-retirement benefit plans.

As at the reporting date, the present value of the funded obligations split according to member status was approximately:

- UK pensions: 8% active members (2020: 8%; 2019: 10%); 14% deferred members (2020: 14%; 2019: 16%); 78% pensioner members (2020: 78%; 2019: 74%);
- US pensions: 35% active members (2020: 36%; 2019: 37%); 9% deferred members (2020: 9%; 2019: 9%); 56% pensioner members (2020: 55%; 2019: 54%); and
- US other post-retirement benefits: 34% active members (2020: 35%; 2019: 39%); 66% pensioner members (2020: 65%; 2019: 61%).

For sensitivity analysis see note 35.

Amounts recognised in the consolidated statement of financial position

	2021 £m	2020 £m	2019 £m
Present value of funded obligations	(23,283)	(24,281)	(24,609)
Fair value of plan assets	24,388	23,748	24,793
	1,105	(533)	184
Present value of unfunded obligations	(324)	(345)	(330)
Other post-employment liabilities	(66)	(75)	(72)
Net defined benefit asset/(liability)	715	(953)	(218)
Represented by:			
Liabilities	(1,032)	(2,802)	(1,785)
Assets	1,747	1,849	1,567
	715	(953)	(218)

The geographical split of pensions and other post-retirement benefits is as shown below:

	UK Pensions			US Pensions			US other post-retirement benefits		
	2021 £m	2020 £m	2019 £m	2021 £m	2020 £m	2019 £m	2021 £m	2020 £m	2019 £m
Present value of funded obligations	(13,571)	(12,775)	(14,200)	(6,681)	(7,809)	(6,901)	(3,031)	(3,697)	(3,508)
Fair value of plan assets	14,680	14,364	15,507	6,909	6,972	6,646	2,799	2,412	2,640
	1,109	1,589	1,307	228	(837)	(255)	(232)	(1,285)	(868)
Present value of unfunded obligations	(74)	(69)	(76)	(250)	(276)	(254)	—	—	—
Other post-employment liabilities	—	—	—	—	—	—	(66)	(75)	(72)
Net defined benefit asset/(liability)	1,035	1,520	1,231	(22)	(1,113)	(509)	(298)	(1,360)	(940)
Represented by:									
Liabilities	(74)	(69)	(76)	(393)	(1,373)	(769)	(565)	(1,360)	(940)
Assets	1,109	1,589	1,307	371	260	260	267	—	—
	1,035	1,520	1,231	(22)	(1,113)	(509)	(298)	(1,360)	(940)

The recognition of the pension assets in both the UK in relation to the NGUKPS, the NGEG of ESPS and the US in relation to the Niagara Mohawk Plan and the KeySpan Retirement Plan reflects legal and actuarial advice that we have taken regarding recognition of surpluses under IFRIC 14. Similarly on the recognition of US other post-retirement assets in relation to: the Long Island Union Life Insurance plan; the New York Union Health Insurance Plan; the Long Island Union Health Insurance plan; and Retirees Health and Welfare Plan II.

We have concluded that the Group has an unconditional right to a refund from the individual plans, including from each Section of the NGUKPS and the NGEG of ESPS, in the event of a winding up. In the UK, the Trustees must seek the agreement of the Company to any benefit augmentation beyond the provisions set out in the Scheme Rules. In the US, surplus assets may be used to pay benefits under other plans, thereby allowing the Company to settle other liabilities under other Plans.

Notes to the consolidated financial statements
continued

25. Pensions and other post-retirement benefits continued

Amounts recognised in the income statement and statement of other comprehensive income

	2021 £m	2020 £m	2019 £m
Included within operating costs			
Administration costs	**18**	16	14
Included within payroll costs			
Defined benefit plan costs:			
Current service cost	**175**	178	193
Past service cost – augmentations	**–**	–	5
Past service credit – redundancies	**(1)**	–	(7)
Special termination benefit cost – redundancies	**5**	2	55
Past service cost – plan amendments[1]	**–**	–	34
	179	180	280
Included within finance income and costs			
Net interest cost	**38**	23	22
Total included in income statement	**235**	219	316
Remeasurement gains/(losses) of pension assets and post-retirement benefit obligations[2]	**1,408**	(724)	68
Exchange adjustments	**186**	(97)	(101)
Total included in the statement of other comprehensive income	**1,594**	(821)	(33)

1. For the year ended 31 March 2019, the estimated cost of equalising for the impact of GMP under the most cost-effective permissible methodology (Section A of NGUKPS – £17 million; Section B of NGUKPS – £12 million; NGEG of ESPS – £5 million).
2. This includes actuarial losses from the purchase of buy-in policies of £0.1 billion (2020: £0.7 billion).

The geographical split of pensions and other post-retirement benefits is as shown below:

	UK Pensions			US Pensions			US other post-retirement benefits		
	2021 £m	2020 £m	2019 £m	2021 £m	2020 £m	2019 £m	2021 £m	2020 £m	2019 £m
Included within operating costs									
Administration costs	**9**	9	6	**7**	6	7	**2**	1	1
Included within payroll costs									
Defined benefit plan costs:									
Current service cost	**28**	33	41	**104**	100	104	**43**	45	48
Past service cost – augmentations	**–**	–	5	**–**	–	–	**–**	–	–
Past service credit – redundancies	**(1)**	–	(7)	**–**	–	–	**–**	–	–
Special termination benefit cost – redundancies	**5**	2	55	**–**	–	–	**–**	–	–
Past service cost – plan amendments	**–**	–	34	**–**	–	–	**–**	–	–
	32	35	128	**104**	100	104	**43**	45	48
Included within finance income and costs									
Net interest (income)/cost	**(38)**	(31)	(31)	**35**	21	21	**41**	33	32
Total included in income statement	**3**	13	103	**146**	127	132	**86**	79	81
Remeasurement (losses)/gains of pension assets and post-retirement benefit obligations[1]	**(622)**	143	57	**1,017**	(588)	(14)	**1,013**	(279)	25
Exchange adjustments	**–**	–	–	**83**	(42)	(42)	**103**	(55)	(59)
Total included in the statement of other comprehensive income	**(622)**	143	57	**1,100**	(630)	(56)	**1,116**	(334)	(34)

1. UK pensions is stated after actuarial losses from the purchase of buy-in policies of £0.1 billion (2020: £0.7 billion).

Following a High Court ruling in October 2018, UK pension schemes were required to equalise Guaranteed Minimum Pensions (GMPs). As a result, a past service cost of £34 million was recognised in the year ended 31 March 2019 for the UK DB pension schemes. This reflected the estimated cost of equalising GMPs for current pension scheme members using the most cost-effective permissible methodology. Following the further High Court ruling in December 2020, an additional allowance of £0.4 million, was included for the year ended 31 March 2021, reflecting the associated cost for members who had transferred out of the pension scheme and were therefore not previously in scope.

25. Pensions and other post-retirement benefits continued

Reconciliation of the net defined benefit liability

	2021 £m	2020 £m	2019 £m
Opening net defined benefit liability	**(953)**	(218)	(263)
Cost recognised in the income statement	**(235)**	(219)	(316)
Remeasurement and foreign exchange effects recognised in the statement of other comprehensive income	**1,594**	(821)	(33)
Employer contributions	**274**	327	419
Other movements	**(14)**	(22)	(25)
Reclassification to held for sale (note 10)	**49**	—	—
Closing net defined benefit asset/(liability)	**715**	(953)	(218)

The geographical split of pensions and other post-retirement benefits is as shown below:

	UK pensions			US pensions			US other post-retirement benefits		
	2021 £m	2020 £m	2019 £m	2021 £m	2020 £m	2019 £m	2021 £m	2020 £m	2019 £m
Opening net defined benefit asset/(liability)	**1,520**	1,231	1,104	**(1,113)**	(509)	(552)	**(1,360)**	(940)	(815)
Cost recognised in the income statement	**(3)**	(13)	(103)	**(146)**	(127)	(132)	**(86)**	(79)	(81)
Remeasurement and foreign exchange effects recognised in the statement of other comprehensive income	**(622)**	143	57	**1,100**	(630)	(56)	**1,116**	(334)	(34)
Employer contributions	**138**	156	174	**110**	153	231	**26**	18	14
Other movements	**2**	3	(1)	**—**	—	—	**(16)**	(25)	(24)
Reclassification to held for sale (note 10)	**—**	—	—	**27**	—	—	**22**	**—**	**—**
Closing net defined benefit asset/(liability)	**1,035**	1,520	1,231	**(22)**	(1,113)	(509)	**(298)**	(1,360)	(940)

Changes in the present value of defined benefit obligations (including unfunded obligations)

	2021 £m	2020 £m	2019 £m
Opening defined benefit obligations	**(24,626)**	(24,939)	(24,054)
Current service cost	**(175)**	(178)	(193)
Interest cost	**(651)**	(751)	(771)
Actuarial gains/(losses) – experience	**123**	148	(69)
Actuarial (losses)/gains – demographic assumptions	**(1)**	452	266
Actuarial losses – financial assumptions	**(1,268)**	(84)	(619)
Past service credit – redundancies	**1**	—	7
Special termination benefit cost – redundancies	**(5)**	(2)	(55)
Past service cost – augmentations	**—**	—	(5)
Past service cost – plan amendments	**—**	—	(34)
Medicare subsidy received	**(25)**	(22)	(19)
Employee contributions	**(1)**	(1)	(1)
Benefits paid	**1,246**	1,282	1,376
Exchange adjustments	**1,166**	(531)	(768)
Reclassification to held for sale (note 10)	**609**	—	—
Closing defined benefit obligations	**(23,607)**	(24,626)	(24,939)

Notes to the consolidated financial statements continued

25. Pensions and other post-retirement benefits continued

The geographical split of pensions and other post-retirement benefits is as shown below:

	UK pensions			US pensions			US other post-retirement benefits		
	2021 £m	2020 £m	2019 £m	**2021 £m**	2020 £m	2019 £m	**2021 £m**	2020 £m	2019 £m
Opening defined benefit obligations	**(12,844)**	(14,276)	(14,226)	**(8,085)**	(7,155)	(6,582)	**(3,697)**	(3,508)	(3,246)
Current service cost	**(28)**	(33)	(41)	**(104)**	(100)	(104)	**(43)**	(45)	(48)
Interest cost	**(296)**	(335)	(358)	**(243)**	(280)	(277)	**(112)**	(136)	(136)
Actuarial (losses)/gains – experience	**(21)**	113	(56)	**(72)**	(45)	(52)	**216**	80	39
Actuarial (losses)/gains – demographic assumptions	**(1)**	140	224	**—**	78	—	**—**	234	42
Actuarial (losses)/gains – financial assumptions	**(1,181)**	798	(568)	**(62)**	(595)	(24)	**(25)**	(287)	(27)
Past service credit – redundancies	**1**	—	7	**—**	—	—	**—**	—	—
Special termination benefit cost – redundancies	**(5)**	(2)	(55)	**—**	—	—	**—**	—	—
Past service cost – augmentations	**—**	—	(5)	**—**	—	—	**—**	—	—
Past service cost – plan amendments	**—**	—	(34)	**—**	—	—	**—**	—	—
Medicare subsidy received	**—**	—	—	**—**	—	—	**(25)**	(22)	(19)
Employee contributions	**(1)**	(1)	(1)	**—**	—	—	**—**	—	—
Benefits paid	**731**	752	837	**371**	374	398	**144**	156	141
Exchange adjustments	**—**	—	—	**804**	(362)	(514)	**362**	(169)	(254)
Reclassification to held for sale (note 10)	**—**	—	—	**460**	—	—	**149**	—	—
Closing defined benefit obligations	**(13,645)**	(12,844)	(14,276)	**(6,931)**	(8,085)	(7,155)	**(3,031)**	(3,697)	(3,508)

Changes in the value of plan assets

	2021 £m	2020 £m	2019 £m
Opening fair value of plan assets	**23,748**	24,793	23,858
Interest income	**613**	728	749
Return on plan assets in excess of/(less than) interest[1]	**2,554**	(1,240)	490
Administration costs	**(18)**	(16)	(14)
Employer contributions	**274**	327	419
Employee contributions	**1**	1	1
Benefits paid	**(1,244)**	(1,279)	(1,377)
Exchange adjustments	**(980)**	434	667
Reclassification to held for sale (note 10)	**(560)**	—	—
Closing fair value of plan assets	**24,388**	23,748	24,793
Actual return on plan assets	**3,167**	(512)	1,239
Expected contributions to plans in the following year	**212**	269	307

1. This includes actuarial losses from the purchase of buy-in policies of £0.1 billion (2020: £0.7 billion).

The geographical split of pensions and other post-retirement benefits is as shown below:

	UK pensions			US pensions			US other post-retirement benefits		
	2021 £m	2020 £m	2019 £m	**2021 £m**	2020 £m	2019 £m	**2021 £m**	2020 £m	2019 £m
Opening fair value of plan assets	**14,364**	15,507	15,330	**6,972**	6,646	6,030	**2,412**	2,640	2,498
Interest income	**334**	366	389	**208**	259	256	**71**	103	104
Return on plan assets in excess of/(less than) interest[1]	**581**	(908)	457	**1,151**	(26)	62	**822**	(306)	(29)
Administration costs	**(9)**	(9)	(6)	**(7)**	(6)	(7)	**(2)**	(1)	(1)
Employer contributions	**138**	156	174	**110**	153	231	**26**	18	14
Employee contributions	**1**	1	1	**—**	—	—	**—**	—	—
Benefits paid	**(729)**	(749)	(838)	**(371)**	(374)	(398)	**(144)**	(156)	(141)
Exchange adjustments	**—**	—	—	**(721)**	320	472	**(259)**	114	195
Reclassification to held for sale (note 10)	**—**	—	—	**(433)**	—	—	**(127)**	—	—
Closing fair value of plan assets	**14,680**	14,364	15,507	**6,909**	6,972	6,646	**2,799**	2,412	2,640
Actual return on plan assets	**915**	(542)	846	**1,359**	233	318	**893**	(203)	75
Expected contributions to plans in the following year	**93**	137	148	**113**	125	150	**6**	7	9

1. This includes actuarial losses from the purchase of buy-in policies of £0.1 billion (2020: £0.7 billion).

25. Pensions and other post-retirement benefits continued

Main defined benefit risks

DB pension plans can pose a significant risk to future cash flows, as National Grid underwrites the financial and demographic risks associated with these plans. Although the governing bodies have sole responsibility for setting investment strategies and managing risks, National Grid closely works with and supports the governing bodies of each plan, to assist them in mitigating the risks associated with their plans and to ensure that the plans are funded to meet their obligations.

The most significant risks associated with the DB plans are:

- investment risk – the plans invest in a variety of asset classes, with actual returns likely to differ from the underlying discount rate adopted, impacting the funding position of the plan through the net balance sheet asset or liability. Each plan seeks to balance the level of investment return required with the risk that it can afford to take, to design the most appropriate investment portfolio. Volatility will be controlled through using liability-matching asset strategies including bulk annuities, as well as interest rate hedging and management of foreign exchange exposure, and diversification of the return-seeking assets;
- changes in bond yields – liabilities are calculated using discount rates set with reference to the yields on high-quality corporate bonds prevailing in the UK and US debt markets and will fluctuate as yields change;
- member longevity – longevity is a key driver of liabilities and changes in life expectancy have a direct impact on liabilities. Improvements in life expectancy will lead to pension payments being paid for longer than expected and benefits ultimately being more expensive. This risk has been partly mitigated by recent scheme investment transactions including a longevity insurance contract (longevity swap) for NGEG of ESPS and three separate buy-in policies for NGUKPS Section A and B;
- counterparty risk – is managed by having a diverse range of counterparties and through having a strong collateralisation process (including for the longevity swap held by NGEG of ESPS). Measurement and management of counterparty risk is delegated to the relevant investment managers. For our bulk annuity policies, various termination provisions were introduced in the contracts, managing our exposure to counterparty risk. The insurers' operational performance and financial strength are monitored on a regular basis;
- currency risk – fluctuations in the value of foreign denominated assets due to exposure to currency exchange rates is managed through a combination of segregated currency hedging overlay and currency hedging carried out by some of the investment managers; and
- inflation risk – changes in inflation will affect the current and future pensions but are partially mitigated through investing in inflation-matching assets and hedging instruments as well as bulk annuity buy-in policies.

Defined benefit investment strategies

In the UK, each plan has a Trustee that is the governing body. The Trustees' responsibilities are set out in the Trust Deed and Rules. In the US, the fiduciary committee for all the retirement plans is the Retirement Plan Committee (RPC). The RPC is structured in accordance with US laws governing retirement plans under the Employee Retirement Income Security Act (ERISA). The Trustees and RPC, after taking advice from professional investment advisors and in consultation with National Grid, set the key principles, including expected returns, risk and liquidity requirements. In setting these they take into account expected contributions, maturity of the pension liabilities, and in the UK, the strength of the covenant. The Trustees and RPC formulate an investment strategy to manage risk through diversification. Where appropriate, the strategies may include interest rate and inflation hedging instruments, and currency hedging to hedge specific risks.

Investments are usually grouped into:

- return-seeking assets – equities, property and diversified funds where the objective is to achieve growth within the constraints of the plans' risk profiles. These assets should produce returns greater than the liability increase, so improving the funding position, and are assessed by reference to benchmarks and performance targets agreed with the investment managers; and
- liability-matching assets – liability-driven investment (LDI) funds, buy-ins, government securities, corporate bonds and swaps, where the objective is to secure fixed or inflation-adjusted cash flows in future. These investments are generally expected to match the change in liability valuation, so protecting the funding position. Bonds and securities are also measured against certain market benchmarks.

The approximate investment allocations for our plans is as follows:

	2021			2020			2019		
	UK pensions	**US pensions**	**US other post-retirement benefits**	UK pensions	US pensions	US other post-retirement benefits	UK pensions	US pensions	US other post-retirement benefits
	%	**%**	**%**	%	%	%	%	%	%
Return-seeking assets	**18**	**55**	**74**	21	49	71	23	56	73
Liability-matching assets	**82**	**45**	**26**	79	51	29	77	44	27

Investments are predominantly made in assets considered to be of investment grade. Where investments are made in non-investment grade assets, the higher volatility involved is carefully judged and balanced against the expected higher returns. Similarly, investments are made predominantly in regulated markets. Where investments are made either in non-investment grade assets or outside of regulated markets, investment levels are kept to prudent levels and subject to agreed control ranges, to control the risk. Should these investments fall outside the pre-agreed ranges, corrective actions and timescales are agreed with the investment manager to remedy the position.

The governing bodies ensure that the performance of investment managers is regularly reviewed against measurable objectives, consistent with each pension plan's long-term objectives and accepted risk levels. Where required, the portfolios are amended, or investment managers changed.

The Trustees and RPC can generally delegate responsibility for the selection of specific bonds, securities and other investments to appointed investment managers. Investment managers are selected based on the required skills, expertise of those markets, process and financial security to manage the investments. The investment managers use their skill and expertise to manage the investments competently. In some cases, they may further delegate this responsibility, through appointing sub-managers.

The pension plans hold sufficient cash to meet benefit requirements, with other investments being held in liquid or realisable assets to meet unexpected cash flow requirements. The plans do not borrow money, or act as guarantor, to provide liquidity to other parties (unless it is temporary).

Notes to the consolidated financial statements continued

25. Pensions and other post-retirement benefits continued

Defined benefit investment strategies continued

In the UK, both NGUKPS and NGEG of ESPS have Responsible Investment (RI) Policies, which take into account Environmental, Social and Governance (ESG) factors. The NGUKPS RI also incorporates the six UN-backed Principles for Responsible Investment (UNPRI). The Trustees believe that ESG factors can be material to financial outcomes and therefore these should and will be considered alongside other factors. The Trustees recognise that their primary responsibility remains a fiduciary one, i.e. their first duty is to ensure the best possible return on investments with the appropriate level of risk. However, the Trustees also recognise the increasing materiality of ESG factors and that they have a fiduciary and regulatory duty to consider RI, including ESG factors and the potential impact on the quality and sustainability of long-term investment returns and therefore on the Trustees' primary fiduciary duty.

In the US, the regulatory and political landscape is evolving with respect to ESG investments within retirement plans. The prior administration had restrictive policies around ESG investments in retirement plans. The current administration is more supportive of ESG investments which will allow fiduciaries more opportunities to incorporate ESG principles into their investment strategy and still remain compliant with ERISA, the federal law governing US retirement plans. Currently, many of the active investment managers for the National Grid US plans utilise ESG factors as part of their investment screening process.

Asset allocations

Within the asset allocations below, there is significant diversification across regions, asset managers, currencies and bond categories.

UK pensions

	2021			2020			2019		
	Quoted £m	Unquoted £m	Total £m	Quoted £m	Unquoted £m	Total £m	Quoted £m	Unquoted £m	Total £m
Equities	555	801	1,356	732	732	1,464	1,181	784	1,965
Corporate bonds	3,730	37	3,767	3,837	–	3,837	3,625	–	3,625
Government securities	1,836	–	1,836	2,051	–	2,051	6,114	–	6,114
Property	104	565	669	103	585	688	108	749	857
Diversified alternatives	–	712	712	–	893	893	–	771	771
Liability-matching assets	1,731[1]	4,133[2]	5,864	1,704[1]	3,278[2]	4,982	1,751[1]	–	1,751
Longevity swap	–	(64)	(64)	–	(51)	(51)	–	(35)	(35)
Cash and cash equivalents	34	250	284	29	222	251	40	259	299
Other (including net current assets and liabilities)	–	256	256	–	249	249	–	160	160
	7,990	6,690	14,680	8,456	5,908	14,364	12,819	2,688	15,507

1. Consists of pooled funds which invests mainly in fixed interest securities.
2. Comprises the buy-in policies held by NGUKPS.

US pensions

	2021			2020			2019		
	Quoted £m	Unquoted £m	Total £m	Quoted £m	Unquoted £m	Total £m	Quoted £m	Unquoted £m	Total £m
Equities	560	2,359	2,919	467	2,043	2,510	533	2,178	2,711
Corporate bonds	1,547	507	2,054	1,640	518	2,158	1,329	425	1,754
Government securities	354	527	881	535	732	1,267	422	640	1,062
Property	–	264	264	–	307	307	–	316	316
Diversified alternatives	167	458	625	162	464	626	183	487	670
Infrastructure	–	130	130	–	121	121	–	99	99
Cash and cash equivalents	24	–	24	24	–	24	21	–	21
Other (including net current assets and liabilities)	12	–	12	(44)	3	(41)	(8)	21	13
	2,664	4,245	6,909	2,784	4,188	6,972	2,480	4,166	6,646

US other post-retirement benefits

	2021			2020			2019		
	Quoted £m	Unquoted £m	Total £m	Quoted £m	Unquoted £m	Total £m	Quoted £m	Unquoted £m	Total £m
Equities	419	1,303	1,722	353	1,037	1,390	404	1,184	1,588
Corporate bonds	13	–	13	15	–	15	19	–	19
Government securities	533	3	536	551	1	552	540	3	543
Diversified alternatives	185	172	357	162	161	323	175	166	341
Other[1]	–	171	171	–	132	132	–	149	149
	1,150	1,649	2,799	1,081	1,331	2,412	1,138	1,502	2,640

1. Other primarily comprises insurance contracts.

26. Provisions

Provisions are recognised when an obligation exists resulting from a past event, and it is probable that cash will be paid to settle it, but the exact amount of cash required can only be estimated. The majority of our provisions relate to environmental remediation, specifically in relation to certain Superfund sites in the US, being sites we own or have owned in the past where hazardous substances are present as a result of the historic operations of manufactured gas plants in Brooklyn, New York. We also recognise provisions for decommissioning costs for various assets we would be required to remove at the end of their lives, the costs associated with restructuring plans and for lease contracts we have entered into that are now loss-making.

In determining the quantum of the provision we recognise, we make estimates in relation to management's best judgement of the evaluation of the likelihood and the probability of exposure to potential loss, and the costs that would be incurred. Should circumstances change following unforeseeable developments, the likelihood or quantum could alter.

Provisions are recognised where a legal or constructive obligation exists at the reporting date, as a result of a past event, where the amount of the obligation can be reliably estimated and where the outflow of economic benefit is probable.

The quantum of the provision recognised for decommissioning, environmental, restructuring and other costs is based on estimated future expenditure, discounted to present values. An initial estimate of decommissioning and environmental costs attributable to property, plant and equipment is recorded as part of the original cost of the related property, plant and equipment. Provisions to decommission significant portions of our regulated transmission and distribution assets are not recognised where no legal obligations exist, and a realistic alternative exists to incurring costs to decommission assets at the end of their life. In any case, even if a legal or constructive obligation did exist, it is not currently determinable when remediation work would take place and therefore no provision would be recorded at this point.

Changes in the provision arising from revised estimates, discount rates or changes in the expected timing of expenditure that relates to property, plant and equipment are recorded as adjustments to their carrying value and depreciated prospectively over their remaining estimated useful economic lives; otherwise such changes are recognised in the income statement.

The unwinding of the discount is included within the income statement within finance costs.

	Environmental £m	Decommissioning £m	Restructuring £m	Other £m	Total provisions £m
At 1 April 2019	1,639	188	83	289	2,199
Exchange adjustments	82	5	—	10	97
Additions[1]	437	93	7	52	589
Unused amounts reversed	(29)	(16)	(16)	(9)	(70)
Unwinding of discount	65	5	—	7	77
Utilised	(123)	(21)	(39)	(55)	(238)
At 31 March 2020	2,071	254	35	294	2,654
Exchange adjustments	(185)	(9)	(1)	(21)	(216)
Additions	26	42	11	67	146
Unused amounts reversed	(38)	(27)	—	(16)	(81)
Unwinding of discount	66	7	—	5	78
Utilised	(161)	(16)	(19)	(62)	(258)
Reclassification to held for sale (note 10)	(79)	(7)	—	(10)	(96)
At 31 March 2021	**1,700**	**244**	**26**	**257**	**2,227**

	2021 £m	2020 £m
Current	**260**	348
Non-current	**1,967**	2,306
	2,227	2,654

1. For the year ended 31 March 2020, £402 million of additions related to exceptional environmental provisions, of which £76 million related to the impact of the change in the real discount rate from 1% to 0.5% during the year (see note 5 for details).

Notes to the consolidated financial statements continued

26. Provisions continued

Environmental provisions

The environmental provision represents the estimated restoration and remediation costs relating to a number of sites owned and managed by subsidiary undertakings, together with certain US sites that National Grid no longer owns. The environmental provision is as follows:

	2021			2020		
	Discounted £m	**Undiscounted £m**	**Real discount rate**	Discounted £m	Undiscounted £m	Real discount rate
UK sites	**167**	**171**	**0.5%**	175	184	0.5%
US sites	**1,533**	**1,583**	**0.5%**	1,896	1,955	0.5%
	1,700	**1,754**		2,071	2,139	

The remediation expenditure in the UK relates to old gas manufacturing sites and also to electricity transmission sites. Cash flows are expected to be incurred until 2075, although the weighted average duration of the cash flows is 15 years. A number of estimation uncertainties affect the calculation of the provision, including the impact of regulation, the accuracy of site surveys, unexpected contaminants, transportation costs, the impact of alternative technologies and changes in the real discount rate. This provision incorporates our best estimate of the financial effect of these uncertainties, but future changes in any of the assumptions could materially impact the calculation of the provision. The undiscounted amount is the undiscounted best estimate of the liability having regard to these uncertainties.

The remediation expenditure in the US is expected to be incurred until 2069, of which the majority relates to three Superfund sites (being sites where hazardous substances are present as a result of the historic operations of manufactured gas plants in Brooklyn, New York). The weighted average duration of the cash flows is 10 years. The uncertainties regarding the calculation of this provision are similar to those considered in respect of UK sites. Under the terms of our rate plans, we are entitled to recovery of environmental clean-up costs from rate payers.

Decommissioning provisions

The decommissioning provisions primarily include £160 million (2020: £174 million) of expenditure relating to asset retirement obligations estimated to be incurred until 2104 and £60 million (2020: £74 million) of expenditure relating to the demolition of gas holders, which is estimated to be incurred until 2026.

Restructuring provisions

In 2021, we are undertaking the design and implementation of our new operating model in both our UK and US businesses, which resulted in the recognition of a £11 million provision in the year. The income statement expense relating to the provision has been treated as an exceptional item, and details are provided in note 5.

Other provisions

Included within other provisions at 31 March 2021 are the following amounts:

- £166 million (2020: £164 million) of estimated liabilities in respect of past events insured by insurance subsidiary undertakings, including employer liability claims. In accordance with insurance industry practice, these estimates are based on experience from previous years, but we currently expect that cash flows will be incurred until 2049;
- £21 million (2020: £37 million) in respect of legacy provisions recognised following the sale of UK Gas Distribution;
- £27 million (2020: £31 million) in respect of onerous lease commitments and rates payable on surplus properties with expenditure expected to be incurred until 2039; and
- £13 million (2020: £17 million) in respect of emissions provisions.

27. Share capital

Ordinary share capital represents the total number of shares issued which are publicly traded. We also disclose the number of treasury shares the Company holds, which are shares that the Company has bought itself, predominantly to actively manage scrip issuances and settle employee share option and reward plan liabilities.

Share capital is accounted for as an equity instrument. An equity instrument is any contract that includes a residual interest in the consolidated assets of the Company after deducting all its liabilities and is recorded at the proceeds received, net of direct issue costs, with an amount equal to the nominal amount of the shares issued included in the share capital account and the balance recorded in the share premium account.

	Allotted, called-up and fully paid	
	million	£m
At 1 April 2019	3,687	458
Issued during the year in lieu of dividends[1]	93	12
At 31 March 2020	3,780	470
Issued during the year in lieu of dividends[1]	35	4
At 31 March 2021	**3,815**	**474**

1. The issue of shares under the scrip dividend programme is considered to be a bonus issue under the terms of the Companies Act 2006, and the nominal value of the shares is charged to the share premium account.

The share capital of the Company consists of ordinary shares of $12\frac{204}{473}$ pence nominal value each including ADSs. The ordinary shares and ADSs allow holders to receive dividends and vote at general meetings of the Company. The Company holds treasury shares but may not exercise any rights over these shares including the entitlement to vote or receive dividends. There are no restrictions on the transfer or sale of ordinary shares.

In line with the provisions of the Companies Act 2006, the Company has amended its Articles of Association and ceased to have authorised share capital.

Treasury shares

At 31 March 2021, the Company held 266 million (2020: 272 million) of its own shares. The market value of these shares as at 31 March 2021 was £2,296 million (2020: £2,574 million).

For the benefit of employees and in connection with the operation of the Company's various share plans, the Company made the following transactions in respect of its own shares during the year ended 31 March 2021:

i. During the year, 4 million (2020: 3 million) treasury shares were gifted to National Grid Employee Share Trusts and 2 million (2020: 2 million) treasury shares were re-issued in relation to employee share schemes, in total representing approximately 0.2% (2020: 0.1%) of the ordinary shares in issue as at 31 March 2021. The nominal value of these shares was £1 million (2020: £1 million) and the total proceeds received were £17 million (2020: £17 million). National Grid settles share awards under its Long Term Incentive Plan and the Save As You Earn scheme, by the transfer of treasury shares to its employee share trusts.

ii. During the year, the Company made payments totalling £2 million (2020: £6 million) to National Grid Employee Share Trusts to enable the trustees to make purchases of National Grid plc shares to settle share awards in relation to all employee share plans and discretionary reward plans. The cost of such purchases is deducted from retained earnings in the period that the transaction occurs.

The maximum number of ordinary shares held in treasury during the year was 272 million (2020: 277 million) representing approximately 7.1% (2020: 7.3%) of the ordinary shares in issue as at 31 March 2021 and having a nominal value of £34 million (2020: £34 million).

Notes to the consolidated financial statements
continued

28. Other equity reserves

Other equity reserves are different categories of equity as required by accounting standards and represent the impact of a number of our historical transactions or fair value movements on certain financial instruments that the Company holds.

Other equity reserves comprise the translation reserve (see accounting policy C in note 1), cash flow hedge reserve and the cost of hedging reserve (see note 32), debt instruments at fair value through other comprehensive income reserve (FVOCI debt) and equity investments at fair value through other comprehensive income reserve (FVOCI equity) (see note 15), the capital redemption reserve and the merger reserve.

The merger reserve arose as a result of the application of merger accounting principles under the then prevailing UK GAAP, which under IFRS 1 was retained for mergers that occurred prior to the IFRS transition date. Under merger accounting principles, the difference between the carrying amount of the capital structure of the acquiring vehicle and that of the acquired business was treated as a merger difference and included within reserves. The merger reserve represents the difference between the carrying value of subsidiary undertaking investments and their respective capital structures following the Lattice demerger from BG Group plc and the 1999 Lattice refinancing.

The cash flow hedge reserve will amortise as the committed future cash flows from borrowings are paid or capitalised in fixed assets (as described in note 32). Cost of hedging, FVOCI debt, and FVOCI equity reserves arose as a result of the adoption of IFRS 9 on 1 April 2018. See note 15 for further detail on FVOCI debt and FVOCI equity reserves and note 32 in respect of cost of hedging reserve.

As the amounts included in other equity reserves are not attributable to any of the other classes of equity presented, they have been disclosed as a separate classification of equity.

	Translation £m	Cash flow hedge £m	Cost of hedging £m	Available-for-sale £m	FVOCI equity £m	FVOCI debt £m	Own credit £m	Capital redemption £m	Merger £m	Total £m
At 1 April 2018 (as previously reported)	390	128	—	88	—	—	—	19	(5,165)	(4,540)
Transfer on transition to IFRS 9	—	(3)	76	(88)	34	46	7	—	—	72
At 1 April 2018 (as restated)	390	125	76	—	34	46	7	19	(5,165)	(4,468)
Exchange adjustments[1,2]	360	—	—	—	—	—	—	—	—	360
Net (losses)/gains taken to equity	—	(206)	(107)	—	—	2	7	—	—	(304)
Share of net gains of associates taken to equity	—	1	—	—	—	—	—	—	—	1
Transferred to profit or loss	—	166	41	—	—	—	—	—	—	207
Net losses in respect of cash flow hedging of capital expenditure	—	(13)	—	—	—	—	—	—	—	(13)
Tax	—	6	7	—	—	—	(1)	—	—	12
Cash flow hedges transferred to the statement of financial position, net of tax	—	(18)	—	—	—	—	—	—	—	(18)
At 1 April 2019	750	61	17	—	34	48	13	19	(5,165)	(4,223)
Exchange adjustments[1,2]	560	—	—	—	—	—	—	—	—	560
Net losses taken to equity	—	(142)	(33)	—	(13)	(15)	(3)	—	—	(206)
Share of net losses of associates taken to equity	—	(5)	—	—	—	—	—	—	—	(5)
Transferred to profit or loss	—	14	(45)	—	—	—	—	—	—	(31)
Net losses in respect of cash flow hedging of capital expenditure	—	(17)	—	—	—	—	—	—	—	(17)
Tax	—	29	11	—	4	(2)	—	—	—	42
Cash flow hedges transferred to the statement of financial position, net of tax	—	(15)	—	—	—	—	—	—	—	(15)
At 1 April 2020	1,310	(75)	(50)	—	25	31	10	19	(5,165)	(3,895)
Exchange adjustments[1]	(1,345)	—	—	—	—	—	—	—	—	(1,345)
Net gains/(losses) taken to equity	—	14	11	—	36	80	(11)	—	—	130
Share of net gains of associates taken to equity	—	1	—	—	—	—	—	—	—	1
Transferred to profit or loss	—	56	3	—	—	—	—	—	—	59
Net losses in respect of cash flow hedging of capital expenditure	—	(14)	—	—	—	—	—	—	—	(14)
Tax	—	(13)	8	—	(10)	—	2	—	—	(13)
Cash flow hedges transferred to the statement of financial position, net of tax	—	(17)	—	—	—	—	—	—	—	(17)
At 31 March 2021	**(35)**	**(48)**	**(28)**	**—**	**51**	**111**	**1**	**19**	**(5,165)**	**(5,094)**

1. The exchange adjustments recorded in the translation reserve comprise a loss of £1,507 million (2020: gain of £545 million; 2019: gain of £896 million) relating to the translation of foreign operations offset by a gain of £183 million (2020: gain of £5 million; 2019: loss of £550 million) relating to borrowings, cross-currency swaps and foreign exchange forward contracts used to hedge the net investment in non-sterling denominated subsidiaries.
2. Comparative amounts have been revised as described in note 1F.

29. Net debt

We define net debt as the amount of borrowings and overdrafts less cash, current financial investments and related financing derivatives.

(a) Composition of net debt

Net debt is comprised as follows:

	2021 £m	2020 £m	2019 £m
Cash and cash equivalents	**157**	73	252
Current financial investments	**2,342**	1,998	1,981
Borrowings	**(31,220)**	(30,794)	(28,730)
Financing derivatives[1]	**175**	133	(32)
	(28,546)	(28,590)	(26,529)

1. The financing derivatives balance included in net debt excludes the commodity derivatives (see note 17).

(b) Analysis of changes in net debt

	Notes	Cash and cash equivalents £m	Financial investments £m	Borrowings £m	Financing derivatives £m	Total[1] £m
At 1 April 2018		329	2,694	(26,625)	600	(23,002)
Impact of transition to IFRS 9	37	—	—	(32)	—	(32)
Cash flow	29(c)	(80)	(846)	(240)	422	(744)
Fair value gains and losses		—	14	(9)	(1,011)	(1,006)
Foreign exchange movements		3	79	(724)	—	(642)
Interest income/(charges)	6	—	29	(1,062)	(43)	(1,076)
Other non-cash movements		—	11	(38)	—	(27)
At 1 April 2019		252	1,981	(28,730)	(32)	(26,529)
Impact of transition to IFRS 16	37	—	—	(474)	—	(474)
Cash flow	29(c)	(183)	(42)	450	450	675
Fair value gains and losses		—	1	(57)	(246)	(302)
Foreign exchange movements		4	24	(807)	—	(779)
Interest income/(charges)	6	—	34	(1,092)	(39)	(1,097)
Other non-cash movements		—	—	(84)	—	(84)
At 1 April 2020		73	1,998	(30,794)	133	(28,590)
Cash flow	29(c)	95	429	(2,336)	4	(1,808)
Fair value gains and losses		—	14	159	31	204
Foreign exchange movements		(7)	(106)	1,710	—	1,597
Interest income/(charges)	6	—	7	(946)	7	(932)
Other non-cash movements		—	—	(136)	—	(136)
Reclassification to held for sale	10	(4)	—	1,123	—	1,119
At 31 March 2021		**157**	**2,342**	**(31,220)**	**175**	**(28,546)**
Balances at 31 March 2021 comprise:						
Non-current assets		—	—	—	514	514
Current assets		157	2,342	—	428	2,927
Current liabilities		—	—	(3,737)	(70)	(3,807)
Non-current liabilities		—	—	(27,483)	(697)	(28,180)
		157	**2,342**	**(31,220)**	**175**	**(28,546)**

1. Includes accrued interest at 31 March 2021 of £263 million (2020: £246 million; 2019: £223 million).
2. Cash flows on current financial investments are comprised of £7 million (2020: £35 million; 2019: £24 million) of interest received and £436 million of cash inflows (2020: £7 million outflows; 2019: £822 million outflows) of net cash flow movements in short-term financial investments, as presented in the consolidated cash flow statement.

Notes to the consolidated financial statements continued

29. Net debt continued

(c) Reconciliation of cash flow from liabilities within net debt to cash flow statement

	2021 Borrowings and other £m	2021 Financing derivatives £m	2020 Borrowings and other £m	2020 Financing derivatives £m	2019 Borrowings and other £m	2019 Financing derivatives £m
Cash flows per financing activities section of cash flow statement:						
Proceeds received from loans	5,645	–	4,218	–	2,932	–
Repayment of loans	(1,663)	–	(3,253)	–	(1,969)	–
Payments of lease liabilities	(112)	–	(121)	–	(70)	–
Net movements in short-term borrowings	(759)	–	(424)	–	179	–
Cash inflows on derivatives	–	58	–	62	–	221
Cash outflows on derivatives	–	(185)	–	(249)	–	(186)
Interest paid	(804)	(31)	(904)	(53)	(856)	(58)
Cash flows per financing activities section of cash flow statement	2,307	(158)	(484)	(240)	216	(23)
Adjustments:						
Non-net debt-related items	29	–	34	–	24	–
Derivative cash inflow in relation to capital expenditure	–	10	–	13	–	13
Derivative cash inflows per investing section of cash flow statement	–	225	–	58	–	17
Derivative cash outflows per investing section of cash flow statement	–	(81)	–	(281)	–	(429)
Cash flows relating to financing liabilities within net debt	2,336	(4)	(450)	(450)	240	(422)
Analysis of changes in net debt:						
Borrowings	2,336	–	(450)	–	240	–
Financing derivatives	–	(4)	–	(450)	–	(422)
Cash flow movements relating to financing liabilities within net debt	2,336	(4)	(450)	(450)	240	(422)

(d) Reconciliation of changes in liabilities arising from financing activities

The table below reconciles changes in liabilities arising from financing activities, including both changes arising from cash flows and non-cash changes. For the purposes of this table, the liabilities arising from financing activities are those for which cash flows were, or future cash flows will be, classified in the consolidated cash flow statement within financing activities. As a result we have separately disclosed the reconciliation below, excluding derivatives associated with our net investment hedges and derivatives associated with the hedging of capital expenditure, given that they are both classified in the consolidated cash flow statement within investing activities.

	Notes	Borrowings £m	Financing derivatives £m	Total £m
At 1 April 2018		(26,625)	553	(26,072)
Impact of transition to IFRS 9	37	(32)	–	(32)
Cash flow	29(c)	(240)	23	(217)
Fair value gains and losses		(9)	(334)	(343)
Foreign exchange movements		(724)	–	(724)
Interest charges	6	(1,062)	(14)	(1,076)
Other non-cash movements		(38)	–	(38)
At 1 April 2019		(28,730)	228	(28,502)
Impact of transition to IFRS 16	37	(474)	–	(474)
Cash flow	29(c)	450	240	690
Fair value gains and losses		(57)	(231)	(288)
Foreign exchange movements		(807)	–	(807)
Interest charges	6	(1,092)	(9)	(1,101)
Other non-cash movements		(84)	–	(84)
At 1 April 2020		(30,794)	228	(30,566)
Cash flow	29(c)	(2,336)	158	(2,178)
Fair value gains and losses		159	(301)	(142)
Foreign exchange movements		1,710	–	1,710
Interest charges	6	(946)	11	(935)
Other non-cash movements		(136)	–	(136)
Reclassification to held for sale	10	1,123	–	1,123
At 31 March 2021		**(31,220)**	**96**	**(31,124)**

30. Commitments and contingencies

Commitments are those amounts that we are contractually required to pay in the future as long as the other party meets its obligations. These commitments primarily relate to energy purchase agreements and contracts for the purchase of assets which, in many cases, extend over a long period of time. We also disclose any contingencies, which include guarantees that companies have given, where we pledge assets against current obligations that will remain for a specific period.

	2021 £m	2020 £m
Future capital expenditure		
Contracted for but not provided	**2,716**	2,629
Energy purchase commitments[1]		
Less than 1 year	**1,255**	1,365
In 1 to 2 years	**894**	890
In 2 to 3 years	**975**	973
In 3 to 4 years	**959**	955
In 4 to 5 years	**896**	861
More than 5 years	**10,805**	11,314
	15,784	16,358
Guarantees[2]		
Guarantee of sublease for US property (expires 2040)	**149**	173
Guarantees of certain obligations of Grain LNG (expire up to 2025)	**33**	34
Guarantees of certain obligations for construction of HVDC West Coast Link (expected expiry 2059)	**85**	92
Guarantees of certain obligations of National Grid North Sea Link Limited (various expiry dates)[2]	**584**	683
Guarantees of certain obligations of St William Homes LLP (various expiry dates)[3]	**53**	30
Guarantees of certain obligations of National Grid IFA 2 Limited (expected expiry 2022)[2]	**170**	564
Guarantees of certain obligations of National Grid Viking Link Limited (expected expiry 2024)	**1,276**	1,096
Other guarantees and letters of credit (various expiry dates)	**486**	150
	2,836	2,822

1. Energy purchase commitments relate to contractual commitments to purchase electricity or gas that are used to satisfy physical delivery requirements to our customers or for energy that we use ourselves (i.e. normal purchase, sale or usage) and hence are accounted for as ordinary purchase contracts (see note 32(f)). Details of commodity contract derivatives that do not meet the normal purchase, sale or usage criteria, and hence are accounted for as derivative contracts, are shown in note 17(b).
2. Included within total guarantees are guarantees to both joint ventures and Engineering, Procurement and Construction contractors regarding the construction of interconnectors of £136 million (2020: £358 million).
3. Includes guarantees to related parties.

Through the ordinary course of our operations, we are party to various litigation, claims and investigations. We do not expect the ultimate resolution of any of these proceedings to have a material adverse effect on our results of operations, cash flows or financial position.

Notes to the consolidated financial statements
continued

31. Related party transactions

Related parties include joint ventures, associates, investments and key management personnel.

The following significant transactions with related parties were in the normal course of business. Amounts receivable from and payable to related parties are due on normal commercial terms:

	2021 £m	2020 £m	2019 £m
Sales: Goods and services supplied to a pension plan	**3**	5	5
Sales: Goods and services supplied to joint ventures[1]	**79**	101	151
Sales: Goods and services supplied to associates[2]	**1**	33	192
Purchases: Goods and services received from joint ventures[3]	**35**	61	26
Purchases: Goods and services received from associates[3]	**43**	56	141
Receivable from joint ventures[4]	**263**	255	584
Receivable from associates[4]	**–**	1	368
Payable to joint ventures	**17**	–	8
Payable to associates	**3**	4	12
Interest income from joint ventures	**–**	2	5
Interest income from associates	**–**	8	23
Dividends received from joint ventures[5]	**49**	34	30
Dividends received from associates[6]	**32**	41	171

1. During the year, £14 million (2020: £38 million; 2019: £139 million) of property sites were sold to St William Homes LLP, £50 million of sales were made to Emerald Energy Venture LLC (2020: £21 million; 2019: £nil) and a further £6 million (2020: £32 million; 2019; £2 million) of sales were made to NGET/SPT Upgrades Limited.
2. In previous years, sales related to transactions with Quadgas, until the date it ceased to be a related party following the disposal of our 39% stake in June 2019 (see note 10) and included income of £31 million in 2020 and £52 million in 2019 relating to a Transitional Service Agreement following the sale of the UK Gas Distribution business to Quadgas.
3. During the year, the Group received goods and services from a number of US associates, both for the transportation of gas and for pipeline services in the US, most notably, £41 million (2020: £31 million; 2019: £30 million) of purchases from Millennium Pipeline Company LLC. The Group also purchased assets of £5 million (2020: £58 million; 2019: £26 million) from NGET/SPT Upgrades Limited (a joint venture).
4. Amounts receivable from joint ventures include £241 million (2020: £242 million; 2019: £325 million) in relation to St William Homes LLP. There are no longer loans receivable from Quadgas (2020: £nil; 2019: £352 million) and Nemo Link (a joint venture) (2020: £nil; 2019: £258 million).
5. Includes dividends of £18 million (2020: £25 million; 2019: £30 million) received from BritNed Development Limited and £25 million (2020: £8 million; 2019:£ nil) from Nemo Link Limited.
6. Includes dividends of £31 million (2020: £32 million; 2019: £24 million) received from Millennium Pipeline Company LLC. Dividends of £133 million were received from Quadgas in 2019.

Details of investments in principal subsidiary undertakings, joint ventures and associates are disclosed in note 34, and information relating to pension fund arrangements is disclosed in note 25. For details of Directors' and key management remuneration, refer to the Directors' Remuneration Report on pages 92 – 113 and note 4(c).

32. Financial risk management

Our activities expose us to a variety of financial risks including credit risk, liquidity risk, capital risk, currency risk, interest rate risk, inflation risk and commodity price risk. Our risk management programme focuses on the unpredictability of financial markets and seeks to minimise potential volatility of financial performance from these risks. We use financial instruments, including derivative financial instruments, to manage these risks.

Risk management related to financing activities is carried out by a central treasury department under policies approved by the Finance Committee of the Board. The objective of the treasury department is to manage funding and liquidity requirements, including managing associated financial risks, to within acceptable boundaries. The Finance Committee provides written principles for overall risk management, and written policies covering the following specific areas: foreign exchange risk, interest rate risk, credit risk, liquidity risk, use of derivative financial instruments and non-derivative financial instruments, and investment of excess liquidity. The Finance Committee has delegated authority to administer the commodity price risk policy and credit policy for US-based commodity transactions to the Energy Procurement Risk Management Committee and the National Grid USA Board of Directors. Details of key activities in the current year are set out in the Finance Committee report on page 88.

We have exposure to the following risks, which are described in more detail below:
- credit risk;
- liquidity risk;
- currency risk;
- interest rate risk;
- commodity price risk; and
- capital risk.

Where appropriate, derivatives and other financial instruments used for hedging currency and interest rate risk exposures are formally designated as fair value, cash flow or net investment hedges as defined in IFRS 9. Hedge accounting allows the timing of the profit or loss impact of qualifying hedging instruments to be recognised in the same reporting period as the corresponding impact of hedged exposures. To qualify for hedge accounting, documentation is prepared specifying the risk management objective and strategy, the component transactions and methodology used for measurement of effectiveness.

32. Financial risk management continued

Hedge accounting relationships are designated in line with risk management activities further described below. The categories of hedging entered into are as follows:

- currency risk arising from our forecasted foreign currency transactions (capital expenditure or revenues) is designated in cash flow hedges;
- currency risk arising from our net investments in foreign operations is designated in net investment hedges; and
- currency and interest rate risk arising from borrowings are designated in cash flow or fair value hedges.

Critical terms of hedging instruments and hedged items are transacted to match on a 1:1 ratio by notional values. Hedge ineffectiveness can nonetheless arise from inherent differences between derivatives and non-derivative instruments and other market factors including credit, correlations, supply and demand, and market volatilities. Ineffectiveness is recognised in the remeasurements component of finance income and costs (see note 6). Hedge accounting is discontinued when a hedging relationship no longer qualifies for hedge accounting.

Certain hedging instrument components are treated separately as costs of hedging with the gains and losses deferred in a component of other equity reserves and released systematically into profit or loss to correspond with the timing and impact of hedged exposures, or released in full to finance costs upon an early discontinuation of a hedging relationship.

Refer to sections (c) currency risk and (d) interest rate risk below for further details on hedge accounting.

(a) Credit risk

We are exposed to the risk of loss resulting from counterparties' default on their commitments including failure to pay or make a delivery on a contract. This risk is inherent in our commercial business activities. Exposure arises from derivative financial instruments, deposits with banks and financial institutions, trade receivables and committed transactions with wholesale and retail customers.

Treasury credit risk

Counterparty risk arises from the investment of surplus funds and from the use of derivative financial instruments. As at 31 March 2021, the following limits were in place for investments and derivative financial instruments held with banks and financial institutions:

	Maximum limit £m	Long-term limit £m
Triple 'A' G7 sovereign entities (AAA)	2,259	1,129
Triple 'A' vehicles (AAA)	500	—
Triple 'A' range institutions and non-G7 sovereign entities (AAA)	1,232	616
Double 'A+' G7 sovereign entities (AA+)	2,054	1,027
Double 'A' range institutions (AA)	822 to 1,027	411 to 513
Single 'A' range institutions (A)	288 to 411	144 to 205

The maximum limit applies to all transactions, including long-term transactions. The long-term limit applies to transactions which mature in more than 12 months' time.

As at 31 March 2021 and 2020, we had a number of exposures to individual counterparties. In accordance with our treasury policies, counterparty credit exposure utilisations are monitored daily against the counterparty credit limits. Counterparty credit ratings and market conditions are reviewed continually with limits being revised and utilisation adjusted, if appropriate. Management does not expect any significant losses from non-performance by these counterparties. Further information on financial investments subject to impairment provisioning is included in note 15.

Commodity credit risk

The credit policy for US-based commodity transactions is owned by the Finance Committee to the Board, which establishes controls and procedures to determine, monitor and minimise the credit exposure to counterparties.

Wholesale and retail credit risk

Our principal commercial exposure in the UK is governed by the credit rules within the regulated codes: Uniform Network Code and Connection and Use of System Code. These set out the level of credit relative to the RAV for each credit rating. In the US, we are required to supply electricity and gas under state regulations. Our policies and practices are designed to limit credit exposure by collecting security deposits prior to providing utility services, or after utility services have commenced if certain applicable regulatory requirements are met. Collection activities are managed on a daily basis. Sales to retail customers are usually settled in cash, cheques, electronic bank payments or by using major credit cards. We are committed to measuring, monitoring, minimising and recording counterparty credit risk in our wholesale business. The utilisation of credit limits is regularly monitored, and collateral is collected against these accounts when necessary.

Since March 2020, the Group's US distribution business ceased certain cash collection and termination activities in response to regulatory instructions following the COVID-19 pandemic. This has resulted in the recognition of expected credit losses (see note 19 for further details).

Notes to the consolidated financial statements continued

32. Financial risk management continued

(a) Credit risk continued

Offsetting financial assets and liabilities

The following tables set out our financial assets and liabilities which are subject to offset and to enforceable master netting arrangements or similar agreements. The tables show the amounts which are offset and reported net in the statement of financial position. Amounts which cannot be offset under IFRS, but which could be settled net under terms of master netting arrangements if certain conditions arise, and with collateral received or pledged, are shown to present National Grid's net exposure.

Financial assets and liabilities on different transactions would only be reported net in the balance sheet if the transactions were with the same counterparty, a currently enforceable legal right of offset exists, and the cash flows were intended to be settled on a net basis.

Amounts which do not meet the criteria for offsetting on the statement of financial position, but could be settled net in certain circumstances, principally relate to derivative transactions under ISDA agreements, where each party has the option to settle amounts on a net basis in the event of default of the other party.

Commodity contract derivatives that have not been offset on the balance sheet may be settled net in certain circumstances under ISDA or North American Energy Standards Board (NAESB) agreements.

For bank account balances and bank overdrafts, there are no 'Gross amounts offset' under cash pooling arrangements (2020: £23 million). Our UK bank accounts for National Grid subsidiaries previously participated in GBP, EUR and USD Composite Accounting System overdraft facilities subject to offsetting gross and net overdraft limits. EUR and USD offsetting arrangements have been discontinued in the year and GBP offsetting arrangements have no impact as at 31 March 2021. In the US, no offsetting arrangements exist, and cash transactions are settled through Service Company bank accounts with subsequent intercompany payables and receivables reported by subsidiaries with the Service Company.

The gross amounts offset for trade payables and receivables, which are subject to general terms and conditions, are insignificant.

				Related amounts available to be offset but not offset in statement of financial position		
At 31 March 2021	**Gross carrying amounts £m**	**Gross amounts offset £m**	**Net amount presented in statement of financial position £m**	**Financial instruments £m**	**Cash collateral received/ pledged £m**	**Net amount £m**
Assets						
Financing derivatives	**942**	**—**	**942**	**(234)**	**(561)**	**147**
Commodity contract derivatives	**57**	**—**	**57**	**(8)**	**—**	**49**
	999	**—**	**999**	**(242)**	**(561)**	**196**
Liabilities						
Financing derivatives	**(767)**	**—**	**(767)**	**234**	**467**	**(66)**
Commodity contract derivatives	**(132)**	**—**	**(132)**	**8**	**4**	**(120)**
	(899)	**—**	**(899)**	**242**	**471**	**(186)**
	100	**—**	**100**	**—**	**(90)**	**10**

				Related amounts available to be offset but not offset in statement of financial position		
At 31 March 2020	Gross carrying amounts £m	Gross amounts offset £m	Net amount presented in statement of financial position £m	Financial instruments £m	Cash collateral received/ pledged £m	Net amount £m
Assets						
Financing derivatives	1,267	—	1,267	(351)	(694)	222
Commodity contract derivatives	75	—	75	(5)	(3)	67
	1,342	—	1,342	(356)	(697)	289
Liabilities						
Financing derivatives	(1,134)	—	(1,134)	351	646	(137)
Commodity contract derivatives	(200)	—	(200)	5	8	(187)
	(1,334)	—	(1,334)	356	654	(324)
	8	—	8	—	(43)	(35)

32. Financial risk management continued

(b) Liquidity risk

Our policy is to determine our liquidity requirements by the use of both short-term and long-term cash flow forecasts. These forecasts are supplemented by a financial headroom analysis which is used to assess funding requirements for at least a 24-month period and maintain adequate liquidity for a continuous 12-month period.

We believe our contractual obligations, including those shown in commitments and contingencies in note 30, can be met from existing cash and investments, operating cash flows and other financing that we reasonably expect to be able to secure in the future, together with the use of committed facilities if required.

Our debt agreements and banking facilities contain covenants, including those relating to the periodic and timely provision of financial information by the issuing entity, restrictions on disposals and financial covenants, such as restrictions on the level of subsidiary indebtedness. Failure to comply with these covenants, or to obtain waivers of those requirements, could in some cases trigger a right, at the lender's discretion, to require repayment of some of our debt and may restrict our ability to draw upon our facilities or access the capital markets.

The following is a payment profile of our financial liabilities and derivatives:

At 31 March 2021	**Less than 1 year £m**	**1 to 2 years £m**	**2 to 3 years £m**	**More than 3 years £m**	**Total £m**
Non-derivative financial liabilities					
Borrowings, excluding lease liabilities	**(3,350)**	**(1,690)**	**(806)**	**(25,562)**	**(31,408)**
Interest payments on borrowings[1]	**(810)**	**(755)**	**(731)**	**(12,018)**	**(14,314)**
Lease liabilities	**(118)**	**(108)**	**(90)**	**(599)**	**(915)**
Other non-interest-bearing liabilities	**(3,207)**	**(350)**	**–**	**–**	**(3,557)**
Contingent consideration	**(40)**	**(24)**	**–**	**–**	**(64)**
Derivative financial liabilities					
Financing derivatives – receipts[2]	**3,773**	**749**	**451**	**4,326**	**9,299**
Financing derivatives – payments[2]	**(3,899)**	**(877)**	**(533)**	**(5,153)**	**(10,462)**
Commodity contract derivatives – receipts[2]	**12**	**–**	**–**	**–**	**12**
Commodity contract derivatives – payments[2]	**(83)**	**(23)**	**(14)**	**(12)**	**(132)**
Derivative financial assets					
Financing derivatives – receipts[2]	**2,162**	**926**	**833**	**1,789**	**5,710**
Financing derivatives – payments[2]	**(1,700)**	**(834)**	**(780)**	**(1,536)**	**(4,850)**
Commodity contract derivatives – receipts[2]	**21**	**4**	**1**	**1**	**27**
Commodity contract derivatives – payments[2]	**(21)**	**(4)**	**(2)**	**–**	**(27)**
	(7,260)	**(2,986)**	**(1,671)**	**(38,764)**	**(50,681)**

At 31 March 2020	Less than 1 year £m	1 to 2 years £m	2 to 3 years £m	More than 3 years £m	Total £m
Non-derivative financial liabilities					
Borrowings, excluding lease liabilities	(3,672)	(2,150)	(1,611)	(22,214)	(29,647)
Interest payments on borrowings[1]	(765)	(750)	(714)	(12,002)	(14,231)
Lease liabilities	(132)	(114)	(99)	(629)	(974)
Other non-interest-bearing liabilities	(3,149)	(318)	–	–	(3,467)
Contingent consideration	(32)	(16)	(32)	(16)	(96)
Derivative financial liabilities					
Financing derivatives – receipts[2]	2,249	986	1,208	3,510	7,953
Financing derivatives – payments[2]	(2,582)	(1,136)	(1,463)	(4,067)	(9,248)
Commodity contract derivatives – receipts[2]	4	2	–	–	6
Commodity contract derivatives – payments[2]	(116)	(50)	(24)	(12)	(202)
Derivative financial assets					
Financing derivatives – receipts[2]	2,469	1,063	570	1,775	5,877
Financing derivatives – payments[2]	(2,271)	(527)	(375)	(1,478)	(4,651)
Commodity contract derivatives – receipts[2]	20	1	1	–	22
Commodity contract derivatives – payments[2]	(21)	–	–	–	(21)
	(7,998)	(3,009)	(2,539)	(35,133)	(48,679)

1. The interest on borrowings is calculated based on borrowings held at 31 March without taking account of future issues. Floating rate interest is estimated using a forward interest rate curve as at 31 March. Payments are included on the basis of the earliest date on which the Company can be required to settle.
2. The receipts and payments line items for derivatives comprise gross undiscounted future cash flows, after considering any contractual netting that applies within individual contracts. Where cash receipts and payments within a derivative contract are settled net, and the amount to be received/(paid) exceeds the amount to be paid/(received), the net amount is presented within derivative receipts/(payments).

Notes to the consolidated financial statements
continued

32. Financial risk management continued

(c) Currency risk

National Grid operates internationally with mainly the pound sterling as the functional currency for the UK companies and the US dollar for the US businesses. Currency risk arises from three major areas: funding activities, capital investment and related revenues, and holdings in foreign operations. This risk is managed using financial instruments including derivatives as approved by policy, typically cross-currency interest rate swaps, foreign exchange swaps and forwards.

Funding activities – our policy is to borrow in the most advantageous market available. Foreign currency funding gives rise to risk of volatility in the amount of functional currency cash to be repaid. This risk is reduced by swapping principal and interest back into the functional currency of the issuer. All foreign currency debt and transactions are hedged except where they provide a natural offset to assets elsewhere in the Group.

Capital investment and related revenues – capital projects often incur costs or generate revenues in a foreign currency, most often euro transactions done by the UK business. Our policy for managing foreign exchange transaction risk is to hedge contractually committed foreign currency cash flows over a prescribed minimum size, typically by buying euro forwards to hedge future expenditure, and selling euro forwards to hedge future revenues. For hedges of forecast cash flows our policy is to hedge a proportion of highly probable cash flows.

Holdings in foreign operations – we are exposed to fluctuations on the translation into pounds sterling of our foreign operations. The policy for managing this translation risk is to issue foreign currency debt or to replicate foreign debt using derivatives that pay cash flows in the currency of the foreign operation. The primary managed exposure arises from dollar denominated assets and liabilities held by our US operations, with a smaller euro exposure in respect of joint venture investments.

Derivative financial instruments were used to manage foreign currency risk as follows:

	2021					2020				
	Sterling £m	**Euro £m**	**Dollar £m**	**Other £m**	**Total £m**	Sterling £m	Euro £m	Dollar £m	Other £m	Total £m
Cash and cash equivalents	**63**	**—**	**94**	**—**	**157**	18	—	55	—	73
Financial investments	**1,215**	**—**	**1,127**	**—**	**2,342**	813	—	1,185	—	1,998
Borrowings	**(12,210)**	**(5,351)**	**(12,660)**	**(999)**	**(31,220)**	(12,407)	(4,150)	(13,217)	(1,020)	(30,794)
Pre-derivative position	**(10,932)**	**(5,351)**	**(11,439)**	**(999)**	**(28,721)**	(11,576)	(4,150)	(11,977)	(1,020)	(28,723)
Derivative effect	**(826)**	**5,459**	**(5,494)**	**1,036**	**175**	(1,169)	4,341	(4,214)	1,175	133
Net debt position	**(11,758)**	**108**	**(16,933)**	**37**	**(28,546)**	(12,745)	191	(16,191)	155	(28,590)

The exposure to dollars largely relates to our net investment hedge activities; exposure to euros largely relates to hedges for our future non-sterling capital expenditure.

The currency exposure on other financial instruments is as follows:

	2021					2020				
	Sterling £m	**Euro £m**	**Dollar £m**	**Other £m**	**Total £m**	Sterling £m	Euro £m	Dollar £m	Other £m	Total £m
Trade and other receivables	**282**	**—**	**1,387**	**—**	**1,669**	306	—	1,403	—	1,709
Trade and other payables	**(1,207)**	**—**	**(1,878)**	**—**	**(3,085)**	(1,177)	—	(2,002)	—	(3,179)
Other non-current liabilities	**(77)**	**—**	**(288)**	**—**	**(365)**	(85)	—	(277)	—	(362)

The carrying amounts of other financial instruments are denominated in the above currencies, which in most instances are the functional currency of the respective subsidiaries. Our exposure to dollars is due to activities in our US subsidiaries. We do not have any other significant exposure to currency risk on these balances.

Hedge accounting for currency risk

Where available, derivatives transacted for hedging are designated for hedge accounting. Economic offset is qualitatively determined because the critical terms (currency and volume) of the hedging instrument match the hedged exposure. If a forecast transaction was no longer expected to occur, the cumulative gain or loss previously reported in equity would be transferred to the income statement. This has not occurred in the current or comparative years.

Cash flow hedging of currency risk of capital expenditure and revenues is designated as hedging the exposure to movements in the spot translation rates only; the timing of forecasted transactions is not designated as a hedged risk. Gains and losses on hedging instruments arising from forward points and foreign currency basis spreads are excluded from designation and are recognised immediately in profit or loss, along with any hedge ineffectiveness. On recognition of the hedged purchase or sale in the financial statements, the associated hedge gains and losses, deferred in the cash flow hedge reserve in other equity reserves, are transferred out of reserves and included with the recognition of the underlying transaction. Where a non-financial asset or a non-financial liability results from a forecast transaction or firm commitment being hedged, the amounts deferred in reserves are included directly in the initial measurement of that asset or liability.

Net investment hedging is also designated as hedging the exposure to movements in spot translation rates only: spot-related gains and losses on hedging instruments are presented in the cumulative translation reserve within other equity reserves to offset gains or losses on translation of the hedged balance sheet exposure. Any ineffectiveness is recognised immediately in the income statement. Amounts deferred in the cumulative translation reserve with respect to net investment hedges are subsequently recognised in the income statement in the event of disposal of the overseas operations concerned. Any remaining amounts deferred in the cost of hedging reserve are also released to the income statement.

Hedges of foreign currency funding are designated as cash flow hedges or fair value hedges of forward exchange risk (hedging both currency and interest rate risk together, where applicable). Gains and losses arising from foreign currency basis spreads are excluded from designation and are treated as a cost of hedging, deferred initially in other equity reserves and released into profit or loss over the life of the hedging relationship. Hedge accounting for funding is described further in the interest rate risk section below.

32. Financial risk management continued

(d) Interest rate risk

National Grid's interest rate risk arises from our long-term borrowings. Our interest rate risk management policy is to seek to minimise total financing costs (being interest costs and changes in the market value of debt). Hedging instruments principally consist of interest rate and cross-currency swaps that are used to translate foreign currency debt into functional currency and to adjust the proportion of fixed-rate and floating-rate in the borrowings portfolio to within a range set by the Finance Committee of the Board. The benchmark interest rates hedged are currently based on LIBOR.

LIBOR is being replaced as an interest rate benchmark by alternative reference rates in certain currencies including our functional currencies, USD and GBP, and foreign currencies in which we operate. This impacts contracts including financial liabilities that pay LIBOR-based cash flows, and derivatives that receive or pay LIBOR-based cash flows. The change in benchmark also affects discount rates which will impact the valuations of certain liabilities. We have disclosed our exposure to LIBOR on our derivative portfolio in note 17, on our borrowings in note 21 and on our hedging arrangements in note 32(e). We are managing the risk by planning to replace LIBOR cash flows with alternative reference rates on our affected contracts. The migration project is underway, with all affected contracts expected to be amended by 31 December 2021. As at 31 March 2021 no contracts had yet been amended. The Finance Committee of the Board have delegated to the treasury department the authority to determine which benchmarks are the most appropriate. A combination of LIBOR and the successor benchmarks, primarily GBP Sterling Overnight Index Average (SONIA) and USD Secured Overnight Financing Rate (SOFR) will be used in the portfolio during the migration period.

We also consider inflation risk and hold some inflation-linked borrowings. We believe that these provide a partial economic offset to the inflation risk associated with our UK inflation-linked revenues.

The table in note 21 sets out the carrying amount, by contractual maturity, of borrowings that are exposed to interest rate risk before taking into account interest rate swaps.

Net debt was managed using derivative financial instruments to hedge interest rate risk as follows:

	2021					2020				
	Fixed rate £m	**Floating rate £m**	**Inflation linked £m**	**Other[1] £m**	**Total £m**	Fixed rate £m	Floating rate £m	Inflation linked £m	Other[1] £m	Total £m
Cash and cash equivalents	**64**	**67**	**—**	**26**	**157**	71	10	—	(8)	73
Financial investments	**—**	**2,309**	**—**	**33**	**2,342**	—	1,966	—	32	1,998
Borrowings	**(23,163)**	**(1,762)**	**(6,295)**	**—**	**(31,220)**	(20,969)	(3,085)	(6,740)	—	(30,794)
Pre-derivative position	**(23,099)**	**614**	**(6,295)**	**59**	**(28,721)**	(20,898)	(1,109)	(6,740)	24	(28,723)
Derivative effect	**2,869**	**(2,511)**	**(183)**	**—**	**175**	2,259	(1,892)	(234)	—	133
Net debt position	**(20,230)**	**(1,897)**	**(6,478)**	**59**	**(28,546)**	(18,639)	(3,001)	(6,974)	24	(28,590)

1. Represents financial instruments which are not directly affected by interest rate risk, such as investments in equity or other similar financial instruments.

Hedge accounting for interest rate risk

Borrowings paying variable or floating-rates expose National Grid to cash flow interest rate risk, partially offset by cash held at variable rates. Where a hedging instrument results in paying a fixed-rate, it is designated as a cash flow hedge because it has reduced the cash flow volatility of the hedged borrowing. Changes in the fair value of the derivative are initially recognised in other comprehensive income as gains or losses in the cash flow hedge reserve, with any ineffective portion recognised immediately in the income statement.

Borrowings paying fixed-rates expose National Grid to fair value interest rate risk. Where the hedging instrument pays a floating-rate, it is designated as a fair value hedge because it has reduced the fair value volatility of the borrowing. Changes in the fair value of the derivative and changes in the fair value of the hedged item in relation to the risk being hedged are both adjusted on the balance sheet and offset in the income statement to the extent the fair value hedge is effective, with the residual difference remaining as ineffectiveness.

Both types of hedges are designated as hedging the currency and interest rate risk arising from changes in forward points. Amounts accumulated in the cash flow hedge reserve (cash flow hedges only) and the deferred cost of hedging reserve (both cash flow and fair value hedges) are reclassified from reserves to the income statement on a systematic basis as hedged interest expense is recognised. Adjustments made to the carrying value of hedged items in fair value hedges are similarly released to the income statement to match the timing of the hedged interest expense.

When hedge accounting is discontinued, any remaining cumulative hedge accounting balances continue to be released to the income statement to match the impact of outstanding hedged items. Any remaining amounts deferred in the cost of hedging reserve are released immediately to the income statement as finance costs.

The Group early-adopted Phase I of IFRS Interest Rate Benchmark Reform amendments related to hedge accounting with effect from 1 April 2019, and Phase II with effect from 1 April 2020. The amendments impact our fair value hedging relationships where derivative cash flows will be transitioned from paying LIBOR to paying an alternative reference rate. The hedged risk must be re-documented to reflect this, and allow existing hedge designations to continue unchanged during the period of uncertainty relating to the timing and method of benchmark migrations.

The amendments will be applied until the earliest point in time of the Group's contracts that reference LIBOR being amended, the hedging relationship being formally discontinued or formal market conventions ending uncertainty being published and widely adopted. If amended cash flows do not cause a hedging relationship to be discontinued, then the amendments will cease to be applied only when that relationship is discontinued under IFRS 9.

The IFRS amendments impact fair value and cash flow hedges of interest rate risk and related hedging instruments, and certain net investment hedges that use cross-currency interest rate swaps to pay a foreign currency floating rate and receive a functional currency floating rate. The notional values of hedging instruments, for each type of hedging relationship impacted, are shown in the hedge accounting tables in note 32(e). These amounts also correspond to the exposures designated as hedged.

Notes to the consolidated financial statements continued

32. Financial risk management continued

(e) Hedge accounting

In accordance with the requirements of IFRS 7, certain additional information about hedge accounting is disaggregated by risk type and hedge designation type in the tables below:

Year ended 31 March 2021	Fair value hedges of foreign currency and interest rate risk £m	Cash flow hedges of foreign currency and interest rate risk £m	Cash flow hedges of foreign currency risk £m	Net investment hedges £m
Consolidated statement of comprehensive income				
Net gains/(losses) in respect of:				
Cash flow hedges	–	14	(14)	–
Cost of hedging	(15)	(24)	–	50
Transferred to profit or loss in respect of:				
Cash flow hedges	–	56	–	–
Cost of hedging	1	2	–	–
Consolidated statement of changes in equity				
Other equity reserves – cost of hedging balances	(11)	(30)	–	6
Consolidated statement of financial position				
Derivatives – carrying value of hedging instruments[1]				
Assets – current	–	10	2	5
Assets – non-current	187	59	1	140
Liabilities – current	–	(12)	(24)	(17)
Liabilities – non-current	(113)	(255)	(22)	–
Profiles of the significant timing, price and rate information of hedging instruments				
Maturity range	Jan 2023 – Jan 2043	Sep 2021 – Nov 2040	Apr 2021 – Feb 2027	Mar 2022 – Sep 2027
Spot foreign exchange range:				
GBP:USD	1.64	1.30 – 1.66	1.31 – 1.41	1.22 – 1.40
GBP:EUR	1.11 – 1.24	1.08 – 1.24	1.04 – 1.29	1.15 – 1.16
EUR:USD	1.13 – 1.17	1.13 – 1.14	n/a	n/a
Interest rate range:				
GBP	LIBOR +30bps/+408bps	0.976% – 5.845%	n/a	n/a
USD	LIBOR +68bps/+115bps	2.513% – 3.864%	n/a	n/a

1. The use of derivatives may entail a derivative transaction qualifying for more than one hedge type designation under IFRS 9. Therefore, the derivative amounts in the table above are grossed up by hedge type, whereas they are presented net at an instrument level in the statement of financial position.

32. Financial risk management continued

(e) Hedge accounting continued

Year ended 31 March 2020	Fair value hedges of foreign currency and interest rate risk £m	Cash flow hedges of foreign currency and interest rate risk £m	Cash flow hedges of foreign currency risk £m	Net investment hedges £m
Consolidated statement of comprehensive income				
Net losses in respect of:				
Cash flow hedges	–	(143)	(17)	–
Cost of hedging	5	(7)	–	(30)
Transferred to profit or loss in respect of:				
Cash flow hedges	–	14	–	–
Cost of hedging	1	(1)	–	(45)
Consolidated statement of changes in equity				
Other equity reserves – cost of hedging balances	2	(8)	–	(43)
Consolidated statement of financial position				
Derivatives – carrying value of hedging instruments[1]				
Assets – current	1	–	4	9
Assets – non-current	247	106	8	–
Liabilities – current	(1)	(105)	(8)	(82)
Liabilities – non-current	(39)	(264)	(12)	(19)
Profiles of the significant timing, price and rate information of hedging instruments				
Maturity range	May 2020 – Feb 2040	Jul 2020 – Dec 2039	Apr 2020 – Dec 2024	Jun 2020 – Sep 2027
Spot foreign exchange range:				
GBP:USD	1.64	1.30 – 1.66	1.24 – 1.41	1.21 – 1.49
GBP:EUR	1.19 – 1.24	1.10 – 1.24	1.04 – 1.30	1.14
EUR:USD	1.13 – 1.17	1.13 – 1.14	n/a	n/a
Interest rate range:				
GBP	LIBOR +30bps/+408bps	1.331% – 5.850%	n/a	n/a
USD	LIBOR –44bps/+115bps	1.103% – 3.864%	n/a	n/a

1. The use of derivatives may entail a derivative transaction qualifying for more than one hedge type designation under IFRS 9. Therefore, the derivative amounts in the table above are grossed up by hedge type, whereas they are presented net at an instrument level in the statement of financial position.

Notes to the consolidated financial statements continued

32. Financial risk management continued

(e) Hedge accounting continued

The following tables show the effects of hedge accounting on financial position and year-to-date performance for each type of hedge. These tables also present notional values of hedging instruments (and equal hedged exposures) impacted by IFRS 9 Interest Rate Benchmark Reform amendments.

(i) Fair value hedges of foreign currency and interest rate risk on recognised borrowings:

As at 31 March 2021		**Balance of fair value hedge adjustments in borrowings**		**Change in value used for calculating ineffectiveness**		
Hedge type	**Hedging instrument notional £m**	**Continuing hedges £m**	**Discontinued hedges £m**	**Hedged item £m**	**Hedging instrument £m**	**Hedge ineffectiveness £m**
Foreign currency and interest rate risk on borrowings[1,2]	**(2,755)**	**121**	**(85)**	**153**	**(127)**	**26**

1. The carrying value of the hedged borrowings is £2,714 million, of which £nil is current and £2,714 million is non-current.
2. Included within the hedging instrument notional balance is £2,679 million impacted by Interest Rate Benchmark Reform amendments.

As at 31 March 2020		Balance of fair value hedge adjustments in borrowings		Change in value used for calculating ineffectiveness		
Hedge type	Hedging instrument notional £m	Continuing hedges £m	Discontinued hedges £m	Hedged item £m	Hedging instrument £m	Hedge ineffectiveness £m
Foreign currency and interest rate risk on borrowings[1,2]	(1,751)	(31)	(95)	(42)	48	6

1. The carrying value of the hedged borrowings was £1,883 million, of which £72 million was current and £1,811 million was non-current.
2. Included within the hedging instrument notional balance was £1,675 million impacted by Interest Rate Benchmark Reform amendments.

(ii) Cash flow hedges of foreign currency and interest rate risk:

As at 31 March 2021		**Balance in cash flow hedge reserve**		**Change in value used for calculating ineffectiveness**		
Hedge type	**Hedging instrument notional £m**	**Continuing hedges £m**	**Discontinued hedges £m**	**Hedged item £m**	**Hedging instrument £m**	**Hedge ineffectiveness £m**
Foreign currency and interest rate risk on borrowings[1]	**(4,884)**	**(11)**	**(6)**	**(16)**	**16**	**–**
Foreign currency risk on forecasted cash flows	**(988)**	**(31)**	**3**	**17**	**(17)**	**–**

1. Included within the hedging instrument notional balance is £176 million impacted by Interest Rate Benchmark Reform amendments.

As at 31 March 2020		Balance in cash flow hedge reserve		Change in value used for calculating ineffectiveness		
Hedge type	Hedging instrument notional £m	Continuing hedges £m	Discontinued hedges £m	Hedged item £m	Hedging instrument £m	Hedge ineffectiveness £m
Foreign currency and interest rate risk on borrowings[1]	(4,127)	(69)	(22)	142	(143)	(1)
Foreign currency risk on forecasted cash flows	(794)	8	–	17	(17)	–

1. Included within the hedging instrument notional balance was £176 million impacted by Interest Rate Benchmark Reform amendments.

(iii) Net investment hedges of foreign currency risk:

As at 31 March 2021		**Balance in translation reserve**		**Change in value used for calculating ineffectiveness**		
Hedge type	**Hedging instrument notional £m**	**Continuing hedges £m**	**Discontinued hedges £m**	**Hedged item £m**	**Hedging instrument £m**	**Hedge ineffectiveness £m**
Currency risk on foreign operations[1]	**(2,786)**	**183**	**(2,826)**	**(183)**	**183**	**–**

1. Included within the hedging instrument notional balance is £nil impacted by Interest Rate Benchmark Reform amendments.

As at 31 March 2020		Balance in translation reserve		Change in value used for calculating ineffectiveness		
Hedge type	Hedging instrument notional £m	Continuing hedges £m	Discontinued hedges £m	Hedged item £m	Hedging instrument £m	Hedge ineffectiveness £m
Currency risk on foreign operations[1]	(3,064)	45	(2,871)	(6)	6	–

1. Included within the hedging instrument notional balance was £nil impacted by Interest Rate Benchmark Reform amendments.

32. Financial risk management continued

(f) Commodity price risk

We purchase electricity and gas to supply our customers in the US and to meet our own energy needs. Substantially all our costs of purchasing electricity and gas for supply to customers are recoverable at an amount equal to cost. The timing of recovery of these costs can vary between financial periods leading to an under- or over-recovery within any particular year that can lead to large fluctuations in the income statement. We follow approved policies to manage price and supply risks for our commodity activities.

Our energy procurement risk management policy and delegations of authority govern our US commodity trading activities for energy transactions. The purpose of this policy is to ensure we transact within pre-defined risk parameters and only in the physical and financial markets where we or our customers have a physical market requirement. In addition, state regulators require National Grid to manage commodity risk and cost volatility prudently through diversified pricing strategies. In some jurisdictions we are required to file a plan outlining our strategy to be approved by regulators. In certain cases, we might receive guidance with regard to specific hedging limits.

Energy purchase contracts for the forward purchase of electricity or gas that are used to satisfy physical delivery requirements to customers, or for energy that the Group uses itself, meet the expected purchase or usage requirements of IFRS 9. They are, therefore, not recognised in the financial statements until they are realised. Disclosure of commitments under such contracts is made in note 30.

US states have introduced a variety of legislative requirements with the aim of increasing the proportion of our electricity that is derived from renewable or other forms of clean energy. Annual compliance filings regarding the level of Renewable Energy Certificates (and other similar environmental certificates) are required by the relevant department of utilities. In response to the legislative requirements, National Grid has entered into long-term, typically fixed-price, energy supply contracts to purchase both renewable energy and environmental certificates. We are entitled to recover all costs incurred under these contracts through customer billing.

Under IFRS, where these supply contracts are not accounted for as leases, they are considered to comprise two components, being a forward purchase of power at spot prices, and a forward purchase of environmental certificates at a variable price (being the contract price less the spot power price). With respect to our current contracts, neither of these components meets the requirement to be accounted for as a derivative. The environmental certificates are currently required for compliance purposes, and at present there are no liquid markets for these attributes. Accordingly, this component meets the expected purchase or usage exemption of IFRS 9. We expect to enter into an increasing number of these contracts, in order to meet our compliance requirements in the short to medium term. In future, if and when liquid markets develop, and to the extent that we are in receipt of environmental certificates in excess of our required levels, this exemption may cease to apply, and we may be required to account for forward purchase commitments for environmental certificates as derivatives at fair value through profit and loss.

Notes to the consolidated financial statements
continued

32. Financial risk management continued

(g) Fair value analysis

Included in the statement of financial position are financial instruments which are measured at fair value. These fair values can be categorised into hierarchy levels that are representative of the inputs used in measuring the fair value. The best evidence of fair value is a quoted price in an actively traded market. In the event that the market for a financial instrument is not active, a valuation technique is used.

	2021				2020			
	Level 1 £m	Level 2 £m	Level 3 £m	Total £m	Level 1 £m	Level 2 £m	Level 3 £m	Total £m
Assets								
Investments held at FVTPL	**1,768**	**–**	**240**	**2,008**	1,278	–	108	1,386
Investments held at FVOCI	**99**	**416**	**–**	**515**	83	352	–	435
Investments in associates	**–**	**–**	**–**	**–**	–	–	103	103
Financing derivatives	**–**	**942**	**–**	**942**	–	1,257	10	1,267
Commodity contract derivatives	**–**	**12**	**45**	**57**	–	9	66	75
	1,867	**1,370**	**285**	**3,522**	1,361	1,618	287	3,266
Liabilities								
Financing derivatives	**–**	**(584)**	**(183)**	**(767)**	–	(889)	(245)	(1,134)
Commodity contract derivatives	**–**	**(75)**	**(57)**	**(132)**	–	(136)	(64)	(200)
Liabilities held at fair value	**(682)**	**–**	**–**	**(682)**	(741)	–	–	(741)
Contingent consideration[1]	**–**	**–**	**(57)**	**(57)**	–	–	(74)	(74)
	(682)	**(659)**	**(297)**	**(1,638)**	(741)	(1,025)	(383)	(2,149)
	1,185	**711**	**(12)**	**1,884**	620	593	(96)	1,117

1. Contingent consideration relates to the acquisition of National Grid Renewables (see note 38).

Level 1: Financial instruments with quoted prices for identical instruments in active markets.

Level 2: Financial instruments with quoted prices for similar instruments in active markets or quoted prices for identical or similar instruments in inactive markets, and financial instruments valued using models where all significant inputs are based directly or indirectly on observable market data.

Level 3: Financial instruments valued using valuation techniques where one or more significant inputs are based on unobservable market data.

Our Level 1 financial investments and liabilities held at fair value are valued using quoted prices from liquid markets.

Our Level 2 financial investments held at fair value are valued using quoted prices for similar instruments in active markets, or quoted prices for identical or similar instruments in inactive markets. Alternatively, they are valued using models where all significant inputs are based directly or indirectly on observable market data.

Our Level 2 financing derivatives include cross-currency, interest rate and foreign exchange derivatives. We value these by discounting all future cash flows by externally sourced market yield curves at the reporting date, taking into account the credit quality of both parties. These derivatives can be priced using liquidly traded interest rate curves and foreign exchange rates, and therefore we classify our vanilla trades as Level 2 under the IFRS 13 framework. One FX forward transacted in the year contains deal-contingent terms linked to the sale of NECO. As at the reporting date, these terms have no material impact on the valuation. This will be re-assessed at each relevant reporting date.

Our Level 2 commodity contract derivatives include over-the-counter gas and power swaps as well as forward physical gas deals. We value our contracts based on market data obtained from the New York Mercantile Exchange (NYMEX) and the Intercontinental Exchange (ICE) where monthly prices are available. We discount based on externally sourced market yield curves at the reporting date, taking into account the credit quality of both parties and liquidity in the market. Our commodity contracts can be priced using liquidly traded swaps. Therefore, we classify our vanilla trades as Level 2 under the IFRS 13 framework.

Our Level 3 financing derivatives include cross-currency swaps, inflation-linked swaps and equity options, where the market is illiquid. In valuing these instruments, we use in-house valuation models and obtain external valuations to support each reported fair value.

Our Level 3 commodity contract derivatives primarily consist of our forward purchases of electricity and gas that we value using proprietary models. Derivatives are classified as Level 3 where significant inputs into the valuation technique are neither directly nor indirectly observable (including our own data, which are adjusted, if necessary, to reflect the assumptions market participants would use in the circumstances).

Our Level 3 investments include equity instruments accounted for at fair value through profit and loss. These equity holdings are part of our corporate venture capital portfolio held by National Grid Partners and comprise a series of small unquoted investments where prices or valuation inputs are unobservable. These investments are either recently acquired or there have been recent funding rounds with third parties and therefore the valuation is based on the latest transaction price and any subsequent investment-specific adjustments.

Our Level 3 investments also include our investment in Sunrun Neptune 2016 LLC, which is accounted for at fair value through profit and loss. The investment is fair valued by discounting expected cash flows using a weighted average cost of capital specific to Sunrun Neptune 2016 LLC.

In light of the current ongoing impact of the COVID-19 pandemic, the valuations of certain assets and liabilities can be more subjective. While there have been significant movements in market indices, we are satisfied that there has been no significant impact on the fair values of our financial instruments measured at fair value, and that any impact is reflected in the fair values in the table above.

32. Financial risk management continued

(g) Fair value analysis continued

The changes in value of our Level 3 financial instruments are as follows:

	Financing derivatives		Commodity contract derivatives		Other[3]		Total	
	2021 £m	2020 £m	**2021 £m**	2020 £m	**2021 £m**	2020 £m	**2021 £m**	2020 £m
At 1 April	**(235)**	(214)	**2**	1	**137**	152	**(96)**	(61)
Net gains/(losses) for the year[1,2]	**51**	(20)	**(16)**	6	**(2)**	26	**33**	12
Purchases	**–**	–	**(1)**	26	**32**	51	**31**	77
Acquisition of National Grid Renewables	**–**	–	**–**	–	**–**	(74)	**–**	(74)
Settlements	**1**	(1)	**(1)**	(31)	**16**	(18)	**16**	(50)
Reclassification to held for sale (note 10)	**–**	–	**4**	–	**–**	–	**4**	–
At 31 March	**(183)**	(235)	**(12)**	2	**183**	137	**(12)**	(96)

1. Gain of £51 million (2020: £20 million loss) is attributable to derivative financial instruments held at the end of the reporting period and has been recognised in finance costs in the income statement.
2. Loss of £46 million (2020: £17 million loss) is attributable to commodity contract derivative financial instruments held at the end of the reporting period.
3. Other comprises our investments in Sunrun Neptune 2016 LLC and the investments made by National Grid Partners, which are accounted for at fair value through profit and loss as well as the contingent consideration arising from the acquisition of National Grid Renewables (see note 38).

The impacts on a post-tax basis of reasonably possible changes in significant Level 3 assumptions are as follows:

	Financing derivatives		Commodity contract derivatives		Other[3]	
	2021 £m	2020 £m	**2021 £m**	2020 £m	**2021 £m**	2020 £m
10% increase in commodity prices[1]	**–**	–	**3**	2	**–**	–
10% decrease in commodity prices[1]	**–**	–	**(1)**	–	**–**	–
+10% market area price change	**–**	–	**(4)**	(4)	**–**	–
-10% market area price change	**–**	–	**7**	4	**–**	–
+20 basis points change in Limited Price Inflation (LPI) market curve[2]	**(83)**	(95)	**–**	–	**–**	–
-20 basis points change in LPI market curve[2]	**83**	90	**–**	–	**–**	–
+50 basis points change in discount rate	**–**	–	**–**	–	**(5)**	(3)
-50 basis points change in discount rate	**–**	–	**–**	–	**5**	4

1. Level 3 commodity price sensitivity is included within the sensitivity analysis disclosed in note 35.
2. A reasonably possible change in assumption of other Level 3 derivative financial instruments is unlikely to result in a material change in fair values.
3. The investments acquired in the period were on market terms, and sensitivity is considered insignificant at 31 March 2021.

The impacts disclosed above were considered on a contract-by-contract basis with the most significant unobservable inputs identified.

Notes to the consolidated financial statements
continued

32. Financial risk management continued

(h) Capital risk management

The capital structure of the Group consists of shareholders' equity, as disclosed in the consolidated statement of changes in equity, and net debt (note 29). National Grid's objectives when managing capital are: to safeguard our ability to continue as a going concern; to remain within regulatory constraints of our regulated operating companies; and to maintain an efficient mix of debt and equity funding thus achieving an optimal capital structure and cost of capital. We regularly review and manage the capital structure as appropriate in order to achieve these objectives.

Maintaining appropriate credit ratings for our operating and holding companies is an important aspect of our capital risk management strategy and balance sheet efficiency. We monitor our balance sheet efficiency using several metrics including retained cash flow/net debt (RCF), regulatory gearing and interest cover. For the year ended 31 March 2021, these metrics for the Group were 6.6% (2020: 9.2%), 65% (2020: 63%) and 4.5x (2020: 4.1x), respectively – see pages 30 and 254 – 255. We believe these are consistent with the current credit ratings for National Grid plc in respect of the main companies of the Group, based on guidance from the rating agencies.

We monitor the RAV gearing within NGET and the regulated transmission businesses within NGG. This is calculated as net debt expressed as a percentage of RAV, and indicates the level of debt employed to fund our UK regulated businesses. It is compared with the level of RAV gearing indicated by Ofgem as being appropriate for these businesses, at around 60% to 62.5%. We also monitor net debt as a percentage of rate base for our US operating companies, comparing this with the allowed rate base gearing inherent within each of our agreed rate plans, typically around 50%.

The majority of our regulated operating companies in the US and the UK are subject to certain restrictions on the payment of dividends by administrative order, contract and/or licence. The types of restrictions that a company may have that would prevent a dividend being declared or paid unless they are met include:

- dividends must be approved in advance by the relevant US state regulatory commission;
- the subsidiary must have at least two recognised rating agency credit ratings of at least investment grade;
- dividends must be limited to cumulative retained earnings, including pre-acquisition retained earnings;
- the securities of National Grid plc must maintain an investment grade credit rating, and if that rating is the lowest investment grade bond rating it cannot have a negative watch/review for downgrade notice by a credit rating agency;
- the subsidiary must not carry on any activities other than those permitted by the licences;
- the subsidiary must not create any cross-default obligations or give or receive any intra-group cross-subsidies; and
- the percentage of equity compared with total capital of the subsidiary must remain above certain levels.

There is a further restriction relating only to NECO, which is required to maintain its consolidated net worth above certain levels.

These restrictions are subject to alteration in the US as and when a new rate case or rate plan is agreed with the relevant regulatory bodies for each operating company and in the UK through the normal licence review process.

As most of our business is regulated, at 31 March 2021 the majority of our net assets are subject to some of the restrictions noted above. These restrictions are not considered to be significantly onerous, nor do we currently expect they will prevent the planned payment of dividends in future in line with our dividend policy.

All the above requirements are monitored on a regular basis in order to ensure compliance. The Group has complied with all externally imposed capital requirements to which it is subject.

33. Borrowing facilities

To support our liquidity requirements and provide backup to commercial paper and other borrowings, we agree committed credit facilities with financial institutions over and above the value of borrowings that may be required. These committed credit facilities have never been drawn, and our undrawn amounts are listed below.

At 31 March 2021, we had bilateral committed credit facilities of £5,410 million (2020: £5,495 million). In addition, we had committed credit facilities from syndicates of banks of £115 million at 31 March 2021 (2020: £277 million). All committed credit facilities were undrawn in 2021 and 2020. An analysis of the maturity of these undrawn committed facilities is shown below:

	2021 £m	2020 £m
Undrawn committed borrowing facilities expiring:		
Less than 1 year	**–**	–
In 1 to 2 years	**1,668**	1,940
In 2 to 3 years	**534**	1,668
In 3 to 4 years	**1,718**	277
In 4 to 5 years	**1,605**	1,887
More than 5 years	**–**	–
	5,525	5,772

Of the unused facilities at 31 March 2021, £5,410 million (2020: £5,495 million) is available for liquidity purposes, while £115 million (2020: £277 million) is available as backup to specific US borrowings. £1,668 million of the undrawn bilateral facilities due to mature in one to two years, were renegotiated between 1 April 2021 and 19 May 2021, with an uplift in the amount committed to £1,861 million with new expiry dates to May 2024. Of the £534 million of undrawn committed borrowings facilities due to expire within two to three years, £150 million was renegotiated between 1 April 2021 and 19 May 2021, with the expiry extended by a further year to June 2024. £400 million of additional undrawn bilateral facilities were entered into subsequent to the year end with expiry dates in May 2024.

In addition, we have the following facilities which are not included in the table above:

- for the separately regulated business of National Grid Electricity System Operator Limited, the Group has a facility of £550 million (2020: £550 million). This facility is not available as Group general liquidity support;
- the Group has Export Credit Agency (ECA) facilities totalling £1,345 million (2020: £901 million), of which £446 million (2020: £233 million) is undrawn; and
- the Group has two new loan facilities in place relating to the acquisition of PPL Western Power Distribution Investments Limited (WPD) (see note 38). A facility of £8,250 million (31 March 2020: £nil) to finance the consideration and a facility of £1,105 million (31 March 2020: £nil) to back up acquired debt which contains change of control provisions, of which £8,250 million and £1,105 million is undrawn. Subsequent to the year end the £1,105 million facility has been cancelled as waivers have been obtained by WPD in relation to the change of control clauses.

Notes to the consolidated financial statements continued

34. Subsidiary undertakings, joint ventures and associates

While we present consolidated results in these financial statements as if we were one company, our legal structure is such that there are a number of different operating and holding companies that contribute to the overall result. This structure has evolved through acquisitions as well as regulatory requirements to have certain activities within separate legal entities.

Subsidiary undertakings

A list of the Group's subsidiaries as at 31 March 2021 is given below. The entire share capital of subsidiaries is held within the Group except where the Group's ownership percentages are shown. These percentages give the Group's ultimate interest and therefore allow for the situation where subsidiaries are owned by partly owned intermediate subsidiaries. Where subsidiaries have different classes of shares, this is largely for historical reasons, and the effective percentage holdings given represent both the Group's voting rights and equity holding. Shares in National Grid (US) Holdings Limited, National Grid (US) Investments 2 Limited, National Grid Hong Kong Limited, National Grid Luxembourg SARL and NGG Finance plc are held directly by National Grid plc. All other holdings in subsidiaries are owned by other subsidiaries within the Group. All subsidiaries are consolidated in the Group's financial statements.

Principal Group companies are identified in **bold**. These companies are incorporated and principally operate in the countries under which they are shown. All entities incorporated in the United States are taxed in the United States on their worldwide income other than where indicated in the footnotes below. Other entities are tax resident in their jurisdiction of incorporation other than where indicated in the footnotes below.

Incorporated in England and Wales

Registered office: 1–3 Strand, London WC2N 5EH, UK (unless stated otherwise in footnotes).

Beegas Nominees Limited
Birch Sites Limited
Carbon Sentinel Limited
Droylsden Metering Services Limited
Gridcom Limited
Icelink Interconnector Limited
Landranch Limited
Lattice Group Employee Benefit Trust Limited
Lattice Group Limited
Lattice Group Trustees Limited
Natgrid Limited
NatGrid One Limited[1]
NatgridTW1 Limited[1]
National Grid Belgium Limited[2*]
National Grid Blue Power Limited[2*]
National Grid Carbon Limited
National Grid Commercial Holdings Limited
National Grid Distributed Energy Limited
National Grid Electricity Group Trustee Limited
National Grid Electricity System Operator Limited
National Grid Electricity Transmission plc
National Grid Energy Metering Limited
National Grid Four Limited[2*]
National Grid Fourteen Limited[2*]
National Grid Gas Holdings Limited
National Grid Gas plc
National Grid Grain LNG Limited
National Grid Holdings Limited[1]
National Grid Holdings One plc
National Grid IFA 2 Limited
National Grid Interconnector Holdings Limited
National Grid Interconnectors Limited
National Grid International Limited[1]
National Grid Metering Limited
National Grid North Sea Link Limited
National Grid Offshore Limited
National Grid Partners Limited
National Grid Plus Limited
National Grid Property Holdings Limited
National Grid Seventeen Limited[2*]
National Grid Smart Limited
National Grid Ten
National Grid Thirty Five Limited[2*]
National Grid Thirty Six Limited
National Grid Twelve Limited[1]
National Grid Twenty Eight Limited
National Grid Twenty-Five Limited[2*]
National Grid Twenty Seven Limited
National Grid Twenty Three Limited[1]
National Grid UK Limited
National Grid UK Pension Services Limited
National Grid (US) Holdings Limited[1]
National Grid (US) Investments 2 Limited[1]
National Grid (US) Investments 4 Limited[1]
National Grid (US) Partner 1 Limited[1]
National Grid Ventures Limited
National Grid Viking Link Limited
National Grid William Limited
NG Nominees Limited
NGC Employee Shares Trustee Limited
NGG Finance plc
Ngrid Intellectual Property Limited
NGT Telecom No. 1 Limited[2*]
NGT Two Limited
Port Greenwich Limited
Stargas Nominees Limited
Supergrid Electricity Limited
Supergrid Energy Transmission Limited
Supergrid Limited
Thamesport Interchange Limited
The National Grid Group Quest Trustee Company Limited
The National Grid YouPlan Trustee Limited
Transco Limited
Warwick Technology Park Management Company (No 2) Limited (60.56%)[3]

1. Companies where National Grid plc has issued guarantees over the liabilities of the companies as at 31 March 2021 and for which the companies are taking the exemption from the requirements of an audit for their individual financial statements as permitted by section 479A of the Companies Act.
2. Registered office: c/o KPMG, 15 Canada Square, London E14 5GL, UK.
3. Registered office: Shire Hall, PO Box 9, Warwick CV34 4RL, UK.

* In liquidation.

34. Subsidiary undertakings, joint ventures and associates continued

Subsidiary undertakings continued

Incorporated in the US

Registered office: National Registered Agents, Inc., 1209 Orange Street, Wilmington, DE 19801, USA (unless stated otherwise in footnotes).

Agave Solar, LLC
Altona Solar, LLC
Apple River Solar, LLC
Apple Solar, LLC
Argenta Solar, LLC
Armenia Solar, LLC
Artemisia Solar, LLC[1]
Ashland Solar, LLC
Athens Solar, LLC
Audubon Wind Farm, LLC
Autauga Solar, LLC
Baileyville Solar, LLC (previously Ellison Solar, LLC)**
Banner Solar, LLC
Bazile Creek Wind Farm, LLC
Bee Hollow Solar, LLC
Bell Plaine Solar, LLC
Benevolent Solar, LLC
Birdsong Creek Solar, LLC
Black Bear Solar, LLC
Blackhawk Solar, LLC
Blaze Solar, LLC[2]
Blevins Solar, LLC
Blue Ridge Wind, LLC
Blue Spring Solar, LLC
Blues Solar, LLC
Bluewater Solar, LLC
Boone Solar, LLC
Boston Gas Company[3]
Braeburn Solar, LLC
Bridges Solar, LLC
Brilliance Solar, LLC
British Transco Capital, Inc.[4]
British Transco Finance, Inc.[4]
Brock Solar, LLC
Broken Bridge Corp.[5]
Brook Trout Solar, LLC
BT Noble Solar, LLC[6]
Bullsnake Solar, LLC
Burley Solar, LLC
Burlington Solar, LLC
Burr Ridge Wind, LLC
Cage Ranch Solar, LLC
Cage Ranch Solar II, LLC
Cage Ranch Solar III, LLC
Caldwell Solar, LLC
Caldwell Solar II, LLC
Cameo Solar, LLC
Canary Solar, LLC
Canby Solar, LLC
Carriere Solar, LLC
Cass Wind Farm, LLC
Cattle Ridge Wind Farm 2, LLC
Cedar Grove Solar, LLC
Centennial Solar, LLC
Chewelah Solar, LLC
Clear Creek Solar, LLC
Clermont Solar, LLC
Clinton County Solar, LLC
Coles Solar, LLC
Commonwealth Solar, LLC
Compass Prairie Wind, LLC
Coneflower Solar, LLC[1]
Conestoga Wind, LLC
Copperhead Solar, LLC
Creekview Solar, LLC
Crocker Wind Farm 2, LLC
Dahlia Solar, LLC[1]
Dakota Hills Wind Farm, LLC
Day Lily Solar, LLC[1]
Deatsville Solar, LLC
Deer Trail Solar, LLC
Dodson Creek Solar, LLC[7]
Donnellson Solar, LLC
East Galesburg Solar, LLC
East Macomb Solar, LLC
Eastern Hemlock Solar, LLC
Eatonville Solar, LLC
Elba Solar, LLC
Elburn Solar, LLC
Eldena Solar, LLC
Elk Creek Solar, LLC
Elk Creek Solar 2, LLC
EUA Energy Investment Corporation[3]
Exie Solar, LLC
Falls City Solar, LLC
Fayette Solar, LLC[8]
Firstview Wind Farm, LLC
Fish Creek Solar, LLC
Forrest Solar, LLC
Fort Solar, LLC
Fowlkes Solar, LLC
Front Range Wind Farm, LLC
Fulton Solar, LLC
Gala Solar, LLC
Galesburg Solar, LLC
Gardenia Solar, LLC[1]
Genesee Solar Energy, LLC
Gillis Solar, LLC
Glenwood Solar, LLC
Golden Solar, LLC
Goldendale Solar, LLC
Goldenrod Wind Farm, LLC
Goldfinch Solar, LLC
Grand Junction Solar, LLC
Granite State Power Link LLC[4]
Grant Solar, LLC
Grant Solar 2, LLC
Grayson Solar, LLC
Greenbrier Creek Solar, LLC
Greensky Solar, LLC
Greenwood Solar, LLC
Grid NY LLC[9]
Grindstone Wind Farm, LLC[10]
Hale County Solar, LLC
Hale Solar, LLC
Hampton Solar, LLC
Hansford Energy Storage, LLC
Harmony Solar ND, LLC
Harmony Solar ND 2, LLC
Harrington Solar, LLC
Hartley Solar, LLC
Hearth Solar, LLC
Heyworth Solar, LLC
Hill River Solar, LLC
Honeybee Solar, LLC
Hoosier Solar, LLC
Hoskins Solar, LLC
Illumination Solar, LLC
Innovation Solar, LLC
Irwin Solar, LLC
Itasca Energy Development, LLC[1]
Itasca Energy Services, LLC
Jackalope Solar, LLC
Jack Rabbit Wind, LLC
Jackson County Solar, LLC
Jantz Solar, LLC
Jonagold Solar, LLC
Junction Solar, LLC
Kankakee Solar, LLC
KeySpan CI Midstream Limited[4]
KeySpan Energy Corporation[9]
KeySpan Energy Services Inc.[4]
KeySpan Gas East Corporation[9]
KeySpan International Corporation[4]
KeySpan MHK, Inc.[4]
KeySpan Midstream Inc.[4]
KeySpan Plumbing Solutions, Inc.[9]
Kindle Solar, LLC
Kingsnake Solar, LLC
Knox Solar, LLC
KSI Contracting, LLC[4]
KSI Electrical, LLC[4]
KSI Mechanical, LLC[4]
Lake Charlotte Solar, LLC
Lake Iris Solar, LLC
Lakeside Solar, LLC
Lamdin Solar, LLC
Land Management & Development, Inc.[9]
Landwest, Inc.[9]
Lansing Solar, LLC
Lawrence Solar, LLC
Leola Wind Farm, LLC
Liberty Solar, LLC
Lilac Solar, LLC[1]
Limestone Solar, LLC
Lind Solar, LLC
Livingston County Solar, LLC
Long Mount Solar, LLC

Notes to the consolidated financial statements continued

34. Subsidiary undertakings, joint ventures and associates continued

Subsidiary undertakings continued

Incorporated in the US continued

Lordsburg Solar, LLC
Louisa Solar, LLC
Lowlands Solar, LLC
Lydia Solar, LLC
Macedonia Solar, LLC
Madden Creek Solar, LLC
Marion County Solar, LLC
Massachusetts Electric Company[3]
Maverick Wind Farm, LLC
Mazon Solar, LLC
Mazon Solar 2, LLC
McFadden Solar, LLC
Meadowlands Solar, LLC
Merton Solar, LLC
Metrowest Realty LLC[4]
Miller Creek Solar, LLC
Millers Ferry Solar, LLC
Moonrise Solar, LLC
Morgan County Solar, LLC
Morning Glory Solar, LLC[1]
Mountain Laurel Solar, LLC
Muddy Creek Solar, LLC
Mustang Ridge Wind Farm, LLC
Mystic Steamship Corporation[7]
Nantucket Electric Company[3]
National Grid Algonquin LLC[4]
National Grid Connect Inc.[4]
National Grid Development Holdings Corp.[4]
National Grid Electric Services LLC[9]
National Grid Energy Management LLC[4]
National Grid Energy Services LLC[4]
National Grid Energy Trading Services LLC[9]
National Grid Engineering & Survey Inc.[9]
National Grid Generation LLC[9]
National Grid Generation Ventures LLC[11]
National Grid Glenwood Energy Center, LLC[4]
National Grid IGTS Corp.[9]
National Grid Insurance USA Ltd[12]
National Grid Islander East Pipeline LLC[4]
National Grid LNG GP LLC[4]
National Grid LNG LLC[4]
National Grid LNG LP LLC[4]
National Grid Millennium LLC[4]
National Grid NE Holdings 2 LLC[3]
National Grid North America Inc.[4]
National Grid North East Ventures Inc.[4]
National Grid Partners Inc.[9]
National Grid Partners LLC[4]
National Grid Port Jefferson Energy Center LLC[4]
National Grid Renewables, LLC (previously NGV Emerald Acquisition Co., LLC)[4]
National Grid Renewables Development, LLC (previously Geronimo Energy, LLC)
National Grid Renewables E Wind, LLC (previously Geronimo E Wind LLC)[1]
National Grid Renewables Operations, LLC[4]
National Grid Renewables Projects, LLC (previously Geronimo Solar Energy, LLC)[1]
National Grid Renewables Stutsman, LLC (previously Geronimo Stutsman Wind Farm, LLC)
National Grid Services Inc.[4]
National Grid Transmission Services Corporation[3]
National Grid US 6 LLC[4,†]
National Grid US LLC[4]
National Grid USA[4]
National Grid USA Service Company, Inc.[3]
NEES Energy, Inc.[3]
New England Electric Transmission Corporation[5]
New England Energy Incorporated[3]
New England Hydro Finance Company, Inc. (53.704%)[3]
New England Hydro-Transmission Corporation (53.704%)[5]
New England Hydro-Transmission Electric Company, Inc. (53.704%)[3]
New England Power Company[3]
Newport America Corporation[13]
Newton Solar, LLC
NG Renewables Energy Marketing, LLC[4]
NG Renewables Energy Services, LLC
NGNE LLC[4]
NGV Emerald Energy Venture Holdings, LLC[4]
NGV OSW Holdings, LLC[4]
NGV US Distributed Energy Inc.[4]
NGV US, LLC (previously NGV Emerald Holdings, LLC)[4]
NGV US Transmission Inc.[4]
Niagara Mohawk Energy, Inc.[4]
Niagara Mohawk Holdings, Inc.[9]
Niagara Mohawk Power Corporation[9]
Niobrara Wind, LLC
NM Properties, Inc.[9]
Noble Storage, LLC
Nordic VOS, LLC
North Adair Solar, LLC
Northeast Renewable Link LLC[4]
North East Transmission Co., Inc.[4]
North Fork Wind, LLC
North Rock Solar, LLC
Onton Solar, LLC
Opinac North America, Inc.[4]
Oreana Solar, LLC
Parklawn Solar, LLC
Patriotic Solar, LLC
Pearl River County Solar, LLC
Pennington Solar, LLC
Peony Solar, LLC
Philadelphia Coke Co., Inc.[4]
Pierce County Solar, LLC
Pike County Solar, LLC
Pinon Pine Solar, LLC
Piper Solar, LLC
Pipestone Solar, LLC
Placedo Solar, LLC
Pleasant Plains Solar, LLC
Plum Creek Wind Farm, LLC
Plum Creek Wind Farm 2, LLC
Portage Solar, LLC
Port of the Islands North, LLC[9]
Prairie Oasis Solar, LLC
Prairie Rose Wind 2, LLC[1]
Prosperity Wind Farm, LLC
Prosperity Wind Farm 2, LLC
Radiance Solar, LLC[1]
Red Rock Solar SD, LLC
Red Wolf Solar, LLC
Regal Solar, LLC
Regal Solar 2, LLC
River North Solar, LLC
Robertson Solar, LLC
Rochester Solar, LLC[1]
Rock Ridge Wind Farm, LLC
Rocky Meadow Solar, LLC
Rolling Hills Solar, LLC
Ross County Solar, LLC[7]
Royal Solar, LLC
Royal Solar 2, LLC
Royerton Solar, LLC
Saddle Solar, LLC
Saginaw Bay Solar, LLC
Sandstone Creek Solar, LLC
Sandstone Creek Solar 2, LLC
Sapphire Sky Wind Farm, LLC
Scorpion Solar, LLC
Serenity Solar, LLC[1]
Shelby Solar, LLC
Sherco Solar, LLC[1]
Sherco Solar 2, LLC[1]
Silver City Solar, LLC
Simpson Solar, LLC (previously Geronimo White Pine Solar, LLC)
South Belleville Solar, LLC
South Macomb Solar, LLC
Spotlight Solar, LLC
Spring Brook Solar, LLC
Springfield Solar Farm, LLC
Spring River Solar, LLC
Stockton Solar, LLC
Stony Brook Wind, LLC
Stony Point Solar, LLC
Stove Creek Solar, LLC
Sturgis Solar, LLC
Summit Lake Solar, LLC
Sunbeam Solar, LLC
Sunray Solar, LLC
Sunrise Solar, LLC
Sycamore Creek Solar, LLC
Thacker Solar, LLC
The Brooklyn Union Gas Company[9]
The Narragansett Electric Company[13]
Tilton Solar, LLC
Torchlight Solar, LLC[1]
Transgas Inc.[3]
Tri-City Solar, LLC
Turquoise Solar, LLC
Uintah Solar, LLC
Unbridled Solar, LLC (previously Henderson Solar, LLC)
Union City Solar, LLC
Upper Hudson Development Inc.[9]
Valley Appliance and Merchandising Company[13]

34. Subsidiary undertakings, joint ventures and associates continued

Subsidiary undertakings continued

Valley Solar, LLC
Vermont Green Line Devco, LLC (90%)[4]
Vibrant Solar, LLC
Virgo Community Solar Gardens, LLC[1]
Virtue Solar, LLC
Vivid Solar, LLC
Wallowa Solar, LLC
Wayfinder Group, Inc.[3]
Wayside Solar, LLC
Western Hemlock Solar, LLC
Wheatfield Solar, LLC
White Elm Wind Farm, LLC
Wild Springs Solar, LLC[1]
Wildcat Ridge Wind Farm, LLC
Wildhorse Creek Solar, LLC
Willard Solar, LLC
Williams County Solar, LLC
Wiregrass Solar, LLC
Wolf River Solar, LLC
Wonder Lake Solar, LLC
Woodlands Solar, LLC
Worthington Solar, LLC
Yellowbud Solar, LLC
Yellowhammer Solar, LLC
Young County Solar, LLC
Yucca Solar, LLC

Incorporated in Australia
Registered office: Level 7, 330 Collins Street, Melbourne, VIC 3000, Australia

National Grid Australia Pty Limited

Incorporated in Canada
Registered office: Stewart McKelvey LLP, c/o Charles Reagh, Queen's Marque, 600-1741 Lower Water Street, Halifax, Nova Scotia, B3J 0J2, Canada

KeySpan Energy Development Co.

Incorporated in Hong Kong
Registered office: Level 54, Hopewell Centre, 183 Queen's Road East, Hong Kong

National Grid Hong Kong Limited†

Incorporated in the Isle of Man
Registered office: Third Floor, St George's Court, Upper Church Street, Douglas, IM1 1EE, Isle of Man, UK

National Grid Insurance Company (Isle of Man) Limited
NGT Holding Company (Isle of Man) Limited*†

Incorporated in Jersey
Registered office: 44 Esplanade, St Helier, JE4 9WG, Jersey, UK

National Grid Jersey Investments Limited*†
NG Jersey Limited*†

Incorporated in Luxembourg
Registered office: 412F, Route d'Esch, L-2086, Luxembourg, Grand Duchy of Luxembourg

National Grid Luxembourg SARL

Incorporated in the Netherlands
Registered office: Westblaak 89, 3012 KG Rotterdam, PO Box 21153, 3001 AD, Rotterdam, Netherlands

British Transco International Finance B.V.

Incorporated in the Republic of Ireland
Registered office: c/o Moore Stephens Nathans, Third Floor, Ulysses House, 23/24 Foley Street, Dublin, D01 W2T2, Ireland

National Grid Company (Ireland) Designated Activity Company*

1. Registered office: National Grid Renewables Development, LLC, 8400 Normandale Lake Blvd. Suite 1200, Bloomington, MN 55437, USA.
2. Registered office: National Registered Agents, Inc., 160 Greentree Drive, Suite 101, Dover DE 19904, USA.
3. Registered office: Corporation Service Company, 84 State Street, Boston MA 02109, USA.
4. Registered office: Corporation Service Company, 251 Little Falls Drive, Wilmington DE 19808, USA.
5. Registered office: Corporation Service Company, 10 Ferry Street, Suite 313, Concord NH 03301, USA.
6. Registered office: National Registered Agents, Inc., 1999 Bryan St, Bryan Street, Dallas, Dallas County TX 75201, USA.
7. Registered office: The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware, 19801, USA.
8. Registered office: 60 Mine Lake Ct, Mine Lake Court, Suite 200, Raleigh, Wake County, NC 27615, USA.
9. Registered office: Corporation Service Company, 80 State Street, Albany NY 12207, USA.
10. Registered office: National Registered Agents, Inc., 30600 Telegraph Road, Suite 2345, Bingham Farms, MI 48025-5720, USA.
11. Registered office: Corporation Service Company, 84 State Street, Albany NY 12207, USA.
12. Registered office: One MetroTech Center, Brooklyn NY 11201, USA.
13. Registered office: Corporation Service Company, 222 Jefferson Boulevard, Suite 200, Warwick RI 02888, USA.

* In liquidation.
** Name change post 31 March 2021.
† Entity is tax resident in the United Kingdom.

Notes to the consolidated financial statements continued

34. Subsidiary undertakings, joint ventures and associates continued

Joint ventures
A list of the Group's joint ventures as at 31 March 2021 is given below. All joint ventures are included in the Group's financial statements using the equity method of accounting. Principal joint ventures are identified in **bold**.

Incorporated in England and Wales
Registered office: 1–3 Strand, London WC2N 5EH, UK (unless stated otherwise in footnotes).

BritNed Development Limited (50%)*
Joint Radio Company Limited (50%)[1]**
National Places LLP (50%)[2]
Nemo Link Limited (50%)
NGET/SPT Upgrades Limited (50%)†
St William Homes LLP (50%)[3]

Incorporated in the US
Registered office: Corporation Service Company, 251 Little Falls Drive, Wilmington, DE 19808, USA (unless stated otherwise in footnotes).

Bight Wind Holdings, LLC (30%)[4]
Clean Energy Generation, LLC (50%)
Emerald Energy Venture LLC (51%)
Island Park Energy Center, LLC (50%)
Islander East Pipeline Company, LLC (50%)[4]
LI Energy Storage System, LLC (50%)
LI Solar Generation, LLC (50%)

Incorporated in France
Registered office: 1 Terrasse Bellini, Tour Initiale, TSA 41000 – 9291, Paris La Defense, CEDEX, France

IFA2 SAS (50%)

Associates
A list of the Group's associates as at 31 March 2021 is given below. Unless otherwise stated, all associates are included in the Group's financial statements using the equity method of accounting. Principal associates are identified in **bold**.

Incorporated in the US
Registered office: Corporation Service Company, 251 Little Falls Drive, Wilmington, DE 19808, USA (unless stated otherwise in footnotes).

Clean Line Energy Partners LLC (32%)[4]
Connecticut Yankee Atomic Power Company (19.5%)[5]
Direct Global Power, Inc. (26%)[4]
Energy Impact Fund LP (9.41%)[6]
KHB Venture LLC (33.33%)[7]
Maine Yankee Atomic Power Company (24%)[8]
Millennium Pipeline Company, LLC (26.25%)[4]
New York Transco LLC (28.3%)[9]
NYSEARCH RMLD, LLC (22.63%)
The Hive IV, LLC (28.2%)[4]
Yankee Atomic Electric Company (34.5%)[10]

Incorporated in Belgium
Registered office: Avenue de Cortenbergh 71, 1000 Brussels, Belgium

Coreso SA (15.84%)

Other investments
A list of the Group's other investments as at 31 March 2021 is given below.

Incorporated in England and Wales
Registered office: 1 More London Place, London SE1 2AF, UK

Energis plc (33.06%)‡

1. Registered office: Friars House, Manor House Drive, Coventry CV1 2TE, UK.
2. Registered office: 80 Cheapside, London, EC2V 6EE, UK.
3. Registered office: Berkeley House, 19 Portsmouth Road, Cobham, Surrey KT11 1JG, UK.
4. Registered office: The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington DE 19801, USA.
5. Registered office: Carla Pizzella, 362 Injun Hollow Road, East Hampton CT 06424-3099, USA.
6. Registered office: Harvard Business Services, Inc., 16192 Coastal Highway, Lewes DE 19958, Sussex County, USA.
7. Registered office: De Maximus Inc., 135 Beaver Street, 4th Floor, Waltham MA 02452, USA.
8. Registered office: Joseph D Fay, 321 Old Ferry Road, Wiscasset ME 04578, USA.
9. Registered office: Corporation Service Company, 80 State Street, Albany NY 12207, USA.
10. Registered office: Karen Sucharzewski, 49 Yankee Road, Rowe MA 01367, USA.

* National Grid Interconnector Holdings Limited owns 284,500,000 €0.20 C Ordinary shares and one £1.00 Ordinary A share.
** National Grid Gas plc owns all £1.00 A Ordinary shares.
† National Grid Electricity Transmission plc owns 50 £1.00 A Ordinary shares.
‡ In administration.

Our interests and activities are held or operated through the subsidiaries, joint arrangements or associates as disclosed above. These interests and activities (and their branches) are established in – and subject to the laws and regulations of – these jurisdictions.

The following UK subsidiaries will take advantage of the audit exemption set out within section 479A of the Companies Act 2006 for the year ended 31 March 2021:

Company name	Company number
NatGrid One Limited	5521240
Natgrid TW1 Limited	7579324
National Grid Holdings Limited	3096772
National Grid International Limited	2537092
National Grid Twelve Limited	4355616
National Grid Twenty Three Limited	6999009
National Grid (US) Holdings Limited	2630496
National Grid (US) Investments 2 Limited	3784528
National Grid (US) Investments 4 Limited	3867128
National Grid (US) Partner 1 Limited	4314432

35. Sensitivities

In order to give a clearer picture of the impact on our results or financial position of potential changes in significant estimates and assumptions, the following sensitivities are presented. These sensitivities are based on assumptions and conditions prevailing at the year-end and should be used with caution. The effects provided are not necessarily indicative of the actual effects that would be experienced because our actual exposures are constantly changing.

The sensitivities in the tables below show the potential impact in the income statement (and consequential impact on net assets) for a reasonably possible range of different variables each of which have been considered in isolation (i.e. with all other variables remaining constant). There are a number of these sensitivities which are mutually exclusive, and therefore if one were to happen, another would not, meaning a total showing how sensitive our results are to these external factors is not meaningful.

The sensitivities included in the tables below broadly have an equal and opposite effect if the sensitivity increases or decreases by the same amount unless otherwise stated.

(a) Sensitivities on areas of estimation uncertainty

The table below sets out the sensitivity analysis for certain areas of estimation uncertainty set out in note 1E. These estimates are those that have a significant risk of resulting in a material adjustment to the carrying values of assets and liabilities in the next year. Note that the sensitivity analysis for the useful economic lives of our gas network assets is included in note 13.

	2021		2020	
	Income statement £m	**Net assets £m**	Income statement £m	Net assets £m
Pensions and other post-retirement benefit liabilities (pre-tax)[1]:				
UK discount rate change of 0.5%[2]	**4**	**952**	6	877
US discount rate change of 0.5%[2]	**17**	**730**	10	514
UK RPI rate change of 0.5%[3]	**3**	**723**	4	670
UK long-term rate of increase in salaries change of 0.5%	**1**	**42**	1	39
US long-term rate of increase in salaries change of 0.5%	**3**	**42**	2	47
UK change of one year to life expectancy at age 65[4]	**1**	**612**	1	545
US change of one year to life expectancy at age 65	**4**	**429**	4	456
Assumed US healthcare cost trend rates change of 1%	**26**	**437**	31	507
Environmental provision:				
10% change in estimated future cash flows	**170**	**170**	210	210

1. The changes shown are a change in the annual pension or other post-retirement benefit service charge and change in the defined benefit obligations.
2. A change in the discount rate is likely to occur as a result of changes in bond yields and as such would be expected to be offset to a significant degree by a change in the value of the bond assets held by the plans. In the UK, there would also be a £257 million (2020: £205 million) net assets offset from the buy-in policies, where the accounting value of the buy-in asset is set equal to the associated liabilities.
3. The projected impact resulting from a change in RPI reflects the underlying effect on pensions in payment, pensions in deferment and resultant increases in salary assumptions. The buy-in policies would have a £190 million (2020: £152 million) net assets offset to the above.
4. In the UK, the buy-in policies and the longevity swap entered into, would have a £183 million (2020: £223 million) net assets offset to the above.

Pensions and other post-retirement benefits assumptions

Sensitivities have been prepared to show how the defined benefit obligations and annual service costs could potentially be impacted by changes in the relevant actuarial assumption that were reasonably possible as at 31 March 2021. In preparing sensitivities, the potential impact has been calculated by applying the change to each assumption in isolation and assuming all other assumptions remain unchanged. This is with the exception of RPI in the UK where the corresponding change to increases to pensions in payment, increases to pensions in deferment and increases in salary are recognised.

Notes to the consolidated financial statements continued

35. Sensitivities continued

(b) Sensitivities on financial instruments

We are further required to show additional sensitivity analysis under IFRS 7 and these are shown separately in the subsequent table due to the additional assumptions that are made in order to produce meaningful sensitivity disclosures.

Our net debt as presented in note 29 is sensitive to changes in market variables, primarily being UK and US interest rates, the UK RPI and the dollar to sterling exchange rate. These impact the valuation of our borrowings, deposits and derivative financial instruments. The analysis illustrates the sensitivity of our financial instruments to reasonably possible changes in these market variables.

The following main assumptions were made in calculating the sensitivity analysis for continuing operations:

- the amount of net debt, the ratio of fixed to floating interest rates of the debt and derivatives portfolio, and the proportion of financial instruments in foreign currencies are all constant and on the basis of the hedge designations in place at 31 March 2021 and 2020 respectively;
- the statement of financial position sensitivity to interest rates relates to items presented at their fair values: derivative financial instruments; our investments measured at fair value through profit and loss (FVTPL) and fair value through other comprehensive income; and our liability measured at FVTPL. Further debt and other deposits are carried at amortised cost and so their carrying value does not change as interest rates move;
- the sensitivity of interest to movements in interest rates is calculated on net floating rate exposures on debt, deposits and derivative instruments;
- changes in the carrying value of derivatives from movements in interest rates of designated cash flow hedges are assumed to be recorded fully within equity; and
- changes in the carrying value of derivative financial instruments designated as net investment hedges from movements in interest rates are presented in equity as costs of hedging, with a one-year release to the income statement. The impact of movements in the dollar to sterling exchange rate are recorded directly in equity.

	2021		2020	
	Income statement £m	Other equity reserves £m	Income statement £m	Other equity reserves £m
Financial risk (post-tax):				
UK RPI change of 0.5%[1]	25	–	27	–
UK interest rates change of 0.5%	12	98	14	47
US interest rates change of 0.5%	6	22	5	27
US dollar exchange rate change of 10%[2]	44	285	49	216

1. Excludes sensitivities to LPI curve. Further details on sensitivities are provided in note 32(g).
2. The other equity reserves impact does not reflect the exchange translation in our US subsidiaries' net assets. It is estimated this would change by £1,425 million (2020: £1,319 million) in the opposite direction if the dollar exchange rate changed by 10%.

Our commodity contract derivatives are sensitive to price risk. Additional sensitivities in respect to commodity price risk and to our derivative fair values are as follows:

	2021		2020	
	Income statement £m	Net assets £m	Income statement £m	Net assets £m
Commodity price risk (post-tax):				
10% increase in commodity prices	20	20	26	26
10% decrease in commodity prices	(21)	(21)	(27)	(27)
Assets and liabilities carried at fair value (post-tax):				
10% fair value change in derivative financial instruments[1]	14	14	12	12
10% fair value change in commodity contract derivative liabilities	6	6	9	9

1. The effect of a 10% change in fair value assumes no hedge accounting.

36. Additional disclosures in respect of guaranteed securities

We have preferred shares that are listed on a US national securities exchange and are guaranteed by a company in the Group. This guarantor commits to honour any liabilities should the company issuing the debt have any financial difficulties. In order to provide debt holders with information on the financial stability of the company providing the guarantee, we are required to disclose individual financial information for this company. We have chosen to include this information in the Group financial statements rather than submitting separate stand-alone financial statements.

Niagara Mohawk Power Corporation, a wholly owned subsidiary of the Group, has issued preferred shares that are listed on a US national securities exchange and are guaranteed by National Grid plc. In order to provide preferred shareholders with information on the financial stability of the company providing the guarantee, we are required to disclose individual financial information for these companies. We have chosen to include this information in the Group financial statements rather than submitting separate stand-alone financial statements.

The following summarised financial information is given in respect of Niagara Mohawk Power Corporation as a result of National Grid plc's guarantee, dated 29 October 2007, of Niagara Mohawk Power Corporation's 3.6% and 3.9% issued preferred shares, which amount to £29 million. National Grid plc's guarantee of Niagara Mohawk Power Corporation's preferred shares is full and unconditional. There are no restrictions on the payment of dividends by Niagara Mohawk Power Corporation or limitations on National Grid plc's guarantee of the preferred shares, and there are no factors that may affect payments to holders of the guaranteed securities.

The following summarised financial information for National Grid plc and Niagara Mohawk Power Corporation is presented on a combined basis and is intended to provide investors with meaningful and comparable financial information, and is provided pursuant to the early adoption of Rule 13-01 of Regulation S-X in lieu of the separate financial statements of Niagara Mohawk Power Corporation.

Summarised financial information is presented, on a combined basis, as at 31 March 2021. The combined amounts are presented under IFRS measurement principles. Inter-company transactions have been eliminated. Investments in other non-issuer and non-guarantor subsidiaries are included at cost, subject to impairment.

Summarised financial information for the year ended 31 March 2021 – IFRS

	National Grid plc and Niagara Mohawk Power Corporation combined £m
Combined statement of financial position	
Non-current loans to other subsidiaries	–
Non-current assets	8,940
Current loans to other subsidiaries	20,692
Current assets	1,553
Current loans from other subsidiaries	(17,589)
Current liabilities	(1,342)
Non-current loans from other subsidiaries	(2,059)
Non-current liabilities	(6,363)
Net assets[1]	3,832
Equity	3,832
Combined income statement – continuing operations	
Revenue	2,462
Operating costs	(4,562)
Operating profit	(2,100)
Other income from other subsidiaries	9,978
Other income and costs, including taxation	(182)
Profit after tax	7,696

1. Excluded from net assets above are investments in other consolidated subsidiaries with a carrying value of £14,415 million.

37. Transition to new accounting standards

(a) Transition to IFRS 16

The Group adopted IFRS 16 'Leases', with effect from 1 April 2019. IFRS 16 introduced a single lease accounting model for lessees (rather than the previous distinction between operating and finance leases). A contract is, or contains, a lease, if it provides the right to control the use of an identified asset for a specific period of time in exchange for consideration. The new standard resulted in our operating leases being accounted for in the consolidated statement of financial position as 'right-of-use' assets with corresponding lease liabilities also recognised. It therefore increased both our assets and liabilities (including net debt). It also changed the timing and presentation in the consolidated income statement as it resulted in an increase in finance costs and depreciation largely offset by a reduction in the previously straight-line operating costs.

Transition options

We applied IFRS 16 using the modified retrospective approach. Comparatives were not restated on adoption. Instead, on the opening balance sheet date, right-of-use assets (net of accrued rent or rent-free periods, and reported within property, plant and equipment), additional lease liabilities (reported within borrowings) and any associated deferred tax were recognised, with no cumulative transition adjustment to reflect through retained earnings. For short-term leases (lease term of 12 months or less) and leases of low-value assets (such as computers), the Group continues to recognise a lease expense on a straight-line basis as permitted by IFRS 16.

Notes to the consolidated financial statements
continued

37. Transition to new accounting standards continued

(a) Transition to IFRS 16 continued

We elected to apply the practical expedient to grandfather our previous assessments of whether contracts were previously accounted for as a lease, as permitted by the standard, instead of reassessing all significant contracts as at the date of initial application to determine whether they met the IFRS 16 definition of a lease.

We elected to apply the practical expedient on transition, which permitted right-of-use assets to be measured at an amount equal to the lease liability on adoption of the standard (adjusted for any prepaid or accrued lease expenses).

In addition, we also elected the option to adjust the carrying amounts of the right-of-use assets as at 1 April 2019 for any onerous lease provisions that had been recognised on the Group consolidated statement of financial position as at 31 March 2019, rather than performing impairment assessments on transition.

Impact of transition

At 31 March 2019, the Group disclosed non-cancellable operating lease commitments of £0.3 billion, of which the majority were in the US. A further £0.4 billion of lease liabilities were recognised due to the requirement in IFRS 16 to recognise lease liabilities for the term that we are reasonably certain to exercise lease extension or lease termination options for, rather than only for the period of the minimum contractual term that was used in determining our lease liability commitments. This was partially offset by the £0.2 billion impact of discounting our lease liabilities at the incremental borrowing rate for each lease. The weighted average discount rate applied to lease liabilities recognised on the transition date was 2.8%. There were some immaterial short-term and low-value leases, which were recognised on a straight-line basis as an expense in the consolidated income statement over the remaining lease term.

As a result, the Group recognised additional right-of-use assets of £0.5 billion and lease liabilities (which are included within net debt) of £0.5 billion at 1 April 2019. No additional net deferred tax was recognised. The transition adjustment was in addition to the £270 million of finance leases already recognised on the consolidated statement of financial position under IAS 17. There was no impact on net assets as shown in the table below, which shows the impacted balances from the Group consolidated statement of financial position.

Impact of transition	31 March 2019 (before the impact of IFRS 16)[1] £m	IFRS 16 transition adjustments £m	**1 April 2019 As restated £m**
Property, plant and equipment – Right-of-use assets			
Land and buildings	2,560	381	**2,941**
Plant and machinery	36,911	67	**36,978**
Assets in the course of construction	5,049	—	**5,049**
Motor vehicles and office equipment	339	20	**359**
Total property, plant and equipment	44,859	468	**45,327**
Borrowings – Lease liabilities			
Current	(65)	(48)	**(113)**
Non-current	(205)	(426)	**(631)**
Total lease liabilities	(270)	(474)	**(744)**
Other liabilities			
Trade and other payables	(3,769)	3	**(3,766)**
Other non-current liabilities	(808)	3	**(805)**
Net assets	19,568	—	**19,568**
Equity			
Total equity	19,568	—	**19,568**

1. Comparative amounts have been revised as described in note 1F.

The impact of IFRS 16 on profit after tax as a result of adopting the new standard was not material. However, it resulted in an increase in operating profit due to the operating costs now being replaced with depreciation and interest charges.

The impact on the cash flow statement was also not material, although there was an increase in operating cash flows and decrease in financing cash flows, because repayment of the principal portion of the lease liabilities is now classified as cash flows from financing activities rather than operating cash flows.

Ongoing accounting policy

With effect from 1 April 2019, new lease arrangements entered into are recognised as a right-of-use asset and a corresponding liability at the date at which the leased asset is available for use by the Group. The right-of-use asset and associated lease liability arising from a lease are initially measured at the present value of the lease payments expected over the lease term, plus any other costs. The discount rate applied is the rate implicit in the lease or if that is not available, then the incremental rate of borrowing for a similar term and similar security.

The lease term takes account of exercising any extension options that are at our option if we are reasonably certain to exercise the option and any lease termination options unless we are reasonably certain not to exercise the option.

Each lease payment is allocated between the liability and finance cost. The finance cost is charged to the income statement over the lease period using the effective interest rate method. The right-of-use asset is depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis. For short-term leases (lease term of 12 months or less) and leases of low-value assets (such as computers), the Group continues to recognise a lease expense on a straight-line basis.

37. Transition to new accounting standards continued

(b) Transition to IFRS 9 and IFRS 15

On 1 April 2018, the Group adopted IFRS 9 and IFRS 15. Both standards were applied using the modified retrospective approach whereby comparative amounts were not restated on transition, but a cumulative adjustment was made to retained earnings in the opening consolidated statement of financial position as at 1 April 2018. The impact of the transition on the opening consolidated statement of financial position is set out in the following table:

Impact of transition	31 March 2018 (Before the impact of transition adjustments)* £m	Transition adjustments IFRS 9 £m	Transition adjustments IFRS 15 £m	1 April 2018 £m
Non-current assets				
Goodwill	4,984	–	–	**4,984**
Other intangible assets	899	–	–	**899**
Property, plant and equipment	40,730	–	–	**40,730**
Other non-current assets	115	–	–	**115**
Pension assets	1,409	–	–	**1,409**
Financial and other investments	899	–[1]	–	**899**
Investments in joint ventures and associates	2,168	–	–	**2,168**
Derivative financial assets	1,319	–	–	**1,319**
Total non-current assets	52,523	–	–	**52,523**
Current assets				
Inventories and current intangible assets	341	–	–	**341**
Trade and other receivables	2,798	–[2]	(3)	**2,795**
Current tax assets	114	–	–	**114**
Financial and other investments	2,694	–[1]	–	**2,694**
Derivative financial assets	405	–	–	**405**
Cash and cash equivalents	329	–	–	**329**
Total current assets	6,681	–	(3)	**6,678**
Total assets	59,204	–	(3)	**59,201**
Current liabilities				
Borrowings	(4,447)	–	–	**(4,447)**
Derivative financial liabilities	(401)	–	–	**(401)**
Trade and other payables	(3,453)	–	59[7]	**(3,394)**
Contract liabilities	–	–	(53)[7]	**(53)**
Current tax liabilities	(123)	–	–	**(123)**
Provisions	(273)	–	–	**(273)**
Total current liabilities	(8,697)	–	6	**(8,691)**
Non-current liabilities				
Borrowings	(22,178)	(32)[3]	–	**(22,210)**
Derivative financial liabilities	(660)	–	–	**(660)**
Other non-current liabilities	(1,317)	–	567[7]	**(750)**
Contract liabilities	–	–	(813)[7]	**(813)**
Deferred tax liabilities	(3,868)	5[4]	74[8]	**(3,789)**
Pensions and other post-retirement benefit obligations	(1,672)	–	–	**(1,672)**
Provisions	(1,779)	–	–	**(1,779)**
Total non-current liabilities	(31,474)	(27)	(172)	**(31,673)**
Total liabilities	(40,171)	(27)	(166)	**(40,364)**
Net assets	19,033	(27)	(169)	**18,837**
Equity				
Share capital	452	–	–	**452**
Share premium account	1,321	–	–	**1,321**
Retained earnings	21,784	(99)[5]	(169)[9]	**21,516**
Other equity reserves	(4,540)	72[6]	–	**(4,468)**
Total shareholders' equity	19,017	(27)	(169)	**18,821**
Non-controlling interests	16	–	–	**16**
Total equity	19,033	(27)	(169)	**18,837**

*Comparative amounts have been revised as described in note 1F.

Notes to the consolidated financial statements
continued

37. Transition to new accounting standards continued

(b) Transition to IFRS 9 and IFRS 15 continued

IFRS 9: Financial Instruments

IFRS 9 has changed the rules concerning the classification and measurement of financial instruments, impairment of financial assets, and hedge accounting. Details of the impact of applying IFRS 9 for the year ended 31 March 2019 are set out below.

Adjustments arising in the year ended 31 March 2019 as a result of the transition to IFRS 9:

1. The available-for-sale category for financial assets was replaced with investments held at fair value through profit and loss (FVTPL) and investments held at fair value through other comprehensive income (FVOCI). Changes to the classification and measurement of financial assets did not alter the carrying value of any financial assets held by the Group. The net impact to retained earnings of the reclassification on transition was an £8 million gain.

   As described in note 15, all recognised financial assets that are within the scope of IFRS 9 are initially recorded at fair value and subsequently measured at amortised cost or fair value based on the Group's business model for managing the financial assets and the contractual cash flow characteristics of the financial assets. Therefore on 1 April 2018, the Group reclassified its investments as follows:

   - Money market funds and fund investments held by captive insurance companies were classified as financial assets at FVTPL because their contractual cash flows are not solely payments of principal and interest;
   - Investments in debt securities that have contractual payments that are solely payments of principal and interest, and which are held as part of the liquidity portfolio or to back employee benefit liabilities, were classified as financial assets at FVOCI because they are held in a business model whose objective is to collect the contractual cash flows and to sell the debt instruments;
   - The Group has elected to hold investments in equity securities, which are held to back employee benefit liabilities, as financial assets at FVOCI as the Group does not believe that changes in their fair value is reflective of the financial performance of the Group; and
   - Loans to joint ventures and associates, cash at bank, and short-term deposits are classified at amortised cost as they have contractual cash flows which are solely payments of principal and interest and the Group holds them to collect contractual cash flows.

   Aside from derivative financial instruments, which remain classified as FVTPL, the Group did not previously have any financial assets or liabilities classified at FVTPL.

   The table below illustrates those financial assets and liabilities that were reclassified at 1 April 2018:

Financial asset/liability	Note	Original measurement category under IAS 39	New measurement category under IFRS 9	Original carrying amount under IAS 39 £m	Change to measurement basis under IFRS 9 £m	New carrying amount under IFRS 9 £m
Money market funds and fund investments in equities and bonds	15	Available-for-sale investments	Financial assets at FVTPL	2,294	—	2,294
Cash surrender value of life insurance policies and investments in debt securities	15	Available-for-sale investments	Financial assets at FVOCI	343	—	343
Investments in equity securities	15	Available-for-sale investments	Financial assets at FVOCI (equity instruments)	84	—	84
Loans to joint ventures and associates and restricted balances	15	Loans and receivables	Financial assets at amortised cost	872	—	872
Borrowings	21	Financial liabilities at amortised cost	Financial liabilities at fair value through profit and loss	(570)	(32)	(602)

   Note that the table above does not include derivative assets, derivative liabilities, trade receivables, cash at bank and short-term deposits, borrowings measured at amortised cost or trade payables. This is because neither the classification nor the measurement of these items has changed on transition to IFRS 9.

2. The change from the incurred loss impairment model of IAS 39 to the expected loss model in IFRS 9 did not have a material impact on the Group's credit loss provision. The Group calculates its impairment provision on trade receivables using a sophisticated provisions matrix. The inclusion of forward-looking information did not have a significant impact on the matrix as the relevant short-term future economic conditions affecting our retail customers in the US are expected to be similar to recent experience.

3. The Group elected to reclassify an existing liability with a carrying value of £570 million from amortised cost to fair value through profit and loss to reduce a measurement mismatch. At transition, the resultant impacts included an increase in the carrying value of the liability of £32 million, a reduction in retained earnings of £40 million and the establishment of an own credit reserve (within other equity reserves) of £7 million.

4. Deferred tax was recognised on the adjustments recorded on the transition to IFRS 9. Reserve impacts are stated net of related deferred tax.

5. Retained earnings included the impact from adjustments 1, 3 and 6.

6. The Group adopted the hedge accounting requirements of IFRS 9, which more closely align with the Group's risk management policies. On transition, it was concluded that all IAS 39 hedge relationships are qualifying IFRS 9 relationships with the treatment of the cost of hedging being the main change. The effect was a reclassification in reserves of a £67 million gain from retained earnings and a £10 million gain from the cash flow hedge reserve, into a new cost of hedging reserve (within other equity reserves). In this reserve, qualifying unrealised gains and losses excluded from hedging relationships are deferred and released systematically into profit or loss to match the timing of hedged items.

37. Transition to new accounting standards continued

(b) Transition to IFRS 9 and IFRS 15 continued

IFRS 15: Revenue from Contracts with Customers

IFRS 15 primarily changed the accounting for our connection and diversion revenues in our regulated businesses. No practical expedients on transition were applied.

The accounting for revenue under IFRS 15 did not represent a substantive change from the Group's previous practice under IAS 18 for recognising revenue from sales to customers with the exception of the following items:

- Certain pass-through revenues (principally revenues collected on behalf of the Scottish and Offshore transmission operators) were recorded net of operating costs, whereas previously they were recognised gross of operating costs. Had we not adopted IFRS 15, our revenues and operating costs for the year ended 31 March 2019 would have been £1,197 million higher, with no impact to operating profits;
- Contributions for capital works relating to connections for our customers were deferred as contract liabilities on our consolidated statement of financial position on transition, and released over the life of the connection assets. This was a change for our US Regulated business and our UK Gas Transmission business, where previously revenues were recorded once the work was completed. Had we not adopted IFRS 15, our revenues and operating profit for the year ended 31 March 2019 would have been £57 million higher; and
- In the UK, contributions for capital works relating to diversions were recognised as the works are completed. This was a change for the UK regulated businesses where revenues were previously deferred over the life of the asset. Had we not adopted IFRS 15, our revenues and operating profit for the year ended 31 March 2019 would have been £26 million and £23 million lower, respectively.

Adjustments arising in the year ended 31 March 2019 as a result of the transition to IFRS 15:

7. Deferred income from contributions for capital works were reclassified to contract liabilities. In addition, these liabilities for capital works relating to connections have increased as these capital contributions for connections were cumulatively adjusted for on 1 April 2018 and are now deferred and released over the life of the connection assets. This was a change for our US Regulated business and our UK Gas Transmission business where previously revenues were recorded once the work was completed.

   Partially offsetting the increase in contract liabilities for connections was the change in accounting treatment for contributions relating to diversions in our UK businesses. These contributions are recognised as revenue as the works are completed where previously revenue was recognised over the life of the assets.

8. Deferred tax was recorded on the incremental amounts recorded against capital contributions and contract liabilities on the transition to IFRS 15. Deferred tax balances have been calculated at the rate substantively enacted at the balance sheet date.

9. The transition adjustment reflected the net of adjustments 7 and 8 above.

Notes to the consolidated financial statements
continued

38. Acquisitions

This note outlines the acquisition announced during the year and the acquisition made in the prior year.

Acquisition of PPL Western Power Distribution Investments Limited
On 17 March 2021, National Grid plc entered into an agreement to acquire 100% of the share capital of PPL WPD Investments Limited (WPD), the holding company of Western Power Distribution plc, which is the UK's largest electricity distribution network operator. The total consideration for the transaction is £7.8 billion. The transaction is expected to complete in July 2021.

Acquisition of Geronimo Energy LLC and Emerald Energy Venture LLC
On 11 July 2019, National Grid Ventures acquired 100% of the share capital of National Grid Renewables (formerly known as Geronimo Energy LLC) and 51% of Emerald Energy Venture LLC (Emerald), which is jointly controlled by National Grid and Washington State Investment Board (WSIB). National Grid Renewables Development LLC is a leading developer of wind and solar generation based in Minneapolis in the US, and the acquisition is a significant step in National Grid's commitment to the decarbonisation agenda, towards developing and growing a large-scale renewable generation business in the US, and delivering sustainable, reliable and efficient energy. This is National Grid's first ownership stake in wind generation and an expansion of our activities in solar generation. Whilst National Grid Renewables develops the assets, Emerald has a right of first refusal to buy, build and operate those assets.

The total consideration was £209 million, satisfied by a combination of cash and contingent consideration. The contingent consideration was recorded within trade and other payables for the amount payable within one year, with the remainder recorded within other non-current liabilities. The fair value of contingent consideration recognised was determined as the present value of our best estimate of the value that we will be required to pay, taking into consideration management's estimates of the volume of successful development activity by National Grid Renewables over the relevant period.The contingent consideration will be payable over a number of years.

The fair values of the assets and liabilities recognised at the acquisition date for both the acquisition of the subsidiary, National Grid Renewables, and the joint venture, Emerald, are set out below.

	£m
Intangible assets	5
Property, plant and equipment	1
Investment in joint venture – Emerald	90
Cash	2
Other identifiable assets and liabilities	30
Total identifiable assets	128
Goodwill	81
Total consideration transferred	209
Satisfied by:	
Contingent consideration – National Grid Renewables	70
Cash consideration – National Grid Renewables	49
Cash consideration – Emerald	90
	209

The goodwill arising from the acquisition comprised the value associated with the potential future projects that will be developed by National Grid Renewables as well as the expertise of the management team that was acquired, neither of which qualify for recognition as tangible or intangible assets. At the acquisition date, there were no material contingent liabilities.

Total acquisition-related costs of £3 million were recognised within operating costs within the consolidated income statement, of which £1 million was recognised in the year ended 31 March 2020.

National Grid Renewables earns revenue from selling its development stage assets to Emerald and other third parties. Emerald generates revenue from the assets it purchases from National Grid Renewables once they are operational and has no other business (see note 16). Neither entity has generated significant revenues or profits for the period between the acquisition date and 31 March 2020. Even if the acquisition had completed on 1 April 2019, there would have been no significant revenues or profits for the year ended 31 March 2020.

39. Post balance sheet events

In the period between 1 April 2021 and 19 May 2021, there have been no significant post balance sheet events.

Company accounting policies

We are required to include the stand-alone balance sheet of our ultimate Parent Company, National Grid plc, under the Companies Act 2006. This is because the publicly traded shares are actually those of National Grid plc (the Company) and the following disclosures provide additional information to shareholders.

A. Basis of preparation

National Grid plc is the Parent Company of the National Grid Group, which is engaged in the transmission and distribution of electricity and gas in Great Britain and northeastern US. The Company is a public limited company, limited by shares. The Company is incorporated and domiciled in England, with its registered office at 1–3 Strand, London, WC2N 5EH.

The financial statements of National Grid plc for the year ended 31 March 2021 were approved by the Board of Directors on 19 May 2021. The Company meets the definition of a qualifying entity under Financial Reporting Standard 100 (FRS 100) issued by the Financial Reporting Council. Accordingly, these individual financial statements of the Company have been prepared in accordance with Financial Reporting Standard 101 'Reduced Disclosure Framework' (FRS 101). In preparing these financial statements the Company applies the recognition and measurement requirements of International Financial Reporting Standards (IFRS) as adopted by the EU, but makes amendments where necessary in order to comply with the provisions of the Companies Act 2006 and sets out below where advantage of the FRS 101 disclosure exemptions has been taken.

These individual financial statements have been prepared on an historical cost basis, except for the revaluation of financial instruments, and are presented in pounds sterling, which is the currency of the primary economic environment in which the Company operates. The comparative financial information has also been prepared on this basis.

These individual financial statements have been prepared on a going concern basis, which presumes that the Company has adequate resources to remain in operation, and that the Directors intend it to do so, for at least one year from the date the financial statements are signed. As the Company is part of a larger group it participates in the Group's centralised treasury arrangements and so shares banking arrangements with its subsidiaries. The Company is expected to generate positive cash flows or be in a position to obtain finance via intercompany loans to continue to operate for the foreseeable future.

As described further in note 1 to the consolidated financial statements, the Directors have considered the impact of COVID-19 on the Group. Based on this analysis, they have concluded that the Company will have adequate resources to continue in operation for at least 12 months from the signing date of these financial statements. Therefore, they continue to adopt the going concern basis of accounting in preparing the financial statements.

In accordance with the exemption permitted by section 408 of the Companies Act 2006, the Company has not presented its own profit and loss account or statement of comprehensive income.

The following exemptions from the requirements of IFRS have been applied in the preparation of these financial statements of the Company in accordance with FRS 101:

- a cash flow statement and related notes;
- disclosures in respect of transactions with wholly owned subsidiaries;
- disclosures in respect of capital management; and
- the effects of new but not yet effective IFRS standards.

The exemption from disclosing key management personnel compensation has not been taken as there are no costs borne by the Company in respect of employees, and no related costs are recharged to the Company.

As the consolidated financial statements of National Grid plc, which are available from the registered office, include the equivalent disclosures, the Company has also taken the exemptions under FRS 101 in respect of certain disclosures required by IFRS 13 'Fair value measurement' and the disclosures required by IFRS 7 'Financial instruments: Disclosures'.

There are no areas of judgement or key sources of estimation uncertainty that are considered to have a significant effect on the amounts recognised in the financial statements.

The balance sheet has been prepared in accordance with the Company's accounting policies approved by the Board and described below.

B. Fixed asset investments

Investments held as fixed assets are stated at cost less any provisions for impairment. Investments are reviewed for impairment if events or changes in circumstances indicate that the carrying amount may not be recoverable. Impairments are calculated such that the carrying value of the fixed asset investment is the lower of its cost or recoverable amount. Recoverable amount is the higher of its fair value less costs of disposal and its value-in-use. The Company accounts for common control transactions at cost.

C. Tax

Current tax for the current and prior periods is provided at the amount expected to be paid or recovered using the tax rates and tax laws that have been enacted or substantively enacted by the balance sheet date.

Deferred tax is provided in full on temporary differences which result in an obligation at the balance sheet date to pay more tax, or the right to pay less tax, at a future date, at tax rates expected to apply when the temporary differences reverse based on tax rates and tax laws that have been enacted or substantively enacted by the balance sheet date. Deferred tax is provided for using the balance sheet liability method and is recognised on temporary differences between the carrying amount of assets and liabilities in the financial statements and the corresponding tax bases used in the computation of taxable profit.

Deferred tax assets are recognised to the extent that it is regarded as more likely than not that they will be recovered. Deferred tax assets and liabilities are not discounted.

Company accounting policies continued

D. Foreign currencies
Transactions in currencies other than the functional currency of the Company are recorded at the rates of exchange prevailing on the dates of the transactions. At each balance sheet date, monetary assets and liabilities that are denominated in foreign currencies are retranslated at closing exchange rates. Gains and losses arising on retranslation of monetary assets and liabilities are included in the profit and loss account.

E. Financial instruments
The Company's accounting policies are the same as the Group's accounting policies under IFRS, namely IAS 32 'Financial Instruments: Presentation', IFRS 9 'Financial Instruments' and IFRS 7 'Financial Instruments: Disclosures'. The Company applies these policies only in respect of the financial instruments that it has, namely investments, derivative financial instruments, debtors, cash at bank and in hand, borrowings and creditors.

The policies are set out in notes 15, 17, 19, 20, 21 and 22 to the consolidated financial statements. The Company is taking the exemption for financial instruments disclosures, because IFRS 7 disclosures are given in notes 32 and 35 to the consolidated financial statements.

F. Hedge accounting
The Company applies the same accounting policy as the Group in respect of fair value hedges and cash flow hedges. This policy is set out in note 32 to the consolidated financial statements.

G. Parent Company guarantees
The Company has guaranteed the repayment of the principal sum, any associated premium and interest on specific loans due by certain subsidiary undertakings primarily to third parties. Such guarantees are accounted for by the Company as insurance contracts. In the event of default or non-performance by the subsidiary, a liability is recorded in accordance with IAS 37.

H. Share awards to employees of subsidiary undertakings
The issuance by the Company to employees of its subsidiaries of a grant over the Company's options represents additional capital contributions by the Company to its subsidiaries. An additional investment in subsidiaries results in a corresponding increase in shareholders' equity. The additional capital contribution is based on the fair value of the option at the date of grant, allocated over the underlying grant's vesting period. Where payments are subsequently received from subsidiaries, these are accounted for as a return of a capital contribution and credited against the Company's investments in subsidiaries. The Company has no employees.

I. Dividends
Interim dividends are recognised when they are paid to the Company's shareholders. Final dividends are recognised when they are approved by shareholders.

J. Directors' remuneration
Full details of Directors' remuneration are disclosed on pages 92 to 113.

Company balance sheet

as at 31 March

	Notes	2021 £m	2020 £m
Fixed assets			
Investments	1	**14,389**	14,362
Current assets			
Debtors (amounts falling due within one year)	2	**20,699**	12,427
Debtors (amounts falling due after more than one year)	2	**143**	398
Investments	5	**784**	752
Cash at bank and in hand		**40**	2
Total current assets		**21,666**	13,579
Creditors (amounts falling due within one year)	3	**(18,312)**	(16,836)
Net current assets/(liabilities)		**3,354**	(3,257)
Total assets less current liabilities		**17,743**	11,105
Creditors (amounts falling due after more than one year)	3	**(3,085)**	(2,620)
Net assets		**14,658**	8,485
Equity			
Share capital	7	**474**	470
Share premium account		**1,296**	1,301
Cash flow hedge reserve		**(3)**	(28)
Cost of hedging reserve		**(15)**	(6)
Other equity reserves		**426**	399
Profit and loss account	8	**12,480**	6,349
Total shareholders' equity		**14,658**	8,485

The Company's profit after tax for the year was £5,107 million (2020: £3,684 million profit). Profits available for distribution by the Company to shareholders were £9.9 billion at 31 March 2021. The financial statements of the Company on pages 217 to 223 were approved by the Board of Directors on 19 May 2021 and were signed on its behalf by:

Sir Peter Gershon Chairman
Andy Agg Chief Financial Officer

National Grid plc
Registered number: 4031152

Company statement of changes in equity

for the years ended 31 March

	Share capital £m	Share premium account £m	Cash flow hedge reserve £m	Cost of hedging reserve £m	Other equity reserves £m	Profit and loss account £m	Total shareholders' equity £m
At 1 April 2019	458	1,314	1	—	380	3,546	5,699
Profit for the year[1]	—	—	—	—	—	3,684	3,684
Other comprehensive (loss)/profit for the year							
Transferred from equity (net of tax)	—	—	(29)	(6)	—	—	(35)
Total comprehensive (loss)/profit for the year	—	—	(29)	(6)	—	3,684	3,649
Other equity movements							
Scrip dividend-related share issue[2]	12	(13)	—	—	—	—	(1)
Issue of treasury shares	—	—	—	—	—	17	17
Purchase of own shares	—	—	—	—	—	(6)	(6)
Share awards to employees of subsidiary undertakings	—	—	—	—	19	—	19
Equity dividends	—	—	—	—	—	(892)	(892)
At 31 March 2020	470	1,301	(28)	(6)	399	6,349	8,485
Profit for the year[1]	—	—	—	—	—	5,107	5,107
Other comprehensive profit/(loss) for the year							
Transferred to/(from) equity (net of tax)	—	—	25	(9)	—	—	16
Dividends in specie (note 1)	—	—	—	—	—	2,422	2,422
Total comprehensive profit/(loss) for the year	—	—	25	(9)	—	7,529	7,545
Other equity movements							
Scrip dividend-related share issue[2]	4	(5)	—	—	—	—	(1)
Issue of treasury shares	—	—	—	—	—	17	17
Purchase of own shares	—	—	—	—	—	(2)	(2)
Share awards to employees of subsidiary undertakings	—	—	—	—	27	—	27
Equity dividends	—	—	—	—	—	(1,413)	(1,413)
At 31 March 2021	**474**	**1,296**	**(3)**	**(15)**	**426**	**12,480**	**14,658**

1. Included within profit for the year is dividend income from subsidiaries of £7,556 million (2020: £3,887 million).
2. Included within the share premium account are costs associated with scrip dividends.

Notes to the Company financial statements

1. Fixed asset investments

	Shares in subsidiary undertakings £m
Cost at 1 April 2019	9,923
Additions	7,011
Disposals	(2,572)
Cost at 31 March 2020	14,362
Additions	2,447
Cost at 31 March 2021	16,809
Provision at 1 April 2019 and 1 April 2020	—
Charge for the year	(2,420)
Provision at 31 March 2021	(2,420)
Net book value at 31 March 2021	**14,389**
Net book value at 31 March 2020	14,362

During the year, there was a capital contribution of £27 million (2020: £19 million) which represents the fair value of equity instruments granted to subsidiaries' employees arising from equity-settled employee share schemes.

In addition, the Company acquired a 100% investment in National Grid (US) Investments 2 Limited and National Grid Hong Kong Limited from its subsidiary undertaking, National Grid Luxembourg SARL, for a total consideration of £2,420 million in the form of a dividend in specie. Then as part of a wider group restructuring project, National Grid (US) Investments 2 Limited, was identified as a subsidiary no longer required and hence a number of accounting steps were implemented to reduce the net assets of that company to a nominal value. These steps included a capital reduction and the payment of dividends to the Company of £2,422 million. Following the receipt of these dividends the carrying value of the investment was reviewed and an impairment charge was made to the profit and loss account of £2,420 million. It is anticipated that National Grid (US) Investments 2 Limited will be placed into voluntary liquidation in the next financial year.

During the year ended 31 March 2020, the Company made a further investment of £2,000 million in National Grid (US) Holdings Limited, following a rights issue by that company; acquired National Grid (US) Investments 2 Limited from an indirect subsidiary undertaking for £2,420 million; and disposed of its investments in National Grid Holdings One plc and National Grid (US) Investments 2 Limited in exchange for an investment in National Grid Luxembourg SARL at a cost of £2,572 million.

The Company's direct subsidiary undertakings as at 31 March 2021 were as follows: National Grid (US) Holdings Limited, National Grid (US) Investments 2 Limited, National Grid Hong Kong Limited, National Grid Luxembourg SARL and NGG Finance plc. The names of indirect subsidiary undertakings, joint ventures and associates are included in note 34 to the consolidated financial statements.

The Directors believe that the carrying value of the investments is supported by the fair value of their underlying net assets.

2. Debtors

	2021 £m	2020 £m
Amounts falling due within one year		
Derivative financial instruments (note 4)	**86**	37
Amounts owed by subsidiary undertakings	**20,613**	12,390
	20,699	12,427
Amounts falling due after more than one year		
Derivative financial instruments (note 4)	**139**	27
Amounts owed by subsidiary undertakings	**–**	363
Deferred tax	**4**	8
	143	398

The carrying values stated above are considered to represent the fair values of the assets. For the purposes of the impairment assessment, loans to subsidiary undertakings are considered low credit risk as the subsidiaries are solvent and are covered by the Group's liquidity arrangements.

A reconciliation of the movement in deferred tax in the year is shown below:

	Deferred tax £m
At 1 April 2019	—
Charged to equity	8
At 31 March 2020	8
Credited to equity	(4)
At 31 March 2021	**4**

Notes to the Company financial statements
continued

3. Creditors

	2021 £m	2020 £m
Amounts falling due within one year		
Borrowings (note 6)	**635**	666
Derivative financial instruments (note 4)	**34**	278
Amounts owed to subsidiary undertakings	**17,589**	15,834
Other creditors	**54**	58
	18,312	16,836
Amounts falling due after more than one year		
Borrowings (note 6)	**823**	355
Derivative financial instruments (note 4)	**203**	160
Amounts owed to subsidiary undertakings	**2,059**	2,105
	3,085	2,620
Amounts owed to subsidiary undertakings falling due after more than one year are repayable as follows:		
In 1 to 2 years	**–**	–
In 2 to 3 years	**–**	–
In 3 to 4 years	**1,061**	–
In 4 to 5 years	**998**	443
More than 5 years	**–**	1,662
	2,059	2,105

The carrying values stated above are considered to represent the fair values of the liabilities.

4. Derivative financial instruments

The fair values of derivative financial instruments are:

	2021			2020		
	Assets £m	Liabilities £m	Total £m	Assets £m	Liabilities £m	Total £m
Amounts falling due within one year	**86**	**(34)**	**52**	37	(278)	(241)
Amounts falling due after more than one year	**139**	**(203)**	**(64)**	27	(160)	(133)
	225	**(237)**	**(12)**	64	(438)	(374)

For each class of derivative, the notional contract[1] amounts are as follows:

	2021 £m	2020 £m
Cross-currency interest rate swaps	**(3,604)**	(3,804)
Foreign exchange forward contracts	**(9,517)**	(7,886)
	(13,121)	(11,690)

1. The notional contract amounts of derivatives indicate the gross nominal value of transactions outstanding at the balance sheet date.

5. Investments

	2021 £m	2020 £m
Investments in short-term money funds	**697**	572
Restricted balances – collateral	**87**	180
	784	752

6. Borrowings

The following table analyses the Company's total borrowings:

	2021 £m	2020 £m
Amounts falling due within one year		
Bank loans	**8**	46
Bonds	**362**	2
Commercial paper	**265**	618
	635	666
Amounts falling due after more than one year		
Bonds	**823**	355
	1,458	1,021

The maturity of total borrowings is as follows:

	2021 £m	2020 £m
Total borrowings are repayable as follows:		
Less than 1 year	**635**	666
In 1 to 2 years	**–**	355
In 2 to 3 years	**–**	–
In 3 to 4 years	**–**	–
In 4 to 5 years	**–**	–
More than 5 years	**823**	–
	1,458	1,021

The notional amount of borrowings outstanding as at 31 March 2021 was £1,480 million (2020: £1,018 million).

7. Share capital

The called-up share capital amounting to £474 million (2020: £470 million) consists of 3,814,951,606 ordinary shares of $12^{204}/_{473}$ pence each (2020: 3,780,237,016 ordinary shares of $12^{204}/_{473}$ pence each). For further information on share capital, refer to note 27 of the consolidated financial statements.

8. Shareholders' equity and reserves

At 31 March 2021, the profit and loss account reserve stood at £12,480 million (2020: £6,349 million) of which profits available for distribution by the Company to shareholders were £9.9 billion (2020: £5 billion). The Company bore no employee costs in either the current or prior year.

For further details of dividends paid and payable to shareholders, refer to note 9 of the consolidated financial statements.

9. Parent Company guarantees

The Company has guaranteed the repayment of the principal sum, any associated premium and interest on specific loans due by certain subsidiary undertakings primarily to third parties. At 31 March 2021, the sterling equivalent amounted to £2,108 million (2020: £2,169 million). The guarantees are for varying terms from less than one year to open-ended.

In addition, as part of the sectionalisation of the National Grid UK Pension Scheme on 1 January 2017, a guarantee of £1 billion has been provided to Section A. This payment is contingent on insolvency or on failure to pay pensions obligations to Section A and can be claimed against National Grid plc, National Grid Holdings One plc or Lattice Group Limited (up to £1 billion in total). Refer to note 25 of the consolidated financial statements.

10. Audit fees

The audit fee in respect of the Parent Company was £28,000 (2020: £27,000). Fees payable to Deloitte for non-audit services to the Company are not required to be disclosed as they are included within note 4 to the consolidated financial statements.

4.

Additional Information

Picture by
Leo Harry Jamieson
UK
Joint winner
Age group 12–16


RECHARGE
StAtion

The business in detail

Key milestones

Some of the key dates and actions in the corporate history of National Grid are listed below. Our full history goes back much further.

1986
British Gas (BG) privatisation

1990
Electricity transmission network in England and Wales transfers to National Grid on electricity privatisation

1995
National Grid listed on the London Stock Exchange

1997
Centrica demerges from BG

Energis demerges from National Grid

2000
Lattice Group demerges from BG and is listed separately

New England Electric System and Eastern Utilities Associates acquired

2002
Niagara Mohawk Power Corporation merges with National Grid in US

National Grid and Lattice Group merge to form National Grid Transco

2004
UK wireless infrastructure network acquired from Crown Castle International Corp

2005
Four UK regional gas distribution networks sold and we adopt National Grid as our name

2006
Rhode Island gas distribution network acquired

2007
UK and US wireless infrastructure operations and the Basslink electricity interconnector in Australia sold

KeySpan Corporation acquired

2008
Ravenswood generation station sold

2010
Rights issue raises £3.2 billion

2012
New Hampshire electricity and gas distribution businesses sold

2016
National Grid separates the UK Gas Distribution business

2017
National Grid sells a 61% equity interest in the UK Gas Distribution business

2019
National Grid separates the UK Electricity System Operator business

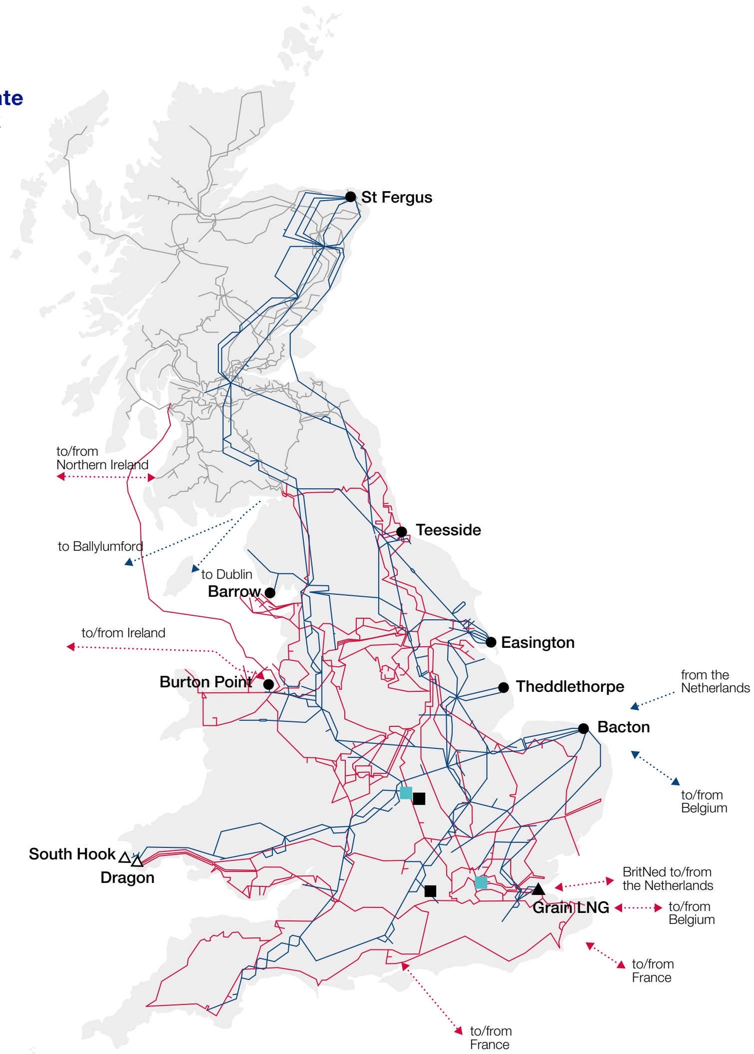
National Grid sells its remaining 39% equity interest in UK Gas Distribution business

Acquisition of Geronimo

2021
National Grid agrees to buy WPD and, subject to the WPD Acquisition and certain regulatory approvals, to sell NECO, its Rhode Island gas and electricity business

National Grid announces its intention to commence a process for the sale of a majority equity interest in the UK GT Business

Where we operate
Our UK network



UK Transmission[1]

- Scottish electricity transmission system
- English and Welsh electricity transmission system

Approximately 4,496 miles (7,236 kilometres) of overhead line, 1,744 miles (2,806 kilometres) of the underground cable and 350 substations.

- Gas transmission system

Approximately 4,740 miles (7,627 kilometres) of high-pressure pipe and 23 compressor stations connecting to eight distribution networks and third-party independent systems.

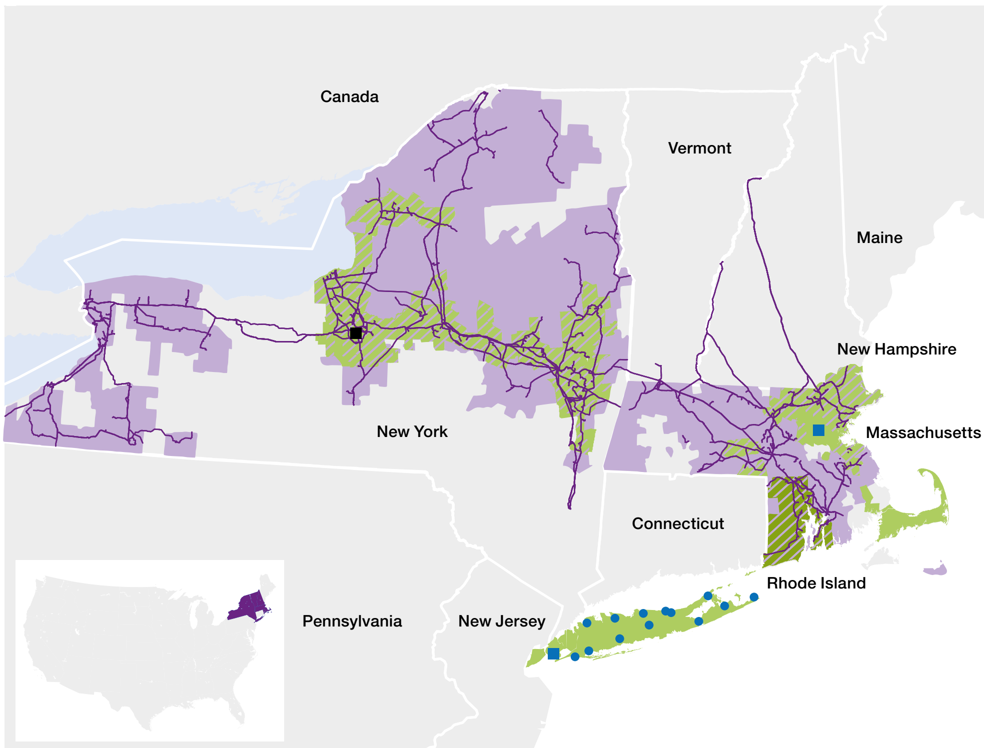
- Terminal
- LNG terminal owned by National Grid
- LNG terminal
- Electricity interconnector
- Gas interconnector

Principal offices

- Owned office space: Warwick and Wokingham
- Leased office space: Solihull and London

Leased office space totalling 105,771 square feet (9,827 square metres) with remaining terms two to five years.

Our US network



US regulated[1]

- Electricity transmission network
- Gas distribution operating area
- Electricity distribution area
- Gas and electricity distribution area overlap
- Gas and electricity distribution area overlap – Rhode Island[2]

An electricity transmission network of approximately 8,972 miles (14,439 kilometres) of overhead line, 105 miles (169 kilometres) of underground cable and 397 transmission substations. We own and operate 278.46 miles (448 kilometres) of High Voltage Electric Interconnectors in New England.

An electricity distribution network of approximately 73,010 circuit miles (117,498 kilometres) and 728 distribution substations in New England and upstate New York.

A network of approximately 35,761 miles (57,551 kilometres) of gas pipeline. Our network also consists of approximately 488 miles (785 kilometres) of gas transmission pipe, as defined by the US Department of Transportation.

- Generation

Principal offices

- Owned office space: Syracuse, New York
- Leased office space: Brooklyn, New York and Waltham, Massachusetts

Leased office space totalling approximately 721,000 square feet (66,404 square metres) with remaining terms of four to fifteen years. In August of 2020, the Company commenced its new lease at 2 Hanson Place, Downtown Brooklyn, New York. The existing One MetroTech lease terminates in February 2025 and will not be renewed; space anticipated to be vacated is being marketed for sub-lease.

At present, environmental issues are not preventing our UK and US businesses from utilising any material operating assets in the course of their operations.

1. Access to electricity and gas transmission assets on property owned by others is controlled through various agreements.
2. Conditional on completion of the WPD acquisition and certain regulatory approvals, we have agreed to sell our Rhode Island electricity transmission and distribution, and gas distribution business to PPL.

The business in detail continued

UK regulation

Our licences to participate in transmission and interconnection activities are established under the Gas Act 1986 and the Electricity Act 1989, as amended (the Acts). These require us to develop, maintain and operate economic and efficient networks and to facilitate competition in the supply of gas and electricity in Great Britain (GB). They also give us statutory powers, including the right to bury our pipes or cables under public highways and the ability to use compulsory powers to purchase land so we can conduct our business.

Our licensed activities are regulated by Ofgem, which has a statutory duty under the Acts to protect the interests of consumers. To protect consumers from the ability of companies to set unduly high prices, Ofgem has established price controls that limit the amount of revenue such regulated businesses can earn. In setting price controls, Ofgem must have regard to the need to secure that licence holders are able to finance their obligations under the Acts. This should give us a level of revenue for the duration of the price control that is sufficient to meet our statutory duties and licence obligations with a reasonable return on our investments. Licensees and other affected parties can appeal price controls or within period licence modifications which have errors, including in respect of financeability.

The RIIO-T1 price controls for electricity and gas transmission networks came into effect on 1 April 2013 for the eight-year period until 31 March 2021. New price controls, called RIIO-2, came into effect on 1 April 2021 and will run for five years until 31 March 2026. Both RIIO-T1 and RIIO-2 follow the RIIO (revenue = incentives + innovation + outputs) framework established by Ofgem. While the RIIO-T1 period has finished, the confirmation of the delivered outputs and performance levels will be reported through the annual reporting process that takes place in July each year. For 2021, this annual process will review what was delivered throughout RIIO-T1 and make adjustments to allowed revenues as allowed in our licences. This process, known as close-out, is an integral part of the price control arrangements.

These price controls include a number of mechanisms designed to help achieve their objectives. These include financial incentives that encourage us to:

- efficiently deliver, through investment and maintenance, the network outputs that customers and stakeholders require, including reliable supplies, new connections and infrastructure capacity;
- innovate so we can continuously improve the services we give our customers, stakeholders and communities; and
- efficiently balance the transmission networks to support the wholesale markets.

Our UK gas and electricity transmission and system operator businesses operate under four separate price controls. These cover our roles as Transmission Owner (TO) and System Operator (SO) in both gas and electricity. In addition to these four regulated network price controls, there is also a tariff cap price control applied to certain elements of domestic-sized metering activities carried out by National Grid Metering and regulation of our electricity interconnector interests.

In 2017, Ofgem, the Department for Business, Energy and Industrial Strategy (BEIS) and National Grid plc agreed to create a legally separate business, the Electricity System Operator (ESO), within the National Grid Group. The ESO became a separate entity within the Group on 1 April 2019. In January 2021, Ofgem recommended to BEIS that the ESO should be fully separated from National Grid into an Independent System Operator. Ofgem suggested that this could also incorporate network planning functions for gas, but it has not recommended that the Gas System Operator (GSO) be separated from National Grid. Ofgem believes an industry structure that enables long-term thinking and allows the SOs to take on new roles as part of the energy transition is an important step in the market and regulatory reform necessary to deliver net zero. Significant further work is needed to determine the detail of that structure. BEIS have commented that it will consider Ofgem's recommendation thoroughly. If and when these changes will be taken forward will be decided at a government level and with further consultation.

More information on the regulation of the ESO and on interconnector regulation is given in separate sections below.

RIIO price controls

The building blocks of the RIIO price control are broadly similar to the price controls historically used in the UK. There are, however, some significant differences in the mechanics of the calculations.

Under RIIO, the outputs we deliver are explicitly articulated and our allowed revenues are linked to their delivery, although some outputs and deliverables have only a reputational impact or are linked to legislation. These outputs reflect what our stakeholders have told us they want us to deliver and were determined through an extensive consultation process, which gave stakeholders a greater opportunity to influence the decisions.

Using information we have submitted, along with independent assessments, including for RIIO-2 an independent user group report, Ofgem determines the efficient level of expected costs necessary for these deliverables to be achieved. Under RIIO this is known as 'totex', which is a component of total allowable expenditure and is broadly the sum of what was defined in previous price controls as operating expenditure (opex) and capital expenditure (capex).

A number of assumptions are necessary in setting allowances for the outputs that we will deliver, including the volumes of work that will be needed and the price of the various external inputs required to achieve them. Consequently, there are a number of uncertainty mechanisms within the RIIO framework designed to protect consumers and network companies by avoiding the need to set allowances when future needs and costs are uncertain.

Where we under- or over-spend the allowed totex for reasons that are not covered by uncertainty mechanisms, there is a 'sharing' factor. This means we share the under- or over-spend with customers through an adjustment to allowed revenues in future years. This sharing factor provides an incentive for us to provide the outputs efficiently, as we are able to keep a portion of savings we make, with the remainder benefiting our customers. Likewise, it provides a level of protection for us if we need to spend more than allowances. Alongside this, there are several specific areas where companies can submit further claims for new allowances within the period, for instance to enable net zero.

Allowed revenue to fund totex costs is split between RIIO 'fast' and 'slow' money categories using specified ratios that are fixed for the duration of the price control. Fast money represents the amount of totex we are able to recover in the year of expenditure. Slow money is added to our Regulatory Asset Value (RAV) – effectively the regulatory IOU. (For more details on the sharing factors under RIIO, please see the tables overleaf.)

In addition to fast money, each year we are allowed to recover regulatory depreciation, i.e. a portion of the RAV, and a return on the outstanding RAV balance. The RAV is also indexed to a measure of inflation, using RPI in RIIO-T1 and CPIH in RIIO-2. In RIIO-T1 regulatory depreciation in electricity and gas transmission permitted recovery of RAV consistent with each addition bringing benefit to consumers for a period of up to 45 years. In RIIO-2, Electricity Transmission (ET) continues on a straight-line depreciation methodology, with Gas Transmission (GT) moving from straight line to sum-of-digit depreciation (so that depreciation is front loaded but then lower in the later years of the life of the asset). We are also allowed to collect additional revenues related to non-controllable costs and incentives. In addition to totex sharing, RIIO incentive mechanisms can increase or decrease our allowed revenue to reflect our performance against various other measures related to our outputs. For example, in RIIO-T1 performance against our customer and stakeholder satisfaction targets could have a positive or negative effect of up to 1% of allowed annual revenues. Many of our incentives affect our revenues two years after the year of performance.

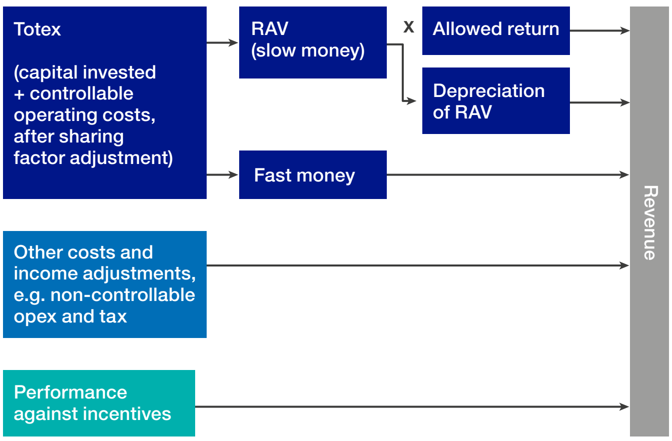
More information on RIIO-T1

The extended eight-year length of the first round of RIIO price controls is one of the ways that RIIO has given innovation more prominence. Innovation refers to all the new ways of working that deliver outputs more efficiently. This broad challenge has an impact on everyone in our business.

During the eight-year period of the RIIO-T1 price control, our regulator included a provision for a mid-period review, which was completed during 2017 and led to some changes in allowances relating to certain specific costs. Further to the mid-period review, National Grid volunteered that £480 million (in 2009/10 prices) of allowances for electricity transmission investments should be deferred. In August 2017, Ofgem determined how the RIIO allowances would be correspondingly adjusted.

In addition, the RIIO-T1 price controls for transmission included a 're-opener mechanism', in relation to specific cost categories where there was uncertainty about expenditure requirements at the time of setting allowances. Both our gas and electricity transmission businesses requested changes to funding under this mechanism in May 2018, leading to some changes to the allowed revenues. In Electricity Transmission, Ofgem has confirmed additional funding spanning both RIIO-T1 and RIIO-2 periods for reinforcements to connect the new Hinkley C power station. Additional funding has also been applied and granted for two visual amenity projects (VIP), in RIIO-T1, where existing overhead lines in national parks and areas of outstanding natural beauty are replaced by underground cables, and a third VIP investment was submitted under the RIIO-T1 arrangement and so will be treated as a RIIO-T1 scheme.

Simplified illustration of RIIO regulatory building blocks for RIIO-T1



Allowed returns

The cost of capital allowed under our RIIO-T1 price controls were as follows:

	Transmission	
	Gas	Electricity
Cost of equity (post-tax real[2])	6.8%	7.0%
Cost of debt (pre-tax real[2])	iBoxx 10-year simple trailing average index (1.09% for 2020/21)	
Notional gearing	62.5%	60.0%
Vanilla WACC (for 2020/21)[1]	3.23%	3.45%

1. Vanilla WACC = cost of debt × gearing + cost of equity × (1-gearing).
2. In RIIO-T1, real returns are relative to RPI.

Sharing factors and fast:slow money ratios under our RIIO-T1 price controls were as follows:

	Gas Transmission		Electricity Transmission	
	Transmission owner (TO)	System operator (SO)	Transmission owner	System operator
Fast[1]	Baseline[3] 35.6% Uncertainty 10%	62.60%	15.00%	72.10%
Slow[2]	Baseline[3] 64.4% Uncertainty 90%	37.40%	85.00%	27.90%
Sharing	44.36%		46.89%	

1. Fast money allows network companies to recover a percentage of totex within a one-year period.
2. Slow money is where costs are added to RAV and, therefore, revenues are recovered slowly (e.g. over up to 45 years) from both current and future customers.
3. The baseline was the expenditure that was funded through ex-ante allowances, whereas the uncertainty adjusted the allowed expenditure where the level of outputs delivered differed from the baseline level, or if triggered by an event.

More information on RIIO-2

In December 2019 we submitted our business plans to Ofgem for the RIIO-2 period, setting out the proposed activities and expenditure to meet the needs of our customers and stakeholders in the period 1 April 2021 to 31 March 2026. These plans were developed through extensive enhanced stakeholder engagement to improve the quality and ensure they delivered what our stakeholders need.

To support this process Independent User Groups were set up in July 2018, one for GT and one for ET. Their responsibility was to ensure that the companies were putting stakeholders at the heart of their decision-making processes so as to produce a business plan that was fully reflective of customers'/consumers'/stakeholders' requirements. They summarised their views in an independent report to Ofgem on the companies' RIIO-2 business plans in December 2019.

The Independent User Groups represent a cross-section of the energy industry and represent the interests of consumers, environmental and public interest groups, as well as large-scale and small-scale customers and distribution networks.

The Group has now taken on an enduring role through RIIO-2. There are expected to be three key focus areas which are to:
- scrutinise and challenge the Company's periodic business plans;
- monitor, interrogate and help the business to enhance transparency of performance against commitments; and
- act as a 'critical friend' for strategy, culture and processes in key areas like stakeholder engagement, innovation, customer, consumer and responsible business.

Ofgem published its Final Determinations in December 2020, followed by the RIIO-2 licences and Regulatory Instructions and Guidance in February 2021. The RIIO-2 price controls started on 1 April 2021. On 2 March 2021, National Grid announced that it was broadly accepting most of the RIIO-2 package for its Electricity and Gas Transmission businesses, but had decided to submit a technical appeal to the Competition and Markets Authority (CMA) in relation to ET and GT focused on Ofgem's proposed cost of equity and 'outperformance wedge', which is a downward adjustment to allowed returns in expectation of future outperformance.

RIIO-2 builds on the framework established for RIIO-T1. For example, it introduces a range of new mechanisms to facilitate the transition to net zero, and it increases support for innovation, for example by allowing the regulator to direct additional funding in gas transportation for hydrogen innovation, in recognition of the uncertainty around the extent networks may have a role in transporting hydrogen.

The business in detail continued

Key Parameters from Ofgem's RIIO-2 Determinations

	Gas Transmission	Electricity Transmission
Allowed return on equity[1, 2]	4.3%[3] (real, relative to CPIH)	4.02%[4] (real, relative to CPIH), at 55% gearing (which is broadly equivalent to 4.3% at 60% gearing)
Allowed debt funding	Calculated and updated each year using an extending 'trombone-like' trailing average of iBoxx Utilities 10+ year index (increases from 10 years for 2021/22 to 14 years for 2025/26), plus 25 bps additional borrowing costs.	
Depreciation of RAV	45-year sum of digits regulatory depreciation applied to RIIO-2 additions and retrospectively to 2002-2021 additions.	No change in policy: straight line over 45 years for post-2021 RAV additions, with pre-2021 RAV additions as per RIIO-T1.
Notional Gearing	60%	55%
Split between fast/slow money	Fast: TO baseline 35%; SO baseline 66%; TO uncertainty mechanisms 25% Slow: TO baseline 65%; SO baseline 34%; TO uncertainty mechanisms 75%	Fast: TO baseline 22%; TO uncertainty mechanisms 15% Slow: TO baseline 78%; TO uncertainty mechanisms 85%
Sharing factor	39%	33%
Core baseline totex in 2018/19 prices (cumulative for the 5 years of RIIO-2)	£2.0 billion	£5.4 billion

1. National Grid has submitted a technical appeal to the CMA on Ofgem's proposed cost of equity and 'outperformance wedge'.
2. The cost of equity in RIIO-2 is subject to annual adjustments that are calculated using the Capital Asset Pricing Model, through indexation of the 'risk-free rate' parameter. The 4.3% and 4.02% figures shown in this row are Ofgem's estimates of the average allowed return on equity over the five years of RIIO-2, as given in the RIIO-2 Final Proposals.
3. The 4.3% value shown here for allowed return on equity is after deduction of the 'outperformance wedge': Ofgem's estimate of the cost of equity before deduction of the wedge is 4.55%.
4. The 4.02% value shown here for allowed return on equity is after deduction of the 'outperformance wedge': Ofgem's estimate of the cost of equity before deduction of the wedge is 4.25%.

Competition in onshore transmission

Ofgem stated in its final decision on the RIIO-T1 price control that it would consider holding a competition to appoint the constructor and owner of suitably large new electricity transmission projects, rather than including these new outputs and allowances in existing transmission licensee price controls. Ofgem reiterated this view in the RIIO-2 Determination, extending it now to gas transmission and gas distribution. In the absence, thus far, of the legislation needed to support a competition, Ofgem has developed a number of models which it has indicated it would consider using to deliver benefits of competition, the primary one of these being called the 'Competition Proxy Model' (CPM), but so far this has not been used for any projects or implemented into licences. The December 2020 BEIS energy white paper reiterated the government's ambition to introduce greater competition to support the delivery of net zero targets but also explained that the introduction of legislation to support full third-party competition would be subject to available parliamentary time.

Regulation of the electricity system operator, NGESO

A primary goal of the ESO legal separation in April 2019 was to increase transparency of our activities and help minimise any perceived conflicts of interest as we take on the challenge of driving forward the energy transformation. There are clear signals from Ofgem and the broader regulatory context that the ESO will play a crucial role in the changing energy environment. As an asset-light and service-based entity, the ESO is also fundamentally different from other regulated network companies. The new price control arrangements for RIIO-2 are therefore an opportunity to implement a new regulatory framework that enables the ESO to meet our stakeholders' expectations.

In April 2018, Ofgem introduced a new regulatory and incentives framework for the ESO. This moved away from the use of targeted, mechanistic incentives towards a 'principles-based' evaluative incentives approach. The new approach includes a set of 'Roles and Principles' designed to set clear expectations about the baseline behaviours expected from the ESO and a requirement for the ESO to produce a Forward Plan, following stakeholder engagement, demonstrating the activities it will undertake over the year to add value for consumers. Ofgem's ESO Performance Panel will challenge the ESO on its plans, evaluate its performance and make recommendations to Ofgem. At the end of the year, Ofgem will decide whether to financially reward or penalise the ESO, with a maximum annual reward of +£30 million and maximum annual penalty of -£30 million (during the RIIO-T1 price control), informed by the Performance Panel's recommendations, as well as other evidence collected throughout the year.

In 2019, the ESO published a mission and set of ambitious goals accompanied by its Forward Plan and its RIIO-2 business plan to set out what, when and how it delivers. The RIIO-2 business plan reflects the ambition shared by us and Ofgem for the ESO to be innovative, ambitious and agile, responding to stakeholder needs and the changing energy landscape. Ofgem's Final Determinations were published on 8 December 2020 confirming a new regulatory framework for the ESO. The framework includes a return on regulatory asset value (RAV) but also provides additional non-RAV funding for roles and risks that are not linked to an asset base. There is no totex incentive mechanism for ESO in RIIO-2, which means that all efficiently incurred costs can be recovered through regulated revenues. This means the ESO have greater flexibility to adjust spending in order to deliver the ambitious business plan and maximise consumer benefit. ESO performance in RIIO-2 will continue to be assessed via an evaluative incentive approach, through a two-year incentive scheme with a total maximum reward of £30 million and maximum penalty of £12 million for the two-year period.

On 25 January 2021, Ofgem published its review into GB system operation. This recommends that the ESO take on more roles and responsibilities within the energy sector to help accelerate the transition to net zero. These roles include more responsibility for onshore and offshore network planning, greater responsibility for whole-system thinking in both system operation and market development, and enhanced responsibilities for data management across the industry as well as upscaling our own use of data and digital infrastructure. As part of taking on new responsibilities, Ofgem believes that further independence of the ESO may be appropriate. The decision on changes and developments for system operation remains with BEIS. The BEIS Energy White Paper, published in December 2020, sets out the government's intention to consult on system governance later this year. We expect that the requirements for further separation will be considered as a part of that process.

Interconnectors regulation

Interconnectors derive their revenues from sales of capacity to users who wish to move power between market areas with different prices. Up until 31 December 2020, this was governed under European legislation and these capacity sales are classified as 'congestion revenues'. This is because the market price differences result from congestion on the established interconnector capacity which limits full price convergence. European legislation governed how congestion revenues may be used and how interconnection capacity is allocated. It requires all interconnection capacity to be allocated to the market through auctions. From 1 January 2021, interconnectors to the UK are no longer governed by European legislation, and the operation of these interconnectors is governed by individual sets of access rules which are agreed by regulators at each end of the link. This does not affect the fundamental business model for interconnectors.

Under UK legislation, interconnection businesses must be separate from transmission businesses.

There is a range of different regulatory models available for interconnector projects. These involve various levels of regulatory intervention, ranging from fully merchant (where the project is fully reliant on sales of interconnector capacity) to cap and floor.

The cap and floor regime is now the regulated route for interconnector investment in GB and may be sought by project developers who do not qualify for, or do not wish to apply for, exemptions from UK and European legislation which would facilitate a merchant development.

US regulation

Regulators

In the US, public utilities' retail transactions are regulated by state utility commissions which serve as economic regulators, approving cost recovery and authorised rates of return. The state commissions establish the retail rates to recover the cost of transmission and distribution services within their jurisdictions. They also serve the public interest by making sure utilities provide safe and reliable services at just and reasonable prices. The commissions establish service standards and approve public utility mergers and acquisitions. State Commissions are also asked to approve a variety of programmes and costs related to state energy and climate goals.

The Federal Energy Regulatory Commission (FERC) regulates wholesale transactions for utilities, such as interstate transmission and wholesale electricity sales, including rates for these services, at the federal level. FERC also regulates public utility holding companies and centralised service companies, including those of our US businesses.

Regulatory process

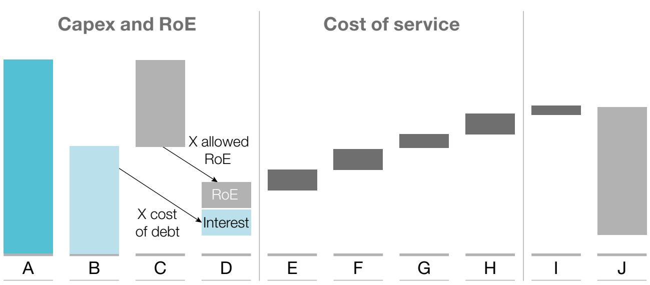
The US regulatory regime is premised on allowing the utility the opportunity to recover its cost of service and earn a reasonable return on its investments as determined by the commission. Utilities submit formal rate filings (rate cases) to the relevant state regulator when additional revenues are necessary to provide safe, reliable service to customers. Utilities can be compelled to file a rate case, either due to complaints filed with the commission or at the commission's own discretion.

The rate case is typically litigated with parties representing customers and other interests. The utility is required to prove that the requested rate change is just and reasonable, and the requested rate plan can span multiple years. In the states where we operate, it can take 9 to 13 months for the commission to render a final decision although, in some instances, rules allow for longer negotiation periods which may extend the length of the rate case proceeding. Unlike the state processes, the federal regulator has no specified timeline for adjudicating a rate case; typically it makes a final decision retroactive when the case is completed.

Gas and electricity rates are established from a revenue requirement, or cost of service, equal to the utility's total cost of providing distribution or delivery service to its customers, as approved by the commission in the rate case. This revenue requirement includes operating expenses, depreciation, taxes and a fair and reasonable return on shareholder capital invested in certain components of the utility's regulated asset base or 'rate base'.

The final revenue requirement and rates for service are approved in the rate case decision. The revenue requirement is derived from a comprehensive study of the utility's total costs during a representative 12-month period, referred to as a test year. Each commission has its own rules and standards for adjustments to the test year. These may include forecast capital investments and operating costs.

US regulatory revenue requirement



A Rate base
B Debt
C Equity
D Return
E Controllable costs
F Non-controllable costs
G Depreciation
H Taxes
I Lagged recoveries
J Allowed revenue

Our rate plans

Each operating company has a set of rates for service. We have three electric distribution operations (upstate New York, Massachusetts and Rhode Island) and six gas distribution networks (upstate New York, New York City, Long Island, Massachusetts (two) and Rhode Island).

Our distribution operating companies have revenue-decoupling mechanisms that delink their revenues from the quantity of energy delivered and billed to customers. These mechanisms remove the natural disincentive utility companies have for promoting and encouraging customer participation in energy-efficiency programmes that lower energy end use and distribution volumes.

We bill our customers for their use of electricity and gas services. Customer bills typically cover the cost of the commodity (electricity or gas delivered), and charges covering our delivery service. With the exception of residential gas customers in Rhode Island, our customers are allowed to select an unregulated competitive supplier for the commodity component of electricity and gas utility services.

A substantial proportion of our costs, in particular electricity and gas commodity purchases, are 'pass-through' costs, fully recoverable from our customers. We recover 'pass-through' costs through making separate charges to customers, designed to recover those costs with no profit. We adjust the charges from time to time often annually to make sure that any over- or under-recovery of these costs is returned to, or recovered from, our customers.

Our rate plans are designed to a specific allowed Return on Equity (RoE), by reference to an allowed operating expense level and rate base. Some rate plans include earnings-sharing mechanisms that allow us to retain a proportion of the earnings above our allowed RoE, achieved through improving efficiency, with the balance benefiting customers.

In addition, our performance under certain rate plans is subject to service performance targets. We may be subject to monetary penalties in cases where we do not meet those targets.

Our FERC-regulated transmission companies use formula rates (instead of periodic stated rate cases) to set rates annually that recover their cost of service. Through the use of annual true-ups, formula rates recover our actual costs incurred and the allowed RoE based on the actual transmission rate base each year. We must make annual formula rate filings documenting the revenue requirement that customers can review and challenge.

Revenue for our wholesale transmission businesses in New England and New York is collected from wholesale transmission customers. These are typically other utilities and include our own New England electricity distribution businesses. With the exception of upstate New York, which continues to combine retail transmission and distribution rates to end-use customers, these wholesale transmission costs are generally incurred by distribution utilities on behalf of their customers. They are fully recovered as a pass-through from end-use customers, as approved by each state commission.

Our Long Island generation plants sell capacity to the Long Island Power Authority (LIPA) under 15-year and 25-year power supply agreements and within wholesale tariffs approved by FERC. Through the use of cost-based formula rates, these long-term contracts provide a similar economic effect to cost-of-service rate regulation.

One measure used to monitor the performance of our regulated businesses is a comparison of achieved RoE to allowed RoE. However, this measure cannot be used in isolation, as several factors may prevent us from achieving the allowed RoE. These include financial market conditions, regulatory lag (e.g. the time period after a rate or expense is approved for recovery but before we collect same from customers) and decisions by the regulator preventing cost recovery in rates from customers.

We work to increase achieved RoE through:

- productivity improvements;
- positive performance against incentives or earned savings mechanisms, such as available energy-efficiency programmes; and
- filing a new rate case when achieved returns are lower than those the Company could reasonably expect to attain through a new rate case.

The business in detail continued

US regulatory filings

The objectives of our rate case filings are to make sure we have the right cost of service and are able to earn a fair and reasonable rate of return, while providing a safe, reliable and economical service. To achieve these objectives and reduce regulatory lag, we have been successful in many cases in obtaining relief, such as:

- revenue decoupling mechanisms;
- capital trackers;
- commodity-related bad debt true-ups;
- pension and other post-employment benefit true-ups, separately from base rates; and
- performance-based frameworks such as incentives and multi-year plans.

We explain these terms in the table on page 235.

Below, we summarise significant, recent developments in rate filings and the regulatory environment. In 2017/18, we made full rate case filings with Niagara Mohawk (electric and gas), in April 2017; Boston Gas and Colonial Gas, in November 2017; and The Narragansett Electric Company, also in November 2017. A joint proposal, setting forth a three-year rate plan for Niagara Mohawk, was approved by the New York State Public Service Commission (NYPSC) in March 2018. An amended settlement agreement setting forth a three-year rate plan for The Narragansett Electric Company was approved by the Rhode Island Public Utilities Commission (RIPUC) in August 2018. The multi-year rate plan includes an interim fourth year, effective 1 September 2021. An order, establishing new base rates for Boston Gas and Colonial Gas, was approved by the Massachusetts Department of Public Utilities (MADPU) in September 2018. In November 2018, we made a full rate case filing for Massachusetts Electric which resulted in a five-year performance-based ratemaking plan in September 2019. In April 2019, we made a full rate case filing for KEDNY and KEDLI in April 2019. In November 2020, we made a full rate case filing for Boston Gas proposing a five-year performance-based ratemaking plan which is currently pending.

Massachusetts

Massachusetts Electric and Nantucket Electric rate cases

We filed a rate case for Massachusetts Electric and Nantucket Electric with the MADPU on 15 November 2018 with new rates effective on 1 October 2019. The Massachusetts Electric rate case was the first for Massachusetts Electric and Nantucket Electric since the case was filed in 2015. It updated the electric companies' rates to more closely align revenues with the cost of service and bring their earned RoEs closer to the allowed RoE. New rates were approved with an allowed RoE of 9.6% on an equity ratio of 53.5%. The MADPU approved a five-year performance-based ratemaking plan, which adjusts distribution rates annually based on a predetermined formula. As part of its decision, the MADPU required a management audit addressing the Company's strategic planning processes, staffing decisions and its relationship to National Grid USA Service Company, among other items.

Boston Gas Company rate case

On 13 November 2020, we filed a rate case with the MADPU for Boston Gas Company, including a request for approval of a performance-based ratemaking plan (PBR Plan), and related proposals. We requested that the MADPU approve new distribution rates to increase distribution revenues by $220.7 million, including the transfer of $81.9 million of recovery of Boston Gas's Gas System Enhancement Program (GSEP) investments completed through 31 March 2020, from the GSEP factors to base distribution rates, with new rates to be effective 1 October 2021. The actual net revenue deficiency calculated by Boston Gas for distribution rates is $138.8 million, or an incremental increase in distribution revenue of 18.1%. The last Boston Gas rate case was filed in 2017, and this rate case would allow the Company's rates to more closely align revenues with the cost of service and bring the earned RoE closer to the allowed RoE. Boston Gas also presented its Future of Heat proposals to address Massachusetts' ambitious greenhouse gas emissions reduction goals. These proposals are innovative programmes and demonstration projects that the Company has developed to reduce emissions, promote gas demand response, and encourage the development of sustainable heating options and new technologies to advance low carbon heating solutions. Ultimately, the MADPU elected to remove our Future of Heat proposals from the rate case without prejudice for their consideration as part of other proceedings.

Investigation into role of gas distribution companies in achieving climate change goals

On 29 October 2020, the MADPU issued an order opening an investigation into the role of gas distribution companies in achieving the Massachusetts' 2050 climate goals. Noting Massachusetts' work to develop a 2050 Decarbonization Roadmap and a Clean Energy Climate Plan for 2030 (together the 'Roadmaps'), released in December 2020, the MADPU directed the gas distribution companies to jointly hire one or more independent consultants to review the Roadmaps, identify any pathways not examined in the Roadmaps, and perform a detailed study of each gas company that analyses the feasibility of all pathways. On or before 1 March 2022, each company must submit a proposal to the MADPU that includes its recommendations and plans for helping Massachusetts achieve its 2050 climate goals, supported by the consultants' report, that incorporates feedback and advice on its proposals obtained through a stakeholder process.

Management Audit

On 30 September 2019, in its decision regarding Massachusetts Electric Company and Nantucket Electric Company's most recent request for a change in base distribution rates, the MADPU required a comprehensive independent management audit of the company, including a review of its relationship to the National Grid USA Service Company (NGSC). On 25 November 2019, the MADPU formally opened the investigation to undertake the audit. The audit scope included a review of:

- the Company's strategic planning processes;
- National Grid's staffing decisions and the extent to which they affect the Company's efficiency of operations and the productivity of its employees;
- potential management problems through to the highest levels of the organisation, as well as potential management issues related to National Grid's relationship with NGSC;
- investigation of management process issues relating to IT strategy, cybersecurity, and the Phase I EV and Phase II EV Programmes; and
- the Company's management of its interconnection process in light of the Transmission Cluster Study in Central and Western, Massachusetts.

The final audit report was issued on 29 March 2021. Regarding organisational structure, the report recommended improvements to risk management processes/mitigation plans and presentation materials to enable the senior leadership team to have visibility of risks at the right level of granularity, and noted changes are already underway. Regarding strategic planning, the report recommended changes to enhanced alignment of strategic planning and budgetary planning processes to avoid a mismatch between budget and resources, and track strategic decision-making at senior management level. In relation to staffing decisions, the report recommended improvements to strategic workforce/resource planning processes. In addition, the report noted positive changes in information technology strategy and efforts to insource strategic capabilities and recommended that the Company implement more electric vehicle programme metrics to track and identify the programme's effectiveness.

On 30 April 2021, the Company filed its response to the final audit report. As part of the Company's proposal for implementation of the audit's recommendations regarding strategic planning, the Company will submit compliance filings during 2021/22 with more specific plans and policies. These compliance filings will also provide an opportunity for the Company to update the MADPU on its progress.

The MADPU inquiry regarding COVID-19 customer assistance and ratemaking matters
Starting with the First Set of Orders on 24 March 2020, the Chairman of the MADPU issued a series of orders in response to the Governor's declaration of a state of emergency due to the COVID-19 pandemic. In the First Set of Orders, the MADPU prohibited the utilities from terminating service to any customer (including residential, commercial and industrial customers) for non-payment of utility bills until the state of emergency is lifted. Since that time the state has extended the moratorium for residential customers to 1 July 2021, but the moratorium for commercial and industrial (C&I) customers has since expired.

On 11 May 2020, the MADPU opened an inquiry into establishing policies and practices regarding customer assistance and ratemaking measures for gas companies in response to the effects of the COVID-19 pandemic and established a Customer Assistance and Ratemaking Working Group ('Working Group') to develop programmes to assist customers and to establish appropriate policies and practices for the resumption of collections activities. The Working Group's first report on customer assistance issues contained a four-phased plan for customer outreach which was approved by the MADPU on 26 June 2020.

On 31 December 2020, the MADPU approved the consensus implementation issues related to the ratemaking treatment of the COVID-19 customer assistance programmes and determined that the remaining contested issues, including the extent to which the companies will be allowed to recover their COVID-19 costs, should be fully adjudicated in a new proceeding which is currently pending before the MADPU.

On 1 March 2021, the distribution companies filed their initial testimony in D.P.U. 20–91 on the following contested ratemaking issues:

- whether companies with PBR Plans, including National Grid, should be permitted to recover incremental bad debt costs or COVID-19 expenses; and
- whether the distribution companies and their shareholders should absorb some losses associated with the pandemic and resulting economic downturn (the Massachusetts Office of the Attorney General's position is that the companies should only get 50%).

New York

Downstate New York 2019 rate cases
On 30 April 2019, we filed to increase revenues for The Brooklyn Union Gas Company and KeySpan Gas East Corporation for the 12 months ending 31 March 2021. On 14 May 2021, we filed a joint proposal setting out a comprehensive three-year rate plan (financial years 2021–23) for our downstate New York gas business. The rate plan includes: a 8.8% RoE and 48% equity ratio; gas revenue decreases of $4.7 million for KEDNY and $22.8 million for KEDLI in 2020/21, gas revenue increases of $47 million for KEDNY and $28.9 million for KEDLI in 2021/22, and gas revenue increases of $73.4 million for KEDNY and $26.2 million for KEDLI in 2022/23; funding for a three-year capital plan of approximately $2 billion for KEDNY and $1.4 billion for KEDLI; annual reconciliation mechanisms for certain non-controllable costs (e.g. property taxes, pension/OPEBs, and site investigation remediation costs); a gas safety and reliability surcharge to recover the costs of incremental leak-prone pipe replacement; and a number of incentive mechanisms, including earnings adjustment mechanisms (EAMs), which provide a potential incentive of approximately $3.3 million and $2.2 million annually for KEDNY and KEDLI, respectively. The NYPSC final decision is expected later this summer.

NMPC rate case
In July 2020, we filed to adjust Niagara Mohawk's base electric and gas delivery rates in the 12 months ending 30 June 2022. To facilitate a potential multi-year settlement, we submitted comprehensive financial information for two additional data years ending 30 June 2023 and 30 June 2024. On 14 October 2020, the Company filed corrections and updates, which requested rate increases of $103.3 million for the electricity business and $37.1 million for the gas business. We are currently engaged in settlement negotiations. If a settlement can be achieved on a multi-year rate plan, we will file a plan that will be subject to approval by the NYPSC.

Downstate Gas Moratorium
Following the Company's decision to enact a moratorium on new gas connections in 2019 and the resulting threat against the Company's licence to operate in New York, various actions have been taken to address gas supply constraints and improve stakeholder relationships.

During November 2019, a settlement was agreed to immediately resume connecting gas services in Brooklyn, Queens and Long Island for applications that had been put on hold. A total of $36 million in customer assistance, gas conservation measures and clean energy investments has been committed by the Company, along with the appointment of an external monitor and the requirement to deliver a plan to address service to customers through winter 2020/21. In the interest of promoting transparency and to assure the public of the Company's commitment to identifying long-term solutions for the region's energy challenges, we extended the engagement of the external monitor through to September 2021. The settlement agreement also provides a framework for identifying longer-term solutions to address the supply constraints in downstate New York. We developed a range of options to address the natural gas constraints facing the region, which were presented at a series of public meetings in the downstate New York service territory. These meetings were designed to facilitate a dialogue with customers, residents, advocates, business leaders and local elected officials on potential solutions. Following the public meetings, the Companies published a report that summarised the public feedback and provided additional information and analysis on the various long-term natural gas supply options. The companies are now working with regulators, stakeholders, and customers to implement long-term solutions to the gas supply constraints in the region. On 15 April 2021, the NYPSC approved an amendment to the Settlement Agreement, which repurposed $20 million of shareholder funding to establish a deferral for the benefit of customers. The funding would be used as a credit to offset the costs of KEDNY and KEDLI's energy efficiency and demand response programmes being addressed in their ongoing rate cases.

COVID-19 response New York
The New York State Legislature, in response to the state of emergency, enacted amendments to Section 32 of the Public Service Law, referred to as the Parker-Mosley amendments, that provided, inter alia, that no utility corporation shall terminate or discontinue service to any residential customer for non-payment of any overdue charges for the duration of the COVID-19 state of emergency.

Other important regulatory updates
In November 2020, the NYPSC approved our filing requesting permission to deploy advanced metering infrastructure (AMI) in NMPC's upstate New York service territory. The AMI programme involves a six-year, $640 million (20-year NPV) deployment of approximately 1.7 million electric AMI meters and 640,000 AMI-compatible gas modules, with two years of back-office system work beginning in the second quarter of 2021, and electric meter/gas module deployment to begin in the second quarter of 2023. This investment will modernise both customer and grid-facing components of the Company's distribution system and is considered a key enabler of NMPC's strategy to address the comprehensive clean energy goals set forth in New York's Climate Leadership and Community Protection Act.

In addition, on 12 February 2021, the Department of Public Service Staff issued white papers on gas system planning that propose:

- a process for modernising the long-term gas planning process in New York; and
- procedures for managing future moratoria on new gas service connections resulting from supply constraints.

The Gas Planning Paper proposes significant changes to the reporting and regulatory oversight for gas supply planning, including that the Commission direct New York's distributions companies to begin filing long-term supply plans every three years. These supply plans would be similar in many respects to our long-term report for downstate New York, in terms of identifying and analysing various supply options to address different demand scenarios. Staff proposes potential financial incentive mechanisms for developing non-pipeline alternatives, including potential incentives for sourcing renewable natural gas and promoting electrification. The Moratorium Paper proposes a roadmap for managing future moratoria, including requirements for stakeholder notifications, communications plans, and applicant management. Final comments on Staff's proposals are due in June 2021.

The business in detail continued

Rhode Island

Rhode Island combined gas and electric rate case

On 24 August 2018, the RIPUC approved the terms of an Amended Settlement Agreement (ASA). We are currently in year three of the Company's multi-year rate plan. The ASA also requires the Company to file the next rate case so that new rates take effect no later than 1 September 2022, unless the Rhode Island Division of Public Utilities and Carriers consents to an extension of the term and specifies another date upon which rates are to take effect. The Company will file its Rate Year 4 compliance filing by 1 June 2021 for distribution rates for year four of the multi-year rate plan, effective 1 September 2021. The ASA includes an Electric Transportation Initiative (the ET Initiative or Program) to facilitate the growth of Electric Vehicle (EV) adoption and scaling of the market for EV-charging equipment to advance Rhode Island's zero emission vehicles and greenhouse gas emissions policy goals. The ET Initiative includes the following five components:

- Off-Peak Charging Rebate Pilot;
- Charging Station Demonstration Program;
- Discount Pilot for Direct Current Fast Charging (DCFC) Station Accounts;
- Fleet Advisory Services; and
- Electric Transportation Initiative Evaluation.

As of the end of Rate Year 2, the Charging Station Demonstration Program achieved 72% of ET Initiative targets for Level 2 ports and 7% of the target for DCFC ports. The ASA also includes two energy storage demonstration projects because storage is critical for achieving Rhode Island's clean energy future, as it provides the ability to optimise system performance over time and allows intermittent renewable resources to make a larger contribution to overall generation.

Rhode Island Aquidneck Island gas service interruption

On 21 January 2019, we suffered a significant loss of gas supply to the distribution system that serves our customers on Aquidneck Island in Rhode Island. As a result, we made the decision to interrupt the gas service to the Aquidneck Island system to protect the safety of our customers and the public. Overall, approximately 7,500 customers lost their gas service. On 30 October 2019, RIPUC issued an investigation report regarding the gas service interruption which identified the causes of the outages, which included multiple factors, some of which were outside the control of The Narragansett Electric Company. RIPUC's report also recommended several gas system improvements, many of which we have addressed already. On 13 December 2019, we filed our response to the RIPUC's report and continue to meet with RIPUC on a quarterly basis regarding winter reliability issues for Aquidneck Island and Rhode Island. On 23 September 2020, we published a long-term capacity study for energy solutions for Aquidneck Island for stakeholder feedback. We are gathering stakeholder feedback on a hybrid model approach that will offset gas demand growth with advanced non-infrastructure solutions while addressing existing gas capacity and vulnerability challenges with an alternative LNG solution.

Power Sector Transformation/Advanced Metering Functionality and Grid Modernisation Plan

On 27 November 2017, we filed a Power Sector Transformation (PST) Vision and Implementation Plan (the PST Plan) in conjunction with our combined gas and electric rate case. The PST Plan proposed a suite of investments, including the full deployment of Advanced Metering Functionality (AMF) and grid modernisation investments. On 21 January 2021, following more than two years of extensive collaboration with regulators and key stakeholders, we filed an Updated AMF Business Case and Grid Modernisation Plan (GMP) with the RIPUC. The Updated AMF Business Case provides a detailed plan to provide customers with greater control, choice and convenience in their energy consumption through the full-scale deployment of approximately 525,000 electric AMF meters, 277,000 gas modules, and the associated communications network. GMP presents a five-year implementation plan, and a ten-year road map of investments necessary to manage the electric distribution grid more granularly considering a range of Distributed Energy Resource (DER) adoption levels through 2030, as well as a comprehensive cost benefit analysis. Cost recovery for the specific projects and programmes in the GMP will be separately requested as part of future Infrastructure, Safety and Reliability (ISR) Plans or rate cases.

Infrastructure, Safety and Reliability Plans

We filed our 2022 Gas and Electric ISR Plans on 18 December and 21 December 2020, respectively, for effect 1 April 2021. The Electric ISR Plan proposed capital spending of $103.7 million, plus $12 million for total operation and maintenance expenses. The Gas ISR Plan proposed total capital spending of $180.1 million. On 29 March 2021, RIPUC approved the Company's 2021/22 Gas ISR Plan which included $173.2 million of investments, and the Company's 2021/22 Electric ISR Plan which included $101.7 million for capital investments plus an additional $12 million for operation and maintenance expenses. The Electric ISR Plan hearing took place on 16 March 2021. The Gas ISR Plan hearing took place on 11 March 2021.

COVID-19 response Rhode Island

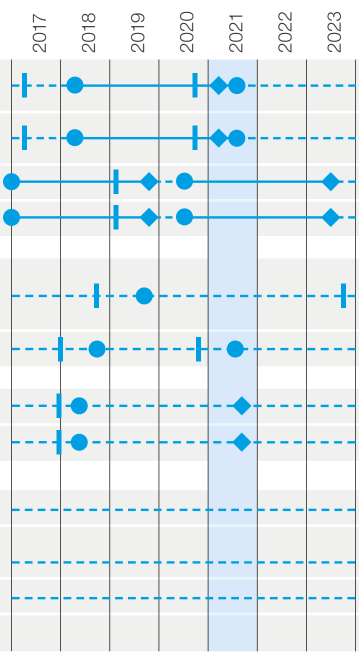
In response to the COVID-19 emergency, effective on 16 March 2020, the RIPUC ordered all electric and natural gas utilities to immediately cease certain collection activities, including termination of service for non-payment. On 13 July 2020, RIPUC, after finding that an emergency still existed for customers eligible for the low-income rate, extended the moratorium on utility shut-offs until 1 November 2020 for customers qualifying for a low-income discount and until 30 September 2020 for remaining residential customers of National Grid. All COVID-19-related moratoria have now expired, and the Company has continued to make progress on the three-stage process for resuming collection activities.

Federal Energy Regulatory Commission

Formula Rate 206 proceeding

On 28 December 2020, FERC approved the settlement of a proceeding it had initiated against the Company and other New England transmission owners in 2015 under Section 206 of the Federal Power Act. The new settlement formula rates will go into effect on 1 January 2022. Permanent formula rate protocols providing for information exchange and challenges will go into effect in June 2023. As part of the settlement approved by the Commission, the parties agreed to a moratorium which applies to Section 205 or Section 206 filings seeking to change Attachment F of the ISO-NE OATT, its appendices or the formula rate Protocols developed as part of the settlement, subject to certain exceptions, until 31 December 2024.

Summary of US price controls and rate plans



Regulator	Entity	Rate base (31 Mar 2021)	Equity-to-debt ratio	Allowed Return on Equity	Achieved Return on Equity (31 Mar 2020)	Revenue decoupling†	Capital tracker‡	Commodity-related bad debt true-up§	Pension/OPEB true-up◊
New York Public Service Commission	Niagara Mohawk[1] (upstate, electricity)	**$6,206m**	**48:52**	**9.0%**	**6.3%**	✓	**P**	**P**	✓
	Niagara Mohawk (upstate, gas)	**$1,467m**	**48:52**	**9.0%**	**7.2%**	✓	**P**	**P**	✓
	KEDNY (downstate)[2,4]	**$4,958m**	**48:52**	**8.8%**	**6.1%**	**P**	**P**	**P**	✓
	KEDLI (downstate)[3,4]	**$3,158m**	**48:52**	**8.8%**	**8.2%**	**P**	**P**	**P**	✓
Massachusetts Department of Public Utilities	Massachusetts Electric/Nantucket Electric	**$3,033m**	**53:47**	**9.6%**	**5.3%**	✓	**P**	✓	✓
	Massachusetts Gas[5]	**$3,521m**	**53:47**	**9.5%**	**5.7%**	✓	**P**	✓	✓
Rhode Island Public Utilities Commission	Narragansett Electric[6]	**$950m**	**51:49**	**9.3%**	**10.0%**	✓	✓	**P**	✓
	Narragansett Gas[6]	**$1,082m**	**51:49**	**9.3%**	**6.9%**	✓	✓	**P**	✓
Federal Energy Regulatory Commission	Narragansett	**$787m**	**50:50**	**10.6%**	**11.1%**	**n/a**	✓	**n/a**	✓
	Canadian Interconnector/Other[7]	**$58m**	**100:0**	**13.0%**	**13.0%**	**n/a**	✓	**n/a**	✓
	New England Power	**$1,970m**	**64:36**	**10.6%**	**11.0%**	**n/a**	✓	**n/a**	✓
	Long Island Generation	**$440m**	**48:52**	**9.9%**	**12.2%**	**n/a**	✓	**n/a**	✓

1. Both transmission and distribution, excluding stranded costs.
2. KeySpan Energy Delivery New York (the Brooklyn Union Gas Company).
3. KeySpan Energy Delivery Long Island (KeySpan Gas East Corporation).
4. National Grid, Department of Public Service Staff, and other settling parties filed a joint proposal for a three-year rate plan beginning April 2020 and ending March 2023. The settlement was filed on 14 May 2021 and a final decision from the NYPSC is expected later this year.
5. The chart shows the anticipated date rates are to be in effect.
6. The Narragansett Electric Company is currently seeking an extension of their current electric and gas rate plans.
7. Equity ratio and return on equity values are for the Canadian Interconnector only.

Rate filing made
New rates effective
Rate plan ends
Rates continue indefinitely
Multi-year rate plan

✓ Feature in place
P Feature partially in place

†Revenue decoupling
A mechanism that removes the link between a utility's revenue and sales volume so that the utility is indifferent to changes in usage. Revenues are reconciled to a revenue target, with differences billed or credited to customers. Allows the utility to support energy efficiency.

‡Capital tracker
A mechanism that allows the recovery of the revenue requirement of incremental capital investment above that embedded in base rates, including depreciation, property taxes and a return on the incremental investment.

§Commodity-related bad debt true-up
A mechanism that allows a utility to reconcile commodity-related bad debt to either actual commodity-related bad debt or to a specified commodity-related bad debt write-off percentage. For electricity utilities, this mechanism also includes working capital.

◊Pension/OPEB true-up
A mechanism that reconciles the actual non-capitalised costs of pension and OPEB and the actual amount recovered in base rates. The difference may be amortised and recovered over a period or deferred for a future rate case.

Internal control and risk factors

Disclosure controls

Our management, including the Chief Executive and Chief Financial Officer, have evaluated the effectiveness of the design and operation of our disclosure controls and procedures as at 31 March 2021. Our disclosure controls and procedures are designed to provide reasonable assurance of achieving their objectives; however, their effectiveness has limitations, including the possibility of human error and the circumvention or overriding of the controls and procedures.

Even effective disclosure controls and procedures provide only reasonable assurance of achieving their objectives. Based on the evaluation, the Chief Executive and Chief Financial Officer concluded that the disclosure controls and procedures are effective to provide reasonable assurance that information required for disclosure in the reports that we file and submit under the Exchange Act is recorded, processed, summarised and reported as and when required and that such information is accumulated and communicated to our management, including the Chief Executive and Chief Financial Officer, as appropriate, to allow timely decisions regarding disclosure.

Internal control over financial reporting

Our management, including the Chief Executive and Chief Financial Officer, have carried out an evaluation of our internal control over financial reporting pursuant to the Disclosure Guidance and Transparency Rules sourcebook and Section 404 of the Sarbanes-Oxley Act 2002. As required by Section 404, management is responsible for establishing and maintaining an adequate system of internal control over financial reporting (as defined in Rules 13a-5(f) and 15d-15(f) under the Exchange Act).

Our internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes, in accordance with generally accepted accounting principles.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management's evaluation of the effectiveness of the Company's internal control over financial reporting was based on the revised Internal Control-Integrated Framework 2013 issued by the Committee of Sponsoring Organizations of the Treadway Commission. Using this evaluation, management concluded that our internal control over financial reporting was effective as at 31 March 2021.

Deloitte LLP, which has audited our consolidated financial statements for the year ended 31 March 2021, has also audited the effectiveness of our internal control over financial reporting.

During the year, there were no changes in our internal control over financial reporting that have materially affected it, or are reasonably likely to materially affect it.

Risk factors

Management of our risks is an important part of our internal control environment, as we describe on pages 24 – 27. In addition to the principal risks listed, we face a number of inherent risks that could have a material adverse effect on our business, financial condition, results of operations and reputation, as well as the value and liquidity of our securities.

Any investment decision regarding our securities and any forward-looking statements made by us should be considered in the light of these risk factors and the cautionary statement set out on page 268. An overview of the key inherent risks we face is provided below.

Risk factors

Law, regulation and political and economic uncertainty

Changes in law or regulation, or decisions by governmental bodies or regulators and increased political and economic uncertainty, could materially adversely affect us.

Most of our businesses are utilities or networks subject to regulation by governments and other authorities. Changes in law or regulation or regulatory policy and precedent (including changes arising as a result of the UK's exit from the European Union), as well as legislation introduced to facilitate the attainment of net zero emissions targets, and decisions of governmental bodies or regulators in the countries or states in which we operate could materially adversely affect us. We may fail to deliver any one of our customer, investor and wider stakeholder propositions due to increased political and economic uncertainty. Subject to completion of the WPD Acquisition, we may come under increased regulatory scrutiny resulting in greater costs of compliance.

If we fail to respond to or meet our own commitments as a leader in relation to climate change and the energy transition, we may be unable to influence future energy policy and deliver our strategy.

Decisions or rulings concerning the following (as examples) could have a material adverse impact on our results of operations, cash flows, the financial condition of our businesses and the ability to develop those businesses in the future:

- the implementation of the RIIO-2 price controls; whether licences, approvals or agreements to operate or supply are granted, amended or renewed; whether consents for construction projects are granted in a timely manner; or whether there has been any breach of the terms of a licence, approval or regulatory requirement; and
- timely recovery of incurred expenditure or obligations; the ability to pass through commodity costs; a decoupling of energy usage and revenue, and other decisions relating to the impact of general economic conditions on us, our markets and customers; implications of climate change and of advancing energy technologies; whether aspects of our activities are contestable; and the level of permitted revenues and dividend distributions for our businesses and in relation to proposed business development activities.

For further information, see pages 228 – 235, which explain our regulatory environment in detail.

Potentially harmful activities

Aspects of the work we do could potentially harm employees, contractors, members of the public or the environment.

Potentially hazardous activities that arise in connection with our business include: the generation, transmission and distribution of electricity; and the storage, transmission and distribution of gas. Electricity and gas utilities also typically use and generate hazardous and potentially hazardous products and by-products. In addition, there may be other aspects of our operations that are not currently regarded or proved to have adverse effects but could become so, such as the effects of electric and magnetic fields.

A significant safety or environmental incident, or the failure of our safety processes or of our occupational health plans, as well as the breach of our regulatory or contractual obligations or our climate change targets, could materially adversely affect our results of operations and our reputation.

Safety is a fundamental priority for us, and we commit significant resources and expenditure to ensuring process safety; to monitoring personal safety, occupational health and environmental performance; and to meeting our obligations under negotiated settlements.

We are subject to laws and regulations in the UK and US governing health and safety matters to protect the public and our employees and contractors, who could potentially be harmed by these activities, as well as laws and regulations relating to pollution, the protection of the environment, and the use and disposal of hazardous substances and waste materials.

These expose us to costs and liabilities relating to our operations and properties, including those inherited from predecessor bodies, whether currently or formerly owned by us, and sites used for the disposal of our waste.

The cost of future environmental remediation obligations is often inherently difficult to estimate, and uncertainties can include the extent of contamination, the appropriate corrective actions and our share of the liability. We are increasingly subject to regulation in relation to climate change and are affected by requirements to reduce our own carbon emissions (including our own commitment to reduce our greenhouse gas emissions to net zero by 2050) as well as to enable reduction in energy use by our customers. If more onerous requirements are imposed or our ability to recover these costs under regulatory frameworks changes, this could have a material adverse impact on our business, reputation, results of operations and financial position.

Infrastructure and IT systems

We may suffer a major network failure or interruption, or may not be able to carry out critical operations due to the failure of infrastructure, data or technology or a lack of supply.

Operational performance could be materially adversely affected by: a failure to maintain the health of our assets or networks; inadequate forecasting of demand and inadequate record keeping or control of data or failure of information systems and supporting technology. This, in turn, could cause us to fail to meet agreed standards of service, incentive and reliability targets, or be in breach of a licence, approval, regulatory requirement or contractual obligation. Even incidents that do not amount to a breach could result in adverse regulatory and financial consequences, as well as harming our reputation.

Where demand for electricity or gas exceeds supply, including where we do not adequately forecast and respond to disruptions in energy supplies, and our balancing mechanisms are not able to mitigate this fully, a lack of supply to consumers may damage our reputation.

In addition to these risks, we may be affected by other potential events that are largely outside our control, such as the impact of the COVID-19 pandemic (including on our operations and as a result of large-scale working from home by our employees), weather (including as a result of climate change and major storms), unlawful or unintentional acts of third parties, insufficient or unreliable supply, or force majeure.

Weather conditions can affect financial performance, and severe weather that causes outages or damages infrastructure, together with our actual or perceived response, could materially adversely affect operational and potentially business performance and our reputation.

Malicious attack, sabotage or other intentional acts, including breaches of our cyber security, may also damage our assets (which include critical national infrastructure) or otherwise significantly affect corporate activities and, as a consequence, have a material adverse impact on our reputation, business, results of operations and financial condition.

Unauthorised access to, or deliberate breaches of, our IT systems may also lead to manipulation of our proprietary business data or customer information. Unauthorised access to private customer information may make us liable for a violation of data privacy regulations. Even where we establish business continuity controls and security against threats to our systems, these may not be sufficient.

Pandemics

We face risks related to health epidemics and other outbreaks.

As seen in the context of COVID-19, pandemics and their associated counter-measures may affect countries, communities, supply chains and markets, including the UK and our service territory in the US. The spread of such pandemics could have adverse effects on our workforce, which could affect our ability to maintain our networks and provide service. In addition, disruption of supply chains could adversely affect our systems or networks.

Pandemics such as COVID-19 can also result in extraordinary economic circumstances in our markets which could negatively affect our customers' ability to pay our invoices in the US or the charges payable to the system operators for transmission services in the UK. Measures such as the suspension of debt collection and customer termination activities across our service area in response to such pandemics are likely to result in near-term lower customer collections, and could result in increasing levels of bad debt and associated provisions.

The extent to which pandemics such as COVID-19 may affect our liquidity, business, financial condition, results of operations and reputation will depend on future developments, which are highly uncertain and cannot be predicted, and will depend on the severity of the relevant pandemic, the scope, duration, cost to National Grid and overall economic impact of actions taken to contain it or treat its effects.

Business performance

Current and future business performance may not meet our expectations or those of our regulators and shareholders.

Earnings maintenance and growth from our regulated gas and electricity businesses will be affected by our ability to meet or exceed efficiency targets and service quality standards set by, or agreed with, our regulators.

If we do not meet these targets and standards, or if we are not able to deliver the US rate plans strategy successfully, we may not achieve the expected benefits, our business may be materially adversely affected and our performance, results of operations and reputation may be materially harmed and we may be in breach of regulatory or contractual obligations.

Internal control and risk factors continued

Growth and business development activity

Failure to respond to external market developments and execute our growth strategy may negatively affect our performance. Conversely, new businesses or activities that we undertake alone or with partners may not deliver target outcomes and may expose us to additional operational and financial risk.

Failure to grow our core business sufficiently and have viable options for new future business over the longer term, or failure to respond to the threats and opportunities presented by emerging technology or innovation (including for the purposes of adapting our networks to meet the challenges of increasing distributed energy resources), could negatively affect the Group's credibility and reputation and jeopardise the achievement of intended financial returns.

Our business development activities, including the WPD Acquisition, the NECO sale and the announced proposed sale of a stake in our Gas Transmission business and the delivery of our growth ambition, involve acquisitions, disposals, joint ventures, partnering and organic investment opportunities, such as development activities relating to changes to the energy mix and the integration of distributed energy resources and other advanced technologies. These are subject to a wide range of both external uncertainties (including the availability of potential investment targets and attractive financing and the impact of competition for onshore transmission in both the UK and US) and internal uncertainties (including actual performance of our existing operating companies and our business planning model assumptions and ability to integrate acquired businesses effectively). As a result, we may suffer unanticipated costs and liabilities and other unanticipated effects.

We may also be liable for the past acts, omissions or liabilities of companies or businesses we have acquired, which may be unforeseen or greater than anticipated. In the case of joint ventures, we may have limited control over operations and our joint venture partners may have interests that diverge from our own.

The occurrence of any of these events could have a material adverse impact on our results of operations or financial condition, and could also impact our ability to enter into other transactions.

Financing and liquidity

An inability to access capital markets at commercially acceptable interest rates could affect how we maintain and grow our businesses.

Our businesses are financed through cash generated from our ongoing operations, bank lending facilities and the capital markets, particularly the long-term debt capital markets.

Some of the debt we issue is rated by credit rating agencies, and changes to these ratings may affect both our borrowing capacity and borrowing costs. In addition, restrictions imposed by regulators may also limit how we service the financial requirements of our current businesses or the financing of newly acquired or developing businesses.

Financial markets can be subject to periods of volatility and shortages of liquidity – for example, as a result of unexpected political or economic events or the COVID-19 pandemic. If we were unable to access the capital markets or other sources of finance at commercially acceptable rates for a prolonged period, our cost of financing may increase, the discretionary and uncommitted elements of our proposed capital investment programme may need to be reconsidered, and the manner in which we implement our strategy may need to be reassessed.

Such events could have a material adverse impact on our business, results of operations and prospects.

Some of our regulatory agreements impose lower limits for the long-term unsecured debt credit ratings that certain companies within the Group must hold or the amount of equity within their capital structures, including a limit requiring National Grid plc to hold an investment-grade long-term senior unsecured debt credit rating.

In addition, some of our regulatory arrangements impose restrictions on the way we can operate. These include regulatory requirements for us to maintain adequate financial resources within certain parts of our operating businesses and may restrict the ability of National Grid plc and some of our subsidiaries to engage in certain transactions, including paying dividends, lending cash and levying charges.

The inability to meet such requirements, or the occurrence of any such restrictions, may have a material adverse impact on our business and financial condition.

Our debt agreements and banking facilities contain covenants, including those relating to the periodic and timely provision of financial information by the issuing entity, restrictions on disposals and financial covenants, such as restrictions on the level of subsidiary indebtedness.

Failure to comply with these covenants, or to obtain waivers of those requirements, could in some cases trigger a right, at the lender's discretion, to require repayment of some of our debt and may restrict our ability to draw upon our facilities or access the capital markets.

Exchange rates, interest rates and commodity price indices

Changes in foreign currency rates, interest rates or commodity prices could materially impact earnings or our financial condition.

We have significant operations in the US and are therefore subject to the exchange rate risks normally associated with non-UK operations including the need to translate US assets, liabilities, income and expenses into sterling (our reporting currency).

In addition, our results of operations and net debt position may be affected because a significant proportion of our borrowings, derivative financial instruments and commodity contracts are affected by changes in interest rates, commodity price indices and exchange rates, in particular the dollar-to-sterling exchange rate.

Furthermore, our cash flow may be materially affected as a result of settling hedging arrangements entered into to manage our exchange rate, interest rate and commodity price exposure, or by cash collateral movements relating to derivative market values, which also depend on the sterling exchange rate into the euro and other currencies.

Post-retirement benefits

We may be required to make significant contributions to fund pension and other post-retirement benefits.

We participate in a number of pension schemes that together cover substantially all our employees. In both the UK and US, such schemes include various large defined benefit schemes where the scheme assets are held independently of our own financial resources.

In the US, we also have other post-retirement benefit schemes. Estimates of the amount and timing of future funding for the UK and US schemes are based on actuarial assumptions and other factors, including: the actual and projected market performance of the scheme assets; future long-term bond yields; average life expectancies; and relevant legal requirements.

Actual performance of scheme assets may be affected by volatility in debt and equity markets.

Changes in these assumptions or other factors may require us to make additional contributions to these pension schemes which, to the extent they are not recoverable under our price controls or state rate plans, could materially adversely affect the results of our operations and financial condition.

Customers and counterparties

Customers and counterparties may not perform their obligations.

Our operations are exposed to the risk that customers, suppliers, banks and other financial institutions, and others with whom we do business, will not satisfy their obligations, which could materially adversely affect our financial position.

This risk is significant where our subsidiaries have concentrations of receivables from gas and electricity utilities and their affiliates, as well as industrial customers and other purchasers, and may also arise where customers are unable to pay us as a result of increasing commodity prices or adverse economic conditions (including as a result of the COVID-19 pandemic).

To the extent that counterparties are contracted with for physical commodities (gas and electricity) and they experience events that impact their own ability to deliver, we may suffer supply interruption as described in Infrastructure and IT systems on page 237.

There is also a risk to us where we invest excess cash or enter into derivatives and other financial contracts with banks or other financial institutions. Banks who provide us with credit facilities may also fail to perform under those contracts.

Employees and others

We may fail to attract, develop and retain employees with the competencies (including leadership and business capabilities), values and behaviours required to deliver our strategy and vision and ensure they are engaged to act in our best interests.

Our ability to implement our strategy depends on the capabilities and performance of our employees and leadership at all levels of the business. Our ability to implement our strategy and vision may be negatively affected by the loss of key personnel or an inability to attract, integrate, engage and retain appropriately qualified personnel (including people with the skills to help us deliver on our net zero commitments) or if significant disputes arise with our employees.

As a result, there may be a material adverse effect on our business, financial condition, results of operations and prospects.

There is a risk that an employee or someone acting on our behalf may breach our internal controls or internal governance framework, or may contravene applicable laws and regulations. This could have an impact on the results of our operations, our reputation and our relationship with our regulators and other stakeholders.

Index to Directors' Report and other disclosures

Shareholder information

Articles of Association

The following description is a summary of the material terms of our Articles of Association (Articles) and applicable English law. It is a summary only and is qualified in its entirety by reference to the Articles.

The Company is proposing at the 2021 AGM to update the Articles to take account of recent changes to company law and market changes, including in particular the flexibility for the Company to hold general meetings by allowing combined physical and electronic general meetings (also known as 'hybrid' meetings). The Notice of Meeting for the 2021 AGM, which sets out details of the proposed amendments to the Articles and the proposed form of the amended Articles (the 'New Articles') are available on the Company's website.

Summary

The Articles set out the Company's internal regulations. Copies are available on our website and upon request. Amendments to the Articles have to be approved by at least 75% of those voting at a general meeting of the Company. Subject to company law and the Articles, the Directors may exercise all the powers of the Company. They may delegate authorities to committees and day-to-day management and decision-making to individual Executive Directors. We set out the committee structure on page 74.

General

The Company is incorporated under the name National Grid plc and is registered in England and Wales with registered number 4031152. Under the Companies Act 2006, the Company's objects are unrestricted.

Directors

Under the Articles, a Director must disclose any personal interest in a matter and may not vote in respect of that matter, subject to certain limited exceptions. As permitted under the Companies Act 2006, the Articles allow non-conflicted Directors to authorise a conflict or potential conflict for a particular matter. In doing so, the non-conflicted Directors must act in a way they consider, in good faith, will be most likely to promote the success of the Company for the benefit of the shareholders as a whole.

The Directors (other than a Director acting in an executive capacity) are paid fees for their services. In total, these fees must not exceed £2,000,000 per year or any higher sum decided by an ordinary resolution at a general meeting of shareholders. In addition, special pay may be awarded to a Director who acts in an executive capacity, serves on a committee, performs services which the Directors consider to extend beyond the ordinary duties of a Director, devotes special attention to the business of National Grid, or goes or lives abroad on the Company's behalf. Directors may also receive reimbursement for expenses properly incurred, and may be awarded pensions and other benefits. The compensation awarded to the Executive Directors is determined by the Remuneration Committee. Further details of Directors' remuneration are set out in the Directors' Remuneration Report (see pages 92 – 113).

The Directors may exercise all the powers of National Grid to borrow money. However, the aggregate principal amount of all the Group's borrowings outstanding at any time must not exceed £35 billion or any other amount approved by shareholders by an ordinary resolution at a general meeting. At the Company's AGM for 2020, shareholders approved, by ordinary resolution, an increase in this amount (which had remained unchanged since the 2009 AGM) to £45 billion and to enable the funding of growth over the medium term in an efficient manner. At the General Meeting on 22 April 2021 to approve the WPD Acquisition, shareholders approved a further increase in this amount to £55 billion to reflect the additional borrowing required for the WPD Acquisition and the taking on of existing WPD debt. The amount specified in the New Articles reflect these resolutions.

Directors can be appointed or removed by the Board or shareholders at a general meeting. Directors must stand for election at the first AGM following their appointment to the Board and the New Articles provide, in line with market practice, that they must be recommended by the Board or the Company must have received written confirmation of their willingness to act as Director. Each Director must retire at least every three years, although they will be eligible for re-election. In accordance with best practice introduced by the UK Corporate Governance Code, all Directors wishing to continue in office currently offer themselves for re-election annually. No person is disqualified from being a Director or is required to vacate that office by reason of attaining a maximum age.

A Director is not required to hold shares in National Grid in order to qualify as a Director.

Rights, preferences and restrictions

(i) Dividend rights

National Grid may not pay any dividend otherwise than out of profits available for distribution under the Companies Act 2006 and other applicable provisions of English law. In addition, as a public company, National Grid may only make a distribution if, at the time of the distribution, the amount of its net assets is not less than the aggregate of its called-up share capital and undistributable reserves (as defined in the Companies Act 2006), and to the extent that the distribution does not reduce the amount of those assets to less than that aggregate. Ordinary shareholders and American Depositary Share (ADS) holders receive dividends.

Subject to these points, shareholders may, by ordinary resolution, declare dividends in accordance with the respective rights of the shareholders, but not exceeding the amount recommended by the Board. The Board may pay interim dividends if it considers that National Grid's financial position justifies the payment. Any dividend or interest unclaimed for 12 years from the date when it was declared or became due for payment will be forfeited and revert to National Grid, and the New Articles clarify that the Company may use such unclaimed dividends for the Company's benefit as the Directors may think fit.

(ii) Voting rights

Subject to any rights or restrictions attached to any shares and to any other provisions of the Articles, at any general meeting on a show of hands, every shareholder who is present in person will have one vote and, on a poll, every shareholder will have one vote for every share they hold. On a show of hands or poll, shareholders may cast votes either personally or by proxy. A proxy need not be a shareholder. Under the Articles, all substantive resolutions at a general meeting must be decided on a poll and the New Articles provide that voting on resolutions at a general meeting that is held at least in part using an electronic platform must be decided on a poll. Ordinary shareholders and ADS holders can vote at general meetings.

(iii) Liquidation rights

In a winding up, a liquidator may (in each case with the sanction of a special resolution passed by the shareholders and any other sanction required under English law): (a) divide among the shareholders the whole or any part of National Grid's assets (whether the assets are of the same kind or not); the liquidator may, for this purpose, value any assets and determine how the division should be carried out as between shareholders or different classes of shareholders, or (b) transfer any part of the assets to trustees on trust for the benefit of the shareholders as the liquidator determines. In neither case will a shareholder be compelled to accept assets upon which there is a liability.

(iv) Restrictions

There are no restrictions on the transfer or sale of ordinary shares. Some of the Company's employee share plans, details of which are contained in the Directors' Remuneration Report, include restrictions on the transfer of ordinary shares while the ordinary shares are subject to the plan. Where, under an employee share plan operated by the Company, participants are the beneficial owners of the ordinary shares but not the registered owner, the voting rights may be exercised by the registered owner at the direction of the participant. Treasury shares do not attract a vote or dividends.

(v) Variation of rights

Subject to applicable provisions of English law, the rights attached to any class of shares of National Grid may be varied or cancelled. This must be with the written consent of the holders of three quarters in nominal value of the issued shares of that class, or with the sanction of a special resolution passed at a separate meeting of the holders of the shares of that class.

General meetings

AGMs must be convened each year within six months of the Company's accounting reference date upon 21 clear days' advance written notice. Under the Articles, any other general meeting may be convened provided at least 14 clear days' written notice is given, subject to annual approval of shareholders. In certain limited circumstances, the Company can convene a general meeting by shorter notice. The notice must specify, among other things, the nature of the business to be transacted, the place, the date and the time of the meeting. As at the date of this report, it will be possible to hold the Company's 2021 AGM as a physical meeting in accordance with the UK government's roadmap to ease COVID-19 restrictions across England. However, given the unpredictable circumstances of the COVID-19 pandemic and to ensure the health and safety of all our shareholders and colleagues, we may be required to rapidly adapt these arrangements to respond to the UK government guidelines. Please ensure you continue to monitor our website nationalgrid.com/investors/shareholder-information/agm for any updates to the arrangements for the AGM.

Rights of non-residents

There are no restrictions under the Articles that would limit the rights of persons not resident in the UK to vote in relation to ordinary shares.

Disclosure of interests

Under the Companies Act 2006, National Grid may, by written notice, require a person whom it has reasonable cause to believe to be or to have been, in the last three years, interested in its shares to provide additional information relating to that interest. Under the Articles, failure to provide such information may result in a shareholder losing their rights to attend, vote or exercise any other right in relation to shareholders' meetings.

Under the UK Disclosure Guidance and Transparency Rules (DTR) sourcebook, there is also an obligation on a person who acquires or ceases to have a notifiable interest in shares in National Grid to notify the Company of that fact. The disclosure threshold is 3% and disclosure is required each time the person's direct and indirect holdings reach, exceed or fall below each 1% threshold thereafter.

The UK City Code on Takeovers and Mergers imposes strict disclosure requirements regarding dealings in the securities of an offeror or offeree company, and also on their respective associates, during the course of an offer period. Other regulators in the UK, US and elsewhere may have, or assert, notification or approval rights over acquisitions or transfers of shares.

Depositary payments to the Company

The Depositary (The Bank of New York Mellon) reimburses the Company for certain expenses it incurs in relation to the ADS programme. The Depositary also pays the standard out-of-pocket maintenance costs for the ADSs, which consist of the expenses for the mailing of annual and interim financial reports, printing and distributing dividend cheques, the electronic filing of US federal tax information, mailing required tax forms, stationery, postage, facsimiles and telephone calls. It also reimburses the Company for certain investor relationship programmes or special investor relations promotional activities. There are limits on the amount of expenses for which the Depositary will reimburse the Company, but the amount of reimbursement is not necessarily tied to the amount of fees the Depositary collects from investors.

For the period 18 June 2020 to 19 May 2021, the Company received a total of $1,943,797.24 in reimbursements from the Depositary consisting of $1,112,830.34, $285,087.01 and $545,879.89 received in October 2020, December 2020 and March 2021 respectively. Fees that are charged on cash dividends will be apportioned between the Depositary and the Company.

Any questions from ADS holders should be directed to The Bank of New York Mellon at the contact details on page 267.

Description of securities other than equity securities: Depositary fees and charges

The Depositary collects fees by deducting them from the amounts distributed or by selling a portion of distributable property for:

- delivery and surrender of ADSs directly from investors depositing shares or surrendering ADSs for the purpose of withdrawal or from intermediaries acting for them; and
- making distributions to investors (including, it is expected, cash dividends).

The Depositary may generally refuse to provide fee-attracting services until its fees for those services are paid.

Persons depositing or withdrawing shares must pay:	For:
$5.00 per 100 ADSs (or portion of 100 ADSs)	Issuance of ADSs, including issuances resulting from a distribution of shares or rights or other property; cancellation of ADSs for the purpose of withdrawal, including if the Deposit agreement terminates; and distribution of securities distributed to holders of deposited securities that are distributed by the Depositary to ADS holders.
Registration or transfer fees	Transfer and registration of shares on our share register to or from the name of the Depositary or its agent when they deposit or withdraw shares.
Expenses of the Depositary	Cable, telex and facsimile transmissions (when expressly provided in the Deposit agreement); and converting foreign currency to dollars.
Taxes and other governmental charges the Depositary or the Custodian has to pay on any ADS or share underlying an ADS, for example, stock transfer taxes, stamp duty or withholding taxes	As necessary.

The Company's Deposit agreement under which the ADSs are issued allows a fee of up to $0.05 per ADS to be charged for any cash distribution made to ADS holders, including cash dividends. ADS holders who receive cash in relation to the 2020/21 final dividend will be charged a fee of $0.02 per ADS by the Depositary prior to distribution of the cash dividend.

Documents on display

National Grid is subject to the US Securities and Exchange Commission (SEC) reporting requirements for foreign companies. The Company's Form 20-F and other filings can be viewed on the National Grid website as well as the SEC website at sec.gov.

Shareholder information continued

Events after the reporting period

There were no events after the reporting period.

Exchange controls

There are currently no UK laws, decrees or regulations that restrict the export or import of capital, including, but not limited to, foreign exchange control restrictions, or that affect the remittance of dividends, interest or other payments to non-UK resident holders of ordinary shares except as otherwise set out in Taxation on pages 243 and 244 and except in respect of the governments of and/or certain citizens, residents or bodies of certain countries (described in applicable Bank of England Notices or European Union Council Regulations in force as at the date of this document).

Material interests in shares

As at 31 March 2021, National Grid had been notified of the following holdings in voting rights of 3% or more in the issued share capital of the Company:

	Number of ordinary shares	% of voting rights[1]	Date of last notification of interest
BlackRock, Inc.	253,998,855	7.21	1 December 2020
The Capital Group Companies, Inc.	145,094,617	3.88	16 April 2015

1. This number is calculated in relation to the issued share capital at the time the holding was disclosed.

As at 19 May 2021, no further notifications have been received.

The rights attached to ordinary shares are detailed on page 240. All ordinary shares and all major shareholders have the same voting rights. The Company is not, to the best of its knowledge, directly or indirectly controlled.

Share capital

As at 19 May 2021, the share capital of the Company consists of ordinary shares of $12^{204/473}$ pence nominal value each and ADSs, which represent five ordinary shares each.

Authority to purchase shares

Shareholder approval was given at the 2020 AGM to purchase up to 10% of the Company's share capital (being 351,013,155 ordinary shares). The Directors intend to seek shareholder approval to renew this authority at the 2021 AGM.

In some circumstances, the Company may find it advantageous to have the authority to purchase its own shares in the market, where the Directors believe this would be in the interests of shareholders generally. The Directors believe that it is an important part of the financial management of the Company to have the flexibility to repurchase issued shares to manage its capital base, including actively managing share issuances from the operation of the scrip dividend scheme. It is expected that repurchases to manage share issuances under the scrip dividend scheme will not exceed 2.5% of the issued share capital (excluding treasury shares) per annum.

When purchasing shares, the Company has taken, and will continue to take, into account market conditions prevailing at the time, other investment and financing opportunities, and the overall financial position of the Company.

At the 2020 AGM, the Company sought authority to purchase ordinary shares in the capital of the Company as part of the management of the dilutive effect of share issuances under the scrip dividend scheme. During the year, the Company did not purchase any of its own shares.

	Number of shares	Total nominal value	% of called up share capital
Shares held in Treasury purchased in prior years[1]	271,931,784	£33,804,627.69[2]	7.19[1]
Shares purchased and held in Treasury during the year	–	–	–
Shares transferred from Treasury during the year (to employees under employee share plans)	6,172,027	£767,262.55[2]	0.16[3]
Maximum number of shares held in Treasury during the year	271,931,784	£33,804,627.69[2]	7.13[3]

1. Called-up share capital: 3,780,237,016 as at 31 March 2020.
2. Nominal value: $12^{204/473}$p.
3. Called-up share capital of 3,814,951,606 ordinary shares as at the date of this report.

As at the date of this report, the Company held 259,621,074 ordinary shares as treasury shares. This represented 6.81% of the Company's called-up share capital.

Authority to allot shares

Shareholder approval was given at the 2020 AGM to allot shares of up to one third of the Company's share capital. The Directors are seeking this same level of authority this year. The Directors consider that the Company will have sufficient flexibility with this level of authority to respond to market developments and that this authority is in line with investor guidelines.

The Directors currently have no intention of issuing new shares or of granting rights to subscribe for or convert any security into shares. This is except in relation to, or in connection with, the operation and management of the Company's scrip dividend scheme and the exercise of options under the Company's share plans. No issue of shares will be made that would effectively alter control of the Company without the sanction of shareholders in a general meeting.

The Company expects to actively manage the dilutive effect of share issuance arising from the operation of the scrip dividend scheme. In some circumstances, additional shares may be allotted to the market for this purpose under the authority provided by this resolution. Under these circumstances, it is expected that the associated allotment of new shares (or rights to subscribe for or convert any security into shares) will not exceed 1% of the issued share capital (excluding treasury shares) per annum.

Dividend waivers

The trustee of the National Grid Employee Share Trust, which is independent of the Company, waived the right to dividends paid during the year. They have also agreed to waive the right to future dividends, in relation to the ordinary shares and ADSs held by the trust.

Under the Company's ADS programme, the right to dividends in relation to the ordinary shares underlying the ADSs was waived during the year, under an arrangement whereby the Company pays the monies to satisfy any dividends separately to the Depositary for distribution to ADS holders entitled to the dividend. This arrangement is expected to continue for future dividends.

Share information

National Grid ordinary shares are listed on the London Stock Exchange under the symbol NG. The ADSs are listed on the New York Stock Exchange under the symbol NGG.

Shareholder analysis

The following table includes a brief analysis of shareholder numbers and shareholdings as at 31 March 2021.

	Number of shareholders	% of shareholders	Number of shares	% of shares[1]
1–50	163,850	21.22	4,977,152	0.13
51–100	194,515	25.19	13,646,168	0.36
101–500	322,508	41.77	67,393,746	1.77
501–1,000	45,487	5.89	31,660,235	0.83
1,001–10,000	43,014	5.57	105,181,894	2.76
10,001–50,000	1,714	0.22	31,282,895	0.82
50,001–100,000	206	0.03	14,734,456	0.39
100,001–500,000	413	0.05	99,665,659	2.61
500,001–1,000,000	151	0.02	109,396,417	2.87
1,000,001+	302	0.04	3,337,012,984	87.47
Total	772,160	100	3,814,951,606	100

1. Percentages have been rounded to two decimal places.

Taxation

This section provides information about certain US federal income tax and UK tax consequences for US Holders (defined below) of owning ADSs and ordinary shares. A US Holder is the beneficial owner of ADSs or ordinary shares who:

- is for US federal income tax purposes (i) an individual citizen or resident of the United States; (ii) a corporation created or organised under the laws of the United States, any state thereof or the District of Columbia; (iii) an estate, the income of which is subject to US federal income tax without regard to its source; or (iv) a trust, if a court within the United States is able to exercise primary supervision over the administration of the trust and one or more US persons have the authority to control all substantial decisions of the trust, or the trust has elected to be treated as a domestic trust for US federal income tax purposes; and
- does not hold ADSs or ordinary shares in connection with the conduct of a business or the performance of services in the UK or otherwise in connection with a branch, agency or permanent establishment in the UK.

This section is not a comprehensive description of all the US federal income tax and UK tax considerations that may be relevant to any particular investor (including consequences under the US alternative minimum tax or net investment income tax). Neither does it address state, local or other tax laws. National Grid has assumed that shareholders, including US Holders, are familiar with the tax rules applicable to investments in securities generally and with any special rules to which they may be subject. This discussion deals only with US Holders who hold ADSs or ordinary shares as capital assets. It does not address the tax treatment of investors who are subject to special rules. Such investors may include:

- financial institutions;
- insurance companies;
- dealers in securities or currencies;
- investors who elect mark-to-market treatment;
- entities treated as partnerships or other pass-through entities and their partners;
- individual retirement accounts and other tax-deferred accounts;
- tax-exempt organisations;
- investors who own (directly or indirectly) 10% or more of our shares (by vote or value);
- investors who hold ADSs or ordinary shares as a position in a straddle, hedging transaction or conversion transaction;
- individual investors who have ceased to be resident in the UK for a period of five years or less;
- persons that have ceased to be US citizens or lawful permanent residents of the US; and
- US Holders whose functional currency is not the US dollar.

The statements regarding US and UK tax laws and administrative practices set forth below are based on laws, treaties, judicial decisions and regulatory interpretations that were in effect on the date of this document. These laws and practices are subject to change without notice, potentially with retroactive effect. In addition, the statements set forth below are based on the representations of the Depositary and assume that each party to the Deposit agreement will perform its obligations thereunder in accordance with its terms.

US Holders of ADSs generally will be treated as the owners of the ordinary shares represented by those ADSs for US federal income tax purposes. For the purposes of the Tax Convention, the Estate Tax Convention and UK tax considerations, this discussion assumes that a US Holder of ADSs will be treated as the owner of the ordinary shares represented by those ADSs. HMRC has stated that it will continue to apply its long-standing practice of treating a holder of ADSs as holding the beneficial interest in the ordinary shares represented by the ADSs; however, we note that this is an area of some uncertainty and may be subject to change.

US Holders should consult their own advisors regarding the tax consequences of buying, owning and disposing of ADSs or ordinary shares depending on their particular circumstances, including the effect of any state, local or other tax laws.

Taxation of dividends

The UK does not currently impose a withholding tax on dividends paid to US Holders.

US Holders should assume that any cash distribution paid by us with respect to ADSs or ordinary shares will be reported as dividend income for US federal income tax purposes. While dividend income received from non-US corporations is generally taxable to a non-corporate US Holder as ordinary income for US federal income tax purposes, dividend income received by a non-corporate US Holder from us generally will be taxable at the same favourable rates applicable to long-term capital gains provided (i) either: (a) we are eligible for the benefits of the Tax Convention or (b) ADSs or ordinary shares are treated as 'readily tradable' on an established securities market in the United States; and (ii) we are not, for our taxable year during which the dividend is paid or the prior year, a passive foreign investment company for US federal income tax purposes (a PFIC), and certain other requirements are met. We expect that our shares will be treated as 'readily tradable' on an established securities market in the United States as a result of the trading of ADSs on the New York Stock Exchange. We also believe we are eligible for the benefits of the Tax Convention.

Based on our audited financial statements and the nature of our business activities, we believe that we were not treated as a PFIC for US federal income tax purposes with respect to our taxable year ending 31 March 2021. In addition, based on our current expectations regarding the value and nature of our assets, the sources and nature of our income, and the nature of our business activities, we do not anticipate becoming a PFIC in the foreseeable future.

Dividends received by corporate US Holders with respect to ADSs or ordinary shares will not be eligible for the dividends-received deduction that is generally allowed to corporations.

Taxation of capital gains

Subject to specific rules relating to assets that derive at least 75% of their value from UK land, US Holders will not be subject to UK taxation on any capital gain realised on the sale or other disposition of ADSs or ordinary shares.

Provided that we are not a PFIC for any taxable year during which a US Holder holds their ADSs or ordinary shares, upon a sale or other disposition of ADSs or ordinary shares, a US Holder generally will recognise a capital gain or loss for US federal income tax purposes that is equal to the difference between the US dollar value of the amount realised on the sale or other disposition and the US Holder's adjusted tax basis in the ADSs or ordinary shares. Such capital gain or loss generally will be long-term capital gain or loss if the ADSs or ordinary shares were held for more than one year. For non-corporate US Holders, long-term capital gain is generally taxed at a lower rate than ordinary income. A US Holder's ability to deduct capital losses is subject to significant limitations.

Shareholder information continued

US information reporting and backup withholding tax
Dividend payments made to US Holders and proceeds paid from the sale, exchange, redemption or disposal of ADSs or ordinary shares to US Holders may be subject to information reporting to the US Internal Revenue Service (IRS). Such payments may be subject to backup withholding taxes if the US Holder fails to provide an accurate taxpayer identification number or certification of exempt status or fails to comply with applicable certification requirements.

US Holders should consult their tax advisors about these rules and any other reporting obligations that may apply to the ownership or disposition of ADSs or ordinary shares. Such obligations include reporting requirements related to the holding of certain foreign financial assets.

UK stamp duty and stamp duty reserve tax (SDRT)

Transfers of ordinary shares – SDRT at the rate of 0.5% of the amount or value of the consideration will generally be payable on any agreement to transfer ordinary shares that is not completed using a duly stamped instrument of transfer (such as a stock transfer form).

The SDRT liability will be cancelled where an instrument of transfer is executed and duly stamped before the expiry of the six-year period beginning with the date on which the agreement is made. If a claim is made within the specified period, any SDRT which has been paid will be refunded. SDRT is due whether or not the agreement or transfer is made or carried out in the UK and whether or not any party to that agreement or transfer is a UK resident.

Purchases of ordinary shares completed using a stock transfer form will generally result in a UK stamp duty liability at the rate of 0.5% (rounded up to the nearest £5) of the amount or value of the consideration. Paperless transfers under the CREST paperless settlement system will generally be liable to SDRT at the rate of 0.5%, and not stamp duty. SDRT is generally the liability of the purchaser, and UK stamp duty is usually paid by the purchaser or transferee.

Transfers of ADSs – no UK stamp duty will be payable on the acquisition or transfer of existing ADSs or beneficial ownership of ADSs, provided that any instrument of transfer or written agreement to transfer is executed outside the UK and remains at all times outside the UK.

An agreement for the transfer of ADSs in the form of American Depositary Receipts will not result in an SDRT liability. A charge to stamp duty or SDRT may arise on the transfer of ordinary shares to the Depositary or The Bank of New York Mellon as agent of the Depositary (the Custodian).

The rate of stamp duty or SDRT will generally be 1.5% of the value of the consideration or, in some circumstances, the value of the ordinary shares concerned. However, there is no 1.5% SDRT charge on the issue of ordinary shares (or, where it is integral to the raising of new capital, the transfer of ordinary shares) to the Depositary or the Custodian.

The Depositary will generally be liable for the stamp duty or SDRT. Under the terms of the Deposit Agreement, the Depositary will charge any tax payable by the Depositary or the Custodian (or their nominees) on the deposit of ordinary shares to the party to whom the ADSs are delivered against such deposits. If the stamp duty is not a multiple of £5, the duty will be rounded up to the nearest multiple of £5.

UK inheritance tax
An individual who is domiciled in the US for the purposes of the Estate Tax Convention and who is not a UK national for the purposes of the Estate Tax Convention will generally not be subject to UK inheritance tax in respect of (i) the ADSs or ordinary shares on the individual's death or (ii) a gift of the ADSs or ordinary shares during the individual's lifetime. This is not the case where the ADSs or ordinary shares are part of the business property of the individual's permanent establishment in the UK or relate to a fixed base in the UK of an individual who performs independent personal services.

Special rules apply to ADSs or ordinary shares held in trust.

In the exceptional case where the ADSs or shares are subject both to UK inheritance tax and to US federal gift or estate tax, the Estate Tax Convention generally provides for the tax paid in the UK to be credited against tax paid in the US or vice versa.

Capital gains tax (CGT) for UK resident shareholders
You can find CGT information relating to National Grid shares for UK resident shareholders on the investor section of our website. Share prices on specific dates are also available on our website.

Other disclosures

All-employee share plans

The Company has a number of all-employee share plans as described below, which operated during the year. These allow UK or US-based employees to participate in tax-advantaged plans and to become shareholders in National Grid.

Sharesave

UK employees are eligible to participate in the Sharesave plan. Under this plan, participants may contribute between £5 and £500 each month, for a fixed period of three years, five years or both. Contributions are taken from net salary. At the end of the fixed period, participants may use their savings to purchase ordinary shares in National Grid at a 20% discounted option price, which is set at the time of each annual Sharesave launch.

Share Incentive Plan (SIP)

UK employees are eligible to participate in the SIP. Contributions up to £150 per month are deducted from participants' gross salary and used to purchase National Grid ordinary shares each month. The shares are placed in a UK resident trust and are available to the individual with tax advantages after a five-year period.

US Incentive Thrift Plans

Thrift Plans are open to all US employees of participating National Grid companies; these are tax-advantaged savings plans (commonly referred to as 401k plans). These are defined contribution (DC) pension plans that give participants the opportunity to invest up to applicable federal salary limits. The federal limits for calendar year 2020 were: for pre-tax contributions, a maximum of 50% of salary limited to $19,500 for those under the age of 50 and $26,000 for those aged 50 and above; for post-tax contributions, up to 15% of salary. The total amount of employee contributions (pre-tax and post-tax) could not exceed 50% of compensation, and was further subject to the combined federal annual contribution limit of $57,000. For the calendar year 2021, participants may invest up to the applicable federal salary limits: for pre-tax contributions, this is a maximum of 50% of salary limited to $19,500 for those under the age of 50 and $26,000 for those aged 50 and above; for post-tax contributions, this is up to 15% of salary. The total amount of employee contributions (pre-tax and post-tax) may not exceed 50% of compensation, and is further subject to the combined federal annual contribution limit of $58,000.

US Employee Stock Purchase Plan (ESPP)

Employees of National Grid's participating US companies are eligible to participate in the ESPP (commonly referred to as a 423b plan). Eligible employees have the opportunity to purchase ADSs in National Grid on a monthly basis at a 15% discounted price. Under the plan, employees may contribute up to 20% of base pay each year, up to a maximum annual contribution of $25,000, to purchase ADSs.

The ESPP rules expire in July 2021 and so the Company will seek shareholder approval at the 2021 AGM for the new ESPP rules. The new rules will be substantially in line with the existing rules, updated to reflect developments in market practice and good governance.

Change of control provisions

No compensation would be paid for loss of office of Directors on a change of control of the Company. As at 31 March 2021, the Company had borrowing facilities of £4.2 billion available to it with a number of banks, which, on a change of control of the Company following a takeover bid, may alter or terminate; however, the Company is currently not drawing on any of such borrowing facilities. All of the Company's share plans contain provisions relating to a change of control. Outstanding awards and options would normally vest and become exercisable on a change of control, subject to the satisfaction of any performance conditions at that time. In the event of a change of control of the Company, a number of governmental and regulatory consents or approvals are likely to be required, arising from laws or regulations of the UK or the US. Such consents or approvals may also be required for acquisitions of equity securities that do not amount to a change of control.

No other agreements that take effect, alter or terminate upon a change of control of the Company following a takeover bid are considered to be significant in terms of their potential impact on the business as a whole.

Code of Ethics

In accordance with US legal requirements, the Board has adopted a Code of Ethics for senior financial professionals. This Code is available on our website: nationalgrid.com (where any amendments or waivers will also be posted). There were no amendments to, or waivers of, our Code of Ethics during the year.

Conflicts of interest

In accordance with the Companies Act 2006, the Board has a policy and procedure in place for the disclosure and authorisation (if appropriate) of actual and potential conflicts of interest. The Board continues to monitor and note possible conflicts of interest that each Director may have. The Directors are regularly reminded of their continuing obligations in relation to conflicts, and are required to review and confirm their external interests annually. During the year ended 31 March 2021, no new actual or potential conflicts of interest were identified that required approval by the Board. The Board has considered and noted a number of situations in relation to which no actual conflict of interest was identified. Due to current ongoing contractual negotiations that the Company has with Costain plc, the situational conflict that Paul Golby has by virtue of being a Non-executive Director of the Company and Chairman of Costain plc has been kept under constant review during the year and Paul Golby has been recused of all discussions in relation to contractual issues with Costain plc. He has also confirmed to us in writing that the same arrangements are in place in Costain plc.

Corporate governance practices: differences from New York Stock Exchange (NYSE) listing standards

The Company is listed on the NYSE and is therefore required to disclose differences in its corporate governance practices adopted as a UK listed company, compared with those of a US company.

The corporate governance practices of the Company are primarily based on the requirements of the Corporate Governance Code 2018 but substantially conform to those required of US companies listed on the NYSE. The following is a summary of the significant ways in which the Company's corporate governance practices differ from those followed by US companies under Section 303A Corporate Governance Standards of the NYSE.

The NYSE rules and the Code apply different tests for the independence of Board members.

The NYSE rules require a separate nominating/corporate governance committee composed entirely of independent directors. There is no requirement for a separate corporate governance committee in the UK. Under the Company's corporate governance policies, all directors on the Board discuss and decide upon governance issues, and the Nominations Committee makes recommendations to the Board with regard to certain responsibilities of a corporate governance committee.

The NYSE rules require listed companies to adopt and disclose corporate governance guidelines. While the Company reports compliance with the Code in each Annual Report and Accounts, the UK requirements do not require the Company to adopt and disclose separate corporate governance guidelines.

The NYSE rules require a separate audit committee composed of at least three independent members. While the Company's Audit Committee exceeds the NYSE's minimum independent Non-executive Director membership requirements, it should be noted that the quorum for a meeting of the Audit Committee, of two independent Non-executive Directors, is less than the minimum membership requirements under the NYSE rules.

The NYSE rules require a compensation committee composed entirely of independent directors, and prescribe criteria to evaluate the independence of the committee's members and its ability to engage external compensation advisors. While the Code prescribes different independence criteria, the Non-executive Directors on the Company's Remuneration Committee have each been deemed independent by the Board under the NYSE rules. Although the evaluation criteria for appointment of external advisors differ under the Code, the Remuneration Committee is solely responsible for the appointment, retention and termination of such advisors.

Directors' indemnity

The Company has arranged, in accordance with the Companies Act 2006 and the Articles of Association, qualifying third-party indemnities against financial exposure that Directors may incur in the course of their professional duties. Equivalent qualifying third-party indemnities were, and remain, in force for the benefit of those Directors who stood down from the Board in prior financial years for matters arising when they were Directors of the Company. Alongside these indemnities, the Company places Directors' and Officers' liability insurance cover for each Director. To the extent appropriate and required, similar indemnities have also been given to directors of subsidiary and other associated companies, who also benefit from Directors' and Officers' liability insurance cover.

Other disclosures continued

Employees

We negotiate with recognised unions. It is our policy to maintain well developed communications and consultation programmes. Other than the implementation of the Massachusetts workforce contingency plan in June 2018 there have been no material disruptions to our operations from labour disputes during the past five years. The agreement under dispute between the Company and the Massachusetts Gas unions was satisfactorily renegotiated in January 2019. National Grid believes that it can conduct its relationships with trade unions and employees in a satisfactory manner. Further details on the Company's colleagues can be found on page 59.

Human rights

We launched our Responsible Business Charter in October 2020 focusing on five key areas. One of the areas is our people and our commitment to ensuring all our people are treated fairly and given the opportunity to thrive at work. As a responsible, purpose-led company the way in which we conduct ourselves allows us to build trust with the people we work with by doing things in the right way, building our reputation as a responsible and ethical company that our stakeholders want to do business with and our employees want to work for.

National Grid does not have direct operations in countries of high concern with respect to human rights, therefore we do not have a specific policy relating to human rights. However, respect for human rights is incorporated into our employment practices and our values. We treat everyone fairly and equally, without discrimination. Respecting others and valuing inclusion and diversity are integral to our Code of Ethics and we provide unconscious bias training to all our people to build awareness of cultural differences and the importance of diversity, and necessity of achieving equity and inclusion. We acknowledge that there may be potential risks in our wider supply chain, and we ensure that the expectations outlined in our Supplier Code of Conduct relating to respecting, protecting and promoting human rights regarding our suppliers are proactively promoted. Our Global Supplier Diversity Policy outlines our commitments to ensuring there is an established approach to diversity, equity, inclusion and respect from our suppliers in all aspects of business.

We recognise that the relationship we have with our suppliers can influence how they support our commitment to acting responsibly. Our Supplier Code of Conduct is updated and communicated to our suppliers annually and clearly sets out our expectations to share our commitment to respecting, protecting and promoting human rights. This includes alignment to the UN Guiding Principles, the 10 Principles of the United Nations Global Compact, the International Labour Organisation (ILO) minimum standards, the Ethical Trading Initiative (ETI) Base Code, the UK Modern Slavery Act 2015, the US Victims of Trafficking and Violence Protection Act 2000, the US Department of State Principles Combatting Human Trafficking and, for our UK suppliers, the requirements of the Living Wage Foundation.

In addition, we are signatories to the UK Construction Protocol, which is a joint agreement with many of the largest firms in the UK construction sector focused on eradicating modern slavery and exploitation in the building industry. We are also founding signatory members of the People Matter Charter which was created to help organisations up and down the supply chain to bring challenges related to decent work together into one workforce strategy. The Charter has eight commitments that can apply to any organisation, of any size including aspects supporting human rights.

We are members of the UNGC Modern Slavery working group and actively involved in the UK Utilities Sector Modern Slavery Working Group which is aimed at working together to eradicate slavery and exploitation in the UK Utilities Sector and its supply chains.

We aim to maintain fairness across the organisation for pay and make sure our pay practices do not show bias. In the US, we pay all our employees at least the minimum wage or above the minimum wage requirements. In the UK, we are accredited by the Living Wage Foundation. Our commitment to our direct employees extends to our contractors and the work they do on behalf of National Grid and is actively promoted through our supply chain and embedded in our contract terms and conditions. We believe that everyone should be appropriately rewarded for their time and effort. We also go above the real living wage requirements and voluntarily pay our trainees the Living Wage. We undertake a real living wage review each year to ensure continued alignment. We also increase individual salaries as required. We have verified the implementation of the real living wage in supply chain contracts where low wages could be a risk including our catering and cleaning contracts.

Listing Rule 9.8.4 R cross-reference table

Information required to be disclosed by LR 9.8.4 R (starting on page indicated):

Interest capitalised	Page 149
Publication of unaudited financial information	Not applicable
Details of long-term incentive schemes	Page 97
Waiver of emoluments by a director	Not applicable
Waiver of future emoluments by a director	Not applicable
Non-pre-emptive issues of equity for cash	Not applicable
Item (7) in relation to major subsidiary undertakings	None
Parent participation in a placing by a listed subsidiary	Not applicable
Contracts of significance	Not applicable
Provision of services by a controlling shareholder	Not applicable
Shareholder waivers of dividends	Page 242
Shareholder waivers of future dividends	Page 242
Agreements with controlling shareholders	Not applicable

Material contracts

On 17 March 2021 we agreed to buy WPD from PPL, and, conditional upon the completion of the WPD Acquisition and certain regulatory approvals, agreed to sell NECO to PPL. The share purchase agreements for the WPD Acquisition and the NECO sale, together with the sponsor agreement between the Company and Barclays Bank plc (Barclays) dated 31 March 2021 (pursuant to which the Company appointed Barclays as sponsor in connection with the WPD Acquisition and the publication of its shareholder circular for approval of the WPD Acquisition), as well as the acquisition facility dated 17 March 2021 required for the WPD Acquisition, comprising a £8,250,000,000 term loan facility and a £1,105,000,000 revolving loan facility term between the Company, Barclays and Goldman Sachs as lenders and lead arrangers, constitute material contracts for the Company.

In addition, each of our Executive Directors has a Service Agreement and each Non-executive Director has a Letter of Appointment. Apart from these, no contract (other than contracts entered into in the ordinary course of business) has been entered into by the Group within the two years immediately preceding the date of this report that is, or may be material; or which contains any provision under which any member of the Group has any obligation or entitlement which is material to the Group at the date of this report.

Political donations and expenditure

At this year's AGM, the Directors will again seek authority from shareholders, on a precautionary basis, for the Company and its subsidiaries to make donations to registered political parties and other political organisations and/or incur political expenditure as such terms are defined in the Companies Act 2006. In each case, donations will be in amounts not exceeding £125,000 in aggregate. The definitions of these terms in the Companies Act 2006 are very wide. As a result, this can cover bodies such as those concerned with policy review, law reform and the representation of the business community (for example trade organisations). It could include special interest groups, such as those involved with the environment, which the Company and its subsidiaries might wish to support, even though these activities are not designed to support or influence support for a particular party. The Companies Act 2006 states that all-party parliamentary groups are not political organisations for these purposes, meaning the authority to be sought from shareholders is not relevant to interactions with such groups. The Company has no intention of changing its current practice of not making political donations or incurring political expenditure within the ordinary meaning of those words. This authority is, therefore, being sought to ensure that none of the Company's activities inadvertently infringe these rules.

National Grid made no political donations and did not incur any political expenditure during the year, as such terms are defined for the purposes of the Companies Act 2006 and the Political Parties, Elections and Referendums Act 2000. National Grid USA and its affiliated New York and federal political action committees (PAC) made political donations in the US totalling $35,000 (£25,365) during the year. National Grid USA's affiliated New York PAC (NYPAC) was funded partly by contributions from National Grid USA and certain of its subsidiaries and partly by voluntary employee contributions. National Grid USA's affiliated federal PAC was funded wholly by voluntary employee contributions. The NYPAC did not receive any corporate contribution during the past fiscal year.

Property, plant and equipment

This information can be found in note 13 property, plant and equipment on pages 159 – 161, note 21 borrowing on pages 170 – 172 and where we operate on page 227.

Research, development and innovation activity

Investment in research and development during the year for the Group was £17 million (2019/20: £14 million; 2018/19: £19 million). We only disclose directly incurred expenditure, and not those amounts our partners contribute to joint or collaborative projects. Collaborating across the industry has played a crucial role in our ability to develop new programmes and deliver value to our stakeholders throughout 2020/21.

UK Electricity

Continued collaboration and stakeholder engagement have driven the research programmes for ET innovation. Our engagement with stakeholders as part of webinars, formal meetings, conferences and dissemination events has been instrumental to developing our strategies including our overall innovation strategy as well as technology and asset-related innovation strategies.

As a result, our project portfolio has been developed around the themes of delivering cleaner and cheaper energy. Our commitment to the net zero target for 2050 has provided the focus for our research programme on carbon emission reduction. We completed our Zero-2050 project, which was aimed at developing the decarbonisation pathways for South Wales using a whole system approach. The project resulted in significant learning for the development of optimised regional pathways to meet the UK net zero targets. We presented our findings to the Welsh government and are now developing the next stages of the project in close collaboration with key stakeholders.

We are also increasing research into decarbonising our own operations and preparing our network for the changes we need to make to accommodate a fully decarbonised energy sector. We have worked with our partners on several projects, investigating ways to eliminate greenhouse gases from our gas-insulated equipment, replacement of diesel generators with low-carbon alternatives for back-up power generation in our substations, and the reduction of our carbon footprint relating to our construction work. Our future network will need to accommodate more renewable energy sources and other converter-based connections and equipment. Providing the infrastructure for a secure, efficient and reliable network requires an increased understanding of network stability. We have, therefore, developed several projects investigating the impacts of reduced inertia, potential controller interactions and reduced fault levels. We are also working with other GB transmission owners and ESO to develop a detailed GB transmission network electromagnetic transient model. An accurate network representation will provide greater insight and design of mitigating actions to maintain network stability.

The second key aspect that our stakeholder engagement has highlighted is the delivery of cheaper energy. This has been implemented in our research programme on optimised asset management and monitoring as well as the digitisation of operational technology, considering in particular, cyber security in a context of increasing cyber threats.

As a key enabler for future innovation we have continued the delivery of our Deeside Centre for Innovation. Significant progress has been made with good progress on the construction of the overhead line test area and detailed design for the substation area, which notably includes a trial for construction with cement-free concrete. We are aiming to open the facility for wider industry use in October 2021.

We submitted two entries to Ofgem for this year's Network Innovation Competition (NIC). The first entry was Proteus, a project which aimed to trial an innovative STATCOM solution for stability and voltage management. The second entry was RICA (Retro-Insulated Cross-Arms), a research project aimed to develop an innovative method for uprating existing overhead lines, allowing the voltage on 275kV overhead lines to be increased to 400kV. Both the entries were successful in the initial screening process and in its final decision, Ofgem awarded £8.1 million funding to the RICA project but chose not to take Proteus forward. The total cost of the RICA project is £9.1 million and ET will be contributing the remaining £1 million. We are also working with Smart Wires (see page 40) to use modular power flow control devices to increase power transfer capability on our network, thereby enabling greater volumes of renewable energy to be efficiently transferred to customers.

Electricity System Operator

Throughout the year the ESO has delivered a diverse innovation portfolio that supports our role in keeping electricity supplies safe, reliable and efficient, while pushing the boundaries to enable a net zero energy future. Our innovation projects continue to explore how we work in ground breaking areas such as advanced analytics and machine learning, as well as state-of-the-art technologies such as Virtual Synchronous Machines. In 2020/21 the ESO funded over £2.6 million worth of projects using Network Innovation Allowance (NIA), and were involved in four large-scale NIC projects with partners (two led by the ESO), we also supported third-party innovation with in-kind support from ESO experts. We refresh our strategy and innovation priorities annually, based on consultation with our stakeholders and this ensures we continue to focus innovation funding only on the most effective projects which could deliver significant consumer benefits. Our innovation activities last year include the Distributed ReStart project, which continues to engage with stakeholders, and explore how distributed energy resources can be used to restore power to the transmission network in the unlikely event of a blackout. The 4D Heat project explored how off-mains gas homes in Scotland could use wind power for domestic heating to ease constraint and congestion issues on the network. While the benefits of closer to real-time procurement of frequency response was tested in the Frequency Response Auction Trial, 2021 was the first year of the new ESO regulatory period, where we have access to £23 million of NIA over five years, and the Strategic Innovation Fund (SIF) will replace the NIC to support large-scale, collaborative projects focused on key industry challenges to achieving net zero targets.

UK Gas

Gas Transmission innovation has increased focus on meeting the UK's net zero 2050 targets. An accelerated programme of work in 2020/21 covered net zero challenges, including hydrogen and reduction of methane emissions alongside a focus on safety, reliability and asset health. The key highlights of 2020/21 include:

- collaboratively working with the gas distribution networks on several new projects under our Hydrogen in the NTS (HyNTS) programme: Hydrogen Deblending which allows for the separation of hydrogen in a natural gas mix and HyTechnical working with the Institute of Gas Engineers & Managers (IGEM) to overhaul the gas technical standards to meet hydrogen specifications;
- successfully securing funding for the £12.7 million HyNTS FutureGrid NIC Project which is an ambitious programme that seeks to build a hydrogen test facility from decommissioned assets at DNV GL Spadeadam, to demonstrate the National Transmission System (NTS) can transport hydrogen;
- reduction of methane emissions through two key projects: Monitoring of Real-time Fugitive Emissions (MoRFE), which looks at developing a cost-effective continuous fugitive emission detection system and CH4RGE, a project that looks at reducing methane emissions from rotating gas equipment;
- development of valve remediation techniques under the Valve Care Toolbox project to provide a suite of solutions that allow for repair rather than replacement of valves; and
- unlocking the potential of drone technology for inspection through the Above & Beyond Project to investigate and demonstrate the ability to fly a drone beyond visual line of sight, in uncontrolled airspace, to inspect large areas of our network and assets.

US research and development

Research and development (R&D) work in the US focused on the advancement of products, processes, systems technologies and work methods that may be new to National Grid. This is accomplished by working with internal departments to identify where strategic R&D investment is needed and is likely to prove beneficial. To achieve these goals, we work in collaboration with technical organisations, academia and vendors in the energy sector that align with our goals and objectives to provide a safe, reliable, efficient and clean service. We continue to focus our R&D on increasing public safety supporting the integration of renewable resource, protecting our workforce and reducing the cost of the work we perform.

Research efforts are designed with the focus on shared learnings across jurisdictions to help reduce cost and allow for a faster pace of technology adoption.

In 2020/21, we continued to invest and participate in several significant pilot projects with the intention of obtaining operational knowledge and experience of technology-driven system impacts.

Other disclosures continued

US Electricity
New England – Distribution

- Under the Company's 'Solar Phase 1, 2 and 3' programmes, we contracted and built approximately 35 MW of PV solar and 6.2 MW/12 MWh of energy storage system as part of our company-owned facilities portfolio. The facilities are used to explore new technologies that can help reduce the interconnection cost and time of solar energy. The research also aims to help the Company move from interconnecting DER to integrating it. Among the technologies researched are smart inverters, energy storage, dynamic VAR STATCOMS, plant level controllers and dual axis PV tracking. To enhance the learning experience the Company partnered with industry leaders such as the Electric Power Research Institute (EPRI), Sandia National Laboratories (Sandia) and Fraunhofer Gesellschaft (Fraunhofer). The programme won two awards in 2020:
  - the 2020 Digitalisation/Technology Adoption Award by Power Magazine; and
  - the Game Changer Award at the 2020 Connected Plant Conference.

New England – Transmission

- Working with Boston Dynamics, National Grid deployed the 'Spot Robot' (the robot) at its Sandy Pond HVDC station, which is responsible for importing almost 2,000 MW of clean hydroelectricity into New England every day. Currently technicians inspect the thyristors twice a year visually through windows looking into a hall, during two planned outages a year.
- The robot can be in the hall when energised. The robot can walk around the full floor area of the thyristor hall, affording the technicians full viewing angles of the equipment which were impossible to view through the windows alone. The robot also conducts thermal scans. With both its high-resolution optical cameras and sensors it can pick up on very small water leaks (which were difficult to detect visually before) and identify hot spots (places of possible mechanical fatigue). This is all without entering the environment such that the station can stay in operation and energised.
- The pilot of the robot was successful, the Company is collaborating with Boston Dynamics and so far has two robots. One of the robots will be permanently in the thyristor hall, and the other serves as a back up and is being considered for other locations.
- Smart Wires manufactures a power flow control device called the SmartValve. SmartValve are FACTS (Flexible Alternating Current Transmission System) devices that use power electronics to 'push and pull' power over a transmission network thus increasing transmission capacity over AC lines without the need to build additional capability (for example, reconductoring, new lines, or other typical upgrades).
- National Grid US deployed the SmartValve system on a 69kV line near the Fitch Road substation (Lancaster, MA north of Worcester, MA). The deployment will give us operational experience with the technology and prove out the capabilities.

New York – Distribution

- We are working on a demand reduction pilot project in Clifton Park that will offer customers various programmes and pricing signals to manage usage to reduce energy bills and demand during peak times. In addition, the Company has deployed and operated two VVO/CVR schemes in Clifton Park. We are conducting an offline analysis to determine the incremental benefits of incorporating AMI data with VVO/CVR operation. We are also piloting a smart inverter VVO/CVR project to assess the feasibility and benefits of integrating smart inverters with the existing VVO/CVR scheme currently in operation in the Clifton Park Pilot.
- We continued to progress our Smart City REV demonstration project in partnership with the city of Schenectady. Phase 1, which involves procurement, deployment and initial operation of all selected technologies, has been completed. Now we are collaborating on the establishment and assessment of functional performance characteristics, including feedback from city stakeholders to evaluate the public acceptance and the overall value proposition. Phase 2 of the project is currently in the technology procurement phase, which will then be deployed in the remaining areas of the city.
- We have been proposing a flexible Load Study to quantify the ability of flexible load to solve potential peak load challenges from beneficial electrification and minimum load challenges from DG penetration simultaneously. This study will model and simulate shifting of load from peak periods to mid-day time.
- As part of our NIMO rate case, we have proposed a distributed communications project to investigate greater integration of DER into the grid via: 1) novel communication schemes and protocols through utilisation of DTT and 3V0 low cost alternatives, 2) communications between the Company and the NYISO for new DER market products, 3) increased integration of DER into distribution automation schemes, 4) low-cost monitoring and control for smart inverters.
- We are also looking to pilot a net zero Carbon Building-to-Grid project to develop building-to-grid ('B2G') software, communication, and integration to Building Management System (BMS) and DER to actively manage the increased electrical load to support the grid and potentially provide compensation to the building owner and tenants.
- We have selected two developers and are proceeding with contract negotiations of two energy storage projects. The first project, Old Forge, is a 20 MW and 40 MWh battery to operate as a Microgrid. The second project, North Lakeville, is a 10 MW and 20 MWh battery and will be operated as an alternative to a traditional wire upgrade. In addition, both projects aim to dually participate in the NYISO markets.

Calibration across multiple jurisdictions

- We are piloting an Active Resource Integration (ARI) project at solar phase 3 location in MA and at Peterboro substation in NY to test the ability to increase the amount of solar DG integrated into the distribution system in constrained areas via development of curtailment capabilities.
- We are starting a DERMS Investigation project to conduct a deep dive into many aspects of DERMS (e.g., use cases, functions, IT architecture, cybersecurity, BCA, vendor capabilities) to prepare National Grid for the enterprise-wide implementation of a DERMS platform and associated modules.
- National Grid is heavily engaged on several EPRI and CEATI programmes, including bulk system renewables, DERs integration, planning and asset management, energy storage, asset management for transmission and distribution, system automation and integrating emerging technologies.
- Over the next 10 years we will be deploying up to 150 digital substations in New England and New York as we transition to fully digital substations on our transmission network, which will utilise the IEC 61850 communications standard. The digital substation reduces construction and operation costs, engineering and construction time, increases system flexibility, and helps facilitate the large-scale incorporation of renewable power.

US Gas
New York

- While partnering with a robotics company and another utility, we have been developing and testing new technology to locate inadvertent sewer cross bores created when using some trenchless technology. This technology is deployed in our gas main immediately after installation, prior to the introduction of natural gas. It differs from the current process, which requires us to gain access to the municipal sewer system. Deployment will reduce the risk and cost associated with sewer cross bores. We constructed a functional sewer system covering five hectares at one of our facilities to test the accuracy of the technology. We purposefully created cross bores in the system at several points to determine if the technology could locate them. The technology found all the cross bores with no false negatives. We are currently transitioning the technology to the field for live testing. After achieving positive results deploying this technology in a controlled test bed at one of our NY facilities, the next step was to test this process in the field. This technology was tested after new pipe installation via trenchless methods as well as in validation runs where sewer cross bores were identified in the field through the existing process. In all cases, the technology was able to verify the locations of the cross bores accurately. We are now working to gather more field data to support the validation of this technology.
- We have been working with a Canadian valve manufacturer to develop a service isolation valve to locally and remotely isolate a gas service. The application has become necessary due to recent industry incidents in the US. The valve has passed all industry and National Grid required testing and can be installed on service lines up to 11 bar of pressure. The valve can take a switched signal from any source and locally isolate the gas service. Signals include flood, fire, seismic, under-pressurisation, over-pressurisation and methane. The valve can also be closed via a wireless signal from National Grid. The intent of this initiative is to incorporate the valve into an integrated safety solution with network communications that has the ability to remotely isolate the service under various hazard conditions while communicating alarms to the utility. We are currently pilot testing versions of this valve integrated with cellular and LoRaWan communications networks. To enhance the functionality of the service isolation valve, we have been working to develop and deploy enhanced residential methane detectors (RMDs).
- In connection with the deployment of the 75 service isolation valves, we have European manufactured RMDs, as part of the integrated safety solution, that are powered by 120 V and hard-wired to the valve control which complicates the installation of the solution at scale. To improve this overall solution, we are working with several manufacturers on RMDs with enhanced features: first to power the unit with long-term batteries (current technology limits battery life to three years); and second, to introduce wireless communication to the valve controller (as current technology requires wiring from the RMD to the isolation valve). We are developing an RMD with communications technology that would allow installation of the RMD in residential and commercial locations. RMDs with network communication will be one of the main components to the integrated safety solution along with the service isolation valve. We are starting trial testing to validate performance of the RMD's battery life and ability to communicate across various networks.
- We are partnering with another NY utility and a company in California on the development of an advanced RMD which is focused on early detection of gas leaks. This technology is focused on improving the detection of leaks to maximise response time to real hazards. The RMD is in its third prototype phase of development and has shown to be capable of precise and accurate detection of methane at the parts per million level. We are deploying several of these prototypes in a controlled test facility that will undergo methane dispersion through typical household leak scenarios. The performance of the RMDs will be evaluated against an established testing protocol that competing technologies have undergone.
- National Grid has begun supporting research into the ability to use hydrogen in its gas distribution systems with the intent of reducing the overall carbon footprint of the gas network. We are formally collaborating in several R&D projects with various other organisations. National Grid and the Institute for Gas Innovation & Technology (IGIT) at Stony Brook University are leading participants in the HyBlend Collaborative Research and Development Agreement (CRADA). This CRADA is a $14 million research programme sponsored by the United States Department of Energy's Hydrogen and Fuel Cell Technologies Office (HFTO) in the Office of Energy Efficiency and Renewable Energy and 22 other industry and academic participants which will identify and evaluate the technical and safety requirements for introducing hydrogen blending into US gas distribution systems. The HyBlend CRADA will be led by the National Renewable Energy Laboratory (NREL) and implemented by six other national laboratories. This effort is currently in the project formation stage and is expected to officially kick off in summer 2021.

The Company is pursuing the above R&D efforts to drive innovations that will improve safety, reliability and operational efficiency of our gas business operations.

Unresolved SEC staff comments

There are no unresolved SEC staff comments required to be reported.

Other unaudited financial information

Alternative performance measures/non-IFRS reconciliations

Within the Annual Report, a number of financial measures are presented. These measures have been categorised as alternative performance measures (APMs), as per the European Securities and Markets Authority (ESMA) guidelines and the Securities and Exchange Commission (SEC) conditions for use of non-GAAP financial measures.

An APM is a financial measure of historical or future financial performance, financial position, or cash flows, other than a financial measure defined under IFRS. The Group uses a range of these measures to provide a better understanding of its underlying performance. APMs are reconciled to the most directly comparable IFRS financial measure where practicable.

The Group has defined the following financial measures as APMs derived from IFRS: net revenue, the various adjusted operating profit, earnings and earnings per share metrics detailed in the 'adjusted profit measures' section below, net debt, capital investment, funds from operations (FFO), FFO interest cover and retained cash flow (RCF)/adjusted net debt. For each of these we present a reconciliation to the most directly comparable IFRS measure.

We also have a number of APMs derived from regulatory measures which have no basis under IFRS; we call these Regulatory Performance Measures (RPMs). They comprise: Group Return on Equity (RoE), UK and US regulatory RoE, regulated asset base, regulated financial performance, regulatory gearing, asset growth, Value Added, including Value Added per share and Value Growth. These measures include the inputs used by utility regulators to set the allowed revenues for many of our businesses.

We use RPMs to monitor progress against our regulatory agreements and certain aspects of our strategic objectives. Further, targets for certain of these performance measures are included in the Company's Annual Performance Plan (APP) and Long Term Performance Plan (LTPP) and contribute to how we reward our employees. As such, we believe that they provide close correlation to the economic value we generate for our shareholders and are therefore important supplemental measures for our shareholders to understand the performance of the business and to ensure a complete understanding of Group performance.

As the starting point for our RPMs is not IFRS, and these measures are not governed by IFRS, we are unable to provide meaningful reconciliations to any directly comparable IFRS measures, as differences between IFRS and the regulatory recognition rules applied have built up over many years. Instead, for each of these we present an explanation of how the measure has been determined and why it is important, and an overview as to why it would not be meaningful to provide a reconciliation to IFRS.

Alternative performance measures

Net revenue

Net revenue is revenue less pass-through costs, such as UK system balancing costs, gas and electricity commodity costs in the US and, prior to the adoption of IFRS 15, payments to other UK network owners. Pass-through costs are fully recoverable from our customers and are recovered through separate charges that are designed to recover those costs with no profit. Where revenue received or receivable exceeds the maximum amount permitted by our regulatory agreement, adjustments will be made to future prices to reflect this over-recovery. No liability is recognised, as such an adjustment to future prices relates to the provision of future services. Similarly, no asset is recognised where a regulatory agreement permits adjustments to be made to future prices in respect of an under-recovery.

	2021			2020			2019		
	Gross revenue £m	**Pass-through costs £m**	**Net revenue £m**	Gross revenue £m	Pass-through costs £m	Net revenue £m	Gross revenue £m	Pass-through costs £m	Net revenue £m
UK Electricity Transmission	**3,992**	**(2,062)**	**1,930**	3,702	(1,528)	2,174	3,351	(1,397)	1,954
UK Gas Transmission	**904**	**(233)**	**671**	927	(242)	685	896	(227)	669
US Regulated	**9,195**	**(3,253)**	**5,942**	9,205	(3,460)	5,745	9,846	(3,978)	5,868
NGV and Other	**715**	**–**	**715**	736	–	736	876	–	876
Sales between segments	**(27)**	**–**	**(27)**	(30)	–	(30)	(36)	–	(36)
Total	**14,779**	**(5,548)**	**9,231**	14,540	(5,230)	9,310	14,933	(5,602)	9,331

Adjusted profit measures

In considering the financial performance of our business and segments, we use various adjusted profit measures in order to aid comparability of results year-on-year.

The various measures are presented on pages 30 – 39 and reconciled below.

Adjusted results, also referred to as Headline results – these exclude the impact of exceptional items and remeasurements that are treated as discrete transactions under IFRS and can accordingly be classified as such. This is a measure used by management that is used to derive part of the incentive target set annually for remunerating certain Executive Directors, and further details of these items are included in Note 5 to the financial statements.

Underlying results – further adapts our adjusted results to take account of volumetric and other revenue timing differences arising due to the in-year difference between allowed and collected revenues, including revenue incentives, as governed by our rate plans in the US or regulatory price controls in the UK (but excluding totex-related allowances and adjustments). For 2020/21, as highlighted on page 251, our underlying results exclude £207 million (2019/20: £147 million) of timing differences as well as £150 million (2019/20: £nil) of major storm costs (as costs were above our $100 million storm cost timing threshold in the current year). We expect to recover major storm costs incurred through regulatory mechanisms in the US.

Constant currency – the adjusted profit measures are also shown on a constant currency basis to show the year-on-year comparisons excluding any impact of foreign currency movements.

Reconciliation of statutory, adjusted and underlying profits and earnings – at actual exchange rates – continuing operations

Year ended 31 March 2021	Statutory £m	Exceptionals and remeasurements £m	Adjusted £m	Timing £m	Major storm costs £m	Underlying £m
UK Electricity Transmission	1,027	7	1,034	88	—	1,122
UK Gas Transmission	337	5	342	96	—	438
US Regulated	1,344	(31)	1,313	23	150	1,486
NGV and Other	187	50	237	—	—	237
Total operating profit	2,895	31	2,926	207	150	3,283
Net finance costs	(870)	(72)	(942)	—	—	(942)
Share of post-tax results of joint ventures and associates	58	8	66	—	—	66
Profit before tax	2,083	(33)	2,050	207	150	2,407
Tax	(442)	26	(416)	(41)	(39)	(496)
Profit after tax	1,641	(7)	1,634	166	111	1,911

Year ended 31 March 2020	Statutory £m	Exceptionals and remeasurements £m	Adjusted £m	Timing £m	Major storm costs £m	Underlying £m
UK Electricity Transmission	1,316	4	1,320	(146)	—	1,174
UK Gas Transmission	347	1	348	54	—	402
US Regulated	880	517	1,397	239	—	1,636
NGV and Other	237	5	242	—	—	242
Total operating profit	2,780	527	3,307	147	—	3,454
Net finance costs	(1,113)	64	(1,049)	—	—	(1,049)
Share of post-tax results of joint ventures and associates	87	1	88	—	—	88
Profit before tax	1,754	592	2,346	147	—	2,493
Tax	(480)	47	(433)	(45)	—	(478)
Profit after tax	1,274	639	1,913	102	—	2,015

Year ended 31 March 2019	Statutory £m	Exceptionals and remeasurements £m	Adjusted £m	Timing £m	Major storm costs £m	Underlying £m
UK Electricity Transmission	778	237	1,015	77	—	1,092
UK Gas Transmission	267	36	303	38	—	341
US Regulated	1,425	299	1,724	(223)	93	1,594
NGV and Other	400	—	400	—	—	400
Total operating profit	2,870	572	3,442	(108)	93	3,427
Net finance costs	(1,069)	76	(993)	—	—	(993)
Share of post-tax results of joint ventures and associates	40	—	40	—	—	40
Profit before tax	1,841	648	2,489	(108)	93	2,474
Tax	(339)	(149)	(488)	36	(24)	(476)
Profit after tax	1,502	499	2,001	(72)	69	1,998

Other unaudited financial information continued

Reconciliation of adjusted and underlying profits – at constant currency

		At constant currency				
Year ended 31 March 2020	Adjusted at actual exchange rate £m	Constant currency adjustment £m	Adjusted £m	Timing £m	Major storm costs £m	Underlying £m
UK Electricity Transmission	1,320	—	1,320	(146)	—	1,174
UK Gas Transmission	348	—	348	54	—	402
US Regulated	1,397	(56)	1,341	229	—	1,570
NGV and Other	242	1	243	—	—	243
Total operating profit	3,307	(55)	3,252	137	—	3,389
Net finance costs	(1,049)	30	(1,019)	—	—	(1,019)
Share of post-tax results of joint ventures and associates	88	(1)	87	—	—	87
Profit before tax	2,346	(26)	2,320	137	—	2,457

		At constant currency				
Year ended 31 March 2019	Adjusted at actual exchange rate £m	Constant currency adjustment £m	Adjusted £m	Timing £m	Major storm costs £m	Underlying £m
UK Electricity Transmission	1,015	—	1,015	77	—	1,092
UK Gas Transmission	303	—	303	38	—	341
US Regulated	1,724	(46)	1,678	(217)	91	1,552
NGV and Other	400	(1)	399	—	—	399
Total operating profit	3,442	(47)	3,395	(102)	91	3,384
Net finance costs	(993)	19	(974)	—	—	(974)
Share of post-tax results of joint ventures and associates	40	(1)	39	—	—	39
Profit before tax	2,489	(29)	2,460	(102)	91	2,449

Earnings per share calculations from continuing operations – at actual exchange rates

The table below reconciles the profit before tax from continuing operations as per the previous tables back to the earnings per share from continuing operations for each of the adjusted profit measures. Earnings per share is only presented for those adjusted profit measures that are at actual exchange rates, and not for those at constant currency.

Year ended 31 March 2021	**Profit after tax £m**	**Non-controlling interest £m**	**Profit after tax attributable to shareholders £m**	**Weighted average number of shares millions**	**Earnings per share pence**
Statutory	**1,641**	**(1)**	**1,640**	**3,523**	**46.6**
Adjusted (also referred to as Headline)	**1,634**	**(1)**	**1,633**	**3,523**	**46.4**
Underlying	**1,911**	**(1)**	**1,910**	**3,523**	**54.2**

Year ended 31 March 2020	Profit after tax £m	Non-controlling interest £m	Profit after tax attributable to shareholders £m	Weighted average number of shares millions	Earnings per share pence
Statutory	1,274	(1)	1,273	3,461	36.8
Adjusted (also referred to as Headline)	1,913	(1)	1,912	3,461	55.2
Underlying	2,015	(1)	2,014	3,461	58.2

Year ended 31 March 2019	Profit after tax £m	Non-controlling interest £m	Profit after tax attributable to shareholders £m	Weighted average number of shares millions	Earnings per share pence
Statutory	1,502	(3)	1,499	3,386	44.3
Adjusted (also referred to as Headline)	2,001	(3)	1,998	3,386	59.0
Underlying	1,998	(3)	1,995	3,386	58.9

Timing and regulated revenue adjustments

As described on pages 228 – 235, our allowed revenues are set in accordance with our regulatory price controls or rate plans. We calculate the tariffs we charge our customers based on the estimated volume of energy we expect will be delivered during the coming period. The actual volumes delivered will differ from the estimate. Therefore, our total actual revenue will be different from our total allowed revenue. These differences are commonly referred to as timing differences.

If we collect more than the allowed revenue, adjustments will be made to future prices to reflect this over-recovery, and if we collect less than the allowed level of revenue, adjustments will be made to future prices to reflect the under-recovery. In the US, a substantial portion of our costs are pass-through costs (including commodity and energy-efficiency costs) and are fully recoverable from our customers. Timing differences between costs of this type being incurred and their recovery through revenue are also included in timing. The amounts calculated as timing differences are estimates and subject to change until the variables that determine allowed revenue are final.

Our continuing operating profit for the year includes a total estimated in-year under-collection of £207 million (2019/20: £147 million under-collection). Our closing balance at 31 March 2021 was £54 million over-recovered. In the UK, there was a cumulative under-recovery of £150 million at 31 March 2021 (2020: over-recovery of £24 million). In the US, cumulative timing over-recoveries at 31 March 2021 were £198 million (2020: £240 million over-recovery).

The total estimated in-year over- or under-collection excludes opening balance adjustments related to estimates or finalisation of balances as part of regulatory submissions.

In addition to the timing adjustments described above, as part of the RIIO price controls in the UK, outperformance against allowances as a result of the totex incentive mechanism, together with changes in output-related allowances included in the original price control, will almost always be adjusted in future revenue recoveries, typically starting in two years' time. We are also recovering revenues in relation to certain costs incurred (for example pension contributions made) in prior years.

Our current IFRS revenues and earnings include these amounts that relate to certain costs incurred in prior years or that will need to be repaid or recovered in future periods. Such adjustments will form an important part of the continuing difference between reported IFRS results and underlying economic performance based on our regulatory obligations.

For our UK Regulated businesses as a whole, timing and regulated revenue adjustments totalled a return of £184 million in the year (2019/20: £92 million recovery). In the US, accumulated regulatory entitlements cover a range of different areas, with the most significant being environmental remediation and pension assets, as well as deferred storm costs.

All regulatory entitlements are recoverable (or repayable) over different periods, which are agreed with the regulators to match the expected payment profile for the liabilities.

	UK Electricity Transmission £m	**UK Gas Transmission £m**	**US Regulated £m**	**Total £m**
1 April 2020 opening balance[1]	**18**	**16**	**227**	**261**
Over/(under) recovery	**(88)**	**(96)**	**(23)**	**(207)**
31 March 2021 closing balance to (recover)/return[3]	**(70)**	**(80)**	**204**	**54**

	UK Electricity Transmission £m	UK Gas Transmission £m	US Regulated £m	Total £m
1 April 2019 opening balance[1]	(127)	59	452	384
Over/(under) recovery	146	(54)	(229)	(137)
31 March 2020 closing balance to (recover)/return[2,3]	19	5	223	247

	UK Electricity Transmission £m	UK Gas Transmission £m	US Regulated £m	Total £m
1 April 2018 opening balance[1]	(41)	97	235	291
Over/(under) recovery	(77)	(38)	217	102
31 March 2019 closing balance to (recover)/return[2,3]	(118)	59	452	393

1. Opening balances have been restated to reflect the finalisation of calculated over/(under)-recoveries in the UK and the US.
2. US over/(under) recovery and all US Regulated balances have been translated using the average exchange rate for the year ended 31 March 2021.
3. The over-recovered closing balance at 31 March 2021 was £48 million (translated at the closing rate of $1.38:£1). 31 March 2020 was £264 million (translated at the closing rate of $1.24:£1). 31 March 2019 was £407 million (translated at the closing rate of $1.30:£1).

Other unaudited financial information continued

Capital investment

'Capital investment' or 'investment' refer to additions to property, plant and equipment and intangible assets, and contributions to joint ventures and associates, other than the St William Homes LLP joint venture during the period. We also include the Group's investments by National Grid Partners during the period, which are classified for IFRS purposes as non-current financial assets in the Group's consolidated statement of financial position.

Investments made to our St William Homes LLP arrangement are excluded based on the nature of this joint venture arrangement. We typically contribute property assets to the joint venture in exchange for cash and accordingly do not consider these transactions to be in the nature of capital investment.

Year ended 31 March	At actual exchange rates			At constant currency		
	2021 £m	2020 £m	% change	**2021 £m**	2020 £m	% change
UK Electricity Transmission	**1,072**	1,043	3	**1,072**	1,043	3
UK Gas Transmission	**176**	249	(29)	**176**	249	(29)
US Regulated	**3,223**	3,228	—	**3,223**	3,098	4
NGV and Other	**460**	559	(18)	**460**	559	(18)
Group capital expenditure	**4,931**	5,079	(3)	**4,931**	4,949	—
Equity investment, funding contributions and loans to joint ventures and associates[1]	**78**	56	39	**78**	54	44
Acquisition of National Grid Renewables (formerly Geronimo) and Emerald	**—**	209	n/a	**—**	195	n/a
Increase in financial assets (National Grid Partners)	**38**	61	(38)	**38**	59	(36)
Group capital investment	**5,047**	5,405	(7)	**5,047**	5,257	(4)

1. Excludes £nil (2020: £15 million) equity contribution to the St William Homes LLP joint venture.

Net debt

See note 29 on page 187 for the definition and reconciliation of net debt.

Funds from operations and interest cover

FFO is the cash flows generated by the operations of the Group. Credit rating metrics, including FFO, are used as indicators of balance sheet strength.

Year ended 31 March	**2021 £m**	2020[1] £m	2019[1] £m
Interest expense (income statement)	**977**	1,119	1,066
Hybrid interest reclassified as dividend	**(38)**	(39)	(51)
Capitalised interest	**131**	122	135
Pensions interest adjustment	**(16)**	16	(4)
Interest on lease rentals adjustment	**—**	—	11
Unwinding of discount on provisions	**(78)**	(77)	(74)
Other interest adjustments	**—**	—	1
Adjusted interest expense	**976**	1,141	1,084
Net cash inflow from operating activities	**4,461**	4,715	4,389
Interest received on financial instruments	**16**	73	68
Interest paid on financial instruments	**(835)**	(957)	(914)
Dividends received	**80**	75	201
Working capital adjustment	**(312)**	(269)	(40)
Excess employer pension contributions	**116**	176	260
Hybrid interest reclassified as dividend	**38**	39	51
Lease rentals	**—**	—	34
Difference in net interest expense in income statement to cash flow	**(138)**	(187)	(186)
Difference in current tax in income statement to cash flow	**(67)**	67	(13)
Current tax related to prior periods	**8**	(45)	(52)
Cash flow from discontinued operations	**—**	(97)	(71)
Other fair value adjustments	**22**	—	—
Funds from operations (FFO)	**3,389**	3,590	3,727
FFO interest cover ((FFO + adjusted interest expense)/adjusted interest expense)	**4.5 x**	4.1 x	4.4 x

1. Numbers for 2020 and 2019 reflect the calculations for the total Group as based on the published accounts for the respective years.

Retained cash flow/adjusted net debt

RCF/adjusted net debt is one of two credit metrics that we monitor in order to ensure the Group is generating sufficient cash to service its debts, consistent with maintaining a strong investment-grade credit rating. We calculated RCF/adjusted net debt applying the methodology used by Moody's, as this is one of the most constrained calculations of credit worthiness. The net debt denominator includes adjustments to take account of the equity component of hybrid debt.

Year ended 31 March	2021 £m	2020 £m	2019 £m
Funds from operations (FFO)	**3,389**	3,590	3,727
Hybrid interest reclassified as dividend	**(38)**	(39)	(51)
Ordinary dividends paid to shareholders	**(1,413)**	(892)	(1,160)
RCF (excluding share buybacks)	**1,938**	2,659	2,516
Repurchase of shares	**–**	–	–
RCF (net of share buybacks)	**1,938**	2,659	2,516
Borrowings[1]	**32,339**	30,794	28,730
Less:			
50% hybrid debt	**(1,032)**	(1,054)	(1,039)
Cash and cash equivalents	**(157)**	(73)	(252)
Financial and other investments	**(1,768)**	(1,278)	(1,311)
Underfunded pension obligations	**467**	1,442	845
Operating leases adjustment[2]	**–**	–	248
Derivative balances removed from debt[2]	**–**	(116)	141
Currency swaps[2]	**–**	203	38
Nuclear decommissioning liabilities reclassified as debt[2]	**–**	6	18
Collateral – cash received under collateral agreements	**(582)**	(785)	(558)
Accrued interest removed from short-term debt[2]	**–**	(246)	(223)
Adjusted net debt (includes pension deficit)	**29,267**	28,893	26,637
RCF (excluding share buybacks)/adjusted net debt	**6.6%**	9.2%	9.4%
RCF (net of share buybacks)/adjusted net debt	**6.6%**	9.2%	9.4%

1. Before NECO reclassification.
2. Below agency threshold, prior year not restated.

Regulatory Performance Measures

Regulated financial performance – UK

Regulatory financial performance is a pre-interest and tax measure, starting at segmental operating profit and making adjustments (such as the elimination of all pass-through items included in revenue allowances and timing) to approximate regulatory profit for the UK regulated activities. This measure provides a bridge for investors between a well-understood and comparable IFRS starting point and through the key adjustments required to approximate regulatory profit. This measure also provides the foundation to calculate Group RoE.

For the reasons noted above, the table below shows the principal differences between the IFRS operating profit and the regulated financial performance, but is not a formal reconciliation to an equivalent IFRS measure.

UK Electricity Transmission

Year ended 31 March	2021 £m	2020 £m	2019 £m
Adjusted operating profit	**1,034**	1,320	1,015
Movement in regulatory 'IOUs'	**188**	(99)	174
Deferred taxation adjustment	**60**	63	64
RAV indexation (average 3% long-run inflation)	**424**	406	391
Regulatory vs IFRS depreciation difference	**(439)**	(459)	(394)
Fast money/other	**28**	26	72
Pensions	**(54)**	(52)	(51)
Performance RAV created	**111**	119	90
Regulated financial performance	**1,352**	1,324	1,361

Other unaudited financial information continued

UK Gas Transmission

Year ended 31 March	2021 £m	2020 £m	2019 £m
Adjusted operating profit	**342**	348	303
Movement in regulatory 'IOUs'	**34**	67	68
Deferred taxation adjustment	**12**	25	8
RAV indexation (average 3% long-run inflation)	**189**	185	179
Regulatory vs IFRS depreciation difference	**(88)**	(77)	(42)
Fast money/other	**25**	(17)	(10)
Pensions	**(34)**	(34)	(33)
Performance RAV created	**(23)**	(24)	(30)
Regulated financial performance	**457**	473	443

Regulated financial performance – US

US Regulated

Year ended 31 March	2021 £m	2020 £m	2019 £m
Adjusted operating profit	**1,313**	1,397	1,724
Provision for bad and doubtful debts (COVID-19), net of recoveries[1]	**120**	117	—
Major storm costs	**150**	—	93
Timing	**23**	239	(223)
US GAAP pension adjustment	**3**	(4)	(80)
Regulated financial performance	**1,609**	1,749	1,514

1. US Regulated financial performance includes an adjustment reflecting our expectation for future recovery of COVID-19-related provision for bad and doubtful debts.

Total regulated financial performance

Year ended 31 March	2021 £m	2020 £m	2019 £m
UK Electricity Transmission	**1,352**	1,324	1,361
UK Gas Transmission	**457**	473	443
US Regulated	**1,609**	1,749	1,514
Total regulated financial performance	**3,418**	3,546	3,318

US timing, major storms and movement in UK regulatory 'IOUs' – Revenue related to performance in one year may be recovered in later years. Where revenue received or receivable exceeds the maximum amount permitted by our regulatory agreement, adjustments will be made to future prices to reflect this over-recovery. No liability is recognised under IFRS, as such an adjustment to future prices relates to the provision of future services. Similarly, no asset is recognised under IFRS where a regulatory agreement permits adjustments to be made to future prices in respect of an under-recovery. In the UK, this is calculated as the movement in other regulated assets and liabilities.

Performance RAV – UK performance efficiencies are in-part remunerated by the creation of additional RAV which is expected to result in future earnings under regulatory arrangements. This is calculated as in-year totex outperformance multiplied by the appropriate regulatory capitalisation ratio and multiplied by the retained company incentive sharing ratio.

Pension adjustment – Cash payments against pension deficits in the UK are recoverable under regulatory contracts. In US Regulated operations, US GAAP pension charges are generally recoverable through rates. Revenue recoveries are recognised under IFRS but payments are not charged against IFRS operating profits in the year. In the UK, this is calculated as cash payments against the regulatory proportion of pension deficits in the UK regulated business, whereas in the US, it is the difference between IFRS and US GAAP pension charges.

3% RAV indexation – Future UK revenues are expected to be set using an asset base adjusted for inflation. This is calculated as UK RAV multiplied by 3% (long-run RPI inflation assumption).

UK deferred taxation adjustment – Future UK revenues are expected to recover cash taxation cost including the unwinding of deferred taxation balances created in the current year. This is the difference between: (a) IFRS underlying EBITDA less other regulatory adjustments; and (b) IFRS underlying EBITDA less other regulatory adjustments less current taxation (adjusted for interest tax shield) then grossed up at full UK statutory tax rate.

Regulatory depreciation – US and UK regulated revenues include allowance for a return of regulatory capital in accordance with regulatory assumed asset lives. This return does not form part of regulatory profit.

Fast/slow money adjustment – The regulatory remuneration of costs incurred is split between in-year revenue allowances and the creation of additional RAV. This does not align with the classification of costs as operating costs and fixed asset additions under IFRS accounting principles. This is calculated as the difference between IFRS classification of costs as operating costs or fixed asset additions and the regulatory classification.

Regulated asset base

The regulated asset base is a regulatory construct, based on predetermined principles not based on IFRS. It effectively represents the invested capital on which we are authorised to earn a cash return. By investing efficiently in our networks, we add to our regulated asset base over the long term, and this in turn contributes to delivering shareholder value. Our regulated asset base is comprised of our regulatory asset value in the UK, plus our rate base in the US.

Maintaining efficient investment in our regulated asset base ensures we are well positioned to provide consistently high levels of service to our customers and increases our revenue allowances in future years. While we have no specific target, our overall aim is to achieve between 5% and 7% growth in regulated asset base each year through continued investment in our networks in both the UK and US.

In the UK, the way in which our transactions impact RAV is driven by principles set out by Ofgem. In a number of key areas these principles differ from the requirements of IFRS, including areas such as additions and the basis for depreciation. Further, our UK RAV is adjusted annually for inflation. RAV in each of our retained UK businesses has evolved over the period since privatisation in 1990, and as a result, historical differences between the initial determination of RAV and balances reported under UK GAAP at that time still persist. Due to the above, substantial differences exist in the measurement bases between RAV and an IFRS balance metric, and therefore, it is not possible to provide a meaningful reconciliation between the two.

In the US, rate base is a regulatory measure determined for each of our main US operating companies. It represents the value of property and other assets or liabilities on which we are permitted to earn a rate of return, as set out by the regulatory authorities for each jurisdiction. The calculations are based on the applicable regulatory agreements for each jurisdiction and include the allowable elements of assets and liabilities from our US companies. For this reason, it is not practical to provide a meaningful reconciliation from the US rate base to an equivalent IFRS measure. However, we include the calculation below.

'Total Regulated and other balances' includes the under or over-recovery of revenues that National Grid's UK regulated businesses target to collect in any year, which are based on the regulator's forecasts for that year. Under the UK price control arrangements, revenues will be adjusted in future years to take account of actual levels of collected revenue, costs and outputs delivered when they differ from those regulatory forecasts. In the US, other regulatory assets and liabilities include regulatory assets and liabilities which are not included in the definition of rate base, including working capital where appropriate.

The investment in 'NGV and other businesses' includes net assets excluding pensions, tax and items related to the UK Gas Distribution sale.

Year ended 31 March (£m at constant currency)	RAV, rate base or other business assets 2021 £m	2020[1] £m	Total Regulated and other balances 2021[2,3] £m	2020[1,2,3] £m
UK Electricity Transmission	**14,565**	14,133	**14,379**	13,772
UK Gas Transmission	**6,307**	6,298	**6,333**	6,291
US Regulated	**20,041**	18,598	**22,015**	20,211
Total regulated	**40,913**	39,029	**42,727**	40,274
NGV and other businesses	**4,458**	3,942	**4,122**	3,428
Total Group regulated and other balances	**45,371**	42,971	**46,849**	43,702

1. Figures relating to prior periods have, where appropriate, been re-presented at constant currency, for opening balance adjustments following the completion of the UK regulatory reporting pack process in 2019, and finalisation of US balances.
2. Includes totex-related regulatory IOUs of £310 million (2020: £411 million), over-recovered timing balances of £150 million (2020: £24 million under-recovered) and under-recovered legacy balances related to previous price controls of £nil (2020: £78 million).
3. Includes assets for construction work-in-progress of £1,639 million (2020: £1,510 million), other regulatory assets related to timing and other cost deferrals of £806 million (2020: £642 million) and net working capital liabilities of £471 million (2020: £361 million).

US rate base and other total regulated and other balances for 31 March 2020 have been restated in the table above at constant currency. At actual currency the values were £20.6 billion and £25.5 billion respectively.

Group RoE

Group RoE provides investors with a view of the performance of the Group as a whole compared with the amounts invested by the Group in assets attributable to equity shareholders. It is the ratio of our regulatory financial performance to our measure of equity investment in assets. It therefore reflects the regulated activities as well as the contribution from our non-regulated businesses together with joint ventures and non-controlling interests.

We use Group RoE to measure our performance in generating value for our shareholders, and targets for Group RoE are included in the incentive mechanisms for executive remuneration within both the APP and LTPP schemes.

Group RoE is underpinned by our regulated asset base. For the reasons noted above, no reconciliation to IFRS has been presented, as we do not believe it would be practical. However, we do include the calculations below.

Calculation: Regulatory financial performance including a long-run assumption of 3% RPI inflation, less adjusted interest and adjusted taxation divided by equity investment in assets:

- adjusted interest removes interest on pensions, capitalised interest in regulated operations and unwind of discount rate on provisions;
- adjusted taxation adjusts the Group taxation charge for differences between IFRS profit before tax and regulated financial performance less adjusted interest; and
- equity investment in assets is calculated as the total opening UK regulatory asset value, the total opening US rate base plus goodwill plus opening net book value of National Grid Ventures and Other activities and our share of joint ventures and associates, minus opening net debt as reported under IFRS restated to the weighted average £/$ exchange rate for the year.

Other unaudited financial information continued

Year ended 31 March	2021 £m	2020[1] £m	2019[1] £m
Regulated financial performance	**3,418**	3,546	3,318
Operating profit of other activities	**264**	269	424
Group financial performance	**3,682**	3,815	3,742
Share of post-tax results of joint ventures and associates	**66**	88	40
Non-controlling interests	**(1)**	(1)	(3)
Adjusted Group interest charge	**(882)**	(1,069)	(1,037)
Group tax charge	**(416)**	(433)	(488)
Tax on adjustments	**(175)**	(117)	(34)
Group financial performance after interest and tax	**2,274**	2,283	2,220
Opening rate base/RAV	**39,552**	37,459	35,045
Opening other balances	**3,984**	3,304	2,298
Opening goodwill	**5,295**	5,435	5,356
Opening capital employed	**48,831**	46,198	42,699
Opening net debt	**(27,398)**	(27,194)	(24,345)
Opening equity	**21,433**	19,004	18,354
Return on Equity	**10.6%**	12.0%	12.1%

1. Group ROE in 2020 and 2019 have been recalculated to reflect the revision to decrease the comparative goodwill balances (see note 1F for details).

UK and US regulated RoE

Year ended 31 March	Regulatory Debt: Equity assumption	Achieved Return on Equity 2021 %	Achieved Return on Equity 2020 %	Base or Allowed Return on Equity 2021 %	Base or Allowed Return on Equity 2020 %
UK Electricity Transmission	**60/40**	**13.9**	13.5	**10.2**	10.2
UK Gas Transmission	**62.5/37.5**	**9.6**	9.8	**10.0**	10.0
US Regulated	**Avg. 50/50**	**7.2**	9.3	**9.4**	9.4

UK regulated RoE

UK regulated RoEs are a measure of how the businesses are performing against the assumptions used by our UK regulator. These returns are calculated using the assumption that the businesses are financed in line with the regulatory adjudicated capital structure, at the cost of debt assumed by the regulator, and that RPI inflation is equal to a long-run assumption of 3%. They are calculated by dividing elements of out/under-performance versus the regulatory contract (i.e., regulated financial performance disclosed above) by the average equity RAV in line with the regulatory assumed capital structure and adding to the base allowed RoE.

This is an important measure of UK regulated business performance, and our operational strategy continues to focus on this metric. This measure can be used to determine how we are performing under the RIIO framework and also helps investors to compare our performance with similarly regulated UK entities. Reflecting the importance of this metric, it is also a key component of the APP scheme.

The UK RoE is underpinned by the UK RAV. For the reasons noted above, no reconciliation to IFRS has been presented, as we do not believe it would be practical.

US regulated RoE

US regulated RoE is a measure of how a business is performing against the assumptions used by the US regulators. This US operational return measure is calculated using the assumption that the businesses are financed in line with the regulatory adjudicated capital structure and allowed cost of debt. The returns are divided by the average rate base (or where a reported rate base is not available, an estimate based on rate base calculations used in previous rate filings) multiplied by the adjudicated equity portion in the regulatory adjudicated capital structure.

This is an important measure of our US regulated business performance, and our operational strategy continues to focus on this metric. This measure can be used to determine how we are performing and also helps investors compare our performance with similarly regulated US entities. Reflecting the importance of this metric, it is also a key component of the APP scheme.

The US return is based on a calculation which gives proportionately more weighting to those jurisdictions which have a greater rate base. For the reasons noted above, no reconciliation to IFRS for the RoE measure has been presented, as we do not believe it would be practical to reconcile our IFRS balance sheet to the equity base.

The table below shows the principal differences between the IFRS result of the US Regulated segment, and the ‘return’ used to derive the US RoE. In outlining these differences, we also include the result for the US regulated Operating Companies (OpCo) entities aggregated under US GAAP.

In respect of 2019/20 and 2018/19, this measure is the aggregate operating profit of our US OpCo entities’ publicly available financial statements prepared under US GAAP. For 2020/21, this measure represents our current estimate, since local financial statements have yet to be prepared.

	2021 £m	2020 £m	2019 £m
Underlying IFRS operating profit for US regulated segment	**1,486**	1,636	1,594
Weighted average £/$ exchange rate	**$1.341**	$1.287	$1.305

	2021 $m	2020 $m	2019 $m
Underlying IFRS operating profit for US regulated segment	**1,993**	2,105	2,081
Adjustments to convert to US GAAP as applied in our US OpCo entities			
Adjustment in respect of customer contributions	**(59)**	(50)	(50)
Pension accounting differences[1]	**–**	(13)	(10)
Environmental charges recorded under US GAAP	**(108)**	(94)	(117)
Storm costs and recoveries recorded under US GAAP	**(113)**	(9)	(112)
Other regulatory deferrals, amortisation and other items	**100**	3	121
Results for US regulated OpCo entities, aggregated under US GAAP[2]	**1,813**	1,942	1,913
Adjustments to determine regulatory operating profit used in US RoE			
Levelisation revenue adjustment	**–**	(122)	(48)
Adjustment for COVID-19-related provision for bad and doubtful debts[3]	**127**	150	–
Net other	**(32)**	51	(1)
Regulatory operating profit	**1,908**	2,021	1,864
Pensions[1]	**(46)**	19	(95)
Regulatory interest charge	**(539)**	(491)	(457)
Regulatory tax charge	**(348)**	(408)	(345)
Regulatory earnings used to determine US RoE	**975**	1,141	967

1. Following a change in US GAAP accounting rules, an element of the pensions charge is reported outside operating profit with effect from 2019.
2. Based on US GAAP accounting policies as applied by our US regulated OpCo entities.
3. US RoE includes an adjustment reflecting our expectation for future recovery of COVID-19-related bad and doubtful debt costs.

	2021 $m	2020 $m	2019 $m
US equity base (average for the year)	**13,621**	12,331	11,045
US RoE	**7.2%**	9.3%	8.8%

Value Added and Value Added per share and Value Growth
Value Added is a measure that reflects the value to shareholders of our cash dividend and the growth in National Grid's regulated and non-regulated assets (as measured in our regulated asset base, for regulated entities), and corresponding growth in net debt. It is a key metric used to measure our performance and underpins our approach to sustainable decision-making and long-term management incentive arrangements.

Value Added is derived using our regulated asset base and, as such, it is not practical to provide a meaningful reconciliation from this measure to an equivalent IFRS measure due to the reasons set out for our regulated asset base. However, the calculation is set out in the Financial review. Value Added per share is calculated by dividing Value Added by the weighted average number of shares (3,523 million) set out in note 8.

Value Growth of 9.4% (2020: 10.7%) is derived from Value Added by adjusting Value Added to normalise for a 3% long-run RPI inflation rate. In 2021, the numerator for Value Growth was £1,995 million (2020: £2,068 million). The denominator is Group equity as used in the Group RoE calculation, adjusted for foreign exchange movements. Value Growth in 2020 has been recalculated from the previously reported 10.4% to reflect the revision to decrease the comparative goodwill balance (see note 1F for details).

Asset growth
Asset growth is the annual percentage increase in our RAV and rate base and other business balances (including the assets of NGV and NGP) calculated at constant currency.

Regulatory gearing
Regulatory gearing is a measure of how much of our investment in RAV and rate base and other elements of our invested capital (including our investments in NGV, UK property and other assets and US other assets) is funded through debt. Comparative amounts as at 31 March 2020 are presented at historical exchange rates and have not been restated for opening balance adjustments.

As at 31 March	2021 £m	2020 £m	
UK RAV	**20,872**	20,431	
US rate base	**20,041**	20,644	
Other invested capital included in gearing calculation	**4,458**	4,105	
Total assets included in gearing calculation	**45,371**	45,180	
Net debt (including 100% of hybrid debt)	**(29,665)**	**(28,590)**	change
Group gearing (based on 100% of net debt)	**65%**	63%	2 % pts
Group gearing (excluding 50% of hybrid debt from net debt)	**63%**	61%	2 % pts

Commentary on consolidated financial statements

for the year ended 31 March 2020

In compliance with SEC rules, we present a summarised analysis of movements in the income statement and an analysis of movements in adjusted operating profit (for the continuing group) by operating segment. This should be read in conjunction with the 31 March 2021 financial review included on pages 30 – 39.

Analysis of the income statement for the year ended 31 March 2020

Revenue

Revenue for the year ended 31 March 2020 decreased by £393 million to £14,540 million. This decrease was driven by lower revenues in our US Regulated, in our UK Gas Transmission business and in our NGV & Other businesses, partially offset by higher revenues in our UK Electricity Transmission business. US Regulated revenues were £641 million lower year-on-year, principally due to the impact of lower commodity pass-through costs, partly offset by new rates and the benefit of foreign exchange. UK Gas Transmission revenues were £27 million higher, driven by the return of allowances related to Avonmouth in the year ended 31 March 2019, partly offset by timing under-recoveries. UK Electricity Transmission revenues increased by £363 million, mainly as the result of higher BSIS pass-through costs (due to increased levels of renewable generation) and favourable timing over-collections (higher volumes and collection of prior period under-recoveries). Revenue from NGV and Other businesses decreased by £142 million, primarily driven by the significant level of sales in our Commercial Property business in the year ended 31 March 2019 and lower income from other support services.

Operating costs

Operating costs for the year ended 31 March 2020 of £11,760 million were £303 million lower than the prior year. This decrease in costs included a £45 million reduction in exceptional items and remeasurements. Lower operating costs were driven by the reduction in US commodity pass-through costs and lower UK BSIS pass-through costs, partially offset by higher workforce costs, increased rates and property taxes, higher depreciation as a result of continued asset investment and the impact of movement in exchange rates.

Net finance costs

For the year ended 31 March 2020, net finance costs before exceptional items and remeasurements were £56 million higher than the year ended 31 March 2019 at £1,049 million, mainly as a result of swap termination and debt buy-back costs, lower capitalised interest, higher lease interest (as a result of IFRS16) and the impact of the stronger US dollar, partially offset by favourable tax interest and the impact of higher UK RPI inflation. Net finance costs in the year ended 31 March 2020 included remeasurement losses of £64 million on derivative financial instruments used to hedge our borrowings, compared to £76 million of remeasurement losses in the year ended 31 March 2019.

Tax

The tax charge on profits before exceptional items and remeasurements of £433 million was £55 million lower than the year ended 31 March 2019. This was mainly related to a lower level of profit before tax in the year ended 31 March 2020 compared to the year ended 31 March 2019, but was also the result of a benefit from the release of reserves following settlement of tax audits relating to earlier years and gains on chargeable disposals which were offset by previously unrecognised capital losses. In the year ended 31 March 2019, significantly higher gains on property disposals that were offset by previously unrecognised capital losses resulted in a lower underlying effective tax rate.

Exceptional items and remeasurements

In the year ended 31 March 2020, exceptional items included a £402 million charge associated with changes in our environmental provisions and an additional deferred tax charge of £192 million reflecting the impact of the remeasurement of the Group's deferred tax liabilities as a result of a change in the substantively enacted UK corporation tax rate. Remeasurement losses of £125 million on commodity contracts were recognised in the year ended 31 March 2020. In the previous year, operating costs included £283 million of costs arising from the workforce contingency plan related to the Massachusetts Gas labour dispute, £204 million of restructuring charges in our UK and US businesses and £137 million related to the impairment of nuclear connection development costs following the cancellation of the NuGen and Horizon projects. These were partially offset by a net £52 million gain on remeasurement of commodity contracts.

Finance costs for the year ended 31 March 2020 included a net loss of £64 million on financial remeasurements of derivative financial instruments used to hedge our borrowings, compared to a loss of £76 million on financial remeasurements in the year ended 31 March 2019.

Share of post-tax results of joint ventures and associates before exceptional items for the year ended 31 March 2020 were £88 million compared to £40 million in the year ended 31 March 2019, principally due to increased profits in St William, our Property joint venture.

Adjusted earnings and EPS from continuing operations

Adjusted earnings and EPS, which exclude exceptional items and remeasurements, are provided to reflect the Group's results on an 'adjusted profit' basis, described further in note 5. See page 252 for a reconciliation of adjusted basic EPS to EPS.

The above earnings performance translated into adjusted EPS in the year ended 31 March 2020 of 55.2p, compared to 59.0p in the year ended 31 March 2019.

Exchange rates

Our financial results are reported in sterling. Transactions for our US operations are denominated in dollars, so the related amounts that are reported in sterling depend on the dollar to sterling exchange rate. The table below shows the average and closing exchange rates of sterling to US dollars.

	2019/20	2018/19	% change
Weighted average (income statement)	**1.29**	1.31	-1.42%
Year-end (statement of financial position)	**1.24**	1.30	4.79%

The movement in foreign exchange during the year ended 31 March 2020 has resulted in a £143 million increase in revenue, a £25 million increase in adjusted operating profit and a £21 million increase in operating profit.

Analysis of the adjusted operating profit by segment for the year ended 31 March 2020

UK Electricity Transmission

For the year ended 31 March 2020, revenue in the UK Electricity Transmission segment decreased by £351 million to £3,702 million, and adjusted operating profit increased by £305 million to £1,320 million. Revenue was significantly impacted by higher levels of pass-through costs related to balancing services in ESO, as a result of record levels of renewable generation in the year ended 31 March 2020. Excluding pass-through costs, net revenue was £220 million higher, principally reflecting timing over-recoveries (higher volumes and collection of prior period under-recoveries) along with higher revenues as a result of MOD impact from cyber and data centre allowances, offset by the true-up of totex allowances and RAV indexation from inflation. Regulated controllable costs were £26 million lower, reflecting inflation and higher IT costs more than offset by efficiency savings and the non-recurrence of ESO legal separation costs in the year ended 31 March 2019. Depreciation and amortisation was £24 million lower due to lower levels of asset commissioning and provision releases in the year ended 31 March 2020. Other costs were £34 million lower, principally relating to provision against income recognised on early termination of connections in the prior year.

Capital expenditure increased by £118 million compared with the year ended 31 March 2019 to £1,043 million reflecting increased activity on Hinkley Seabank, London Power Tunnels 2 and higher capex on the Dorset Visual Impact Provision project in the year ended 31 March 2020.

UK Gas Transmission
Revenue in the UK Gas Transmission segment increased by £31 million to £927 million, and adjusted operating profit increased by £45 million to £348 million.

After deducting pass-through costs, net revenue was £16 million higher than the yeard ended 31 March 2019, reflecting the prior year refund of revenues previously received in respect of the proposed Avonmouth pipeline project that is no longer required. Regulated controllable costs were £17 million lower than the year ended 31 March 2019, with efficiency savings and an environmental provision release offsetting the higher IT run-the-business costs and the impact of inflation. Pension costs were £8 million lower mainly related to the Guaranteed Minimum Pension equalisation ruling in the year ended 31 March 2019. Depreciation and amortisation costs were £10 million lower following a full year impact of asset lives changes made in the year ended 31 March 2019. Other operating costs were £6 million higher than the year ended 31 March 2019, as a result of the release of unused provisions in the prior year.

Capital expenditure decreased by £59 million to £249 million, as a result of lower expenditure on Feeder 9 project (Humber Estuary), lower investment in Peterborough and Huntingdon compressor project and reduced asset health investment.

US Regulated
Revenue in our US Regulated business reduced by £641 million to £9,205 million, and adjusted operating profit decreased by £327 million to £1,397 million.

The stronger US dollar decreased revenue and operating profit in the year ended 31 March 2020. Excluding the impact of foreign exchange rate movements, revenue decreased by £783 million. Of this decrease, £575 million was due to increases in commodity pass-through costs charged on to customers, and £465 million was due to year-on-year timing movements as a result of under-collection of revenues compared to our regulatory allowances in the year ended 31 March 2020 of £239 million (2019: £226 million over-recovery). Excluding pass-through costs and timing swings, net revenue increased by £257 million at constant currency, principally reflecting increased revenue allowances under rate plans in upstate and downstate New York, in Massachusetts and in Rhode Island.

We incurred £76 million of deferrable storm costs in the year ended 31 March 2020 through a number of storms that caused substantial damage to our electricity networks, but this fell below our $100 million threshold to qualify as ‘major’ and be excluded from our underlying results. This compared to £95 million in the year ended 31 March 2019, which as these this did exceed our threshold were stripped out of our underlying results in the previous year. Excluding the impact of foreign exchange movements, regulated controllable costs decreased by £51 million as a result of cost efficiencies (principally from the benefit of restructurings and contract management), partly offset by workload increases and inflation. Bad debt expense increased by £85 million at constant currency, driven by £117 million additional provision for receivables related to the impact of COVID-19. Depreciation and amortisation increased due to ongoing investment in our networks. Other operating costs were £61 million higher at constant currency, as a result of higher storms in underlying in the year ending 31 March 2020 partly offset by lower cost of removal.

Capital expenditure in the US Regulated business increased to £3,228 million in the year ending 31 March 2020, £578 million more than in the year ending 31 March 2019. At constant currency, this represented a £540 million increase in investment driven by higher investment in new and replacement gas mains and gas business enablement investment, the impact of the Massachusetts Gas labour dispute on capex in the year ending 31 March 2019 and increased investment in IT.

NGV and Other
Revenue in NGV and Other reduced by £140 million to £736 million, and adjusted operating profit increased by £5 million to £242 million. This reflects lower revenues and profit on disposal of property sites in our UK commercial property business (due to significant sales made in the year ending 31 March 2019) and reduced income from support services supplied to Cadent compared to the prior year.

Capital expenditure in NGV and Other was £121 million higher than the year ending 31 March 2019 at £559 million, including the increased investment in a second French Interconnector, the North Sea Link interconnector to Norway and the Viking interconnector to Denmark.

Five year summary financial information

Financial summary (unaudited)

The financial summary set out below has been derived from the audited consolidated financial statements of National Grid for the five financial years ended 31 March 2021. It should be read in conjunction with the consolidated financial statements and related notes, together with the Strategic Report. The information presented below is adjusted for the matters described in the footnotes below for the years ended 31 March 2021, 2020, 2019, 2018 and 2017 where relevant and has been prepared under IFRS as issued by the IASB and as adopted by the EU.

Summary income statement (£m)	2021	2020	2019	2018[1]	2017
Continuing operations					
Revenue	**14,779**	14,540	14,933	15,250	15,035
Operating profit					
Before exceptional items, remeasurements	**2,926**	3,307	3,442	3,457	3,773
Exceptional items, remeasurements	**(31)**	(527)	(572)	36	(565)
Profit before tax					
Before exceptional items, remeasurements	**2,050**	2,346	2,489	2,500	2,807
Exceptional items, remeasurements	**33**	(592)	(648)	160	(623)
Profit after tax from continuing operations					
Before exceptional items, remeasurements	**1,634**	1,913	2,001	1,916	2,141
Exceptional items, remeasurements	**7**	(639)	(499)	1,633	(331)
(Loss)/profit after tax from discontinued operations					
Before exceptional items, remeasurements	**–**	5	57	145	606
Exceptional items, remeasurements	**–**	(14)	(45)	(143)	57
Gain on disposal of UK Gas Distribution after tax	**–**	–	–	–	5,321
Total profit for the year	**1,641**	1,265	1,514	3,551	7,794
Profit for the year attributable to equity shareholders					
Before exceptional items, remeasurements	**1,633**	1,917	2,055	2,060	2,747
Exceptional items, remeasurements	**7**	(653)	(544)	1,490	(273)
Gain on disposal of UK Gas Distribution after tax	**–**	–	–	–	5,321
Total	**1,640**	1,264	1,511	3,550	7,795
Earnings per share					
Basic – continuing operations (pence)	**46.6**	36.8	44.3	102.5	48.1
Diluted – continuing operations (pence)	**46.3**	36.6	44.1	102.1	47.9
Basic – total (pence)	**46.6**	36.5	44.6	102.6	207.1
Diluted – total (pence)	**46.3**	36.3	44.4	102.1	206.2
Weighted average number of shares – basic (millions)	**3,523**	3,461	3,386	3,461	3,763
Weighted average number of shares – diluted (millions)	**3,540**	3,478	3,401	3,476	3,780
Dividends per ordinary share					
Paid during the year (pence)	**49.00**	47.83	46.52	128.97	43.51
Approved or proposed during the year (pence)[2]	**49.16**	48.57	47.34	45.93	128.65
Paid during the year ($)	**0.628**	0.615	0.607	1.751	0.555
Approved or proposed during the year ($)	**0.682**	0.625	0.618	0.624	1.642

1. Items previously reported for 2018 have been re-presented to reflect our investment in Quadgas HoldCo Limited being presented as a discontinued operation in 2019.
2. Following the disposal of UK Gas Distribution, 2017 includes a special interim dividend of 84.375 pence per share that was paid on 2 June 2017.

Summary statement of net assets (£m)	2021	2020[1]	2019[1]	2018	2017
Non-current assets	**57,278**	61,759	55,466	52,106	52,266
Current assets	**9,938**	5,801	7,946	6,681	13,574
Total assets	**67,216**	67,560	63,412	58,787	65,840
Current liabilities	**(9,368)**	(8,564)	(9,129)	(8,697)	(10,511)
Non-current liabilities	**(37,988)**	(39,203)	(34,715)	(31,242)	(34,945)
Total liabilities	**(47,356)**	(47,767)	(43,844)	(39,939)	(45,456)
Net assets	**19,860**	19,793	19,568	18,848	20,384
Total shareholders' equity	**19,839**	19,771	19,548	18,832	20,368

1. Items previously reported for 2019 and 2020 have been revised as detailed in note 1F.

Definitions and glossary of terms

Our aim is to use plain English in this Annual Report and Accounts. However, where necessary, we do use a number of technical terms and abbreviations. We summarise the principal ones below, together with an explanation of their meanings. The descriptions below are not formal legal definitions. Alternative and Regulatory Performance Measures are defined on pages 250 – 262.

A

Adjusted interest
A measure of the interest charge of the Group, calculated by making adjustments to the Group reported interest charge.

Adjusted net debt
A measure of the indebtedness of the Group, calculated by making adjustments to the Group reported borrowings, including adjustments made to include elements of pension deficits and exclude elements of hybrid debt financing.

Adjusted results (also referred to as headline results)
Financial results excluding the impact of exceptional items and remeasurements that are treated as discrete transactions under IFRS and can accordingly be classified as such. This is a measure used by National Grid management that forms part of the incentive target set annually for remunerating certain Executive Directors, and further details of these items are included in note 5 to the Financial Statements.

American Depositary Shares (ADSs)
Securities of National Grid listed on the New York Stock Exchange, each of which represents five ordinary shares. They are evidenced by American Depositary Receipts or ADRs.

Annual General Meeting (AGM)
Meeting of shareholders of the Company held each year to consider ordinary and special business as provided in the Notice of AGM.

B

BEIS
The Department for Business, Energy and Industrial Strategy, the UK government department responsible for business, industrial strategy, and science and innovation with energy and climate change policy.

Board
The Board of Directors of the Company (for more information see pages 72 and 73).

bps
Basis point (bp, bps) is a unit that is equal to 1/100th of 1% and is typically used to denote the movement in a percentage-based metric such as interest rates or RoE. A 0.1% change in a percentage represents 10 basis points.

BritNed
BritNed Development Limited, a joint venture company in which National Grid and Tennet, the Dutch national transmission system operator, each hold 50% of the shares.

C

Called-up share capital
Shares (common stock) that have been issued and have been fully paid for.

Capital tracker
In the context of our US rate plans, this is a mechanism that allows the recovery of the revenue requirement of incremental capital investment above that embedded in base rates, including depreciation, property taxes and a return on the incremental investment.

Carbon capture usage and storage (CCUS)
The process of capturing carbon dioxide (CO_2) for the purpose of recycling it for further usage and/or determining safe and permanent storage options for it.

Carrying value
The amount at which an asset or a liability is recorded in the Group's statement of financial position and the Company's balance sheet.

The Company, the Group, National Grid, we, our or us
We use these terms to refer to either National Grid plc itself or to National Grid plc and/or all or certain of its subsidiaries, depending on context.

Consolidated financial statements
Financial statements that include the results and financial position of the Company and its subsidiaries together as if they were a single entity.

Constant currency
'Constant currency basis' refers to the reporting of the actual results against the results for the same period last year, which, in respect of any US$ currency denominated activity, have been translated using the average US$ exchange rate for the year ended 31 March 2021, which was \$1.34 to £1. The average rate for the year ended 31 March 2020 was \$1.29 to £1, and for the year ended 31 March 2019 was \$1.31 to £1. Assets and liabilities as at 31 March 2020 have been retranslated at the closing rate at 31 March 2021 of \$1.38 to £1. The closing rate for the balance sheet date 31 March 2020 was \$1.24 to £1.

Contingent liabilities
Possible obligations or potential liabilities arising from past events for which no provision has been recorded, but for which disclosure in the financial statements is made.

COP26
The 26th UN Climate Change Conference of the Parties which the UK will host at the Scottish Event Campus in Glasgow on 1–12 November 2021. The climate talks will bring together heads of state, climate experts and campaigners to agree coordinated action to tackle climate change. The Company is a principal partner of COP26.

COVID-19
COVID-19 or coronavirus disease is an infectious disease caused by a newly discovered coronavirus which spreads through droplets of saliva or discharge from the nose when an infected person coughs or sneezes.

CPIH
The UK Consumer Prices Index including Owner Occupiers' Housing Costs as published by the Office for National Statistics.

D

Dth
Decatherm, being an amount of energy equal to 1 million British thermal units (BTUs), equivalent to approximately 293 kWh.

DB
Defined benefit, relating to our UK or US (as the context requires) final salary pension schemes.

DC
Defined contribution, relating to our UK or US (as the context requires) pension schemes to which National Grid, as an employer, pays contributions based on a percentage of employees' salaries.

Deferred tax
For most assets and liabilities, deferred tax is the amount of tax that will be payable or receivable in respect of that asset or liability in future tax returns as a result of a difference between the carrying value for accounting purposes in the statement of financial position or balance sheet and the value for tax purposes of the same asset or liability.

Deposit agreement
The amended and restated deposit agreement entered into between National Grid plc, the Depositary and all the registered holders from time to time of ADRs, pursuant to which ADSs have been issued, dated 23 May 2013, and any related agreement.

Depositary
Depositary means the Bank of New York Mellon acting as depositary.

Derivative
A financial instrument or other contract where the value is linked to an underlying index, such as exchange rates, interest rates or commodity prices. In most cases, we exclude contracts for the sale or purchase of commodities that are used to supply customers or for our own needs from this definition.

Directors/Executive Directors/Non-executive Directors
The Directors/Executive Directors and Non-executive Directors of the Company, whose names are set out on pages 72 and 73 of this document.

Distributed energy resources (DER)
Decentralised assets, generally located behind the meter, covering a range of technologies including solar, storage, electric vehicle charging, district heating, smart street lighting and combined heat and power.

Definitions and glossary of terms continued

Dollars or $
Except as otherwise noted, all references to dollars or $ in this Annual Report and Accounts relate to the US currency.

E

Earnings per share (EPS)
Profit for the year attributable to equity shareholders of the Company allocated to each ordinary share.

Electricity System Operator (ESO)
The party responsible for the long-term strategy, planning and real-time operation (balancing supply and demand) of the electricity system in Great Britain.

Electricity Transmission (ET)
National Grid's UK electricity transmission business.

Employee engagement
A key performance indicator (KPI), based on the percentage of favourable responses to certain indicator questions repeated in each employee survey. It is used to measure how employees think, feel and act in relation to National Grid. Research shows that a highly engaged workforce leads to increased productivity and employee retention. We use employee engagement as a measure of organisational health in relation to business performance.

Employee resource group (ERG)
A group of employees who join together in their workplace based on shared characteristics or life experiences.

Estate Tax Convention
The convention between the US and the UK for the avoidance of double taxation with respect to estate and gift taxes.

EU
The European Union (EU) is the economic and political union of 27 member states located in Europe. The UK left the European Union on 31 January 2020.

Exchange Act
The US Securities Exchange Act 1934, as amended.

F

FERC
The US Federal Energy Regulatory Commission.

Finance lease
A lease where the asset is treated as if it was owned for the period of the lease, and the obligation to pay future rentals is treated as if they were borrowings. Also known as a capital lease.

Financial year
For National Grid this is an accounting year ending on 31 March. Also known as a fiscal year.

FRS
A UK Financial Reporting Standard as issued by the UK Financial Reporting Council (FRC). It applies to the Company's individual financial statements on pages 217 – 223, which are prepared in accordance with FRS 101.

Funds from Operations (FFO)
A measure used by the credit rating agencies of the operating cash flows of the Group after interest and tax but before capital investment.

G

Gas Transmission (GT)
National Grid's UK gas transmission business.

Grain LNG
National Grid Grain LNG Limited.

Great Britain (GB)
England, Wales and Scotland.

Group Value Growth
Group Value Growth is Group-wide value added expressed as a proportion of Group equity. See page 34 for an explanation of Value Added.

GW
Gigawatt, an amount of power equal to 1 billion watts (10^9 watts).

GWh
Gigawatt hours, an amount of energy equivalent to delivering 1 billion watts (10^9 watts) of power for a period of one hour.

H

HMRC
HM Revenue & Customs. The UK tax authority.

HVDC
High-voltage, direct-current electric power transmission that uses direct current for the bulk transmission of electrical power in contrast to the more common alternating current systems.

I

IAS or IFRS
An International Accounting Standard (IAS) or International Financial Reporting Standard (IFRS), as issued by the International Accounting Standards Board (IASB). IFRS is also used as the term to describe international generally accepted accounting principles as a whole.

Individual financial statements
Financial statements of a company on its own, not including its subsidiaries or joint ventures and associates.

Interest cover
A measure used by the credit rating agencies, calculated as FFO plus adjusted interest divided by adjusted interest.

J

Joint venture (JV)
A company or other entity that is controlled jointly with other parties.

K

KEDLI
KeySpan Gas East Corporation, also known as KeySpan Energy Delivery Long Island.

KEDNY
The Brooklyn Union Gas Company, also known as KeySpan Energy Delivery New York.

KPI
Key performance indicator.

kW
Kilowatt, an amount of power equal to 1,000 watts.

L

LIPA
The Long Island Power Authority.

LNG
Liquefied natural gas is natural gas that has been condensed into a liquid form, typically at temperatures at or below -161°C (-258°F).

Lost time injury (LTI)
An incident arising out of National Grid's operations that leads to an injury where the employee or contractor normally has time off for the following day or shift following the incident. It relates to one specific (acute) identifiable incident which arises as a result of National Grid's premises, plant or activities, and was reported to the supervisor at the time and was subject to appropriate investigation.

Lost time injury frequency rate (LTIFR)
The number of lost time injuries (LTIs) per 100,000 hours worked in a 12-month period.

M

MADPU
The Massachusetts Department of Public Utilities.

MW
Megawatt, an amount of power equal to 1 million watts.

MWh
Megawatt hours, an amount of energy equivalent to delivering 1 million watts (10^6) of power for a period of one hour.

N

National Grid Metering Limited (NGM)
The Company's UK regulated metering business.

National Grid Partners (NGP)
The Company's venture investment and innovation business established in November 2018.

National Grid Renewables (NGR)
This business, which includes the renewables development company formerly known as Geronimo, is a leading developer of wind and solar generation based in Minneapolis in the US. National Grid acquired Geronimo in July 2019.

National Grid Ventures (NGV)
The Company's division that operates outside its core UK and US regulated businesses, comprising a broad range of activities in the UK and US, including National Grid Renewables, electricity interconnectors, the Grain LNG terminal and energy metering, as well as being tasked with investment in adjacent businesses and distributed energy opportunities.

National Transmission System (NTS)
The gas National Transmission System in Great Britain.

NECO
The Narragansett Electric Company, National Grid's electricity transmission and distribution service provider to, as well as a natural gas distribution company in, Rhode Island.

NECO Sale
The agreed sale by National Grid to PPL of NECO, conditional upon completion of the WPD Acquisition and receipt of certain regulatory approvals, which is expected to complete before the end of the first quarter of 2022.

Nemo Link
Nemo Link Limited, a joint venture company in which National Grid and Elia, the Belgian national transmission system operator each hold 50% of the shares.

Net Promoter Score (NPS)
A commonly used tool to measure customer experience to gauge the loyalty of a company's customer relationships. It is an index ranging from -100 to +100.

Net zero
Net zero means that a person, legal entity (such as a company), country or other body's own emissions of greenhouse gases are either zero or that its remaining greenhouse gas emissions are balanced by schemes to offset, through the removal of an equivalent amount of greenhouse gases from the atmosphere, such as planting trees or using technology like carbon capture and storage.

New England
The term refers to a region within northeastern US that includes the states of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont. National Grid's New England operations are primarily in the states of Massachusetts and Rhode Island.

Northeastern US
The northeastern region of the US, comprising the states of Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island and Vermont.

NYPSC
The New York Public Service Commission.

O

Ofgem
The UK Office of Gas and Electricity Markets is part of the UK Gas and Electricity Markets Authority (GEMA), which regulates the energy markets in the UK.

OPEB
Other post-employment benefits.

Ordinary shares
Voting shares entitling the holder to part ownership of a company. Also known as common stock. National Grid's ordinary shares have a nominal value of $12^{204/473}$ pence following the share consolidation approved at the General Meeting of the Company held on 19 May 2017.

P

Paris Agreement
The agreement, also known as the Paris Climate Accord, within the United Nations Framework Convention on Climate Change dealing with greenhouse gas emissions mitigation, adaptation and finance starting in the year 2020, and adopted by consensus on 12 December 2015.

PPL
PPL Corporation, a US energy company headquartered in Pennsylvania.

Price control
The mechanism by which Ofgem sets restrictions on the amounts of revenue we are allowed to collect from customers in our UK businesses. The allowed revenues are intended to cover efficiently incurred operational expenditure, capital expenditure and financing costs, including a Return on Equity invested.

R

Rate base
The base investment on which the utility is authorised to earn a cash return. It includes the original cost of facilities, minus depreciation, an allowance for working capital and other accounts.

Rate plan
The term given to the mechanism by which a US utility regulator sets terms and conditions for utility service, including, in particular, tariffs and rate schedules. The term can mean a multi-year plan that is approved for a specified period, or an order approving tariffs and rate schedules that remain in effect until changed as a result of future regulatory proceedings. Such proceedings can be commenced through a filing by the utility or on the regulator's own initiative.

Regulated controllable costs
Total operating costs under IFRS less depreciation and certain regulatory costs where, under our regulatory agreements, mechanisms are in place to recover such costs in current or future periods.

Regulatory asset value (RAV)
The value ascribed by Ofgem to the capital employed in the relevant licensed business. It is an estimate of the initial market value of the regulated asset base at privatisation, plus subsequent allowed additions at historical cost, less the deduction of annual regulatory depreciation. Deductions are also made to reflect the value realised from the disposal of certain assets that formed part of the regulatory asset base. It is also indexed to the RPI to allow for the effects of inflation.

Regulatory IOUs
Net under/over-recoveries of revenue from output-related allowance changes, the totex incentive mechanism, legacy price control cost true-up and differences between allowed and collected revenues.

Retained cash flow (RCF)
A measure of the cash flows of the Group used by the credit rating agencies. It is calculated as funds from operations less dividends paid and costs of repurchasing scrip shares.

Revenue decoupling
Revenue decoupling is the term given to the elimination of the dependency of a utility's revenue on the volume of gas or electricity transported. The purpose of decoupling is to encourage energy-efficiency programmes by eliminating the disincentive a utility otherwise has to such programmes.

RIIO
Revenue = Incentives + Innovation + Outputs, the regulatory framework for energy networks issued by Ofgem.

RIIO-T1
The regulatory framework for transmission networks that was implemented in the eight-year price controls that started on 1 April 2013.

RIIO-2
The regulatory framework for energy networks issued by Ofgem which started on 1 April 2021.

Definitions and glossary of terms continued

RIPUC
The Rhode Island Public Utilities Commission.

RPI
The UK retail price index as published by the Office for National Statistics.

S

Scope 1 greenhouse gas emissions
Scope 1 emissions are direct greenhouse gas emissions that occur from sources that are owned or controlled by the Company. Examples include emissions from combustion in owned or controlled boilers, furnaces, vehicles, etc.

Scope 2 greenhouse gas emissions
Scope 2 emissions are greenhouse gas emissions from the generation of purchased electricity consumed by the Company. Purchased electricity is defined as electricity, heat, steam or cooling that is purchased or otherwise brought into the organisational boundary of the Company. Scope 2 emissions physically occur at the facility where electricity is generated.

Scope 3 greenhouse gas emissions
Scope 3 emissions are indirect greenhouse gas emissions as a consequence of the operations of the Company, but are not owned or controlled by the Company, such as emissions from third-party logistics providers, waste management suppliers, travel suppliers, employee commuting, and combustion of sold gas by customers.

SEC
The US Securities and Exchange Commission, the financial regulator for companies with registered securities in the US, including National Grid and certain of its subsidiaries.

SF_6
Sulphur hexafluoride is an inorganic, colourless, odourless and non-flammable greenhouse gas. SF_6 is used in the electricity industry as a gaseous dielectric medium for high-voltage circuit breakers, switchgear and other electrical equipment. The Kyoto protocol estimated that the global warming potential over 100 years of SF_6 is 23,900 times more potent than that of CO_2.

Share premium
The difference between the amount shares are issued for and the nominal value of those shares.

STEM
Science, technology, engineering and mathematics.

Subsidiary
A company or other entity that is controlled by National Grid.

Swaption
A swaption gives the buyer, in exchange for an option premium, the right, but not the obligation, to enter into an interest-rate swap at some specified date in the future. The terms of the swap are specified on the trade date of the swaption.

T

Task Force on Climate-relate Financial Disclosures (TCFD)
A body, established in 2015 comprising 31 members from across the G20, whose role is to develop recommendations for more informed investment and enable stakeholders to better understand the concentrations of carbon-related assets in the financial sector and the financial system's exposures to climate-related risk.

Taxes borne
Those taxes that represent a cost to the Company and are reflected in our results.

Taxes collected
Those taxes that are generated by our operations but do not affect our results. We generate the commercial activity giving rise to these taxes and then collect and administer them on behalf of tax authorities.

Tax Convention
Tax Convention means the income tax convention between the US and the UK.

Tonne
A unit of mass equal to 1,000 kilogrammes, equivalent to approximately 2,205 pounds.

Tonnes carbon dioxide equivalent (CO_2e)
A measure of greenhouse gas emissions in terms of the equivalent amount of carbon dioxide.

Totex
Total expenditure, comprising capital and operating expenditure.

Treasury shares
Shares that have been repurchased but not cancelled. These shares can then be allotted to meet obligations under the Company's employee share schemes.

Total Societal Impact (TSI)
TSI is a methodology that attempts to calculate the total benefit to society from a company's products, services, operations, core capabilities and activities.

U

UK
The United Kingdom, comprising England, Wales, Scotland and Northern Ireland.

UK Corporate Governance Code (the Code)
Guidance, issued by the Financial Reporting Council in 2018, on how companies should be governed, applicable to UK listed companies, including National Grid, in respect of reporting periods starting on or after 1 January 2019.

UK GAAP
Generally accepted accounting practices in the UK. These differ from IFRS and from US GAAP.

Underlying EPS
Underlying results for the year attributable to equity shareholders of the Company allocated to each ordinary share.

Underlying results
The financial results of the Company, adjusted to exclude the impact of exceptional items and remeasurements that are treated as discrete transactions under IFRS and can accordingly be classified as such, and to take account of volumetric and other revenue timing differences arising due to the in-year difference between allowed and collected revenues as well as major storm costs (where these are above $100 million threshold in a given year).

US
The United States of America, its territories and possessions, any state of the United States and the District of Columbia.

US GAAP
Generally accepted accounting principles in the US. These differ from IFRS and from UK GAAP.

US state regulators (state utility commissions)
In the US, public utilities' retail transactions are regulated by state utility commissions, including the New York Public Service Commission (NYPSC), the Massachusetts Department of Public Utilities (MADPU) and the Rhode Island Public Utilities Commission (RIPUC).

V

Value growth
Value growth is the Value Added, adjusted to normalise for a 3% long-run RPI inflation rate, expressed as a proportion of Group equity. See page 259.

W

WPD
PPL WPD Investments Limited and its subsidiaries. The group is the UK's largest electricity distribution business and includes four distribution network operators.

WPD Acquisition
The agreement by National Grid to acquire WPD, which is subject to certain regulatory approvals and is expected to complete by July 2021.

Want more information or help?

Equiniti
For queries about ordinary shares:

0800 169 7775
This is a Freephone number from landlines within the UK, mobile costs may vary. Lines are open 8.30am to 5.30pm, Monday to Friday, excluding public holidays. If calling from outside the UK: +44 (0) 800 169 7775. Calls from outside the UK will be charged at the applicable international rate.

Visit help.shareview.co.uk for information regarding your shareholding (from here you will also be able to email a query securely).

National Grid Share Register
Equiniti
Aspect House
Spencer Road, Lancing
West Sussex BN99 6DA

The Bank of New York Mellon
For queries about American Depositary Shares:

1-800-466-7215
If calling from outside the US:
+1-201-680-6825

adrbnymellon.com
Email: shrrelations@cpushareownerservices.com

BNY Mellon – ADR
PO Box 505000
Louisville, KY 40233-5000

Further information about National Grid, including share price and interactive tools, can be found on our website: nationalgrid.com/investors

Beware of share fraud
Investment scams are often sophisticated and difficult to spot. Shareholders are advised to be wary of any unsolicited advice or offers, whether over the telephone, through the post or by email. If you receive any unsolicited communication, please check the company or person contacting you is properly authorised by the Financial Conduct Authority (FCA) before getting involved. Be ScamSmart and visit fca.org.uk/scamsmart. You can report calls from unauthorised firms to the FCA by calling 0800 111 6768.

Financial calendar
The following dates have been announced or are indicative:

20 May 2021	2020/21 full-year results
3 June 2021	Ordinary shares and ADRs go ex-dividend for 2020/21 final dividend
4 June 2021	Record date for 2020/21 final dividend
10 June 2021	Scrip reference price announced
21 July 2021 (5pm London time)	Scrip election date
26 July 2021	2021 AGM
18 August 2021	2020/21 final dividend paid to qualifying shareholders
18 November 2021	2021/22 half-year results
2 December 2021	Ordinary shares and ADRs go ex-dividend for 2021/22 interim dividend
3 December 2021	Record date for 2021/22 interim dividend
9 December 2021	Scrip reference price announced
20 December 2021 (5pm London time)	Scrip election date for 2021/22 interim dividend
19 January 2022	2021/22 interim dividend paid to qualifying shareholders

Dividends
The Directors are recommending a final dividend of 32.16 pence per ordinary share ($2.2812 per ADS) to be paid on 18 August 2021 to shareholders on the register as at 4 June 2021. Further details on dividend payments can be found on page 39. If you live outside the UK, you may be able to request that your dividend payments are converted into your local currency.

Under the Deposit agreement, a fee of up to $0.05 per ADS can be charged for any cash distribution made to ADS holders, including cash dividends. ADS holders who receive cash in relation to the 2020/21 final dividend will be charged a fee of $0.02 per ADS by the Depositary prior to the distribution of the cash dividend.

Have your dividends paid directly into your bank or building society account:
- your dividend reaches your account on the payment day;
- it is more secure – cheques sometimes get lost in the post; and
- no more trips to the bank.

Elect to receive your dividends as additional shares:
Join our scrip dividend scheme; no stamp duty or commission to pay.

Electronic communications
Please register at shareview.co.uk.

It only takes a few minutes to register – just have your 11-digit Shareholder Reference Number to hand. You will be sent an Activation Code to complete registration.

Once you have registered, you can elect to receive your shareholder communications electronically.

Registered office
National Grid plc was incorporated on 11 July 2000. The Company is registered in England and Wales No. 4031152, with its registered office at 1–3 Strand, London WC2N 5EH.

Share dealing
Postal share dealing: Equiniti offer our European Economic Area resident shareholders a share dealing service by post. This service is available to private shareholders resident within the European Economic Area, the Channel Islands or the Isle of Man. If you hold your shares in CREST, you are not eligible to use this service. For more information and to obtain a form, please visit shareview.co.uk or call Equiniti on 0800 169 7775.

Internet and telephone share dealing: Equiniti also offer telephone and online share dealing at live prices. For full details together with terms and conditions, please visit shareview.co.uk. You can call Equiniti on 0345 603 7037 for further details, or to arrange a trade. Lines are open Monday to Friday, 8.00am to 4.30pm for dealing, and until 6.00pm for enquiries.

ShareGift: If you only have a small number of shares that would cost more for you to sell than they are worth, you may wish to consider donating them to ShareGift. ShareGift is a registered charity (No. 1052686) which specialises in accepting such shares as donations. For more information, visit sharegift.org or contact Equiniti.

Individual Savings Accounts (ISAs): ISAs for National Grid shares are available from Equiniti. For more information, call Equiniti on 0345 300 0430 or visit shareview.co.uk/ISA.

Cautionary statement

This document comprises the Annual Report and Accounts for the year ended 31 March 2021 for National Grid and its subsidiaries.

It contains the Directors' Report and Financial Statements, together with the independent auditor's report thereon, as required by the Companies Act 2006. The Directors' Report, comprising pages 1 – 113 and 224 – 262 has been drawn up in accordance with the requirements of English law, and liability in respect thereof is also governed by English law. In particular, the liability of the Directors for these reports is solely to National Grid.

This document contains certain statements that are neither reported financial results nor other historical information. These statements are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These statements include information with respect to our financial condition, our results of operations and businesses, strategy, plans and objectives. Words such as 'aims', 'anticipates', 'expects', 'should', 'intends', 'plans', 'believes', 'outlook', 'seeks', 'estimates', 'targets', 'may', 'will', 'continue', 'project' and similar expressions, as well as statements in the future tense, identify forward-looking statements. These forward-looking statements are not guarantees of our future performance and are subject to assumptions, risks and uncertainties that could cause actual future results to differ materially from those expressed in or implied by such forward-looking statements. Many of these assumptions, risks and uncertainties relate to factors that are beyond our ability to control or estimate precisely, such as changes in laws or regulations, including any arising as a result of the United Kingdom's exit from the European Union and any legislation introduced to facilitate the attainment of net zero emissions targets; announcements from and decisions by governmental bodies or regulators, including the implementation of the RIIO-2 price control as well as increased economic uncertainty following the COVID-19 pandemic; the timing of construction and delivery by third parties of new generation projects requiring connection; breaches of, or changes in, environmental, climate change, and health and safety laws or regulations, including breaches or other incidents arising from the potentially harmful nature of our activities; network failure or interruption, the inability to carry out critical non-network operations, and damage to infrastructure, due to adverse weather conditions, including the impact of major storms as well as the results of climate change, due to counterparties being unable to deliver physical commodities, or due to the failure of or unauthorised access to or deliberate breaches of our IT systems and supporting technology; failure to adequately forecast and respond to disruptions in energy supply; performance against regulatory targets and standards and against our peers with the aim of delivering stakeholder expectations regarding costs and efficiency savings; and customers and counterparties (including financial institutions) failing to perform their obligations to the Company. Other factors that could cause actual results to differ materially from those described in this document include fluctuations in exchange rates, interest rates and commodity price indices; restrictions and conditions (including filing requirements) in our borrowing and debt arrangements, funding costs and access to financing; regulatory requirements for us to maintain financial resources in certain parts of our business and restrictions on some subsidiaries' transactions, such as paying dividends, lending or levying charges; the delayed timing of recoveries and payments in our regulated businesses and whether aspects of our activities are contestable; the funding requirements and performance of our pension schemes and other post-retirement benefit schemes; the failure to attract, develop and retain employees with the necessary competencies, including leadership and business capabilities, and any significant disputes arising with our employees or the breach of laws or regulations by our employees; the failure to respond to market developments, including competition for onshore transmission; the threats and opportunities presented by emerging technology; the failure by the Company to respond to, or meet its own commitments as a leader in relation to, climate change development activities relating to energy transition, including the integration of distributed energy resources; and the need to grow our business to deliver our strategy, as well as incorrect or unforeseen assumptions or conclusions (including unanticipated costs and liabilities) relating to business development activity, including the WPD Acquisition, the NECO Sale and the proposed sale of a majority stake in the Group's UK Gas Transmission business, and joint ventures.

For further details regarding these and other assumptions, risks and uncertainties that may affect National Grid, please read the Strategic Report and the risk factors on pages 236 – 239 of this document. In addition, new factors emerge from time to time and we cannot assess the potential impact of any such factor on our activities or the extent to which any factor, or combination of factors, may cause actual future results to differ materially from those contained in any forward-looking statement. Except as may be required by law or regulation, the Company undertakes no obligation to update any of its forward-looking statements, which speak only as of the date of this document.

The contents of any website references in this document do not form part of this document.

Bringing net zero to life children's art competition

For this year's Annual Report and Accounts we decided to do something different for our front cover. We ran a competition for children to draw or paint a picture or design, in colour, to bring to life what they thought 'net zero' means for an energy company like National Grid.

Prizes of Amazon vouchers were awarded to an overall winner, as well to winners for each of the age groups: 6 and under, 7 to 11 and 12 to 16.

Kailyn Brenn
US
Overall Winner

Leo Harry Jamieson
UK
Joint winner
Age group 12–16

Rona Khanji
US
Winner
Age group 7–11

Zuri De Hazra-Sarkar
UK
Winner
Age group 6 and under

Niamh O'Sullivan
US
Runner-up
Age group 12–16

Eleni LaFond
US
Joint winner
Age group 12–16

Hadeeja Khan
UK
Runner-up
Age group 6 and under

We were delighted with the quality and variety of entries received from children both in our UK and US operating regions. Scan the QR code to see more of the runners-up entries.

Special Prize
Cornelia Perry, UK, age group 6 and under, was awarded a special prize for her amazing model and video of the net zero office of the future.

MIX
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This report is printed on Arena White Smooth which is made of FSC® certified and other controlled material.

Printed sustainably in the UK by Pureprint, a CarbonNeutral® company with FSC® chain of custody and an ISO 14001 certified environmental management system recycling over 99% of all dry waste.

If you have finished with this document and no longer wish to retain it, please pass it on to other interested readers or dispose of it in your recycled waste. Thank you.

The paper used in this report has been Carbon Balanced with the World Land Trust, an international conservation charity, who offset carbon emissions through the purchase and preservation of high conservation value land.

Through protecting standing forests, under threat of clearance, carbon is locked in that would otherwise be released. These protected forests are then able to continue absorbing carbon from the atmosphere, referred to as REDD (Reduced Emissions from Deforestation and forest Degradation). This is now recognised as one of the most cost-effective and swiftest ways to arrest the rise in atmospheric CO_2 and global warming effects. Additional to the carbon benefits is the flora and fauna this land preserves, including a number of species identified at risk of extinction on the IUCN Red List of Threatened Species.

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National Grid plc
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London WC2N 5EH
United Kingdom

nationalgrid.com

RWE

Focus on growth.

Annual Report 2021

Our energy for a sustainable life.

For more than 120 years, our product has always been the same: electricity. What has changed is how we produce it. We generated our very first megawatt hour in 1900 – from hard coal. Later, lignite and nuclear fuel rods were our major energy sources. Today, they have been replaced with natural gas, wind, sun and water. Tomorrow, we will make a full transition to zero-carbon energy sources. Because our objective is to be carbon neutral. And we aim to accomplish this by 2040.

Green energy is the lifeblood of a sustainable economy. And demand for it is also rising outside of the energy sector. Be it in industry, transport or buildings, fossil fuels such as oil and natural gas must be replaced by zero-carbon energy sources everywhere. And where it is not possible to switch to green electricity directly, for example in steel production, hydrogen is a suitable alternative – that is hydrogen produced using electricity from renewables. Which we believe also presents us with significant opportunities. Together with renowned partners from industry and science, we have set our sights on a hydrogen economy. We have already launched about 30 projects. Our long-term goal is to supply both green electricity and green hydrogen, a second product with huge potential demand.

It takes a major effort to achieve major goals. We plan to invest 50 billion euros in green growth in the current decade – in new wind and solar farms, battery storage, flexible backup power plants and electrolysers for hydrogen production. In net terms, i.e. after deducting proceeds on the sale of stakes in projects, expenditure will total some 30 billion euros. Our objective here is to double generation capacity in our core business to 50 gigawatts. As we work to accomplish this, we will also make a socially acceptable exit from coal-fired generation. We want to do this as quickly as possible, while ensuring security of supply at all times.

Why are we doing all of this? Because as a world leading power provider, we shoulder a unique responsibility for implementing the Paris Climate Agreement. RWE‘s purpose ‘Our energy for a sustainable life‘ expresses that this responsibility is what drives us and shapes our entrepreneurial actions. We want to play our part in the joint effort to limit the global rise in temperature to far below two degrees Celsius compared to the pre-industrial era. Our accomplishments demonstrate how seriously we are taking this: our carbon dioxide emissions from power production have more than halved since 2012. Based on a review by the independent Science Based Targets initiative, our emission reduction strategy is in line with the Paris climate target. This is scientific proof that we are on the right path.

Our path leads to a sustainable, carbon-neutral energy world.

Come join us!

At a glance

RWE Group – key figures[1]		2021	2020	+/–
Power generation	GWh	160,773	141,204[2]	19,569
External revenue (excluding natural gas tax/electricity tax)	€ million	24,526	13,688	10,838
Adjusted EBITDA	€ million	3,650	3,286	364
Adjusted EBIT	€ million	2,185	1,823	362
Income from continuing operations before tax	€ million	1,522	1,265	257
Net income/income attributable to RWE AG shareholders	€ million	721	1,051	-330
Adjusted net income	€ million	1,569	1,257	312
Cash flows from operating activities of continuing operations	€ million	7,274	4,125	3,149
Capital expenditure	€ million	3,769	3,358	411
Property, plant and equipment and intangible assets	€ million	3,689	2,285	1,404
Financial assets	€ million	80	1,073	-993
Proportion of taxonomy-eligible investments[3]	%	88	–	–
Free cash flow	€ million	4,562	1,132	3,430
Number of shares outstanding (annual average)	thousands	676,220	637,286	38,934
Earnings per share	€	1.07	1.65	-0.58
Adjusted net income per share	€	2.32	1.97	0.35
Dividend per share	€	0.90[4]	0.85	0.05
		31 Dec 2021	31 Dec 2020	
Net assets (+)/net debt (–)	€ million	360	-4,432	4,792
Workforce[5]		18,246	19,498	-1,252

1 Some prior-year figures restated due to a change in the recognition of tax benefits to subsidise renewables in the USA (see page 47).
2 Adjusted figure, as power purchases from generation assets in which RWE does not own the majority, but which we have long-term usage rights to, are no longer considered.
3 Taxonomy-eligible economic activity is activity which is subject to criteria under the EU Taxonomy Regulation – irrespective of whether the criteria are met (see page 34 et seq.).
4 Dividend proposal for fiscal 2021, subject to the passing of a resolution by the 28 April 2022 Annual General Meeting.
5 Converted to full-time positions.

Contents

We provide detailed information on our sustainability activities in our **Sustainability Report** and **Non-financial Report**. These publications are available at www.rwe.com/responsibility-and-sustainability. The reports on fiscal 2021 will be published in April 2022.

In accordance with Section 162 of the German Stock Corporation Act, we published the **Remuneration Report** for fiscal 2021 as a separate report for the first time. It has also been included in the invitation to the virtual Annual General Meeting, scheduled for 28 April 2022. The publications are available at www.rwe.com/remuneration and www.rwe.com/agm.

1

To our investors

"Taking on and mastering new challenges is what RWE strives for – and so do I."

Feixia Li, Junior Project Manager Corporate Improvements & Projects, RWE Supply & Trading

1.1 Letter from the CEO

Dr. Markus Krebber, Chief Executive Officer of RWE AG

Dear Shareholders,
Ladies and Gentlemen

Europe is experiencing particularly difficult times. The images we are seeing from Ukraine are shocking. For me, the scale of the human suffering caused by the war is almost inconceivable. With the attack on Ukraine, Russia's leadership has violated international law and the right of the Ukrainian people to self-determination. Sadly, we have been reminded that democracy, freedom and peace cannot be taken for granted and that we must stand up in support of them. Our thoughts and solidarity are with the people in Ukraine, who must endure the horrors of war.

The conflict has massive ramifications for Europe as a whole. One key aspect is security of energy supply. As a company active in critical infrastructure, we at RWE are well aware of the great responsibility we bear at this time. We therefore support the efforts of the EU and the German government to reduce dependence on deliveries of commodities from Russia and simultaneously ensure a reliable supply of energy. We are working on identifying RWE power stations which can provide additional backup capacity. We are also playing our part in diversifying the supply of natural gas. One example of this is our participation in the planned LNG terminal in Brunsbüttel, Germany, which will be able to receive shipments of liquefied natural gas and, in the future, green ammonia for hydrogen production.

Even though security of supply is the centre of attention at the moment, the medium- and long-term vision for energy policy remains unchanged. Indeed, expanding renewables and ramping up the hydrogen economy are more important than ever – not only to protect the climate, but also to increase our independence from commodity imports. RWE will make a major contribution to these causes. At our Capital Market Day on 15 November 2021, we informed the public of the action we plan to take. Our Growing Green strategy will make the 2020s a decade of growth for our company. By 2030, we intend to invest a gross sum of around €50 billion in transforming RWE and thus transitioning to a sustainable energy system. These funds will be spent on the construction of wind and solar farms, battery storage, climate-friendly backup power stations and electrolysers for the production of hydrogen. Our net capital expenditure, which takes into account proceeds from the sale of stakes in projects, is expected to reach €30 billion. With this, we plan to double generation capacity in our core business to roughly 50 GW by the end of the decade. Earnings from core activities will also increase sharply: for 2030, we project adjusted EBITDA in the order of €5 billion, representing an increase of around 80 % compared to 2021. These goals are ambitious, but realistic. This was reflected in the stock market's positive reaction to our Growing Green strategy, as the RWE share closed trading that day with a strong gain and continued to perform well in the following weeks.

We are pursuing our growth strategy with determination. Since the start of 2021, we have commissioned 14 wind and solar farms with a total capacity of 1.2 GW, despite supply chain issues that led to delays for some projects. In the spring of 2021, we started building the Sofia wind farm off the eastern coast of the UK, which will set new standards with its planned capacity of 1.4 GW. In addition, we set the stage for a number of attractive major projects. In auctions for new offshore wind farm sites in Great Britain, Germany, Denmark and the USA we secured leases for sites where we can build up to 8 GW of generation capacity.

The past year was challenging in many respects, and thus we are even more pleased that we outperformed our financial targets. At €3,650 million, our adjusted EBITDA was well above the range we had projected. We met or exceeded the expectations in all of the segments. These achievements are driven by our dedicated employees, who have put their all into ensuring our company's continued success. I'd like to express my gratitude to all of them, on behalf of the entire Executive Board. Coming against the backdrop of the coronavirus pandemic, our performance in 2021 is all the more impressive. Thanks to the flexibility and dedication of our employees, we were able to maintain all of our critical operations at all times.

The catastrophic flooding in western Germany was a defining moment in the summer of 2021. All of us can recall the scenes of utter devastation. Among the many people who lost their lives was an employee of one of RWE's partner companies. We would like to extend our deepest condolences to his family and friends. The floods impacted a number of our sites. Nevertheless, we were able to limit the resulting downtime at the Inden opencast mine and many of our run-of-river power stations to just a few days. We have the untiring efforts of our people to thank for this. Many of them also rolled up their sleeves and personally helped out those in need. RWE itself provided materials, machinery and funds totalling around €2 million, with one quarter of the donations coming from our employees.

In closing, let me briefly look ahead to fiscal 2022. Despite the uncertain course of the conflict in Ukraine and its consequences, I am confident that we can continue to generate good earnings as was the case in 2021. At present, our projection for adjusted EBITDA foresees a range of €3.6 billion to €4.0 billion. In this regard, one key factor will be the earnings contributions of our new wind and solar farms. As you can see, our growth strategy is paying off. That said, we are at the very beginning of a long and challenging journey. RWE's transformation involves much more than billions of euros of investment. Passion, the ability to change, and, sometimes, courage are all key ingredients. I am convinced that RWE has all these qualities. And that means you, dear shareholders, can count on us. Thank you for your trust and confidence! I hope you'll continue with us on this exciting journey.

Sincerely yours,

1.2 Executive Board of RWE AG

Markus Krebber, Chief Executive Officer, was born in 1973 in Kleve, Germany. He has held this position since May 2021. He trained as a banker and holds a doctorate in economics. Markus started his career in 2000 at McKinsey & Company. Thereafter, he held various managerial positions at Commerzbank AG. In November 2012, Markus joined the Board of Directors of RWE Supply & Trading GmbH, where he was responsible for finance and became CEO in March 2015. Markus joined the Executive Board of RWE AG in October 2016, where he was Chief Financial Officer until May 2021.

Michael Müller has been Chief Financial Officer since May 2021. Born in 1971 in Cologne, Germany, he is an economist and holds a doctorate in mechanical engineering. After five years at McKinsey & Company, in mid-2005 he joined the RWE Group where he held managerial positions at RWE Power AG, RWE Generation SE and RWE AG. In September 2016, he became the Managing Director of RWE Supply & Trading GmbH in charge of finance. Michael has been a Member of the Executive Board of RWE AG since November 2020.

Zvezdana Seeger was appointed Chief Human Resources Officer and Labour Director in November 2020. She was born in 1964 in Jajce, Bosnia and Herzegovina, holds a degree in economics and started her career in mechanical engineering. From 1995 to 2008, she worked for Deutsche Telekom AG, exiting as Managing Director of T-Systems Enterprise Service GmbH. In 2010, Zvezdana joined the Board of Directors of DHL Global Forwarding, Freight. In 2015, she was responsible for IT and operations on the Board of Management of Postbank AG. After Postbank was folded into DB Privat- und Firmenkundenbank AG, she sat on the Board of Management of the latter company. In addition, she was COO of the Private and Corporate Business Unit of Deutsche Bank AG. Zvezdana has been a Member of the Executive Board of RWE AG since November 2020.

1.3 Supervisory Board report

Dr. Werner Brandt, Chairman of the Supervisory Board of RWE AG

"RWE's growth and climate protection strategy is both ambitious and credible. It justifies the trust investors place in our company."

Dear Shareholders,
Ladies and Gentlemen

You might be familiar with the proverb 'A journey of a thousand miles begins with a single step.' More often than not, this is true. But at RWE, the journey from a past dominated by fossil fuel to a carbon-neutral future began with a whole series of steps. Investors, media representatives and the public bore witness to the speed at which the company seeks to continue this journey on 15 November 2021. That was the day on which management presented its ambitious growth strategy under the motto 'Growing Green,' which the Supervisory Board had been heavily involved in developing. RWE aims to invest approximately €50 billion in the company's green transformation from 2021 to 2030, thus contributing to the success of the energy transition. After subtracting proceeds on the sale of stakes in projects, net investments will amount to some €30 billion. RWE will use these funds to build renewable generation assets, battery storage systems, flexible backup power stations and electrolysers for hydrogen production with a total capacity of 25 GW. Based on the criteria established by the EU Taxonomy Regulation, over 90 percent of the capital expenditure should contribute to environmental sustainability. Our growth campaign should drive the Group's adjusted EBITDA up to about €5 billion by 2030 although the non-core business with coal and nuclear power plants will have stopped contributing to earnings by then. Such a transformation is unrivalled in terms of speed, sustainability and returns.

Every departure for new horizons involves bidding farewell to the past. RWE has set out to become carbon neutral along the entire value chain by 2040. The key to achieving this goal is the phaseout of electricity generation from coal, which in Germany goes hand in hand with an exit from nuclear energy. This is a Herculean task for RWE, both financially and socially. Last year, our company decommissioned its last two German hard coal-fired power plants, five lignite units and the Gundremmingen C nuclear power station. So this part of our transformation is also progressing at speed, as it should. However, we must not forget that the power plants guaranteed a reliable supply of electricity and that, first and foremost, we have the skilled and motivated staff on site to thank for that. Many of them dedicated their entire working life to the safe and profitable operation of the stations. To honour this loyalty, RWE will stand by its employees, ensuring that the personnel reduction is socially acceptable. Here, our focus rests in particular on the approximately 8,500 people working in the Rhenish lignite mining region. One can only consider a transformation successful if no one is left behind. RWE is absolutely determined to rise to this challenge.

Last year was a momentous one, and sadly the second dominated by the coronavirus pandemic. Fortunately, its effects on our company and staff remained manageable. RWE took extensive protective measures, thereby ensuring that our key personnel were able to continue working almost without restrictions. Our company demonstrated yet again how well it can navigate through crises. The Supervisory Board was also able to fulfil its duties without exceptions. Six of our seven meetings - the only exception being the session in September - and nearly all committee meetings were held virtually. The same applied to the Annual General Meeting (AGM) that took place on 28 April 2021. We benefited from the experience gained at our first purely digital Annual General Meeting held in the preceding year. In addition, we reacted to the wishes expressed by our investors by introducing some new services. For example, the speeches by the CEO and CFO as well as my report were published on the company's website before the AGM. Moreover, our shareholders had the opportunity to submit questions and remarks in advance. We will have to hold a purely virtual Annual General Meeting once again in 2022. We hope that you, our valued shareholders, accept this decision in light of the continued exposure to risks arising from COVID-19. No AGM is worth risking one's health.

At RWE, our hearts went out to the many victims of the catastrophic floods in the summer in the states of North Rhine-Westphalia and Rhineland-Palatinate. The floodwater claimed the life of an employee of a partner company at the Inden opencast lignite mine. We would like to express our deepest condolences to the family and friends of those who died in this tragic event. RWE was affected by the floods at several of its locations. Both Inden and nearly all our run-of-river power plants in the region were forced to interrupt operations. However, the stations and mines were able to resume operations after a few days. We have the huge dedication of our employees to thank for this. I was deeply touched by their commitment both on and off site and the way everyone pulled together throughout the entire Group. As sad as the catastrophic floods were, they reminded us of the phenomenal people we have at RWE – a team on which we can rely and we can be proud of.

Unfortunately, the beginning of this year is plagued by a horrifying event. The Russian invasion of Ukraine signals a turning point for the whole of Europe. I'm absolutely appalled at this act of aggression, which is a serious breach of international law. The war against Ukraine demonstrates that peace and freedom are by no means a matter of course in Europe and that we must take decisive action to preserve these ideals. We discussed the political and economic consequences of the crisis in Ukraine at the Supervisory Board meeting we held on 9 March 2022. If the situation escalates, we may face bottlenecks on Europe's energy markets, which would also affect RWE. However, after assessing the potential developments in depth, we currently believe that the risks to which the Group is exposed are manageable. Our main concern is for the people in Ukraine for whom we feel deeply during these difficult times.

Changes in personnel on the Executive and Supervisory Boards. The past year was a landmark both in terms of strategy and personnel. RWE AG has had a new CEO since 1 May 2021: Markus Krebber, our former CFO, who joined the Group in 2012. His predecessor, Rolf Martin Schmitz, retired from the Executive Board on 30 April, 2021 after four-and-a-half years at the helm. Together with Markus, he initiated RWE's transformation into a leading renewable energy company. It is with great pleasure that I look back on the successful work we did with Rolf, but I also look forward to continuing this journey with Markus and his team. Zvezdana Seeger and Michael Müller joined the team in November 2020. Zvezdana is our Chief HR Officer and Labour Director. Michael took over as CFO from Markus Krebber with effect from 1 May 2021.

The Supervisory Board also went through some personnel changes last year. On conclusion of the Annual General Meeting on 28 April 2021, the tenures of all the members of this corporate body expired. However, it was impossible for the ten employee representatives to be elected as the Assembly of Delegates, which is charged with this task, was not able to convene until 15 September owing to the restrictions imposed to combat COVID-19. Therefore, restaffing for the transitional period was implemented by court order.

The incumbent employee representatives were reappointed to the Supervisory Board by the Essen District Court. In alphabetical order, they were Michael Bochinsky, Sandra Bossemeyer, Martin Bröker, Frank Bsirske, Anja Dubbert, Matthias Dürbaum, Harald Louis, Ralf Sikorski, Marion Weckes and Leonhard Zubrowski.

By contrast, the election of the shareholder representatives was carried out as planned at the virtual Annual General Meeting on 28 April: Ute Gerbaulet, Hans-Peter Keitel, Monika Kircher, Günther Schartz, Erhard Schipporeit, Ullrich Sierau and I received the votes required to serve for another term. Dagmar Mühlenfeld, Peter Ottmann and Wolfgang Schüssel did not run for re-election. Hans Bünting, Hauke Stars and Helle Valentin were elected members of the Supervisory Board in their place.

The elections involved a new approach, which I consider to be a great step forward: the shareholder representatives received shortened and staggered tenures. Following established practice in Germany, they used to be elected with identical five-year tenures. The advantage of shortening terms is that the Supervisory Board's composition can be adapted to new demands faster than before. Staggered tenures prevent too many people from leaving the corporate body at the same time, causing valuable experience to be lost. At the 2021 Annual General Meeting, five candidates were elected for three years, and another five were elected for four years. Future by-elections and new elections to the Supervisory Board will be for three-year terms only.

At its constituent meeting following the Annual General Meeting, the Supervisory Board re-elected me its Chairman. I consider this to be in recognition of my work to date and thank my colleagues for the trust they have placed in me. The corporate body chose Frank Bsirske as Deputy Chairman. Furthermore, we restaffed the committees. Germany's law on strengthening the integrity of the financial market, which was enacted in mid-2021, stipulates that each supervisory board must have two independent experts in finance with in-depth knowledge of accounting and financial statement audits. Thanks to Erhard Schipporeit, Chairman of the Audit Committee, and Monika Kirchner, who is also a member of this committee, we fulfil this requirement.

On 15 September 2021, the Assembly of Delegates finally elected the employee representatives to the Supervisory Board. This ended the tenure of the court-appointed members. Ralf Sikorski, Michael Bochinsky, Sandra Bossemeyer, Matthias Dürbaum, Harald Louis and Marion Weckes were re-elected. Martin Bröker, Frank Bsirske, Anja Dubbert and Leonhard Zubrowski retired from their offices. Reiner van Limbeck, Dagmar Paasch, Dirk Schumacher and Andreas Wagner replaced them as new members of the Supervisory Board. The terms of all employee representatives will end on conclusion of the 2026 Annual General Meeting, in compliance with the Articles of Incorporation. As Frank Bsirske left the corporate body, the position of my Deputy had to be restaffed. Ralf Sikorski was elected to this office at the first meeting of all new Supervisory Board members on 21 September. Furthermore, positions on the committees that were vacated by exiting employee representatives were reassigned.

Soon thereafter, there was another personnel change among the shareholder representatives. Günther Schartz resigned from his office as of 30 September 2021. Thereupon, Thomas Kufen was appointed to the corporate body by the Essen District Court with effect from 18 October 2021. We are pleased to have found a worthy successor to Mr. Schartz in him. As mayor of the energy metropolis Essen, he is very familiar with our sector and with RWE. We will submit the restaffing to the Annual General Meeting on 28 April 2022 for the passage of a corresponding resolution.

One of RWE's good traditions is the extensive support that new Supervisory Board members receive from the company in familiarising themselves with their tasks. They go through a tried-and-tested onboarding process to become acquainted with RWE's business model, the Group's structures and certain topics as necessary. The Board Office, which is assigned to Legal, has a co-ordinating function. Moreover, the Board Office informs them of their rights and duties, is of assistance through one-on-ones and ensures the provision of documents and privileges required to exchange digital information.

More detailed information on the new Supervisory Board members and the composition of the committees can be found on pages 220 et seqq. of this report.

An overview of the Supervisory Board's work in the past year. I would now like to touch on the Supervisory Board's activity in the fiscal year that just ended. As usual, we fulfilled all of the duties imposed on us by German law and the Articles of Incorporation. We advised the Executive Board on running the company and monitored its actions with great care. We were involved in all fundamental decisions. The Executive Board informed us of all material aspects of business developments, the earnings situation as well as the risks and the management thereof both verbally and in writing. This was done regularly, extensively and in a timely fashion. In addition, I was constantly in touch with the Executive Board, allowing us to discuss major developments without delay.

When in session, we concerned ourselves with RWE's growth strategy both repeatedly and in great depth. Further focal points of debate were the effects of the coronavirus pandemic, the restaffing of the Executive Board and the German coal phaseout. We took our decisions on the basis of detailed reports and draft resolutions submitted by the Executive Board, which we discussed in depth in our plenary sessions and committees. We were also informed by the Executive Board of projects and transactions of special importance or urgency in extraordinary meetings as well as between meetings. We passed the resolutions required of us by German law or the Articles of Incorporation, occasionally by circular.

One of the Supervisory Board’s key tasks is maintaining dialogue with the shareholders. As I do not believe that this exchange of information should be limited to the Annual General Meeting, I have been holding regular talks with investors and shareholder representatives for many years now. This is a practice I maintained despite COVID-19. The focal points of these talks were the staffing of the Supervisory Board, the staggered tenures, the Executive Board remuneration system, RWE's strategy and the coal phaseout.

We took the basic and advanced training measures needed to fulfil our tasks on our own initiative. The company helped us by organising in-house informational events on topics of special relevance.

Main points of debate of the Supervisory Board meetings. Last year, the Supervisory Board convened for seven meetings, including one constituent and one extraordinary session. In our meetings, we were informed by the Executive Board in great detail of transactions and events of significance to RWE. We discussed certain agenda items without involving the Executive Board. The shareholder and employee representatives met separately before the Supervisory Board meetings, in order to consult on matters in a smaller circle and establish joint positions where necessary.

The following issues were discussed at our meetings:

- Our first session last year took place on 10 March. We discussed and approved the 2020 financial statements of RWE AG, the consolidated financial statements, and the separate Non-financial Report. In addition, we passed a resolution to hold last year's Annual General Meeting on 28 April 2021 as a purely online event. At this meeting, I reported on talks I had held with institutional investors and shareholder representatives in the months prior. The agenda also included legal matters, e.g. Germany's new Supply Chain Due Diligence Act, which requires companies to ensure that human rights are observed in their supply chains. We also concerned ourselves extensively with the success achieved by RWE in an auction in Great Britain, at which the company won the rights to build wind farms on two offshore sites.

- We convened in two sessions on 28 April, the first of which was mainly dedicated to preparing the Annual General Meeting, which took place thereafter. We held the constituent meeting of the Supervisory Board with the newly elected shareholder representatives right after the AGM. As set out earlier, the employee representatives had been appointed by court order, because the Assembly of Delegates had to be postponed due to COVID-19. In addition to the election of the Chairman of the Supervisory Board and his Deputy, the meeting centred on staffing the committees. By amending the Articles of Incorporation, we were able to enlarge the Strategy and Sustainability Committee by two to eight members due to its increased importance and reduce the Executive Committee by two to six members in exchange.

- In the next session on 9 June, we debated the judgment of the German Constitutional Court on the 2019 Climate Protection Act. The Court found that the law was insufficient because it identified the risk of substantial emissions reductions being shifted to future generations, placing too heavy a burden on them. The Executive Board informed us that RWE expanded its goal of becoming carbon neutral by 2040 to include the company's entire value chain. Another piece of good news was the start of COVID-19 vaccination by RWE company physicians.

- In our session on 21 September – the only in-person meeting last year – we welcomed the newly elected employee representatives to the Supervisory Board. As mentioned before, the Assembly of Delegates had convened a few days earlier. This resulted in some changes in personnel, which required seats on the committees to be restaffed and the Deputy Chairman of the Supervisory Board to be elected anew. Another main point of debate was RWE's strategy. I stated earlier that management informed the public of the company's roadmap for the current decade on 15 November. The Supervisory Board was greatly involved in developing the strategic guidelines. During the meeting in September, we focused on management's growth plans in relation to RWE's green core business and the phaseout of coal-fired power generation. Talks also centred on the catastrophic floods in the west of Germany. The Executive Board kept us abreast of the situation at the affected sites and of RWE's aid measures. Furthermore, we discussed the statutory transparency regulations applicable to the remuneration of the Executive Board and appointed the auditor of the Remuneration Report and of the Non-financial Report for fiscal 2021.

- On 10 October, we held an extraordinary meeting which focused on the extreme rise in commodity prices and its effects on RWE. The collateral we pledge for electricity forward contracts was at times much higher than previous levels. Thanks to a substantial liquidity buffer and our highly professional financial management, however, the company was able to meet its payment commitments at all times.

- In our session on 10 December, we reviewed and adopted the company planning for fiscal 2022. Moreover, we fulfilled our corporate governance reporting duties: together with the Executive Board, we adopted an updated statement of compliance in accordance with Section 161 of the German Stock Corporation Act and approved the parts of the Corporate Governance Declaration relating to the Supervisory Board pursuant to Section 289a of the German Commercial Code. The documents are available at www.rwe.com/statement-of-compliance and www.rwe.com/corporate-governance-declaration respectively. Further topics discussed were the liquidity position, plans to reorganise the renewable energy business and the forming of the new coalition government after Germany's general elections on 26 September. We also discussed at great length the announcement of the coalition partners to accelerate the coal phaseout. Here, the Supervisory Board and the Executive Board have affirmed their commitment to phasing out RWE's lignite-fired power generation in agreement with politicians and after weighing up all interests. Another item on the agenda was the positive feedback from analysts and investors on our Capital Market Day in November. In a nutshell, these stakeholder groups believe that we are charting the right course and have realistic goals. This confirmed that RWE's growth and climate strategy is both ambitious and credible. It justifies the trust investors place in our company.

Supervisory Board committees. Last year, the Supervisory Board had six standing committees, the members of which are listed on page 225. These committees are charged with preparing topics and resolutions for plenary sessions. In certain cases, they exercise decision-making powers if they have been conferred on them by the Supervisory Board. The Supervisory Board is informed of the work of the committees by their chairs at every ordinary meeting. In the year under review, a total of 13 committee meetings were held, which I would like to touch upon in more detail.

- The **Executive Committee** held one meeting, which took place in December. As usual, the objective was to discuss the company's planning for fiscal 2022 and the outlook on the two subsequent years.

- The **Audit Committee** was in session four times. It carefully reviewed the financial statements of RWE AG and the Group, together with the combined review of operations, the report for the first half of the year, the quarterly statements and the Non-financial Report. It discussed the financial statements with the Executive Board before they were published and received reports on the outcome of the audits and audit-like reviews from the independent auditors. Furthermore, the Audit Committee submitted a recommendation to the Supervisory Board regarding the election of the independent auditors for fiscal 2021, prepared the grant of the audit award to the independent auditors including the fee agreement, and set the priorities of the audit. It also verified the independence of the auditors and the quality of the audit. Current laws require RWE to appoint new independent auditors for no later than fiscal 2024. The Committee has already begun preparations for the invitation to tender. Furthermore, as usual, the Audit Committee was informed of the effectiveness of the accounting-related Internal Control System (ICS). The report did not reveal any issues that would call the effectiveness of the ICS into question. Additional points of focus were the planning and findings of internal audits, RWE's exposure to risk pursuant to the German Corporate Control and Transparency Act (KonTraG), the risk management system of RWE Supply & Trading, data security, compliance matters as well as legal and tax issues. Related party transactions also featured on the agenda. The Committee verified that the transactions were in line with practices generally accepted on the market, as required by the German law on the implementation of the Second Shareholders Directive. The independent auditors attended all of the Audit Committee meetings and also exchanged information with the Committee Chairman between sessions. In-house experts were occasionally involved in the consultations.

- The **Personnel Affairs Committee** held three meetings. Debates centred on the personnel changes on the Executive Board, the new Executive Board remuneration system, and its presentation in the Remuneration Report in accordance with Section 162 of the German Stock Corporation Act. The remuneration system was approved by the 2021 Annual General Meeting.

- The **Nomination Committee** convened three times. The Supervisory Board elections and filling the position on the Committee vacated by Günther Schartz were the points of focus. In view of the shortened tenures, we also discussed the long-term succession plan.

- The **Strategy and Sustainability Committee** held two sessions to consult on the details and state of implementation of our growth strategy. Agendas focused on the progress made in expanding renewable energy and on the Group's numerous hydrogen projects. Committee members debated the strategy presentation shown at our Capital Market Day in depth. Another focal point was RWE's responsible implementation of the coal phaseout. Moreover, the Committee maintained dialogue with the Executive Board on the varied sustainability goals and measures.

- The **Mediation Committee** pursuant to Section 27, Paragraph 3 of the German Co-Determination Act did not have to convene in 2021.

Attendance. The table below contains an overview of Supervisory Board member attendance at the meetings of this corporate body and its committees. As the Mediation Committee did not convene in 2021, it has been omitted from this table. Here is an example of how to interpret the numbers: '3 / 4' means that the individual attended three out of four sessions held during their membership of the corporate body. The figures show that absence from a meeting was the exception. The attendance rate was 99.5 %.

Attendance at meetings in fiscal 2021 by Supervisory Board member	Supervisory Board	Executive Committee	Audit Committee	Personnel Affairs Committee	Nomination Committee	Strategy and Sustainability Committee
Dr. Werner Brandt, Chairman	7 / 7	1 / 1	4 / 4[1]	3 / 3	3 / 3	2 / 2
Ralf Sikorski, Deputy Chairman	7 / 7	1 / 1	2 / 3	1 / 1		2 / 2
Michael Bochinsky	7 / 7		4 / 4			1 / 1
Sandra Bossemeyer	7 / 7			1 / 1		1 / 1
Martin Bröker	4 / 4					
Frank Bsirske	4 / 4			2 / 2		1 / 1
Dr. Hans Friederich Bünting	5 / 5					2 / 2
Anja Dubbert	4 / 4					
Matthias Dürbaum	7 / 7		1 / 1			
Ute Gerbaulet	7 / 7	1 / 1				
Prof. Dr. Hans-Peter Keitel	7 / 7	1 / 1			3 / 3	2 / 2
Dr. h. c. Monika Kircher	7 / 7		4 / 4			
Thomas Kufen	1 / 1					
Reiner van Limbeck	3 / 3	1 / 1				
Harald Louis	7 / 7			3 / 3		1 / 1
Dagmar Mühlenfeld	2 / 2					
Peter Ottmann	2 / 2			2 / 2	1 / 1	
Dagmar Paasch	3 / 3		1 / 1			1 / 1
Günther Schartz	5 / 5					
Dr. Erhard Schipporeit	7 / 7		4 / 4			

1 Werner Brandt attended meetings of the Audit Committee as a guest.

Attendance at meetings in fiscal 2021 by Supervisory Board member	Supervisory Board	Executive Committee	Audit Committee	Personnel Affairs Committee	Nomination Committee	Strategy and Sustainability Committee
Dirk Schumacher	3/3	1/1				
Dr. Wolfgang Schüssel	2/2			2/2		
Ullrich Sierau	7/7		4/4			
Hauke Stars	5/5			1/1	2/2	
Helle Valentin	5/5					2/2
Dr. Andreas Wagner	3/3					
Marion Weckes	7/7		3/3			
Leonhard Zubrowski	4/4			2/2		1/1

Conflicts of interest. The members of the Supervisory Board are obliged by law and the German Corporate Governance Code to immediately disclose any conflicts of interest they have. We were not notified of any such conflict in fiscal 2021.

Financial statements for fiscal 2021. PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft (PwC) audited and issued an unqualified auditor's opinion on the 2021 financial statements of RWE AG, which were prepared by the Executive Board in compliance with the German Commercial Code, the financial statements of the Group prepared pursuant to Section 315a of the German Commercial Code in compliance with International Financial Reporting Standards (IFRS) as well as the combined review of operations for RWE AG and the Group including the accounts. The opinion was signed by the auditors in charge, Markus Dittmann and Aissata Touré. In addition, PwC subjected the Non-financial Report to a limited assurance audit and found that the Executive Board had established an appropriate early risk detection system. The company had been elected independent auditor by the 2021 Annual General Meeting. Thereafter, the Supervisory Board had commissioned it to audit the aforementioned financial statements and reports.

The 2021 Annual Report and the audit reports as well as documents supporting the annual financial statements were submitted to the members of the Supervisory Board in good time. Furthermore, the Executive Board commented on the documents at the Supervisory Board's balance sheet meeting of 9 March 2022. The independent auditors reported in this session on the material results of the audit and were available to provide supplementary information. The Audit Committee had previously concerned itself in depth with the financial statements of RWE AG, the consolidated financial statements, as well as audit reports during its meeting on the preceding day, with the auditors present. It recommended that the Supervisory Board approve the financial statements as well as the appropriation of distributable profit proposed by the Executive Board. The financial statements of RWE AG, the consolidated financial statements, the combined review of operations, the Executive Board's proposal regarding the appropriation of distributable profit, and the Non-financial Report were reviewed by the Supervisory Board. The corporate body did not raise any objections as a result of this review. As recommended by the Audit Committee, the Supervisory Board endorsed the findings of the audits of the financial statements of RWE AG and the consolidated financial statements and approved both financial statements. The 2021 annual financial statements are therefore adopted. The Supervisory Board concurs with the Executive Board's proposal regarding the appropriation of profits, which envisages paying a dividend of €0.90 per share.

Success and solidarity: A big thank you to everyone at RWE. Anyone who sets off on a major journey needs motivated people who have their sights set firmly on the destination and are also capable of reaching it. Without a doubt, this applies to RWE. The past fiscal year showed that our company can rely on the expertise and dedication of its employees. Despite the coronavirus and the substantial financial loss sustained due to an unusually harsh cold snap in Texas, 2021 turned out to be a very successful year. On behalf of the Supervisory Board, I would like to express our deep-felt gratitude to the staff members who made this possible. As mentioned earlier, I was extremely impressed by how everyone pulled together and was willing to pitch in to provide the much needed assistance in the wake of the catastrophic floods in parts of western Germany. So many people made donations and rolled up their sleeves, demonstrating what it means to stand united. I have always been proud to be the Chairman of RWE's Supervisory Board. And I now have even more reason to feel this way.

Werner Brandt

Werner Brandt

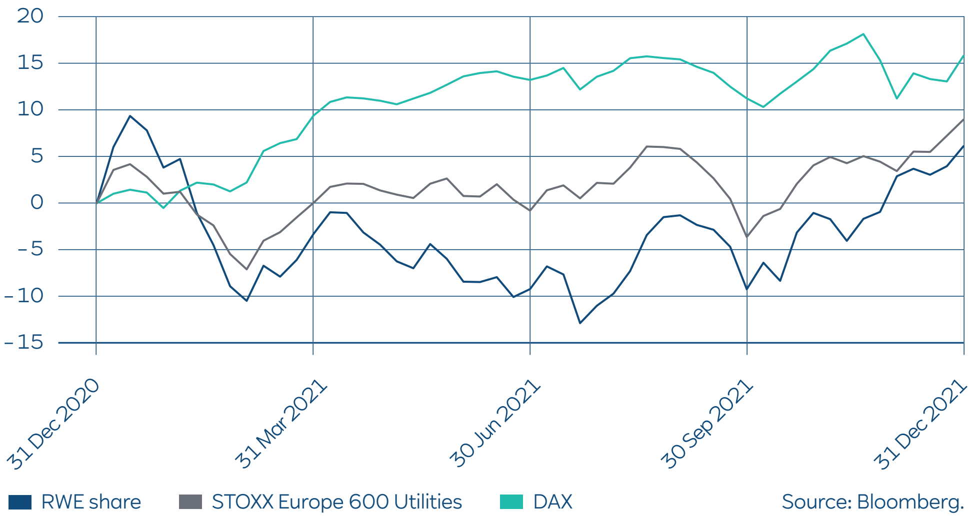
Chairman of the Supervisory Board

Essen, 9 March 2022

1.4 RWE on the capital market

Fiscal 2021 was a good year for investors in stock markets despite the continued coronavirus pandemic. Driven by a global economic upturn, the DAX repeatedly hit new all-time highs. Germany's blue chip index closed the year with a strong gain of 16 %. The RWE share was unable to match this pace, after having consistently left the DAX far behind in the four preceding years. The total return of the RWE share, made up of the change in price and the dividend, amounted to 6 %. In part, the shortfall versus the DAX is due to the fact that utility stocks often trail cyclical shares when the economy trends upwards. By contrast, we made the headlines on the debt capital market: RWE AG issued its first green bonds in 2021, raising €1.85 billion for the expansion of renewables.

Total return of the RWE share compared with the DAX and STOXX Europe 600 Utilities
% (average weekly figures)



Source: Bloomberg.

DAX up 16 % thanks to economic recovery. Although 2021 was overshadowed by the COVID-19 crisis, optimism prevailed on international stock markets. The DAX continued its course for recovery which began in 2020, climbing from one all-time high to the next. It closed the year at 15,885 points, representing a return of 16 %. The resurgence of the stock markets was driven by a marked acceleration of the economy. Certain sectors such as automotive experienced a veritable boom despite worldwide logistical problems. Share prices were also positively affected by the European Central Bank maintaining its expansionary monetary policy despite mounting inflation.

RWE share registers 6 % total return. The RWE share also posted gains, albeit smaller than those recorded by the DAX. It closed the month of December 2021 at €35.72. Taking account of the dividend of €0.85 paid in May 2021, this results in a total return of 6 % for the year. Therefore, our share was outperformed not only by the DAX but also by the STOXX Europe 600 Utilities, which registered a gain of 9 %. Financial analysts confirm the attractive earnings prospects of renewable energy companies like RWE. However, the economic upswing has resulted in a return to strong investment in cyclical stocks. In addition, some capital market participants fear that mounting competitive pressure in the renewable energy business, e. g. created by oil companies entering the market, and rising material costs, may make wind and solar projects less profitable. In February 2021, we suffered substantial financial losses due to extreme weather conditions in Texas, which also weighed on the share price. RWE stock received tailwind in November when we published our growth plans and earnings prospects for the current decade at a Capital Market Day (see pages 25 et seqq.). RWE made up for ground lost to the DAX and the sector index thereafter.

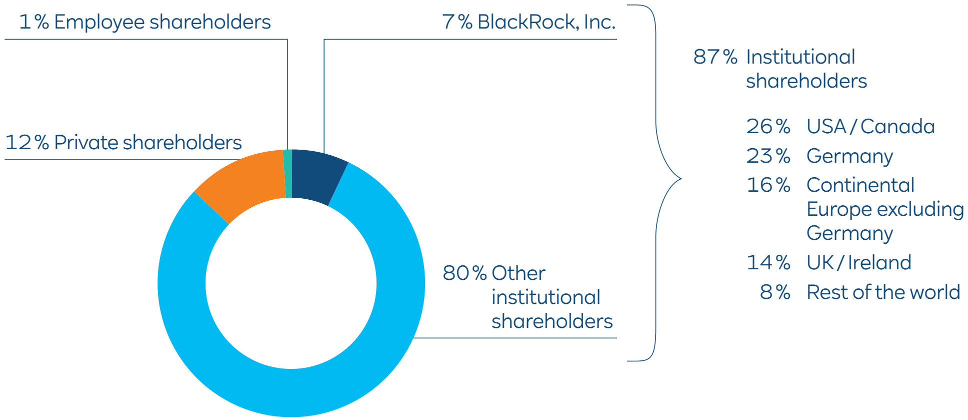
RWE share indicators[1]		2021	2020	2019	2018	2017
Earnings per share	€	1.07	1.65	13.82	0.54	3.09
Adjusted net income per share	€	2.32	1.97	–	–	2.00
Cash flows from operating activities of continuing operations per share	€	10.76	6.47	- 1.59	7.50	- 6.13
Dividend per share	€	0.90[2]	0.85	0.80	0.70	1.50
Dividend payment	€ million	609[2]	575	492	430	922
Share price						
End of fiscal year	€	35.72	34.57	27.35	18.97	17.00
Highest closing price	€	38.65	35.02	28.69	22.48	23.14
Lowest closing price	€	28.64	21.00	18.97	15.10	11.80
Share dividend yield[3]	%	2.5	2.5	2.9	3.7	8.8
Number of shares outstanding (annual average)	thousands	676,220	637,286	614,745	614,745	614,745
Market capitalisation at the end of the year	€ billion	24.2	23.4	16.8	11.7	10.3

1 The comparability of some of the figures for various fiscal years is limited due to changes in reporting.
2 Dividend proposal for RWE AG's 2021 fiscal year, subject to the passing of a resolution by the 28 April 2022 Annual General Meeting.
3 Ratio of the dividend per share to the share price at the end of the respective fiscal year.

Dividend of €0.90 per share proposed for past fiscal year. In view of the Group's good earnings, the Executive Board and the Supervisory Board of RWE AG will propose a dividend of €0.90 per share to the next Annual General Meeting on 28 April 2022. This is €0.05 more than last year. €0.90 is the lower limit we have set for the dividend for the coming years. In the long run, we intend to pay 50 % to 60 % of adjusted net income to our shareholders.

Broad international shareholder base. Based on our latest survey, at the end of 2021, an estimated 87 % of the total of 676.2 million RWE shares were held by institutional investors and 13 % were owned by individuals (including employees). Institutional investors from Germany owned 23 % of our capital stock. This investor group accounted for 16 % in the rest of Continental Europe, 14 % in the United Kingdom / Ireland and 26 % in North America. At the end of 2021, RWE AG's single-largest shareholder was the US asset management company BlackRock, with a stake of 7 %.

Shareholder structure of RWE AG[1]



1 As of the end of 2021; percentages reflect shares in subscribed capital. Sources: RWE data and notifications from shareholders in accordance with the German Securities Trading Act.

100 % free float of the capital stock. The free float of our shares considered by Deutsche Börse in terms of index weighting was 100 % when this report went to print. Normally, shares held by investors accounting for at least a cumulative 5 % of the capital stock are not included in the free float. However, a higher threshold of 25 % applies to asset management companies like BlackRock.

Profit participation through employee shares. About 1 % of our stock is owned by our current and former staff members. German and British Group companies offer their employees the opportunity to take shares in RWE on preferential terms. Last year, 7,023 people, representing 40 % of all qualifying staff members, made use of these offers and bought a total of 312,000 shares. The preferential terms and the administration of the employee share ownership programmes led to an expense of €2.9 million.

Ticker symbols and identification numbers of the RWE share	
Reuters: Xetra	RWEG.DE
Bloomberg: Xetra	RWE GY
German Securities Identification Number	703712
International Securities Identification Number (ISIN)	DE0007037129
ADR CUSIP Number	74975E303

RWE represented on numerous stock markets. RWE shares are traded on the Frankfurt Stock Exchange and other stock exchanges in Germany, as well as via electronic platforms such as Xetra. They are also available on stock markets in the rest of Europe. In the USA, RWE is represented via a Level 1 ADR programme, under which American Depositary Receipts – or ADRs for short – are traded in place of our shares. ADRs are share certificates issued by US depositary banks, representing a certain number of a foreign company's deposited shares. Under RWE's programme, one ADR represents one share.

Ticker symbols and identification numbers of RWE green bonds

Issue date	Issue price (%)	Volume (€ million)	Maturity	Nominal interest rate (%)	German Securities Identification Number	International Securities Identification Number
11 Jun 2021	99.711	500	11 Jun 2031	0.625	A3E5VA	XS2351092478
26 Nov 2021	99.808	750	26 Nov 2028	0.500	A3MP70	XS2412044567
26 Nov 2021	99.138	600	26 Nov 2033	1.000	A3MP71	XS2412044641

RWE enters green bond market. RWE AG issued its first green bond in June 2021. The paper has a nominal volume of €500 million, a ten-year tenor and a 0.625 % coupon. Later in the year, two more green bonds were placed on the market: one with a volume of €750 million, a 0.5 % coupon and a seven-year tenor, and another with a volume of €600 million, a 1.0 % coupon and a twelve-year tenor. All three of the issuances met with keen interest among investors. Capital raised by the issuance of green bonds must be spent on projects that contribute to protecting the environment and climate. RWE's green bond policy stipulates that proceeds on issuances be spent on wind and solar farms exclusively. This is in line with the United Nations' Sustainable Development Goals. One of these objectives is to increase the share of the global energy mix accounted for by renewables. RWE's rules also comply with the generally accepted Green Bond Principles of the International Capital Market Association (ICMA). This has been certified by Sustainalytics, a prominent sustainability agency.

We have summarised the main features of our three green bonds in the above table. In addition, we have two hybrid bonds outstanding (€282 million and US$317 million) with earliest redemption dates in 2025 and 2026, respectively. A residual amount (€12.2 million) of a standard bond that matures in 2037 – which we could not fully transfer to innogy, a former subsidiary of ours acquired by E.ON, at the end of 2016 – has not been redeemed, either. Further information on outstanding RWE bonds can be found at www.rwe.com/bonds.

2

Combined review of operations

"Energy is all around us. All we have to do is harness it."

Jason Jackson, Site Operations Manager at Hickory Park (USA), RWE Renewables

2.1 Strategy

In November 2021, we informed the public about our growth and earnings targets for this decade and received very positive feedback. By 2030, we intend to invest €50 billion in renewables, battery storage, gas-fired power stations and electrolysers. Including proceeds from selling stakes in projects, we foresee net investments of €30 billion. This will double our generation capacity in these technologies to 50 GW by 2030. At the same time, we are successively phasing out electricity generated from coal and setting the stage for RWE to be carbon neutral by no later than 2040. This will not only make RWE greener, but also more profitable. Our 2030 goal is to achieve an adjusted EBITDA in our core business segments of €5 billion. This would represent an increase of around 80% compared to 2021.

Who we are and what we do. RWE is a leading international energy company headquartered in Essen, Germany, with a focus on power generation. Energy sources such as wind and solar are an increasingly important part of our business. Our core activities also include the storage of electricity and natural gas, the hydrogen business, trading of energy-related commodities and innovative energy solutions for industrial customers. We generated revenues of €24.5 billion in fiscal 2021. Our key markets are Germany, the United Kingdom, the Netherlands and the USA. In the field of renewables, we are also active in a whole host of other countries, for example in Poland, Spain, Italy, Sweden and Australia. We intend to position ourselves even more broadly geographically in our renewables business. For example, we are stepping up our efforts to win offshore wind projects in new markets such as Norway, Japan, South Korea and Taiwan.

Carbon-neutral energy – the great challenge of our time. In most industrial countries, energy policy is shaped by climate change. In the past, the main objective was to provide a reliable, affordable supply of electricity and fuel, whereas nowadays – more so than ever before – our energy consumption should not be to the detriment of the Earth's temperature. Most industrialised countries where we do business want to minimise their emissions of greenhouse gases generated by the use of fossil fuels. Over the long run, the goal is to achieve climate neutrality, i.e. a state in which humankind zeroes out its net emissions of greenhouse gases into the atmosphere. The European Union and the UK want to be climate neutral by 2050, while Germany wishes to reach this goal by 2045. Both these objectives call for the fundamental restructuring of the way in which companies and households consume energy. This transformation has many aspects. For the energy industry, the following issues need to be addressed:

- **Decarbonising electricity generation.** The energy transition is basically about abandoning electricity generation from fossil fuels and embracing renewables. Coal and natural gas are finite resources, the use of which leads to the emission of greenhouse gases. By contrast, wind, solar and hydro are energy sources which do not generate CO_2 emissions, are available in abundance and thus form the foundation for a sustainable supply of electricity and heat. The EU has set the goal of covering at least 32% of final energy consumption from renewable sources by 2030. At present, work is under way on a directive which calls for an even higher proportion of at least 40%. Numerous countries both inside and outside the EU have specific plans to phase out the use of coal and ambitiously expand renewables.

- **Creating storage and backup capacities.** Electricity generation using renewable sources depends on the weather conditions as well as the time of day and the season. Sometimes, renewables can only cover a fraction of demand, while at other times, their generation exceeds local needs so much that production actually has to be throttled. Consequently, as energy supply becomes increasingly reliant on wind and solar farms, power storage systems become ever more important for stabilising the power grids. Furthermore, we need more environmentally-friendly, flexible generation assets, which can reliably produce power when there is no wind and no sunshine. Modern gas-fired power stations that can be retrofitted to run on carbon-free fuels like hydrogen will be well-positioned for this task, once the necessary volumes of such fuels are available.

- **Replacing fossil fuels with green power.** Simply reducing emissions in the power generation sector is not enough to achieve climate neutrality. At present, over 70% of European energy consumption is still covered by oil, coal and natural gas. Electrification – in other words switching energy consumption to electricity produced with carbon-neutral methods, e.g. by using heat pumps instead of oil and gas heating systems – also enables significant emission reductions in the manufacturing, heat and transportation sectors. Thus, over the long run, demand for electricity in our markets will expand significantly.

- **Establishing the hydrogen economy.** The economy can only be completely decarbonised if solutions are also found for applications where direct electrification is not an option. Examples of this are the production of steel and fertilisers as well as aviation and shipping. In the near future, hydrogen produced with zero-carbon methods would be a solution. Taking a longer-term perspective, using hydrogen as a storage medium will also be a key component of a climate-neutral energy system. According to the European Commission, by 2030 the EU should have electrolysers with a total capacity of at least 40 GW capable of producing 10 million metric tons of hydrogen annually. Germany is looking to expand its electrolysis capacity to 10 GW by the end of the decade, as recently announced by the new coalition government comprising the SPD, the Greens and the FDP.

We're driving the energy transition. RWE is well positioned to contribute to transforming the energy sector and the broader economy in all of the areas discussed above. And that is precisely what we are doing, by investing billions of euros in wind power, photovoltaics, battery storage and green hydrogen, phasing out coal-based generation, building environmentally friendly backup capacities and helping industrial customers optimise their energy consumption. These activities make us a driving force in the energy transition and allow us to support the countries where we do business in their efforts to achieve climate protection targets. Our commitment in this regard is reflected by our own ambitious plans: we want to be carbon neutral by 2040 at the latest, ten years earlier than the EU. Not only does this apply to our own greenhouse gas emissions (referred to as Scope 1), it also covers the upstream and downstream value chain (Scope 2 and Scope 3). We have also set ourselves ambitious goals for the current decade: by 2030, we want to reduce our emissions by 50% (Scope 1 and 2) and 30% (Scope 3) compared to 2019. At the Paris Climate Conference in 2015, the global community committed to limiting the increase in average global temperatures to well below two degrees Celsius compared to pre-industrial levels. Our actions are in line with this target, as was officially confirmed by the independent Science Based Targets initiative at the end of 2020. However, our ambitions do not end there. Moving forward, we have also set our sights on ensuring we adhere to the target of 1.5 degrees Celsius established at the Paris Climate Conference.

Sustainability – at the heart of our corporate culture. A sustainable business involves far more than cutting greenhouse gas emissions. Sustainability is measured in a myriad of ways. The expression is generally used in relation to the environment, society and governance (ESG). Last year, we reassessed our approach to the topic of sustainability. Working together with internal and external experts, we defined the fields of action that are of most significance to RWE and what we want to achieve in these areas. In addition to reducing greenhouse gas emissions, one of our most important environmental efforts is preserving biodiversity at the sites where we operate. In particular, this involves the recultivation of mining areas, as well as the erection, operation and decommissioning of wind farms. We want to reduce the use of natural resources and significantly boost our recycling ratio at the same time.

As a company, we take great responsibility in the communities where we do business. We want to live up to this responsibility across all our sites. In the Rhenish lignite mining region, we are acutely aware of our prime-aged employees who are losing their jobs due to the coal phaseout, and are in the process of securing socially acceptable solutions to this issue. Occupational health and safety is another key concern of ours. Our aim is to ensure that the employees at our sites leave work at the end of each day as healthy as when they arrived. We also advocate for a diverse, inclusive corporate culture. Diversity has many facets. One is gender equality when filling leadership roles within the company. In our core business, which covers all Group activities with the exception of Coal / Nuclear, the share of women in executive positions was 19 % at the end of 2021. We aim to reach 30 % by 2030.

Our mission statement 'Our energy for a sustainable life' truly encompasses our purpose as a company and confirms that sustainability is a principle that guides our actions. Our commitment in this regard is made tangible by the fact that achievement of ESG targets has a direct impact on the level of Executive Board remuneration. Further information on our ESG goals and accomplishments can be found in our Sustainability Report and in the separate Non-financial Report in accordance with Section 315b, Paragraph 3 of the German Commercial Code. The reports for fiscal 2021 will be published in April 2022 and will be accessible at www.rwe.com/responsibility-and-sustainability. Our website also has further information on how independent rating agencies assess our sustainability strategy at www.rwe.com/ratings-and-rankings.

Growing Green – our strategic roadmap to 2030. In mid-November 2021, we informed the public about the strategy and goals for our business activities during the current decade at our Capital Market Day event. An ambitious growth programme in our green core business forms the centrepiece of our strategy, which is entitled 'Growing Green'. In the 10-year period from 2021 to the end of 2030, we intend to invest approximately €50 billion in new wind farms, photovoltaic assets, battery storage, gas-fired power plants and electrolysers.

This capital expenditure will be divided up roughly four ways between Germany, the United Kingdom, the USA and our other markets. In net terms, i. e. taking into account cash flows from divestments, we expect that our investments will total around €30 billion. We will use these funds to massively expand our climate-friendly generation capabilities. Including battery storage and electrolysers, we intend to have a generation capacity of around 50 GW by 2030. This target is a pro-rata figure, meaning we state our capacity according to our shareholding ratios. In order to reach 50 GW, we will have to build approx. 25 GW. At 21 GW, the majority of this capacity will come from wind farms, solar assets and battery storage. It will be supplemented by flexible gas-fired power stations and electrolysers with a total installed capacity of 2 GW each. Our adjusted EBITDA will also rise sharply in conjunction with our generation capacities. For 2030, we project a level of €5 billion, generated solely from our green core business. By comparison, in fiscal 2021 we posted adjusted EBITDA of €2.8 billion from our core activities.

Turning to the individual components of our growth programme:

- **Offshore Wind.** We have been active in offshore wind for 20 years now, making us a world leader in this field. At the end of 2021, our offshore wind power portfolio had a total pro-rata capacity of 2.4 GW. This figure is expected to hit 8 GW by 2030. We currently operate wind farms in the coastal waters of the United Kingdom, Germany, Belgium, Sweden and Denmark. Europe is our most important region in terms of growth. Examples for this include projects such as Sofia (UK / 1,400 MW), Kaskasi (Germany / 342 MW), Thor (Denmark / 1,000 MW) and F. E. W. Baltic II (Poland / 350 MW). We are also looking to markets outside of Europe: together with local partners, we are working on offshore wind projects in the USA, Japan, Taiwan and South Korea. But we are interested in more than just regional opportunities, as we want to tap into new technological options as well. In order to realise the full potential of offshore wind, we will also be operating wind turbines on floating platforms in the future. Together with our partners, we are exploring which types of foundations are best suited for this (see page 30 et seq.). The first prototype co-engineered by RWE – the TetraSpar Demonstrator off the coast of Norway – started operating in autumn 2021.

- **Onshore Wind / Solar.** We also have more than two decades of experience in onshore wind and rank among the global leaders, with pro-rata generation capacity of 7 GW. We intend to boost this figure to 12 GW by 2030. In terms of solar, where our capacity currently stands at 0.5 GW, we are still in the start phase. However, we aim for a steep expansion curve towards 8 GW by the end of the decade. We are concentrating our onshore wind and solar efforts on North America and Europe, where we are looking to diversify geographically. For instance, we have partnered with Public Power Corporation (PPC), Greece's largest energy group, to position ourselves as a solar power producer in its home market. In the United States, we are also expanding into new territories. Evidence of this can be found at Scioto Ridge, our first wind farm in Ohio, which started operating in May 2021. Our main focus in terms of growth ventures rests on countries and market segments harbouring potential for more than one technology, e.g. for photovoltaics plus wind energy and / or electricity storage.

- **Battery storage.** Demand for electricity storage is increasing as power generation shifts to wind and solar assets. RWE has been involved in the development, construction and operation of battery storage systems for many years now. For this decade, we are targeting an installed capacity of 3 GW, compared to 47 MW in late-2021. We are currently rolling out a key battery project in Hickory Park, which is located in the south of Georgia, USA. This site will be home to a 196 MW solar farm coupled to a 40 MW battery storage system. This combination will enable electricity feed-ins into the local grid to be optimised, significantly improving the solar array's yield. Future photovoltaic projects will largely follow this approach. We are also building battery storage to provide grid services. Two examples of this are the massive batteries with storage capacities of 72 MW and 45 MW, which we are currently installing at our German power plant sites in Werne and Lingen.

- **Flexible gas-fired power plants.** The supply gap caused by the coal phaseout cannot be resolved by energy storage solutions alone. We need to build low-carbon backup capacities that can balance out the fluctuations in power generation from solar and wind. This presents growth opportunities, particularly for established power generators such as RWE. Gas-fired power plants play a key role in this regard. With an installed capacity of 14.1 GW, our fleet of gas-fired stations is the second largest in Europe, and we want to build another 2 GW of capacity by 2030. We see a need for investment in Germany in particular, where the coal exit is coinciding with the nuclear phaseout. Nevertheless, the construction of new assets in Germany involves a high degree of political and economic uncertainty, unless the plants receive guaranteed remuneration based on the Combined Heat and Power Act or via capacity auctions held by the grid operator. In one such auction, we won the right to construct a 300 MW grid stabilisation unit at our Biblis site, which is scheduled to start operation in 2022.

  The Institute of Energy Economics at the University of Cologne (EWI) estimates that Germany needs to add gas-fired plants with a total capacity of 23 GW by 2030 if the country is set on phasing out coal over that same period. We are prepared to play our part. Not only does RWE have the necessary expertise, it also has a number of favourably situated sites. That said, we can only make these investments if the necessary incentives are provided for, which could include capacity payments for example. New assets would then receive remuneration for being online and thus ensuring security of supply. This would ensure economic viability even with low capacity utilisation. Furthermore, conditions must be in place for us to operate our gas-fired power stations using green hydrogen over the longer term. We are planning the necessary retrofits for our existing gas-fired assets and have already finalised the relevant strategies. Power plants that do not run on hydrogen, could separate CO_2 from the flue gas and store it underground. For political reasons, however, this option can only be considered outside Germany for the time being.

- **Hydrogen.** The hydrogen economy is a crucial part of the energy transition and a perfect complement to our business model. We want to be active along the entire value chain, from green electricity generation and hydrogen production by electrolysis to hydrogen trading and storage and the conclusion of individual supply agreements with major industrial customers. Our regional focus in these activities is on Germany, the United Kingdom and the Netherlands. In recent years, we have forged a range of partnerships with businesses and research institutes seeking to work closely with us to develop a comprehensive hydrogen infrastructure. Noteworthy projects include the German initiatives GET H2 and AquaVentus, the Dutch projects Eemshydrogen and NorthH2 and our partnership with Shell, which was formed at the end of 2021. At present, we are participating in around 30 hydrogen projects. By 2030, we intend on developing electrolysis capacities totalling 2 GW. We are designing facilities that allow for industrial-scale production. Examples of this include the three electrolysers slated to start production at the Lingen power station in the period from 2024 to 2026. With capacities of 100 MW each, these units will be among the largest of their kind in Europe. More information on our hydrogen strategy and our major projects can be found at www.rwe.com/hydrogen.

Energy trading and customer solutions. In addition to power generation, we are also focused on energy trading as one of our core competencies. It is managed by the Group company RWE Supply & Trading, which acts as our window into the energy markets. Around 200 RWE specialists trade electricity, fuel and emission rights around the clock. RWE Supply & Trading also markets the electricity from our power stations and procures the fuel and emission allowances required to produce it. The objective here is to limit price risks. On top of that, the company is in charge of the commercial optimisation of our power plant dispatch, the earnings of which go to our generation companies. Companies outside of the RWE Group can also benefit from the expertise of our trading subsidiary. They are offered a wide range of products and services, running the gamut from traditional energy supply contracts and comprehensive energy management solutions to sophisticated risk management concepts.

Above and beyond this, RWE Supply & Trading has established itself as an intermediary for pipeline gas and liquefied natural gas (LNG). Thus, in addition to meeting the needs of our Group companies, it also serves numerous industrial customers around the world. To this end, it enters into long-term supply agreements with producers, organises gas transportation by booking pipelines or LNG tankers and optimises the timing of deliveries using leased gas storage facilities. In this regard, the greater the size and diversification of the procurement and supply portfolios, the better the chances to commercially optimise them. The gas business also opens up opportunities for activities in the field of hydrogen. One example in this regard is the long-term partnership between RWE Supply & Trading and Australian LNG producer Woodside. We intend to purchase liquefied natural gas from Woodside as of 2025 and collaborate on investigating the potential to market hydrogen to RWE's customer base in Asia and Europe. Another example that relates to the development of the hydrogen economy is the planned Brunsbüttel LNG terminal near Hamburg, which RWE Supply & Trading is helping to realise. In future, green ammonia could also be imported to Germany via the terminal and converted into hydrogen in the port area.

Socially-acceptable phaseout of coal-fired generation. Our growth programme is flanked by a rapid coal exit. In the United Kingdom and Germany, we already phased out hard-coal-fired power generation in 2019 and 2021, respectively. We are currently only using hard coal in our Dutch stations Amer 9 and Eemshaven, where biomass is co-fired. From 2025 and 2030, respectively, we will no longer be using hard coal in these plants. For RWE, the phaseout of lignite, which is produced and turned into electricity in the Rhenish mining region to the west of Cologne, is much more complex and difficult in terms of the social ramifications. In early 2022, we still operated lignite-fired power stations with a total capacity of 7.6 GW, a third less than in 2015. This year, we will also be shutting down another 1.6 GW of capacity. Pursuant to current legislation, the last unit will go offline in 2038. However, the new German government has already announced that they are looking to accelerate the phaseout of coal in Germany and are working towards a deadline of 2030.

RWE supports the Federal government's climate protection ambitions. If it were possible to provide for the necessary framework conditions in pursuit of accelerating the coal exit, we would be able to progress more quickly on our path of reducing emissions. At the same time, this would also be associated with significant additional financial burdens for us. The present legal phaseout roadmap already presents us with tremendous challenges – from operational, financial and social standpoints. At the end of 2019, before the Coal Phaseout Act entered into force, some 10,000 people were employed in the Rhenish mining region; in 2030 less than 4,000 will work there. Although the personnel affected by job losses will receive state support, such as an adjustment allowance, we will also pay for redundancy measures ourselves. In August 2020, we concluded the 'Coal Exit' tariff agreement with ver.di, Germany's United Services Trade Union, and IG BCE, the country's Industrial Mining, Chemicals and Energy Trade Union. It defines what benefits RWE will provide above and beyond the state-guaranteed payments. Early retirement plans will apply to most of those affected. Younger employees will be reassigned to new positions within the Group, or – where that is not possible – will be offered severance packages.

Our responsibility to the people in the Rhenish coal region does not end at the factory gates: we want to do our part to ensure that the region remains structurally resilient and integrated within the energy sector, despite the coal phaseout. By 2030, we want to invest €4 billion in renewables, gas-fired power plants and electrolysers in North Rhine-Westphalia, with no less than 500 MW of wind and solar capacities being built in the Rhenish region alone. Some recultivated land is very well suited for these plans, and three RWE wind farms are already located there. We also want to further develop our power plant sites. For example, there are plans to build an innovation, technology and commercial park in Frimmersdorf and the surrounding area. At the Weisweiler site, within the scope of an EU project, we are looking into the possibility of capturing geothermal heat, which could be fed into the district heating network of the greater Aachen area. In addition, we are researching power-to-gas technology at the Niederaussem Innovation Centre. This is where, since 2013, we have used hydrogen and carbon dioxide made by electrolysis to produce fuel and feedstock for the chemical industry for research purposes.

Nuclear power: Our focus is on safe and efficient decommissioning. Germany's phaseout of nuclear power will soon be completed. RWE's Gundremmingen C power plant and two units belonging to other companies were taken offline at the end of 2021, leaving just three regional sites to produce electricity, of which one is run by RWE. At the end of 2022, these will also cease generation. After that, our nuclear power operations will be focused exclusively on the safe and efficient decommissioning of the plants. Moreover, we are making efforts to ensure that the sites continue to be used for energy-related purposes, as illustrated by the example of the grid stabilisation unit at Biblis.

RWE AG's management system. Our management system is geared towards sustainable growth that creates value and is based on RWE's strategic guidelines. To determine these guidelines, we analyse the market environment and competitiveness of our segment activities, identify growth potential and weigh up the opportunities and risks involved. Which projects are ultimately realised is at the discretion of the management of the Group company concerned. Larger investments are approved by the Executive Board of RWE AG. It also determines the allocation of capital, the long-term portfolio development and the type of financing.

To operationally manage the Group's activities, RWE AG deploys a groupwide planning and controlling system, which ensures that resources are used efficiently, and provides timely, detailed insight into the current and prospective development of the company's assets, financial position and net earnings. Based on the targets set by the Executive Board and management's expectations regarding the development of the business, once a year we formulate our medium-term and long-term plans, in which we forecast the development of key financial indicators. The medium-term plan contains the budget figures for the following fiscal year and planned figures for the two years thereafter. The Executive Board submits the plan to the Supervisory Board, which reviews and approves it. During the respective current fiscal year, we produce internal forecasts based on the budget. Members of the Executive Board of RWE AG and the main operating companies meet regularly to analyse the interim and annual financial statements and update the forecasts. In the event that the forecast figures deviate significantly from the budget figures during a fiscal year, we analyse the underlying reasons and take countermeasures if necessary. We also immediately notify the capital market if published forecasts need to be modified.

Key earnings indicators. Among other things, we use key earnings indicators such as EBITDA, EBIT and net income to manage our business; however, we adjust these indicators by removing special items. EBITDA is defined as earnings before interest, taxes, depreciation and amortisation. In order to improve its explanatory power in relation to the development of ordinary activities, we remove non-operating or aperiodic effects and present these in the non-operating result. This applies to capital gains or losses, temporary effects from the fair valuation of derivatives, goodwill impairments and other material special items. Subtracting operating depreciation and amortisation from adjusted EBITDA yields adjusted EBIT. Adjusted net income is another key operating indicator for us. We calculate it by correcting net income to exclude the non-operating result, and material special items in the financial result. Instead of the actual tax rate, which reflects one-off effects, we apply the budgeted rates of 15 % (until 2022) and 20 % (from 2023), which we have derived in consideration of the earnings in our core markets, the tax rates applicable there and the utilisation of loss carryforwards.

Expected minimum return on investments. We primarily use the internal rate of return (IRR) to evaluate the attractiveness of investment projects. We only undertake projects if – at the time of the investment decision – the expected IRR stays within a defined minimum threshold, which is determined on the basis of the weighted average cost of capital (WACC). The WACC is augmented with project-specific risk premiums, which usually range from 100 to 300 basis points, depending on the technology or region. Using this approach, we have set lower limits which vary from 5 % to 9 % for offshore wind projects. Minimum returns of 4 % to 7 % are applied to projects involving the construction of onshore wind farms, solar assets or batteries in Europe or the USA. The thresholds for new gas-fired power plants or hydrogen activities are set between 6 % and 11 %.

Safeguarding our financial strength and creditworthiness. The RWE Group's financial position is analysed using cash flows from operating activities, amongst other things. We also attach special importance to the development of free cash flow, which is derived by deducting capital expenditure from cash flows from operating activities and adding proceeds from divestments and asset disposals. Net debt is another indicator of RWE's financial strength: it is calculated by adding provisions for pensions and similar obligations, for the dismantling of wind farms and for nuclear waste management to RWE's net financial position. Conversely, mining provisions, our 15 % stake in E.ON and compensation for the German lignite exit, as confirmed by the German government, are disregarded.

In managing our indebtedness, we orientate ourselves towards the leverage factor, i. e. the ratio of net debt to adjusted EBITDA in our core business. Given that we recorded positive net assets rather than net debt as of 31 December 2021, the leverage factor was below zero. For the coming years, we expect net debt to trend upward, as we will partially finance our growth investments with debt capital. Over the medium term, however the leverage factor should not exceed 3.0, as we wish to maintain our financial flexibility. For the period after 2025 we believe that an upper limit of 3.5 is reasonable, as the expansion of renewables will enhance our financial stability and our political risk exposure will decline with the gradual phaseout of coal-based power generation.

Attractive dividend of at least €0.90 per share. Despite the significant funds needed for capital expenditure, RWE will remain an attractive dividend stock in the future. We will propose a dividend of €0.90 per share to the Annual General Meeting on 28 April 2022 for fiscal 2021. This will also constitute the minimum payout for the coming years. Over the long term, we plan to distribute 50 % to 60 % of adjusted net income to our shareholders.

2.2 Innovation

The success of the energy transition doesn't simply hinge on the dedication with which we implement it. It is also the degree of innovation deployed to fuel these strategies that is decisive. Whether it's expanding renewable energy capacities, transitioning to a hydrogen economy or opting for environmentally friendly carbon recycling methods, technical challenges lurk behind every turn, waiting for solutions to address them. In 2021, RWE worked on close to 200 research and development projects in collaboration with partners from industry and science. All these projects share one common goal: to overcome hurdles on the road to an environmentally friendly, stable and sustainable energy world.

Solutions for a sustainable energy system. RWE is innovative in many ways. We are motivated both by a desire to remain competitive in an ever-changing environment as well as a passion to be a driving force of this change. Our innovation projects are dedicated to developing solutions that help us advance the utilisation of renewable energy, expand electricity storage and become involved in large-scale hydrogen production. We also want to help build a circular economy in which sensible use is made of carbon dioxide.

Our more than 964 patents and patent applications, based on about 241 inventions, speak volumes about RWE's capability for innovation. The Group's various activities in the field of research and development (R&D) are also testimony for this expertise. Last year, we worked on 196 R&D projects. Around 400 RWE employees were solely dedicated to these activities or contributed to them in addition to performing their normal tasks. Such ventures often entail working with other companies or research institutions and we could not implement many of these projects without their valuable insights. These collaborations are also financially advantageous, as costs are shouldered by many stakeholders. This limits operating R&D spending, which in 2021 amounted to €22 million (previous year: €20 million).

On the following pages, we present a small selection of our current innovation projects. They illustrate the breadth and variety of the challenges we face in light of the energy transition and demonstrate the creativity with which we are tackling these issues.

How we are using new technologies for offshore wind expansion. There are currently 170 offshore wind farms operating around the world. All are located in shallow coastal waters with turbines firmly anchored to the seabed. Coastal regions with greater water depths have – until recently – been off-limits to offshore wind farms. After all, the deeper the water, the more expensive the foundation. Wind power projects generally become uneconomical at depths of over 60 metres. According to WindEurope, the European wind industry association, in about 80% of all coastal sea areas where wind speeds are suitable for electricity generation, the ocean is simply too deep for conventional foundation designs. However, in order to harness the potential of wind energy more effectively, companies are turning their efforts to concepts for floating wind turbines. The units are mounted on floating platforms made of steel or concrete, which are secured to the seabed using mooring lines and anchors. This opens up the possibility of deploying wind turbines in deeper waters, e.g. coastal areas in Asia, the Americas and the Mediterranean region as well as in parts of the North Sea. RWE has taken a leading role in the development of these new foundations. We are currently involved in three demonstration projects, researching the pros and cons of the various floating foundations. Our aim is to identify which technology is the most viable for the respective wind power initiative.

The **DemoSATH** project is a partnership with Spanish company Saitec Offshore Technologies that aims to develop and construct a floating platform for a 2 MW wind turbine. The project relies on Saitec's SATH (swinging around twin hull) technology, which is a catamaran-like floating platform made of tensioned concrete elements. This design allows the floating platform to rotate freely around a single point of mooring, depending on wind and wave directions. We have commissioned a prototype, DemoSATH, which will be assembled on a quayside in the port of Bilbao, in northern Spain. Once complete, tugs will move the floating wind turbine to a mooring point three kilometres from the Basque coast, where it will start generating electricity before the end of the year.

The **New England Aqua Ventus** project is a collaboration with the University of Maine and Diamond Offshore Wind, a subsidiary of Mitsubishi Corporation. The unit will feature a technology developed by the University of Maine, where the floating platform consists of modular concrete components with glued joints – a construction technique seen in bridges. We aim to have built an 11 MW prototype by 2024, which will be deployed in the Gulf of Maine on the eastern coast of the USA. This testing process will provide us with valuable technical learnings, as well as helping us to understand how best to limit potential for friction between the plant and local fisheries.

TetraSpar Demonstrator is our most advanced project. It is a collaboration with Shell, Japanese utility TEPCO and Danish company Stiesdal Offshore Technologies, and involves a floating platform comprising two sections that are cost-effectively prefabricated across various locations. A keel below the platform is used to keep the steel top section stable in the water – similar to a ship. We assembled the sections in the Port of Grenaa in Denmark. A 3.6 MW wind turbine was then mounted on the floating platform. In summer 2021, we towed the structure to a test site 10 kilometres off the Norwegian coast, near Stavanger. Once on site, it was attached to the seabed 200 metres below using mooring lines and anchor chains, before being connected to the Norwegian power grid. The floating turbine has been operating since November. We have fitted a number of sensors to measure whether real-life performance matches up to forecasts created using calculations and tests.

How we are improving the sustainability of wind power facilities. In essence, a wind turbine consists of a tower, a nacelle and three rotor blades. To ensure it doesn't just produce green electricity but is also entirely environmentally friendly, a turbine should be completely recyclable once it reaches the end of its service life. Although tried-and-tested recycling methods for the tower and components of the nacelle already exist, it's a different story when it comes to the rotor blades. These components are made using composite materials that are almost impossible to separate, due to the glass fibre-reinforced epoxy resin that becomes completely solid once hardened. In a ground-breaking project, we are now helping to identify end-to-end recycling solutions at our Kaskasi wind farm, off the coast of Heligoland. A number of the 38 wind turbines being erected there this year will be fitted with special recyclable rotor blades. Our supplier Siemens Gamesa is manufacturing them using a new type of resin with a chemical structure that allows for the different materials to be separated, preserving their properties. This makes it possible to reuse the individual components once the rotor blade has reached the end of its lifetime. We will test these sustainable rotor blades in real-life settings over the coming years. Should they prove effective, then resin solutions of this nature could become standard for future RWE wind farms.

How we are forging ahead with green hydrogen production. Zero-carbon hydrogen has the potential to be used for multiple processes within the context of the energy transition. Not only is it suitable for storing electricity, it could also be used to decarbonise industrial processes and modes of transport that either cannot be electrified or where electrification has proven to be prohibitively expensive or arduous. Most of our hydrogen projects focus on decarbonising industrial applications. RWE is working with partners on around 30 such initiatives with a geographical focus on Germany, the Netherlands and the United Kingdom. Several have a good chance of being classified as 'Important Projects of Common European Interest' (IPCEI) by the EU. This means they would qualify for national subsidies. Our HyTechHafen Rostock project as well as parts of the GET H2 and AquaVentus collaborative initiatives backed by RWE all made it onto the shortlist of the Federal Ministry of Economics. In the following pages, we will take a closer look at the undertakings.

GET H2 was launched in 2019, making it one of the first hydrogen initiatives involving several industries in Germany. A host of companies and scientific institutions including RWE, BASF, BP, Evonik, Nowega, OGE and ThyssenGas are participating in the project. GET H2 spans the entire hydrogen value chain, from production and transport to industrial usage. The long-term objective is to build a nationwide hydrogen infrastructure in Germany. As part of the initiative, we joined forces with four partners at our Lingen power plant in 2020 to launch the GET H2 Nukleus project. By 2026, three electrolysis plants are to be built on site, each with a capacity of 100 MW. The aim is to use electrolysis technology on a larger scale to bring it to series production and unlock cost cutting potential. The green hydrogen produced in Lingen will be transported using repurposed natural gas pipelines to the northern Ruhr region, where it will be used in the BP refinery in Gelsenkirchen. This would form the heart of the public hydrogen infrastructure. The IPCEI funding application also envisages that the hydrogen grid be expanded towards Salzgitter, Duisburg, and the Netherlands. Furthermore, the first German H_2 cavern storage facility is expected to be connected to the hydrogen grid in Gronau-Epe.

Another initiative with substantial potential is **AquaVentus**. The idea behind it is to produce hydrogen at sea using electricity from offshore wind farms and transport it via pipelines to demand hotspots on land. The island of Heligoland will act as a hub. In a first step, the plan is to transport the hydrogen there via pipelines to cover demand on the island itself. Once production volumes increase, hydrogen in ever greater volumes will then be forwarded to the mainland, initially by tanker and later via a collector pipeline. Our AquaVentus partners include the island of Heligoland, Gascade, Gasunie, Shell and Siemens. A pilot project is being conducted to build two 14 MW wind turbines in the coastal waters of Heligoland and integrate an electrolyser in each of their bases. If the project stays on schedule, the turbines could become operational in 2026. But this is only the beginning. By 2035, electrolysers with a total capacity of 10 GW could be installed in the North Sea. This would be enough to produce up to 1 million metric tons of green hydrogen every year.

Our **HyTechHafen Rostock** project is dedicated to harnessing the potentials of the port of Rostock as a promising location for the hydrogen economy, not least due to its industrial infrastructure. Together with our partners, port operator Rostock Port and energy providers RheinEnergie and EnBW, we will initially focus on constructing 100 MW of electrolysis capacity. The unit will be built next to a power plant operated by RheinEnergie and EnBW in the vicinity of the port and the green hydrogen generated on site will be delivered to local industrial customers via pipelines. Going forward, the infrastructure could also be used for road, rail and sea traffic. If the project stays on schedule and the framework is suitable, the port area could one day boast up to 1 GW of electrolysis capacity, as the site grows to become a hydrogen hub.

How we are preparing to generate electricity with green hydrogen. The more we rely on wind and solar power for our electricity supply, the more crucial it will be to have ample energy storage facilities to ensure a reliable, weather-independent supply of electricity that satisfies demand. Battery-based solutions and green hydrogen for electricity generation are promising concepts. This is why we want to build flexible gas-fired power stations with a total capacity of 2 GW as part of our 'Growing Green' strategy. In the long-term, the plants will run on green hydrogen, once supplies are sufficient. To improve the technical conditions for this, we have joined forces with one of the world's leading turbine manufacturers, Kawasaki Heavy Industries. The aim of this partnership is to trial a hydrogen-capable gas turbine. It is due to be built at our Lingen power plant, have a capacity of 34 MW and become operational in 2024. The turbine will be the largest gas turbine in the world that can be operated using 100 % H_2. It would also be possible to use the turbine to co-fire natural gas and hydrogen in any desired ratio. This flexibility is a massive plus, for as long as the hydrogen industry is in its infancy, the average available volume of H_2 will probably not suffice to exploit the turbine's capacity to the desired extent.

What we are doing to support carbon-neutral economic cycles. Many experts believe that human intervention in the climate can only be limited effectively if the global economic system successfully makes the shift to closed carbon cycles. Ideally, only as much carbon enters the atmosphere, by way of greenhouse gas emissions such as CO_2 or methane, as is bound by other processes at the same time. The transition to a circular carbon economy is a Herculean task, that hinges on innovation. For more than ten years now, RWE has been developing techniques that use CO_2 in an ecologically meaningful way. Within the context of this work, we collaborate with universities and research institutes, with whom we seek to contribute to the creation of the necessary technical and systemic conditions for carbon-neutral economic cycles.

A key process in transitioning to the circular carbon economy is thermal conversion. Here, heat is applied to carbonaceous materials, converting them into synthesis gas, which largely consists of hydrogen and carbon and can be used as a basic raw material in the production of fuels, plastics and fine chemicals. At the RWE Niederaussem Innovation Centre, we are dedicated to developing a high-temperature process to thermally convert different materials, and thus reuse basic resources in manufacturing. We have partnered with the Fraunhofer Institute for Environmental, Safety and Energy Technology (Fraunhofer UMSICHT) and Bochum Ruhr University for this purpose.

In mid-2021, we took a **multi-fuel-conversion plant** online in Niederaussem, which we intend to use to test whether phosphorus can be reclaimed from sewage sludge using high-temperature conversion. The process works as follows: by heating the sewage sludge to up to 1,500 degrees Celsius, we achieve gasification of the phosphorus, hydrogen and carbon contained therein. The phosphorus can then be separated from this gas and used to produce fertiliser, for example. Additional process steps can then be taken to convert the remaining gas mixture of hydrogen and carbon back into chemical raw materials or fuels. We should have the first test results back by late-2022. However, the potential of the multi-fuel-conversion technology is by no means likely to be exhausted. In future, we also want to apply this technology to other waste streams and biomass.

Another project dedicated to the use of carbonaceous waste materials launched in June 2021. The **NRW-Revier-Power-to-BioJetFuel** study we are conducting together with BP Europe and the Jülich Research Centre is assessing the prerequisites for manufacturing carbon-neutral aviation fuel on an industrial scale. This research focuses on questions such as: 'What kind of regulatory framework is necessary to ensure the economic viability of plans to operate a demonstration plant for deriving synthetic fuels from alternative carbon sources (e. g. sewage sludge, biomass or power plant flue gas) at an RWE site in the Rhenish region?' We are also determining to what extent the resulting fuels could be further processed and used for industry in the Ruhr region. If the results are promising, project development for the construction of a demonstration plant could start as early as this year.

2.3 Business environment

All signs point to more stringent climate protection measures in Europe. Last year, the EU upped its greenhouse gas reduction goal for 2030 from 40 % to 55 %. The baseline year is 1990. Germany has set its sights even higher: the largest economy in Europe has increased its target from 55 % to 65 %. We welcome this change, as it encourages the rapid expansion of renewable energy. The economic environment also presents us with opportunities. Soaring natural gas and emission allowance prices have caused prices on electricity markets to skyrocket. This favours climate-friendly generation assets in particular. Given that most of our power production had already been sold forward, the increased price levels had little impact on our earnings in 2021. In 2022, however, we expect margins to improve notably.

Regulatory environment

Emission reduction target for 2030: EU adopts stricter benchmark of 55 %. The European climate law came into force on 29 July 2021, under which the EU and its member states are obligated to decrease their net greenhouse gas emissions to zero by 2050. There had been some initial disagreement, in particular with regard to the emission reduction goal for 2030. The Commission had suggested an increase from 40 % to 55 % versus 1990. The European Council (Council of Ministers) had also voted in favour of this change, while the European Parliament had backed a reduction of as much as 60 %. Following a number of trilateral meetings, representatives of the individual institutions ultimately agreed on 55 %. They also approved the formation of a panel known as the European Scientific Advisory Board on Climate Change. The 15 senior scientific experts on this advisory board will be responsible for delivering a greenhouse gas budget, which can be used to determine an intermediate target for 2040.

The European Commission specified the instruments that would be necessary to achieve its new climate protection target for 2030 in the 'Fit for 55' legislative package. The package was made public on 14 July 2021, and includes proposals for a number of measures that will, for example, improve energy efficiency, cut carbon emissions in transport, construction and agriculture, bring the taxation of energy products in line with current objectives, expand natural carbon sinks and cushion the social implications of climate protection. Renewables are due to be scaled up rapidly and should cover at least 40 % of primary energy consumption in the EU by 2030. A goal which, until now, had been set at 32 %. Furthermore, the Commission wants to adapt the EU Emissions Trading System (ETS). The aim here is to decrease the total number of emission allowances placed on the market. At present, companies in the energy, industry and aviation sectors are participating in the ETS. In future, there is likely to be a similar system for heating and all other transport. In addition, the Commission plans to introduce a carbon border adjustment mechanism to ensure products manufactured in the EU are not subjected to higher carbon prices than imports. This is to prevent domestic companies suffering a competitive disadvantage and thus relocating their production sites to countries outside the EU. The 'Fit for 55' package is being debated by member states and in the European Parliament. Draft laws have already been submitted for most of the legislative initiatives. However, Parliament and the Council of Ministers are expected to go through a lengthy process to establish their positions and reach an agreement.

EU taxonomy: Commission defines conditions for 'green' economic activity. In a delegated act published in mid-2021, the European Commission defined technical screening criteria to determine whether economic activity is mitigating or adapting to climate change. Most renewable energy assets are likely to meet the criteria. The act formalises the provisions of the Taxonomy Regulation, introduced by the European Parliament and the Council of Ministers in mid-2020. The Regulation is designed as a tool to help determine when to classify economic activity as sustainable. The EU is taking this stance to improve transparency for investors and channel capital flows into environmentally friendly activities.

To be recognised as taxonomy-aligned, an economic activity must contribute to at least one of the following environmental objectives, without significantly harming any of the others: (1) climate change mitigation, (2) climate change adaptation, (3) sustainable use and protection of water and marine resources, (4) transition to a circular economy, (5) pollution prevention and control and (6) protection and restoration of biodiversity and ecosystems. The Commission's first delegated act was concerned with defining the criteria for the first two objectives, with the remaining targets to be delivered over the course of the coming year.

In February 2022, the Commission passed a supplementary delegated act which formalises the taxonomy criteria for new gas and nuclear power stations. It states that gas-fired power plants which are approved before 2030, can be classed as sustainable even if they exceed the upper emissions limit of 100 g CO_2 / kWh, provided they replace more carbon-intensive assets and are fully operated using climate-friendly gases like hydrogen no later than 2036. There will also be a cap on CO_2 emissions. The act mentions two upper limits, of which one has to be complied with, namely 270 g CO_2 / kWh or – alternatively – 550 kg CO_2 / kW as an annual average over a period of 20 years. The standards imposed are ambitious, but can be met given the right framework conditions. These include the rapid expansion of hydrogen infrastructure. The delegated act does not require formal approval from the European Parliament or Council of Ministers. However, both authorities have veto powers: they can reject an act entirely within six months of its passage by the Commission.

The Taxonomy Regulation has also introduced new transparency obligations. Players on the financial market, e. g. investment funds that label a financial product as environmentally sustainable, now have to disclose the share of green assets in their portfolio. Listed companies will also have to observe stricter disclosure requirements. Under the new requirements, businesses that are already obliged to prepare non-financial reports will now have to disclose what percentage of their capital expenditure, revenue and operational expenditure are classed as sustainable in accordance with EU taxonomy regulations. This obligation applies to all annual reports published on or after 1 January 2022.

In the first year of reporting, companies are allowed to follow a simplified process, whereby disclosure is limited to whether taxonomy criteria exist for a given economic activity and not whether the applicable conditions for said activity have been met. Activities for which taxonomy criteria exist are classed as 'taxonomy-eligible'. Up to 88 % of our capital expenditure in 2021 met this requirement. It should be noted that taxonomy-relevant capital expenditure (€6.0 billion) is not defined in the same way as the figure shown on pages 58 et seq. (€3.8 billion) and also cover, for example, additions from mergers of companies. In the past year, 18 % of revenue (€24.5 billion) was taxonomy-eligible along with 25 % of operational expenditure (€1.6 billion). From 1 January 2023, we will report what percentage of our economic activities actually meet the technical screening criteria and is thus considered 'taxonomy-aligned'. We have set ourselves the target of ensuring that more than 90 % of our investments are dedicated to such activities in future.

New climate law: Germany seeks to become carbon neutral by 2045. On 24 June 2021, the German Upper House passed a reform of the climate law, imposing a stricter greenhouse gas reduction target, which was greenlit by the Lower House one day later. Germany has now set its sights firmly on being carbon neutral by 2045 – five years ahead of the climate law's original schedule, drawn up in 2019. By 2030, greenhouse gas emissions are to be reduced by 65 % compared to 1990. The original target was 55 %. It is also the first time that an emission reduction target for 2040 has been set: it amounts to 88 %. The law also specifies targets for individual sectors, with the energy industry shouldering the majority of additional emissions cuts: in 2030, the sector is limited to emitting 108 million metric tons of carbon. The original emissions threshold had been set at 175 million metric tons.

These legislative amendments were seen as a reaction to a decision handed down by the German Constitutional Court and published in April 2021. The judges in Karlsruhe had found the Climate Protection Act of 2019 to be insufficient and had called for more concrete regulations for the period after 2030. They highlighted the enormous burden that irreversibly delaying considerable emission reductions would place on future generations.

How exactly these additional emission reductions will be achieved is now down to the new government coalition between Germany's Social Democrats, Greens and Free Democrats. A range of measures have already been announced, such as further expediting the phaseout of coal, which is ideally to be achieved by 2030. The German government is also looking to move up a gear in other areas, including expanding renewable capacities and scaling up the hydrogen economy.

Germany imposes stricter emissions limits for air pollutants. At the eleventh hour, Germany transposed the new EU requirements for limiting air pollutant emissions from power plants into national law. Midway through 2021, an amendment to the 13th German Emission Control Act and new co-firing requirements in the 17th German Emission Control Act entered into force, introducing more stringent limits on nitrogen oxides and mercury, in particular. To ensure compliance, we have optimised the nitrogen oxide reduction processes in all our lignite-fired power plants and equipped our three most state-of-the-art units with additional mercury removal systems. Gas-fired stations are also affected by the stricter regulations. Existing plants and those under construction are marginally compliant with the current nitrogen oxide thresholds, without having to rely on retrofits. However, future power stations must be fitted with catalytic exhaust gas purification systems, which will increase costs significantly.

German government establishes new system for nuclear phaseout compensation. The 18th Amendment to the German Nuclear Energy Act entered into force on 31 October 2021. It governs remuneration for German nuclear power plant operators impacted by the accelerated nuclear phaseout. RWE was entitled to €880 million in compensation. We received the funds at the end of November. It had been necessary to readdress the issue of remuneration in light of the German Constitutional Court's findings that the regulations drawn up in 2018 had never entered into force and were, moreover, unconstitutional. We provided additional context on this matter on page 39 of the 2020 Annual Report. The new law is flanked by an associated public-law contract between the Federal Republic of Germany and the power plant operators, which was signed by the contracting parties in March 2021.

United Kingdom launches national emissions trading system. The new British trading system for carbon emission allowances entered into force in early 2021. On 19 May, the first 6.1 million certificates (UK Allowances, or UKAs for short) were auctioned off, each entitling the holder to emit one metric ton of carbon. At £44 (€51), the price was twice as high as the lower regulatory limit. Additional auctions followed every two weeks. In 2021, around 83 million emission allowances were auctioned off in total, and around 38 million were allocated free of charge. The UK sought to establish its own emissions trading system as a result of leaving the EU. Britain has not participated in European emissions trading since the end of 2020. Until now, both systems have been kept strictly separate, i. e. it has not been possible to use EU Allowances (EUAs) in the UK nor has using UKAs been permissible in the EU. This can give rise to price discrepancies (see page 38). In addition to a number of renewable energy assets, our UK power generation portfolio includes ten gas-fired power plants with a total capacity of 7 GW. The carbon emitted by these facilities amounted to 12.8 million metric tons in 2021.

Netherlands limits use of coal in power plants. The Dutch parliament and senate have passed an amendment to the country's legislation on the Coal Phaseout Act, which places additional restrictions on the use of coal for electricity generation. Under the new law, annual CO_2 emissions from coal use may in future not exceed 35 % of the level that is theoretically possible in the respective plant. The regulation will apply from 2022 to 2024. Plant operators are to be compensated, however this is yet to be approved under state aid law by the EU Commission. RWE operates two hard coal power plants in the Netherlands, Amer 9 and Eemshaven. Amer 9 runs on 80 % biomass and is therefore not affected by the upper limit. Eemshaven, on the other hand, will be severely impacted by the law as it only uses 15 % biomass.

Poland establishes funding framework for offshore wind. The Polish government has finalised the legal framework for offshore wind farm subsidies, with the Polish parliament passing a corresponding law in January 2021. Poland intends to increase the share of renewables in its power generation portfolio to 32 % in 2030; in 2020 this figure stood at 16 %. At the moment, there are no wind farms off the coast of Poland. However, turbines with a total capacity of 10.9 GW should be in development, under construction or in operation by as early as 2027. Wind farms with a total capacity of 5.9 GW will be able to take part in the first round of subsidies. Plant operators will be awarded contracts for difference which guarantee a fixed payment for 100,000 full load hours. The maximum subsidy period is set at 25 years. RWE succeeded in securing a contract of this nature for its F. E. W. Baltic II project, on which we report in detail on page 41.

The US government plans to extend tax benefits for renewables. Shortly after his inauguration, US president Joe Biden presented an ambitious investment package to subsidise infrastructure, social care and climate protection initiatives, which envisages an extension to renewables tax benefits. New power stations are to continue to receive Production Tax Credits (PTCs) or Investment Tax Credits (ITCs). The aim is to grant PTCs in the amount of US$25 per MWh for a period of ten years, while ITCs are to account for up to 30 % of the investment costs. In future, it should be possible to subsidise hydrogen and electricity storage projects in addition to wind power and solar systems.

Before it is enshrined in law, the investment package must first pass through the Senate and the House of Representatives. The Democrats hold the necessary majorities in both houses. In November, the House of Representatives greenlit the proposal. One single Democratic senator, however, has so far prevented it from passing through the Senate. Points of contention include the overall cost of the package and individual social measures. Commentators expect a new package to be tabled, which includes tax incentives for investing in climate protection and is capable of achieving a majority in both houses. However, time is of the essence here given the pending Senate elections in November 2022. Should the Democrats lose their narrow majority, then the Republicans could block legislative proposals from the US government.

Market environment

Strong economic output in all of RWE's core markets. In 2021, global output made a strong recovery, following the economic downturn witnessed during the pandemic. Initial estimates put increased economic performance at 6 % year on year. While the USA saw a similar level of growth, the Eurozone fell behind by approximately one percentage point. In Germany and the Netherlands, our two most important markets within the currency union, current data suggests a rise of 3 % and 5 %, respectively. The UK economy is centred around the service industry and was therefore hit much harder by the pandemic. However, figures suggest the nation's economy could have since rebounded by 7 %. The global economic recovery was reflected in the significant rise in demand for commodities, which led to a notable increase in prices. There were also supply shortages and project delays, which have only affected RWE to a minimal extent so far.

German power consumption up by 3 % versus prior year. In the past year, demand for electricity has risen across all RWE markets. This was largely attributable to the economic upswing. Preliminary data from the German Association of Energy and Water Industries (BDEW) indicates that German electricity consumption was up 3 % on 2020. For the USA, experts estimate a rise of similar proportions, while the Netherlands (1 %) and the UK (2 %), will most likely have fallen short of this mark.

Low wind speeds across the majority of RWE locations. Utilisation and profitability of renewables assets are largely weather-dependent. This is why we monitor wind speeds carefully. In 2021, these were lower than the long-term average across most of our production sites in Europe and North America. A year-on-year comparison also revealed an unfavourable development: most RWE wind farms were underutilised versus 2020 due to weather conditions. Only pockets of southern Europe were able to benefit from higher wind volumes. The utilisation of run-of-river power stations depends on precipitation and melt water volumes. In Germany, where most of the RWE Group's hydroelectric plants are located, these volumes were a little below the long-term average. They were, however, higher than in 2020.

Average RWE wind farm utilisation	Onshore		Offshore	
%	2021	2020	2021	2020
Germany	17	20	35	40
United Kingdom	27	34	35	42
Netherlands	30	30	–	–
Poland	27	29	–	–
Spain	24	23	–	–
Italy	24	21	–	–
Sweden	29	33	47	56
USA	32	33	–	–

Natural gas prices skyrocket. The utilisation and earnings of our conventional power plants are heavily dependent on how electricity, fuel and emission allowance markets perform. Natural gas, our most important energy source for producing electricity, became increasingly expensive in the year under review. In the first quarter of 2021, quotations at the Dutch Title Transfer Facility (TTF), Continental Europe's lead market, were still largely priced between €15 / MWh and €20 / MWh, but by the fourth quarter they intermittently exceeded levels far above €100. In 2021, the average spot price of €48 / MWh was more than five times as high as in 2020 (€9 / MWh). This drastic price hike for natural gas is partially attributable to increased demand for energy due to the global economic upturn. In addition, colder weather across large parts of Europe meant that more gas was needed for heating compared to 2020. Geopolitical tensions and uncertainty surrounding the approval of the Russian-German Nord Stream 2 gas pipeline contributed to the price increase. Due to the aforementioned factors, forward quotations rose considerably. The 2022 forward hit a record high of well above €100 / MWh in December. On average, it was quoted at €34 / MWh. By way of comparison, in the previous year the 2021 TTF forward cost €13 / MWh on average.

Increased demand from China boosts hard coal prices. Prices for hard coal used in power plants (steam coal) also rose notably in the year under review. Deliveries to ARA ports (ARA = Amsterdam, Rotterdam, Antwerp) including freight and insurance were settled for an average of US$122 / metric ton (€104) in 2021, as opposed to US$50 / metric ton the previous year. This notable rise can, in part, be traced back to increased demand from China, where the local economy recovered quickly from the economic fallout of the pandemic. The same trend was also reflected in the development of hard coal forward prices: in the year under review, the 2022 forward (API 2 Index) was quoted at an average of US$95 / metric ton (€81). This is US$37 more than was paid for the 2021 forward in 2020.

CO_2 emissions trading: More ambitious EU climate protection target pushes prices up. An increasingly important price factor for fossil fuel-fired power plants is the procurement of CO_2 emission allowances. An EU Allowance (EUA), entitling the holder to emit one metric ton of carbon dioxide, was traded at an average of €54 in 2021 – almost twice the price in 2020. This figure is based on contracts for delivery that mature in December of the following year. Once the EUA price curve had exceeded €30 in late 2020, there was only one way things could go, and that was up. As 2021 drew to a close, allowance prices were already closing in on the €80 figure. The considerable price hikes were primarily the result of the introduction of a stricter European greenhouse gas reduction target for 2030. To meet this goal, the EU needs to vastly decrease the number of emission allowances available to companies. Many market participants anticipated this, making early purchases of EUAs. The increase in energy consumption driven by the economy contributed to the rise in prices because it also drove up greenhouse gas emissions and demand for emission allowances.

As explained on page 36, the United Kingdom launched its own CO_2 emissions trading system when it left the EU. UK Allowances (UKAs) have been traded on the secondary market since the first auction in May 2021. In the seven and a half months to the end of the year, UKAs were quoted above EUAs. The average price during this time was £57 (€67).

Surge in fuel and emissions allowance prices impacts cost of electricity. The incredible rise in the price of fuel and emission allowances shaped the trajectory of our most important wholesale electricity markets in Europe. The low wind energy output, due to poor weather, and maintenance-related outages at French nuclear power plants also came to bear to some extent. In Germany, the average annual spot price for base-load electricity more than tripled compared to 2020, rising from €30 / MWh to €97 / MWh. The changes were on a similar scale in the United Kingdom and the Netherlands, where quotations rose from £35 / MWh to £118 / MWh (€138) and from €32 / MWh to €103 / MWh, respectively. Electricity forward markets also witnessed a drastic upward curve. An average of €89 / MWh was paid for the 2022 base-load forward in Germany and the Netherlands. In the preceding year, this figure stood at €40 in both countries. The price of the British one-year forward increased from £44 / MWh to £92 / MWh (€108).

Once-in-a-century snowstorm sees electricity spot prices in Texas hit record high. The North American electricity market is geographically divided into multiple sub-systems, each of which is governed by an independent system operator. The most important market region for RWE is Texas, where most of our wind farms in the USA are connected to the grid and the system operator is the Electric Reliability Council of Texas (ERCOT). Spot prices on the ERCOT market briefly peaked at US$9,000 / MWh in February 2021 due to supply shortages and regulatory interventions. This was due to an exceptionally harsh cold spell, which led to outages at several power plants. Electricity forward prices saw no long-term effects from this event. Last year, a one-year forward contract in the ERCOT market cost on average US$37 / MWh (€31), US$7 more than in 2020. Higher natural gas prices were decisive in this regard. The more moderate electricity price level compared to Europe can be explained by the fact that gas prices in the USA remain relatively low, despite the recent hike. In addition, Texan electricity producers do not need to purchase carbon emission allowances.

Higher margins on electricity forward markets. In order to mitigate the risk of short-term sales and price fluctuations, we sell most of our electricity forward, whilst also hedging the prices for necessary fuels and emission allowances. Our revenue for the period under review was thus influenced by the conditions of forward contracts for 2021, which were concluded in previous years. These forward sales are largely conducted with a lead time of up to three years for power production in our lignite and nuclear plants, which are mainly used to cover base-load needs. On average, we were able to achieve higher prices and margins from these assets for 2021 than for 2020. Sales of electricity from our gas-fired stations were subject to a shorter lead time. Margins realised from these transactions were higher than the previous year. A portion of our renewables portfolio is also subject to forward contracts.

We do, however, still sell some of the generated power at spot market prices valid at the time of sale. The margins we achieved for these transactions were higher than in 2020. Furthermore, price spikes on the spot market contributed to additional income from the short-term optimisation of our power plant dispatch.

The rise in the price of electricity will have a more notable impact on margins in 2022. This concerns generation assets that had not yet fully or had only partially sold their electricity forward when prices began to climb. European wind farms, in particular, where electricity revenue depends on market prices, now enjoy improved earnings forecasts. However, a portion of our conventional power plant portfolio also stands to benefit from the price trend.

2.4 Major events

In 2021, we showed just how committed we are to green growth. We secured the rights to build and operate offshore wind projects in the United Kingdom, Denmark, Poland and Germany with a capacity of up to 5 GW. Furthermore, we forged strong partnerships for joint wind and solar activities in new markets. In the hydrogen business, we formalised a partnership with Shell, which we expect to deliver substantial synergies. RWE's green transition strategy comprises the phaseout of coal-fired power. Here too, we took massive strides in 2021 by decommissioning our two remaining German hard coal-fired power stations and five lignite units. In this chapter, we present the main events that took place in 2021 and the beginning of 2022, focusing on those which are not outlined in more detail elsewhere in the review of operations.

Events in the fiscal year

RWE wins rights to develop new offshore wind power sites in the British North Sea. At an auction held in February 2021, RWE secured the rights to build wind turbines with a total capacity of 3,000 MW across two neighbouring locations in the UK North Sea. In return, we will pay an annual option fee of £82,552 / MW (plus inflation adjustment) until we make a final investment decision. The area is situated on a sandbank in shallow waters known as Dogger Bank. The Sofia wind farm is also being built in the vicinity. After the auction, an official plan-level Habitats Regulations Assessment (HRA) was initiated, which is expected to be finalised in 2022. Only after this is completed will the option fee period commence. In accordance with applicable regulations, however, we had to pay an annual fee in advance in 2021. As soon as all permits for the new wind farms have been obtained, we will participate in an auction for a subsidy contract, after which we will make a final investment decision. Then the option fee will be replaced by a much lower lease payment. If connected to the grid in time, the wind farms could be commissioned as early as the end of this decade.

The Crown Estate's tender process allocated development rights to a total of six sites on which offshore wind farms with a total capacity of up to 7,980 MW can be built. A number of the participants, which also secured option rights, submitted significantly higher bids than us. RWE will pay the lowest average annual option fee per megawatt of all successful bidders.

Danish Energy Agency awards large offshore wind project to RWE. In Denmark, we have been granted the rights to build and operate the Thor offshore wind project in the North Sea. We had taken part in an auction along with five other bidders: all participants submitted minimum bids of DKK 0.1 / MWh. On 1 December 2021, we won the auction and shortly afterwards signed a concession agreement with the Danish Energy Agency, which entitles us to build the wind farm and operate it for 30 years. Thor will be constructed about 20 kilometres off the coast of west Denmark and will be the country's largest offshore wind farm to date, with a capacity of approximately 1,000 MW. It is scheduled for full commissioning in 2027. Due to our minimum bid, we will not receive state subsidies for the electricity generated by Thor. In the early years, we will have to transfer our proceeds to the Danish government until they total DKK 2.8 billion (€377 million) plus annual inflation. We expect our investment for the wind farm and the grid connection to amount to €2.1 billion. In Denmark, RWE already operates the Rødsand 2 offshore wind farm, which is located south of the island of Lolland and has an installed capacity of 207 MW.

RWE secures two offshore wind farm sites in the German North Sea. In Germany too, we laid the groundwork for new offshore wind farms. Last year, we secured the usage rights to two sites in the German North Sea. We were allocated one of the sites, officially referred to as N-3.7, during an auction held by the German Network Agency in September 2021. This confers us the right to build a wind farm on site with a capacity of 225 MW. To give us the best chance of winning the auction, we submitted a zero-cent bid, which means the electricity generated by the wind farm is not subject to a minimum price guaranteed by the state. We were granted usage rights to the second site, referred to as N-3.8, following the September auction, allowing us to build a wind farm with an installed capacity of 433 MW. Originally, the winning bid had been placed by French energy group EDF, but it had to pass on the usage rights to a joint venture between Northland Power and RWE. This is because we had pre-developed the site together with our Canadian partner and therefore had a step-in right. Now we must deliver the project at the conditions in EDF's winning bid; the company submitted a zero-cent bid.

Support secured for offshore wind project in Poland. We have also made good progress in relation to our first wind energy project in the Polish Baltic Sea. In April 2021, the government in Warsaw made a preliminary commitment to subsidise our F. E. W. Baltic II project. It is envisaged that the wind farm be built on the Słupsk sandbank and have a capacity of 350 MW. It was not until January 2021 that the Polish government established the legal framework for subsidising offshore wind power. We were granted environmental clearance for F. E. W. Baltic II in December and will receive the final subsidy approval in 2022, at which time the regulator will also decide on the level of the funding. The support will be granted in the form of two-sided contracts for difference which guarantee that we receive a fixed price per megawatt hour for the generation volume of 100,000 full load hours. If the realised market price is lower than this amount, the state pays the difference. If it is higher, the operators are obliged to make a payment. The subsidy period is limited to 25 years.

RWE becomes majority shareholder in Rampion offshore wind farm. As of 1 April 2021, we acquired a 20 % interest in the UK Rampion offshore wind farm from E.ON. The purchase price was paid in December 2020. As a result of the transaction, we now own 50.1 % of the 400 MW wind farm and can consolidate it fully. The other owners are a consortium led by Macquarie (25 %) and Canadian energy group Enbridge (24.9 %). Rampion is located in the English Channel off the coast of Sussex and has been operating commercially since 2018.

TCP investor consortium acquires Rampion's grid connection. In November, investor consortium Transmission Capital Partners (TCP) purchased Rampion's grid connection, for which it paid a total of £279.5 million. The transaction included the offshore and onshore export cables as well as the substations at sea and on land. The sale was a regulatory requirement. In the United Kingdom, construction of offshore wind farms and the associated grid connection is managed under one umbrella. The grid connection must subsequently be sold to an independent third party under the supervision of UK regulator Ofgem.

Go-ahead for construction of Sofia wind farm in the North Sea. In the spring of 2021, RWE made the final investment decision to build the Sofia wind farm in the UK North Sea, one of the largest offshore wind projects in the world. We hold a 100 % stake in the project. Sofia will be located almost 200 kilometres off the coast of North East England. It will consist of 100 turbines with a total installed capacity of 1,400 MW, and will be capable of supplying green electricity to approximately 1.2 million homes in the UK. June 2021 saw the start of onshore construction, with offshore work scheduled to begin in 2023. According to current plans, Sofia is set to take its full capacity online by 2026. We will be contractually remunerated for electricity generated by the wind farm in the amount of £39.65 / MWh. This amount is based on the 2012 price level and will be subject to an upward adjustment for inflation. We anticipate investing about £3 billion in Sofia. This includes expenditure for the grid connection, which we will sell on completion.

Alliances to expand offshore wind forged. We have joined forces with foreign partners to improve our growth opportunities in the offshore wind business. The following is a brief overview of some of the most recent collaborations.

- In May 2021, we agreed with UK-based National Grid Ventures that we would jointly participate in the New York Bight seabed lease auctions. In February 2022, we secured a site in a tender process with the potential for about 3 GW in generation capacity (see page 45).
- Also in May, we signed an agreement with Equinor and Hydro to develop a wind energy project in the Sørlige Nordsjø II area in the Norwegian North Sea. The site neighbours Danish waters and has excellent wind conditions. The favourable location should allow us to sell electricity both within and outside of Norway.
- In September, we forged a further alliance with Norwegian partners. Together with NTE and Havfram, we plan to participate in auctions for floating wind farms. The Norwegian Ministry of Petroleum and Energy has earmarked an area known as Utsira Nord off the country's southern coast for this purpose. The site can accommodate wind turbines with a total capacity of up to 1.5 GW.
- Floating wind farms are also the focus of a partnership in South Korea, which we finalised with the port city of Ulsan in November. Together with our local partner, our objective is to implement projects to create up to 1.5 GW in generation capacity off the coast of the country. South Korea is aiming for 12 GW in offshore wind capacity by 2030 and wants to be climate neutral by 2050.
- In February 2022 we joined forces with Tata Power, India's largest power generator, to develop offshore wind projects along the country's 7,600-kilometre coastline. India has also set ambitious renewables expansion targets, and aims to have 30 GW in offshore capacity by 2030.

Three major US wind farms start commercial operation. We completed three onshore wind projects in the USA in 2021. In the spring, Scioto Ridge went online commercially after about two-and-a-half years of construction. It is our first wind farm in the state of Ohio and has a total capacity of 250 MW. In the summer, we completed two further large-scale wind farms: West Raymond in Texas and Cassadaga in the US state of New York. The wind farms have capacities of 240 MW and 125 MW, respectively. A total of more than €800 million was invested in the three projects.

Stakes in four Texan wind farms sold. To increase our financial strength and better balance our generation portfolio, we sold shares in four Texan wind farms: Stella (201 MW), Cranell (220 MW), East Raymond (200 MW), and West Raymond, which was mentioned earlier. The buyers are a subsidiary of Canadian energy utility Algonquin Power & Utilities and UK investor Greencoat, which took an interest of 51 % and 24 % in the wind farms. RWE is therefore only a minority shareholder but is staying on as the operator of these assets. We no longer fully consolidate them in our financial reporting and instead account for them using the equity method. The sale was agreed in December 2020 and was completed in January (Stella / Cranell / East Raymond) and August 2021 (West Raymond).

Australian Limondale solar farm is officially connected to the grid. In autumn 2021, our Limondale solar farm went online in the Australian state of New South Wales. With a capacity of 249 MW, the photovoltaic system is one of the largest in the country. It consists of approximately 872,000 solar panels, spread over a 900-hectare site. Construction started in 2018. Our capital expenditure on Limondale amounted to approximately €330 million.

RWE sets the stage to expand solar power in Greece. In October, we set up a joint venture with energy group Public Power Corporation (PPC) to realise solar projects in Greece. RWE and PPC own 51 % and 49 % of the new company, respectively. Our partner is the country's largest power utility and will contribute photovoltaic projects with up to 940 MW of capacity to the joint venture. RWE will bring a project pipeline of a similar size to the table. The undertakings are in various stages of development. Based on current plans, the first farms will be commissioned in 2023.

Belectric Group solar services business sold. In December, the Dutch energy service provider Elevion acquired parts of the Belectric Group from RWE. Assets affected by the transaction were companies in Europe and Israel which provide services relating to the construction, operation and maintenance of solar farms. Elevion is part of ČEZ, the Czech Republic's largest energy utility. Belectric's battery business remains within the RWE Group. It was transferred to RWE Battery Solutions in 2020.

RWE sells small hydropower plants to KELAG. Austrian energy utility KELAG acquired twelve French and seven Portuguese hydro assets from us, which have a total installed capacity of 62 MW (RWE's pro-rata share). We also sold a number of small wind turbines in Portugal with a combined capacity of 3 MW to KELAG. A corresponding agreement was reached at the end of 2020. We transferred the French plants in April 2021, and the Portuguese assets followed in September. KELAG is a leading hydropower producer. We currently hold a 37.9 % stake in the company.

Green light for the construction of two mega batteries in Germany. We will contribute to safeguarding security of supply in the future with two high-capacity batteries at our power plant sites in Werne and Lingen. This decision was taken in June. We expect the battery storage units to have outputs of 72 MW (Werne) and 45 MW (Lingen) as well as storage capacities of 79 MWh and 49 MWh, respectively. They are due to go online at the end of 2022. We intend to invest some €50 million in total.

Partnership with Shell on hydrogen projects. In November, we reached an agreement with Shell to intensify our collaborative efforts to build a European hydrogen economy. Working together with the British energy group, we will develop projects to produce, use and sell hydrogen. RWE and Shell are already partners in the trailblazing hydrogen projects AquaVentus in Germany (see page 32) and NorthH2 in the Netherlands. RWE and Shell intend to take the next step and initiate large-scale projects in the United Kingdom for the production of green hydrogen using offshore wind energy. The partnership also encompasses measures to decarbonise gas and biomass-fired power stations within the RWE Group. To this end, we will explore the following alternatives: carbon capture and storage as well as retrofitting stations to use environmentally friendly hydrogen.

Success in British capacity market auction. In March 2021, RWE assets totalling 6,544 MW in secured generation capacity – primarily gas-fired power stations – qualified for a payment at a capacity market auction in Great Britain. The bidding process related to the period from 1 October 2024 to 30 September 2025. Stations with a total capacity of 40.8 GW won a contract. These assets will be remunerated for being online and contributing to electricity supply in the aforementioned period. The auction cleared at £18.00 / kW (plus inflation adjustment).

Once-in-a-century Texan cold snap weighs heavily on earnings. In February 2021, an extraordinary cold front in parts of the USA curtailed energy supply substantially (see page 39). Winter storms and freezing rain forced RWE wind farms to go offline for several days. We had sold forward a portion of the generation of these assets and therefore had to conduct short-term spot purchases in order to meet our supply obligations. Due to the tight supply situation and regulatory price interventions, we had to pay up to US$9,000 / MWh for these electricity purchases. This reduced the adjusted EBITDA in the Onshore Wind / Solar segment by approximately €400 million.

Group sites affected by catastrophic floods in western Germany. In mid-July, severe weather events in parts of Germany led to disastrous floods resulting in a large number of fatalities and substantial damage to property. Rhineland-Palatinate and the south of North Rhine-Westphalia were the most devastated regions. The extreme weather also affected our company and its employees. In the Rhenish lignite mining area, water ingress at the Inden opencast mine brought production to a temporary halt. We are deeply saddened that an employee of a partner company was swept away in the floods and could not be saved despite a major rescue operation. In Erftstadt-Blessem, located near Cologne, the Erft river burst its banks, flooding a gravel pit operated by a subsidiary of RWE Power. Nearly all RWE-operated run-of-river power plants in the Eifel and on the Mosel, Saar and Ruhr rivers were forced to interrupt operations due to the floodwaters. Within a few days, however, these stations and the Inden mines were available once more. Our financial burdens resulting from the disastrous flooding will total a figure in the low two-digit million euro range. RWE provided about €2 million to an emergency relief programme, one quarter of which was donated by our staff.

RWE stops generating electricity from hard coal in Germany. In the middle of last year, our last German hard coal units, Westfalen E at Hamm (764 MW) and Ibbenbüren B (794 MW), were closed for good. At the end of 2020, we successfully participated in the first nationwide shutdown auction for hard coal-fired power plants with these assets. We received €216 million in compensation for their early decommissioning. In the first half of 2021, we were forbidden from selling electricity generated by these assets, but were obligated to keep them on standby to ensure security of supply. During this period, Westfalen E went online 13 times at the request of the transmission system operator. The station is envisaged to continue to contribute to security of supply, albeit without using hard coal. As the German Network Agency has classified the power plant as system-relevant, we will convert the generator to a rotary phase shifter to produce reactive power to maintain voltage levels, an important element in stabilising the electricity grid. Conversely, Ibbenbüren B has not been deemed to be system-relevant and will be fully decommissioned.

Further lignite-fired power stations taken offline. During the year under review we closed five 300 MW power plant units in the Rhenish lignite mining region. To comply with the German Coal Phaseout Act, we took Neurath B (294 MW), Niederaussem C (295 MW) and Weisweiler E (321 MW) offline at the end of December. The Frimmersdorf lignite power plant was shut down three months earlier. The station's last two units P (284 MW) and Q (278 MW) had been placed on security stand-by on 1 October 2017. This meant that they were forbidden by law from participating in the market, but had to remain available as a safeguard to ensure security of supply when necessary. They were shut down for good on expiry of the security stand-by period. Most employees affected by the lignite exit will retire. Younger staff members will transfer to other areas within the Group or will receive severance packages.

Gundremmingen C nuclear power station stops operating. Also at the end of 2021, we took Unit C of the Gundremmingen nuclear power plant offline. The plant was commissioned in 1984 and had a net installed capacity of 1,288 MW. Its closure and current dismantling are a result of the roadmap dictated by the German nuclear phaseout. We took Unit B of the Gundremmingen nuclear power station offline at the end of 2017. Now electricity generation at the site has stopped entirely. About 540 people were working there as of 31 December 2021. This number will likely drop to about 440 by the end of 2022. We will implement further socially acceptable redundancies in the years thereafter.

Events after the close of the fiscal year

RWE enters US offshore wind market. At the end of February 2022, we were successful in an auction of seabed leases for offshore wind sites in the New York Bight. A joint venture between RWE and National Grid Ventures secured an area for US$1.1 billion. About 3 GW of generation capacity can be built at the site, which would be capable of producing enough electricity to power 1.1 million US homes. The auction included six lease sites, with bidders only being allowed to secure one each. Every successful bid conferred the right to develop a site and participate in upcoming offtake auctions in the states of New York and New Jersey. If the project progresses as planned, our offshore wind farm in the New York Bight will be commissioned before the end of the decade.

Wind joint venture with Northland Power launched. In January 2022, RWE and Northland Power formed a joint venture for the development of wind energy projects in the German North Sea. We expect this partnership to deliver substantial synergies, resulting in cost savings in the development, construction and operation of the assets. RWE owns 51 % and our Canadian partner owns 49 % of the joint venture, which encompasses three offshore wind projects aiming to develop a total capacity of 1.3 GW. The sites of the future wind farms are located north of the island of Juist. Before forging the joint venture, we had already worked with Northland Power on two of the three projects. One project is focused on a 433 MW wind farm on a site officially called N-3.8, which we secured via a step-in right following an invitation to tender in 2021 (see page 41). The other initiative involved the construction and operation of a 420 MW wind farm, which we hope to build on the N-3.5 site. We also have a step-in right for this area, but have not exercised it yet. RWE initially only held a 15 % share of both projects and had originally developed the third joint venture project alone. It is centred around a 480 MW wind farm at the N-3.6 site, for which we also hold a step-in right which has not yet been made use of. The auctions for the sites N-3.5 and N-3.6 should be held in 2023. In the event that other companies are successful, we can exercise our step-in rights.

RWE once again successful in British capacity market auctions. Another auction, relating to the delivery period from 1 October 2025 to 30 September 2026, was held for the British capacity market on 22 February. We secured a payment for all participating RWE power stations, including two small new-builds. Altogether, these assets have a secured capacity of 6,647 MW. At £30.59 / kW per annum (plus inflation adjustment). A total of 42.4 GW in generation capacity qualified for a payment at the auction.

Huge uncertainty after Russia attacks Ukraine. Russian troops marched into Ukraine at the end of February. As an invasion under international law, it prompted outrage and consternation around the globe. Many countries including the USA, EU member states and the United Kingdom imposed economic sanctions on Russia. Uncertainty concerning commodity deliveries from Russia to Europe has caused a significant increase in gas and electricity trading quotations. In some European countries, including Germany, governments are working on measures to reduce dependency on Russian oil and gas imports. When this review of operations was prepared in early March 2022, it was impossible to predict the development of the Ukraine conflict or its consequences. Although RWE does not have business activities in Russia or Ukraine, further escalation of the conflict and discontinuation of supply relationships with Russian companies could have notable effects on our assets, liabilities, financial position and profit or loss. More detailed information can be found in the chapter entitled 'Development of risks and opportunities', which starts on page 70.

2.5 Commentary on reporting

In our financial reporting, the RWE Group is broken down into five segments, which we present in detail in this chapter. Renewable energy, gas-fired power plants, energy storage, our hydrogen business and energy trading are distributed among the first four segments. They play a key role in the energy transition and therefore make up our core business. The fifth segment covers power generation from coal and nuclear energy, which will increasingly lose importance due to legally mandated phaseout roadmaps.

Group structure features five segments. We distinguish between five segments when reporting our business performance. The first four form our core business. Our segments are defined as follows:

- **Offshore Wind:** We present our business relating to offshore wind here. It is overseen by our Group company RWE Renewables.
- **Onshore Wind / Solar:** This is the segment in which we pool our onshore wind and solar business as well as parts of our battery storage activities. Here again, responsibility lies with RWE Renewables.
- **Hydro / Biomass / Gas:** Generation from our run-of-river, pumped storage, biomass and gas power stations is pooled here. The segment also includes the Dutch Amer 9 and Eemshaven power plants, which run on biomass and hard coal, as well as individual battery storage systems. The project management and engineering consulting company RWE Technology International and our 37.9 % stake in Austrian energy utility KELAG are also allocated to this segment. The activities are overseen by RWE Generation. In addition, since 2021, this management company has been responsible for designing and implementing our hydrogen strategy.
- **Supply & Trading:** Proprietary trading of energy commodities is at the core of this segment and is overseen by RWE Supply & Trading. The company also acts as an intermediary for gas, supplies key accounts with energy, and undertakes a number of additional trading-related activities. Our German and Czech gas storage facilities also form part of this segment.
- **Coal / Nuclear:** This is where we report on the activities which are not part of our core business as their importance is declining due to the course set by the energy policy in our domestic market, Germany. First and foremost, these consist of our German electricity generation from coal and nuclear fuel as well as our lignite production in the Rhenish mining region to the west of Cologne. This is also where we report our investments in Dutch nuclear power plant operator EPZ (30 %) and Germany-based URANIT (50 %), which holds a 33 % stake in uranium enrichment specialist Urenco. Most of the aforementioned activities and investments are overseen by RWE Power. RWE Generation is responsible for our German hard coal-fired power plants; we shut down the last two stations in mid-2021.

Group companies with cross-segment tasks, such as the Group holding company RWE AG, are stated as part of the core business under the 'other, consolidation' line item. This also applies to our stakes of 25.1 % in German transmission system operator Amprion and 15 % in E.ON. However, the dividends we receive from E.ON are recognised in the financial result. Furthermore, 'other, consolidation' contains consolidation effects.

Changed recognition of tax benefits for renewables in the USA. At the start of fiscal 2021, we changed the way in which we account for tax benefits received for US wind and solar projects. Renewable energy is subsidised largely via tax credits in the USA. Furthermore, plant operators can benefit from accelerated depreciation, referred to as tax benefits. Until 2020, they were recognised in taxes on income, whereas the benefits of tax credits were considered in other operating income. For the sake of consistency, we have also been recognising tax benefits since 2021. It has a positive impact on adjusted EBITDA. To ensure comparability, we restated the prior-year figures. More information can be found in the Notes on pages 108 et seq.

Forward-looking statements. This report contains forward-looking statements regarding the future development of the RWE Group and its companies as well as economic and political developments. These statements are assessments that we have made based on information available to us at the time this document was prepared. Despite this, actual developments can deviate from the prognoses, for instance if underlying assumptions do not materialise or unforeseen risks arise. Therefore, we cannot assume responsibility for the correctness of forward-looking statements.

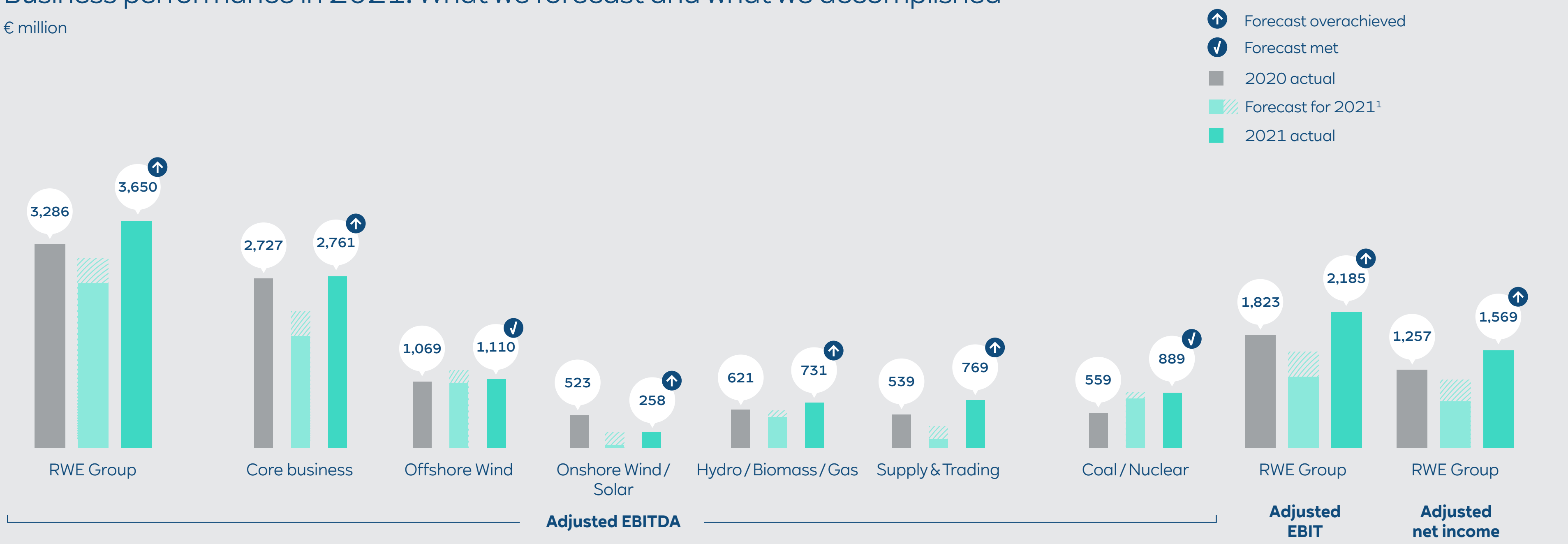
References. The contents of web pages and publications to which we refer in this chapter are not part of the Review of operations and merely provide additional information.

2.6 Business performance

Fiscal 2021 was a very successful year for RWE, despite getting off to a lacklustre start. In February, extreme weather in Texas led to outages at wind farms and a significant financial loss due to power purchases. However, we more than offset the earnings shortfalls as the year progressed, thanks to an exceptional energy trading performance. Improved generation margins provided additional income. This enabled us to increase the Group's adjusted EBITDA by 11 % compared to the previous year. We clearly exceeded the earnings forecast for 2021 which we published after the events in Texas.

Business performance in 2021: What we forecast and what we accomplished

€ million



1 See pages 67 et seq. of the 2020 Annual Report. The hatched portion reflects the forecast range.

Power generation[1]	Renewables		Pumped storage, batteries		Gas		Lignite		Hard coal		Nuclear		Total[2]	
GWh	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020
Offshore Wind	7,564	7,009	–	–	–	–	–	–	–	–	–	–	7,564	7,009
Onshore Wind / Solar	16,709	16,762	–	–	–	–	–	–	–	–	–	–	16,709	16,762
Hydro / Biomass / Gas	7,899	5,832	41	80	52,257	46,894	–	–	6,952	3,584	–	–	67,321	56,600
of which:														
Germany	1,645	1,546	41	80	5,988	8,576	–	–	–	–	–	–	7,846	10,412
United Kingdom	493	573[3]	–	–	35,263	25,138	–	–	–	–	–	–	35,756	25,711
Netherlands	5,725	3,679	–	–	6,647	8,899	–	–	6,952	3,584	–	–	19,324	16,162
Turkey	–	–	–	–	4,359	4,281	–	–	–	–	–	–	4,359	4,281
Coal / Nuclear	18	19	–	–	147	726	45,916	36,649	188	2,549	22,704	20,682	69,179	60,833
RWE Group	**32,190**	**29,622**	**41**	**80**	**52,404**	**47,620**	**45,916**	**36,649**	**7,140**	**6,133**	**22,704**	**20,682**	**160,773**	**141,204**

1 No longer considers power purchases from generation assets in which RWE does not own the majority, but which we have long-term usage rights to. Prior-year figures adjusted accordingly.
2 Including production volumes not attributable to any of the energy sources mentioned (e.g. electricity from waste-to-energy plants).
3 Adjusted figure.

Electricity production 14 % up on prior year. In the fiscal year that just came to a close, the RWE Group produced 160,773 GWh of electricity. Deviating from the former recognition method, this figure does not include power purchases from generation assets in which we do not own the majority, even if we have long-term usage rights to them. Prior-year figures including the purchases have been adjusted accordingly. Our electricity generation grew by 14 % compared to 2020. The most significant increases were recorded by our German lignite power stations, which benefited from favourable market conditions. Contributing factors were the rise in electricity consumption compared to the previous year thanks to the economic recovery, as well as the weather-induced drop in wind energy fed into the system. For these reasons and despite a significant hike in fuel costs, our UK gas-fired power stations were also utilised more than in 2020, whereas generation from gas was down in Germany and the Netherlands. Our Dutch power plants Amer 9 and Eemshaven, which run on biomass and hard coal, stepped up production considerably. The rise at Eemshaven was due to the station's return to nearly full availability after fire damage in the preceding year. Our German nuclear power stations also posted a substantial rise, because there were fewer maintenance outages. A counteracting effect was felt from the German coal phaseout. At the end of 2020, we ceased commercial operation of the Ibbenbüren B (794 MW) and Westfalen E (764 MW) hard coal-fired power plants and shut down the Niederaussem D (297 MW) lignite unit.

Power generation from renewables[1]	Offshore Wind		Onshore Wind		Solar		Hydro		Biomass		Total	
GWh	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020
Germany	1,811	2,082	939	1,168	3	3	1,645	1,483	–	4	4,398	4,740
United Kingdom	5,557	4,690	1,719	2,134	–	–	189	231[2]	304	342	7,769	7,397
Netherlands	–	–	727	768	17	7	27	14	5,697	3,665	6,468	4,454
Poland	–	–	1,245	997	1	1	–	–	–	–	1,246	998
Spain	–	–	934	890	96	51	29	29	–	–	1,059	970
Italy	–	–	1,008	882	–	–	–	–	–	–	1,008	882
Sweden	196	237	293	339	–	–	–	–	–	–	489	576
USA	–	–	8,961	9,059	354	271	–	–	–	–	9,315	9,330
Australia	–	–	–	–	245	65	–	–	–	–	245	65
Rest of the world	–	–	41	30	81	34	71	146	–	–	193	210
RWE Group	**7,564**	**7,009**	**15,867**	**16,267**	**797**	**432**	**1,961**	**1,903**	**6,001**	**4,011**	**32,190**	**29,622**

1 No longer considers power purchases from generation assets in which RWE does not own the majority, but which we have long-term usage rights to. Prior-year figures adjusted accordingly.
2 Adjusted figure.

Production from our wind farms was roughly on a par year on year. A positive effect was felt from the increase in our stake in the Rampion offshore wind farm (400 MW) in the UK as of 1 April 2021 from 30.1 % to 50.1 % and the full consolidation of Rampion since then. Furthermore, we commissioned the Scioto Ridge (250 MW) and Cassadaga (125 MW) wind farms in the USA and started feeding electricity from the Triton Knoll offshore wind farm (857 MW) in the UK into the grid. Opposing effects were felt from lower wind speeds and the sale of majority stakes in wind farms in Texas (see page 42).

In addition to our in-house generation, we procure electricity from suppliers outside of the Group. In the year being reviewed, these purchases totalled 48,131 GWh. In-house production and power purchases combined for 208,904 GWh (previous year: 200,715 GWh).

Lower generation capacity due to coal power plant closures. At the end of 2021, we had an installed power production capacity of 36.1 GW. This figure does not include our three German lignite units, which are in legally mandated security standby and will be shut down for good in 2022 / 2023. Certain assets, where we are not the majority owner and which generate electricity that we can completely or partially use on the basis of long-term usage agreements, are also disregarded. In the past, we included the capacities of these stations in the figures if we were entitled to the associated generation. Prior-year figures were adjusted.

Our generation capacity declined by 1.6 GW compared to 2020. In line with the German coal phaseout, we decommissioned the Niederaussem C (295 MW), Neurath B (294 MW) and Weisweiler E (321 MW) lignite units as of 31 December 2021. The legal lifetime of the Gundremmingen C (1,288 MW) nuclear power station ended on the same day. By contrast, we increased production capacity from renewables by 0.6 GW in part as a result of our fully consolidating the Rampion offshore wind farm for the first time. Furthermore, we completed the Limondale (249 MW) solar farm in Australia as well as the Scioto Ridge and Cassadaga wind farms in the USA, whereas the sale of majority stakes in the Texan wind farms Stella (201 MW), Cranell (220 MW) and East Raymond (200 MW) had a counteracting effect.

In terms of generation capacity, gas is our main energy source, accounting for a share of 40 % at the close of 2021. Renewables take second place, with a share of 30 %. Our biggest source of renewable energy is wind (8.9 GW), followed by biomass (0.8 GW), hydro (0.5 GW) and solar (0.5 GW).

The geographic focus of our generation business is Germany, where 42 % of our installed capacity is located. The United Kingdom and the Netherlands follow, accounting for shares of 27 % and 14 %, respectively. The USA comes in fourth: about half of our onshore wind capacity is situated there, a large portion of which is in Texas.

Installed capacity[1]	Renewables		Pumped storage, batteries		Gas		Lignite		Hard coal		Nuclear		Total[2]	
As of 31 December, MW	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020
Offshore Wind	2,318	1,918	–	–	–	–	–	–	–	–	–	–	2,318	1,918
Onshore Wind / Solar	7,082	6,858	28	20	–	–	–	–	–	–	–	–	7,110	6,877
Hydro / Biomass / Gas	1,285	1,319	168	172	13,901	13,901	–	–	1,469	1,474	–	–	17,115	17,158
of which:														
Germany	393	389	168	172	3,807	3,807	–	–	–	–	–	–	4,407	4,407
United Kingdom	139	137	–	–	6,984	6,984	–	–	–	–	–	–	7,376	7,374
Netherlands / Belgium	753	748	–	–	2,323	2,323	–	–	1,469	1,474	–	–	4,545	4,545
Turkey	–	–	–	–	787	787	–	–	–	–	–	–	787	787
Coal / Nuclear	12	7	–	–	400	400	7,638	8,548	–	–	1,482	2,770	9,559	11,752
RWE Group[3]	**10,697**	**10,102**	**199**	**194**	**14,301**	**14,301**	**7,638**	**8,548**	**1,469**	**1,474**	**1,482**	**2,770**	**36,104**	**37,708**

1 No longer considers power plants taken offline as of 31 December. Assets scheduled for decommissioning are excluded from the capacity overview once they stop producing electricity. They include our lignite units in legally mandated security standby. No longer considers generation assets in which RWE does not own the majority, but which we have long-term usage rights to. Prior-year figures adjusted accordingly. Commercial rounding can result in inaccurate sum totals.
2 Including production volumes not attributable to any of the energy sources mentioned (e.g. electricity from waste-to-energy plants).
3 Including insignificant capacity at RWE Supply & Trading.

Installed capacity based on renewables[1]	Offshore wind		Onshore wind		Solar		Hydro		Biomass		Total	
As of 31 December, MW	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020
Germany	598	598	637	666	3	3	393	389	–	–	1,630	1,655
United Kingdom	1,672	1,272	803	707	–	–	84	82	55	55	2,615	2,117
Netherlands	–	–	331	268	17	–	11	11	742	737	1,100	1,016
Poland	–	–	425	385	1	1	–	–	–	–	426	386
Spain	–	–	447	447	45	45	12	12	–	–	504	504
Italy	–	–	488	475	–	–	–	–	–	–	488	475
Sweden	48	48	116	116	–	–	–	–	–	–	164	164
USA	–	–	3,313	3,543	125	125	–	–	–	–	3,438	3,668
Australia	–	–	–	–	249	–	–	–	–	–	249	–
Rest of the world	–	–	36	10	47	47	–	61	–	–	83	118
RWE Group	**2,318**	**1,918**	**6,596**	**6,616**	**486**	**220**	**500**	**556**	**797**	**792**	**10,697**	**10,102**

1 No longer considers power purchases from generation assets in which RWE does not own the majority, but which we have long-term usage rights to. Prior-year figures adjusted accordingly. Commercial rounding can result in inaccurate sum totals.

CO_2 emissions rise due to low wind speeds. Last year, our power stations emitted 80.9 million metric tons of carbon dioxide, 13.9 million metric tons more than in 2020. This represents the first increase after eight years of emissions reductions totalling 62 %, and despite the fact that we closed further coal power plants. In 2021, a series of factors drove up usage of our lignite-fired power stations: besides a recovery of demand for electricity, lower generation volumes from wind farms also played a part. In addition, gas-fired power plants were less competitive, due to soaring fuel costs. We expect to return back to our ambitious emission reduction path in 2022.

Our specific emissions, i.e. the amount of carbon dioxide emitted per megawatt hour of electricity generated, amounted to 0.50 metric tons in the fiscal year that just came to a close. The previous year's figure stood at 0.47 metric tons.

CO_2 emissions of our power stations[1] Million metric tons	2021	2020	+/–
Hydro / Biomass / Gas	25.0	20.3	4.7
of which:			
Germany	2.6	3.5	-0.9
United Kingdom	12.8	9.1	3.7
Netherlands	8.0	6.1	1.9
Turkey	1.6	1.6	–
Coal / Nuclear	55.9	46.7	9.2
RWE Group	**80.9**	**67.0**	**13.9**

1 No longer considers CO_2 emissions from generation assets in which RWE does not own the majority, but which we have long-term usage rights to. Prior-year figures adjusted accordingly.

62.6 million metric tons of lignite produced. Our generation companies procure the fuel they need either directly on the market or via RWE Supply & Trading, except for lignite, which we source from proprietary opencast mines. In our Rhenish mining area west of Cologne, we produced 62.6 million metric tons of lignite last year. This was 11.2 million metric tons more than in the preceding year, owing to the higher utilisation of our power plants. We used the lion's share, or 53.2 million metric tons, of lignite to generate electricity. The remainder was used to manufacture refined products (e.g. lignite powder, hearth furnace coke and briquettes) and, to a limited extent, to generate process steam and district heat.

Electricity and gas sales 4 % and 25 % higher year on year. Last year, we sold 203,101 GWh of electricity and 45,721 GWh of gas. These transactions were largely carried out by the Supply & Trading segment. We sold 4 % more of our main product, electricity. This growth can be traced back to the rise in generation from our power stations, which we usually sell externally via our Group company RWE Supply & Trading. Gas deliveries were up 25 %. One contributing factor was that RWE Supply & Trading won new key accounts, most notably municipal utilities. In addition, existing customers increased their gas purchases from us.

External revenue 79 % up on 2020. Revenue from external customers (excluding natural gas tax and electricity tax) totalled €24,526 million in 2021. This represents a 79 % increase over the previous year. Electricity revenue grew by 75 % to €20,476 million, primarily due to the steep rise in the price of electricity last year. Price effects were also the main reason why our gas revenue quadrupled to €2,142 million. Additional information on the development of commodity quotations can be found on pages 38 et seq.

One key performance indicator that is of particular interest to Sustainability investors is the portion of our revenue accounted for by coal-fired generation and other coal products. In the fiscal year that just ended, this share was 22 % (previous year: 23 %).

External revenue € million	2021	2020	+/–
Offshore Wind	688	332	356
Onshore Wind / Solar	2,324	1,855	469
Hydro / Biomass / Gas	1,315	1,056	259
Supply & Trading	19,296	9,597	9,699
Other	4	9	-5
Core business	**23,627**	**12,849**	**10,778**
Coal / Nuclear	899	839	60
RWE Group (excluding natural gas tax / electricity tax)	**24,526**	**13,688**	**10,838**
Natural gas tax / electricity tax	235	208	27
RWE Group	**24,761**	**13,896**	**10,865**

External revenue by product € million	2021	2020	+/–
Electricity revenue	**20,476**	**11,701**	**8,775**
of which:			
Offshore Wind	688	332	356
Onshore Wind / Solar	2,107	1,676	431
Hydro / Biomass / Gas	877	684	193
Supply & Trading	16,540	8,775	7,765
Core business	**20,212**	**11,468**	**8,744**
Coal / Nuclear	264	233	31
Gas revenue	**2,142**	**534**	**1,608**
of which: Supply & Trading	2,142	529	1,613
Other revenue	**1,908**	**1,453**	**455**
RWE Group (excluding natural gas tax / electricity tax)	**24,526**	**13,688**	**10,838**

Adjusted EBITDA[1] € million	2021	2020	+/–
Offshore Wind	1,110	1,069	41
Onshore Wind / Solar	258	523	-265
Hydro / Biomass / Gas	731	621	110
Supply & Trading	769	539	230
Other, consolidation	-107	-25	-82
Core business	**2,761**	**2,727**	**34**
Coal / Nuclear	889	559	330
RWE Group	**3,650**	**3,286**	**364**

1 Some prior-year figures restated due to a change in the recognition of tax benefits to subsidise renewable energy in the USA (see commentary on page 47).

Adjusted EBITDA of €3,650 million clearly exceeds expectations. Our adjusted earnings before interest, taxes, depreciation and amortisation (adjusted EBITDA) amounted to €3,650 million. This is far above our March 2021 forecast. The outlook we published on pages 67 et seq. of the 2020 Annual Report envisaged a range of €2,650 million to €3,050 million. Adjusted EBITDA from our core business was also significantly better than originally expected, totalling €2,761 million. We had anticipated a figure between €1,800 million and €2,200 million. The fact that we easily exceeded our forecast was predominantly thanks to an outstanding energy trading performance. We also closed the fiscal year above the forecast ranges in the Onshore Wind / Solar and Hydro / Biomass / Gas segments.

Our adjusted EBITDA was 11 % up on the prior year. In addition to the exceptional trading performance, improved margins of our lignite and nuclear power stations came to bear in particular. This was contrasted by significant charges in our US wind energy business. As set out on page 43, in early 2021, the worst cold snap in a century in Texas led to unscheduled plant outages, forcing us to fulfil existing electricity supply commitments with expensive power purchases on the market.

The following developments were observed in the segments:

- **Offshore Wind:** Adjusted EBITDA posted here amounted to €1,110 million. We had forecast a range of €1,050 million to €1,250 million. We recorded a gain of 4 % compared to 2020 (€1,069 million). One contributing factor was that we took a majority interest in the Rampion offshore wind farm in the UK as of 1 April 2021 and have fully consolidated this stake since then. Furthermore, we benefited from the partial commissioning of the Triton Knoll offshore wind farm. This was contrasted by earnings shortfalls caused by the reduced utilisation of our assets due to the weather.

- **Onshore Wind / Solar:** In this segment, adjusted EBITDA totalled €258 million. We were therefore slightly above the targeted range of €50 million to €250 million. Improved margins resulting from the recent significant increase in wholesale electricity prices were the main driver. Compared to the previous year (€523 million) however, adjusted EBITDA dropped considerably. This was primarily due to about €400 million in lost earnings caused by the severe cold snap in Texas in February 2021. Besides this exceptional effect, lower wind speeds also came to bear. By contrast, we benefited from the commissioning of new generation assets and capital gains on the sale of stakes in the US wind farms Stella, Cranell, East Raymond and West Raymond.

- **Hydro / Biomass / Gas:** Here, adjusted EBITDA came in at €731 million. This clearly exceeded the forecast range of €500 million to €600 million. Our outlook was based on the assumption that income from the commercial optimisation of our power plant dispatch would fall short of the high level achieved in 2020. In fact, however, it rose, especially in the fourth quarter. This is why we also exceeded adjusted EBITDA registered in the prior year (€621 million). The markedly improved availability of the Eemshaven power station also played a role.

- **Supply & Trading:** Our performance in the trading business was exceptional. This led to €769 million in adjusted EBITDA, which clearly surpassed the envisaged range of €150 million to €350 million. We also exceeded the previous year's figure, which was very high (€539 million). In addition to the strong trading performance, improved earnings in the gas business also came to bear.

- **Coal / Nuclear:** Adjusted EBITDA recorded in this segment amounted to €889 million, which was within the anticipated range of €800 million to €900 million. This represents strong growth compared to the preceding year (€559 million). The main reason for this was that we realised higher wholesale prices for electricity generated by our lignite-fired and nuclear power plants than in 2020. We had already sold forward nearly all of the production of these stations in earlier years. Income from the commercial optimisation of power plant dispatch also rose. Furthermore, we benefited from the improved availability of our nuclear power stations. This was contrasted by earnings shortfalls caused by extensive maintenance at lignite-fired power plants. Further burdens stemmed from the implementation of the German Coal Phaseout Act and the floods in the Rhenish lignite mining region, on which we report on page 44.

Reconciliation to net income[1] € million	2021	2020	+/-
Adjusted EBITDA	**3,650**	**3,286**	**364**
Operating depreciation, amortisation and impairment losses	-1,465	-1,463	-2
Adjusted EBIT	**2,185**	**1,823**	**362**
Non-operating result	-650	-104	-546
Financial result	-13	-454	441
Income from continuing operations before taxes	**1,522**	**1,265**	**257**
Taxes on income	-690	-376	-314
Income from continuing operations	**832**	**889**	**-57**
Income from discontinued operations	–	221	-221
Income	**832**	**1,110**	**-278**
of which:			
Non-controlling interests	111	59	52
Net income / income attributable to RWE AG shareholders	**721**	**1,051**	**-330**

1 Some prior-year figures restated due to a change in the recognition of tax benefits to subsidise renewable energy in the USA (see commentary on page 47).

Reconciliation to net income: Exceptional effects overshadow operating development. The reconciliation from adjusted EBITDA to net income was greatly affected by one-off effects, which had a negative impact in net terms. The following is an overview of the changes to the items of the reconciliation statement.

Adjusted EBIT[1] € million	2021	2020	+/–
Offshore Wind	636	697	-61
Onshore Wind / Solar	-145	138	-283
Hydro / Biomass / Gas	418	283	135
Supply & Trading	721	496	225
Other, consolidation	-106	-25	-81
Core business	**1,524**	**1,589**	**-65**
Coal / Nuclear	661	234	427
RWE Group	**2,185**	**1,823**	**362**

1 Some prior-year figures restated due to a change in the recognition of tax benefits to subsidise renewable energy in the USA (see commentary on page 47).

The RWE Group's adjusted EBIT rose by 20% to €2,185 million, exceeding the range of €1,150 million to €1,550 million forecast in March 2021. This growth was driven by the same factors that bolstered adjusted EBITDA. The difference between these two key figures is that operating depreciation and amortisation, which at €1,465 million was basically on a par with the previous year's level (€1,463 million), is included in adjusted EBIT, but not in adjusted EBITDA.

Non-operating result[1] € million	2021	2020	+/–
Disposal result	21	13	8
Effects on income from the valuation of derivatives	-503	1,886	-2,389
Other	-168	-2,003	1,835
Non-operating result	**-650**	**-104**	**-546**

1 Some prior-year figures restated due to a change in the recognition of tax benefits to subsidise renewable energy in the USA (see commentary on page 47).

The non-operating result, in which we recognise certain items which are not related to operations or the period being reviewed, amounted to -€650 million as opposed to -€104 million in the preceding fiscal year. Its components developed as follows:

- At €21 million, income from the disposal of investments and assets was essentially immaterial, as in the previous year (€13 million). It largely resulted from the sale of small run-of-river power stations in France and Portugal (see page 43).
- Effects from the valuation of derivatives reduced earnings by €503 million, after increasing them by €1,886 million in the preceding year. Such impacts are only temporary and are primarily due to the fact that, pursuant to IFRS, financial instruments used to hedge price risks are accounted for at fair value at the corresponding balance-sheet date, whereas the hedged underlying transactions are only recognised as a profit or loss when they are realised.
- In the 'other' line item, we reported a loss of €168 million, which was much smaller than in the previous year (€2,003 million). Income in 2020 was curtailed by about €1.8 billion in impairments recognised for power plants and opencast lignite mines. Impairments relating to our lignite business were also recognised in the year being reviewed. They amounted to €780 million and are explained in more detail in the Notes on pages 112 et seq. Income benefited from the €880 million compensation for the nuclear phaseout in Germany we received from the government in November 2021.

Financial result € million	2021	2020	+/-
Interest income	260	283	-23
of which: E.ON dividend	186	182	4
Interest expenses	-340	-296	-44
Net interest	**-80**	**-13**	**-67**
Interest accretion to non-current provisions	-138	-255	117
of which: interest accretion to mining provisions	-121	-186	65
Other financial result	205	-186	391
Financial result	**-13**	**-454**	**441**

Our financial result improved by €441 million to -€13 million. Its components changed as follows:

- Net interest dropped by €67 million to -€80 million, in part due to higher interest expenses in connection with currency hedges and higher costs incurred to pledge collateral in energy trading. Net interest includes the dividend on our 15% stake in E.ON, which totalled €186 million (previous year: €182 million).
- The interest accretion to non-current provisions reduced income by €138 million. In the previous year, the decline was more substantial (€255 million) because we had lowered the discount rate applied when calculating our mining provisions and the resulting increase in the present value of the obligations had in part been recognised as an expense in the interest accretion.
- The other financial result rose by €391 million to €205 million. The main reason for the increase was a one-off effect of interest claims in relation to a tax refund for earlier assessment periods. Furthermore, a charge incurred in the prior year did not recur: in March 2020, we suffered substantial losses on security holdings owing to the turmoil on financial markets caused by the COVID-19 pandemic.

Income from continuing operations before tax grew by €257 million to €1,522 million. At 45%, our effective tax rate was unusually high. One contributing factor was that we wrote off or did not recognise deferred tax assets in RWE AG's tax group, because we are unlikely to be able to use the deferred tax claims in the foreseeable future. Furthermore, an increase in the UK corporation tax rate effective as of 2023 drove up deferred tax liabilities. By contrast, the aforementioned tax refund for earlier years provided some relief.

In the fiscal year being reviewed, there was no income from discontinued operations. In the preceding year, this figure amounted to €221 million. It stemmed from the stake in Slovak energy utility VSE, which we sold to E.ON in August 2020.

Non-controlling interests in income rose by €52 million to €111 million. This is because we started fully consolidating Rampion in April 2021 and reduced our stake in the Humber Gateway wind farm in the UK North Sea (219 MW) from 100% to 51% at the end of 2020. Consequently, we now state non-controlling interests of the co-owners of these wind farms. A counteracting effect was felt from the sale of VSE: in 2020, a profit of €34 million had been assigned to the company's co-shareholders.

The RWE Group's net income amounted to €721 million (previous year: €1,051 million). This resulted in earnings per share of €1.07 (previous year: €1.65). The number of RWE shares outstanding used to calculate this indicator totalled 676.2 million compared to 637.3 million in the previous year. These figures are annual averages. In August 2020, we issued 61.5 million new RWE shares via a capital increase.

Reconciliation to adjusted net income 2021 € million	Original figures	Adjustment	Adjusted figures
Adjusted EBIT	**2,185**	**–**	**2,185**
Non-operating result	-650	650	–
Financial result	-13	-196	-209
Taxes on income	-690	394	-296
Income	**832**	**848**	**1,680**
of which:			
Non-controlling interests	111	–	111
Net income / income attributable to RWE AG shareholders	**721**	**848**	**1,569**

Adjusted net income higher than expected. Adjusted net income amounted to €1,569 million. Due to the unexpectedly positive development of operating earnings, it was well above the guided range of €750 million to €1,100 million. The prior-year figure of €1,257 million was also clearly exceeded. To calculate adjusted net income, we corrected net income according to IFRS by deducting the non-operating result and major special items in the financial result from it. Instead of the actual tax rate, we applied a rate of 15%, which reflects the tax level net of one-off effects that can theoretically be expected.

Capital expenditure on property, plant and equipment and on intangible assets[1] € million	2021	2020	+/–
Offshore Wind	1,683	756	927
Onshore Wind / Solar	1,404	1,154	250
Hydro / Biomass / Gas	294	153	141
Supply & Trading	47	43	4
Other, consolidation	2	–	2
Core business	**3,430**	**2,106**	**1,324**
Coal / Nuclear	259	183	76
RWE Group	**3,689**	**2,285**[2]	**1,404**

1 Table only shows cash investments.
2 Including a –€4 million consolidation effect between the core business and the Coal / Nuclear segment.

Capital expenditure on financial assets[1] € million	2021	2020	+/–
Offshore Wind	27	520	-493
Onshore Wind / Solar	27	408	-381
Hydro / Biomass / Gas	6	115	-109
Supply & Trading	20	18	2
Other, consolidation	–	11	-11
Core business	**80**	**1,072**	**-992**
Coal / Nuclear	–	1	-1
RWE Group	**80**	**1,073**	**-993**

1 Table only shows cash investments.

Marked increase in capital expenditure on renewable energy. In the past fiscal year, our capital spending totalled €3,769 million, 12% more than in 2020 (€3,358 million). The lion's share of the funds was dedicated to the Offshore Wind (45%) and Onshore Wind / Solar (38%) segments.

Our capital expenditure on property, plant and equipment and intangible assets amounted to €3,689 million (previous year: €2,285 million). The Triton Knoll wind farm in the UK North Sea received the biggest share of investments. Significant sums were also spent to build the Sofia wind farm off the eastern coast of England (1,400 MW), the Kaskasi wind farm near Heligoland (342 MW), the Blackjack Creek (240 MW) and El Algodon Alto (200 MW) onshore wind farms in Texas, and the Hickory Park solar farm in the US state of Georgia (196 MW plus battery storage). In addition, we made advance payments for the rights we secured in an auction in February 2021 to develop new offshore wind areas in the UK North Sea (see page 40).

At €80 million, capital expenditure on financial assets was much lower than the high figure registered in the prior year (€1,073 million), which included our acquisitions of the 20% stake in the Rampion offshore wind farm and Nordex's European development business (see page 43 of the 2020 Annual Report).

Workforce[1]	31 Dec 2021	31 Dec 2020	+/–
Offshore Wind	1,277	1,119	158
Onshore Wind / Solar	2,146	2,402	– 256
Hydro / Biomass / Gas	2,606	2,667	– 61
Supply & Trading	1,804	1,790	14
Other[2]	467	425	42
Core business	**8,300**	**8,403**	**– 103**
Coal / Nuclear	9,946	11,095	– 1,149
RWE Group	**18,246**	**19,498**	**– 1,252**

1 Converted to full-time positions.
2 This item exclusively comprises employees of the holding company RWE AG.

Headcount significantly down year on year. As of 31 December 2021, the RWE Group had 18,246 people on its payroll, of which 13,585 were employed in Germany and 4,661 worked abroad. Part-time positions were considered in these numbers on a pro-rata basis. Personnel figures were down markedly compared to the end of 2020 (– 1,252). We recorded a significant decline (– 1,149) in the Coal / Nuclear segment where many employees accepted early retirement offers as part of the German coal phaseout. Although we created a large number of jobs by expanding renewable energy, headcount in our core business declined somewhat. The main reason for this was that we sold large parts of the Belectric Group.

Staff figures do not include apprentices or trainees. At the end of 2021, 785 young adults were learning a profession at RWE, compared to 750 in the previous year.

2.7 Financial position and net worth

Our financial position and net worth continued to improve in 2021. Even though we invested billions in the expansion of renewables, our net debt fell to less than zero. As of the balance-sheet date, the RWE Group posted net assets of €360 million. This pleasing development was particularly thanks to our strong cash flow from operating activities. Our robust credit ratings also underline how strong our financial position is. The agencies Moody's and Fitch raised RWE's credit rating by one notch last year. Our current long-term ratings are investment grade, at Baa2 and BBB+ respectively.

RWE AG bears responsibility for procuring funds. Responsibility for Group financing is centralised at RWE AG. As the parent company, RWE AG is responsible for acquiring funds from banks or the financial markets. Subsidiaries only raise debt capital directly in specific cases, for example if it is advantageous economically to make use of local credit and capital markets. RWE AG also acts as a co-ordinator when subsidiaries assume contingent liabilities. This allows us to manage and monitor financial risks centrally. Moreover, it strengthens our position when negotiating with banks, business partners, suppliers and customers.

Tools for raising debt capital. We cover most of our financing needs with earnings from our operating activities. In addition, we have a wide range of tools to procure debt capital:

- Our Debt Issuance Programme (DIP) gives us latitude in raising debt capital for the long term. Our current DIP allows us to issue bonds with a total face value of up to €10 billion. By issuing three green bonds, we exercised this financing option in 2021 for the first time in six years.

- For short-term refinancing, we have a Commercial Paper Programme, which was updated in 2021. It allows us to raise funds equivalent to up to €5 billion on the money market. During the past fiscal year, we accessed a large portion of this funding volume: at times, a total of up to €3 billion in commercial paper was outstanding.

- To secure our liquidity, we also have access to a €5 billion syndicated credit line extended by a consortium of 27 international banks. It consists of two tranches: one of €2 billion, which expires in April 2022, and one of €3 billion, which is available through to April 2026. At our initiative, sustainability criteria were added to the conditions of the second tranche last year. Among other things, the conditions now depend on the development of the following three indicators: the share of renewables in RWE's generation portfolio, the CO_2 intensity of our plants and the percentage of our capex that is classified as sustainable in accordance with the EU taxonomy regulation. We have set goals for all three of these criteria. If we do not achieve the targets, we will have to pay higher interest and commitment fees. Half of the additional expenses would be directed to non-profit organisations. This new structure for the credit line underlines our commitment to our emissions reduction strategy.

Green bonds worth €1,850 million issued. For the first time ever, RWE AG issued green bonds in 2021. In June, we placed a 10-year bond with a nominal volume of €500 million and an annual coupon of 0.625 %, followed by two issues in November: a 7-year bond of €750 million and a 12-year bond of €600 million, with annual coupons of 0.5 % and 1.0 %, respectively. Additional information on these three debt securities can be found on page 21. The proceeds of green bonds are tied to specific purposes. We will use these funds exclusively for wind and solar projects.

Bond volume rises to €2.4 billion. RWE bonds with a total face value equivalent to €2.4 billion were outstanding at the end of 2021, versus €0.6 billion in the previous year. The significant increase was due to the aforementioned issues. Along with the three green bonds, RWE still has two outstanding hybrid bonds: one of €282 million with a 3.5 % coupon and one of US$317 million with a 6.625 % coupon. Due to early buybacks in October 2017, the outstanding amounts are below the issuance volumes of €550 million and US$500 million. The earliest redemption dates for the two hybrid bonds are in April 2025 and March 2026, respectively.

Credit rating of RWE AG	Moody's		Fitch	
As of March 2022	Current	Previous	Current	Previous
Long-term debt				
Senior debt	Baa2	Baa3	BBB+	BBB
Subordinated debt (hybrid bonds)	Ba1	Ba2	BBB-	BB+
Short-term debt	P-2	P-3	F1	F2
Outlook	Stable	Positive	Stable	Stable

Solid investment grade rating. The conditions at which we can raise debt largely depend on rating agencies' assessment of our creditworthiness. Moody's and Fitch make such evaluations on request from us. In the past year, both agencies raised their credit rating for RWE by one notch. RWE's long-term creditworthiness is now rated Baa2 (Moody's) and BBB+ (Fitch), both with a stable outlook. These are investment grade ratings. The ratings for our hybrid bonds and current financial liabilities are now also one level higher (see table above). Moody's and Fitch cited RWE's transformation into a leading renewables company as the reason for the rating improvement. This business is characterised by attractive and relatively stable earnings.

Cash flow statement[1] € million	2021	2020	+/–
Funds from operations	7,103	4,108	2,995
Change in working capital	171	17	154
Cash flows from operating activities of continuing operations	**7,274**	**4,125**	**3,149**
Cash flows from investing activities of continuing operations	**-7,738**	**-4,278**	**-3,460**
Cash flows from financing activities of continuing operations	**1,457**	**1,769**	**-312**
Effects of changes in foreign exchange rates and other changes in value on cash and cash equivalents	58	-34	92
Total net changes in cash and cash equivalents	**1,051**	**1,582**	**-531**
Cash flows from operating activities of continuing operations	7,274	4,125	3,149
Minus capital expenditure	-3,769	-3,358	-411
Plus proceeds from divestitures / asset disposals	1,057	365	692
Free cash flow	**4,562**	**1,132**	**3,430**

1 All items solely relate to continuing operations; some prior-year figures restated due to a change in the recognition of tax benefits to subsidise renewables in the USA (see commentary on page 47).

Robust improvement in operating cash flow. Our cash flows from operating activities of continuing operations amounted to €7,274 million, clearly exceeding the prior-year figure (€4,125 million). The good earnings situation and the compensation paid to us in November 2021 by the German Federal government for the phaseout of nuclear energy had positive effects. The main reason for the increase, however, were high margin payments for forward contracts for electricity, fuel and CO_2 certificates. RWE concludes contracts of this kind to reduce earnings risk exposure. For exchange-traded derivatives, we first have to provide an initial margin. Additionally, over the term of the contract, we receive or pay variation margins, depending on how the market value of the derivative changes. So-called collateral has to be provided for over-the-counter derivative transactions.

During the year under review, we received a high amount of variation margins, which are included in cash flow from our operating activities. This was contrasted against significant outflows of funds for initial margins and collaterals, which we reported in cash flows from financing activities.

Investing activities of continuing operations led to a cash outflow of €7,738 million (previous year: €4,278 million). €3,769 million of this sum stemmed from our capital expenditure on property, plant and equipment and financial assets. Moreover, we made significant investments in securities and an extraordinary increase of the assets used to meet pension obligations in the amount of €1,092 million. This was contrasted by revenues from the sale of business activities and shareholdings of €1,057 million. The most important transactions were the sale of our stakes in the US wind farms Stella, Cranell, East Raymond and West Raymond as well as the disposal of the grid connection for the Rampion offshore wind farm in the UK (see page 41).

Financing activities of continuing operations produced cash inflows of €1,457 million (previous year: €1,769 million). In 2021, we recorded high income from bank loans taken out, the issuance of commercial paper and the three green bonds we issued, which are discussed on page 60. However, we also had to make substantial payments for initial margins and collaterals. Outflows of funds were also registered due to dividend payments to RWE shareholders and minority shareholders.

On balance, the aforementioned cash flows from operating, investing and financing activities increased our cash and cash equivalents by €1,051 million.

Cash flows from operating activities, less capital expenditures, plus proceeds from divestments and asset disposals, results in free cash flow. This amounted to €4,562 million, up substantially on the prior-year figure (€1,132 million).

Net assets / net debt[1] € million	31 Dec 2021	31 Dec 2020	+/–
Cash and cash equivalents	5,825	4,774	1,051
Marketable securities	8,347	4,517	3,830
Other financial assets	12,403	2,507	9,896
Financial assets	**26,575**	**11,798**	**14,777**
Bonds, other notes payable, bank debt, commercial paper	-10,704	-2,160	-8,544
Hedging of bond currency risk	-9	-31	22
Other financial liabilities	-7,090	-3,038	-4,052
Financial liabilities	**-17,803**	**-5,229**	**-12,574**
Plus 50 % of the hybrid capital stated as debt	290	278	12
Net financial assets (including correction of hybrid capital)	**9,062**	**6,847**	**2,215**
Provisions for pensions and similar obligations	-1,934	-3,864	1,930
Surplus of plan assets over benefit obligations	459	172	287
Provisions for nuclear waste management	-6,029	-6,451	422
Provisions for dismantling wind farms	-1,198	-1,136	-62
Net assets (+) / net debt (–)	**360**	**-4,432**	**4,792**

1 Mining provisions are not included in net debt. The same holds true for the assets which we attribute to them. At present, this includes our 15 % stake in E.ON and our claim for state compensation for the German lignite phaseout in the amount of €2.6 billion.

Net assets of €360 million. Our net debt declined by €4,792 million versus the previous year (€4,432 million). As a result of this, we posted a net asset position of €360 million as of 31 December 2021. The main reason for this was the excellent free cash flow. The market-driven increase in the discount rates we use to calculate the present value of pension obligations also played a role, as it resulted in a decline in provisions for pensions. A similar effect was exerted by the income generated from managing the plan assets for our pension obligations. While the aforementioned extraordinary funding of these assets in the amount of €1,092 million caused provisions to decline, it was coupled with a corresponding outflow of funds and thus did not result in a reduction of debt. Dividend payments lowered our net financial position by €730 million.

Leverage factor below zero. One of our key management parameters is the ratio of net debt to the adjusted EBITDA of the core business, also referred to as the leverage factor. This figure is more indicative than total liabilities, as it also reflects earning power and therefore our ability to meet our debt obligations. We set the upper limit for the leverage factor at 3.0 in order to secure our financial flexibility. As the RWE Group did not have any net debt as of the balance-sheet date and posted a net asset position, this indicator was below zero. However, the leverage factor should increase in the medium term, above all due to growth investments in our green core business, which we will also finance using debt capital.

Moderate decline in off-balance-sheet fuel purchase obligations. Net debt does not include our off-balance-sheet obligations, which largely stem from long-term purchase agreements for fuel and electricity. As of the balance-sheet date, our payment obligations from material fuel procurement contracts amounted to €22.3 billion (previous year: €23.6 billion). In relation to electricity procurement, they amounted to €7.1 billion and were thus as high as in 2020. The figures are based on assumptions regarding the prospective development of commodity prices. Our purchase commitments rose from €2.1 billion to €5.6 billion over the course of the year. Further off-balance-sheet obligations result, inter alia, from liabilities for pension commitments that employees of our former subsidiary innogy had earned at RWE up to its IPO in 2016.

Sharp increase in balance-sheet total due to temporary effects from commodity derivatives. At 31 December 2021, the Group balance sheet was strongly influenced by changes in commodity derivatives. They rose by €56.4 billion on the assets side and €68.2 billion on the liabilities side. This was driven by the extreme increase in prices of electricity and natural gas. The increase in these derivatives was the main reason that the balance-sheet total of €142.3 billion was more than twice as high as in 2020 (€61.6 billion). Another reason for this development was that we raised a large amount of debt capital. Among other things, the funds were used to collateralise derivative transactions, which resulted in a corresponding build-up of receivables. At €17.0 billion, our equity was slightly below last year's level. The equity ratio amounted to 11.9 %. Due to the increase in the balance-sheet total, this figure was significantly lower compared to 2020 (28.7 %).

Group balance sheet structure[1]	31 Dec 2021		31 Dec 2020			31 Dec 2021		31 Dec 2020	
	€ million	%	€ million	%		€ million	%	€ million	%
Assets					**Equity and liabilities**				
					Equity	16,996	11.9	17,706	28.7
Non-current assets	38,863	27.3	34,418	55.8	Non-current liabilities	28,306	19.9	27,435	44.5
of which:					of which:				
Intangible assets	5,884	4.1	4,899	7.9	Provisions	16,943	11.9	19,470	31.6
Property, plant and equipment	19,984	14.0	17,902	29.0	Financial liabilities	6,798	4.8	3,951	6.4
Current assets	103,446	72.7	27,224	44.2	Current liabilities	97,007	68.2	16,501	26.8
of which:					of which:				
Trade accounts receivable	6,470	4.5	3,007	4.9	Provisions	4,268	3.0	3,004	4.9
					Financial liabilities	10,996	7.7	1,247	2.0
Receivables and other assets	79,626	56.0	12,531	20.3	Trade accounts payable	4,428	3.1	2,387	3.9
Marketable securities	8,040	5.6	4,219	6.8	Other liabilities	77,315	54.4	9,282	15.1
Assets held for sale	657	0.5	1,061	1.7	Liabilities held for sale	–	–	581	0.9
Total	**142,309**	**100.0**	**61,642**	**100.0**	**Total**	**142,309**	**100.0**	**61,642**	**100.0**

1 Some prior-year figures restated due to a retroactive change in the recognition of tax benefits to subsidise renewables in the USA (see page 47) and retroactive adjustments to the first-time consolidation of operations which RWE acquired from Nordex in 2020 (see page 95).

2.8 Notes to the financial statements of RWE AG (holding company)

The financial statements of RWE AG are significantly influenced by the business performance of its subsidiaries. In sum, the profit transfers of these companies recorded an increase in 2021. This was contrasted by an impairment recognised for a subsidiary. We posted positive developments in other income and expenses as well as in net interest. Overall, RWE AG's earnings position has therefore improved: at €1,108 million, RWE AG's net profit was substantially higher than in 2020. We intend to raise the dividend and will therefore propose a payment of €0.90 per share to the Annual General Meeting taking place in April 2022. This constitutes an increase of €0.05 versus last year.

Balance sheet of RWE AG (abridged) € million	31 Dec 2021	31 Dec 2020	+/-
Assets			
Financial assets	17,866	20,524	-2,658
Accounts receivable from affiliated companies	7,922	2,094	5,828
Other accounts receivable and other assets	616	519	97
Marketable securities and cash and cash equivalents	11,709	6,664	5,045
Total assets	**38,113**	**29,801**	**8,312**
Equity and liabilities			
Equity	8,359	7,826	533
Provisions	2,245	1,996	249
Accounts payable to affiliated companies	18,743	18,905	-162
Other liabilities	8,766	1,074	7,692
Total equity and liabilities	**38,113**	**29,801**	**8,312**

Income statement of RWE AG (abridged) € million	2021	2020	+/-
Income from financial assets	378	1,114	-736
Net interest	318	-72	390
Other income and expenses	132	-712	844
Taxes on income	280	250	30
Net profit	**1,108**	**580**	**528**
Transfer to other retained earnings	-499	-5	-494
Distributable profit	**609**	**575**	**34**

Financial statements in accordance with German commercial law. RWE AG prepares its financial statements in compliance with the rules set out in the German Commercial Code and the German Stock Corporation Act. The financial statements are submitted to Bundesanzeiger Verlag GmbH, located in Cologne, Germany, which publishes them in the Federal Gazette. They are available on the internet at www.rwe.com/financial-reports.

Assets. RWE AG had €38.1 billion in total assets as of 31 December 2021 (previous year: €29.8 billion). Accounts receivable from affiliated companies registered a significant rise. This was mainly because we made cash and cash equivalents available to our subsidiary RWE Supply & Trading as collateral for commodity forward transactions. We also posted significant increases in 'marketable securities and cash and cash equivalents' and 'other liabilities'. In the year under review, we increased our liabilities significantly by way of bank loans, commercial paper and green bonds. These funds were, inter alia, used to secure liquidity, with a portion thereof, e.g. the proceeds generated by bonds issued, earmarked for growth investments. RWE AG's equity rose by €533 million to €8,359 million. However, the equity ratio decreased from 26.3 % to 21.9 %, due to the increase in the balance sheet total.

Financial position. RWE AG is set up solidly in economic terms with high levels of cash and cash equivalents and a number of financing tools at its disposal that it can use flexibly. Accordingly, rating agencies Moody's and Fitch classify our creditworthiness as 'investment grade'. Last year, they both raised our respective credit rating by one level to Baa2 (Moody's) and BBB+ (Fitch). You can find detailed information on RWE's financial situation and on our financing activities in the year under review on pages 60 et seqq.

Earnings position. RWE AG's earnings position improved compared to 2020. The main items on the income statement developed as follows:

- Income from financial assets dropped by €736 million to €378 million. One reason for this was an impairment loss recognised in relation to our stake in RWE Power. However, this company's profit transfer was higher than in 2020, which was attributable to improved generation margins and lower charges resulting from impairments, depreciation and amortisation. RWE Nuclear also gained considerable ground. This was due to the compensation we received from the German government for the nuclear phaseout (see page 36). By contrast, income from our stake in RWE Supply & Trading decreased.

- Net interest increased by €390 million to €318 million. This was in part due to a rise in capital gains from the management of plan assets used to cover our pension obligations and was further boosted by interest claims relating to tax refunds for earlier assessment periods.

- The 'other income and expenses' line item improved by €844 million to €132 million. In the year under review, we recognised write-backs for financial accounts receivable from a Dutch subsidiary. This reversed impairments in previous years to some extent.

- In 2021, we recorded tax income of €280 million (previous year: €250 million). This is largely due to the aforementioned tax refunds for earlier assessment periods.

- Versus 2020 (€580 million), the presented earnings figures led to a considerably higher net profit of €1,108 million.

- The distributable profit of €609 million corresponds to the planned payment of a dividend of €0.90 per share to our shareholders.

Outlook for 2022. RWE AG's earnings prospects will largely depend on the business performance of its subsidiaries. Our current assessment makes us confident that we will achieve a net profit in 2022 that offers the necessary margins for the intended dividend of €0.90. However, it is unlikely to match the level achieved in 2021.

Corporate governance declaration in accordance with Sections 289f and 315d of the German Commercial Code. On 15 February 2022, the Executive Board and the Supervisory Board of RWE AG issued its Corporate Governance Declaration in accordance with Sections 289f and 315d of the German Commercial Code. The declaration contains the Corporate Governance Report and has been published at www.rwe.com/corporate-governance-declaration.

2.9 Outlook

We are confident of being able to pick up where we left off last year in terms of our earnings position. As things stand, we anticipate adjusted EBITDA of €3.6 billion to €4.0 billion. Our core business is expected to close fiscal 2022 up on last year's earnings, which had been heavily impacted by the extreme weather conditions in Texas. The commissioning of new generation capacities is set to have a positive effect. We also expect to see improved electricity margins and better wind conditions. After last year's extraordinarily successful energy trading performance, we anticipate income to normalise. Not yet included in our forecast is the fallout of the Ukraine conflict, which is difficult to assess. How events unfold and how sanctions against Russia affect European energy supply may have a significant impact on our business.

Ukraine crisis puts economic growth at risk. Forecasts concerning the economic development in our core markets are linked to considerable uncertainties related to the Ukraine conflict. Estimates available when the combined review of operations was written had been compiled before the war broke out. Based on these figures, world economic output could increase by about 4 % in 2022. Growth rates forecast for the Eurozone, Germany and the USA are of a similar order, while those for the United Kingdom and the Netherlands are expected to reach 3 %. Should energy prices remain extremely high due to the Ukraine conflict, then the economy may well prove to be less dynamic.

Rise in electricity consumption anticipated. Higher economic output is generally associated with additional demand for electricity. However, this is contrasted by continued energy savings which will probably have a slightly dampening effect. Provided the aforementioned economic prognoses prove to be accurate, demand for electricity in our key markets Germany, the Netherlands, the UK and the USA should be between 1 % and 3 % higher than in 2021.

Our power production for 2022 has already largely been sold forward. Wholesale electricity prices rose considerably last year, surging again in early 2022 due to the Ukraine conflict. Their development during the current year is impossible to predict, but market fluctuations would only have a moderate impact on this year's generation margins as we have already largely sold forward our electricity production for 2022 and hedged the prices of the required fuel and CO_2 emission allowances. These transactions have been concluded up to three years ahead, and already reflect the rise in electricity prices in 2021 to a limited extent. A large portion of electricity generated by RWE wind farms, where revenue is market-dependant, has also already been sold forward.

Forecast € million	2021 actual	Outlook for 2022
Adjusted EBITDA	3,650	3,600-4,000
of which:		
Core business	2,761	2,900-3,300
of which:		
Offshore Wind	1,110	1,350-1,600
Onshore Wind / Solar	258	650-800
Hydro / Biomass / Gas	731	700-900
Supply & Trading	769	150-350
Coal / Nuclear	889	650-750
Adjusted EBIT	2,185	2,000-2,400
Adjusted net income	1,569	1,300-1,700

2022 adjusted EBITDA of €3.6 billion to €4.0 billion expected. Subject to the risks associated with the Ukraine conflict, which are difficult to gauge, we expect this year's business performance to pick up where we left off in terms of our good operating result in 2021. We forecast adjusted EBITDA for the Group of €3,600 million to €4,000 million (previous year: €3,650 million) for 2022 and envisage a range of €2,900 million to €3,300 million in the core business, thus exceeding last year's figure (€2,761 million) which had been heavily burdened by an extreme cold snap in Texas in February 2021. We assume the commissioning of new wind and solar farms and higher electricity margins to have a positive effect on earnings. Moreover, we expect to see average wind speeds, which would improve the utilisation of our wind farms compared to 2021, which was a low-wind year. By contrast, we may well fall short of the very good result achieved in the energy trading business last year. We anticipate a decline in EBITDA outside of the core business, i. e. in the Coal / Nuclear segment, due to decommissioning of generation capacities, in particular the closure of the Gundremmingen C nuclear power station as of 31 December 2021.

Based on anticipated operating depreciation and amortisation of approximately €1,600 million, adjusted EBIT should range between €2,000 million and €2,400 million (last year: €2,185 million). Net income, which excludes major exceptional effects, is expected to total between €1,300 million and €1,700 million (last year: €1,569 million). We explain how this key figure is calculated on page 58.

Our outlook broken down by segment is as follows:

- **Offshore Wind:** Adjusted EBITDA in this business is forecast to total between €1,350 million and €1,600 million (last year: €1,110 million). We expect the full commissioning of the Triton Knoll wind farm to play an important part. In addition, the first full consolidation of the Rampion wind farm for the year as a whole is also likely to have a positive effect. Furthermore, we anticipate higher margins than last year and expect utilisation of our assets to improve due to the weather.

- **Onshore Wind / Solar:** Our prognosis for this segment is adjusted EBITDA of €650 million to €800 million, clearly surpassing last year's level (€258 million). The main contributing factor will be the non-recurrence of the one-off burden due to the cold snap in Texas in 2021. In addition, we anticipate higher generation volumes due to the commissioning of new generation capacity and more favourable wind conditions. Higher generation margins will also help earnings to rise. This will be contrasted by an increase in expenditure on the development of growth projects. Furthermore, last year's result included capital gains on the sale of majority stakes in Texan wind farms, which will not recur.

- **Hydro / Biomass / Gas:** Here, we forecast adjusted EBITDA of €700 million to €900 million. Therefore, the segment stands a good chance of closing 2022 up on last year's figure (€731 million). Higher margins on electricity forward sales will play a significant role. Moreover, we expect capital gains from the sale of a former power plant site in the United Kingdom. Conversely, income from the commercial optimisation of power plant dispatch may well fall short of the high level achieved in 2021. Payments from the British capacity market will also decline. An unscheduled outage at the Dutch Claus C gas-fired power station is also expected to have a negative effect.

- **Supply & Trading:** Earnings in this segment are difficult to predict due to the high volatility of the trading business. Assuming that business develops normally, adjusted EBITDA should range between €150 million and €350 million. In this case, it would be substantially below the unusually high level recorded last year (€769 million).

- **Coal / Nuclear:** Here, we anticipate a decrease in adjusted EBITDA to between €650 million and €750 million (last year: €889 million). The main reason for this is the closure of the Gundremmingen C nuclear power station and five lignite units in 2021. This will be contrasted by positive effects stemming from cost savings.

Capital expenditure on property, plant and equipment markedly up on last year. In comparison to 2021 (€3,689 million), we plan on substantially increasing our property, plant and equipment and intangible asset investments. Considerable funds will be allocated to building the Kaskasi and Sofia offshore wind farms near Heligoland and in the UK North Sea, respectively. Further investments will be made in wind, solar and battery projects in the USA and Europe as well as the construction of a gas-fired power station at Biblis, which is needed to stabilise the electricity grid. Outside of the core business, in the Coal / Nuclear segment, we plan to spend about €200 million on property, plant and equipment, mainly to maintain our power stations and opencast mines.

Leverage factor to stay below upper limit of 3.0. One of our key management parameters is the ratio of net debt to adjusted EBITDA of the core business, also referred to as the leverage factor. As explained on page 63, the leverage factor fell below zero in 2021. However, it will probably rise again in the long run. This is largely on account of our planned growth investments, a portion of which we will finance by raising debt capital. It is virtually impossible to make leverage factor forecasts for individual years primarily due to the significant liquidity fluctuations that can result from the collateralisation of commodity forward transactions. Nevertheless in 2022, we anticipate this key performance indicator to be clearly below 3.0, i. e. the cap we have set for it.

Dividend for fiscal 2022. The Executive Board of RWE AG aims to pay a dividend of €0.90 per share for the 2022 financial year. This corresponds to the dividend that we intend to propose to the Annual General Meeting on 28 April 2022 for fiscal 2021.

2.10 Development of risks and opportunities

RWE's transformation into a growth company in the green economy has improved our risk-opportunity profile. Thanks to the predominantly high, stable revenues that can be generated with renewables, not only are we more profitable, we are also more resilient. However, Russia's invasion of Ukraine has given rise to new uncertainties. What this conflict will mean for the energy industry and the development of RWE's business is impossible to predict. The German government's plans to accelerate the phaseout of coal-based power generation also pose a risk and could be associated with significant financial burdens for RWE. However, if framework conditions prove favourable, they also offer us the chance to proceed more quickly towards climate neutrality.

Distribution of risk management tasks at RWE. Responsibility for Group risk management lies with the parent company RWE AG. Its Executive Board monitors and manages the Group's overall risk. In addition, it determines the general risk appetite of RWE and defines upper limits for single risk positions. At the level below the Executive Board, the Controlling & Risk Management Department has the task of applying and constantly refining the risk management system. It derives detailed limits for the individual business fields and operating units from the risk caps set by the Executive Board. Its tasks also include checking the identified risks for completeness and plausibility and aggregating them. In so doing, it receives support from the Risk Management Committee, which is composed of the heads of the following five RWE AG departments: (1) Controlling & Risk Management (Chair), (2) Finance & Credit Risk, (3) Accounting, (4) Legal, Compliance & Insurance, and (5) Strategy & Sustainability. The Controlling & Risk Management Department provides the Executive Board and the Supervisory Board of RWE AG with regular reports on the company's risk exposure.

A number of additional organisational units and committees have been entrusted with risk management tasks:

- Financial risks and credit risks are managed by the Finance & Credit Risk Department of RWE AG.
- The Accounting Department ensures that financial reporting is free of material misstatements. It has an accounting-related internal control system for this purpose. A committee consisting of officers from Accounting and other departments of relevance to accounting assists in securing the quality of financial reporting. More detailed information can be found on page 79.
- Risks from changes in commodity prices are monitored by RWE Supply & Trading in so far as they relate to the conventional electricity generation, energy trading and gas businesses. Where these risks relate to the renewable energy business, they are managed by RWE Renewables.
- Strategies to limit market risks in conventional electricity generation must be approved by the Commodity Management Committee. This expert panel consists of the CFO of RWE AG, members of the Board of Directors of RWE Supply & Trading and a representative of the Controlling & Risk Management Department.
- We also have a committee tasked with mitigating market risks associated with the renewable energy business. The Renewables Commodity Management Committee consists of the CFO of RWE AG, members of the management of RWE Renewables and a representative of the Controlling & Risk Management Department.

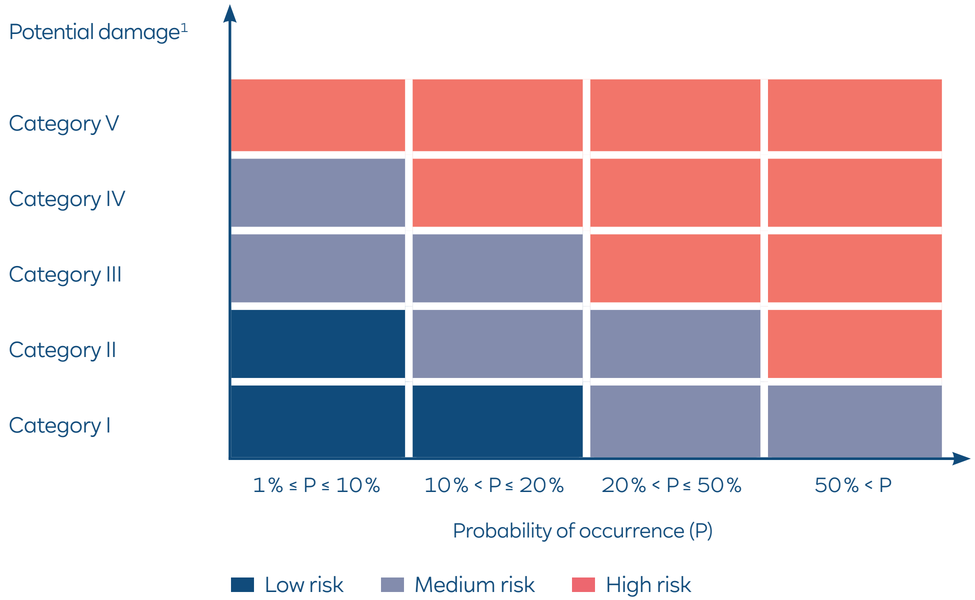
Under the expert management of the aforementioned organisational units, RWE AG and its subsidiaries are responsible for identifying risks early, assessing them correctly and managing them in compliance with corporate standards. Internal Audit regularly verifies the quality and functionality of our risk management system. The Executive Board formally establishes the Group's risk bearing capacity. This took place by way of a resolution dated 23 November 2021.

Risk identification and assessment. Risks and opportunities are defined as negative or positive deviations from expected figures. Their management is an integral and continuous part of operating processes. We assess risks every six months, using a bottom-up analysis. We also monitor risk exposure between the regular survey dates. The Executive Board of RWE AG is immediately notified of any material changes. Our executive and supervisory bodies are updated on the Group's risks once a quarter.

Our risk analysis normally covers the three-year horizon of our medium-term plan, but can extend beyond that in individual cases. We measure the potential damage based on the possible effects on net income, liquidity, net debt and/or equity. In doing so, we take hedges into account. We define the potential damage as the deviation from the budgeted figure in question, aggregated over the planning horizon.

We display the material risks using a matrix (see chart on the right) in which they are categorised by potential damage and probability of occurrence. Risks that share the same cause are aggregated to a single risk, if possible. To clearly assign them to the matrix fields, we have established damage potential thresholds, which are oriented towards the RWE Group's ability to bear risks. They are presented in the table below the matrix. Depending on their position in the matrix, we distinguish between low, medium and high risks. Based on this systematic risk identification, we determine whether there is a need for action and initiate measures to mitigate the risks if necessary.

RWE AG risk matrix



Potential damage[1] € million	**Earnings risks** Potential impact on net income (X)	**Indebtedness / equity risks** Potential impact on liquidity, net debt and / or equity (Y)
Category V	8,000 ≤ X	8,000 ≤ Y
Category IV	1,500 ≤ X < 8,000	4,000 ≤ Y < 8,000
Category III	600 ≤ X < 1,500	2,000 ≤ Y < 4,000
Category II	300 ≤ X < 600	1,000 ≤ Y < 2,000
Category I	X < 300	Y < 1,000

1 Aggregated over the planning horizon.

Risk classes	Classification of the highest single risk	
	31 Dec 2021	31 Dec 2020
Market risks	Medium	Medium
Regulatory and political risks	High	Medium
Legal risks	Low	Low
Operational risks	Medium	Medium
Financial risks	Medium	Medium
Creditworthiness of business partners	Medium	Medium
Other risks	Low	Medium

Main risks for the RWE Group. Depending on their causes, our risks can be divided into seven classes, which are shown in the table. The highest individual risk determines the classification of the risk of the entire risk class. Our classification of risks reflects the situation in early March 2022. It was not possible to predict the impact of the Ukraine conflict at this time. The following changes have been made versus last year's risk classification:

- We adjusted the classification of our regulatory and political risks upwards from 'medium' to 'high'. One reason for this is the plan of the new government coalition, made up of the Social Democrats, the Green Party and the Free Democrats, to accelerate the German coal phaseout without granting the affected companies compensation. Far-reaching EU sanctions against Russia could also have a significant impact on our business.

- We reclassified our 'other risks' from 'medium' to 'low' because the economic impact of the coronavirus pandemic has become more manageable. Previously, we believed our single-largest other risk was that a reduction in demand for energy caused by the pandemic would cause electricity prices to drop over the long term and we would thus have to recognise impairments for generation assets. Now we feel that this is unlikely.

As set out earlier, the focus of the risk analysis described in this chapter lies on the three-year horizon of our medium-term plan. In 2017, the Task Force on Climate-related Financial Disclosures (TCFD), a panel of experts, recommended that companies consider time horizons that go far above and beyond this when identifying and assessing climate-related risks. RWE implements the TCFD proposals. We explain how we do this in our 2021 Sustainability Report, which will be published in April 2022 and will then be available at www.rwe.com/sustainability-report.

In this section, we provide commentary on the main risks and opportunities we have identified for this and the next two years and explain what measures have been taken to counter the threat of negative developments.

- **Market risks.** In most of the countries in which we are active, the energy sector is characterised by the free formation of prices. This presents both opportunities and risks. Over the course of the past year, prices quoted in our key European electricity forward markets hit an all-time high. As a result, the earnings prospects of our generation assets became considerably more favourable. If limits are placed on Russian natural gas imports in the long term due to the Ukraine conflict, then energy prices should remain at a high level. However, there is a possibility that the economy will fall into a recession and that electricity prices will drop again.

  With regard to power and gas purchase agreements, if the conditions are not coupled to the development of wholesale prices, there is a risk of having to pay more for the product than we can earn when selling it. This may force us to form provisions to cover this risk. We have identified such a risk inherent in the two contracts we concluded to purchase electricity from the Datteln 4 hard coal-fired power plant in 2005 and 2006. The station was commissioned by energy group Uniper in mid-2020, ten years later than planned. We were unsuccessful in taking legal recourse against the continuation of the agreements. A further legal dispute regarding certain contractual provisions with Uniper is still pending.

RWE has a long-term gas purchase agreement with Russian energy group Gazprom. What the Ukraine crisis will mean for this contract remains to be seen. We have the option to negotiate contractual changes depending on market conditions during price reviews, should it remain effective. In the past, this has enabled us to mitigate our earnings risk exposure from the contract.

We assess the price risks to which we are exposed on the procurement and supply markets taking account of current forward prices and expected volatility. For our power plants and parts of our renewable energy portfolio, we limit the earnings risks by selling a large portion of the electricity forward. Whenever we need fuel and CO_2 emission allowances to produce power, we secure the respective prices when we sell the electricity. This makes it easier for us to plan generation margins in coming years. However, if we sell too much electricity forward, we run the risk of having to make expensive purchases on the market to fulfil supply commitments in the event of production outages. An example of such a situation was the extreme cold snap in Texas in February 2021, on which we report on page 43. The consequences of this weather event prompted us to review and optimise our hedging strategy.

We also use financial instruments to hedge our commodity positions. In the consolidated financial statements, these instruments are inter alia presented through the statement of on-balance-sheet hedges. The same applies to financial instruments serving the purpose of limiting interest rate and currency risks. More detailed information on this can be found on pages 105 and 158 et seqq. in the Notes.

RWE Supply & Trading plays a central role when it comes to managing commodity price risks. It functions as the Group's interface to the global wholesale markets for electricity and energy commodities. On behalf of our power plant companies, RWE Supply & Trading markets large portions of our electricity output and purchases the necessary fuel and CO_2 certificates. Since RWE Supply & Trading acts as the internal transaction partner it is easier for us to limit the risks associated with price volatility on energy markets. However, the trading transactions are not exclusively intended to reduce risks. In compliance with risk thresholds, the company also takes commodity positions to achieve a profit.

Our risk management system for energy trading is firmly aligned with best practice as applied to the trading businesses of banks. As part of this, transactions with third parties are concluded only if the associated risks are within approved limits. There are guidelines governing the treatment of commodity price risks and associated credit risks. Our subsidiaries constantly monitor their commodity positions. Risks associated with trades conducted by RWE Supply & Trading for its own account are monitored daily.

The Value at Risk (VaR) is of central importance for risk measurement in trading. It specifies the maximum loss from a risk position not exceeded with a predetermined probability over a predefined period of time. The RWE Group's VaR figures are generally based on a confidence interval of 95 % and a holding period of one day. This means that, with a probability of 95 %, the daily loss will not exceed the VaR.

The VaR for the price risks of commodity positions in the trading business should not exceed a certain daily cap. In the past, this upper limit was initially set at €40 million, but was increased by €10 million at the beginning of 2021 and again in early 2022. In the period under review, the actual amounts averaged €32 million. The daily maximum was €50 million. In addition, limits derived from the respective VaR thresholds have been set for every trading desk. Furthermore, we develop extreme scenarios and factor them into stress tests, determine their impact on earnings, and take countermeasures if we deem the risks to be too high.

The management of our gas portfolio and the liquefied natural gas (LNG) business is pooled in a dedicated organisational unit at RWE Supply & Trading. During the past year, the daily VaR cap for these activities was raised from €14 million to €25 million. We used a maximum of €22 million of this headroom. The average VaR for the year was €8 million.

The massive price spikes recently observed in energy trading could continue due to the Ukraine conflict. Nevertheless, our market risks remain unchanged in the 'medium' category.

- **Regulatory and political risks.** Most countries in which we are active have set their sights on ambitious climate protection goals. A number of them, including Germany, have recently introduced more stringent objectives. To meet these targets, they will need to continue to improve the framework for renewable energy and green hydrogen. For companies such as RWE, which have designed their business model around the energy transition, this is associated with opportunities for growth. At the same time, our ambitious carbon-reduction strategy has meant that regulatory interventions to improve climate protection are no longer associated with such high risks.

  Nevertheless, changes to political and regulatory frameworks can severely impact us. The Ukraine crisis, in particular, is currently associated with risks. For example, there is the possibility that Russian commodities suppliers are no longer able to meet their obligations due to the sanctions against Russia, forcing us to procure these commodities on the market at high prices. It cannot be ruled out that contractual partners become insolvent because of the sanctions. Moreover, in core markets such as Germany, politicians could intervene with regulatory measures to secure energy supply and stabilise consumer prices. It is not yet possible to foresee what effects this could have on RWE.

  A core component of Germany's climate protection strategy is reducing coal-fired electricity generation to zero by 2038. In exchange for closing our lignite assets early, we are due €2.6 billion in compensation, which is still pending approval under EU state aid law. There is now talk of the exit roadmap being expedited. Germany's new government has announced that it ideally wants electricity generation from coal to end as early as 2030 and that it does not intend to grant affected companies any additional compensation. This would impose considerable financial burdens on RWE. However, the accelerated coal phaseout also presents us with opportunities as it presupposes more favourable framework conditions for the construction of environmentally friendly replacement plants, while the expansion of renewables would also have to be ramped up. This would benefit the implementation of our growth strategy. Moreover, the government might pay us compensation after all.

  We are also exposed to risks associated with the coal phaseout in the Netherlands, where a law was passed in 2019 that prevents us from using hard coal in Amer 9 and Eemshaven as of 2025 and 2030, respectively. There are no plans to offer compensation. We accept the coal phaseout, but do not believe it is just that the law does not provide for any remuneration for this intervention in companies' property rights. Given the lack of concessions by Dutch policymakers, we have submitted an application for arbitration proceedings in accordance with the Energy Charter Treaty with the International Centre for Settlement of Investment Disputes in Washington. We hope this will give us the opportunity to receive financial compensation. In addition to the coal phaseout, the Netherlands introduced a cap on coal firing in power plants, which will apply from 2022 to 2024. We are likely to be awarded compensation in relation to this measure, however it is not yet clear how much it will be. Furthermore, the EU Commission will still need to approve it under state aid law.

  Although the renewable energy business is characterised by fairly stable framework conditions and wide public acceptance, political uncertainties exist in this area as well. Adjustments to state subsidy schemes may result in reductions in payments and new projects losing their appeal. This can lead to investment undertakings being broken off. It is also conceivable that firmly pledged state payments may be cut retrospectively. In the dialogue we maintain with policymakers, we point out that companies which invest in building sustainable, climate-friendly energy infrastructure need reliable framework conditions.

  Even in the present regulatory environment, we are exposed to risks associated with, for instance, approvals for constructing and operating production facilities. This particularly affects our opencast mines, power stations and wind farms. The danger here is that approvals are granted late or not at all and that granted approvals are withdrawn temporarily or for good. Furthermore, it cannot be ruled out that the courts will legislatively prohibit the transfer of land that has been assigned to us in the vicinity of our opencast mines.

Producers in Germany benefit from lower tax rates on in-house electricity, gas and oil consumption. RWE also utilises this financial mechanism. The Federal government, however, intends to reform the legal basis for these benefits in accordance with the EU's guidelines on climate and environmental protection and state aid for energy. There is a risk that the new rules will be more restrictive and that we will possibly either receive lower discounts from 2023, or none at all.

Certain statutory regulations to which we must adhere can be interpreted in various ways and are therefore in need of legal clarification. One example is the regulation which exempts us from paying an apportionment under the Renewable Energy Act (EEG) for electricity that we consume ourselves in our German power stations and opencast mines. However, the legal situation surrounding the regulation is vague, for example with regard to the EEG exemption of leased assets. There is a danger that using this exemption may be limited by Germany's highest court and that back payments may even have to be made for previous years.

As set out earlier, we have adjusted the assessment of our regulatory and political risks from 'medium' to 'high', which is due to the uncertainties associated with the Ukraine conflict and Germany's coal exit.

- **Legal risks.** Individual RWE Group companies are involved in litigation and arbitration proceedings due to their operations or M&A transactions. Out-of-court claims have been filed against some of them. Furthermore, Group companies are directly involved in various procedures with public authorities or are at least affected by their outcomes. To the extent necessary, we have accrued provisions for possible losses resulting from pending proceedings before ordinary courts and arbitration courts.

  Risks may also result from exemptions and warranties that we granted in connection with the sale of assets. Exemptions ensure that the seller covers the risks that are identified within the scope of due diligence, the probability of occurrence of which is, however, uncertain. In contrast, warranties cover risks that are unknown at the time of sale. These hedging instruments are standard practice in sales of companies and equity holdings.

  We currently have low exposure to legal risks. This assessment did not change compared to the previous year.

- **Operational risks.** RWE operates technologically complex, interconnected generation assets. Damage and outages can weigh heavily on earnings, as seen in 2021 during the severe cold snap in the US state of Texas (see page 43). The recent sharp rise in electricity prices is associated with a higher risk of earnings losses but also presents opportunities should the utilisation of our assets be higher than anticipated. To mitigate these risks, we ensure that our supply commitments are not too high, as we may be forced to buy electricity at a high cost to meet these obligations in case of production outages, for example. Furthermore, we also regularly maintain our facilities and take out insurance policies if economically viable.

  When production facilities are built and modernised, delays and cost increases can occur, for example due to logistical bottlenecks or inadequate services provided by suppliers. The coronavirus pandemic and international trade conflicts have recently proven to be risk factors. Project delays can cause costs to rise and earnings to be delayed. Furthermore, delays of renewable energy projects can be disadvantageous to the level of subsidies they receive. We counter these risks through circumspect planning and diligent project management.

  The COVID-19 pandemic, which has persisted for two years now, continues to expose us to risks, albeit to a manageable extent. As before, deliveries can be delayed. Theoretically, it is also conceivable that the reliable operation of our plants may be jeopardised if a large number of employees goes on sick leave. Thanks to comprehensive preventive measures and forward-looking emergency plans, so far we have been able to keep all major operational processes up and running, and we are confident that we can continue doing so.

RWE has ambitious growth targets and has increased its investment budgets significantly. We take care to ensure that our new-build projects and acquisitions satisfy our return requirements. If positive market developments occur after an investment decision has been made, electricity revenue and thus also returns can exceed expectations. However, it is also possible that income achieved through our projects falls short of forecasts and that prices paid for acquisitions prove to be too high retrospectively. We prepare our investment decisions by conducting extensive analyses to try and map the financial and strategic effects as realistically as possible before taking investment decisions. Moreover, RWE has specific accountability provisions and approval processes in place to prepare and implement the decisions.

Our business processes are supported by secure data processing systems. Nevertheless, it is not possible to rule out a lack of availability of IT infrastructure or a breach in data security. There is also a risk of cyber attacks. The Ukraine crisis may trigger a rise in these sorts of attacks. We limit our IT risks with high security standards, and groupwide cyber security training programmes are designed to mitigate them. In addition, we regularly invest in hardware and software upgrades.

As in the previous year, we classify our operational risks as 'medium'.

- **Financial risks.** Interest rates, foreign exchange rates, securities prices and rates of inflation are subject to fluctuations, which can be difficult to predict and can have a major impact on our net worth and earnings.

Changes in interest rates give rise to risks and opportunities in several respects. Market interest rates, for example, can impact our provisions, as they are the point of reference for the discount rates used for determining the net present values of obligations. This means that, all other things being equal, provisions decrease when market interest rates rise and increase when market interest rates fall. On pages 144 et seq. of the Notes, we present the effects of changes in interest rates on the net present values of our pension obligations and on the nuclear and mining provisions.

Rises in market interest rates can lead to reductions in the prices of the securities we hold and vice versa. This primarily relates to fixed-interest bonds. In 2021, we started measuring the price risk using a sensitivity analysis. As of the balance-sheet date, an increase in market interest rates of 100 basis points would have lowered the value of the bonds on our books by €28 million.

Moreover, interest rates also determine our financing costs. We measure the possible impact using the Cash Flow at Risk (CFaR), applying a confidence level of 95 % and a holding period of one year. The average CFaR at RWE AG in 2021 was €8 million.

Changes to the general price level can also give rise to risks and opportunities. Rising inflation can force us to increase the value of our future obligations and raise provisions. Price increases are particularly detrimental when they are above average in sectors from which we procure products and services for nuclear waste disposal and recultivating opencast mine areas.

With our focus on the global expansion of renewables, changes in exchange rates may increasingly impact our earnings. Companies which are overseen by RWE AG have their currency risks managed by the parent company. These risks are aggregated to a net financial position for each currency and hedged using currency derivatives if necessary. Our foreign currency risks are measured using sensitivity analyses. In the course of such, we calculate how a 10 % change in the exchange rate would affect the value of the respective foreign currency position. As of the balance-sheet date, the sum total of the sensitivities amounted to €0.3 million.

Security price fluctuations can have a considerable impact on RWE's financial assets and pension funds. In case of a stock market crisis, for example due to the conflict in Ukraine, we would possibly need to significantly increase our pension provisions in order to compensate our fund assets potentially losing value. We are also exposed to share price risks in relation to our 15 % stake in E.ON, which had a fair value of €4.8 billion at the end of 2021.

Risks and opportunities from changes in the price of securities are controlled by a professional fund management system. Range of action, responsibilities and controls are set out in internal guidelines which the Group companies are obliged to adhere to when concluding financial transactions. All financial transactions are recorded using special software and are monitored by RWE AG.

Collateral pledged for forward transactions also harbours a risk. The amount of the payments – variation margins in the case of exchange transactions – depends on the extent to which the contractually agreed prices deviate from market quotations as of the respective cut-off date. If differences are substantial, then they may weigh heavily on our liquidity. As set out on page 38 et seq., wholesale prices of electricity, natural gas and CO_2 emission allowances spiked substantially in 2021. This forced us to pay unusually high variation margins for electricity forward sales. Thanks to our robust financial position and use of financing instruments at our disposal, we were always able to provide the required funds. Another positive factor was that we received significant margin payments in relation to forward sales of commodities, in particular of CO_2 emission allowances.

The conditions at which we finance our debt capital are in part dependent on the credit ratings we receive from independent rating agencies. As set out on page 61, Moody's and Fitch place our creditworthiness in the investment grade category. If our rating deteriorates, we may incur additional costs if we have to raise debt capital. This would probably also increase the liquidity requirement when pledging collateral for forward transactions. However, we believe that such a scenario is unlikely. Just last year, Moody's and Fitch raised our credit score by one notch to Baa2 and BBB+, respectively, both with a stable outlook. In doing so, they rewarded us for our transformation into a leading renewable energy company through which we have become more financially robust.

The assessment of our creditworthiness by rating agencies, banks and capital investors depends in part on the level of our net debt. Our goal is to ensure that, in the medium term, it does not exceed three times the adjusted EBITDA of our core business. Despite this, net debt could temporarily be above budget, for instance if we have to pay high variation margins. Nevertheless, we are confident that we can keep our indebtedness below the cap.

Despite the significant increase in volatility on commodity markets, we continue to classify our financial risks as 'medium'.

- **Creditworthiness of business partners.** Our business relations with key accounts, suppliers, trading partners and financial institutions expose us to credit risks. Therefore, we track the creditworthiness of our partners closely and assess their credit standing based on internal and external ratings, both before and during the business relationship. Transactions that exceed a certain size and all trading transactions are subject to credit limits, which we determine before the transaction is concluded and adjust if necessary, for instance in the event of a change in the business partner's creditworthiness. At times, we request cash collateral or bank guarantees. In the trading and financing business, credit risks and the utilisation of the limits are measured daily. We agree on collateral when concluding over-the-counter trading transactions. Furthermore, we enter into framework agreements, e. g. those of the European Federation of Energy Traders. For financial derivatives, we make use of the German master agreement for forward financial transactions or the master agreement of the International Swaps and Derivatives Association.

The significant price spikes on commodity markets have increased the danger of transaction partners being unable to meet their obligations. The Ukraine crisis has further exacerbated this risk, in particular in relation to trading with Russian commodities producers. This exposes us to substantial financial losses especially with regard to contracts that are particularly valuable to us. We are monitoring the default risks closely and are assessing counterbalancing measures.

Although our risks stemming from the creditworthiness of our business partners have increased overall, they still do not exceed the 'medium' category.

- **Other risks.** This is the class in which we record the potential effects of damage to our reputation, compliance infringements and criminal acts. The risk of a COVID-19-driven decrease in electricity prices which may force us to recognise impairments for generation assets has also been recorded in this category. However, we now believe it is very unlikely that this will come to pass. Therefore, we have lowered the category of other risks from 'medium' to 'low'.

RWE's risks and opportunities: General assessment by management. Shifting our generation portfolio from fossil fuels to renewables has improved RWE's opportunity-risk profile. By aiming to be carbon neutral by 2040, we are demonstrating that we want to expedite the decarbonisation of the energy sector, thereby increasing our acceptance among politicians, capital lenders, customers and other stakeholder groups. At the same time, our solid financial management ensures that our company remains on a safe course. By analysing the effects of risks on our liquidity and pursuing a conservative financing strategy, we ensure that we can meet our payment obligations punctually. We have considerable liquid funds and great leeway in terms of debt financing, thanks to the Debt Issuance Programme, the Commercial Paper Programme and the syndicated credit line (see page 60). We budget our liquidity with foresight, based on the short, medium and long-term financing needs of our Group companies, and always hold a significant amount of minimum liquidity.

As shown by the commentary in this chapter, we consider unfavourable changes to the political and regulatory framework to be our biggest risk. Due to the war in Ukraine, developments are conceivable that could have a considerable negative impact on us. We are monitoring events closely as they unfold and are trying to limit these risks as much as possible. We could also become exposed to significant financial burdens due to the accelerated coal phaseout. We therefore class the political and regulatory risks as 'high'. In the previous year, we had classed them as 'medium'. That being said, we also see opportunities here. For example, we are confident that an earlier German coal exit would be associated with improved framework conditions for the expansion of renewables and for the creation of environmentally friendly backup assets. The additional investments and the steeper climb towards reducing emissions should again increase our acceptance among capital lenders and customers. It is also possible that the government may offer fair compensation regulations, contrary to early statements.

The booming commodity markets presents us with opportunities. If wholesale electricity prices remain high, renewable energy assets that do not receive fixed payments will achieve additional revenue. This also holds true for our conventional power stations as long as additional earnings are not offset by higher costs of fuel and CO_2 allowances. However, high electricity prices also increase the potential for greater earnings shortfalls in the event of unscheduled plant outages. Price hikes on the energy markets could also see the funds needed to collateralise forward contracts rise at short notice. The same applies to income generated by these contracts. As a result, standards on our liquidity management would become stricter and the risk of our contracting parties being unable to make payments would rise.

RWE has been affected by COVID-19 to a limited extent so far, and we are confident that this will not change. Projects may still be delayed owing to the pandemic. However, the risk of a sustained COVID-19-induced economic crisis resulting in a reduction in electricity prices and impairments to power stations has not materialised. In view of the latest economic recovery and the record energy prices, we now find that such a scenario is unlikely.

Thanks to the measures for safeguarding our financial and earning power over the long term and our comprehensive risk management system, we are confident that we can manage our current risks. At the same time, we are establishing the prerequisites for ensuring that this remains the case in the future. Overall, we do not currently foresee any risks that would undermine the viability of RWE AG or the RWE Group.

Accounting-related internal control system: Statements in accordance with Sec. 289, Para. 4, and Sec. 315, Para. 4 of the German Commercial Code. Our financial reporting is exposed to the risk of misrepresentations that could have a significant influence on the decisions made by their addressees. For example, stated earnings that are too high can cause capital investors to invest in a company. Capital market law regulations and RWE's Code of Conduct require that we inform the public of our business performance and important company specific events completely, objectively, accurately, clearly and in a timely manner. We use a series of tools to meet this ambition. Examples of this are our IFRS accounting regulation and the high minimum standards to which we subject the IT systems used to record and process accounting-related data. Furthermore, we use an accounting-related Internal Control System (ICS) for quality assurance purposes. The ICS aims to detect potential errors and misrepresentations that result from non-compliance with accounting standards. The Accounting Department of RWE AG is responsible for designing the ICS and reviewing its effectiveness. In doing so, it applies groupwide rules. In addition, it receives assistance from the ICS Committee, the objective of which is to ensure that the ICS is applied throughout the Group following uniform principles and meeting high ambitions in terms of correctness and transparency. The Committee consists of representatives from the Accounting, Controlling & Risk Management and Internal Audit & Security Departments, along with officers from the human resources, procurement, trading, finance, taxes and IT functions, which are highly relevant to accounting.

We subject the ICS to a comprehensive review every year. First, we examine whether the risk situation is presented appropriately and whether suitable controls are in place for the identified risks. Then, we test the effectiveness of the controls. If the ICS reviews pertain to accounting-related processes, e. g., to the preparation of financial statements or to consolidation, they are conducted by employees from the Accounting Department. When it comes to processes handled by service centres on our behalf, for example invoice processing, an auditor certifies the appropriateness and effectiveness of the controls. The representatives of the finance, human resources, procurement, trading, and IT functions document whether the agreed ICS quality standards are adhered to by their respective areas. Our Internal Audit & Compliance Department also oversees the ICS reviews. The results of the reviews are documented in a report to the Executive Board of RWE AG. The review conducted in 2021 once again demonstrated that the ICS is effective.

Within the scope of external reporting, the members of the Executive Board of RWE AG take an initial half-year and a full-year balance-sheet oath, confirming that the prescribed accounting standards have been adhered to and that the financial statements give a true and fair view of the net worth, financial position and earnings. When in session, the Supervisory Board's Audit Committee regularly concerns itself with the effectiveness of the ICS. Once a year, the Executive Board of RWE AG submits a report on this to the Committee.

2.11 Disclosure relating to German takeover law

The following disclosure is in accordance with Sections 315a and 289a of the German Commercial Code as well as with Section 176, Paragraph 1, Sentence 1 of the German Stock Corporation Act. The information relates to company-specific regulations, for example relating to adjustments to the capital structure by the Executive Board or a change of control of the company. At RWE, these provisions are in line with the standards of German listed companies.

Composition of subscribed capital. RWE AG's capital stock amounts to €1,731,123,322.88. It is divided among 676,220,048 no-par-value bearer shares.

Limitation of voting rights or share transfers and employee share schemes. One share grants one vote at the Annual General Meeting and determines the proportion of the company's profit to which the shareholder is entitled. This does not apply to RWE AG's treasury stock, which does not confer any rights to the company. Voting rights are excluded by law in cases where Section 136 of the German Stock Corporation Act applies.

Within the scope of an employee share plan, we issued 288,624 RWE shares to our employees in Germany in the financial year that just ended. The beneficiaries may only freely dispose of the shares after 31 December 2022.

RWE also has employee share schemes in the United Kingdom. Participating companies are RWE Generation UK plc, RWE Supply & Trading GmbH UK Branch and RWE Technology UK Limited. In 2021, employees purchased a total of 23,181 RWE shares under the UK schemes. These shares are also subject to a restriction on disposal, which lasts five years from the grant date.

Employees can exercise the control rights conferred on them from the employee shares in the same manner as other shareholders can whilst in compliance with statutory regulations and the provisions of the Articles of Incorporation.

Shares in capital accounting for more than 10 % of voting rights and special rights with control powers. As of 31 December 2021, no holding in RWE AG exceeded 10 % of the voting rights. There are no RWE shares with special rights that confer control powers.

Appointment and dismissal of Executive Board members / amendments to the Articles of Incorporation. Executive Board members are appointed and dismissed in accordance with Sections 84 et seq. of the German Stock Corporation Act in conjunction with Section 31 of the German Co-Determination Act. Amendments to the Articles of Incorporation are made pursuant to Sections 179 et seqq. of the German Stock Corporation Act in conjunction with Article 16, Paragraph 5 of the Articles of Incorporation of RWE AG. According to the aforementioned provision in the Articles of Incorporation, unless otherwise required by law or the Articles of Incorporation, the Annual General Meeting shall adopt all resolutions by a simple majority of the votes cast or – if a capital majority is required – by the simple majority of the capital stock represented when the resolution is passed. Pursuant to Article 10, Paragraph 9 of the Articles of Incorporation, the Supervisory Board is authorised to pass resolutions in favour of amendments to the Articles of Incorporation that only concern formal matters, without having a material impact on the content.

Executive Board authorisation to implement issuances and buybacks of RWE shares. On 28 April 2021, the Annual General Meeting authorised the Executive Board to increase the company's capital stock subject to the approval of the Supervisory Board by up to €346,224,663.04 through the issuance of up to 135,244,009 bearer shares (authorised capital). The authorisation is limited to five years and expires on 27 April 2026.

On 28 April 2021, the Annual General Meeting further authorised the Executive Board until 27 April 2026, subject to Supervisory Board approval, to issue bearer convertible and / or option bonds with a total face value of up to €5,000,000,000 with or without a limited maturity and to grant the bondholders convertible or option rights to bearer shares in the company. To enable the issuance of shares to holders of convertible and / or option bonds, the Annual General Meeting of 28 April 2021 conditionally increased the company's capital stock by up to €173,112,330.24, divided into up to 67,622,004 registered or bearer shares (conditional capital).

New shares from authorised capital and the aforementioned bonds may be issued in exchange for contributions in cash or in kind. These shares must generally be tendered to the shareholders for subscription. However, the Executive Board is authorised, subject to Supervisory Board approval, to waive subscription rights in the following cases:

- to avoid fractions of shares resulting from the subscription rate;
- if the issuance is conducted in exchange for contributions in kind;
- to provide protection from dilution in connection with convertible and / or option bonds that have already been issued; and
- if the issue price of the new shares or bonds is not significantly below their quotation or their theoretical fair value calculated by generally accepted methods of quantitative finance and if waived subscription rights are limited to no more than 10 % of the capital stock.

In sum, shares issued from authorised capital with a waiver of subscription rights and in connection with convertible or option bonds may not exceed 10 % of the capital stock. The aforementioned upper limit is defined by the amount of capital stock at the time the resolution providing the authorisation is adopted or when the authorisation is exercised, if the capital stock is lower. Other measures taken waiving subscription rights count towards the upper limit.

The Annual General Meeting of 26 April 2018 authorised the Executive Board of RWE AG, subject to Supervisory Board approval, to purchase shares in the company accounting for up to 10 % of the capital stock when the resolution is passed or when the authorisation is exercised, if the latter is lower at that time. At the Executive Board's discretion, the purchase can be made on the stock exchange or via a public offer.

Shares acquired in this manner may be used for all purposes described in the authorisation. Shareholder subscription rights may be waived depending on the purpose for which the shares are used.

Effects of a change of control on debt financing. Our debt financing instruments often contain clauses that take effect in the event of a change of control. Such a provision is in place e. g. in respect of our €5 billion syndicated credit line, and essentially means that in the event of a change of control or majority at RWE AG, drawings are suspended until further notice. The lenders shall enter into negotiations with us on a continuation of the credit line. The time limit for doing this is 30 days from the notification of the change of control. On expiry of the time limit, lenders who are not satisfied with the outcome of the negotiations may revoke their loan commitment or cancel the loan if it has already been paid out, requesting immediate repayment.

The green bonds issued in 2021 (see page 60) are also subject to change-of-control clauses. In the event that a change of control is announced or implemented, investors may request that their bonds be redeemed by a certain deadline, if RWE's long-term credit rating falls below investment grade due to the change of control or the rating agencies stop issuing us a credit rating. A similar rule applies to the senior bond that matures in 2037, a small portion of which remained on our books as it could not be fully transferred to innogy in 2016.

In the event of a change of control, we can redeem our two subordinated hybrid bonds with volumes of €282 million and US$317 million within the determined change-of-control period. If they are not redeemed and our long-term credit rating also falls below investment grade or credit ratings are no longer issued, their annual yield rises by 500 basis points.

Compensation agreement with the Executive Board and employees in the event of a takeover offer. The current version of the German Corporate Governance Code dated 16 December 2019 recommends that no commitments to additional benefits be made in the event that Executive Board members terminate their employment contract early due to a change of control. We fully adhere to this principle, meaning that we have not included clauses envisaging a special right of termination or rights to severance subject to a change of control in any of the current employment contracts of the members of the Executive Board of RWE AG.

Share-based payments made to the Executive Board members and executives are subject to the following provisions: in the event of a change of control, RWE will pay out all the performance shares that have been finally granted, but have not been paid out yet on expiry of the holding period. Performance shares granted on a preliminary basis on the date of a change of control are valued based on the degree to which the targets have been achieved up to that point in time. Performance shares granted on a preliminary basis in the year of the change of control lapse. They are replaced by a new plan of equal value for the Executive Board members and executives for the fiscal year in which the change of control occurs and the following years.

“Wind energy has a bright future. Being part of the energy transition is really exciting and opens up so many doors.”

Zefiro Drieghe, Wind Farm Supervisor, RWE Renewables

3

Responsibility Statement

3 Responsibility Statement

To the best of our knowledge, and in accordance with the applicable reporting principles, the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group, and the Group review of operations includes a fair review of the development and performance of the business and the position of the Group, together with a description of the principal opportunities and risks associated with the expected development of the Group.

Essen, 3 March 2022

The Executive Board

Krebber   Müller   Seeger

“For us, safety comes first. Both on site and when it comes to supplying our customers with energy.”

Ute Brimberg, Cluster Manager of the Emsland gas-fired power station, RWE Generation

4

Consolidated financial statements

4.1 Income statement

€ million	Note	2021	2020[1]
Revenue (including natural gas tax / electricity tax)	(1)	**24,761**	**13,896**
Natural gas tax / electricity tax	(1)	235	208
Revenue	(1)	**24,526**	**13,688**
Other operating income	(2)	2,257	4,977
Cost of materials	(3)	17,713	9,814
Staff costs	(4)	2,502	2,365
Depreciation, amortisation and impairment losses	(5), (10)	2,373	3,136
Other operating expenses	(6)	3,081	1,950
Income from investments accounted for using the equity method	(7), (12)	291	381
Other income from investments	(7)	130	-62
Financial income	(8)	1,810	1,933
Finance costs	(8)	1,823	2,387
Income from continuing operations before tax		**1,522**	**1,265**
Taxes on income	(9)	-690	-376
Income from continuing operations		**832**	**889**
Income from discontinued operations			221
Income		**832**	**1,110**
of which: non-controlling interests		111	59
of which: net income / income attributable to RWE AG shareholders		**721**	**1,051**
Basic and diluted earnings per share in €	(26)	**1.07**	**1.65**
of which: from continuing operations in €		1.07	1.36
of which: from discontinued operations in €			0.29

1 Some prior-year figures restated due to a retroactive change in the recognition of tax benefits to subsidise renewable energy in the USA (see commentary on pages 108 et seq.).

4.2 Statement of comprehensive income

Figures stated after taxes – € million	Note	2021	2020[1]
Income		**832**	**1,110**
Actuarial gains and losses of defined benefit pension plans and similar obligations		1,150	-493
Income and expenses of investments accounted for using the equity method (pro-rata)	(12)	10	-46
Fair valuation of equity instruments		1,117	-143
Income and expenses recognised in equity, not to be reclassified through profit or loss		**2,277**	**-682**
Currency translation adjustment	(20)	126	-391
Fair valuation of debt instruments		-29	19
Fair valuation of financial instruments used for hedging purposes	(27)	-3,474	-233
Income and expenses of investments accounted for using the equity method (pro rata)	(12), (20)	17	-6
Income and expenses recognised in equity, to be reclassified through profit or loss in the future		**-3,360**	**-611**
Other comprehensive income		**-1,083**	**-1,293**
Total comprehensive income		**-251**	**-183**
of which: attributable to RWE AG shareholders		-462	-200
of which: attributable to non-controlling interests		211	17

1 Some prior-year figures restated due to a retroactive change in the recognition of tax benefits to subsidise renewable energy in the USA (see commentary on pages 108 et seq.).

4.3 Balance sheet

Assets € million	Note	31 Dec 2021	31 Dec 2020[1]	1 Jan 2020[2]
Non-current assets				
Intangible assets	(10)	5,884	4,899	4,777
Property, plant and equipment	(11)	19,984	17,902	19,016
Investments accounted for using the equity method	(12)	3,021	3,276	3,252
Other non-current financial assets	(13)	5,477	4,237	4,337
Financial receivables	(14)	111	131	128
Other receivables and other assets	(15)	3,490	3,434	3,276
Income tax assets		233	142	264
Deferred taxes	(16)	663	397	680
		38,863	**34,418**	**35,730**
Current assets				
Inventories	(17)	2,828	1,632	1,585
Financial receivables	(14)	12,394	2,482	2,359
Trade accounts receivable		6,470	3,007	3,621
Other receivables and other assets	(15)	66,805	9,821	12,755
Income tax assets		427	228	196
Marketable securities	(18)	8,040	4,219	3,258
Cash and cash equivalents	(19)	5,825	4,774	3,192
Assets held for sale		657	1,061	1,274
		103,446	**27,224**	**28,240**
		142,309	**61,642**	**63,970**

1 Some prior-year figures restated due to a retroactive change in the recognition of tax benefits to subsidise renewable energy in the USA (see commentary on pages 108 et seq.) and retroactive adjustments to the first-time consolidation of operations which RWE acquired from Nordex in 2020 (see commentary on page 95).
2 Some prior-year figures restated due to a retroactive change in the recognition of tax benefits to subsidise renewable energy in the USA (see commentary on pages 108 et seq.).

Equity and liabilities € million	Note	31 Dec 2021	31 Dec 2020[1]	1 Jan 2020[2]
Equity	(20)			
RWE AG shareholders' interest		15,254	16,916	16,616
Non-controlling interests		1,742	790	503
		16,996	**17,706**	**17,119**
Non-current liabilities				
Provisions	(22)	16,943	19,470	18,937
Financial liabilities	(23)	6,798	3,951	3,924
Income tax liabilities	(24)	888	797	1,050
Other liabilities	(25)	1,729	1,355	1,094
Deferred taxes	(16)	1,948	1,862	2,197
		28,306	**27,435**	**27,202**
Current liabilities				
Provisions	(22)	4,268	3,004	2,638
Financial liabilities	(23)	10,996	1,247	1,689
Trade accounts payable		4,428	2,387	2,987
Income tax liabilities	(24)	44	236	193
Other liabilities	(25)	77,271	9,046	11,632
Liabilities held for sale			581	510
		97,007	**16,501**	**19,649**
		142,309	**61,642**	**63,970**

1 Some prior-year figures restated due to a retroactive change in the recognition of tax benefits to subsidise renewable energy in the USA (see commentary on pages 108 et seq.) and retroactive adjustments to the first-time consolidation of operations which RWE acquired from Nordex in 2020 (see commentary on page 95).
2 Some prior-year figures restated due to a retroactive change in the recognition of tax benefits to subsidise renewable energy in the USA (see commentary on pages 108 et seq.).

4.4 Cash flow statement

€ million	Note (30)	2021	2020[1]
Income from continuing operations		832	889
Depreciation, amortisation, impairment losses / write-backs		2,117	3,161
Changes in provisions		847	342
Changes in deferred taxes		840	422
Income from disposal of non-current assets and marketable securities		-268	-54
Other non-cash income / expenses		2,735	-652
Changes in working capital		171	17
Cash flows from operating activities of continuing operations		**7,274**	**4,125**
Cash flows from operating activities of discontinued operations			50
Cash flows from operating activities		**7,274**	**4,175**
Intangible assets / property, plant and equipment			
Capital expenditure		-3,689	-2,285
Proceeds from disposal of assets		393	132
Acquisitions, investments			
Capital expenditure		-80	-1,073
Proceeds from disposal of assets / divestitures		664	233
Changes in marketable securities and cash investments		-3,934	-1,189
Cash flows from investing activities of continuing operations (before initial / subsequent transfer to plan assets)		**-6,646**	**-4,182**
Initial / subsequent transfer to plan assets		-1,092	-96
Cash flows from investing activities of continuing operations (after initial / subsequent transfer to plan assets)		**-7,738**	**-4,278**
Cash flows from investing activities of discontinued operations			-76
Cash flows from investing activities (after initial / subsequent transfer to plan assets)		**-7,738**	**-4,354**

1 Some prior-year figures restated due to a retroactive change in the recognition of tax benefits to subsidise renewable energy in the USA (see commentary on pages 108 et seq.).

€ million	Note (30)	2021	2020[1]
Net change in equity (incl. non-controlling interests)		-184	2,230
Dividends paid to RWE AG shareholders and non-controlling interests		-730	-522
Issuance of financial debt		16,485	5,537
Repayment of financial debt		-14,114	-5,476
Cash flows from financing activities of continuing operations		**1,457**	**1,769**
Cash flows from financing activities of discontinued operations			6
Cash flows from financing activities		**1,457**	**1,775**
Net cash change in cash and cash equivalents		993	1,596
Effects of changes in foreign exchange rates and other changes in value on cash and cash equivalents		58	-34
Net change in cash and cash equivalents		**1,051**	**1,562**
Cash and cash equivalents at beginning of the reporting period		4,774	3,212
of which: reported as 'Assets held for sale'			20
Cash and cash equivalents at beginning of the reporting period as per the consolidated balance sheet		4,774	3,192
Cash and cash equivalents at the end of the reporting period		5,825	4,774
Cash and cash equivalents at end of the reporting period as per the consolidated balance sheet		**5,825**	**4,774**

1 Some prior-year figures restated due to a retroactive change in the recognition of tax benefits to subsidise renewable energy in the USA (see commentary on pages 108 et seq.).

4.5 Statement of changes in equity

Statement of changes in equity € million Note (20)	Subscribed capital of RWE AG	Additional paid-in capital of RWE AG	Retained earnings and distributable profit	Accumulated other comprehensive Income: Currency translation adjustments	Accumulated other comprehensive Income: Fair value measurement of financial instruments: Debt instruments measured at fair value through other comprehensive income	Accumulated other comprehensive Income: Fair value measurement of financial instruments: Used for hedging purposes	RWE AG shareholders' interest	Non-controlling interests	Total
Balance at 1 Jan 2020 prior to adjustment[1]	**1,574**	**2,385**	**8,908**	**1,097**	**45**	**2,955**	**16,964**	**503**	**17,467**
Adjustment[1]			-348				-348		-348
Balance at 1 Jan 2020[2]	**1,574**	**2,385**	**8,560**	**1,097**	**45**	**2,955**	**16,616**	**503**	**17,119**
Capital paid in	157	1,844	-11				1,990	162	2,152
Dividends paid			-492				-492	-64	-556
Income[2]			1,051				1,051	59	1,110
Other comprehensive income[2]			-682	-366	19	-222	-1,251	-42	-1,293
Total comprehensive income[2]			369	-366	19	-222	-200	17	-183
Other changes			-123			-875	-998	172	-826
Balance at 1 Jan 2021[2]	**1,731**	**4,229**	**8,303**	**731**	**64**	**1,858**	**16,916**	**790**	**17,706**
Capital paid out								-175	-175
Dividends paid			-575				-575	-155	-730
Income			721				721	111	832
Other comprehensive income			2,277	62	-29	-3,493	-1,183	100	-1,083
Total comprehensive income			2,998	62	-29	-3,493	-462	211	-251
Other changes			-21			-604	-625	1,071	446
Balance at 31 Dec 2021	**1,731**	**4,229**	**10,705**	**793**	**35**	**-2,239**	**15,254**	**1,742**	**16,996**

1 Restated due to a retroactive change in the recognition of tax benefits to subsidise renewable energy in the USA (see commentary on pages 108 et seq.).
2 Some prior-year figures restated due to a retroactive change in the recognition of tax benefits to subsidise renewable energy in the USA (see commentary on pages 108 et seq.).

4.6 Notes

Basis of presentation

RWE AG, recorded in Commercial Register B of the Essen District Court under HRB 14525 and headquartered at RWE Platz 1 in 45141 Essen, Germany, is the parent company of the RWE Group ('RWE' or 'Group'). RWE generates electricity from renewable and conventional sources, primarily in Europe and the USA.

The consolidated financial statements for the period ended 31 December 2021 were approved for publication on 3 March 2022 by the Executive Board of RWE AG. The statements were prepared in accordance with the International Financial Reporting Standards (IFRSs) applicable in the European Union (EU), as well as in accordance with the supplementary accounting regulations applicable pursuant to Sec. 315e, Para. 1 of the German Commercial Code (HGB). The previous year's figures were calculated according to the same principles.

A statement of changes in equity has been disclosed in addition to the income statement, the statement of comprehensive income, the balance sheet and the cash flow statement. The Notes also include segment reporting.

Several balance sheet and income statement items have been combined in the interests of clarity. These items are stated and explained separately in the Notes to the financial statements. The income statement is structured according to the nature of expense method.

The consolidated financial statements have been prepared in euros. Unless specified otherwise, all amounts are stated in millions of euros (€ million). Due to calculation procedures, rounding differences may occur.

These consolidated financial statements were prepared for the fiscal year from 1 January to 31 December 2021.

The Executive Board of RWE AG is responsible for the preparation, completeness and accuracy of the consolidated financial statements and the Group review of operations, which is combined with the review of operations of RWE AG.

We employ internal control systems, uniform groupwide directives, and programmes for basic and advanced staff training to ensure that the consolidated financial statements and combined review of operations are adequately prepared. Compliance with legal regulations and the internal guidelines as well as the reliability and viability of the control systems are continuously monitored throughout the Group.

In line with the requirements of the German Corporate Control and Transparency Act (KonTraG), the Group's risk management system enables the Executive Board to identify risks at an early stage and take countermeasures, if necessary.

The consolidated financial statements, the combined review of operations, and the independent auditors' report are discussed in detail by the Audit Committee and at the Supervisory Board's meeting on financial statements with the independent auditors present.

Scope of consolidation

In addition to RWE AG, the consolidated financial statements contain all material German and foreign companies which RWE AG controls directly or indirectly. In determining whether there is control, in addition to voting rights, other rights in company, inter-company, consortial and management contracts and potential voting rights are also taken into consideration.

Material associates are accounted for using the equity method, and principal joint arrangements are accounted for using the equity method or as joint operations.

Associates are companies on which RWE AG exercises a significant influence on the basis of voting rights of 20 % up to and including 50 % or on the basis of contractual agreements.

In classifying joint arrangements which are structured as independent vehicles, as joint operations or as joint ventures, other facts and circumstances – in particular delivery relationships between the independent vehicle and the parties participating in such – are taken into consideration, in addition to the legal form and contractual agreements.

Investments in subsidiaries, joint ventures, joint operations or associates which are of secondary importance from a Group perspective are accounted for in accordance with IFRS 9.

The list of Group shareholdings pursuant to Sec. 313, Para. 2 of the German Commercial Code (HGB) is presented on pages 184 et seqq.

The following summaries show the changes in the number of fully-consolidated companies as well as associates and joint ventures accounted for using the equity method:

Number of fully consolidated companies	Germany	Abroad	Total
1 Jan 2021	**55**	**197**	**252**
First-time consolidation	5	39	44
Deconsolidation	-2	-29	-31
Mergers	-3	-2	-5
31 Dec 2021	**55**	**205**	**260**

Number of companies accounted for using the equity method	Germany	Abroad	Total
1 Jan 2021	**11**	**20**	**31**
Acquisitions		1	1
Disposals		-2	-2
Other changes		1	1
31 Dec 2021	**11**	**20**	**31**

As in the previous year, two companies are presented as joint operations. Of these, Greater Gabbard Offshore Winds Limited, UK, is a material joint operation of the RWE Group. Greater Gabbard holds a 500 MW offshore wind farm, which RWE operates together with Scottish and Southern Energy (SSE) Renewables Holdings. RWE owns 50 % of the shares and receives 50 % of the power generated (including green power certificates). The wind farm is part of the Offshore Wind segment.

First-time consolidation and deconsolidation generally take place when control is obtained or lost.

Sales of shares which led to a change of control resulted in sales proceeds from disposals amounting to €186 million, which were reported in other operating income (previous year: €13 million). Furthermore, in the previous year a deconsolidation gain of €154 million on the sale of discontinued operations was recognised in the 'income from discontinued operations' line item on the income statement.

Acquisitions

Nordex wind and solar projects. In early November 2020, RWE completed the acquisition of 100 % of the shares in the companies NXD HOLDCO B.V. and NXD France SAS and thus gained control of the European development operations of the wind turbine manufacturer Nordex. Since then, the names of the acquired companies have been changed to RWE Renewables HoldCo B.V. and RWE Renouvelables France SAS.

The status at initial consolidation is presented in the following table as at 31 December 2020:

Balance-sheet items € million	IFRS carrying amounts (fair value) at initial consolidation (as at 31 Dec 2020)
Non-current assets	329
Current assets	
Non-current liabilities	56
Current liabilities	6
Net assets	**267**
Purchase price	375
Goodwill	**108**

An update of the figures reported during first-time consolidation was performed during the period under review and resulted in the following adjustments: Due to better understanding of the fair value of principally operating rights, the fair value of net assets stated upon first-time consolidation was reduced by €76 million, from €267 million to €191 million. As a result, the goodwill recognised upon first-time consolidation increased by €76 million to €184 million.

In the previous year, the acquired operations did not make significant contributions to the Group's revenue and earnings after initial consolidation.

The purchase price (excluding €21 million in redeemed shareholder loans) amounted to €375 million and was paid exclusively in cash and cash equivalents.

Shareholding in Rampion Renewables Ltd. increased to 100 %. On 1 April 2021, RWE acquired the roughly 40 % share in Rampion Renewables Limited ('RRL'), UK, which had been held by E.ON until then. Consequently, RWE obtained control over RRL and its subsidiary Rampion Offshore Wind Limited, in which RRL holds a 50.1 % stake. As a result of the transaction, RWE became the majority owner of the UK offshore wind farm Rampion, which has been fully consolidated since 1 April 2021. This transaction does not represent the acquisition of a business in the sense of IFRS 3 and resulted in an increase of €1,010 million in property, plant and equipment and of €1,105 million in intangible assets. There was no effect on earnings. The purchase price for the approximately 40 % share in RRL was already paid in December 2020. The 400-MW wind farm is located off the coast of Sussex and has been operating commercially since 2018.

King's Lynn power station. The acquisition of a 100 % stake in Centrica KL Limited ('CKLL'), Windsor, UK, was completed on 12 February 2020, as agreed with the British energy company GB Gas Holdings Limited, a subsidiary of Centrica plc, Windsor, UK, at the end of December 2019.

The initial accounting of the business combination from the previous year is presented in the following table, together with the assumed assets and liabilities:

Balance-sheet items € million	IFRS carrying amounts (fair value) at initial consolidation
Non-current assets	125
Current assets	5
Non-current liabilities	9
Current liabilities	88
Net assets	**33**
Purchase price	33
Goodwill	

In the previous year, the company contributed €25 million to the Group's revenue and €12 million to the Group's earnings after its initial consolidation.

Excluding €80 million in redeemed shareholder loans, the purchase price amounted to €33 million, which was paid exclusively in cash and cash equivalents during the previous year.

Disposals, disposal groups, assets held for sale and discontinued operations

Sale of a 75 % stake in the onshore wind farms Stella, Cranell, East Raymond and West Raymond. In January 2021, the sale of a total of 75 % of the shares in the three onshore wind farms Stella, Cranell and East Raymond in Texas was completed. In total, 75 % of the shares in West Raymond were sold in August 2021. In this transaction, 51 % of the shares were sold to Algonquin Power Fund (America) Inc., USA, a subsidiary of Algonquin Power & Utilities Corp., Canada, and another 24 % of the shares to the UK investment firm Greencoat Capital LLP. The underlying contracts were concluded in December 2020. As of 31 December 2020, the assets and liabilities of the four wind farms were thus reported as 'held for sale' in the balance sheet.

The divested wind farms were assigned to the Onshore Wind / Solar segment. Upon completion of the transaction in January and August 2021, RWE deconsolidated the above wind farms and reported its remaining 25 % stake as an investment accounted for using the equity method. The gain on deconsolidation amounted to €156 million and was recognised in the 'other operating income' line item on the income statement. Additionally, in relation to the derecognition of a commodity derivative in this transaction, a current expense of €34 million reported under 'other operating expenses' is also taken into account.

Sale of 100 % of the shares in Energies France and Investerg to KELAG. At the end of April 2021, RWE sold 100 % of the shares in Energies France, S.A.S., France. The gain on deconsolidation amounted to €9 million and was recognised in the 'other operating income' line item on the income statement.

RWE also sold 100 % of the shares in Investerg – Investimentos em Energias, SGPS, Lda., Portugal, to the Austrian energy utility KELAG at the end of September 2021. The gain on deconsolidation amounted to €7 million and was recognised in the 'other operating income' line item on the income statement.

Upon completion of these two transactions that were agreed in December 2020, KELAG acquired twelve French hydroelectric stations from RWE with a combined generation capacity of 45 MW, as well as the Portuguese run-of-river operations and some wind turbines with a total generation capacity of 20 MW (pro-rata share of RWE). Energies France was part of the Hydro /Biomass / Gas segment, while Investerg was assigned to Onshore Wind / Solar. KELAG is an associate company of RWE.

Sale of the grid connection for the Rampion offshore wind farm. In order to comply with competition law requirements, RWE was obligated to sell the grid connection for the Rampion offshore wind farm, which had been fully consolidated since 1 April 2021. Sale of the grid connection, which was part of the Offshore Wind segment, was completed on 19 November 2021. No disposal result was recorded.

Disposal of parts of the Belectric Group. In December 2021, RWE sold the companies BELECTRIC GmbH, Belectric France S.à.r.l., Belectric Israel Ltd., Belectric Italia s.r.l. and Belectric Solar Ltd. to the Elevion Group B.V., and thus disposed of its business for services in the fields of engineering, procurement, construction, operation and maintenance of solar plants for third parties in Germany, France, Israel, Italy and the United Kingdom. The Elevion Group is an energy services provider headquartered in the Netherlands, which is part of the ČEZ Group. The gain on deconsolidation amounted to €4 million and was recognised in the 'other operating income' line item on the income statement. The divested companies were part of the segment Onshore Wind / Solar.

Sale of the grid connection for the Triton Knoll offshore wind farm. In order to comply with competition law requirements, RWE must sell the grid connection for the Triton Knoll offshore wind farm. The book value of the grid connection, which consists exclusively of property, plant and equipment, is reported as 'held for sale' in the balance sheet as of 31 December 2021, in the amount of €657 million. This asset held for sale is assigned to the Offshore Wind segment. The sale is expected to be completed in the latter half of 2022.

Východoslovenská energetika Holding a.s. (VSEH). On 21 August 2020, RWE sold the shares in its fully consolidated investment in the Slovak power and gas utility Východoslovenská energetika Holding a.s. (VSEH), which was previously stated as part of 'innogy – discontinued operations', to E.ON. The deconsolidation gain in the previous year amounted to €154 million and was stated in the 'income from discontinued operations' line item on the income statement.

Major key figures of the activities of the discontinued operations deconsolidated as of 21 August 2020 are presented in the following tables:

Key figures of the disposal group € million	31 Dec 2019
Non-current assets	
Intangible assets	405
Property, plant and equipment	734
Other non-current assets	8
	1,147
Current assets	**127**
Non-current liabilities	
Provisions	9
Financial liabilities	225
Other non-current liabilities	131
	365
Current liabilities	**145**

Key figures of the discontinued operations € million	2020	2019
Revenue[1]	507	23,890
Other income[2]	15	1,518
Expenses[3]	437	23,214
Income of discontinued operations before tax	85	2,194
Taxes on income	18	636
Deconsolidation gain	154	8,258
Income of discontinued operations	221	9,816

1 Including income with continuing operations in the amount of €1,402 million in the previous year.
2 Including income with continuing operations in the amount of €108 million in the previous year.
3 Including expenses with continuing operations in the amount of €119 million (previous year: €9,772 million).

Georgia Biomass Holding LLC. The sale of Georgia Biomass Holding LLC, which had been contractually agreed on 18 June 2020, was completed on 31 July 2020. Georgia Biomass Holding LLC was responsible for RWE's biomass business in the USA and was part of the Hydro / Biomass / Gas segment. The deconsolidation gain on this transaction amounted to €13 million, which was recognised in the 'other operating income' line item on the income statement in the previous year.

Seabreeze II installation ship. In April 2020, the Seabreeze II offshore installation ship (jack-up vessel) and the related equipment was sold and transferred to SPIC Ronghe International Financial Leasing Co. Ltd. The ship was part of the Offshore Wind segment. In the previous year, this transaction resulted in a gain in the medium double-digit million euro range, which was recognised in the 'other operating income' line item on the income statement for that period.

Consolidation principles

The financial statements of German and foreign companies included in the scope of the Group's financial statements are prepared using uniform accounting policies. On principle, subsidiaries whose fiscal years do not end on the Group's balance-sheet date (31 December) prepare interim financial statements as of this date. Two subsidiaries have a different balance-sheet date of 31 March (previous year: three). Different fiscal years compared to the calendar year stem from tax-related reasons or country-specific regulations.

Business combinations are reported according to the acquisition method. This means that capital consolidation takes place by offsetting the purchase price, including the amount of the non-controlling interests, against the acquired subsidiary's revalued net assets at the time of acquisition. In doing so, the non-controlling interests can either be measured at the prorated value of the subsidiary's identifiable net assets or at fair value. The subsidiary's identifiable assets, liabilities and contingent liabilities are measured at full fair value, regardless of the amount of the non-controlling interests. Intangible assets are reported separately from goodwill if they are separable from the company or if they stem from a contractual or other right. In accordance with IFRS 3, no new restructuring provisions are recognised within the scope of the purchase price allocation. If the purchase price exceeds the revalued prorated net assets of the acquired subsidiary, the difference is capitalised as goodwill. If the purchase price is lower, the difference is included in income.

In the event of deconsolidation, the related goodwill is derecognised with an effect on income. Changes in the ownership share which do not alter the ability to control the subsidiary are recognised without an effect on income. By contrast, if there is a change in control, the remaining shares are remeasured at fair value with an effect on income.

Expenses and income as well as receivables and payables between consolidated companies are eliminated; intra-group profits and losses are eliminated.

For investments accounted for using the equity method, goodwill is not reported separately, but rather included in the value recognised for the investment. In other respects, the consolidation principles described above apply analogously. If impairment losses on the equity value become necessary, we report such under income from investments accounted for using the equity method. The financial statements of investments accounted for using the equity method are also prepared using the Group's uniform accounting policies.

Foreign currency translation

In their individual financial statements, the companies measure non-monetary foreign currency items at the balance-sheet date using the exchange rate in effect on the date they were initially recognised. Monetary items are converted using the exchange rate valid on the balance-sheet date. Exchange rate gains and losses from the measurement of monetary balance-sheet items in foreign currency occurring up to the balance-sheet date are recognised on the income statement.

Functional foreign currency translation is applied when converting the financial statements of companies outside of the Eurozone. As the principal foreign enterprises included in the consolidated financial statements conduct their business activities independently in their national currencies, their balance-sheet items are translated into euros in the consolidated financial statements using the average exchange rate prevailing on the balance-sheet date. This also applies for goodwill, which is viewed as an asset of the economically autonomous foreign entity. We report differences to previous-year translations in other comprehensive income without an effect on income. Expense and income items are translated using annual average exchange rates. When translating the adjusted equity of foreign companies accounted for using the equity method, we follow the same procedure.

The following exchange rates (among others) were used as a basis for foreign currency translations:

Exchange rates	Average		Year-end	
in €	2021	2020	31 Dec 2021	31 Dec 2020
1 US dollar	0.85	0.87	0.88	0.81
1 British pound	1.16	1.12	1.19	1.11
100 Czech korunas	3.90	3.77	4.02	3.81
1 Polish zloty	0.22	0.22	0.22	0.22
1 Danish crown	0.13	0.13	0.13	0.13
1 Swedish crown	0.10	0.10	0.10	0.10
1 Norwegian crown	0.10	0.09	0.10	0.10

Accounting policies

Intangible assets are accounted for at amortised cost. With the exception of goodwill, all intangible assets have finite useful lives and are amortised using the straight-line method. Useful lives and methods of amortisation are reviewed on an annual basis.

Software for commercial and technical applications is amortised over three to five years. 'Operating rights' refer to the entirety of the permits and approvals required for the operation of a power plant. Such rights are generally amortised over the economic life of the power plant, using the straight-line method. Capitalised customer relations are amortised over a maximum period of up to 18 years.

Goodwill is not amortised; instead it is subjected to an impairment test once every year, or more frequently if there are triggers for an impairment.

Development costs are capitalised if a newly developed product or process can be clearly defined, is technically feasible and it is the company's intention to either use the product or process itself or market it. Furthermore, asset recognition requires that there be a sufficient level of certainty that the development costs lead to future cash inflows. Capitalised development costs are amortised over the period during which the products are expected to be sold. Research expenditures are recognised as expenses in the period in which they are incurred.

An impairment loss is recognised for an intangible asset if the recoverable amount of the asset is less than its carrying amount. A special regulation applies for cases when the asset is part of a cash-generating unit. Such units are defined as the smallest identifiable group of assets which generates cash inflows; these inflows must be largely independent of cash inflows from other assets or groups of asset. If the intangible asset is a part of a cash-generating unit, the impairment loss is calculated based on the recoverable amount of this unit. If goodwill was allocated to a cash-generating unit and the carrying amount of the unit exceeds the recoverable amount, the allocated goodwill is initially written down by the difference. Impairment losses which must be recognised in addition to this are taken into account by reducing the carrying amount of the other assets of the cash-generating unit on a prorated basis. If the reason for an impairment loss recognised in prior periods has ceased to exist, a write-back to intangible assets is performed. The increased carrying amount resulting from the write-back may not, however, exceed the amortised cost. Impairment losses on goodwill are not reversed.

Property, plant and equipment is stated at depreciated cost. Borrowing costs are capitalised as part of the asset's cost, if they are incurred directly in connection with the acquisition or production of a 'qualified asset'. What characterises a qualified asset is that a considerable period of time is required to prepare it for use or sale. If necessary, the cost of property, plant and equipment may contain the estimated expenses for the decommissioning of plants or site restoration. Maintenance and repair costs are recognised as expenses.

With the exception of land and leasehold rights, as a rule, property, plant and equipment is depreciated using the straight-line method, unless in exceptional cases another depreciation method is better suited to the usage pattern. The depreciation methods are reviewed annually. We calculate the depreciation of RWE's typical property, plant and equipment according to the following useful lives, which apply throughout the Group and are also reviewed annually:

Useful life in years	
Buildings	7 - 50
Technical plants	
Thermal power plants	6 - 40
Wind turbines	Up to 25
Gas and water storage facilities	10 - 60
Mining facilities	3 - 25
Other renewable generation facilities	5 - 50

In relation to lignite mining and generation, the decommissioning data from the Act on Coal Phaseout are taken into consideration in determining the useful life spans.

Property, plant and equipment also include right-of-use assets resulting from leases of which RWE is the lessee. These right-of-use assets are measured at cost. The cost results from the present value of the lease instalments, adjusted to take into account advance payments, initial direct costs and potential dismantling obligations and corrected for received lease incentives. Right-of-use assets are depreciated using the straight-line method over the lease term or the expected useful life, whichever is shorter.

For short-term leases and leases for low-value assets, lease instalments are recognised as an expense over the lease term. For operating leases of which RWE is the lessor, the minimum lease instalments are recognised as income over the lease term.

Impairment losses and write-backs on property, plant and equipment are recognised according to the principles described for intangible assets.

Investments accounted for using the equity method are initially accounted for at cost and thereafter based on the carrying amount of their prorated net assets. The carrying amounts are increased or reduced annually by prorated profits or losses, dividends and all other changes in equity. Goodwill is not reported separately, but rather included in the recognised value of the investment. Goodwill is not amortised. An impairment loss is recognised for investments accounted for using the equity method, if the recoverable amount is less than the carrying amount.

The initial measurement of **other financial assets** occurs at the settlement date. Shares in non-consolidated subsidiaries and in associates or joint ventures are recognised at fair value through profit or loss insofar as such can be determined reliably. Other investments are also recognised at fair value, insofar as such can be determined reliably. The option to state changes in fair value in other comprehensive income is exercised for some of these equity instruments. Non-current securities are also accounted for at fair value and changes in value are recognised through profit or loss or other comprehensive income depending on their classification. Gains and losses on sales of equity instruments, for which the option to state changes in fair value in other comprehensive income is exercised, remain in equity and are not reclassified to the income statement. An impairment in the amount of the expected credit losses is recognised through profit or loss for debt instruments that are recognised at fair value through other comprehensive income. The changes reported in other comprehensive income are recognised with an effect on earnings upon the sale of these instruments.

Receivables are comprised of **financial receivables, trade accounts receivable** and **other receivables.** Aside from financial derivatives, **receivables and other assets** are stated at amortised cost minus a risk provision in the amount of the expected losses.

Loans reported under financial receivables are stated at amortised cost minus a risk provision in the amount of the expected losses. Loans with interest rates common in the market are shown on the balance sheet at nominal value; as a rule, however, non-interest or low-interest loans are disclosed at their present value discounted using an interest rate commensurate with the risks involved.

CO_2 emission allowances and certificates for renewable energies are accounted for as intangible assets and reported under other assets; both are stated at cost and are not amortised.

Deferred taxes result from temporary differences in the carrying amount in the separate IFRS financial statements and tax bases, and from consolidation procedures. Deferred tax assets also include tax reduction claims resulting from the expected utilisation of existing loss carryforwards in subsequent years. Deferred taxes are capitalised if it is sufficiently certain that the related economic advantages can be used. Their amount is assessed with regard to the tax rates applicable or expected to be applicable in the specific country at the time of realisation. The tax regulations valid or adopted as of the balance-sheet date are key considerations in this regard. Deferred tax assets and deferred tax liabilities are netted out for each company and / or tax group.

Inventories are assets which are held for sale in the ordinary course of business (finished goods and goods for resale), which are in the process of production (work in progress – goods and services) or which are consumed in the production process or in the rendering of services (raw materials including nuclear fuel assemblies and excavated earth for lignite mining).

Insofar as inventories are not acquired primarily for the purpose of realising a profit on a short-term resale transaction, they are carried at the lower of cost or net realisable value. Production costs reflect the full costs directly related to production; they are determined based on normal capacity utilisation and, in addition to directly allocable costs, they also include adequate portions of required materials and production overheads. They also include production-related depreciation. Borrowing costs, however, are not capitalised as part of the cost. The determination of cost is generally based on average values. The usage of excavated earth for lignite mining is calculated using the 'first in – first out' method (FIFO).

If the net realisable value of inventories written down in earlier periods has increased, the reversal of the write-down is recognised as a reduction of the cost of materials.

Nuclear fuel assemblies are stated at amortised cost. Depreciation is determined by operation and capacity, based on consumption and the reactor's useful life.

Inventories which are acquired primarily for the purpose of realising a profit on a short-term resale transaction are recognised at fair value less costs to sell. Changes in value are recognised with an effect on income.

Securities classified as current marketable securities essentially consist of fixed-interest securities which have a maturity of more than three months and less than one year from the date of acquisition. Securities are measured at fair value through profit or loss or at fair value through other comprehensive income. The transaction costs directly associated with the acquisition of these securities are included in the initial measurement, which occurs on their settlement date. Unrealised gains and losses are recognised through profit or loss or other comprehensive income, with due consideration of any deferred taxes depending on the underlying measurement category. An impairment in the amount of the expected credit losses is recognised through profit or loss for debt instruments that are stated at fair value through other comprehensive income. Changes included in other comprehensive income are recognised through profit or loss on disposal of such instruments.

Cash and cash equivalents consist of cash on hand, demand deposits and current fixed-interest securities with a maturity of three months or less from the date of acquisition.

Assets are stated under **Assets held for sale** if they can be sold in their present condition and their sale is highly probable within the next twelve months. Such assets may be certain non-current assets, asset groups ('disposal groups') or operations ('discontinued operations'). Liabilities intended to be sold in a transaction together with assets are a part of a disposal group or discontinued operations, and are reported separately under **Liabilities held for sale**.

Non-current assets held for sale are no longer depreciated or amortised. They are recognised at fair value less costs to sell, as long as this amount is lower than the carrying amount.

Gains or losses on the valuation of specific assets held for sale and of disposal groups are stated under income from continuing operations until final completion of the sale. Gains or losses on the valuation of discontinued operations and on certain assets of a discontinued operation, which are not subject to the valuation rules pursuant to IFRS 5, are stated under income from discontinued operations.

The stock option plans granted by RWE to executives and corporate bodies are accounted for as cash-settled **share-based payment**. At the balance-sheet date, a provision is recognised in the amount of the prorated fair value of the payment obligation. Changes in the fair value are recognised with an effect on income. The fair value of options is determined using generally accepted valuation methodologies.

Provisions are recognised for all legal or constructive obligations to third parties which exist on the balance-sheet date and stem from past events which will probably lead to an outflow of resources, and the amount of which can be reliably estimated. Provisions are carried at their prospective settlement amount and are not offset against reimbursement claims. If a provision involves a large number of items, the obligation is estimated by weighting all possible outcomes by their probability of occurrence (expected value method).

All non-current provisions are recognised at their prospective settlement amount, which is discounted as of the balance-sheet date. In the determination of the settlement amount, any cost increases likely to occur up until the time of settlement are taken into account.

If necessary, the cost of property, plant and equipment may contain the estimated expenses for the decommissioning of plants or site restoration. Decommissioning, restoration and similar provisions are recognised for these expenses. If changes in the discount rate or changes in the estimated timing or amount of the payments result in changes in the provisions, the carrying amount of the respective asset is increased or decreased by the corresponding amount. If the decrease in the provision exceeds the carrying amount, the excess is recognised immediately through profit or loss.

As a rule, releases of provisions are credited to the expense account on which the provision was originally recognised.

Provisions for pensions and similar obligations are recognised for defined benefit plans. These are obligations of the company to pay future and ongoing post-employment benefits to entitled current and former employees and their surviving dependents. In particular, the obligations refer to retirement pensions. Individual commitments are generally oriented to the employees' length of service and compensation.

Provisions for defined benefit plans are based on the actuarial present value of the respective obligation. This is measured using the projected unit credit method. This method not only takes into account the pension benefits and benefit entitlements known as of the balance-sheet date, but also anticipated future increases in salaries and pension benefits. The calculation is based on actuarial reports, taking into account appropriate biometric parameters (for Germany, in particular the 'Richttafeln 2018 G' by Klaus Heubeck, and the Standard SAPS Table S2PA of the respective year for the United Kingdom, taking into consideration future changes in mortality rates). The provision derives from the balance of the actuarial present value of the obligations and the fair value of the plan assets. The service cost is disclosed in staff costs. Net interest is included in the financial result.

Gains and losses on the revaluation of net defined benefit liability or asset are fully recognised in the fiscal year in which they occur. They are reported outside of profit or loss, as a component of other comprehensive income in the statement of comprehensive income, and are immediately assigned to retained earnings. They remain outside profit or loss in subsequent periods as well.

In the case of defined contribution plans, the enterprise's obligation is limited to the amount it contributes to the plan. Contributions to the plan are reported under staff costs.

Waste management provisions in the nuclear energy sector are based on obligations under public law, in particular the German Atomic Energy Act, and on restrictions from operating licenses. These provisions are measured using estimates, which are based on and defined in contracts as well as on information from internal and external specialists (e. g. experts).

Obligations existing as of the balance-sheet date and identifiable when the balance sheet is being prepared are recognised as provisions for mining damage to cover land recultivation and remediation of mining damage that has already occurred or been caused. The provisions must be recognised due to obligations under public law, such as the German Federal Mining Act, and formulated, above all, in operating schedules and water law permits. Provisions are generally fully related to the degree of mining in question. Such provisions are measured at full expected cost or according to estimated compensation payments. Cost estimates are based on external expert opinions to a significant extent.

A provision is recognised to cover the obligation to submit CO_2 emission allowances and certificates for renewable energies to the respective authorities; this provision is primarily measured at the secured forward price of the CO_2 allowances or certificates for renewable energies. If a portion of the obligation is not covered with allowances that are available or have been purchased forward, the provision for this portion is measured using the market price of the emission allowances or certificates for renewable energies on the reporting date.

Liabilities consist of **financial liabilities, trade accounts payable, income tax liabilities** and **other liabilities**. Upon initial recognition, these are generally stated at fair value including transaction costs and are carried at amortised cost in the periods thereafter (except for derivative financial instruments). Lease liabilities are measured at the present value of the future lease payments. For subsequent measurements, the lease payments are divided into the financing costs and repayment portion of the outstanding debt. Financing costs are distributed over the lease term in such a manner that a steady interest rate is created for the outstanding debt.

If uncertain income tax items are recognised in income tax liabilities because they are probable, the former are generally measured at the most likely amount. Measurement at expected value is only considered in exceptional cases.

Moreover, other liabilities also include contract liabilities. A contract liability is the obligation of the Group to transfer goods or services to a customer, for which we have already received consideration or for which the consideration is already due.

Government grants provided in relation to the acquisition of an asset are not deducted from the cost of the subsidised asset; they are reported as deferrals under other liabilities. These deferrals are reversed with an effect on income over the economic life of the subsidised asset.

Derivative financial instruments are recognised as assets or liabilities and measured at fair value, regardless of their purpose. Changes in this value are recognised with an effect on income, unless the instruments are used for hedge accounting purposes. In such cases, recognition of changes in the fair value depends on the type of hedging transaction.

Fair value hedges are used to hedge assets or liabilities carried on the balance sheet against the risk of a change in their fair value. The following applies: changes in the fair value of the hedging instrument and the fair value of the respective underlying transactions are recognised in the same line item on the income statement. Hedges of unrecognised firm commitments are also recognised as fair value hedges. Changes in the fair value of the firm commitments with regard to the hedged risk result in the recognition of an asset or liability with an effect on income.

Cash flow hedges are used to hedge the risk of variability in future cash flows related to an asset or liability carried on the balance sheet or related to a highly probable forecast transaction. If a cash flow hedge exists, unrealised gains and losses from the hedging instrument are initially stated as other comprehensive income. Such gains or losses are only included on the income statement when the hedged underlying transaction has an effect on income. If forecast transactions are hedged and such transactions lead to the recognition of a financial asset or financial liability in subsequent periods, the amounts that were recognised in equity until this point in time are recognised on the income statement in the period during which the asset or liability affects the income statement. If the transactions result in the recognition of non-financial assets or liabilities, for example the acquisition of property, plant and equipment, the amounts recognised in equity without an effect on income are included in the initial cost of the asset or liability.

The purpose of hedges of a net investment in foreign operations (net investment hedges) is to hedge the currency risk from investments with foreign functional currencies. With the exception of hedging costs, unrealised gains and losses from such hedges are recognised in other comprehensive income until disposal of the foreign operation.

Hedging relationships must be documented in detail and meet the following effectiveness requirements:

- there is an economic relationship between the hedged item and the hedging instrument,
- the value change of hedging relationship is not dominated by the credit risk, and
- the hedge ratio is the same as that resulting from the quantities used within the scope of risk management.

Only the effective portion of a hedge is recognised in accordance with the preceding rules. The ineffective portion is recognised immediately on the income statement with an effect on income.

Contracts on the receipt or delivery of non-financial items in accordance with the company's expected purchase, sale or usage requirements (own-use contracts) are not accounted for as derivative financial instruments, but rather as executory contracts. If the contracts contain embedded derivatives, the derivatives are accounted separately from the host contract, insofar as the economic characteristics and risks of the embedded derivatives are not closely related to the economic characteristics and risks of the host contract. Written options to buy or sell a non-financial item which can be settled in cash are not own-use contracts.

Contingent liabilities are possible obligations to third parties or existing obligations which will probably not lead to an outflow of economic benefits or the amount of which cannot be measured reliably. Contingent liabilities are only recognised on the balance sheet if they were assumed within the framework of a business combination. The amounts disclosed in the Notes correspond to the best possible estimate of the settlement amount at the balance-sheet date.

Contingent assets are possible assets resulting from past events, the existence of which must be confirmed by future events that are not under the full control of RWE. Contingent assets are not stated in the balance sheet. The volumes reported in the Notes correspond to estimates of the possible financial ramifications as of the balance-sheet date.

As explained on page 37, renewable energy projects in the USA are primarily subsidised via tax credits and tax benefits (hereinafter referred to jointly as tax items). Within the framework of so-called **tax equity** financing, tax equity investors participate directly in financing the generation facilities of individual project companies. Due to its financing character, the capital contributed by the tax equity investor is reported under financial liabilities, in the amount of the outstanding repayment.

Repayment of interest and capital for the tax equity liability occurs primarily via the direct allocation of the tax items generated by the project to the tax equity investor, which can then apply the items in relation to its own tax accounting. In addition to this, repayment of interest and capital also occurs in cash.

The tax equity arrangement and the related obligation to maintain proper operations is treated similar to a contract for services. The income resulting from the tax items is recorded under other operating income, with this income realised using the straight-line method over the anticipated duration of the tax equity contracts. In this regard, linear realisation of the income is capped at the amount of income that will most likely be generated during the contract, and any amounts above and beyond this are only recognised up to the amount of income that is actually generated.

Management judgements in the application of accounting policies. Management judgements are required in the application of accounting policies. In particular, this pertains to the following aspects:

- With regard to certain contracts, a decision must be made as to whether they are to be treated as derivatives or as so-called own-use contracts, and be accounted for as executory contracts.
- Financial assets are classified by contractual cash flows and applied business model. Whereas the contractual cash flows are determined by the characteristics of the financial instruments, the business model is based on the Group's internal requirements relating to the portfolios of financial instruments.
- With regard to assets held for sale, it must be determined if they can be sold in their current condition and if the sale of such is highly probable in the next twelve months. If both conditions apply, the assets and any related liabilities must be reported and measured as assets or liabilities held for sale, respectively.

Management estimates and judgements. Preparation of consolidated financial statements pursuant to IFRS requires assumptions and estimates to be made, which have an impact on the recognised value of the assets and liabilities carried on the balance sheet, on income and expenses and on the disclosure of contingent liabilities.

Amongst other things, these assumptions and estimates relate to the accounting and measurement of provisions. With regard to non-current provisions, the discount factor to be applied is an important estimate, in addition to the amount and timing of future cash flows. The discount factor for pension obligations is determined on the basis of yields on high-quality, fixed-rate corporate bonds on the financial markets as of the balance-sheet date. The new government coalition consisting of the SPD, the Green Party and the FDP wishes to accelerate Germany's phaseout of coal, in the interests of climate protection. 2030 is stated as the desired final date in the coalition agreement. This is eight years earlier than envisaged in the current legal roadmap. The accounting policies continue to be based on the 2038 decommissioning date as foreseen in the current legal regulations.

The rules governing valuation allowances for financial assets under IFRS 9 stipulate that the expected credit losses must be determined. The valuation allowance is based on information from within and outside the Group.

The impairment test for goodwill and non-current assets is based on certain assumptions pertaining to the future, which are regularly adjusted. Property, plant and equipment is tested for indications of impairment on each cut-off date. Based on the respective business models, the anticipated effects of the coronavirus pandemic did not make it necessary to conduct any impairment tests.

Power plants are grouped together as a cash-generating unit if their production capacity and fuel needs are centrally managed as part of a portfolio, and it is not possible to ascribe individual contracts and cash flows to the specific power plants.

Upon first-time consolidation of an acquired company, the identifiable assets, liabilities and contingent liabilities are recognised at fair value. Determination of the fair value is based on valuation methods which require a projection of anticipated future cash flows.

Deferred tax assets are recognised if realisation of future tax benefits is probable. Actual future development of income for tax purposes and hence the realisability of deferred tax assets, however, may deviate from the estimation made when the deferred taxes are capitalised.

Further information on the assumptions and estimates upon which these consolidated financial statements are based can be found in the explanations of the individual items.

All assumptions and estimates are based on the circumstances and forecasts prevailing on the balance-sheet date. Furthermore, as of the balance-sheet date, realistic assessments of overall economic conditions in the sectors and regions in which RWE conducts operations are taken into consideration with regard to the prospective development of business. Actual amounts may deviate from the estimated amounts if the overall conditions develop differently than expected. In such cases, the assumptions, and, if necessary, the carrying amounts of the affected assets and liabilities are adjusted.

As of the date of preparation of the consolidated financial statements, it is not presumed that there will be any material changes compared to the assumptions and estimates.

Capital management. The focus of RWE's financing policy is on ensuring uninterrupted access to the capital market. The goal is to be in a position to refinance maturing debts and finance the operating activities at all times. Maintaining a solid rating and a positive operating cash flow from continuing activities serve this purpose.

The management of RWE's capital structure is oriented towards a leverage factor of three or less. This indicator is calculated by adding material non-current provisions, with the exception of mining provisions, to net financial debt and comparing the resulting figure to the adjusted EBITDA of the core business. RWE's liabilities of relevance to net debt primarily consist of (hybrid) bonds, short-term borrowing and provisions for pensions, nuclear waste management and wind farms.

During the reporting period, RWE's net debt was mainly influenced by inflows of variation margins on forward transactions with electricity, commodities and CO_2 certificates. Variation margins are payments with which transaction partners mutually collateralise profit and loss positions resulting from the daily revaluation of active contracts. However, their influence on cash flows is temporary and ends once the transactions triggering the payments are realised. Conversely, capital expenditures, in particular on wind and solar power, increased compared to the previous year. In total, net financial assets amounted to €9.1 billion on 31 December 2021 and were thus higher than at the end of 2020 (previous year: €6.9 billion). Furthermore, net debt provisions fell by €2.6 billion to €8.7 billion (previous year: €11.3 billion). On average, provisions have a very long duration; their level is primarily determined by external factors such as the general level of interest rates. A precise calculation of net debt/assets and net financial debt/assets is presented on page 62 of the review of operations. In total, as of 31 December 2021, RWE's net assets amounted to €0.4 billion (previous year: net debt of €4.4 billion). As of 31 December 2021, the leverage factor was -0.1 (previous year: 1.7) and was thus below the planned ceiling.

RWE's credit rating is influenced by a number of qualitative and quantitative factors. These include aspects such as the amount of cash flows and debt as well as market conditions, competition, and the political framework. Our hybrid bonds also have a positive effect on our rating. The leading rating agency, Moody's, classifies part of hybrid capital as equity.

In March and April 2021, the rating agencies Fitch and Moody's both raised their credit rating for RWE by one notch. RWE's long-term creditworthiness is now classified as BBB+ (Fitch) and Baa2 (Moody's), with a stable outlook. RWE's short-term credit ratings are P-2 (previous year: P-3) and F1 (previous year: F2), respectively.

Changes in accounting regulations

The International Accounting Standards Board (IASB) has approved several amendments to existing IFRSs, which are effective for the RWE Group as of fiscal 2021 due to EU endorsement:

- Amendments to IFRS 4: Extension of the Temporary Exemption From Applying IFRS 9 (2020)
- Amendments to IAS 39, IFRS 4, IFRS 7, IFRS 9 and IFRS 16: Interest Rate Benchmark Reform – Phase 2 (2020)
- Amendments to IFRS 16 Leases: Covid-19-Related Rent Concessions beyond 30 June 2021 (2021)

These new regulations do not have any material effects on the RWE Group's consolidated financial statements.

Changes to the accounting of tax items in relation to tax equity contracts. At the beginning of fiscal 2021, the fundamental basis for the accounting of tax items in relation to tax equity financing arrangements was changed. In the new approach, the allocation of tax items to the tax equity investor is accounted for as a process similar to a sales transaction (see also page 106), in order to present the economic peculiarities of the US subsidy system more accurately and thus provide more relevant information regarding the economic and financial consequences of this system.

Even though a contract similar to contract for services is recognised, IFRS 15 is not directly applicable as a tax equity contract does not fulfil the definition of a contract with a customer in the sense of IFRS 15. Instead, IFRS 15 is applied analogously, as per IAS 8.11 (a). In this analogy, the contractually agreed capital payment is treated as the transaction price, while the maintenance of operations in the interests of generating the tax items to be transferred to the tax equity investor is treated as RWE's performance obligation over time. As a result, all income resulting from the tax items is recognised in other operating income; furthermore, realisation of this income occurs using the straight-line method over the anticipated duration of the tax equity contracts and is thus independent of the actual amount of the tax items generated during the reporting period in question. This method of realising the income results from linear performance over time, i. e. the amount paid by the tax equity investor is viewed as a transaction price, which is recognised pro-rata over the duration of the relevant tax equity contract.

Compared to the previous accounting method, the approach described above primarily leads to a different accounting treatment of tax benefits, which stem from accelerated depreciation in particular. Previously, these tax benefits were reported in taxes on income, in the amount of the tax benefits that were actually generated. Due to the change in the accounting method, the comparable figures for the previous year were adjusted accordingly.

In fiscal 2021, RWE recognised tax benefits totalling €72 million in other operating income, which would have been reported as €38 million in taxes on income prior to the change in the accounting policy. The tax benefits recognised in income from investments accounted for using the equity method amount to a total of €9 million. Prior to the change in the accounting policy, this figure would have been reported as €7 million under income from investments accounted for using the equity method.

The following table shows the changes in the balance sheet as of 31 December 2020 and 1 January 2020:

€ million	31 Dec 2020 before changes	31 Dec 2020 after changes	1 Jan 2020 before changes	1 Jan 2020 after changes
Investments accounted for using the equity method	3,297	3,276	3,281	3,252
Deferred tax assets	397	397	689	680
Assets held for sale	1,045	1,061	1,274	1,274
Equity	17,971	17,706	17,467	17,119
Non-current other liabilities	1,154	1,355	862	1,094
Deferred tax liabilities	1,908	1,883[1]	2,164	2,197
Current other liabilities	9,003	9,046	11,588	11,632
Liabilities held for sale	539	581	510	510

1 Prior to consideration of retroactive adjustments to the first-time consolidation of operations which RWE acquired from Nordex in 2020 (see commentary on page 95).

The following table shows the changes to the income statement for fiscal 2020:

€ million	Jan – Dec 2020 before changes	Jan – Dec 2020 after changes
Other operating income	4,931	4,977
Depreciation, amortisation and impairment losses	3,154	3,136
Income from investments accounted for using the equity method	375	381
Income from continuing operations before tax	1,196	1,265
Taxes on income	-363	-376
Income from continuing operations after tax	833	889
Income	1,054	1,110
Net income / income attributable to RWE AG shareholders	995	1,051
Basic and diluted earnings per share in €	1.56	1.65

The retroactive application of changes to the accounting policy for tax equity agreements had an impact on currency translation adjustment in the statement of comprehensive income. The figure for fiscal 2020 is €26 million higher. The change had no effect on the cash flows from operating activities of continuing operations in fiscal 2020. The increase of €56 million in income from continuing operations in fiscal 2020 was offset by a decline of €18 million in depreciation, amortisation and impairment losses, a decline of €63 million in deferred taxes, a decline of €5 million in other non-cash income/expenses and a rise of €30 million in changes in working capital.

New accounting policies

The IASB issued further standards and amendments to standards, which were not yet mandatory in the EU in fiscal 2021. These standards and amendments to standards, which are not expected to have any material effects on RWE's consolidated financial statements, are listed below:

- IFRS 17 Insurance Contracts (2017) including Amendments to IFRS 17 (2020)
- Amendments to IAS 1 Presentation of Financial Statements: Classification of Liabilities as Current or Non-current (2020) and Presentation of Financial Statements: Classification of Liabilities as Current or Non-current – Deferral of Effective Date (2020)
- Amendments to IFRS 3 Business Combinations: Reference to the Conceptual Framework (2020)
- Amendments to IAS 16 Property, Plant and Equipment: Proceeds before Intended Use (2020)
- Amendments to IAS 37 Provisions, Contingent Liabilities and Contingent Assets: Onerous Contracts – Cost of Fulfilling a Contract (2020)
- Annual Improvements to IFRS Standards 2018-2020 (2020)
- Amendments to IAS 1 Presentation of Financial Statements and IFRS Practice Statement 2: Disclosure of Accounting Policies (2021)
- Amendments to IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors: Definition of Accounting Estimates (2021)
- Amendments to IAS 12 Income Taxes: Deferred Tax related to Assets and Liabilities arising from a Single Transaction (2021)
- Amendments to IFRS 17 Insurance Contracts: Initial Application of IFRS 17 and IFRS 9 – Comparative Information (2021)

Notes to the Income Statement

(1) Revenue

Revenue is recorded when the customer has obtained control over goods or services.

We recognise income from the sale of the electricity generated by all of RWE Group's generation technologies and the consumer business in revenue. Revenue resulting from the commercial optimisation of generation dispatch is based on the net sale price, after deduction of the relevant material costs. By contrast, all other revenue from our generation activities and the consumer business is reported on a gross basis.

Revenue contains state subsidies for the sale of green electricity and the refund of such to the state, including subsidies from contracts for differences, amounting to -€37 million (previous year: €51 million), which do not meet the definition of IFRS 15. These contracts for differences are used as a state subsidy mechanism within the framework of climate-protection measures and essentially result in a fixed price for the electricity that is sold, by offsetting positive and negative deviations (in so-called two-way contracts for difference) and negative deviations (in so-called one-way contracts for difference) from a defined reference price that is agreed with state contractual partners or the subsidy mechanism counterparty.

In the year under review, RWE generated external revenue with three large customers in the amount of €4,683 million, €2,475 million and €2,471 million (previous year: two large customers at €6,963 million and €1,544 million) in the Supply & Trading segment.

During the year under review, revenues rose sharply compared to the previous year, in particular due to the steep increase in electricity prices.

A breakdown of revenue by division, geographical region and product is contained in the segment reporting on pages 174 et seqq.

The item 'natural gas tax / electricity tax' comprises the taxes paid directly by Group companies.

Certain performance obligations of the RWE Group were not yet or not yet fully met by the end of the fiscal year. The €2,319 million in revenue due from these performance obligations (previous year: €3,154 million) is expected to be received over the following three years. The receipt of this revenue will depend on when these performance obligations to the customer are met. It does not include future revenue from contracts with an original contractual term of twelve months or less.

(2) Other operating income

Other operating income € million	2021	2020[1]
Income from own work capitalised	47	84
Income from changes in product inventories	20	10
Income from release of provisions	20	11
Cost allocations / refunds	151	175
Income from disposal and write-back of non-current assets including income from deconsolidation	442	128
Income from derivative financial instruments	96	3,721
Compensation and insurance benefits	33	66
Income from leases	16	29
Currency gains		71
Miscellaneous	1,432	682
	2,257	**4,977**

1 Some prior-year figures restated due to a retroactive change in the recognition of tax benefits to subsidise renewable energy in the USA (see commentary on pages 108 et seq.).

To improve the presentation of the development of business, in the previous year unrealised and realised gains from contracts measured at fair value in the Supply & Trading segment were stated as a net amount in income from derivative financial instruments. In the previous year, net income totalled €3,613 million. In the year under review, a net expense was recognised, which is reported in expenses from derivative financial instruments under other operating expenses.

In the reporting period, the miscellaneous operating income includes the statutory compensation of €880 million for the residual production volumes of RWE-owned nuclear power plants which could no longer be used as a result of the accelerated German nuclear phaseout.

Income from the disposal of non-current financial assets and loans is disclosed under income from investments if it relates to investments; otherwise it is recorded as part of the financial result as is the income from the disposal of current marketable securities.

(3) Cost of materials

Cost of materials € million	2021	2020
Cost of raw materials and of goods for resale	16,589	8,539
Cost of purchased services	1,124	1,275
	17,713	**9,814**

The cost of materials primarily includes expenses for the input materials of power plants. Expenses for coal of €276 million (previous year: €75 million) were recognised at the market price prevailing at settlement.

Impairments amounting to €25 million were recognised on excavated earth in the year under review. These impairments were related to the impairment test conducted for the Garzweiler cash-generating unit. In the previous year, impairments of €140 million were recognised for stock materials and coal inventories. These impairments were based on lower market prices and impairment tests performed for the cash-generating units Garzweiler, Hambach, Inden and the hard coal-fired power stations (see page 113).

During the year under review, the cost of materials rose significantly compared to the previous year, in particular due to the sharp increases in electricity and gas prices.

(4) Staff costs

Staff costs € million	2021	2020
Wages and salaries	2,012	1,891
Cost of social security, pensions and other benefits	490	474
	2,502	**2,365**

Number of employees	2021		2020	
	Number of employees	In full-time equivalents	Number of employees	In full-time equivalents
Employees covered by collective agreements and other employees	12,994	12,754	13,539	13,272
Employees not covered by collective agreements	6,248	6,113	6,493	6,358
	19,242	**18,867**	**20,032**	**19,630**

In contrast to the previous year, the number of employees and full-time equivalents are reported for the year under review. The headcount figures do not include trainees. On average, 710 trainees were employed (previous year: 669). This corresponds to the figure calculated in full-time equivalents.

(5) Depreciation, amortisation and impairment losses

Depreciation, amortisation and impairment losses € million	2021	2020[1]
Intangible assets	180	156
Property, plant and equipment	2,193	2,980
	2,373	**3,136**

1 Some prior-year figures restated due to a retroactive change in the recognition of tax benefits to subsidise renewable energy in the USA (see commentary on pages 108 et seq.).

The following impairments were included in depreciation, amortisation and impairment losses:

Impairments € million	2021	2020[1]
Intangible assets	4	18
Property, plant and equipment	948	1,694
	952	**1,712**

1 Some prior-year figures restated due to a retroactive change in the recognition of tax benefits to subsidise renewable energy in the USA (see commentary on pages 108 et seq.).

RWE has entered into long-term CO_2 hedging transactions in order to hedge generation positions for its lignite-fired power stations. As a result of the increase in CO_2 prices, the fair value of these hedges has risen sharply, leading to an improvement in equity (other comprehensive income). Conversely, the value of the lignite-fired plants and opencast mines has declined. The impairment test performed in 2021 in the Coal / Nuclear segment for the Garzweiler cash-generating unit resulted in a write-down of €729 million on property, plant and equipment (recoverable amount: €0.1 billion). Additionally, impairments of €26 million were recognised on property, plant and equipment outside of the Garzweiler cash-generating unit. The Garzweiler cash-generating unit comprises the Niederaußem (K) and Neurath (F, G) power plant units, which – according to the law on coal phaseout – will remain online over the long term, and the Garzweiler opencast mine, along with the refining plants. With the exception of the property and buildings reported at market value, the property, plant and equipment of the Garzweiler unit has thus been written down in full, as was already the case with the Hambach and Inden units.

In the previous year, the impairment test for the Dutch Power Plant Portfolio cash-generating unit resulted in a write-down of €557 million (recoverable amount: €0.7 billion) in the Hydro / Biomass / Gas segment, due to the deterioration of market conditions in the Netherlands.

The impairment tests performed in the Coal / Nuclear segment in the previous year resulted in the recognition of impairments on property, plant and equipment in the amount of €791 million. This was mainly due to changed market conditions and specification of the lignite phaseout plans. Of these impairments, €579 million was related to the Garzweiler cash-generating unit (recoverable amount: €0.8 billion), €114 million to the Hambach cash-generating unit (recoverable amount: – €0.7 billion) and €98 million to the Inden cash-generating unit (recoverable amount: – €0.4 billion).

Additionally, in the previous year impairments of €231 million were recognised on property, plant and equipment of the hard coal-fired power stations in the Coal / Nuclear segment (recoverable amount: €0.0 billion), in relation to the phaseout of hard coal in Germany.

Other impairments on intangible assets and property, plant and equipment were recognised primarily on the basis of cost increases and changes in price expectations.

Recoverable amounts are generally determined on the basis of fair values less costs to sell; in the Onshore Wind / Solar segment, they are also determined on the basis of values in use. Fair values are determined using valuation models based on planned cash flows. In the fiscal year, the valuation models were based on discount rates (after taxes) in the range of 2.75 % to 5.00 % (previous year: 2.75 % to 4.50 %). Our key planning assumptions relate to the development of wholesale prices of electricity, crude oil, natural gas, coal and CO_2 emission allowances, market shares and regulatory framework conditions. Based on the use of internal planning assumptions, the determined fair values are assigned to Level 3 of the fair value hierarchy.

(6) Other operating expenses

Other operating expenses € million	2021	2020
Maintenance and renewal obligations	538	499
Additions to provisions / reversals	419	48
Structural and adaptation measures	57	12
Legal and other consulting and data processing services	322	301
Disposal of current assets and decreases in values (excluding decreases in the value of inventories and marketable securities)	18	49
Disposal of non-current assets including expenses from deconsolidation	37	32
Insurance, commissions, freight and similar distribution costs	83	82
General administration	49	51
Expenses from derivative financial instruments	1,125	507
Expenses from leases	43	30
Fees and membership dues	70	56
Exchange rate losses	29	
Other taxes (primarily on property)	48	40
Miscellaneous	243	243
	3,081	**1,950**

To improve the presentation of the development of business, in the year under review, unrealised and realised losses from contracts measured at fair value in the Supply & Trading segment are stated as a net amount in expenses from derivative financial instruments. In the year under review, a net expense of €765 million was recognised. In the previous year, net income was recorded, which was reported in income from derivative financial instruments under other operating income.

(7) Income from investments

Income from investments includes all income and expenses which have arisen in relation to operating investments. It is comprised of income from investments accounted for using the equity method and other income from investments.

Income from investments € million	2021	2020[1]
Income from investments accounted for using the equity method	**291**	**381**
Income from non-consolidated subsidiaries	36	-82
Income from other investments	79	5
Income from the disposal of investments	9	4
Income from loans to investments	6	11
Other income from investments	**130**	**-62**
	421	**319**

1 Some prior-year figures restated due to a retroactive change in the recognition of tax benefits to subsidise renewable energy in the USA (see commentary on pages 108 et seq.).

(8) Financial result

Financial result € million	2021	2020
Interest and similar income	260	283
Other financial income	1,550	1,650
Financial income	**1,810**	**1,933**
Interest and similar expenses	340	296
Interest accretion to		
Provisions for pensions and similar obligations (including capitalised surplus of plan assets)	21	37
Provisions for nuclear waste management as well as to mining provisions	135	203
Other provisions	-19	15
Other finance costs	1,346	1,836
Finance costs	**1,823**	**2,387**
	-13	**-454**

The financial result breaks down into net interest, interest accretion to provisions, other financial income and other finance costs.

Interest accretion to provisions contains the annual amounts of accrued interest. It is reduced by the imputed interest income on plan assets for the coverage of pension obligations.

Interest expenses incurred for lease liabilities amounted to €42 million in the year under review (previous year: €35 million).

Net interest essentially includes interest income from interest-bearing securities and loans, income and expenses relating to marketable securities, and interest expenses.

Interest income includes dividend income of €186 million from the 15% stake in E.ON (previous year: €182 million).

In the year under review, €80 million in borrowing costs were capitalised as costs in connection with the acquisition, construction or production of qualifying assets (previous year: €61 million). The underlying capitalisation rate ranged from 3.6 % to 3.7 % (previous year: from 3.0 % to 3.7 %).

Net interest € million	2021	2020
Interest and similar income	260	283
Interest and similar expenses	340	296
	-80	**-13**

Net interest stems from financial assets and liabilities, which were allocated to the following measurement categories pursuant to IFRS 9:

Interest result by category € million	2021	2020
Debt instruments measured at amortised cost	64	78
Financial instruments measured at fair value through profit or loss		3
Debt instruments measured at fair value through other comprehensive income	10	14
Equity instruments measured at fair value through other comprehensive income	186	187
Financial liabilities measured at amortised cost	-340	-295
	-80	**-13**

Other financial income includes €60 million in gains realised from the disposal of marketable securities (previous year: €28 million). Of the other finance costs, €41 million (previous year: €17 million) stem from realised losses on the disposal of marketable securities.

(9) Taxes on income

Taxes on income € million	2021	2020[1]
Current taxes on income	-150	-46
Deferred taxes	840	422
	690	**376**

1 Some prior-year figures restated due to a retroactive change in the recognition of tax benefits to subsidise renewable energy in the USA (see commentary on pages 108 et seq.).

Of the deferred taxes, €931 million is related to temporary differences (previous year: €425 million). In the year under review, changes in valuation allowances for deferred tax assets amounted to €701 million (previous year: €370 million).

Current taxes on income contain €419 million in net tax income (previous year: expenses of €16 million) relating to prior periods.

Due to the utilisation of tax loss carryforwards unrecognised in prior years, current taxes on income were reduced by €8 million (previous year: €10 million).

Expenses from deferred taxes declined by €5 million (previous year: €7 million) due to reassessments of and previously unrecognised tax loss carryforwards.

Income taxes recognised in other comprehensive income € million	2021	2020
Fair valuation of equity instruments		11
Fair valuation of debt instruments	15	-9
Fair valuation of financial instruments used for hedging purposes	1.035	107
Actuarial gains and losses of defined benefit pension plans and similar obligations[1]	-105	-40
	945	**69**

1 Including valuation allowances.

Taxes in the amount of €186 million (previous year: €311 million) were offset directly against equity.

Tax reconciliation € million	2021	2020[1]
Income before tax	**1,522**	**1,265**
Theoretical tax expense	**497**	**413**
Differences to foreign tax rates	-327	-105
Tax effects on		
Tax-free dividends	-127	-123
Other tax-free income	-126	-31
Expenses not deductible for tax purposes	99	29
Accounting for associates using the equity method (including impairment losses on associates' goodwill)	-40	-30
Unutilisable loss carryforwards, utilisation of unrecognised loss carryforwards, write-downs on loss carryforwards, recognition of loss carryforwards	342	329
Income on the disposal of investments	15	-1
Changes in foreign tax rates	210	86
Other allowances for deferred taxes in the RWE AG tax group	450	-69
Other	-303	-122
Effective tax expense	**690**	**376**
Effective tax rate in %	45.3	29.7

1 Some prior-year figures restated due to a retroactive change in the recognition of tax benefits to subsidise renewable energy in the USA (see commentary on pages 108 et seq.)

The theoretical tax expense is calculated using the tax rate for the RWE Group of 32.6 % (previous year: 32.6 %). This is derived from the prevailing 15 % corporate tax rate, the solidarity surcharge of 5.5 %, and the Group's average local trade tax rate.

Notes to the Balance Sheet

(10) Intangible assets

Intangible assets[1] € million	Development costs	Concessions, patent rights, licences and similar rights	Customer relationships and similar assets	Goodwill	Prepayments	Total
Cost						
Balance at 1 Jan 2021	37	3,832	296	2,679	10	6,854
Additions / disposals due to changes in the scope of consolidation		1,058	-157	2		903
Additions		14			18	32
Transfers	1	7				8
Currency translation adjustments	2	134	13	55		204
Disposals	9	9				18
Balance at 31 Dec 2021	31	5,036	152	2,736	28	7,983
Accumulated amortisation / impairment losses						
Balance at 1 Jan 2021	34	1,901	20			1,955
Additions / disposals due to changes in the scope of consolidation		-33	-11			-44
Amortisation / impairment losses in the reporting period	2	167	11			180
Transfers		2				2
Currency translation adjustments	1	18	1			20
Disposals	9	2				11
Write-backs		3				3
Balance at 31 Dec 2021	28	2,050	21			2,099
Carrying amounts						
Balance at 31 Dec 2021	3	2,986	131	2,736	28	5,884

1 Some prior-year figures restated due to retroactive adjustments to the first-time consolidation of operations which RWE acquired from Nordex in 2020 (see commentary on page 95).

Intangible assets[1] € million	Development costs	Concessions, patent rights, licences and similar rights	Customer relationships and similar assets	Goodwill	Prepayments	Total
Cost						
Balance at 1 Jan 2020	40	3,713	310	2,549	6	6,618
Additions / disposals due to changes in the scope of consolidation		230	-1	184		413
Additions		19			4	23
Transfers	-1	6				5
Currency translation adjustments	-1	-98	-13	-46		-158
Disposals	1	38		8		47
Balance at 31 Dec 2020	37	3,832	296	2,679	10	6,854
Accumulated amortisation / impairment losses						
Balance at 1 Jan 2020	36	1,799	6			1,841
Additions / disposals due to changes in the scope of consolidation		4	-1			3
Amortisation / impairment losses in the reporting period	2	138	16			156
Transfers	-2	2				
Currency translation adjustments	-1	-6	-1			-8
Disposals	1	36				37
Balance at 31 Dec 2020	34	1,901	20			1,955
Carrying amounts						
Balance at 31 Dec 2020	3	1,931	276	2,679	10	4,899

1 Some prior-year figures restated due to retroactive adjustments to the first-time consolidation of operations which RWE acquired from Nordex in 2020 (see commentary on page 95).

In the reporting period, the RWE Group's total expenditures on research and development amounted to €22 million (previous year: €20 million).

Goodwill breaks down as follows:

Goodwill € million	31 Dec 2021	31 Dec 2020[1]
Offshore Wind	1,441	1,376
Onshore Wind / Solar	184	184
Hydro / Biomass / Gas	105	113
Supply & Trading	1,006	1,006
	2,736	**2,679**

1 Some prior-year figures restated due to retroactive adjustments to the first-time consolidation of operations which RWE acquired from Nordex in 2020 (see commentary on page 95).

In the previous year, new cash-generating units were formed as of 1 January 2020. In doing so, goodwill in the amount of €606 was transferred from the former 'innogy – continuing operations' cash-generating unit to the new Offshore Wind cash-generating unit and in the amount of €121 million to the new Hydro / Biomass / Gas cash-generating unit. Goodwill of €816 million was transferred from the former cash-generating unit 'operations acquired from E.ON' to the new Offshore Wind cash-generating unit.

The impairment tests carried out in the previous year in relation to the formation of new cash-generating units did not result in any impairments.

In the previous year, goodwill increased by €184 million as a result of the first-time consolidation of Nordex's wind and solar projects in the Onshore Wind segment. This goodwill passed the impairment test in the fourth quarter of 2020. In the year under review, the goodwill of the cash-generating unit Offshore Wind increased by €9 million as a result of the initial consolidation of Baltic Trade and Invest Sp. z.o.o. In the Hydro / Biomass / Gas cash-generating unit, goodwill decreased by €8 million due to the deconsolidation of Energies France SAS. In the previous year, goodwill declined by €8 million due to the deconsolidation of Georgia Biomass in the Hydro / Biomass / Gas cash-generating unit.

In the third quarter of every fiscal year, an impairment test is performed to determine if there is any need to write down goodwill. In doing so, goodwill is allocated to the cash-generating units.

The recoverable amount of the cash-generating unit is determined, which is defined as the higher of fair value less costs to sell or value in use. Fair value is the best estimate of the price that an independent third party would pay to purchase the cash-generating unit as of the balance-sheet date. Value in use reflects the present value of the future cash flows which are expected to be generated with the cash-generating unit.

Fair value less costs to sell is assessed from an external perspective and value in use from a company-internal perspective. Values are determined using a business valuation model, based on planned future cash flows. These cash flows, in turn, are based on the medium- and long-term business plans, as approved by the Executive Board and valid at the time of the impairment test. They pertain to a detailed planning period of three to ten years. The cash flow plans are based on experience as well as on expected market trends in the future. If available, market transactions in the same sector or third-party valuations are taken as a basis for determining fair value. Based on the use of internal planning assumptions, the determined fair values are assigned to Level 3 of the fair value hierarchy.

The medium- and long-term business plans are based on country-specific assumptions regarding the development of key economic indicators such as gross domestic product, consumer prices, interest rate levels and nominal wages. These estimates are, amongst others, derived from macro- economic and financial studies.

Our key planning assumptions for the business segments active in electricity and gas markets relate to the development of wholesale prices of electricity, crude oil, natural gas, coal and CO_2 emission allowances, market shares and regulatory framework conditions.

For the Renewables segments, the valuation is based on a normal wind year, which is calculated as the average of the last 20 years.

The discount rates used for business valuations are determined on the basis of market data. During the period under review, they were 4.25 % for the cash-generating unit Supply & Trading (previous year: 4.25 %), 3.75 % for Offshore Wind (previous year: 4.25 %), 3.50 % for Onshore Wind / Solar (previous year: 3.50 %) and 4.00 % for Hydro / Biomass / Gas (previous year: 3.75 %).

In the cash-generating units Offshore Wind and Onshore Wind / Solar, we used a growth rate of 0.50 % (previous year: 0.50 %) as a basis for extrapolating future cash flows going beyond the detailed planning period. For all of the other cash-generating units, we do not base the extrapolation of future cash flows going beyond the detailed planning period on growth rates. The growth rate for each segment is generally derived from experience and expectations of the future and does not exceed the long-term average growth rates of the respective markets in which the Group companies are active. The annual cash flows assumed for the years after the detailed planning period include as a deduction capital expenditure in the amount necessary to maintain the scope of business.

As of the balance-sheet date, the recoverable amounts of the cash-generating units, which are determined as the fair value less costs to sell, were higher than their carrying amounts. The surpluses react especially sensitively to changes in the discount rate, the growth rate – insofar as such are used in the model – and cash flows in terminal value.

Of all of the cash-generating units, the Supply & Trading cash-generating unit exhibited the smallest surplus of recoverable amount over the carrying amounts. The recoverable amount was €0.7 billion higher than the carrying amount. Impairment would have been necessary if the calculations had used an after-tax discount rate increased by more than 1.25 percentage points to above 5.5 %, a growth rate reduced by more than 1.4 percentage points to less than – 1.4 % or cash flows reduced by more than €105 million in terminal value.

(11) Property, plant and equipment

Property, plant and equipment[1] € million	Land, land rights and buildings incl, buildings on third-party land	Technical plant and machinery	Other equipment, factory and office equipment	Prepayments and plants under construction	Total
Cost					
Balance at 1 Jan 2021	5,728	51,459	1,033	4,851	63,071
Additions / disposals due to changes in the scope of consolidation	86	564	-29	-871	-250
Additions	365	828	61	2,755	4,009
Transfers	52	2,779	5	-2,844	-8
Currency translation adjustments	67	883	12	228	1,190
Disposals	165	770	70	14	1,019
Balance at 31 Dec 2021	6,133	55,743	1,012	4,105	66,993
Accumulated depreciation / impairment losses					
Balance at 1 Jan 2021	3,697	39,677	862	933	45,169
Additions / disposals due to changes in the scope of consolidation	64	-47	-27	-34	-44
Amortisation / impairment losses in the reporting period[2]	330	1,764	114	108	2,316
Transfers	2	19		-23	-2
Currency translation adjustments	18	262	8	3	291
Disposals	83	408	65	2	558
Write-backs	69	79	11	4	163
Balance at 31 Dec 2021	3,959	41,188	881	981	47,009
Carrying amounts					
Balance at 31 Dec 2021	2,174	14,555	131	3,124	19,984

1 Some prior-year figures restated due to retroactive change in the recognition of tax benefits to subsidise renewable energy in the USA (see commentary on pages 108 et seq.).
2 In part from the release of a provision for impending losses for purchase commitments.

Property, plant and equipment[1] € million	Land, land rights and buildings incl, buildings on third-party land	Technical plant and machinery	Other equipment, factory and office equipment	Prepayments and plants under construction	Total
Cost					
Balance at 1 Jan 2020	5,323	48,758	988	4,224	59,293
Additions / disposals due to changes in the scope of consolidation	87	2,068	15	-236	1,934
Additions	443	872	69	2,389	3,773
Transfers	23	1,290	7	-1,326	-6
Currency translation adjustments	-58	-808	-10	-185	-1,061
Disposals	90	721	36	15	862
Balance at 31 Dec 2020	5,728	51,459	1,033	4,851	63,071
Accumulated depreciation / impairment losses					
Balance at 1 Jan 2020	3,128	35,505	770	873	40,276
Additions / disposals due to changes in the scope of consolidation	102	2,761	17		2,880
Amortisation / impairment losses in the reporting period	511	2,266	115	88	2,980
Transfers		24		-24	
Currency translation adjustments	-13	-262	-6	-1	-282
Disposals	22	563	34	3	622
Write-backs	9	54			63
Balance at 31 Dec 2020	3,697	39,677	862	933	45,169
Carrying amounts					
Balance at 31 Dec 2020	2,031	11,782	171	3,918	17,902

1 Some prior-year figures restated due to retroactive change in the recognition of tax benefits to subsidise renewable energy in the USA (see commentary on pages 108 et seq.).

Property, plant and equipment in the amount of €1,426 million (previous year: €1,590 million) was subject to restrictions from land charges, chattel mortgages or other restrictions. Disposals of property, plant and equipment resulted from sale or decommissioning.

Property, plant and equipment includes legally owned assets as well as right-of-use assets from leases of which RWE is the lessee.

These leases primarily comprise long-term rights of use to leased office buildings and land (e.g. leaseholds, properties for renewable energy production) and rights of use to leased assets relating to vehicle fleets and power plants.

In the previous year, RWE sold an office building to an external investor within the framework of a sale-and-leaseback transaction. The fixed lease term of the leasing contract is 17.5 years.

The following table shows the development of right-of-use assets recognised in property, plant and equipment:

Right-of-use assets Development in 2021 € million	Balance at 1 Jan 2021	Additions	Depreciation, amortisation and impairments	Disposals	Other changes[1]	Balance at 31 Dec 2021
Cost						
Buildings	161	117	31		-4	243
Land	631	132	52	10	57	758
Technical plant and machinery	29	1	27			3
Pumped storage power stations	264	5	11			258
Vehicle fleet	22	11	22	2	-1	8
Other plant, factory and office equipment	16	7	21	1		1
	1,123	273	164	13	52	1,271

1 Other changes comprise transfers, write-backs, currency translation adjustments as well as additions and disposals in the scope of consolidation.

Right-of-use assets Development in 2020 € million	Balance at 1 Jan 2020	Additions	Depreciation, amortisation and impairments	Disposals	Other changes[1]	Balance at 31 Dec 2020
Cost						
Buildings	70	121	17	7	-6	161
Land	666	49	38	2	-44	631
Technical plant and machinery	43	2	6	1	-9	29
Pumped storage power stations	261	13	10			264
Vehicle fleet	18	17	11	1	-1	22
Other plant, factory and office equipment	23	7	13	1		16
	1,081	209	95	12	-60	1,123

1 Other changes comprise transfers, write-backs, currency translation adjustments as well as additions and disposals in the scope of consolidation.

Disclosure on the corresponding lease liabilities and interest expenses can be found in Notes (8) Financial result, (23) Financial liabilities and (27) Reporting on financial instruments.

In addition, leases had the following effect on the RWE Group's earnings and cash flows in the year under review:

Effects of leases on income and cash flows € million	2021	2020
RWE as lessee		
Expenses from short-term leases	85	79
Expenses from leases for low-value assets	1	1
Expenses from variable lease payments not considered in the measurement of lease liabilities	22	21
Income from subleases	5	6
Gains or losses on sale-and-leaseback transactions		2
Total cash outflows from leases[1]	235	215
RWE as lessor		
Income from operating leases	9	20

1 Restated prior-year figure.

Leases primarily relating to wind farm sites that have been contractually agreed, but not begun yet, lead to future lease payments of €118 million (previous year: €187 million). Moreover, potential lease payments predominantly relating to leases of wind farm space were disregarded when valuing lease liabilities. This relates to €390 million (previous year: €405 million) in variable payments which may come due depending on generation volumes and €261 million (previous year: €97 million) in potential payments associated with extension and termination options.

In addition to right-of-use assets, property, plant and equipment also include land and buildings leased as operating leases by RWE as lessor. As of 31 December 2021, the carrying amount of these assets totalled €153 million (previous year: €180 million).

The following payment claims resulted from these operating leases:

Nominal lease payments from operating leases € million	31 Dec 2021	31 Dec 2020
Due in up to 1 year	7	8
Due in > 1 to 2 years	6	7
Due in > 2 to 3 years	5	5
Due in > 3 to 4 years	5	5
Due in > 4 to 5 years	5	4
Due after 5 years	34	37

(12) Investments accounted for using the equity method

Information on material and non-material investments in associates and joint ventures accounted for using the equity method is presented in the following summaries:

Material investments accounted for using the equity method	Amprion GmbH, Dortmund		KELAG-Kärntner Elektrizitäts-AG / Kärntner Energieholding Beteiligungs GmbH (KEH), Klagenfurt (Austria)	
€ million	31 Dec 2021	31 Dec 2020	31 Dec 2021	31 Dec 2020
Balance sheet[1]				
Non-current assets	6,676	5,953	1,826	1,780
Current assets	4,982	2,838	346	349
Non-current liabilities	2,657	2,001	950	946
Current liabilities	5,681	3,488	253	266
Share of equity[2]	833	829	436	393
Goodwill			198	198
Carrying amounts	833	829	634	591
Statement of comprehensive income[1]				
Revenue	9,000	12,622	1,061	1,300
Income after taxes[3]	137	495	110	112
Other comprehensive income	-20	-35	-6	-47
Total comprehensive income	117	460	104	65
Dividends (prorated)	25	25	19	19
RWE shareholding	25%	25%	49%	49%

1 Figures based on KEH's consolidated financial statements; KELAG is fully consolidated in these figures.
2 Figures based on proportional share of equity in KEH and KELAG.
3 Some prior-year figures restated.

Amprion GmbH, headquartered in Dortmund, Germany, is a transmission system operator for the electricity sector, pursuant to the German Energy Act. Amprion's main shareholder is a consortium of financial investors.

KELAG-Kärntner Elektrizitäts-AG, headquartered in Klagenfurt, Austria, is a leading Austrian energy supplier in the fields of electricity, district heating and natural gas. RWE has an interest of 49 % in Kärntner Energieholding Beteiligungs GmbH (KEH), KELAG's largest shareholder and also holds 12.85 % of KELAG directly (imputed RWE shareholding of 37.9 %).

Non-material investments accounted for using the equity method	Associates		Joint ventures	
€ million	31 Dec 2021	31 Dec 2020[1]	31 Dec 2021	31 Dec 2020[1]
Income (pro-rata)	27	24	160	187
Other comprehensive income	1	-28	13	-2
Total comprehensive income	28	-4	173	185
Carrying amounts	367	213	1,187	1,642

1 Some prior-year figures restated due to retroactive change in the recognition of tax benefits to subsidise renewable energy in the USA (see commentary on pages 108 et seq.).

The RWE Group holds shares with a book value of €3 million (previous year: €3 million) in associates and joint ventures, which are subject to temporary restrictions or conditions in relation to their distributions of profits, due to conditions in loan agreements.

(13) Other non-current financial assets

Other financial assets encompass non-consolidated subsidiaries, other investments and non-current securities.

Non-current securities amounting to €146 million and €3 million (previous year: €133 million, adjusted by €104 million, and €4 million) were deposited in trust for RWE AG and its subsidiaries, in order to cover credit balances stemming from the block model for pre-retirement part-time work, pursuant to Sec. 8a of the Pre-Retirement Part-Time Work Act and from the management of long-term working hours accounts pursuant to Sec. 7e of the German Code of Social Law IV, respectively. This coverage applies to the employees of RWE AG as well as to the employees of Group companies.

(14) Financial receivables

Financial receivables	31 Dec 2021		31 Dec 2020	
€ million	Non-current	Current	Non-current	Current
Loans to non-consolidated subsidiaries and investments	101	1	105	1
Collaterals for trading activities		11,997		2,154
Other financial receivables				
Accrued interest		64		43
Miscellaneous other financial receivables	10	332	26	284
	111	**12,394**	**131**	**2,482**

Companies of the RWE Group deposited collateral for the trading activities stated above for exchange-based and over-the-counter transactions. These are to guarantee that the obligations from the transactions are discharged even if the development of prices is not favourable for RWE. Regular replacement of the deposited collateral depends on the contractually agreed thresholds, above which collateral must be provided for the market value of the trading activities.

(15) Other receivables and other assets

Other receivables and other assets	31 Dec 2021		31 Dec 2020	
€ million	Non-current	Current	Non-current	Current
Derivatives	668	64,492	675	8,109
Capitalised surplus of plan assets over benefit obligations	459		172	
Prepayments for items other than inventories		167		148
CO_2 emission allowances		793		446
Miscellaneous other assets	2,363	1,353	2,587	1,118
	3,490	**66,805**	**3,434**	**9,821**
of which: financial assets	1,134	64,584	855	8,452
of which: non-financial assets	2,356	2,221	2,579	1,369

The financial instruments reported under miscellaneous other assets are measured at amortised cost. Derivative financial instruments are stated at fair value. The carrying values of exchange-traded derivatives with netting agreements are offset.

The increase in derivatives during the reporting period resulted from the significant price rises for over-the-counter commodity derivatives for electricity and natural gas, which cannot be netted.

€2,600 million of the miscellaneous other assets comprise the compensatory payments for our early exit from the lignite business awarded by the German government (previous year: €2,600 million). The EU Commission is expected to grant approval in 2022, as part of the review of compliance with state aid law.

Furthermore, in the previous year €86 million of the miscellaneous other assets were allocable to government grants awarded in relation with co-firing biomass in two Dutch power plants.

(16) Deferred taxes

Deferred tax assets and liabilities principally stem from the fact that measurements in the IFRS statements differ from those in the tax bases. As of 31 December 2021, no deferred tax liabilities were recognised for the difference between net assets and the carrying value of the subsidiaries and associates for tax purposes (known as 'outside basis differences') in the amount of €817 million (previous year: €820 million), as it is neither probable that there will be any distributions in the foreseeable future, nor will the temporary differences reduce in the foreseeable future. €36,348 million and €35,531 million of the gross deferred tax assets and liabilities, respectively, will be realised within twelve months (previous year: €3,404 million and €4,047 million).

The following is a breakdown of deferred tax assets and liabilities by item:

Deferred taxes	31 Dec 2021		31 Dec 2020[1]	
€ million	Assets	Liabilities	Assets	Liabilities
Non-current assets	487	2,055	663	1,367
Current assets	9,875	26,245	1,373	2,526
Exceptional tax items		126		58
Non-current liabilities				
Provisions for pensions	15	26	85	3
Other non-current liabilities	356	900	645	848
Current liabilities	26,473	9,286	2,031	1,521
	37,206	**38,638**	**4,797**	**6,323**
Tax loss carryforwards				
Corporate income tax (or comparable foreign income tax)	146		49	
Trade tax (or comparable foreign local income tax)	1		12	
Gross total	**37,353**	**38,638**	**4,858**	**6,323**
Netting	-36,690	-36,690	-4,461	-4,461
Net total	**663**	**1,948**	**397**	**1,862**

1 Some prior-year figures restated due to a retroactive change in the recognition of tax benefits to subsidise renewable energy in the USA (see commentary on pages 108 et seq.) and retroactive adjustments to the first-time consolidation of operations which RWE acquired from Nordex in 2020 (see commentary on page 95).

As of 31 December 2021, RWE reported deferred tax claims which exceeded the deferred tax liabilities by €48 million (previous year: €73 million), in relation to companies which suffered a loss in the current or previous period. The basis for the recognition of deferred tax assets is the judgement of the management that it is likely that the companies in question will generate taxable earnings, against which unutilised tax losses and deductible temporary differences can be applied.

The capitalised tax reduction claims from loss carryforwards result from the expected utilisation of previously unused tax loss carryforwards in subsequent years.

It is sufficiently certain that these tax carryforwards will be realised. At the end of the reporting period, corporate income tax loss carryforwards and trade tax loss carryforwards (or such related to comparable foreign income tax) for which no deferred tax claims have been recognised amounted to €4,187 million and €2,965 million, respectively (previous year: €2,811 million and 1,912 million).

The corporate income tax loss carryforwards do not have any time limits, but are not expected to be used for the most part.

As of 31 December 2021, temporary differences for which no deferred tax assets were recognised amounted to €14,678 million (previous year: €13,216 million).

In the year under review, a deferred tax expense of –€68 million arising from the currency translation of foreign financial statements was offset against equity (previous year: deferred tax income of €41 million).

(17) Inventories

Inventories € million	31 Dec 2021	31 Dec 2020
Raw materials, incl. nuclear fuel assemblies and earth excavated for lignite mining	436	579
Work in progress – goods / services	31	50
Finished goods and goods for resale	2,368	999
Prepayments	–7	4
	2,828	**1,632**

The carrying amount of inventories acquired for resale purposes was €2,340 million (previous year: €964 million). As in the previous year, this entire amount related to gas inventories in the reporting period.

The fair value of gas inventories is determined every month on the basis of the current price curves of the relevant indices for gas (e.g. NCG). The valuations are based on prices which can be observed directly or indirectly (Level 2 of the fair value hierarchy). Differences between the fair value and the carrying value of inventories acquired for resale purposes are recognised on the income statement at the end of the month.

(18) Marketable securities

Current marketable securities include fixed-interest marketable securities totalling €8,036 million (previous year: €4,216 million) which predominantly have a maturity of more than three months from the date of acquisition. Stocks and profit-participation certificates accounted for €4 million (previous year: €3 million). Marketable securities are stated at fair value.

(19) Cash and cash equivalents

Cash and cash equivalents € million	31 Dec 2021	31 Dec 2020
Cash and demand deposits	5,824	4,764
Marketable securities and other cash investments (maturity less than 3 months from the date of acquisition)	1	10
	5,825	**4,774**

RWE keeps demand deposits exclusively for short-term cash positions. For cash investments, banks are selected on the basis of various creditworthiness criteria, including their rating from one of the three renowned rating agencies – Moody's, Standard & Poor's and Fitch – as well as their equity capital and prices for credit default swaps. As in the previous year, interest rates on cash and cash equivalents were at market levels in 2021.

(20) Equity

A breakdown of fully paid-up equity is shown on page 92. The subscribed capital of RWE AG consists exclusively of common no-par-value bearer shares.

Subscribed capital	31 Dec 2021 Number of shares	31 Dec 2020 Number of shares	31 Dec 2021 Carrying amount	31 Dec 2020 Carrying amount
	in '000.	in '000.	€ million	€ million
Shares	676,220	676,220	1,731	1,731

On 18 August 2020, RWE AG decided on a capital increase in return for cash contributions with partial utilisation of the approved capital authorised by the General Meeting on 26 April 2018. The company's capital stock was thus increased by 10% via the issue of 61,474,549 new bearer shares, under the exclusion of existing shareholders' subscription rights. The new shares were placed with institutional investors at a price of €32.55 per share in an accelerated bookbuilding process. As a result of the capital increase, in the previous year the subscribed capital of RWE AG rose by €157,374,845.44 and its paid-in capital rose to €1,843,621,724.51. Transaction expenses of €11,070,500.71 were offset against retained earnings in the previous year.

As the approved capital was partially utilised in this capital increase, the General Meeting passed a resolution to replace the remaining authorisation with new approved capital on 28 April 2021. Pursuant to this resolution, the Executive Board is authorised, subject to Supervisory Board approval, to increase the company's capital stock by up to €346,224,663.04 – equivalent to approximately 20% of the current capital stock – until 27 April 2026 through the issue of up to 135,244,009 bearer shares in return for contributions in cash and/or in kind (approved capital).

In certain cases, with the approval of the Supervisory Board, the subscription rights of shareholders can be excluded.

On 28 April 2021, the General Meeting also decided on a conditional increase of the company's capital stock by up to €173,112,330.24, divided into up to 67,622,004 bearer shares. This conditional capital increase serves the purpose of granting shares to the holders or creditors of convertible and / or option bonds. It shall only be implemented by 27 April 2026 to the extent that the holders or creditors of convertible and / or option bonds issued on the basis of the resolution passed by the Annual General Meeting on 28 April 2021 by the company or a company affiliated with the company within the meaning of Sections 15 et seqq. of the German Stock Corporation Act, in which the company has a direct or indirect stake of at least 90%, exercise conversion / option rights, fulfil conversion / option obligations, or shares are tendered and no other forms of fulfilment are used. The Executive Board is authorised, subject to Supervisory Board approval, to determine further details of implementing conditional capital increases.

Pursuant to a resolution passed by the Annual General Meeting on 26 April 2018, the company was further authorised until 25 April 2023 to acquire shares of the company up to a volume of 10% of the capital stock when the resolution on this authorisation was passed, or if the following is lower, when this authorisation is exercised. Based on the authorisation, the Executive Board is authorised to cancel treasury shares without a further resolution by the Annual General Meeting. Moreover, the Executive Board is authorised to transfer or sell such shares to third parties under certain conditions and excluding shareholders' subscription rights. Furthermore, treasury shares may be issued to holders of option or convertible bonds under certain conditions. The Executive Board is also authorised to use the treasury shares to discharge obligations from future employee share schemes; in this regard, shareholders' subscription rights shall be excluded.

No treasury shares were held as of 31 December 2021, as was also the case at last year's reporting date.

In fiscal 2021, RWE AG purchased a total of 288,624 RWE shares (previous year: 314,808) for a purchase price of €9,459,816.32 on the capital market (previous year: €10,633,444.15). This is equivalent to €738,877.44 of the capital stock (0.04% of subscribed capital) (previous year: €805,908.48 and 0.05% of subscribed capital). Employees of RWE AG and its subsidiaries received a total of 288,624 shares for capital formation under the employee share plan (previous year: 314,808). This resulted in total proceeds of €9,356,616.42 (previous year: €10,516,392.73). The difference to the purchase price was offset against freely available retained earnings.

As a result of equity capital transactions with subsidiary companies which did not lead to a change of control, the share of equity attributable to RWE AG's shareholders changed by a total of – €10 million (previous year: – €145 million) and the share of equity attributable to other shareholders changed by a total of €6 million (previous year: €395 million). In the previous year, this included the subsequent effects of the 2019 acquisition of the 23.2 % non-controlling interest in the continuing innogy operations (change in RWE AG shareholders' interest in Group equity of – €298 million) as well as effects from the sale of a 49 % stake in the offshore UK wind farm Humber Gateway (€163 million change in the share of equity attributable to RWE AG's shareholders).

Accumulated other comprehensive income (OCI) reflects changes in the fair values of debt instruments measured at fair value through other comprehensive income, cash flow hedges and hedges of the net investment in foreign operations, as well as changes stemming from foreign currency translation adjustments from foreign financial statements.

As of 31 December 2021, the share of accumulated other comprehensive income attributable to investments accounted for using the equity method amounted to – €11 million (previous year: – €29 million).

During the reporting year, €7 million in differences from currency translation which had originally been recognised without an effect on income were realised as income (previous year: income of €3 million).

Dividend proposal

We propose to the Annual General Meeting that RWE AG's distributable profit for fiscal 2021 be appropriated as follows:

Distribution of a dividend of €0.90 per share.

Dividend	€608,598,043.20
Profit carryforward	€25,045.09
Distributable profit	€608,623,088.29

Based on a resolution of RWE AG's Annual General Meeting on 28 April 2021, the dividend for fiscal 2020 amounted to €0.85 per dividend-bearing share. The dividend payment to shareholders of RWE AG amounted to €575 million (previous year: €492 million).

Non-controlling interests

The share ownership of third parties in Group entities is presented in this item.

The income and expenses recognised directly in equity (OCI) include the following non-controlling interests:

Non-controlling interests in OCI € million	2021	2020
Currency translation adjustment	64	-25
Fair valuation of financial instruments used for hedging purposes	36	-17
Income and expenses recognised directly in equity, to be reclassified through profit or loss in the future	**100**	**-42**
	100	**-42**

Material non-controlling interests are attributable to the subsidiary Rampion Offshore Wind Limited., headquartered in Coventry, United Kingdom.

Subsidiaries with material non-controlling interests € million	Rampion Offshore Wind Limited, United Kingdom 31 Dec 2021
Balance sheet	
Non-current assets	1,929
Current assets	169
Non-current liabilities	250
Statement of comprehensive income	
Revenue	278
Income	85
Total comprehensive income	123
Cash flows from operating activities	183
Non-controlling interests	
Dividends paid to non-controlling interests	68
Income of non-controlling interests	42
Share of non-controlling interests in equity	49.90%
Share of non-controlling interests in voting rights	49.90%

Rampion Offshore Wind Limited, United Kingdom, was fully consolidated for the first time in the second quarter of 2021.

(21) Share-based payment

For executives of RWE AG as well as of affiliated companies, Long Term Incentive Plans (LTIPs) are in place as share-based payment systems known as Strategic Performance Plans (SPPs). The expenses associated with these are borne by the Group companies which employ the persons holding notional stocks.

The LTIP SPP 2016-2020 was introduced in 2016. It uses an internal performance target (net income of relevance to remuneration) derived from the mid-term planning and takes into account the development of RWE AG's share price. Executives receive conditionally granted virtual shares (performance shares). The final number of virtual shares in a tranche is determined based on the achievement of the adjusted net income target. Each of the issued LTIP SPP tranches has a term of four years before payment is possible.

The plan conditions of the LTIP SPP were adjusted and extended for grants starting from fiscal 2021. In the future, along with the development of adjusted net income of relevance to remuneration, the share-based payment scheme LTIP SPP 2021 will orientate to two additional success factors: the carbon footprint of our generation portfolio and the relative total shareholder return, which puts the total return of the RWE share in relation to that of other European utility stocks. These three success factors determine how many of the conditionally granted performance shares are finally granted at the end of the performance period. The performance period was extended from the previous one year to three years. Once it ends, all three success factors will be given equal weight in calculating the final grant. Thereafter, the performance shares must be held for a further year. Therefore, the vesting period will still be four years.

LTIP SPP 2016-2020	2017 tranche	2018 tranche	2019 tranche	2020 tranche
Start of term	1 Jan 2017	1 Jan 2018	1 Jan 2019	1 Jan 2020
Number of conditionally granted performance shares	1,338,027	883,974	932,889	935,331
Term (vesting period)	4 years	4 years	4 years	4 years
Performance target	Adjusted net income	Adjusted net income	Adjusted net income	Adjusted net income
Cap / number of performance shares	150%	150%	150%	150%
Cap / payment amount	200%	200%	200%	200%
Determination of payment	The payment amount is calculated on the basis of the determined number of performance shares multiplied by the sum of a) the mathematical average of the closing share price of the RWE share (ISIN DE 000703129), with all available decimal places, in Xetra trading of Deutsche Börse AG (or a successor trading system which subsequently takes the place of the Xetra system) for the last 30 trading days prior to the end of the vesting period rounded according to standard commercial practice to two decimal places, and b) the dividends paid per share for the fiscal years between the determination of the final number of performance shares and the end of the vesting period. Dividends do not bear interest and are not reinvested. If a dividend payment occurs during the 30-day period for calculating the share price in accordance with item a), the share prices of the trading days leading up to the payment (CUM share prices) are adjusted by the dividend, as the dividend would otherwise be considered twice. Payment amount = (number of finally granted performance shares) x (mathematical average of the share price + dividends paid). The payment amount calculated in this manner is limited to no more than 200% of the grant amount.			
Change in corporate control / merger	A change in corporate control ('change of control') shall occur if a) a shareholder gains control in accordance with Sec. 29 of the German Securities Acquisition and Takeover Act by holding at least 30% of the voting rights including third-party voting rights attributable to it in accordance with Sec. 30 of the German Securities Acquisition and Takeover Act, or b) a control agreement in accordance with Sec. 291 of the German Stock Corporation Act is concluded with RWE AG as the dependent company, or c) RWE AG is merged with another legal entity that does not belong to the Group in accordance with Sec. 2 of the German Company Transformation Act, unless the value of the other legal entity is less than 50% of the value of RWE AG based on the agreed conversion rate; in such a case, item a) shall not apply. In the event of a change of control, all of the performance shares which have been fully granted and have not been paid out shall be paid out early. The payment amount is determined according to the exercise conditions, with the deviation that the last 30 trading days prior to the announcement of the change in control is to be used; plus the dividends paid per share in the fiscal years between the determination of the final number of performance shares and the time of the change in control. The payment amount calculated in this manner shall be paid to the plan participant together with his or her next salary payment. All conditionally granted performance shares as of the effective date of the change of control shall lapse without consideration..			
Form of settlement	Cash settlement	Cash settlement	Cash settlement	Cash settlement
Payment date	2021	2022	2023	2024

LTIP SPP 2021	2021 tranche
Start of term	1 Jan 2021
Number of conditionally granted performance shares	823,566
Term (vesting period)	4 years
Performance targets	1. Adjusted net income; 2. CO_2 intensity; 3. Relative total shareholder return
Weighting of performance targets	Average achievement of performance targets, each weighted 1/3
Performance period	3 years
Cap / number of performance shares	150%
Cap / payment amount	200%
Determination of payment	The payment amount is calculated on the basis of the determined number of performance shares multiplied by the sum of a) the mathematical average of the closing share price of the RWE share (ISIN DE 000703129), with all available decimal places, in Xetra trading of Deutsche Börse AG (or a successor trading system which subsequently takes the place of the Xetra system) for the last 30 trading days prior to the end of the vesting period rounded according to standard commercial practice to two decimal places, and b) the dividends paid per share for the fiscal years between the determination of the final number of performance shares and the end of the vesting period. Dividends do not bear interest and are not reinvested. If a dividend payment occurs during the 30-day period for calculating the share price in accordance with item a), the share prices of the trading days leading up to the payment (CUM share prices) are adjusted by the dividend, as the dividend would otherwise be considered twice. Payment amount = (number of finally granted performance shares) x (mathematical average of the share price + dividends paid). The payment amount calculated in this manner is limited to no more than 200% of the grant amount.
Change in corporate control / merger	A change in corporate control ('change of control') shall occur if a) a shareholder gains control in accordance with Sec. 29 of the German Securities Acquisition and Takeover Act by holding at least 30% of the voting rights including third-party voting rights attributable to it in accordance with Sec. 30 of the German Securities Acquisition and Takeover Act, or b) a control agreement in accordance with Sec. 291 of the German Stock Corporation Act is concluded with RWE AG as the dependent company, or c) RWE AG is merged with another legal entity that does not belong to the Group in accordance with Sec. 2 of the German Company Transformation Act, unless the value of the other legal entity is less than 50% of the value of RWE AG based on the agreed conversion rate; in such a case, item a) shall not apply. In the event of a change of control, all of the performance shares which have been fully granted and have not been paid out shall be paid out without change on expiry of the holding period. The payment amount is determined according to the exercise conditions, with the deviation that the takeover price per share is to be used, plus the dividends paid per share in the fiscal years between the start of the vesting period and the time of the change in control. The value of all performance shares granted conditionally at the time of the change of control shall be determined with appropriate application of the exercise conditions based on the full-year results for the targets that are available up to the fiscal year in which the change of control occurs, even if in this case the performance period only lasts one or two years. The payment amount is determined according to the exercise conditions, with the deviation that the takeover price per share is to be used, plus the dividends paid per share in the fiscal years between the start of the vesting period and the time of the change in control. All conditionally granted performance shares for the calendar year of the change of control shall lapse without consideration.
Form of settlement	Cash settlement
Payment date	2025

The fair value of the performance shares conditionally granted under SPP included the following sums on the grant date:

Performance Shares from the RWE AG SPP €	2017 tranche	2018 tranche	2019 tranche	2020 tranche	2021 tranche
Fair value per share	11.62	18.80	19.10	26.41	34.07

The fair values of the tranches of the RWE AG SPP are based on RWE AG's current share price plus the dividends per share which have already been paid to the shareholders during the term of the corresponding tranche. The limited payment per SPP was implemented via a sold call option. The option value calculated using the Black Scholes Model was deducted. The maximum payments per conditionally granted SPP (= option strike) established in the plan conditions, the discount rates relative to the remaining term as well as the volatilities and expected dividends of RWE AG were considered in determining the option price.

Multivariate Monte Carlo simulations were used for the valuation of RWE AG's 2021 tranche of the SPP. In this context, the success factors not dependent on the capital market were taken as the best estimators without variability. In the valuation model, due consideration was given to the maximum payment amounts stipulated in the programme's conditions for each conditionally granted SPP (= option strike), the success factors not dependent on the capital market, the current level of the RWE AG share and the index, the volatilities and correlations, the discount rates for the remaining term and the expected dividends of RWE AG.

The performance shares displayed the following development in the fiscal year that just came to a close:

Performance Shares from the RWE AG SPP	2017 tranche	2018 tranche	2019 tranche	2020 tranche	2021 tranche
Outstanding at the start of the fiscal year	1,643,631	1,088,490	1,403,532	935,331	
Granted					823,566
Change[1]		-10,609	-7,973	77,820	
Paid out	-1,643,631				
Outstanding at the end of the fiscal year		1,077,881	1,395,559	1,013,151	823,566
Payable at the end of the fiscal year		1,077,881			

1 'Change' pertains to the final grant based on target achievement or the subsequent grant or lapse of performance shares.

For the SPP options exercised in the previous fiscal year, the average weighted daily share price on the day of exercise was €34.51.

During the period under review, expenses for the share-based payment system totalled €33 million (previous year: €38 million). As of the balance-sheet date, provisions for cash-settled share-based payment programmes amounted to €85 million (previous year: €85 million).

(22) Provisions

Provisions € million	31 Dec 2021 Non-current	Current	Total	31 Dec 2020 Non-current	Current	Total
Provisions for pensions and similar obligations	1,934		1,934	3,864		3,864
Provisions for nuclear waste management	5,577	452	6,029	6,113	338	6,451
Provisions for mining damage	4,871	122	4,993	4,729	85	4,814
	12,382	**574**	**12,956**	**14,706**	**423**	**15,129**
Other provisions						
Staff-related obligations (excluding restructuring)	304	832	1,136	339	651	990
Restructuring obligations	579	31	610	624	18	642
Purchase and sales obligations	1,266	213	1,479	1,366	124	1,490
Provisions for dismantling wind farms	1,196	2	1,198	1,125	11	1,136
Other dismantling and retrofitting obligations	553	94	647	648	70	718
Environmental protection obligations	73	1	74	76	2	78
Interest payment obligations	223		223	223		223
Obligations to deliver CO_2 emission allowances / certificates for renewable energies		2,099	2,099		1,332	1,332
Miscellaneous other provisions	367	422	789	363	373	736
	4,561	**3,694**	**8,255**	**4,764**	**2,581**	**7,345**
	16,943	**4,268**	**21,211**	**19,470**	**3,004**	**22,474**

Provisions for pensions and similar obligations. The company pension plan consists of defined contribution and defined benefit plans. The defined benefit commitments mainly relate to pension benefits based on final salary. These are exposed to the typical risks of longevity, inflation and salary increases.

In the reporting period, €36 million (previous year: €32 million) was paid into defined contribution plans. This includes payments made by RWE for a benefit plan in the Netherlands which covers the commitments of various employers. This fund does not provide the participating companies with information allowing for the pro-rata allocation of defined benefit obligations, plan assets and service cost. In the consolidated financial statements, the contributions are thus recognised analogously to a defined contribution plan, although this is a defined benefit plan. The pension plan for employees in the Netherlands is administered by Stichting Pensioenfonds ABP (see www.abp.nl). Contributions to the pension plan are calculated as a percentage rate of employees' salaries and are paid by the employees and employers. The rate of the contributions is determined by ABP. There are no minimum funding obligations. Approximately €9 million in employer contributions are expected to be paid to the ABP pension fund in the following fiscal 2022 (prior-year figure for fiscal 2021: €9 million). The contributions are used for all of the beneficiaries. If ABP's funds are insufficient, it can either curtail pension benefits and future post-employment benefits, or increase the contributions of the employer and employees. In the event that RWE terminates the ABP pension plan, ABP will charge a termination fee. Amongst other things, its level depends on the number of participants in the plan, the amount of salary and the age structure of the participants. As of 31 December 2021, we had around 600 active participants in the plan (previous year: approximately 600).

RWE transferred assets to RWE Pensionstreuhand e.V. within the framework of a contractual trust arrangement (CTA) in order to finance the pension commitments of German Group companies. There is no obligation to provide further funds. From the assets held in trust, funds were transferred to RWE Pensionsfonds AG to cover pension commitments to most of the employees who have already retired. RWE Pensionsfonds AG falls under the scope of the Act on the Supervision of Insurance Undertakings and oversight by the Federal Financial Supervisory Agency (BaFin). Insofar as a regulatory deficit occurs in the pension fund, supplementary payment shall be requested from the employer. Independently of the aforementioned rules, the liability of the employer shall remain in place. The boards of RWE Pensionstreuhand e.V. and RWE Pensionsfonds AG are responsible for ensuring that the funds under management are used in compliance with the contract and thus fulfil the requirements for recognition as plan assets. In March 2021, RWE made an extraordinary funding payment of €1,049 million to the assets held in trust, in order to further improve the capital coverage of the domestic pension obligations.

In the United Kingdom, it is legally mandated that defined benefit plans are provided with adequate and suitable assets to cover pension obligations. The corporate pension system is managed by the sector-wide Electricity Supply Pension Scheme (ESPS). Following completion of the E.ON transaction, dedicated independent sections were formed for RWE for the conventional generation business (RWE Section), for the renewables business acquired legally from innogy which has been consolidated with RWE without interruption (Innogy Section) and for the renewables business acquired from E.ON (Former E.ON Section). The sections are managed by trustees which are elected by members of the pension plans or appointed by the sponsoring employers. The trustees are responsible for managing the pension plans. This includes investments, pension payments and financing plans. The pension plans comprise the benefit obligations and plan assets for the subsidiaries of the RWE Group. It is required by law to assess the required financing of the pension plans once every three years in compliance with the UK regulations for pensions (a so-called funding valuation). This involves measuring pension obligations on the basis of conservative assumptions, which deviate from the requirements imposed by IFRS. The underlying actuarial assumptions primarily include the projected life expectancies of the members of the pension plans as well as assumptions relating to inflation, imputed interest rates and the market returns on the plan assets.

The last funding valuation for the RWE section was carried out on 31 March 2019 and showed that the RWE section had a financing deficit of £44.3 million, which was rectified with a payment of £48.3 million as of 31 March 2020. The next funding valuation must occur by 31 March 2022. A financing deficit of £103.4 million was revealed for the Innogy Section. It was subsequently agreed with the trustees to rectify this deficit with annual payments of £37.5 million, £36.3 million, £17.0 million and £17.0 million from 2020 to 2023. An agreement was also reached with the trustees to draw forward the next valuation to 31 March 2021. This valuation was completed in December 2021. No financing deficit was identified. Together with the trustees, the decision was then made not to undertake the annual payments for 2022 and 2023 resulting from the previous valuation. A valuation was carried out for the section of the renewables business acquired from E.ON on 31 March 2020. It revealed a financing deficit of £7 million. In December 2021, the sponsoring employers and the trustees decided to transfer the members of this section to the Innogy Section. Consequently, there is no need to settle the financing deficit.

The payments to settle the deficit are charged to the participating companies on the basis of a contractual agreement. Above and beyond this, payments are regularly made to finance the newly arising benefit obligations of active employees which increase the pension claims.

Provisions for defined benefit plans are determined using actuarial methods. We apply the following assumptions:

Calculation assumptions	31 Dec 2021		31 Dec 2020	
in %	Germany	Foreign[1]	Germany	Foreign[1]
Discount rate	1.10	1.80	0.80	1.30
Wage and salary growth rate	2.35	3.20	2.35	3.00
Pension increase rate	1.00, 1.60 and 1.75	2.20 and 3.10	1.00, 1.60 and 1.75	2.10 and 2.90

1 Pertains to benefit commitments to employees of the RWE Group in the UK.

Composition of plan assets (fair value)	31 Dec 2021				31 Dec 2020			
€ million	Germany[1]	Of which: Level 1 pursuant to IFRS 13	Foreign[2]	Of which: Level 1 pursuant to IFRS 13	Germany[1]	Of which: Level 1 pursuant to IFRS 13	Foreign[2]	Of which: Level 1 pursuant to IFRS 13
Equity instruments, exchange-traded funds	1,784	1,754	496	108	1,472	1,449	485	69
Interest-bearing instruments	5,430		4,146	419	3,785		3,956	
Real estate	1				1			
Mixed funds[3]			1,478	143	645	324	1,509	116
Alternative investments	663	609	386		711	542	412	
Other[4]	60	24	626	101	56	23	477	85
	7,938	**2,387**	**7,132**	**771**	**6,670**	**2,338**	**6,839**	**270**

1 Plan assets in Germany primarily pertain to assets of RWE AG and other Group companies which are managed by RWE Pensionstreuhand e.V. as a trust, as well as to assets of RWE Pensionsfonds AG.
2 Foreign plan assets pertain to the assets of the RWE Group within the British ESPS to cover benefit commitments to employees of the RWE Group in the UK.
3 Includes equity and interest-bearing instruments.
4 Includes reinsurance claims against insurance companies and other fund assets.

Our investment policy in Germany is based on a detailed analysis of the plan assets and the pension commitments and the relation of these two items to each other, in order to determine the best possible investment strategy (Asset Liability Management Study). Using an optimisation process, portfolios are identified which can earn the best targeted results at a defined level of risk. One of these efficient portfolios is selected and the strategic asset allocation is determined; furthermore, the related risks are analysed in detail.

The focus of RWE's strategic investment policy is on domestic and foreign government bonds. In order to increase the average yield, corporate bonds with a higher yield are also included in the portfolio. The ratio of equities in the portfolio is lower than that of bonds. Investment occurs in various regions. The investment position in equities is intended to earn a risk premium over bond investments over the long term. Furthermore, in order to achieve consistently high returns, there is also investment in products which are more likely to offer relatively regular positive returns over time. This involves products with returns which fluctuate like those of bond investments, but which achieve an additional return over the medium term, such as so-called absolute return products.

In the United Kingdom, our capital investment takes account of the structure of the pension obligations as well as liquidity and risk matters. The goal of the investment strategy in this context is to maintain the level of pension plan funding and ensure the full financing of the pension plans over time. To reduce financing costs and earn surplus returns, we also include higher-risk investments in our portfolio. The capital investment focusses on government and corporate bonds.

Pension provisions for pension commitments changed as follows:

Changes in pension provisions € million	Present value of pension commitments	Fair value of plan assets	Capitalised surplus of plan assets	Total
Balance at 1 Jan 2021	**17,201**	**13,509**	**172**	**3,864**
Current service cost	171			171
Interest cost / income	170	149		21
Return on fund assets less interest components		503		-503
Gain / loss on change in demographic assumptions	35			35
Gain / loss on change in financial assumptions	-782			-782
Experience-based gains / losses	-4			-4
Currency translation adjustments	458	474	18	2
Employee contributions	8	8		
Employer contributions [1]		1,129		-1,129
Benefits paid [2]	-727	-702		-25
Changes in the scope of consolidation / transfers	7	5		2
Past service cost	8			8
General administration expenses		-5		5
Change in capitalised surplus of plan assets			269	269
Balance at 31 Dec 2021	**16,545**	**15,070**	**459**	**1,934**
of which: domestic	9,844	7,938	3	1,909
of which: foreign	6,701	7,132	456	25

1 Of which: €1,092 million from initial and subsequent transfers to plan assets and €37 million in cash flows from operating activities.
2 Contained in cash flows from operating activities.

Changes in pension provisions € million	Present value of pension commitments	Fair value of plan assets	Capitalised surplus of plan assets	Total
Balance at 1 Jan 2020	**16,486**	**13,193**	**153**	**3,446**
Current service cost	148			148
Interest cost / income	238	201		37
Return on fund assets less interest components		859		-859
Gain / loss on change in demographic assumptions	-17			-17
Gain / loss on change in financial assumptions	1,435			1,435
Experience-based gains / losses	-106			-106
Currency translation adjustments	-352	-361	-10	-1
Employee contributions	8	8		
Employer contributions[1]		245		-245
Benefits paid [2]	-718	-690		-28
Changes in the scope of consolidation	71	62		9
Past service cost	8			8
General administration expenses		-8		8
Change in capitalised surplus of plan assets			29	29
Balance at 31 Dec 2020	**17,201**	**13,509**	**172**	**3,864**
of which: domestic	10,503	6,670		3,833
of which: foreign	6,698	6,839	172	31

1 Of which: €96 million from initial and subsequent transfers to plan assets and €149 million in cash flows from operating activities.
2 Contained in cash flows from operating activities.

Changes in the actuarial assumptions would lead to the following changes in the present value of the defined benefit obligations:

Sensitivity analysis of pension provisions	Changes in the present value of defined benefit obligations			
€ million	31 Dec 2021		31 Dec 2020	
Change in the discount rate by + 50 / - 50 basis points				
Domestic	- 715	813	- 792	903
Foreign	- 458	518	- 486	552
Change in the wage and salary growth rate by - 50 / + 50 basis points				
Domestic	- 44	46	- 63	65
Foreign	- 36	42	- 41	47
Change in the pension increase rate by - 50 / + 50 basis points				
Domestic	- 463	507	- 518	569
Foreign	- 307	267	- 339	382
Increase of one year in life expectancy				
Domestic		478		523
Foreign		223		210

The sensitivity analyses are based on the change of one assumption each, with all other assumptions remaining unchanged. Actual developments will probably be different than this. The methods of calculating the aforementioned sensitivities and for calculating the pension provisions are in agreement. The dependence of pension provisions on market interest rates is limited by an opposite effect. The background of this is that the commitments stemming from company pension plans are primarily covered by funds, and mostly plan assets exhibit negative correlation with the market yields of fixed-interest securities. Consequently, declines in market interest rates are typically reflected in an increase in plan assets, whereas rising market interest rates are typically reflected in a reduction in plan assets.

The present value of pension obligations, less the fair value of the plan assets, equals the net amount of funded and unfunded pension obligations.

As of the balance-sheet date, the recognised amount of pension provisions totalled €1,367 million for funded pension plans (previous year: €3,265 million) and €567 million for unfunded pension plans (previous year: €599 million).

As in the previous year, a portion of the past service cost related to effects in connection with restructuring measures in Germany and severance payments in Great Britain.

Domestic company pensions are subject to an obligation to review for adjustment every three years pursuant to the Act on the Improvement of Company Pensions (Sec 16 of the German Company Pension Act (BetrAVG)). Additionally, some commitments grant annual adjustments of pensions, which may exceed the adjustments in compliance with the legally mandated adjustment obligation.

Some domestic pension plans guarantee a certain pension level, taking into account the statutory pension (total retirement earnings schemes). As a result, future reductions in the statutory pension can result in higher pension payments by RWE.

The weighted average duration of the pension obligations was 16 years in Germany (previous year: 16 years) and 16 years outside of Germany (previous year: 17 years).

In fiscal 2022, RWE expects to make €65 million in payments for defined benefit plans of continuing operations (previous-year target: €240 million), as direct benefits and contributions to plan assets.

Provisions for nuclear energy and mining € million	Balance at 1 Jan 2021	Additions	Unused amounts released	Interest accretion	Amounts used	Balance at 31 Dec 2021
Provisions for nuclear waste management	6,451	162	-2	14	-596	6,029
Provisions for mining damage	4,814	116	-2	127	-62	4,993
	11,265	**278**	**-4**	**141**	**-658**	**11,022**

Provisions for nuclear waste management are recognised in the full amount for the nuclear power plants Biblis A and B, Emsland and Gundremmingen A, B and C, as well as Lingen and Mülheim-Kärlich. Provisions for waste disposal for the Dutch nuclear power plant Borssele are included at a rate of 30 %, in line with RWE's stake.

Provisions for nuclear waste disposal are almost exclusively reported as non-current provisions, and their settlement amount is discounted to the balance-sheet date. Based on the current state of planning, these provisions will essentially be used by the beginning of the 2040s. The discount rate calculated on the basis of the current level of market interest rates for no-risk cash investments was 0.0 % as of the balance-sheet date (previous year: 0.0 %). The escalation rate based on expectations with regard to general increases in wages and prices and productivity growth was 1.5 % (previous year: 1.5 %). As a result, the real discount rate used for nuclear waste management purposes, which is the difference between the discount rate and the escalation rate, amounted to – 1.5 % (previous year: – 1.5 %). An increase (decrease) in this rate by 0.1 percentage point would reduce (increase) the present value of the provision by roughly €40 million.

Excluding the interest accretion, additions to provisions for nuclear waste management are based on quantity-related increases in the provisions as well as updates of the cost estimates and amount to €162 million. Of the changes in provisions, €21 million was offset against the corresponding costs of nuclear power plants still in operation and the fuel elements. In the reporting period, we also used provisions of €245 million for the decommissioning of nuclear power plants. Decommissioning and dismantling costs had originally been capitalised in a corresponding amount and reported under the cost of the respective nuclear power plants.

The provisions of the law on the reassignment of responsibility for nuclear waste disposal stipulate that accountability for the shutdown and dismantling of the assets in Germany as well as for packaging radioactive waste remains with the companies. The shutdown and dismantling process encompasses all activities following the final termination of production by the nuclear power plant until the plant site is removed from the regulatory scope of the Nuclear Energy Act. A request to decommission and dismantle the nuclear power plant will be filed with the nuclear licensing authority during its operating period so that the decommissioning and dismantling work can be performed in time after the expiry of the operating permit. Dismantling operations essentially consist of dismantling and removal of the radioactive contamination from the facilities and structures, radiation protection, and regulatory monitoring of the dismantling measures and residual operations.

We thus subdivide our provisions for nuclear waste management into the residual operation of nuclear power plants, the dismantling of nuclear power station facilities as well as the cost of residual material processing and radioactive waste treatment facilities.

Provisions for nuclear waste management € million	31 Dec 2021	31 Dec 2020
Residual operation	2,211	2,707
Dismantling	2,126	2,007
Processing of residual material and waste management	1,692	1,737
	6,029	**6,451**

Provisions for the residual operation of nuclear power station facilities cover all steps that must be taken largely independent of dismantling and disposal but are necessary to ensure that the assets are safe and in compliance with permits or are required by the authorities. In addition to works monitoring and facility protection, these mainly include service, recurrent audits, maintenance, radiation and fire protection as well as infrastructural adjustments.

Provisions for the dismantling of nuclear power plant facilities include all work done to dismantle plants, parts of plants, systems and components as well as on buildings that must be dismantled to comply with the Nuclear Energy Act. They also consider the conventional dismantling of nuclear power plant facilities to fulfil legal or other obligations.

Provisions for residual material processing and waste management include the costs of processing radioactive residual material for non-hazardous recycling and the costs of treating radioactive waste produced during the plant's service life and dismantling operations. This includes the various processes for conditioning, proper packaging of the low-level and intermediate-level radioactive waste in suitable containers and the transportation of such waste to BGZ Gesellschaft für Zwischenlagerung mbH (BGZ), which has been commissioned by the Federal government for intermediate storage. This item also contains the cost of transporting the waste produced by recycling and of the proper packaging of spent nuclear fuel elements, i.e. the cost of procuring and loading freight and interim storage containers.

Commissioned by the plant operator, the internationally renowned company NIS Ingenieurgesellschaft mbH, Alzenau, assesses the prospective costs of residual operation and dismantling of the nuclear power plants on an annual basis. The costs are determined specifically for each facility and take into consideration the current state of the art, regulatory requirements and previous practical experience from ongoing and completed dismantling projects. Additionally, current developments are also incorporated into the cost calculations. They also include the cost of conditioning and packaging radioactive waste generated during dismantling operations and the transportation of such waste to BGZ. Further cost estimates for the disposal of radioactive waste are based on contracts with foreign reprocessing companies and other disposal companies. Furthermore, the cost estimates are based on plans by internal and external experts, in particular GNS Gesellschaft für Nuklear-Service mbH, (GNS) Essen.

In terms of their contractual definition, provisions for nuclear waste management break down as follows:

Provisions for nuclear waste management € million	31 Dec 2021	31 Dec 2020
Provisions for nuclear obligations, not yet contractually defined	4,148	4,623
Provisions for nuclear obligations, contractually defined	1,881	1,828
	6,029	**6,451**

The provision for obligations which are not yet contractually defined covers the costs of the remaining operational phase of the operating plants, the costs of dismantling as well as the residual material processing and waste treatment costs incurred in connection with waste produced as a result of shutdowns.

Provisions for contractually defined nuclear obligations relate to all obligations the value of which is specified in contracts under civil law. The obligations include the anticipated residual costs of reprocessing and returning the resulting radioactive waste. These costs stem from existing contracts with foreign reprocessing companies and with GNS. Moreover, these provisions also include the costs for transport and intermediate storage containers for and the loading of spent fuel assemblies within the framework of final direct storage. Furthermore, this item also includes the amounts for the professional packaging of radioactive operational waste as well as the in-house personnel costs incurred for the residual operation of plants which are permanently decommissioned.

Provisions for mining damage also consist almost entirely of non-current provisions and fully covered the volume of obligations as of the balance-sheet date. They are reported at their settlement amount discounted to the balance-sheet date. The cost estimates are based on internal planning and estimates and are largely backed by external expert opinions.

In discounting the amounts used in the coming 30 years, we have oriented ourselves towards the current market interest rates for risk-free cash investments. Since no market interest rates are available for later periods, a sustainable, long-term interest rate is used to discount the amounts used after the next 30 years. The average discount rate was 2.1 % (previous year: 2.0 %). The majority of the provisions still pertains to claims that are expected to materialise over the next 30 years. Based on the currently expected price and cost increases, the escalation rate was 1.5 % as in the previous year. The real discount rate applied for mining purposes, which is the difference between the discount rate and the escalation rate, was thus 0.6 % (previous year: 0.5 %). A decline of 0.1 percentage point in the real discount rate would increase the present value of the provision by around €140 million, while an increase of 0.1 percentage point would reduce the present value by around €130 million.

Excluding the interest accretion, additions to provisions for mining damage amounted to €116 million in the reporting period. The reason for this was quantity-induced increases in the obligatory volume and updates of the cost estimates, of which €21 million was capitalised in the item The interest accretion increased provisions for mining damage by €127 million, of which €6 million was capitalised in the item 'property, plant and equipment'.

Other provisions € million	Balance at 1 Jan 2021	Additions	Unused amounts released	Interest accretion	Changes in the scope of consolidation, currency adjustments, transfers	Amounts used	Balance at 31 Dec 2021
Staff-related obligations (excluding restructuring)	990	708	-25		37	-574	1,136
Restructuring obligations	642	96	-64	-15	-40	-9	610
Purchase and sales obligations	1,490	425	-77	-9		-350	1,479
Provisions for dismantling wind farms	1,136	159	-165	-105	175	-2	1,198
Other dismantling and retrofitting obligations	718	35	-92	-9	8	-13	647
Environmental protection obligations	78	1	-4		3	-4	74
Interest payment obligations	223						223
Obligations to deliver CO_2 emission allowances / certificates for renewable energies	1,332	2,095	-27		20	-1,321	2,099
Miscellaneous other provisions	736	435	-41		-17	-324	789
	7,345	**3,954**	**-495**	**-138**	**186**	**-2,597**	**8,255**

Provisions for staff-related obligations mainly consist of provisions for pre-retirement part-time work arrangements, severance, outstanding vacation and service jubilees and performance-based pay components. Based on current estimates, we expect most of these to be used from 2022 to 2025.

Provisions for restructuring obligations pertain mainly to measures for socially acceptable payroll downsizing. We currently expect most of these to be used from 2022 to 2038. In so doing, sums ear-marked for personnel measures are reclassified from provisions for restructuring obligations to provisions for staff-related obligations as soon as the underlying restructuring measure has been specified. This is the case if individual contracts governing socially acceptable payroll downsizing are signed by affected employees.

Provisions for purchase and sales obligations primarily relate to contingent losses from pending transactions.

From the current perspective, we expect that the majority of the **provisions for the dismantling of wind farms** will be used from 2022 to 2046, and the **provisions for other dismantling and retrofitting obligations** will be used from 2022 to 2060.

(23) Financial liabilities

Financial liabilities	31 Dec 2021		31 Dec 2020	
€ million	Non-current	Current	Non-current	Current
Bonds payable[1]	2,411		549	
Commerical paper		2,710		
Bank debt	2,014	3,569	1,528	83
Other financial liabilities				
Collateral for trading activities		4,239		716
Miscellaneous other financial liabilities	2,373	478	1,874	448
	6,798	**10,996**	**3,951**	**1,247**

1 Including hybrid bonds classified as debt as per IFRS.

The following overview shows the key data on the bonds of the RWE Group as of 31 December 2021:

Bonds payable Issuer	Outstanding amount	Carrying amount € million	Coupon in %	Maturity
RWE AG	€ 12 million	12	3.5	October 2037
RWE AG	€ 282 million[1]	281	3.5	April 2075
RWE AG	US$ 317 million[1]	278	6.625	July 2075
RWE AG	€ 500 million	500	0.625	June 2031
RWE AG	€ 750 million	747	0.5	November 2028
RWE AG	€ 600 million	593	1.0	November 2033
Bonds payable		**2,411**		

1 Hybrid bonds classified as debt as per IFRS.

In June 2021, RWE issued a green corporate bond with a volume of €500 million and a maturity of ten years. Based on a coupon of 0.625 % p.a. and an issue price of 99.711 %, the yield-to-maturity amounts to 0.655 % p.a. In accordance with RWE's guidelines for green bonds, the RWE Green Bond Framework, the proceeds from the issue may only be used for the financing or refinancing of wind and solar projects.

RWE issued another green bond in November 2021. It consisted of two tranches, with a volume of €750 million and a maturity of seven years and a volume of €600 million and a maturity of twelve years, respectively. Based on a coupon of 0.5 % p.a. and an issue price of 99.808 %, the yield-to-maturity amounts to 0.528 % p.a. for the first tranche. The yield-to-maturity is 1.077 % p.a. for the second tranche, with a coupon of 1.0 % and an issue price of 99.138 %.

In the previous year, a hybrid bond issued by RWE AG which was previously classified as debt pursuant to IAS 32 was cancelled on 4 September 2020. The redemption in the amount of €539 million was effected on 21 October 2020 without refinancing the hybrid bond with fresh hybrid capital. The hybrid bond had a 2.75 % coupon and maturity ending in April 2075.

€23 million of the financial liabilities are secured by mortgages (previous year: €31 million). Other financial liabilities contain lease liabilities.

(24) Income tax liabilities

Income tax liabilities contain uncertain income tax items in the amount of €905 million (previous year: €939 million). This item primarily includes income taxes for periods for which the tax authorities have not yet finalised a tax assessment and for the current year.

(25) Other liabilities

Other liabilities	31 Dec 2021		31 Dec 2020[1]	
€ million	Non-current	Current	Non-current	Current
Tax liabilities		226		158
Social security liabilities	1	20	1	14
Derivatives	873	76,119	554	8,106
Miscellaneous other liabilities	855	906	800	768
	1,729	**77,271**	**1,355**	**9,046**
of which: financial debt	961	76,677	640	8,414
of which: non-financial debt	768	594	715	632

1 Some prior-year figures restated due to a retroactive change in the recognition of tax benefits to subsidise renewable energy in the USA (see commentary on pages 108 et seq.).

The increase in derivatives during the reporting period resulted from the significant price rises for over-the-counter commodity derivatives for electricity and natural gas, which cannot be netted.

The principal component of social security liabilities are the amounts payable to social security institutions.

Miscellaneous other liabilities contain €150 million in contract liabilities (previous year: €221 million).

Moreover, €63 million (previous year: €66 million) in miscellaneous other liabilities were allocable to state investment subsidies primarily granted in connection with the construction of wind farms.

Other information

(26) Earnings per share

Basic and diluted earnings per share are calculated by dividing the portion of net income attributable to RWE shareholders by the average number of shares outstanding; treasury shares are not taken into account in this calculation.

Earnings per share		2021	2020[1]
Net income for RWE AG shareholders	€ million	721	1,051
of which: from continuing operations		721	864
of which: from discontinued operations			187
Number of shares outstanding (weighted average)	in '000	676,220	637,286
Basic and diluted earnings per share	€	1.07	1.65
of which: from continuing operations		1.07	1.36
of which: from discontinued operations			0.29
Dividend per share	€	0.90[2]	0.85

1 Some prior-year figures restated due to a retroactive change in the recognition of tax benefits to subsidise renewable energy in the USA (see commentary on pages 108 et seq.).
2 Dividend proposal for fiscal 2021, subject to the resolution of the Annual General Meeting on 28 April 2022.

(27) Reporting on financial instruments

Financial instruments are divided into non-derivative and derivative. Non-derivative financial assets essentially include other non-current financial assets, accounts receivable, marketable securities and cash and cash equivalents. Financial instruments are recognised either at amortised cost or at fair value, depending on their classification. Financial instruments are recognised in the following categories:

- Debt instruments measured at amortised cost: the contractual cash flows solely consist of interest and principal on the outstanding capital: there is an intention to hold the financial instrument until maturity.
- Debt instruments measured at fair value through other comprehensive income: the contractual cash flows solely consist of interest and principal on the outstanding capital; there is an intention to hold and sell the financial instrument.
- Equity instruments measured at fair value through other comprehensive income: the option to recognise changes in fair value directly in equity is exercised.
- Financial assets measured at fair value through profit or loss: the contractual cash flows of a debt instrument do not solely consist of interest and principal on the outstanding capital or the option to recognise changes in the fair value of equity instruments in other comprehensive income is not exercised.

On the liabilities side, non-derivative financial instruments principally include liabilities measured at amortised cost.

Financial instruments recognised at fair value are measured based on the published exchange price, insofar as the financial instruments are traded on an active market. The fair value of non-quoted debt and equity instruments is generally determined on the basis of discounted expected payment flows, taking into consideration macro-economic developments and corporate business plan data. Current market interest rates corresponding to the remaining maturity are used for discounting.

Derivative financial instruments are recognised at their fair values as of the balance-sheet date, insofar as they fall under the scope of IFRS 9. Exchange-traded products are measured using the published closing prices of the relevant exchange. Non-exchange traded products are measured on the basis of publicly available broker quotations or, if such quotations are not available, on generally accepted valuation methods. In doing so, we draw on prices on active markets as much as possible. If such prices are not available, company-specific planning estimates are used in the measurement process. These estimates encompass all of the market factors which other market participants would take into account in the course of price determination. Assumptions pertaining to the energy sector and economy are made within the scope of a comprehensive process with the involvement of both in-house and external experts.

Measurement of the fair value of a group of financial assets and financial liabilities is conducted on the basis of the net risk exposure per business partner.

The following overview presents the classifications of financial instruments measured at fair value in the fair value hierarchy prescribed by IFRS 13. The individual levels of the fair value hierarchy are defined as follows:

- Level 1: Measurement using (unadjusted) prices of identical financial instruments formed on active markets,
- Level 2: Measurement on the basis of input parameters which are not the prices from Level 1, but which can be observed for the financial instrument either directly (i. e. as price) or indirectly (i. e. derived from prices),
- Level 3: Measurement using factors which cannot be observed on the basis of market data.

Fair value hierarchy € million	Total 31 Dec 2021	Level 1	Level 2	Level 3	Total 31 Dec 2020	Level 1	Level 2	Level 3
Other financial assets[1]	5,477	4,960	235	282	4,237	3,659	214	364
Derivatives (assets)	65,160		61,281	3,879	8,784		8,085	699
of which: used for hedging purposes	6,768		6,768		1,634		1,634	
Securities	8,040	1,078	6,962		4,219	1,269	2,950	
Derivatives (liabilities)	76,992		75,760	1,232	8,660		8,404	256
of which: used for hedging purposes	14,609		14,609		1,498		1,498	

1 Some prior-year figures restated due to retroactive adjustments to the first-time consolidation of operations which RWE acquired from Nordex in 2020 (see commentary on page 95).

Due to the higher number of price quotations on active markets, financial assets with a fair value of €16 million (previous year: €43 million) were reclassified from Level 2 to Level 1 and €93 million (previous year: €0 million) to Level 3. Conversely, due to a drop in the number of price quotations, financial assets with a fair value of €13 million (previous year: €93 million) were reclassified from Level 1 to Level 2.

The development of the fair values of Level 3 financial instruments is presented in the following table:

Level 3 financial instruments: Development in 2021 € million	Balance at 1 Jan 2021	Changes in the scope of consolidation, currency adjustments and other	Changes			Balance at 31 Dec 2021
			Recognised in profit or loss	Recognised in OCI	With a cash effect	
Other financial assets	364	-95	21	-103	95	282
Derivatives (assets)	699		3,466		-286	3,879
Derivatives (liabilities)	256	-29	1,190		-185	1,232

Level 3 financial instruments: Development in 2020 € million	Balance at 1 Jan 2020	Changes in the scope of consolidation, currency adjustments and other	Changes			Balance at 31 Dec 2020
			Recognised in profit or loss	Recognised in OCI	With a cash effect	
Other financial assets[1]	350	-52	-85	98	53	364
Derivatives (assets)	665	-9	42		1	699
Assets held for sale	8	-9			1	
Derivatives (liabilities)	577	-8	-313			256
Liabilities held for sale	4	-4				

1 Some prior-year figures restated due to retroactive adjustments to the first-time consolidation of operations which RWE acquired from Nordex in 2020 (see commentary on page 95).

Amounts recognised in profit or loss generated through Level 3 financial instruments relate to the following line items on the income statement:

Level 3 financial instruments: Amounts recognised in profit or loss € million	Total 2021	Of which: attributable to financial instruments held at the balance-sheet date	Total 2020	Of which: attributable to financial instruments held at the balance-sheet date
Other operating income / expenses	2,276	2,277	356	852
Income from investments	21	20	-86	-85
	2,297	**2,297**	**270**	**767**

Level 3 derivative financial instruments essentially consist of energy purchase and commodity agreements, which relate to trading periods for which there are no active markets yet. The valuation of such depends on the development of electricity, oil and gas prices in particular. All other things being equal, rising market prices cause the fair values to increase, whereas declining gas prices cause them to drop. A change in pricing by + / – 10% would cause the market value to rise by €82 million (previous year: €95 million) or decline by €82 million (previous year: €95 million).

Financial assets and liabilities can be broken down into the measurement categories with the following carrying amounts according to IFRS 9 in the year under review:

Carrying amounts by category € million	31 Dec 2021	31 Dec 2020
Financial assets measured at fair value through profit or loss	65,854	10,566
of which: obligatorily measured at fair value – continuing operations	65,854	10,566
Debt instruments measured at amortised cost[1]	24,911	10,766
of which: held for sale		2
Debt instruments measured at fair value through other comprehensive income	1,236	1,338
Equity instruments measured at fair value through other comprehensive income	4,819	3,702
Financial liabilities measured at fair value through profit or loss	62,384	7,163
of which: obligatorily measured at fair value – continuing operations	62,384	7,163
Financial liabilities measured at amortised cost	21,359	7,013
of which: held for sale		315

1 Restated prior-year figure.

The carrying amounts of financial assets and liabilities within the scope of IFRS 7 basically correspond to their fair values. The only deviations are for financial liabilities. The carrying amount of these is €16,385 million (previous year: €4,011 million), while the fair value amounts to €16,419 million (previous year: €4,281 million). Of this, €2,460 million (previous year: €607 million) is related to Level 1 and €13,959 million (previous year: €3,674 million) to Level 2 of the fair value hierarchy.

The following net results from financial instruments as per IFRS 7 were recognised on the income statement, depending on the category:

Net gain / loss by category € million	2021	2020
Financial assets and liabilities measured at fair value through profit or loss	-1,270	3,318
of which: obligatorily measured at fair value	-1,270	3,318
Debt instruments measured at amortised cost	600	-248
Debt instruments measured at fair value through other comprehensive income	59	-7
Equity instruments measured at fair value through other comprehensive income	194	193
Financial liabilities measured at amortised cost	-648	-303

The net result as per IFRS 7 essentially includes interest, dividends and results from the measurement of financial instruments at fair value.

The option to recognise changes in fair value in OCI is exercised for a portion of the investments in equity instruments. These are strategic investments and other long-term investments.

Fair value of equity instruments measured at fair value through other comprehensive income € million	31 Dec 2021	31 Dec 2020
Nordsee One GmbH	17	120
E.ON SE	4,802	3,582

In fiscal 2021, €194 million (previous year: €193 million) in income from dividends from these financial instruments was recognised, of which €0 million (previous year: €5 million) was attributable to equity instruments sold during the same year. In the previous year, their fair value at the derecognition date amounted to €782 million. The resulting loss amounted to €18 million in the previous year.

The following is an overview of the financial assets and financial liabilities which are netted out in accordance with IAS 32 or are subject to enforceable master netting agreements or similar agreements. The netted financial assets and liabilities essentially consist of collateral for stock market transactions due on a daily basis.

The related amounts not set off include cash collateral received and pledged for over-the-counter transactions as well as collateral pledged in advance for stock market transactions.

Netting of financial assets and financial liabilities as of 31 Dec 2021	Gross amounts recognised	Netting	Net amounts recognised	Related amounts not set off		Net amount
€ million				Financial instruments	Cash collateral received / pledged	
Derivatives (assets)	69,985	-65,273	4,712		-4,039	673
Derivatives (liabilities)	69,714	-61,564	8,150	-1,107	-7,004	39

Netting of financial assets and financial liabilities as of 31 Dec 2020	Gross amounts recognised	Netting	Net amounts recognised	Related amounts not set off		Net amount
€ million				Financial instruments	Cash collateral received / pledged	
Derivatives (assets)	10,111	-9,209	902		-495	407
Derivatives (liabilities)	8,024	-7,439	585	-267	-310	8

As an energy producer with international operations, the RWE Group is exposed to market, credit and liquidity risks in its ordinary business activity. We limit these risks via systematic, groupwide risk management. The range of action, responsibilities and controls are defined in binding internal directives.

Market risks stem from changes in exchange rates and share prices as well as interest rates and commodity prices, which can have an influence on business results.

Due to the RWE Group's international profile, currency management is a key issue. Fuels are traded in British pounds and US dollars as well as in other currencies. In addition, RWE does business in a number of currency areas. The companies of the RWE Group are required to hedge their foreign currency risks via RWE AG. Foreign currency risks arising from the involvement in and the financing of the renewable energy business are hedged by RWE Renewables International Participations B.V.

Interest rate risks stem primarily from financial debt and the Group's interest-bearing investments. We hedge against negative changes in value caused by unexpected interest-rate movements using non-derivative and derivative financial instruments.

Opportunities and risks from changes in the values of non-current securities are centrally controlled by a professional fund management system operated by RWE AG.

The Group's other financial transactions are recorded using centralised risk management software and monitored by RWE AG.

For commodity operations, risk management directives have been established by RWE AG's Controlling & Risk Management Department. These regulations stipulate that derivatives may be used to hedge price risks. Furthermore, commodity derivatives may be traded, subject to limits. Compliance with limits is monitored daily.

Risks stemming from fluctuations in commodity prices and financial market risks (foreign currency risks, interest rate risks, securities risks) are monitored and managed by RWE using indicators such as the Value at Risk (VaR) and sensitivities, amongst other things. In addition, for the management of interest rate risk, a Cash Flow at Risk (CFaR) is determined.

Using the VaR method, RWE determines and monitors the maximum expected loss arising from changes in market prices with a specific level of probability during specific periods. Historical price volatility is taken as a basis in the calculations. With the exception of the CFaR data, all VaR figures are based on a confidence interval of 95 % and a holding period of one day. For the CFaR, a confidence interval of 95 % and a holding period of one year is taken as a basis.

In respect of interest rate risks, RWE distinguishes between two risk categories: on the one hand, increases in interest rates can result in declines in the prices of securities from the holdings of RWE. This pertains primarily to fixed-rate instruments. Starting from fiscal 2021, price risk is measured using sensitivity analysis in relation to an interest rate change of 100 basis points. As of the balance-sheet date, it amounted to €28.2 million (previous year: €2.5 million). On the other hand, financing costs also increase along with the level of interest rates. The sensitivity of interest expenses to increases in market interest rates is measured with the CFaR. As of 31 December 2021 this amounted to €2.0 million (previous year: €18.6 million). RWE calculates the CFaR based on the assumption of the refinancing of maturing debt.

Starting from fiscal 2021, risks related to financial positions in foreign currency are also measured using sensitivity analysis, which shows the impact on the value of the position stemming from a 10% change in the exchange rate. As of 31 December 2021, this sensitivity was €0.3 million (previous year: €0.4 million).

Since fiscal 2021, we also measure the price risk of equities in RWE's portfolio using sensitivity analysis. As of the balance-sheet date, this analysis yielded the following results (before taxes): In the event of a 10% rise in the relevant equity prices, equity would increase by €490 million (previous year: €358 million) and income by €9 million (previous year: €0 million). In the event of a 10% fall in the relevant equity prices, equity would decrease by €490 million (previous year: €358 million) and income by €9 million (previous year: €0 million).

The key internal control parameters for commodity positions at RWE Supply & Trading are the VaR for the trading business and the VaR for the pooled gas and liquefied natural gas (LNG) business. Here, the maximum VaR is €50 million and €25 million, respectively. As of 31 December 2021, the VaR was €30.6 million in the trading business (previous year: €25.0 million) and €14.9 million for the pooled gas and LNG business (previous year: €6.7 million).

Additionally, stress tests are carried out on a monthly basis in relation to the trading and pooled LNG and gas business of RWE Supply & Trading to model the impact of commodity price changes on the earnings conditions and take risk-mitigating measures if necessary. In these stress tests, market price curves are modified, and the commodity position is re-valued on this basis. Historical scenarios of extreme prices and realistic, fictitious price scenarios are modelled. In the event that the stress tests exceed internal thresholds, these scenarios are then analysed in detail in relation to their impact and probability, and – if necessary – risk-mitigating measures are considered.

Commodity risks of the Group's power generation companies belonging to the Coal / Nuclear and Hydro / Biomass / Gas segments are managed by the Commodity Management Commitee (CMC) and hedged by the Supply & Trading segment on the basis of available market liquidity in accordance with Group guidelines. In accordance with the approach for long-term investments for example, it is not possible to manage commodity risks from long-term positions or positions which cannot be hedged due to their size and the prevailing market liquidity using the VaR concept. As a result, these positions are not included in the VaR figures. Above and beyond open production positions which have not yet been transferred, the Group companies belonging to the Coal / Nuclear and Hydro / Biomass / Gas segments are not allowed to maintain significant risk positions, according to a Group guideline. Furthermore, commodity price risks can exist in relation to the renewable generation positions and in the gas storage business. The commodity price risks associated with the renewable generation positions are managed by the Renewables Commodity Management Committee (RES CMC). The subsidiaries owning the gas storage facilities also manage their positions independently, in compliance with unbundling regulations.

One of our most important instruments to limit market risk is the conclusion of hedging transactions. The instruments most commonly used are forwards and options with foreign currency, interest rate swaps, interest rate currency swaps, equity capital derivatives, and forwards, options, futures and swaps with commodities.

Maturities of derivatives related to interest rates, currencies, equity capital, indices and commodities for the purpose of hedging are based on the maturities of the underlying transactions and are thus primarily short term and medium term in nature. Hedges of the foreign currency risks of foreign investments have maturities of up to ten years.

All derivative financial instruments within the scope of IFRS 9 are recognised as assets or liabilities and are measured at fair value. When interpreting their positive and negative fair values, it should be taken into account that, with the exception of trading in commodities, these financial instruments are generally matched with underlying transactions that carry offsetting risks.

Hedge accounting pursuant to IFRS 9 is used primarily for mitigating currency risks from net investments in foreign functional currencies, commodity market price risks, interest risks from non-current liabilities and currency and price risks from sales and purchase transactions.

In the previous year, fair value hedges were used to limit the market price risk exposure related to CO_2 emission allowances. In the case of fair value hedges, both the derivative as well as the underlying hedged transaction (in relation to the hedged risk) are recorded at fair value with an effect on income.

In the previous year, RWE held the following instruments to hedge the fair value of commodity price risks:

Fair value hedges as of 31 Dec 2020	Maturity 1 – 6 months	7 – 12 months	> 12 months
CO_2 derivatives			
Nominal volume (€ million)			39
Secured average price (€ / metric ton)			5.57

Cash flow hedges are primarily used to hedge against interest risks from non-current liabilities as well as currency and price risks from sales and purchase transactions. Hedging instruments consist of forwards, swaps and options with foreign currency and interest rates, and forwards, futures and swaps with commodities. Changes in the fair value of the hedging instruments – insofar as they affect the effective portion – are recorded in other comprehensive income until the underlying transaction is realised. The ineffective portion of changes in value is recognised in profit or loss. When hedging commodities, underlying and hedging transactions are based on the same price index. This generally does not result in ineffectiveness. When hedging foreign currency risks, ineffectiveness can result from the difference in timing between the origination of the hedged item and the hedging instrument. Ineffectiveness can likewise stem from hedges containing material foreign currency basis spreads. Upon realisation of the underlying transaction, the hedge's contribution to income from accumulated other comprehensive income is recognised on the income statement or is offset against the initial value recognition of an asset or a liability.

RWE held the following instruments to hedge future cash flows relating to foreign currency risks:

Cash flow hedges as of 31 Dec 2021	Maturity 1 – 6 months	7 – 12 months	> 12 months
Currency forwards – purchases			
Nominal volume (€ million)	850	377	686
Avg. EUR / USD exchange rate	1.17	1.19	1.17
Avg. EUR / GBP exchange rate	0.86	0.86	0.89
Avg. EUR / CAD exchange rate	1.60	1.48	1.65
Avg. EUR / DKK exchange rate			7.44
Avg. EUR / SGD exchange rate	1.59	1.60	1.62
Avg. EUR / CHF exchange rate	1.10		
Currency forwards – sales			
Nominal volume (€ million)	- 1,001	- 554	- 2,188
Avg. EUR / USD exchange rate	1.19	1.18	1.26
Avg. EUR / GBP exchange rate	0.87	0.88	0.90
Avg. EUR / CAD exchange rate	1.47	1.45	
Avg. EUR / DKK exchange rate			7.45

Cash flow hedges as of 31 Dec 2020	Maturity		
	1 – 6 months	7 – 12 months	> 12 months
Currency forwards – purchases			
Nominal volume (€ million)	522	258	234
Avg. EUR / USD exchange rate	1.19	1.19	1.20
Avg. EUR / GBP exchange rate	0.91	0.91	0.92
Avg. EUR / CAD exchange rate	1.54	1.63	1.64
Currency forwards – sales			
Nominal volume (€ million)	– 945	– 319	– 447
Avg. EUR / USD exchange rate	1.20	1.21	1.20
Avg. EUR / GBP exchange rate	0.90	0.91	0.91
Avg. EUR / CAD exchange rate	1.55	1.57	

RWE held the following instruments to hedge future cash flows relating to interest risks:

Cash flow hedges as of 31 Dec 2021	Maturity		
	1 – 6 months	7 – 12 months	> 12 months
Interest swaps			
Nominal volume (£ million)	950		1,155
Secured average interest rate (%)	1.62		1.82

Cash flow hedges as of 31 Dec 2020	Maturity		
	1 – 6 months	7 – 12 months	> 12 months
Interest swaps			
Nominal volume (£ million)			1,215
Secured average interest rate (%)			1.55

The commercial optimisation of the power plant portfolio is based on a dynamic hedging strategy. Hedged items and hedging instruments are constantly adjusted based on changes in market prices, market liquidity and the sales business with consumers. Commodity prices are hedged if this leads to a positive margin. Proprietary commodities trading is strictly separated from this when managing risks.

Hedges of net investment in a foreign operation are used to hedge the foreign currency risks of net investment in foreign entities whose functional currency is not the euro. We use interest rate currency swaps and other currency derivatives as hedging instruments. If there are changes in the fair value of interest rate currency swaps, the amount of the effective portion is recorded under foreign currency translation adjustments in other comprehensive income.

The forward and spot elements of the hedging instruments used in net investment hedges are treated separately and only the value of the spot element is designated. In these cases, the fair value change of the forward element (hedging costs) is recognised in other comprehensive income to the extent that the fair value change relates to the hedged net investment. Moreover, the fair value of the forward element as of the time of designation is amortised over the duration of the hedging instrument using the straight-line method and recognised in profit or loss.

RWE held the following instruments to hedge net investments in foreign operations:

Net investment hedges as of 31 Dec 2021	Maturity		
	1 - 6 months	7 - 12 months	> 12 months
Currency forwards – purchases			
Nominal volume (€ million)	59		2,888
Avg. EUR / GBP exchange rate	0.84		0.88
Currency forwards – sales			
Nominal volume (€ million)	- 702	- 557	- 7,507
Avg. EUR / GBP exchange rate	0.86	0.86	0.87

Net investment hedges as of 31 Dec 2020	Maturity		
	1 - 6 months	7 - 12 months	> 12 months
Currency forwards – purchases			
Nominal volume (€ million)	277		
Avg. EUR / GBP exchange rate	0.90		
Currency forwards – sales			
Nominal volume (€ million)	- 5,737		- 631
Avg. EUR / GBP exchange rate	0.91		0.63

The hedging instruments designated in hedging relationships had the following effects on the company's net asset, financial and earnings position:

Hedging instruments – effects on the net asset, financial and earnings position as of 31 Dec 2021 € million	Nominal amount	Carrying amount		Fair value changes in the current period	Recognised ineffectiveness
		Assets	Liabilities		
Cash flow hedges					
Interest risks	1,866		67	-93	
Foreign currency risks	-70		1	3	
Commodity price risks	6,890[1]	6,242	14,146	-7,899	
Net investment hedges					
Foreign currency risks		5	327	-386	70

1 The net nominal amount stated is made up of purchases in the amount of €7,733 million and sales in the amount of –€14,623 million.

Hedging instruments – effects on the net asset, financial and earnings position as of 31 Dec 2020 € million	Nominal amount	Carrying amount		Fair value changes in the current period	Recognised ineffectiveness
		Assets	Liabilities		
Fair value hedges					
Commodity price risks	39		192	56	
Cash flow hedges					
Foreign currency risks	729		177	-90	
Commodity price risks	2,444[1]	3,020	1,104	614	
Net investment hedges					
Foreign currency risks		6	366	122	67

1 The net nominal amount stated is made up of purchases in the amount of €1,086 million and sales in the amount of –€3,530 million.

The carrying amounts of the hedging instruments are recognised in the 'Other receivables and other assets' and 'Other liabilities' balance-sheet items.

The hedged items designated in hedging relationships had the following effects on the company's net asset, financial and earnings position:

Fair value hedges as of 31 Dec 2020	Carrying amount		Of which: cumulative fair value adjustments		Changes in fair value in the reporting year
€ million	Assets	Liabilities	Assets	Liabilities	
Commodity price risks	231		192		56

Cash flow hedges and net investment hedges as of 31 Dec 2021 € million	Changes in fair value during the current period	Reserve for current hedges	Reserve for terminated hedges
Cash flow hedges			
Interest risks	54	-68	14
Foreign currency risks	14	1	1
Commodity price risks	-4,973	-1,567	
Net investment hedges			
Foreign currency risks	-413	836	350

Cash flow hedges and net investment hedges as of 31 Dec 2020 € million	Changes in fair value during the current period	Reserve for current hedges	Reserve for terminated hedges
Cash flow hedges			
Interest risks	44	-50	
Foreign currency risks	-78	-59	-14
Commodity price risks	-1,528	3,094	-11
Net investment hedges			
Foreign currency risks	117	1,275	350

In the previous year, the carrying amounts of the hedged items for fair value hedges were stated in the 'other receivables and other assets' balance-sheet item. Amounts realised from other comprehensive income and any ineffectiveness are recognised in the items on the income statement in which the underlying transactions are also recognised with an effect on income. The amounts realised from other comprehensive income are recognised in the items 'revenue' and 'cost of materials', whereas any ineffectiveness is recognised in 'other operating income and expenses'. Amounts recognised and any ineffectiveness of hedging interest risks are recognised in 'financial income' and 'financial expenses' on the income statement.

The reconciliation of the changes in the hedge reserve in relation to the various risk categories of hedge accounting follows below:

Hedge reserve 2021 € million	
Balance at 1 Jan 2021	**1,837**
Cash flow hedges	
Effective portion of changes in market value	-5,243
Interest risks	3
Foreign currency risks	-14
Commodity price risks	-5,232
Gain or loss reclassified from OCI to the income statement – realisation of underlying transactions	470
Foreign currency risks	25
Commodity price risks	445
Gain or loss recognised as a basis adjustment	-586
Interest risks	
Foreign currency risks	-3
Commodity price risks	-583
Tax effect of the change in the hedge reserve	1,222
Net investment hedges	
Effective portion of changes in market value	-414
Foreign currency risks	-414
Ofsetting against currency adjustments	414
Fair value changes of hedging costs	24
Amortisation of hedging costs	33
Balance at 31 Dec 2021	**-2,243**

Hedge reserve 2020[1] € million	
Balance at 1 Jan 2020	**2,946**
Cash flow hedges	
Effective portion of changes in market value	-1,800
Interest risks	-55
Foreign currency risks	34
Commodity price risks	-1,779
Gain or loss reclassified from OCI to the income statement – realisation of underlying transactions	1,256
Foreign currency risks	
Commodity price risks	1,256
Gain or loss recognised as a basis adjustment	-982
Interest risks	
Foreign currency risks	1
Commodity price risks	-982
Tax effect of the change in the hedge reserve	417
Net investment hedges	
Effective portion of changes in market value	-147
Foreign currency risks	-147
Ofsetting against currency adjustments	147
Balance at 31 Dec 2020	**1,837**

1 Some prior-year figures restated.

As part of the reform of the current system for determining reference interest rates (the so-called IBOR reform), the existing reference rates and methods for determining such were replaced with alternative interest rates and methods. In the EU, the EONIA was discontinued on 3 January 2022, and in the United Kingdom the LIBOR was phased out after 31 December 2021.

With regard to the RWE Group, the IBOR reform impacts the accounting treatment of certain financial liabilities and hedging relationships which serve to reduce the interest rate risks associated with non-current liabilities. These hedging relationships are based on the 1-month GBP LIBOR and the 6-month GBP LIBOR. As of 31 December 2021, the transition to alternative interest rates was not yet complete. The designated hedging instruments had a nominal volume of €1,318 million and a carrying amount of €47 million as of the reporting date. The total carrying amount of the hedged financial liabilities was €1,413 million as of the reporting date.

RWE is managing the transition to the new benchmark rates by way of an interdisciplinary working group headed by the Finance & Credit Risk Department. Its focus is on supplementing, amending and reassessing the relevant contracts and carrying out the technically necessary system adjustments. With regard to the financial liabilities and derivatives designated in hedging relationships, RWE has initiated negotiations with the contractual partners to transition the interest rates previously based on the GBP LIBOR to the GBP SONIA plus a spread which offsets the difference between the two reference rates. The amended credit contracts were concluded on 10 January 2022, with an effective transition to SONIA as of 31 January 2022. As part of the transition from GBP LIBOR to SONIA plus a spread, the hedging instruments which hedged the previous interest rate risk from the GBP LIBOR were also adjusted. The hedging relationships were adjusted on 10 January 2022, with effective transition as of 31 January 2022.

Starting from 1 January 2020, RWE applied the amendments in IFRS 9, IAS 39 and IFRS 7 – Interest Rate Benchmark Reform, which were published in September 2019. The amendments provide temporary relief from applying specific hedge accounting requirements to hedging relationships directly affected by IBOR reform. The reliefs primarily mean that the uncertainties arising from the IBOR reform do not result in discontinuation of the hedging relationships. Hedge ineffectiveness continues to be recognised in the profit or loss.

At the time of the aforementioned contractual adjustments in January 2022, RWE also applied the amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16 – Interest Rate Benchmark Reform - Phase 2, which were published in August 2020. These amendments allow for other temporary reliefs for the accounting treatment of hedging relationships which are affected by the IBOR reform.

Credit risks. In the fields of finance and commodities, RWE primarily has credit relationships with banks that have good creditworthiness and other trading partners with predominantly good creditworthiness. Furthermore, RWE has credit relationships primarily with banks and other business partners with good creditworthiness within the scope of large-scale projects such as the construction of wind farms. RWE reviews counterparty default risks before contracts are concluded. RWE mitigates such risks by establishing limits which are adjusted during the business relationships if the creditworthiness of the business partners changes. Counterparty risks are monitored constantly so that countermeasures can be initiated early on. Furthermore, RWE is exposed to credit risks due to the possibility of customers failing to meet their payment obligations. We identify these risks by conducting regular analyses of the creditworthiness of our customers and initiate countermeasures if necessary.

Due to the coronavirus crisis, the economic situation of many companies deteriorated. While the current economic recovery is leading to an improvement in their situation, RWE's business partners, competitors and customers may continue to be impacted by the consequences of the crisis, as well as by the very strong price developments seen on the energy markets since the fourth quarter of 2021. RWE is thus carefully monitoring critical branches of the economy and exercising greater caution when conducting new transactions or extending existing ones. If necessary, previously approved limits are being lowered.

Amongst other things, RWE demands guarantees, cash collateral and other forms of security in order to mitigate credit risks. Furthermore, RWE takes out credit insurance policies to protect against defaults. Bank guarantees received as collateral are from financial institutions with the required good ratings. Collateral for credit insurance is pledged by insurers with an investment-grade rating.

The maximum balance-sheet default risk is derived from the carrying amounts of the financial assets stated on the balance sheet. The default risks for derivatives correspond to their positive fair values. Risks can also stem from financial guarantees and loan commitments which we have to fulfil vis-à-vis external creditors in the event of a default of a certain debtor. As of 31 December 2021, these obligations amounted to €1,231 million (previous year: €417 million). As of 31 December 2021, default risks were balanced against credit collateral, financial guarantees, bank guarantees and other collaterals amounting to €10.1 billion (previous year: €3.6 billion). Of this, €0.6 billion relates to trade receivables (previous year: €0.8 billion), €1.5 billion to derivatives used for hedging purposes (previous year: €0.6 billion), and €8.0 billion to other derivatives (previous year: €2.2 billion). There were no material defaults in fiscal 2021 or the previous year.

In the RWE Group, the risk provision for financial assets is determined on the basis of expected credit losses. These are determined on the basis of the probability of default, loss given default and the exposure at default. We determine the probability of default and loss given default using historical data and forward-looking information. The exposure at default date for financial assets is the gross carrying amount on the balance-sheet date. The expected credit loss for financial assets determined on this basis corresponds to the difference between the contractually agreed payments and the payments expected by RWE, discounted by the original effective interest rate. The assignment to one of the levels described below influences the level of the expected losses and the effective interest income recognised.

- Stage 1 – Expected 12-month credit losses: At initial recognition, financial assets are generally assigned to this stage – with the exception of those that have been purchased or originated credit impaired, which are thus considered separately. The level of impairment results from the cash flows expected for the entire term of the financial instrument, multiplied by the probability of a default within 12 months from the reporting date. The effective interest rate used for measurement is determined on the basis of the carrying amount before impairment (gross).
- Stage 2 – Lifetime expected credit losses (gross): If the credit risk has risen significantly between initial recognition and the reporting date, the financial instrument is assigned to this stage. Unlike Stage 1, default events expected beyond the 12-month period from the reporting date are also considered in calculating the impairment. The effective interest rate used for measurement is still determined on the basis of the carrying amount before impairment (gross).
- Stage 3 – Lifetime expected credit losses (net): If in addition to the criteria for Stage 2 there is an objective indication of an impairment, the financial asset is assigned to Stage 3. The impairment is calculated analogously to Stage 2. In this case, however, the effective interest rate used for measurement is applied to the carrying amount after impairment (net).

In the RWE Group, risk provisions are formed for financial instruments in the following categories:

- debt instruments measured at amortised cost,
- debt instruments measured at fair value through other comprehensive income.

For debt instruments for which there has been no significant rise in credit risk since initial recognition, a risk provision is recognised in the amount of the expected 12-month credit losses (Stage 1). In addition, a financial instrument is assigned to Stage 1 of the impairment model if the absolute credit risk is low on the balance-sheet date. The credit risk is classified as low if the debtor's internal or external rating is investment-grade. For trade accounts receivable, the risk provision corresponds to the lifetime expected credit losses (Stage 2).

To determine whether a financial instrument is assigned to Stage 2 of the impairment model, it must be determined whether the credit risk has increased significantly since initial recognition. To make this assessment, we consider quantitative and qualitative information supported by our experience and assumptions regarding future developments. In so doing, special importance is accorded to the sector in which the RWE Group's debtors are active. Our experience is based on studies and data from financial analysts and government authorities, amongst others.

Special attention is paid to the following developments:

- significant deterioration of the internal or external rating of the financial instrument,
- unfavourable changes in risk indicators, e.g. credit spreads or debtor-related credit default swaps,
- negative development of the debtor's regulatory, technological or economic environment,
- danger of an unfavourable development of business resulting in a significant reduction in operating income.

Independent thereof, a significant rise in credit risk and thus an assignment of the financial instrument to Stage 2 are assumed if the contractually agreed payments are more than 30 days overdue and there is no information that contradicts the assumption of a payment default.

We draw conclusions about the potential default of a counterparty from information from internal credit risk management. If internal or external information indicates that the counterparty cannot fulfil its obligations, the associated receivables are classified as unrecoverable and assigned to Stage 3 of the impairment model. Examples of such information are:

- The debtor of the receivable has apparent financial difficulties.
- The debtor has already committed a breach of contract by missing or delaying payments.
- Concessions already had to be made to the debtor.
- An insolvency or another restructuring procedure is impending.
- The market for the financial asset is no longer active.
- A sale is only possible at a high discount, which reflects the debtor's reduced creditworthiness.

A payment default and an associated assignment of the financial asset to Stage 3 is also assumed if the contractually agreed payments are more than 90 days overdue and there is no information disproving the assumption of a payment default. Based on our experience, we generally assume that this assumption does not apply to trade accounts receivable.

A financial asset is depreciated if there are indications that the counterparty is in serious financial difficulty and the situation is unlikely to improve. We may also take legal recourse and other measures in order to enforce the contractually agreed payments in the event of an impairment.

The following impairments were recognised for financial assets stated under the following balance-sheet items within the scope of IFRS 7:

Impairment of financial assets € million	Stage 1 – 12-month expected credit losses	Stage 2 – lifetime expected credit losses	Stage 3 – lifetime expected credit losses	Total
Financial receivables				
Balance at 1 Jan 2021	**6**		**13**	**19**
Remeasurement due to new measurement parameters	-2			-2
Redeemed or derecognised financial assets	-1		-2	-3
Level transfer		2		2
Balance at 31 Dec 2021	**3**	**2**	**11**	**16**

Impairment of financial assets € million	Stage 1 – 12-month expected credit losses	Stage 2 – lifetime expected credit losses	Stage 3 – lifetime expected credit losses	Total
Financial receivables				
Balance at 1 Jan 2020	**11**	**3**	**11**	**25**
Remeasurement due to new measurement parameters	-5			-5
Level transfer		-3	2	-1
Balance at 31 Dec 2020	**6**		**13**	**19**

For trade accounts receivable, the expected credit loss is determined by applying the simplified approach taking account of the entire lifetime of the financial instruments.

In the RWE Group, there are no cases where a risk provision for trade accounts receivable was not recognised due to the collateral on the books.

The following tables show the development of the risk provisions for trade accounts receivable:

Risk provision for trade accounts receivable € million	
Balance at 1 Jan 2021	**42**
Addition	16
Redeemed / derecognised	-25
Changes in the scope of consolidation	-5
Balance at 31 Dec 2021	**28**

Risk provision for trade accounts receivable € million	
Balance at 1 Jan 2020	**32**
Addition	13
Changes in the scope of consolidation	-3
Balance at 31 Dec 2020	**42**

The following table presents the gross carrying amounts of the financial instruments under the scope of the impairment model:

Gross carrying amounts of financial assets as of 31 Dec 2021 € million	Equivalent to S&P scale	Stage 1 – 12-month expected credit losses	Stage 2 – lifetime expected credit losses	Stage 3 – lifetime expected credit losses	Trade accounts receivable	Total
Class 1–5: low risk	AAA to BBB–	18,502	38		6,330	24,870
Class 6–9: medium risk	BB+ to BB–	776		11	345	1,132
Class 10: high risk	B+ to B–	37			138	175
Class 11: doubtful	CCC to C	1			10	11
Class 12: loss	D			1	38	39
		19,316	**38**	**12**	**6,861**	**26,227**

Gross carrying amounts of financial assets as of 31 Dec 2020[1] € million	Equivalent to S&P scale	Stage 1 – 12-month expected credit losses	Stage 2 – lifetime expected credit losses	Stage 3 – lifetime expected credit losses	Trade accounts receivable	Total
Class 1 – 5: low risk	AAA to BBB–	9,000	42		2,779	11,821
Class 6 – 9: medium risk	BB+ to BB–	59		11	153	223
Class 10: high risk	B+ to B–	19			85	104
Class 11: doubtful	CCC to C				14	14
Class 12: loss	D			1	37	38
		9,078	**42**	**12**	**3,068**	**12,200**

1 Some prior-year figures restated.

Liquidity risks. As a rule, RWE Group companies refinance with RWE AG. In this regard, there is a risk that liquidity reserves will prove to be insufficient to meet financial obligations in a timely manner. In 2022, liabilities owed to banks of €3.6 billion (previous year: €0.1 billion) are due. Above and beyond this, commercial paper in the amount of €2.7 billion matures in 2022 (previous year: €0 billion).

As of 31 December 2021, holdings of cash and cash equivalents and current marketable securities amounted to €13,865 million (previous year: €8,993 million).

The volume of RWE AG's credit line amounts to €5 billion. Its two tranches expire in April 2022 (€2 billion) and April 2026 (€3 billion). The commercial paper programme allows for issuance up to a maximum amount of €5 billion (previous year: €5 billion). As of the balance-sheet date, €2.7 billion of this programme was used (previous year: €0 billion). Above and beyond this, RWE AG can finance itself using a €10 billion debt issuance programme; as of the balance-sheet date, outstanding bonds from this programme amounted to €1.85 billion (previous year: €0 billion) at RWE AG. Accordingly, the RWE Group's medium-term liquidity risk can be classified as low.

Financial liabilities falling under the scope of IFRS 7 are expected to result in the following (undiscounted) payments in the coming years:

Redemption and interest payments on financial liabilities € million	Carrying amounts 31 Dec 2021	Redemption payments 2022	Redemption payments 2023 to 2026	Redemption payments From 2027	Interest payments 2022	Interest payments 2023 to 2026	Interest payments From 2027
Bonds payable[1]	2,411		562	1,849	42	157	70
Commercial paper	2,710	2,710					
Bank debt	5,583	3,568	281	1,733	34	127	98
Lease liabilities	1,409	86	273	1,061	20	102	252
Other financial liabilities	1,442	374	441	649	80	197	498
Derivative financial liabilities	76,992	76,250	222	532	45	68	128
Collateral for trading activities	4,239	4,239					
Miscellaneous other financial liabilities	4,975	4,892	86	2			

1 Including hybrid bonds classified as debt as per IFRS, taking into account the earliest possible call date.

Redemption and interest payments on financial liabilities € million	Carrying amounts 31 Dec 2020	Redemption payments			Interest payments		
		2021	2022 to 2025	From 2026	2021	2022 to 2025	From 2026
Bonds payable[1]	549		282	267	27	110	22
Bank debt	1,611	85	140	1,385	26	44	9
Lease liabilities	1,187	86	263	957	22	91	404
Other financial liabilities	1,135	350	324	476	50	149	472
Derivative financial liabilities	8,661	7,857	201	605	20	78	151
Collateral for trading activities	716	716					
Miscellaneous other financial liabilities	2,687	2,645	82	2			

1 Including hybrid bonds classified as debt as per IFRS, taking into account the earliest possible call date.

Above and beyond this, as of 31 December 2021, there were financial guarantees for external creditors in the amount of €1,191 million (previous year: €364 million), which are to be allocated to the first year of repayment. Additionally, Group companies have provided loan commitments to third-party companies amounting to €40 million (previous year: €53 million), which are callable in 2022.

Detailed information on the risks of the RWE Group and on the objectives and procedures of the risk management is presented on pages 70 et seqq. in the review of operations.

(28) Contingent assets, contingent liabilities and financial commitments

As of 31 December 2021, the amount of contractual commitments totalled €5,668 million (previous year: €2,071 million). This mainly consisted of investment in property, plant and equipment.

We have made long-term contractual purchase commitments for supplies of fuels, including natural gas in particular. Payment obligations stemming from the major long-term purchase contracts amounted to €22.3 billion as of 31 December 2021 (previous year: €23.6 billion), of which €0.3 billion is due within one year (previous year: €0.3 billion).

Gas purchases by the RWE Group are partially based on long-term take-or-pay contracts. The conditions in these contracts, which have terms up to 2036 in some cases, are renegotiated by the contractual partners at certain intervals, which may result in changes in the reported payment obligations. Calculation of the payment obligations resulting from the purchase contracts is based on parameters from the internal planning.

Furthermore, RWE has long-term financial commitments for purchases of electricity. As of 31 December 2021, the minimum payment obligations stemming from the major purchase contracts totalled €7.1 billion (previous year: €7.1 billion), of which €0.4 billion is due within one year (previous year: €0.3 billion). Above and beyond this, there are also long-term purchase and service contracts for uranium, conversion, enrichment and fabrication.

We bear legal and contractual liability from our membership in various associations which exist in connection with power plant projects, profit- and loss-pooling agreements and for the provision of liability cover for nuclear risks, amongst others.

On the basis of a mutual benefit agreement, RWE AG and other parent companies of German nuclear power plant operators undertook to provide approximately €2,244 million in funding to liable nuclear power plant operators to ensure that they are able to meet their payment obligations in the event of nuclear damages. From 1 January 2022 onwards, RWE AG has a 36.927 % contractual share in the liability (37.299 % until 31 December 2021) plus 5 % for damage settlement costs.

As part of the Group restructuring that occurred in fiscal 2016, a large portion of the pension commitments which up to then had been reported at the holding level were transferred to former Group companies (former subsidiaries innogy SE, Essen, and affiliated companies) by cancelling the performance obligation existing on an intra-group basis. The guarantees remaining vis-à-vis external parties were cancelled. The Group is liable for the accrued claims of the active and former employees of these companies in the amount of €5,875 million (previous year: €6,404 million).

RWE AG and its subsidiaries are involved in official, regulatory and antitrust proceedings, litigation and arbitration proceedings related to their operations and are affected by the results of such. In some cases, out-of-court claims are also filed. However, RWE does not expect any material negative repercussions from these proceedings on the RWE Group's economic or financial position.

With the approval of the Senate, the Dutch Parliament passed an amendment of the Coal Phaseout Act, which limits the carbon dioxide emissions of power plants to 35% of the maximum possible level by the end of 2024. RWE will be entitled to compensation payments for the economic disadvantages it will suffer. As foreseen in the Act, we expect to submit an application for compensation in the upper triple-digit million range in a timely manner.

(29) Segment reporting

RWE is divided into five segments, which are separated from each other based on functional criteria.

In the Offshore Wind segment, we report on our business in offshore wind, which is overseen by RWE Renewables. The main production sites are located in the United Kingdom and Germany. In addition to electricity generation, activities in this field also include the development and realisation of projects to expand capacity.

Onshore Wind / Solar encompasses our activities with onshore wind, solar power and battery storage. Here again, in addition to electricity generation, the focus is on expanding capacities. RWE Renewables has operating responsibility. Along with the USA, the main production sites are located in the United Kingdom, Germany, Italy, Spain, Poland and the Netherlands, as well as in Australia in the field of solar power.

Activities with run-of-river, pumped storage, biomass, and gas-fired power plants are bundled in the Hydro / Biomass / Gas segment. It also contains the Dutch hard coal power stations Amer 9 and Eemshaven, which are increasingly co-firing biomass, and the company RWE Technology International, which specialises in project management and engineering services. This segment is the responsibility of RWE Generation, which has also been responsible for formulating and implementing our hydrogen strategy since 2021. The 37.9 % stake in the Austrian energy utility KELAG is also reported in the Hydro / Biomass / Gas segment.

The Supply & Trading segment contains energy and commodities trading, the marketing and hedging of the RWE Group's electricity position and the gas midstream business. This segment is the responsibility of RWE Supply & Trading, which also supplies certain major industrial and commercial customers with electricity and natural gas. Additionally, gas storage facilities in Germany and the Czech Republic also belong to this segment.

The Coal / Nuclear segment covers German electricity production using lignite and nuclear power, as well as lignite mining operations in the Rhineland. It also includes the investment in the Dutch power plant operator EPZ (30%) and URANIT (50%), which holds a 33% stake in Urenco, a uranium enrichment specialist. The aforementioned activities and investments are the responsibility of the group company RWE Power.

'Other, consolidation' covers RWE AG, consolidation effects and the activities of other business areas which are not presented separately. These activities primarily include our non-controlling interests in the German transmission system operator Amprion and in E.ON; the E.ON dividend is reported in the financial result.

Segment reporting Divisions 2021 € million	Offshore Wind	Onshore Wind / Solar	Hydro / Biomass / Gas	Supply & Trading	Other, consolidation	Core business	Coal / Nuclear	Consolidation	RWE Group
External revenue (incl. natural gas tax / electricity tax)	**688**	**2,324**	**1,316**	**19,518**	**4**	**23,850**	**911**		**24,761**
Intra-group revenue	808	361	5,361	5,214	-10,986	758	4,116	-4,874	
Total revenue	1,496	2,685	6,677	24,732	-10,982	24,608	5,027	-4,874	24,761
Adjusted EBIT	636	-145	418	721	-106	1,524	661		2,185
Operating income from investments	116	10	61	68	47	302	51		353
Operating income from investments accounted for using the equity method	105	10	62	7	48	232	53		285
Operating depreciation, amortisation and impairment losses	474	403	313	48	-1	1,237	228		1,465
Impairment losses		80	7			87	872		959
Adjusted EBITDA	**1,110**	**258**	**731**	**769**	**-107**	**2,761**	**889**		**3,650**
Carrying amount of investments accounted for using the equity method	973	382	700	3	833	2,891	130		3,021
Capital expenditure on intangible assets, property, plant and equipment	1,683	1,404	294	47	2	3,430	259		3,689

Regions 2021 € million	Germany	UK	Rest of Europe	North America	Other	RWE Group
External revenue[1,2,3]	9,081	8,259	6,051	810	325	24,526
Intangible assets and property, plant and equipment	4,941	13,045	3,402	4,261	219	25,868

1 Excluding natural gas tax / electricity tax.
2 Broken down by the region in which the service was provided.
3 Including state subsidies received which do not conform to IFRS 15 and refunds paid to state bodies, among other things from CfD contracts, amounting to –€45 million in the UK, €2 million in Rest of Europe and €6 million in Other.

Segment reporting Divisions 2020[1] € million	Offshore Wind	Onshore Wind / Solar	Hydro / Biomass / Gas	Supply & Trading	Other, consolidation	Core business	Coal / Nuclear	Consoli-dation	RWE Group
External revenue (incl. natural gas tax / electricity tax)	**332**	**1,855**	**1,059**	**9,789**	**7**	**13,042**	**854**		**13,896**
Intra-group revenue	959	304	3,144	2,778	-6,803	382	3,075	-3,457	
Total revenue	1,291	2,159	4,203	12,567	-6,796	13,424	3,929	-3,457	13,896
Adjusted EBIT	697	138	283	496	-25	1,589	234		1,823
Operating income from investments	127	15	53	-57	123	261	95		356
Operating income from investments accounted for using the equity method	120	4	52	6	124	306	95		401
Operating depreciation, amortisation and impairment losses	372	385	338	43		1,138	325		1,463
Impairment losses		79	561	64		704	1,097		1,801
Adjusted EBITDA	**1,069**	**523**	**621**	**539**	**-25**	**2,727**	**559**		**3,286**
Carrying amount of investments accounted for using the equity method	1,490	171	655	3	830	3,149	127		3,276
Capital expenditure on intangible assets and property, plant and equipment	756	1,154	153	43		2,106	183	-4	2,285

1 Some prior-year figures restated due to a retroactive change in the recognition of tax benefits to subsidise renewable energy in the USA (see pages 108 et seq.).

Regions 2020 € million	Germany	UK	Rest of Europe	North America	Other	RWE Group
External revenue[1,2,3]	3,988	3,909	3,958	1,146	687	13,688
Intangible assets and property, plant and equipment[4]	5,714	10,811	3,049	2,953	273	22,800

1 Excluding natural gas tax / electricity tax.
2 Broken down by the region in which the service was provided.
3 Including state subsidies received which do not conform to IFRS 15 and refunds paid to state bodies, among other things from CfD contracts, amounting to €31 million in the UK, €19 million in Rest of Europe and €1 million in Other.
4 Some prior-year figures restated due to retroactive adjustments to the first-time consolidation of operations which RWE acquired from Nordex in 2020 (see page 95).

External revenue by product in 2021 € million	Offshore Wind	Onshore Wind / Solar	Hydro / Biomass / Gas	Supply & Trading	Other	Core business	Coal / Nuclear	RWE Group
External revenue[1]	**688**	**2,324**	**1,315**	**19,296**	**4**	**23,627**	**899**	**24,526**
of which: electricity[2]	688	2,107	877	16,540		20,212	264	20,476
of which: gas				2,142		2,142		2,142
of which: other revenue		217	438	614	4	1,273	635	1,908

1 Excluding natural gas tax / electricity tax.
2 Including state subsidies received which do not conform to IFRS 15 and refunds paid to state bodies, among other things from CfD contracts, amounting to –€39 million in Offshore Wind and €2 million in Onshore Wind / Solar.

External revenue by product in 2020 € million	Offshore Wind	Onshore Wind / Solar	Hydro / Biomass / Gas	Supply & Trading	Other	Core business	Coal / Nuclear	RWE Group
External revenue[1]	**332**	**1,855**	**1,056**	**9,597**	**9**	**12,849**	**839**	**13,688**
of which: electricity[2]	332	1,676	684	8,775	1	11,468	233	11,701
of which: gas			5	529		534		534
of which: other revenue		179	367	293	8	847	606	1,453

1 Excluding natural gas tax / electricity tax.
2 Including state subsidies received which do not conform to IFRS 15 and refunds paid to state bodies, among other things from CfD contracts, amounting to €51 million in Onshore Wind / Solar.

Notes on segment data. The external revenue of the segments Offshore Wind and Onshore Wind / Solar contains state subsidies and refunds paid to state bodies for the sale of green electricity, including subsidies from contracts for differences, amounting to -€39 million (previous year: €0 million) and €2 million (previous year: €51 million), respectively, which do not meet the definition of IFRS 15. These contracts for differences are used as a state subsidy mechanism and essentially result in a fixed price for the electricity that is sold, by offsetting positive and negative deviations (in so-called two-way contracts for difference) and negative deviations (in so-called one-way contracts for difference) from a defined reference price that is agreed with state contractual partners or the subsidy mechanism counterparty. We report revenue between the segments as RWE intra-group revenue. Internal supply of goods and services is settled at arm's length conditions.

Adjusted EBITDA is used for internal management. The following table presents the reconciliation of adjusted EBITDA to adjusted EBIT and income from continuing operations before tax:

Reconciliation of income items € million	2021	2020[1]
Adjusted EBITDA	**3,650**	**3,286**
– Operating depreciation, amortisation and impairment losses	-1,465	-1,463
Adjusted EBIT	**2,185**	**1,823**
+ Non-operating result	-650	-104
+ Financial result	-13	-454
Income from continuing operations before tax	**1,522**	**1,265**

1 Some prior-year figures restated due to a retroactive change in the recognition of tax benefits to subsidise renewable energy in the USA (see pages 108 et seq.).

Income and expenses that are unusual from an economic perspective, or stem from exceptional events, prejudice the assessment of operating activities. They are reclassified to the non-operating result. In addition to proceeds from the disposal of shareholdings or non-current assets not necessary for operations, this item mainly covers effects from the valuation of certain derivatives. These involve valuation effects which are only temporary and mainly arise because financial instruments to hedge price risks are reported at their fair value on the respective reporting date, while the hedged underlying transactions may only be recorded with an effect on income upon the realisation of such. A loss of €168 million is reported in the item 'other' (previous year: -€2,003 million). The 2020 result included impairment charges on power plants and opencast lignite mines amounting to €1.8 billion. Impairments were recognised in the lignite business during the reporting period as well, in the amount of €780 million. The compensation of €880 million paid to us in November 2021 by the German Federal government for the phaseout of nuclear energy in Germany had a positive effect.

Non-operating result € million	2021	2020[1]
Disposal result	21	13
Impact of the valuation of derivatives on earnings	-503	1,886
Other	-168	-2,003
Non-operating result	**-650**	-104

1 Some prior-year figures restated due to a retroactive change in the recognition of tax benefits to subsidise renewable energy in the USA (see pages 108 et seq.).

(30) Notes to the cash flow statement

The cash flow statement classifies cash flows according to operating, investing and financing activities. Cash and cash equivalents in the cash flow statement correspond to the amount stated on the balance sheet. Cash and cash equivalents consist of cash on hand, demand deposits and fixed-interest marketable securities with a maturity of three months or less from the date of acquisition.

Among other things, cash flows from operating activities include:

- cash flows from interest and dividends of €263 million (previous year: €281 million) and cash flows used for interest expenses of €284 million (previous year: €299 million),
- €163 million (previous year: -€72 million) in taxes on income paid (less refunds),
- income from investments, corrected for items without an effect on cash flows, in particular from accounting using the equity method, which amounted to €185 million (previous year: €323 million).

Cash flows from the acquisition and sale of consolidated subsidiaries and other business units are included in cash flows from investing activities, while effects stemming from exchange rate developments and other changes in value are shown separately. During the fiscal year, sales prices in the amount of €619 million (previous year: €872 million) were recognised for disposals resulting in a change of control. During the fiscal year, purchase prices amounting to –€5 million (previous year: €270 million) were recognised for acquisitions which also resulted in a change of control. The pre-payment of a purchase price in the previous year, which was already reported in the cash flows from investing activities last year, is not included in this figure, as there had been no change of control at that point in time. As in the previous year, sales prices received and purchase prices paid were effected exclusively in cash. In relation to this, cash and cash equivalents (disregarding assets held for sale) were acquired in the amount of €52 million (previous year: €0 million) and were sold in the amount of €39 million (previous year: €5 million).

With regard to subsidiaries or other business units of which control was gained or lost, the amounts of assets and liabilities (with the exception of cash and cash equivalents) are presented in the following, broken down by main groups:

Balance-sheet items 2021 € million	Additions	Disposals
Non-current assets	**2,073**	**786**
Intangible assets	951	29
Property, plant and equipment	1,003	119
Other non-current assets	119	638
Current assets	**451**	**1,238**
Non-current liabilities	**189**	**201**
Provisions	116	1
Financial liabilities	24	175
Other non-current liabilities	49	25
Current liabilities	**27**	**654**

Balance-sheet items 2020 € million	Additions	Disposals
Non-current assets	**541**	**131**
Intangible assets	395	6
Property, plant and equipment	133	120
Other non-current assets	13	5
Current assets	**10**	**1,357**
Non-current liabilities	**48**	**20**
Provisions		3
Financial liabilities		11
Other non-current liabilities	48	6
Current liabilities	**89**	**584**

Cash flows from financing activities of continuing operations include €575 million (previous year: €492 million) which was distributed to RWE shareholders, and €155 million (previous year: €30 million) which was distributed to non-controlling shareholders. Furthermore, cash flows from financing activities include purchases of €1 million (previous year: €485 million) and sales in the amount of -€7 million (previous year: €562 million) of shares in subsidiaries and other business units which did not lead to a change of control.

Changes in liabilities from financing activities are presented in the following table:

Development of financial liabilities € million	1 Jan 2021	Increase / repayment	Changes in the scope of consolidation	Currency effects	Changes in fair values	Other changes	31 Dec 2021
Current financial liabilities	1,247	9,535	-1	-206	148	273	10,996
Non-current financial liabilities	3,951	2,862	-138	241		-118	6,798
Other items		-10,026					

Development of financial liabilities € million	1 Jan 2020	Increase / repayment	Changes in the scope of consolidation	Currency effects	Changes in fair values	Other changes	31 Dec 2020
Current financial liabilities	1,689	15	38	15	-276	-234	1,247
Non-current financial liabilities	3,924	592	-289	-183		-93	3,951
Other items		-546					

The amount stated in the 'other items' line item contains cash-effective changes resulting from derivative financial instruments and margin payments, which are recognised in cash flows from financing activities in the cash flow statement and in financial liabilities in the balance sheet.

The item 'other changes' includes interest expenses which are reported in cash flows from operating activities.

Restrictions on the disposal of cash and cash equivalents amounted to €4 million (previous year: €45 million).

(31) Related party disclosures

Within the framework of their ordinary business activities, RWE AG and its subsidiaries have business relationships with numerous companies. These include associated companies and joint ventures, which are classified as related parties. In particular, this category includes material investments of the RWE Group, which are accounted for using the equity method.

Business transactions were concluded with major associates and joint ventures, resulting in the following items in RWE's consolidated financial statements:

Key items from transactions with associates and joint ventures	Associated companies		Joint ventures	
€ million	2021	2020	2021	2020
Income	597	320	140	182
Expenses	370	187	30	46
Receivables	170	119	56	49
Liabilities	247	134	65	72

The key items from transactions with associates and joint ventures mainly stem from supply and service transactions. In addition to supply and service transactions, there are also financial links with joint ventures. During the reporting period, income of €1 million (previous year: €0 million) was recorded from interest-bearing loans to joint ventures. As of the balance-sheet date, financial receivables accounted for €44 million of the receivables from joint ventures (previous year: €42 million). All transactions were completed at arm's length conditions, i. e. on principle the conditions of these transactions did not differ from those with other enterprises. €173 million of the receivables (previous year: €124 million) and €266 million of the liabilities (previous year: €162 million) fall due within one year. Other obligations from executory contracts amounted to €114 million (previous year: €112 million).

Above and beyond this, the RWE Group did not execute any material transactions with related companies or persons.

The members of the Executive Board and Supervisory Board of RWE AG are deemed to be key management personnel for the RWE Group, in respect of whom the following information on total compensation is to be reported pursuant to IAS 24.

Key management personnel (Executive and Supervisory Board members) received €11,673,000 in short-term compensation components for fiscal 2021 (previous year: €8,357,000). Additionally, share-based payments within the framework of LTIP SPP amounted to €3,191,000 (previous year: €4,731,000) and the pension service cost amounted to €0 (previous year: €595,000). Share-based payment was measured according to IFRS 2 and service cost for pensions according to IAS 19. Provisions totalling €11,334,000 (previous year: €32,959,000) were formed for obligations vis-à-vis key management personnel.

The following information pertains to total remuneration pursuant to the guidelines of German commercial law.

In total, the remuneration of the Executive Board amounted to €12,234,000 (previous year: €8,501,000). This contains share-based payments amounting to €4,417,000 (129,635 RWE performance shares) granted within the framework of the LTIP SPP. In the previous year, share-based payments amounting to €2,934,000 (111,070 RWE performance shares) were granted.

Including remuneration from subsidiaries for the exercise of mandates, the Supervisory Board received total remuneration of €3,571,000 (previous year: €2,880,000) in fiscal 2021. The employee representatives on the Supervisory Board have labour contracts with the respective Group companies. Remuneration occurs in accordance with the relevant contractual conditions.

During the period under review, no loans or advances were granted to members of the Executive Board. Two employee representatives on the Supervisory Board had employee loans totalling €17,000.

Former members of the Executive Board and their surviving dependants received €11,432,000 (previous year: €10,962,000), of which €678,000 came from subsidiaries (previous year: €671,000). As of the balance-sheet date, €148,241,000 (previous year: €145,620,000) were accrued for defined benefit obligations to former members of the

Executive Board and their surviving dependants. Of this, €6,405,000 was set aside at subsidiaries (previous year: €6,925,000).

Information on the members of the Executive and Supervisory Boards is presented on pages 220 et seqq. of the Notes.

(32) Auditors' fees

The fees for audit services primarily contain the fees for the audit of the consolidated financial statements and for the audit of the financial statements of RWE AG and its subsidiaries, along with the review of the interim statements. Other assurance services mainly include fees for reviews related to statutory or court-ordered requirements. In particular, the fees for tax services include compensation for consultation in the preparation of tax returns and other national and international tax-related matters as well as review of resolutions of the tax authorities. Other services include compensation for consultation related to M&A activity.

RWE recognised the following fees as expenses for the services rendered by the auditors of the consolidated financial statements, PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft (PwC) and companies belonging to PwC's international network:

PwC network fees	2021		2020	
€ million	Total	Of which: Germany	Total	Of which: Germany
Audit services	12.5	6.8	10.7	5.8
Other assurance services	0.5	0.4	1.2	1.0
Tax services	0.3	0.3	0.3[1]	0.2
Other services	0.7	0.7	2.5	2.5
	14.0	**8.2**	**14.7[1]**	**9.5**

1 Restated prior-year figure.

(33) Application of the exemption rule pursuant to Sec. 264, Para. 3 and Sec. 264b of the German Commercial Code

In fiscal 2021, the following German subsidiaries made partial use of the exemption clause pursuant to Sec. 264, Para. 3 and Sec. 264b of the German Commercial Code (HGB):

- BGE Beteiligungs-Gesellschaft für Energieunternehmen mbH, Essen
- GBV Zweiunddreißigste Gesellschaft für Beteiligungsverwaltung mbH, Essen
- Kernkraftwerk Lingen Gesellschaft mit beschränkter Haftung, Lingen (Ems)
- KMG Kernbrennstoff-Management Gesellschaft mit beschränkter Haftung, Essen
- Nordsee Windpark Beteiligungs GmbH, Essen
- Rheinbraun Brennstoff GmbH, Cologne
- Rheinische Baustoffwerke GmbH, Bergheim
- RV Rheinbraun Handel und Dienstleistungen GmbH, Cologne
- RWE Battery Solutions GmbH, Essen
- RWE Generation Service GmbH, Essen
- RWE Renewables Beteiligungs GmbH, Dortmund
- RWE Renewables Offshore HoldCo One GmbH, Essen
- RWE Renewables Offshore HoldCo Three GmbH, Essen
- RWE Renewables Offshore HoldCo Two GmbH, Essen
- RWE Technology International GmbH, Essen
- RWE Trading Services GmbH, Essen

(34) Events after the balance-sheet date

In the period from 1 January 2022 until the completion of the consolidated financial statements on 3 March 2022, the following significant events occurred:

RWE enters US offshore wind market. At the end of February 2022, we were successful in an auction of seabed leases for offshore wind sites in the New York Bight. A joint venture between RWE and National Grid Ventures secured an area for US$1.1 billion, on which about 3 GW of generation capacity can be built, which would be capable of producing enough electricity to serve 1.1 million US homes. The auction included six lease sites, with bidders being allowed to secure one each. Every successful bid conferred the right to develop a site and participate in upcoming auctions of the conditions for purchasing the electricity in the states of New York and New Jersey. If the project progresses as planned, our offshore wind farm in the New York Bight will be commissioned during this decade.

Wind joint venture with Northland Power launched. In January 2022, RWE and Northland Power initiated a joint venture for the development of wind energy projects in the German North Sea. We expect this cooperation to deliver substantial synergies, resulting in cost savings in the development, construction and operation of the assets. RWE owns 51 % and our Canadian partner owns 49 % of the joint venture, which encompasses three offshore wind projects aiming to develop a total capacity of 1.3 GW. The sites of the future wind farms are located north of the Island of Juist. Before forging the joint venture, we had co-operated with Northland Power on two of the three projects. One project is focussed on a 433 MW wind farm on a site officially called N-3.8, which we secured via a step-in right following an invitation to tender in 2021 (see page 41). The other initiative was dedicated to the construction and operation of a 420 MW wind farm, which we hope to build on the N-3.5 site. We also have a step-in right for this area, but have not exercised it yet. RWE initially only held a 15 % share of both ventures and had originally developed the third joint venture project alone. It is centred around a 480 MW wind farm at the N-3.6 site, for which we also hold a step-in right which has not been made use of to date. The auctions for the sites N-3.5 and N-3.6 should be held in 2023. In the event that other companies are successful, we can exercise our step-in rights.

RWE once again successful in British capacity market auctions. The British capacity market held another auction on 22 February, relating to the delivery period from 1 October 2025 to 30 September 2026. We secured a payment for all participating RWE power stations, including two small new-builds. Altogether, these assets have a secured capacity of 6,647 MW. At £30.59 / kW per annum (plus inflation adjustment), the capacity payment established in the bidding procedure was the highest such figure since the capacity market auctions started in 2014. A total of 42.4 GW in generation capacity qualified for a capacity payment at the auction. During the delivery period, they will receive remuneration for being online and contributing to electricity supply.

Huge uncertainty after Russian attack on Ukraine. Russian troops marched into Ukraine at the end of February. This constitutes an invasion under international law, prompting outrage and consternation around the globe. Many countries including the USA, EU member states and the United Kingdom imposed economic sanctions on Russia. Uncertainty concerning commodity deliveries from Russia to Europe has caused a significant increase in gas and electricity trading quotations. In some European countries, including Germany, governments are working on measures to reduce dependency on Russian oil and gas imports. When the consolidated financial statements were prepared in early March 2022, it was impossible to predict the development of the Ukraine conflict or its consequences. Although RWE does not have business activities in Russia or Ukraine, further escalation of the conflict and discontinuation of supply relationships with Russian companies could have notable effects on our assets, liabilities, financial position and profit or loss. It is possible, for example, that Russian commodity suppliers will no longer be able to meet their obligations and that we will have to purchase commodities at high prices on the market. It cannot be ruled out that contractual partners may become insolvent due to sanctions. Additionally, changes in security prices due to a stock market crisis resulting from the Ukraine conflict may have a significant impact on RWE's financial assets and those of our pension funds. More detailed information can be found in the chapter entitled 'Development of risks and opportunities', which starts on page 70.

(35) Declaration according to Sec. 161 of the German Stock Corporation Act

The declaration on the German Corporate Governance Code prescribed by Sec. 161 of the German Stock Corporation Act (AktG) has been submitted for RWE AG and has been made permanently and publicly available to shareholders on the Internet pages of RWE AG.

Essen, 3 March 2022

The Executive Board

Krebber Müller Seeger

1 www.rwe.com/statement-of-compliance-2021

4.7 List of shareholdings (part of the Notes)

List of shareholdings as per Sec. 285 No. 11 and No. 11a and Sec. 313 Para. 2 (in relation to Sec. 315 e Para. 1) of HGB as of 31 December 2021

I. Affiliated companies which are included in the consolidated financial statements	Shareholding in %		Equity	Net income/loss
	Direct	Total	€ '000	€ '000
Aktivabedrijf Wind Nederland B.V., Geertruidenberg/Netherlands		100	-7,452	-18,208
Alte Haase Bergwerks-Verwaltungs-Gesellschaft mbH, Dortmund		100	-69,129	-2,441
Amrum-Offshore West GmbH, Essen		100	2,632	86,150
An Suidhe Wind Farm Limited, Swindon/United Kingdom		100	24,339	229
Anacacho Holdco, LLC, Wilmington/USA		100	58,538	-80
Anacacho Wind Farm, LLC, Wilmington/USA		100	124,124	1,248
Andromeda Wind s.r.l., Bolzano/Italy		51	10,651	2,229
Avolta Storage Limited, Kilkenny/Ireland		100	-520	-34
Baltic Trade and Invest Sp. z o.o., Słupsk/Poland		100	16,821	-738
Belectric Canada Solar Inc., Vancouver/Canada		100	550	535
Belectric Photovoltaic India Private Limited, Mumbai/India		100	1,824	949
BELECTRIC Solar Power, S.L. en liquidación, Barcelona/Spain		100	390	337
BGE Beteiligungs-Gesellschaft für Energieunternehmen mbH, Essen	100	100	201	[1]
Big Star Solar, LLC, Wilmington/USA		100	0	0
Bilbster Wind Farm Limited, Swindon/United Kingdom		100	4,255	75
Blackjack Creek Wind Farm, LLC, Wilmington/USA		100	0	0
Boiling Springs Holdco, LLC, Wilmington/USA		100	113,656	-264
Boiling Springs Wind Farm, LLC, Wilmington/USA		100	113,669	-11,014
Bright Arrow Solar, LLC, Wilmington/USA		100	0	0

1 Profit and loss-pooling agreement; amounts blocked for transfer.
2 Figures from the Group's consolidated financial statements.
3 Newly founded, financial statements not yet available.
4 No control by virtue of company contract.
5 Significant influence via indirect investments.
6 Significant influence by virtue of company contract.

I. Affiliated companies which are included in the consolidated financial statements	Shareholding in %		Equity	Net income / loss
	Direct	Total	€ '000	€ '000
Bruenning's Breeze Holdco, LLC, Wilmington/USA		100	87,793	-442
Bruenning's Breeze Wind Farm, LLC, Wilmington/USA		100	214,346	-10,228
Carl Scholl GmbH, Cologne		100	463	-151
Carnedd Wen Wind Farm Limited, Swindon/United Kingdom		100	-4,856	-229
Cassadaga Class B Holdings LLC, Wilmington/USA		100	173,678	-76
Cassadaga Wind Holdings LLC, Wilmington/USA		100	172,739	-980
Cassadaga Wind LLC, Chicago/USA		100	253,679	-24,138
Champion WF Holdco, LLC, Wilmington/USA		100	14,469	-87,805
Champion Wind Farm, LLC, Wilmington/USA		100	14,469	-87,805
Cloghaneleskirt Energy Supply Limited, Kilkenny/Ireland		100	152	114
Colbeck's Corner Holdco, LLC, Wilmington/USA		100	68,609	-446
Colbeck's Corner, LLC, Wilmington/USA		100	223,316	-9,802
Conrad Solar Inc., Vancouver/Canada		100	0	0
DOTTO MORCONE S.r.l., Rome/Italy		100	4,351	4,189
Dromadda Beg Wind Farm Limited, Kilkenny/Ireland		100	2,806	688
Edgware Energy Limited, Swindon/United Kingdom		100	374	231
El Algodon Alto Wind Farm, LLC, Wilmington/USA		100	-437	-419
Electra Insurance Limited, Hamilton/Bermudas		100	26,288	-724
Energy Resources Holding B.V., Geertruidenberg/Netherlands		100	99,656	-13,461
Energy Resources Ventures B.V., Geertruidenberg/Netherlands		100	17,416	-1,292
Extension Du Parc Eolien De L'Epine Marie Madeleine SAS, Clichy/France		100	-39	-41
Extension Du Parc Eolien Du Douiche SAS, Clichy/France		100	7	-3
Farma Wiatrowa Barzowice Sp. z o.o., Warsaw/Poland		100	30,179	1,399

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4 No control by virtue of company contract.
5 Significant influence via indirect investments.
6 Significant influence by virtue of company contract.

I. Affiliated companies which are included in the consolidated financial statements	Shareholding in %		Equity	Net income / loss
	Direct	Total	€ '000	€ '000
Farma Wiatrowa Rozdrazew sp. z o.o., Warsaw/Poland		100	-414	-7
Forest Creek Investco, Inc., Wilmington/USA		100	102	-7
Forest Creek WF Holdco, LLC, Wilmington/USA		100	14,565	-63,829
Forest Creek Wind Farm, LLC, Wilmington/USA		100	14,565	-63,829
Fri-El Anzi Holding s.r.l., Bolzano/Italy		51	6,997	855
Fri-El Anzi s.r.l., Bolzano/Italy		100	8,209	1,303
Fri-El Guardionara s.r.l., Bolzano/Italy		51	10,868	1,640
GBV Zweiunddreißigste Gesellschaft für Beteiligungsverwaltung mbH, Essen	100	100	17,585,771	[1]
Generación Fotovoltaica Castellano Manchega, S.L., Murcia/Spain		100	-21	-56
Generación Fotovoltaica De Alarcos, S.L.U., Barcelona/Spain		100	656	579
Generación Fotovoltaica Puerta del Sol, S.L.U., Murcia/Spain		100	67	-17
GfV Gesellschaft für Vermögensverwaltung mbH, Dortmund	100	100	126,158	-7,685
Grandview Holdco, LLC, Wilmington/USA		100	92,929	-786
Green Gecco GmbH & Co. KG, Essen		51	69,851	6,325
Hardin Class B Holdings LLC, Wilmington/USA		100	164,320	-179
Hardin Wind Holdings LLC, Wilmington/USA		100	162,302	-2,076
Hardin Wind LLC, Chicago/USA		100	253,464	-10,029
Harryburn Wind Farm Limited, Swindon/United Kingdom		100	5	19
Hickory Park Solar, LLC, Wilmington/USA		100	-9,065	-6,255
Inadale Wind Farm, LLC, Wilmington/USA		100	40,947	17,047
Kernkraftwerk Lingen Gesellschaft mit beschränkter Haftung, Lingen (Ems)		100	20,034	[1]
Kernkraftwerke Lippe-Ems Gesellschaft mit beschränkter Haftung, Lingen (Ems)		100	432,269	[1]
KMG Kernbrennstoff-Management Gesellschaft mit beschränkter Haftung, Essen		100	696,225	[1]

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2 Figures from the Group's consolidated financial statements.
3 Newly founded, financial statements not yet available.
4 No control by virtue of company contract.
5 Significant influence via indirect investments.
6 Significant influence by virtue of company contract.

I. Affiliated companies which are included in the consolidated financial statements	Shareholding in %		Equity	Net income / loss
	Direct	Total	€ '000	€ '000
Knabs Ridge Wind Farm Limited, Swindon/United Kingdom		100	13,870	1,129
Las Vaguadas I Fotovoltaica S.L., Barcelona/Spain		100	32	-123
Limondale Sun Farm Pty. Ltd., Melbourne/Australia		100	3,477	-18,722
Little Cheyne Court Wind Farm Limited, Swindon/United Kingdom		59	32,823	7,140
MI-FONDS G50, Frankfurt am Main	100	100	77,784	-243
ML Wind LLP, Swindon/United Kingdom		51	70,121	8,144
Munnsville Investco, LLC, Wilmington/USA		100	14,165	-28
Munnsville WF Holdco, LLC, Wilmington/USA		100	766	-34,996
Munnsville Wind Farm, LLC, Wilmington/USA		100	766	-34,996
Nordsee Windpark Beteiligungs GmbH, Essen		100	15,318	[1]
Panther Creek Holdco, LLC, Wilmington/USA		100	202,899	0
Panther Creek Three Class B, LLC, Wilmington/USA		100	220,448	0
Panther Creek Three Holdco, LLC, Wilmington/USA		100	220,448	0
Panther Creek Wind Farm I&II, LLC, Wilmington/USA		100	317,329	-9,962
Panther Creek Wind Farm Three, LLC, Wilmington/USA		100	70,889	-17,391
Parc Eolien D'Allerey SAS, Clichy/France		100	-118	-96
Parc Eolien De Catillon-Fumechon SAS, Clichy/France		100	26	-2
Parc Eolien De La Brie Nangissienne SAS, Clichy/France		100	23	-4
Parc Eolien De La Butte Aux Chiens SAS, Clichy/France		100	27	-2
Parc Eolien De La Voie Corette SAS, Clichy/France		100	-94	-36
Parc Eolien De Luçay-Le-Libre Et De Giroux SAS, Clichy/France		100	20	-4
Parc Eolien De Martinpuich SAS, Clichy/France		100	-15	-20
Parc Eolien Des Grands Lazards SAS, Clichy/France		100	26	-2

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3 Newly founded, financial statements not yet available.
4 No control by virtue of company contract.
5 Significant influence via indirect investments.
6 Significant influence by virtue of company contract.

I. Affiliated companies which are included in the consolidated financial statements	Shareholding in %		Equity	Net income / loss
	Direct	Total	€ '000	€ '000
Parc Eolien Des Hauts-Bouleaux SAS, Clichy/France		100	-113	-37
Parc Eolien Des Nouvions SAS, Clichy/France		100	-164	-61
Parc Eolien Du Balinot SAS, Clichy/France		100	26	-2
Parc Eolien Du Ban Saint-Jean SAS, Clichy/France		100	25	-2
Parc Eolien Du Catesis SAS, Clichy/France		100	-27	-25
Parc Eolien Du Chemin De Chálons SAS, Clichy/France		100	5	-4
Parc Eolien Du Chemin De Saint-Gilles SAS, Clichy/France		100	-14	-9
Parc Eolien Du Mirebalais SAS, Clichy/France		100	26	-2
Parc Eolien Du Moulin Du Bocage SAS, Clichy/France		100	26	-2
Parc Eolien Les Pierrots SAS, Clichy/France		60	-633	-302
Park Wiatrowy Dolice Sp. z o.o., Warsaw/Poland		100	224	-300
Park Wiatrowy Gaworzyce Sp. z o.o., Warsaw/Poland		100	59	-616
Peyton Creek Holdco, LLC, Wilmington/USA		100	-51	13,277
Peyton Creek Wind Farm, LLC, Wilmington/USA		100	179,821	-2,580
Piecki Sp. z o.o., Warsaw/Poland		51	21,525	3,062
Pioneer Trail Wind Farm, LLC, Wilmington/USA		100	153,861	3,253
Primus Projekt GmbH & Co. KG, Hanover		100	0	-331
Pyron Wind Farm, LLC, Wilmington/USA		100	80,726	14,416
Radford's Run Holdco, LLC, Wilmington/USA		100	126,858	-516
Radford's Run Wind Farm, LLC, Wilmington/USA		100	409,862	-19,884
Rampion Offshore Wind Limited, Coventry/United Kingdom		50	1,251,676	129,641
Rampion Renewables Limited, Coventry/United Kingdom		100	1,038,964	390,537
Renewables Solar Holding GmbH, Kolitzheim		100	43,839	38,816

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4 No control by virtue of company contract.
5 Significant influence via indirect investments.
6 Significant influence by virtue of company contract.

I. Affiliated companies which are included in the consolidated financial statements	Shareholding in %		Equity	Net income / loss
	Direct	Total	€ '000	€ '000
Rheinbraun Brennstoff GmbH, Cologne		100	82,619	1
Rheinische Baustoffwerke GmbH, Bergheim		100	9,236	1
Rheinkraftwerk Albbruck-Dogern Aktiengesellschaft, Waldshut-Tiengen		77	32,103	1,757
Rhenas Insurance Limited, Sliema/Malta	100	100	60,708	1,327
Rhyl Flats Wind Farm Limited, Swindon/United Kingdom		50	127,978	13,150
Roscoe WF Holdco, LLC, Wilmington/USA		100	1,711	-150,971
Roscoe Wind Farm, LLC, Wilmington/USA		100	1,711	-150,971
RV Rheinbraun Handel und Dienstleistungen GmbH, Cologne		100	36,694	1
RWE & Turcas Güney Elektrik Üretim A.S., Ankara/Turkey		70	97,561	-1,220
RWE Aktiengesellschaft, Essen			8,359,158	1,108,098
RWE Battery Solutions GmbH, Essen		100	1,180	1
RWE Bergheim Windparkbetriebsgesellschaft mbH, Hanover		100	25	1
RWE Brise Windparkbetriebsgesellschaft mbH, Hanover		100	226	1
RWE Canada Ltd., Saint John/Canada		100	4,635	-596
RWE Eemshaven Holding II B.V., Geertruidenberg/Netherlands		100	-953,590	-450,075
RWE Energie Odnawialne Sp. z o.o., Szczecin/Poland		100	117,729	11,227
RWE Energy Services, LLC, Wilmington/USA		100	856	-44
RWE Evendorf Windparkbetriebsgesellschaft mbH, Hanover		100	25	1
RWE Gas Storage CZ, s.r.o., Prague/Czech Republic		100	347,075	26,423
RWE Gas Storage West GmbH, Dortmund		100	350,087	1
RWE Generation Holding B.V., Geertruidenberg/Netherlands		100	-56,300	39,100
RWE Generation Hydro GmbH, Essen		100	25	1
RWE Generation NL B.V., Geertruidenberg/Netherlands		100	-550,990	-296,475

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4 No control by virtue of company contract.
5 Significant influence via indirect investments.
6 Significant influence by virtue of company contract.

I. Affiliated companies which are included in the consolidated financial statements	Shareholding in %		Equity	Net income / loss
	Direct	Total	€ '000	€ '000
RWE Generation NL Personeel B.V., Geertruidenberg/Netherlands		100	15,327	1,106
RWE Generation SE, Essen	100	100	270,659	8,850[1]
RWE Generation Service GmbH, Essen		100	25	[1]
RWE Generation UK Holdings Limited, Swindon/United Kingdom		100	3,066,711	198,692
RWE Generation UK plc, Swindon/United Kingdom		100	1,632,056	27,517
RWE Hörup Windparkbetriebsgesellschaft mbH, Hörup		100	26	[1]
RWE indeland Windpark Eschweiler GmbH & Co. KG, Eschweiler		51	45,822	4,385
RWE Investco EPC Mgmt, LLC, Wilmington/USA		100	398,948	10,568
RWE Investco Mgmt II, LLC, Wilmington/USA		100	568,737	11,076
RWE Investco Mgmt, LLC, Wilmington/USA		100	1,598,287	-6,916
RWE Kaskasi GmbH, Hamburg		100	1,811	[1]
RWE KL Limited, Swindon/United Kingdom		100	-43,501	-17,927
RWE Lengerich Windparkbetriebsgesellschaft mbH, Gersten		100	25	[1]
RWE Limondale Sun Farm Holding Pty. Ltd., Melbourne/Australia		100	8,386	-31,305
RWE Lüneburger Heide Windparkbetriebsgesellschaft mbH, Walsrode		100	25	[1]
RWE Magicat Holdco, LLC, Wilmington/USA		100	74,464	2,854
RWE Markinch Limited, Swindon/United Kingdom		100	94,357	-3,235
RWE Mistral Windparkbetriebsgesellschaft mbH, Hanover		100	578	[1]
RWE Nuclear GmbH, Essen	100	100	137,286	37,286[1]
RWE Offshore Wind Netherlands B.V., Geertruidenberg/Netherlands		100	-338	-387
RWE Personeel B.V., Geertruidenberg/Netherlands		100	-14	-5
RWE Power Aktiengesellschaft, Cologne and Essen	100	100	2,109,457	72,248[1]
RWE Renewables Americas, LLC, Wilmington/USA		100	1,608,434	-154,642

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4 No control by virtue of company contract.
5 Significant influence via indirect investments.
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I. Affiliated companies which are included in the consolidated financial statements	Shareholding in %		Equity	Net income / loss
	Direct	Total	€ '000	€ '000
RWE Renewables Asset Management, LLC, Wilmington/USA		100	281,468	2,937
RWE Renewables Australia Pty. Ltd., Melbourne/Australia		100	269	289
RWE Renewables Benelux B.V., Geertruidenberg/Netherlands		100	-44,190	-1,708
RWE Renewables Beteiligungs GmbH, Dortmund		100	8,950	[1]
RWE Renewables Canada Holdings Inc., Vancouver/Canada		100	-1,266	209
RWE Renewables Denmark A/S, Rødby/Denmark		100	1,342	1,241
RWE Renewables Development, LLC, Wilmington/USA		100	791,489	-14,998
RWE Renewables Energy Marketing Australia Pty. Ltd., Melbourne/Australia		100	-5	-5
RWE Renewables Energy Marketing, LLC, Wilmington/USA		100	57,600	-377,113
RWE Renewables GmbH, Essen		100	1,109	[1]
RWE Renewables GYM 2 Limited, Swindon/United Kingdom		100	-8,666	4,215
RWE Renewables GYM 3 Limited, Swindon/United Kingdom		100	-8,667	4,215
RWE Renewables GYM 4 Limited, Swindon/United Kingdom		100	-25,993	10,379
RWE Renewables HoldCo B.V., Geertruidenberg/Netherlands		100	270,757	0
RWE Renewables Iberia, S.A.U. – Group – (pre-consolidated)			162,287	11,322[2]
Danta de Energías, S.A., Soria/Spain		99		
Explotaciones Eólicas de Aldehuelas, S.L., Soria/Spain		95		
General de Mantenimiento 21, S.L.U., Barcelona/Spain		100		
Hidroeléctrica del Trasvase, S.A., Barcelona/Spain		60		
RWE Renewables Iberia, S.A.U., Barcelona/Spain		100		
RWE Renewables International Participations B.V., Geertruidenberg/Netherlands		100	350,070	244,043
RWE Renewables Ireland Limited, Kilkenny/Ireland		100	-8,536	-2,645
RWE Renewables Italia S.r.l., Rome/Italy		100	393,034	-1,418

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I. Affiliated companies which are included in the consolidated financial statements	Shareholding in %		Equity	Net income / loss
	Direct	Total	€ '000	€ '000
RWE Renewables Japan G.K., Tokyo/Japan		100	9,024	-3,360
RWE Renewables Management UK Limited, Swindon/United Kingdom		100	120,181	1,572
RWE Renewables Offshore HoldCo One GmbH, Essen		100	25	1
RWE Renewables Offshore HoldCo Three GmbH, Essen		100	25	1
RWE Renewables Offshore HoldCo Two GmbH, Essen		100	25	1
RWE Renewables O&M, LLC, Wilmington/USA		100	19,543	10,795
RWE Renewables Operations Australia Pty Ltd, Melbourne/Australia		100	1,558	710
RWE Renewables Poland Sp. z o.o., Warsaw/Poland		100	412,146	23,210
RWE Renewables QSE, LLC, Wilmington/USA		100	-4,754	20
RWE Renewables Services, LLC, Wilmington/USA		100	407,654	-46,240
RWE Renewables Sweden AB, Malmö/Sweden		100	58,576	4,638
RWE Renewables UK Blyth Limited, Coventry/United Kingdom		100	1,325	700
RWE Renewables UK Dogger Bank South One Limited, Swindon/United Kingdom		100	-985	-964
RWE Renewables UK Dogger Bank South Two Limited, Swindon/United Kingdom		100	-985	-964
RWE Renewables UK Holdings Limited, Swindon/United Kingdom		100	1,866,890	128,297
RWE Renewables UK Humber Wind Limited, Coventry/United Kingdom		51	596,843	59,989
RWE Renewables UK Limited, Coventry/United Kingdom		100	549,041	593
RWE Renewables UK London Array Limited, Coventry/United Kingdom		100	170,757	50,398
RWE Renewables UK Onshore Wind Limited, Coventry/United Kingdom		100	95,315	20,690
RWE Renewables UK Operations Limited, Coventry/United Kingdom		100	59,702	19,238
RWE Renewables UK Robin Rigg East Limited, Coventry/United Kingdom		100	102,060	23,490
RWE Renewables UK Robin Rigg West Limited, Coventry/United Kingdom		100	86,281	12,689
RWE Renewables UK Scroby Sands Limited, Coventry/United Kingdom		100	64,593	6,179

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	Direct	Total	€ '000	€ '000
RWE Renewables UK Swindon Limited, Swindon/United Kingdom		100	2,366,891	84,707
RWE Renewables UK Wind Services Limited, Coventry/United Kingdom		100	39,212	13,152
RWE Renewables UK Zone Six Limited, Coventry/United Kingdom		100	0	0
RWE Renouvelables France SAS, Clichy/France		100	111,747	-5,872
RWE Solar Development, LLC, Wilmington/USA		100	269,466	-15,214
RWE Solar NC Lessee LLC, Wilmington/USA		100	14,396	-393
RWE Solar NC Pledgor LLC, Wilmington/USA		100	2,516	0
RWE Solar Netherlands B.V., Geertruidenberg/Netherlands		100	-238	-238
RWE Solar PV, LLC, Wilmington/USA		100	64,885	-6,258
RWE Sommerland Windparkbetriebsgesellschaft mbH, Sommerland		100	26	[1]
RWE Süderdeich Windparkbetriebsgesellschaft mbH, Süderdeich		100	106	[1]
RWE Supply & Trading Asia-Pacific PTE. LTD., Singapore/Singapore		100	47,311	17,311
RWE Supply & Trading CZ, a.s., Prague/Czech Republic		100	255,599	-8,131
RWE Supply & Trading GmbH, Essen	100	100	446,778	[1]
RWE Supply & Trading Japan KK, Tokyo/Japan		100	6,483	-937
RWE Supply & Trading Participations Limited, London/United Kingdom		100	14,557	46
RWE Supply and Trading (Shanghai) Co. Ltd, Shanghai/China		100	11,108	-1,677
RWE Technology International GmbH, Essen		100	15,788	3,861[1]
RWE Technology Tasarim ve Mühendislik Danismanlik Ticaret Limited Sirketi, Istanbul/Turkey		100	42	6
RWE Technology UK Limited, Swindon/United Kingdom		100	2,521	375
RWE Titz Windparkbetriebsgesellschaft mbH, Essen		100	25	[1]
RWE Trading Services GmbH, Essen		100	5,735	[1]
RWE Wind Karehamn AB, Malmö/Sweden		100	33,670	75

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	Direct	Total	€ '000	€ '000
RWE Wind Onshore Deutschland GmbH, Hanover		100	80,111	[1]
RWE Wind Services Denmark A/S, Rødby/Denmark		100	8,941	5,207
RWE Windpark Bedburg A44n GmbH & Co. KG, Bedburg		51	12,086	-66
RWE Windpark Bedburg GmbH & Co. KG, Bedburg		51	59,713	7,721
RWE Windpark Garzweiler GmbH & Co. KG, Essen		51	33,301	889
RWE Windpower Netherlands B.V., Geertruidenberg/Netherlands		100	8,271	3,511
RWEST Middle East Holdings B.V., 's-Hertogenbosch/Netherlands		100	11,894	5,540
Sand Bluff WF Holdco, LLC, Wilmington/USA		100	-2,040	-8,442
Sand Bluff Wind Farm, LLC, Wilmington/USA		100	-4,781	-2,628
Settlers Trail Wind Farm, LLC, Wilmington/USA		100	20,028	-143,866
Sofia Offshore Wind Farm Holdings Limited, Swindon/United Kingdom		100	0	0
Sofia Offshore Wind Farm Limited, Swindon/United Kingdom		100	-433	-17
Solar Holding India GmbH, Kolitzheim		100	5,924	-2
Solar Holding Poland GmbH, Kolitzheim		100	13	-2
SOLARENGO Energia, Unipessoal, Lda., Cascais/Portugal		100	-369	-218
Solarengo Portugal, SGPS, Unipessoal Lda., Cascais/Portugal		100	9,709	-14
SRS EcoTherm GmbH, Salzbergen		90	21,497	4,304
Taber Solar 1 Inc., Vancouver/Canada		100	8,699	-1,297
Taber Solar 2 Inc., Vancouver/Canada		100	4,655	-4,319
Tamworth Holdings, LLC, Raleigh/USA		100	8,115	128
Tanager Holdings, LLC, Raleigh/USA		100	7,554	84
Tech Park Solar, LLC, Wilmington/USA		100	13,090	45
The Hollies Wind Farm Limited, Swindon/United Kingdom		100	731	162

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	Direct	Total	€ '000	€ '000
Triton Knoll HoldCo Limited, Swindon/United Kingdom		59	98,705	0
Triton Knoll Offshore Wind Farm Limited, Swindon/United Kingdom		100	-150,791	666
Valencia Solar, LLC, Tucson/USA		100	10,623	1,045
West of the Pecos Holdco, LLC, Wilmington/USA		100	65,527	-7
West of the Pecos Solar, LLC, Wilmington/USA		100	109,492	-339
Wind Farm Deliceto s.r.l., Bolzano/Italy		100	25,525	1,767
Windpark Eekerpolder B.V., Geertruidenberg/Netherlands		100	1,824	2,021
Windpark Kattenberg B.V., Geertruidenberg/Netherlands		100	1,155	390
Windpark Nordsee Ost GmbH, Heligoland		100	256	[1]
Windpark Oostpolderdijk B.V., Geertruidenberg/Netherlands		100	-47	-17
Windpark Zuidwester B.V., Geertruidenberg/Netherlands		100	8,164	-584
WKN Windkraft Nord GmbH & Co. Windpark Wönkhausen KG, Hanover		100	2,977	779

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	Direct	Total	€ '000	€ '000
Agenzia Carboni S.r.l., Genoa/Italy		100	224	17
Alcamo II S.r.l., Milan/Italy		100	-4	-29
Alvarado Solar S.L., Barcelona/Spain		100	4	-11
Anemos Ala Segarra, S.L., Reus/Spain		100	3	0
Ashwood Solar I, LLC, Wilmington/USA		100	0	0
Auzoberri Desarrollo, S.L.U., Barasoain/Spain		100	233	-1
Azagra Energy Quel, S.L.U., Barasoain/Spain		100	382	-2
Baron Winds II LLC, Chicago/USA		100	0	0
Baron Winds LLC, Chicago/USA		100	0	0
Belectric Inversiones Latinoamericana S.L., Barcelona/Spain		100	115	-9
BELECTRIC JV GmbH, Kolitzheim		100	53	2
Belectric Mexico Fotovoltaica S.de R.L. de C.V., Bosques de las Lomas/Mexico		100	-26	-20
Blackbeard Solar, LLC, Wilmington/USA		100	0	0
Blackbriar Battery, LLC, Wilmington/USA		100	0	0
Blueberry Hills LLC, Chicago/USA		100	0	0
BO Baltic Offshore GmbH, Hamburg		98	6	-2
Bowler Flats Energy Hub LLC, Chicago/USA		100	0	0
Buckeye Wind LLC, Chicago/USA		100	0	0
Burgar Hill Wind Farm Limited, Swindon/United Kingdom		100	0	0
Bursjöliden Vind AB, Malmö/Sweden		100	573	0
Camaiore Sp. z o.o., Warsaw/Poland		100	-11	-13
Camellia Solar LLC, Wilmington/USA		100	0	0
Camellia Solar Member LLC, Wilmington/USA		100	0	0

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	Direct	Total	€ '000	€ '000
Camster II Wind Farm Limited, Swindon/United Kingdom		100		[3]
Cardinal Wind Farm, LLC, Wilmington/USA		100	0	0
Carmagnola Sp. z o.o., Warsaw/Poland		100	-11	-13
Casarano Sp. z o.o., Warsaw/Poland		100	-11	-13
Casey Fork Solar, LLC, Wilmington/USA		100	0	0
Cattleman Wind Farm II, LLC, Wilmington/USA		100	0	0
Cattleman Wind Farm, LLC, Wilmington/USA		100	0	0
Cecina Sp. z o.o., Warsaw/Poland		100	-11	-13
Cercola Sp. z o.o., Warsaw/Poland		100	-11	-13
Cerignola Sp. z o.o., Warsaw/Poland		100	-11	-13
Champaign Wind LLC, Chicago/USA		100	0	0
Clavellinas Solar, S.L., Barcelona/Spain		100	5	-9
Clinton Wind, LLC, Wilmington/USA		100	0	0
Cordeneos Sp. z o.o., Warsaw/Poland		100	-11	-12
Cordova Wind Farm, LLC, Wilmington/USA		100	0	0
Cormano Sp. z o.o., Warsaw/Poland		100	-12	-13
Cremona Sp. z o.o., Warsaw/Poland		100	-11	-13
Curns Energy Limited, Kilkenny/Ireland		70	-1,036	-393
Decadia GmbH, Essen	100	100	2,715	424
Dohema Offshore sp. z o.o., Główczyce/Poland		100	12	-2
E & Z Industrie-Lösungen GmbH, Essen		100	16,975	-1,099
Eko-En 1 Sp. z o.o., Warsaw/Poland		100	12	-12
Eko-En 2 Sp. z o.o., Warsaw/Poland		100	47	-33

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	Direct	Total	€ '000	€ '000
Eko-En 3 Sp. z o.o., Warsaw/Poland		100	422	-22
Eko-En 4 Sp. z o.o., Warsaw/Poland		100	401	-13
Eko-En 5 Sp. z o.o., Warsaw/Poland		100	-4	-8
El Navajo Solar, S.L., Barcelona/Spain		100	1	-5
Emisja Zero Sp. z o.o., Zielona Góra/Poland		100	4	-2
Enchant Solar 4 Inc., Vancouver/Canada		100	0	0
Eólica Alta Anoia, S.L., Reus/Spain		100	3	0
Eólica La Conca, S.L., Reus/Spain		100	3	0
Eólica La Conca 2, S.L., Reus/Spain		100	3	0
Eólica La Conca 3, S.L., Reus/Spain		100	3	0
EverPower Maine LLC, Chicago/USA		100	0	0
EverPower Ohio LLC, Chicago/USA		100	0	0
EverPower Solar LLC, Chicago/USA		100	0	0
EverPower Wind Development, LLC, Chicago/USA		100	0	0
Extension Du Parc Eolien Des Nouvions SAS, Clichy/France		100	27	-2
Fifth Standard Solar PV, LLC, Wilmington/USA		100	0	0
Flatlands Wind Farm, LLC, Wilmington/USA		100	0	0
Flexilis Power Limited, Kilkenny/Ireland		100	0	0
Florida Solar and Power Group LLC, Wilmington/USA		100	0	0
Frazier Solar, LLC, Wilmington/USA		100	0	0
Gazules I Fotovoltaica, S.L., Barcelona/Spain		100	-78	-119
Gazules II Solar, S.L., Barcelona/Spain		100	-107	-118
GBV Achtunddreißigste Gesellschaft für Beteiligungsverwaltung mbH, Essen		100	25	[1]

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	Direct	Total	€ '000	€ '000
GBV Dreiunddreißigste Gesellschaft für Beteiligungsverwaltung mbH, Essen	100	100	25	1
GBV Einunddreißigste Gesellschaft für Beteiligungsverwaltung mbH, Essen	100	100	30	1
GBV Siebte Gesellschaft für Beteiligungsverwaltung mbH, Essen		100	100	1
Geun Heung Offshore Wind Power Co., Ltd., Seoul/South Korea		100		3
Goldcup 29644 AB, Sundsvall/Sweden		100		3
Goldcup 29645 AB, Sundsvall/Sweden		100		3
Goldcup 29646 AB, Sundsvall/Sweden		100		3
Grandview Wind Farm III, LLC, Wilmington/USA		100	0	0
Grandview Wind Farm IV, LLC, Wilmington/USA		100	0	0
Grandview Wind Farm V, LLC, Wilmington/USA		100	0	0
Green Gecco Verwaltungs GmbH, Essen		51	38	1
Greenswitch Wind, LLC, Wilmington/USA		100		3
Haube Wind Sp. z o.o., Słupsk/Poland		100	191	-1,502
Hickory Park Class B, LLC, Wilmington/USA		100		3
Hickory Park Holdco, LLC, Wilmington/USA		100		3
Highland III LLC, Chicago/USA		100	0	0
Horse Thief Wind Project LLC, Chicago/USA		100	0	0
INDI Energie B.V., 's-Hertogenbosch/Netherlands		100	62	0
INDI Solar-Projects 1 B.V., Utrecht/Netherlands		100	89	82
Infraestructuras de Aldehuelas, S.A., Barcelona/Spain		100	428	0
Infrastrukturgesellschaft Netz Lübz mit beschränkter Haftung, Hanover		100	60	-28
Iron Horse Battery Storage, LLC, Wilmington/USA		100	10,133	-247
Janus Solar PV, LLC, Wilmington/USA		100	0	0

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	Direct	Total	€ '000	€ '000
Jerez Fotovoltaica S.L., Barcelona/Spain		100	8	-8
Jugondo Desarrollo, S.L.U., Barasoain/Spain		100	1,185	-2
Kieswerk Kaarst GmbH & Co. KG, Bergheim		51	3,454	1,254
Kieswerk Kaarst Verwaltungs GmbH, Bergheim		51	31	0
La Casa Wind, LLC, Wilmington/USA		100		3
Lake Fork Wind Farm, LLC, Wilmington/USA		100	0	0
Lampasas Wind LLC, Chicago/USA		100	0	0
Las Vaguadas II Solar S.L., Barcelona/Spain		100	6	-7
Lumbier Energy Judas, S.L.U., Barasoain/Spain		100	358	-2
Mahanoy Mountain, LLC, Chicago/USA		100	0	0
Major Wind Farm, LLC, Wilmington/USA		100	0	0
March Road Solar, LLC, Wilmington/USA		100	0	0
Maricopa East Solar PV, LLC, Wilmington/USA		100	0	0
Maricopa East Solar PV 2, LLC, Wilmington/USA		100	0	0
Maricopa Land Holding, LLC, Wilmington/USA		100	0	0
Maricopa West Solar PV 2, LLC, Wilmington/USA		100	0	0
Maryland Sunlight 1 LLC, Wilmington/USA		100	0	0
Mason Dixon Wind LLC, Chicago/USA		100	0	0
Morska Farma Wiatrowa Antares sp. z o.o., Warsaw/Poland		100	50	-33
Mud Springs Wind Project LLC, Chicago/USA		100	0	0
Muñegre Desarrollo, S.L.U., Barasoain/Spain		100	202	-1
Northern Orchard Solar PV, LLC, Wilmington/USA		100	0	0
Northern Orchard Solar PV 2, LLC, Wilmington/USA		100	0	0

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	Direct	Total	€ '000	€ '000
Northern Orchard Solar PV 3, LLC, Wilmington/USA		100	0	0
Nouvions Poste de Raccordement SAS, Clichy/France		100	-4	-2
Oddeheia Wind DA, Oslo/Norway		100		[3]
Offshore-Windpark Delta Nordsee GmbH, Hamburg		100	493	[1]
Ohio Sunlight 1 LLC, Wilmington/USA		100	0	0
Olmunite Investments sp. z o.o., Główczyce/Poland		100	-2	-3
Oranje Wind Power B.V., Geertruidenberg/Netherlands		100	0	0
Oranje Wind Power C.V., Geertruidenberg/Netherlands		100	0	0
Orcoien Energy Orcoien, S.L.U., Barasoain/Spain		100	209	-4
Owen Prairie Wind Farm, LLC, Wilmington/USA		100	0	0
Painter Energy Storage, LLC, Wilmington/USA		100	0	0
Panther Creek Solar, LLC, Wilmington/USA		100	0	0
Parc Eolien De Beg Ar C'hra SAS, Clichy/France		100	26	-2
Parc Eolien De Canny SAS, Clichy/France		100	33	-2
Parc Eolien de Dissay-sous-Courcillon SAS, Clichy/France		100		[3]
Parc Eolien De Foissy-Sur-Vanne SAS, Clichy/France		100	33	-2
Parc Eolien de Froidmont-cohartille SAS, Clichy/France		100		[3]
Parc Eolien De Ganochaud SAS, Clichy/France		100	20	-3
Parc Eolien De La Cabane Blanche SAS, Clichy/France		100	22	-3
Parc Eolien De La Croix Blanche SAS, Clichy/France		100	27	-2
Parc Eolien De La Jarrie-Audouin SAS, Clichy/France		100	33	-2
Parc Eolien De La Plaine De Beaulieu SAS, Clichy/France		100	33	-2
Parc Eolien de la Vallée de l'Eaulne SAS, Clichy/France		100	35	-2

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	Direct	Total	€ '000	€ '000
Parc Eolien De Langeron SAS, Clichy/France		100	21	-3
Parc Eolien de Langonnet SAS, Clichy/France		100		[3]
Parc Eolien De L'Avre SAS, Clichy/France		100	23	-2
Parc Eolien De Mesbrecourt-Richecourt SAS, Clichy/France		100	33	-2
Parc Eolien de Morley SAS, Clichy/France		100		[3]
Parc Eolien De Nuisement Et Cheniers SAS, Clichy/France		100	33	-2
Parc Eolien De Soudron SAS, Clichy/France		100	33	-2
Parc Eolien de Viam SAS, Clichy/France		100		[3]
Parc Eolien De Villeneuve Minervois SAS, Clichy/France		100	33	-2
Parc Eolien Des Ailes Du Gótinâis SAS, Clichy/France		100	33	-2
Parc Eolien des Baumes SAS, Clichy/France		100	35	-2
Parc Eolien des Cinq Poiriers SAS, Clichy/France		100	35	-2
Parc Eolien des Milles Vents SAS, Clichy/France		100	35	-2
Parc Eolien Des Raisinières SAS, Clichy/France		100	33	-2
Parc Eolien D'Ormesnil SAS, Clichy/France		100	33	-2
Parc Eolien Du Bocage SAS, Clichy/France		100	-91	-14
Parc Eolien Du Champ Madame SAS, Clichy/France		100	33	-2
Parc Eolien Du Chemin Vert SAS, Clichy/France		100	33	-2
Parc Eolien Du Mont Hellet SAS, Clichy/France		100	33	-2
Parc Eolien Du Mont Herbé SAS, Clichy/France		100	26	-2
Parc Eolien Du Moulin De Thiau SAS, Clichy/France		100	26	-3
Parc Eolien Du Plateau De La Chapelle-Surchésy SAS, Clichy/France		100	33	-2
Parc Eolien Du Ru Garnier SAS, Clichy/France		100	27	-2

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	Direct	Total	€ '000	€ '000
Parc Eolien 106 SAS, Clichy/France		100	35	-2
Parc Eolien 107 SAS, Clichy/France		100	35	-2
Parc Eolien 108 SAS, Clichy/France		100	35	-2
Parc Eolien 111 SAS, Clichy/France		100		3
Parc Eolien 112 SAS, Clichy/France		100		3
Parc Eolien 113 SAS, Clichy/France		100		3
Parc Eolien 114 SAS, Clichy/France		100		3
Parc Eolien 115 SAS, Clichy/France		100		3
Parc Solaire de Canny SAS, Clichy/France		100		3
Parc Solaire de Gannat SAS, Clichy/France		100		3
Parc Solaire de l'Echineau SAS, Clichy/France		100	35	-2
Parc Solaire de Pimorin SAS, Clichy/France		100	35	-2
Parc Solaire de Vernusse SAS, Clichy/France		100		3
Parc Solaire des Pierrieres SAS, Clichy/France		100	35	-2
Parc Solaire du Ban Saint Jean SAS, Clichy/France		100		3
Parc Ynni Cymunedol Alwen Cyfyngedig, Swindon/United Kingdom		100	0	0
Parque Eólico El Ópalo, S. de R.L. de C.V., Ciudad de México/Mexico		100		3
Pawnee Spirit Wind Farm, LLC, Wilmington/USA		100	0	0
Paz 'Éole SAS, Clichy/France		100	26	-2
Pe Ell North LLC, Chicago/USA		100	0	0
PI E&P Holding Limited, George Town/Cayman Islands		100	46,563	-5
PI E&P US Holding LLC, New York City/USA		100	45,834	-285
Pinckard Solar LLC, Wilmington/USA		100	0	0

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II. Affiliated companies which are not included in the consolidated financial statements due to secondary importance for the assets, liabilities, financial position and profit or loss of the Group	Shareholding in %		Equity	Net income / loss
	Direct	Total	€ '000	€ '000
Pinckard Solar Member LLC, Wilmington/USA		100	0	0
Pinto Pass, LLC, Wilmington/USA		100	0	0
Pipkin Ranch Wind Farm, LLC, Wilmington/USA		100	0	0
Prairie Creek Wind, LLC, Wilmington/USA		100		[3]
Proyectos Solares Iberia I, S.L., Barcelona/Spain		100	22	-5
Proyectos Solares Iberia II, S.L., Barcelona/Spain		100	26	-12
Proyectos Solares Iberia III, S.L., Barcelona/Spain		100	20	-5
Proyectos Solares Iberia IV, S.L., Barcelona/Spain		100	21	-5
Proyectos Solares Iberia V, S.L., Barcelona/Spain		100	21	-5
Pryor Caves Wind Project LLC, Chicago/USA		100	0	0
PT Rheincoal Supply & Trading Indonesia, PT, Jakarta/Indonesia		100	1,441	-157
Quartz Solar, LLC, Wilmington/USA		100		[3]
Quintana Fotovoltaica S.L.U., Barcelona/Spain		100	3	-5
RD Hanau GmbH, Hanau		100	0	[1]
R-Gen Renewables Limited, Altrincham/United Kingdom		100		[3]
Ribaforada Energy Ribaforada, S.L.U., Barasoain/Spain		100	212	-2
Roadrunner Crossing Wind Farm, LLC, Wilmington/USA		100	0	0
Rose Rock Wind Farm, LLC, Wilmington/USA		100	0	0
Rouget Road Solar Farm, LLC, Lake Mary/USA		100		[3]
RWE & Turcas Dogalgaz Ithalat ve Ihracat A.S., Istanbul/Turkey		100	535	175
RWE AUSTRALIA PTY LTD, Brisbane/Australia		100	58	14
RWE Belgium BV, Brussels/Belgium		100	1,388	0
RWE Carbon Sourcing North America, LLC, Wilmington/USA		100	0	0

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II. Affiliated companies which are not included in the consolidated financial statements due to secondary importance for the assets, liabilities, financial position and profit or loss of the Group	Shareholding in %		Equity	Net income/loss
	Direct	Total	€ '000	€ '000
RWE Dhabi Union Energy LLC, Abu Dhabi/United Arab Emirates		49	36	0
RWE Dils Energie NV, Hasselt/Belgium		100	0	0
RWE Eemshydrogen B.V., Geertruidenberg/Netherlands		100	0	0
RWE Energy APAC Co. Ltd., Chengdu/China		100	-99	-1,918
RWE Enerji Toptan Satis A.S., Istanbul/Turkey		100	2,118	250
RWE Gas Storage Beteiligungsverwaltungs GmbH, Essen		100	10,985	-4
RWE Hillston Sun Farm Holding Pty. Ltd., Melbourne/Australia		100	2	235
RWE indeland Windpark Eschweiler Verwaltungs GmbH, Eschweiler		100	60	6
RWE Ingen!us Limited, Swindon/United Kingdom		100	2,660	36
RWE NSW PTY LTD, Sydney/Australia		100	51	-27
RWE Offshore Development, LLC, Wilmington/USA		100		[3]
RWE Offshore Wind A/S, Rødby/Denmark		100		[3]
RWE Offshore Wind GmbH, Essen		100	25	[1]
RWE Offshore Wind Holdings LLC, Dover/USA		100	-106	-1,065
RWE Offshore Wind Netherlands Participations I B.V., Geertruidenberg/Netherlands		100	0	0
RWE Offshore Wind Netherlands Participations II B.V., Geertruidenberg/Netherlands		100	0	0
RWE Offshore Wind Netherlands Participations III B.V., Geertruidenberg/Netherlands		100	0	0
RWE Offshore Wind Netherlands Participations IV B.V., Geertruidenberg/Netherlands		100	0	0
RWE Pensionsfonds AG, Essen	100	100	3,950	78
RWE Principal Investments UK Limited, Swindon/United Kingdom		100	84	-215
RWE Principal Investments USA, LLC, New York City/USA		100	6,759	943
RWE Renewables Australia Holdings Pty Ltd., Brisbane/Australia		100	-319	-823
RWE Renewables Chile SpA, Santiago/Chile		100	7,108	-2,036

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II. Affiliated companies which are not included in the consolidated financial statements due to secondary importance for the assets, liabilities, financial position and profit or loss of the Group	Shareholding in %		Equity	Net income / loss
	Direct	Total	€ '000	€ '000
RWE Renewables Deutschland GmbH, Schönefeld		100	25	1
RWE Renewables France SAS, Levallois-Perret/France		100	4,045	-437
RWE Renewables Hellas Single Member S.A., Athens/Greece		100		3
RWE Renewables Japan Holdings K.K., Tokyo/Japan		100		3
RWE Renewables Korea LLC, Seoul/South Korea		100	948	-76
RWE Renewables Land, LLC, Wilmington/USA		100		3
RWE Renewables Mexico, S. de R.L. de C.V., Ciudad de México/Mexico		100	-357	-1,572
RWE Renewables Offshore Development One GmbH, Essen		100		3
RWE Renewables Offshore Development Two GmbH, Essen		100		3
RWE Renewables Offshore HoldCo Four GmbH, Essen		100		3
RWE Renewables Services GmbH, Essen		100	25	-377
RWE Renewables Services Mexico, S. de R.L. de C.V., Ciudad de México/Mexico		100	226	-297
RWE Renewables Taiwan Ltd., Taipei City/Taiwan		100	153	-6
RWE Renewables Trident Offshore GmbH, Essen		100		3
RWE Renewables UK Spareco Limited, Swindon/United Kingdom		100	0	0
RWE Slovak Holding B.V., Geertruidenberg/Netherlands	100	100	242	158
RWE Solar Poland Sp. z o.o., Warsaw/Poland		100	-654	-514
RWE Stallingborough Limited, Swindon/United Kingdom		100	0	0
RWE Supply & Trading (India) Private Limited, Mumbai/India		100	927	55
RWE SUPPLY TRADING TURKEY ENERJI ANONIM SIRKETI, Istanbul/Turkey		100	542	36
RWE Technology International Energy Environment Engineering GmbH, Essen		100	25	1
RWE TECNOLOGIA LTDA, Rio de Janeiro/Brazil		100	94	-1
RWE THOR 1 B.V., Geertruidenberg/Netherlands		100		3

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II. Affiliated companies which are not included in the consolidated financial statements due to secondary importance for the assets, liabilities, financial position and profit or loss of the Group	Shareholding in %		Equity	Net income / loss
	Direct	Total	€ '000	€ '000
RWE THOR 2 B.V., Geertruidenberg/Netherlands		100		[3]
RWE THOR 3 B.V., Geertruidenberg/Netherlands		100		[3]
RWE THOR 4 B.V., Geertruidenberg/Netherlands		100		[3]
RWE Trading Americas Inc., New York City/USA		100	3,010	-6,947
RWE Trading Services Limited, Swindon/United Kingdom		100	1,438	35
RWE Wind Development AS, Oslo/Norway		100	167	-31
RWE Wind Holding A/S, Rødby/Denmark		100		[3]
RWE Wind Norway AB, Malmö/Sweden		100	5,596	-14
RWE Wind Projects AB, Malmö/Sweden		100	5	0
RWE Wind Service Italia S.r.l., Milan/Italy		100	243	-8
RWE Wind Services Norway AS, Oslo/Norway		100	40	-124
RWE Wind Transmission AB, Malmö/Sweden		100	694	-6
RWE Windpark Bedburg A44n Verwaltungs GmbH, Bedburg		100	28	3
RWE Windpark Bedburg Verwaltungs GmbH, Bedburg		51	48	1
RWE Windpark Garzweiler Verwaltungs GmbH, Essen		100	23	-4
RWE Windpark Papenhagen GmbH & Co. KG, Hanover		100	564	-12
RWE Windpark Papenhagen Verwaltungs GmbH, Hanover		100	38	4
RWE Windparks Deutschland GmbH, Essen		100	24	[1]
RWEST NA Investments GmbH, Essen		100	77	-40,761
RWEST PARTICIPAÇÕES, Rio de Janeiro/Brazil		100		[3]
RWEST PI Bras Limited, London/United Kingdom		100	23,818	-1,837
RWEST PI FRE Holding LLC, New York City/USA		100	2	-11
SB Retrofit, LLC, Dallas/USA		100		[3]

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II. Affiliated companies which are not included in the consolidated financial statements due to secondary importance for the assets, liabilities, financial position and profit or loss of the Group	Shareholding in %		Equity	Net income / loss
	Direct	Total	€ '000	€ '000
Scioto Solar LLC, Wilmington/USA		100	0	0
Seohae Offshore Wind Power Co., Ltd., Taean-gun/South Korea		100		[3]
Sergenite Investments sp. z o.o., Główczyce/Poland		100	-2	-3
Servanin Sp. z o.o., Warsaw/Poland		100		[3]
Sharco Wind sp. z o.o., Główczyce/Poland		100	0	-2
Shay Solar, LLC, Wilmington/USA		100	0	0
Snow Shoe Wind Farm, LLC, Wilmington/USA		100	0	0
Solar PV Construction Poland sp. z.o.o., Warsaw/Poland		100	-135	-41
Sparta North, LLC, Wilmington/USA		100	0	0
Sparta South, LLC, Wilmington/USA		100	0	0
Stillwater Energy Storage, LLC, Wilmington/USA		100	0	0
Storage Facility 1 Ltd., Slough/United Kingdom		100	-75	-33
Sun Data GmbH (i.L.), Kolitzheim		100	60	-7
Sunrise Energy Generation Pvt. Ltd., Mumbai/India		100	77	3
Sunrise Wind Holdings, LLC, Chicago/USA		100	0	0
Tafalla Energy Tafalla, S.L.U., Barasoain/Spain		100	212	-2
TE Portfolio Financing One, LLC, Wilmington/USA		100		[3]
Terrapin Hills LLC, Chicago/USA		100	0	0
Thor Wind Farm I/S, Rødby/Denmark		100		[3]
Three Rocks Solar, LLC, Wilmington/USA		100	0	0
Tierra Blanca Wind Farm, LLC, Wilmington/USA		100	0	0
Tika Solar, S. de R.L. de C.V., Ciudad de México/Mexico		100		[3]
Tipton Wind, LLC, Wilmington/USA		100	0	0

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II. Affiliated companies which are not included in the consolidated financial statements due to secondary importance for the assets, liabilities, financial position and profit or loss of the Group	Shareholding in %		Equity	Net income / loss
	Direct	Total	€ '000	€ '000
Valverde Wind Farm, LLC, Wilmington/USA		100	0	0
VDE Komplementär GmbH, Hanover		100	13	-17
Venado Wind Farm, LLC, Wilmington/USA		100	0	0
Versuchsatomkraftwerk Kahl GmbH, Karlstein am Main		80	665	31
Vici Wind Farm II, LLC, Wilmington/USA		100	0	0
Vici Wind Farm III, LLC, Wilmington/USA		100	0	0
Vici Wind Farm, LLC, Wilmington/USA		100	0	0
Villarrobledo Desarrollo 2, S.L.U., Barasoain/Spain		100	1,185	-2
Vindkraftpark Aurvandil AB, Uppsala/Sweden		100	606	-135
Vindkraftpark Brynhild AB, Uppsala/Sweden		100	3,300	3
Vortex Energy Deutschland GmbH, Kassel		100	4,397	-265
Vortex Energy Windpark GmbH & Co. KG, Hanover		100	4,900	-2,177
VSL Primus Sp. z o.o., Warsaw/Poland		100	0	0
Walker Road Solar Farm, LLC, Lake Mary/USA		100		3
West Fork Solar, LLC, Wilmington/USA		100	0	0
Wildcat Wind Farm II, LLC, Wilmington/USA		100	0	0
Wildcat Wind Farm III, LLC, Wilmington/USA		100	0	0
Willowbrook Solar I, LLC, Wilmington/USA		100	0	0
Windpark Winterlingen-Alb GmbH & Co. KG, Hanover		100	3,350	-503
WIT Ranch Wind Farm, LLC, Wilmington/USA		100	0	0
WR Graceland Solar, LLC, Wilmington/USA		100	0	0
Zielone Główczyce Sp. z o.o., Główczyce/Poland		100	4,192	-277

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III. Joint operations	Shareholding in %		Equity	Net income / loss
	Direct	Total	€ '000	€ '000
Greater Gabbard Offshore Winds Limited, Reading/United Kingdom		50	1,090,232	102,399
N.V. Elektriciteits-Produktiemaatschappij Zuid-Nederland EPZ, Borssele/Netherlands		30	93,082	10,335

IV. Affiliated companies of joint operations	Shareholding in %		Equity	Net income / loss
	Direct	Total	€ '000	€ '000
Enzee B.V., Borssele/Netherlands		100	506	406

V. Associated companies of joint operations	Shareholding in %		Equity	Net income / loss
	Direct	Total	€ '000	€ '000
B.V. NEA, Arnhem/Netherlands		29	74,611	1,512

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VI. Joint ventures accounted for using the equity method	Shareholding in %		Equity	Net income / loss
	Direct	Total	€ '000	€ '000
AS 3 Beteiligungs GmbH, Essen		51[4]	31,598	1,779
AWE-Arkona-Windpark Entwicklungs-GmbH, Hamburg		50	1,073,377	138,320
Awel y Môr Offshore Wind Farm Limited, Swindon/United Kingdom		60[4]	14,871	-473
C-Power N.V., Ostend/Belgium		27	286,106	29,287
Elevate Wind Holdco, LLC, Wilmington/USA		50	140,100	-10,341
Galloper Wind Farm Holding Company Limited, Swindon/United Kingdom		25	-30,155	46,189
Grandview Wind Farm, LLC, Wilmington/USA		50	252,278	-19,610
Gwynt y Môr Offshore Wind Farm Limited, Swindon/United Kingdom		50	-3,679	-457
Meton Energy S.A., Athens/Greece		51[4]		[3]
RWE Venture Capital GmbH, Essen		75[4]	432	-410
Société Electrique de l'Our S.A., Luxembourg/Luxembourg		40	17,212	4,697[2]
TCP Petcoke Corporation, Dover/USA		50	33,535	2,112[2]
URANIT GmbH, Jülich		50	70,416	147,383

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VII. Associates accounted for using the equity method	Shareholding in %		Equity	Net income / loss
	Direct	Total	€ '000	€ '000
Amprion GmbH, Dortmund	25	25	2,466,400	216,600
Belectric Gulf Limited, Abu Dhabi/United Arab Emirates		49	2,655	-5,518
Bray Offshore Wind Limited, Kilkenny/Ireland		50	-107	-9
DOTI Deutsche Offshore-Testfeld- und Infrastruktur-GmbH & Co. KG, Oldenburg		26	34,574	-17,351
GNS Gesellschaft für Nuklear-Service mbH, Essen		28	33,248	11,097[2]
Grosskraftwerk Mannheim Aktiengesellschaft, Mannheim		40	140,729	6,647
Kärntner Energieholding Beteiligungs GmbH, Klagenfurt/Austria		49	969,918	109,841[2]
KELAG-Kärntner Elektrizitäts-AG, Klagenfurt/Austria		13[5]	969,067	110,063[2]
Kish Offshore Wind Limited, Kilkenny/Ireland		50	-128	-9
Magicat Holdco, LLC, Wilmington/USA		20	276,350	-14,337
Mingas-Power GmbH, Essen		40	4,881	4,212
Nysäter Wind AB, Malmö/Sweden		20	47,706	-7,188
PEARL PETROLEUM COMPANY LIMITED, Road Town/British Virgin Islands		10[6]	1,791,179	143,505
Rødsand 2 Offshore Wind Farm AB, Malmö/Sweden		20	131,320	18,235
RWE Renewables Technology Fund I GmbH & Co. KG, Dortmund		78[4]	14,619	945
Schluchseewerk Aktiengesellschaft, Laufenburg (Baden)		50	70,575	2,809
Vela Wind Holdco, LLC, Wilmington/USA		25	149,560	0
Vliegasunie B.V., De Bilt/Netherlands		75[4]	5,395	-478

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VIII. Companies which are not accounted for using the equity method due to secondary importance for the assets, liabilities, financial position and profit or loss of the Group	Shareholding in %		Equity	Net income / loss
	Direct	Total	€ '000	€ '000
Abwasser-Gesellschaft Knapsack, Gesellschaft mit beschränkter Haftung, Hürth		33	472	242
Akita Yurihonjo Yojou Wind Energy K.K., Yurihonjo/Japan		50		3
Alfred Thiel-Gedächtnis-Unterstützungskasse GmbH, Essen		50	5,483	370
Ascent Energy LLC, Wilmington/USA		50	82,215	-8,617
Bight Wind Holdings, LLC, Wilmington/USA		70		3
CARBON Climate Protection GmbH, Langenlois/Austria		50	4,931	3,826
CARBON Egypt Ltd. (under liquidation), Cairo/Egypt		49	-2,290	-247
Deutsche Gesellschaft für Wiederaufarbeitung von Kernbrennstoffen AG & Co. oHG, Essen		31	1,732	1,221
DOTI Management GmbH, Oldenburg		26	120	0
Dunkerque Eoliennes En Mer SAS, Montpellier/France		32	-17	-26
Fassi Coal Pty. Ltd., Rutherford/Australia		47	-10,197	-3,030
First River Energy LLC, Denver/USA		40	-1,399	-7,197
Five Estuaries Offshore Wind Farm Limited, Swindon/United Kingdom		25	8,460	-229
Fond du Moulin SAS, Asnières-sur-Seine/France		25	-135	-39
Gemeinschaftswerk Hattingen Gesellschaft mit beschränkter Haftung, Essen		52	2,045	-403
GfS Gesellschaft für Simulatorschulung mbH, Essen		33	67	3
Kraftwerk Buer GbR, Gelsenkirchen		50	5,113	0
KSG Kraftwerks-Simulator-Gesellschaft mbH, Essen		33	666	26
KÜCKHOVENER Deponiebetrieb GmbH & Co. Kommanditgesellschaft, Bergheim		50	27	0
KÜCKHOVENER Deponiebetrieb Verwaltungs-GmbH, Bergheim		50	26	0
LDO Coal Pty. Ltd., Rutherford/Australia		47	-103	78
London Array Limited, Tunbridge Wells/United Kingdom		30	0	0
Moravske Hidroelektrane d.o.o., Belgrade/Serbia		51	4,000	-5

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VIII. Companies which are not accounted for using the equity method due to secondary importance for the assets, liabilities, financial position and profit or loss of the Group	Shareholding in %		Equity	Net income / loss
	Direct	Total	€ '000	€ '000
Netzanbindung Tewel OHG, Cuxhaven		25	563	-25
New England Aqua Ventus, LLC, Los Angeles/USA		50	837	-515
North Falls Offshore Wind Farm HoldCo Limited, Swindon/United Kingdom		50	0	0
Parc Eolien De Sepmes SAS, Angers/France		50	37	-3
Parc Eolien Des Monts Jumeaux SAS, Paris/France		50	3	-4
Parc Eolien Du Coupru SAS, Paris/France		50	-76	-26
Parc Eolien Du Vilpion SAS, Paris/France		50	-108	-37
Q-Portal GmbH, Grevenbroich		49	2,639	114
Rampion Extension Development Limited, Swindon/United Kingdom		50	10,212	-23
Scarweather Sands Limited, Coventry/United Kingdom		50	0	0
TetraSpar Demonstrator ApS, Copenhagen/Denmark		23	3,349	-14,410
Toledo PV A.E.I.E., Madrid/Spain		33	965	635
TPG Wind Limited, Coventry/United Kingdom		50	339	753
Umspannwerk Putlitz GmbH & Co. KG, Oldenburg		25	0	-87
Versorium Energy (GP) Ltd., Calgary/Canada		48		[3]
Versorium Energy LP, Calgary/Canada		50		[3]
Walden Renewables Development LLC, New York City/USA		92	17,050	9,274
Windesco Inc, Boston/USA		21	5,187	-1,765
WINDTEST Grevenbroich GmbH, Grevenbroich		38	896	-70
WP France 15 SAS, Puteaux/France		40	-42	-18

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IX. Other investments	Shareholding in %		Equity	Net income / loss
	Direct	Total	€ '000	€ '000
APEP Dachfonds GmbH & Co. KG, Munich	36	36	81,373	14,880
Chrysalix Energy II U.S. Limited Partnership, Vancouver/Canada		6	17,964	1,680
Chrysalix Energy III U.S. Limited Partnership, Vancouver/Canada		5	69,375	-5,555
Energías Renovables de Ávila, S.A., Madrid/Spain		17	595	0
E.ON SE, Essen		15	10,642,800	2,113,800
Glenrothes Paper Limited, Glenrothes/United Kingdom		0	-594	0
High-Tech Gründerfonds II GmbH & Co. KG, Bonn		1	107,586	0
HOCHTEMPERATUR-KERNKRAFTWERK Gesellschaft mit beschränkter Haftung (HKG) Gemeinsames Europäisches Unternehmen, Hamm		31	0	0
Nordsee One GmbH, Oststeinbek		15	69,649	44,956
Nordsee Three GmbH, Oststeinbek		15	68	-4
Nordsee Two GmbH, Oststeinbek		15	67	-4
OPPENHEIM PRIVATE EQUITY Institutionelle Anleger GmbH & Co. KG, Cologne	29	29	0	-159
Parque Eólico Cassiopea, S.L., Oviedo/Spain		10	82	0
Parque Eólico Escorpio, S.A., Oviedo/Spain		10	2,392	0
Parque Eólico Leo, S.L., Oviedo/Spain		10	316	0
PEAG Holding GmbH, Dortmund	12	12	19,636	1,693
Promocion y Gestion Cáncer, S.L., Oviedo/Spain		10	95	0
SET Fund II C.V., Amsterdam/Netherlands		6	21,877	-2,423
Stem Inc., Milbrae/USA		4	4,415	-95,326

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IX. Other investments	Shareholding in %		Equity	Net income / loss
	Direct	Total	€ '000	€ '000
Sustainable Energy Technology Fund C.V., Amsterdam/Netherlands		48	18,947	-4,185
Technologiezentrum Jülich GmbH, Jülich		5	2,147	191
Transport- und Frischbeton-Gesellschaft mit beschränkter Haftung & Co. Kommanditgesellschaft Aachen, Aachen		17	390	122
Trinkaus Secondary GmbH & Co. KGaA, Düsseldorf	43	43	1,000	-25
Umspannwerk Lübz GbR, Lübz		18	41	13
Versorgungskasse Energie (VVaG) i.L., Hanover		0	51,729	0
Versorium Energy Ltd., Calgary/Canada		15	-309	-117

1 Profit and loss-pooling agreement; amounts blocked for transfer.
2 Figures from the Group's consolidated financial statements.
3 Newly founded, financial statements not yet available.
4 No control by virtue of company contract.
5 Significant influence via indirect investments.
6 Significant influence by virtue of company contract.

Changes in shareholding with change of control	Shareholding in % 31 Dec 2021	Shareholding in % 31 Dec 2020	Change
Additions to affiliated companies included in the consolidated financial statements			
Panther Creek Three Class B, LLC, Wilmington/USA	100		100
Panther Creek Three Holdco, LLC, Wilmington/USA	100		100
Rampion Offshore Wind Limited, Coventry/United Kingdom	50		50
RWE Generation Service GmbH, Essen	100		100
RWE Renewables Offshore HoldCo One GmbH, Essen	100		100
RWE Renewables Offshore HoldCo Three GmbH, Essen	100		100
RWE Renewables Offshore HoldCo Two GmbH, Essen	100		100
RWE Renewables UK Dogger Bank South One Limited, Swindon/United Kingdom	100		100
RWE Renewables UK Dogger Bank South Two Limited, Swindon/United Kingdom	100		100
Solarengo Portugal, SGPS, Unipessoal Lda., Cascais/Portugal	100		100
Additions to joint ventures accounted for using the equity method	Shareholding in % 31 Dec 2021	Shareholding in % 31 Dec 2020	Change
Meton Energy S.A., Athens/Greece	51[1]		51
Change of joint ventures accounted for using the equity method into affiliated companies included in the consolidated financial statements	Shareholding in % 31 Dec 2021	Shareholding in % 31 Dec 2020	Change
Rampion Renewables Limited, Coventry/United Kingdom	100	60[1]	40
Change of affiliated companies included in the consolidated financial statements into associated companies accounted for using the equity method			
Vela Wind Holdco, LLC, Wilmington/USA	25	100	-75

1 No control by virtue of company contract.

Changes in shareholding with change of control	Shareholding in % 31 Dec 2021	Shareholding in % 31 Dec 2020	Change
Disposal of affiliated companies included in the consolidated financial statements			
Belectric France S.à.r.l., Vendres/France		100	-100
BELECTRIC GmbH, Kolitzheim		100	-100
Belectric Israel Ltd., Be'er Sheva/Israel		100	-100
Belectric Italia s.r.l., Latina/Italy		100	-100
Belectric Solar Ltd., Slough/United Kingdom		100	-100
Centrale Hydroelectrique d'Oussiat S.A.S., Paris/France		100	-100
Cranell Holdco, LLC, Wilmington/USA		100	-100
Cranell Wind Farm, LLC, Wilmington/USA		100	-100
Energies Charentus S.A.S., Paris/France		100	-100
Energies France S.A.S., Paris/France		100	-100
Energies Maintenance S.A.S., Paris/France		100	-100
Energies Saint Remy S.A.S., Paris/France		100	-100
Energies VAR 1 S.A.S., Paris/France		100	-100
Energies VAR 3 S.A.S., Paris/France		100	-100
Glen Kyllachy Wind Farm Limited, Swindon/United Kingdom		100	-100
Inversiones Belectric Chile LTDA, Santiago de Chile/Chile		100	-100
INVESTERG - Investimentos em Energias, Sociedade Gestora de Participações Sociais, Lda., São João do Estoril/Portugal		100	-100
LUSITERG – Gestão e Produção Energética, Lda., São João do Estoril/Portugal		74	-74
Raymond Holdco, LLC, Wilmington/USA		100	-100
Raymond Wind Farm, LLC, Wilmington/USA		100	-100
SAS Île de France S.A.S., Paris/France		100	-100
Stella Holdco, LLC, Wilmington/USA		100	-100
Stella Wind Farm, LLC, Wilmington/USA		100	-100
West Raymond Holdco, LLC, Wilmington/USA		100	-100
West Raymond Wind Farm, LLC, Wilmington/USA		100	-100

Changes in shareholding with change of control	Shareholding in % 31 Dec 2021	Shareholding in % 31 Dec 2020	Change
Disposal of associated companies accounted for using the equity method			
ATBERG – Eólicas do Alto Tâmega e Barroso, Lda., Ribeira de Pena/Portugal		40	-40
HIDROERG – Projectos Energéticos, Lda., Lisbon/Portugal		32	-32

Changes in shareholding without change of control	Shareholding in % 31 Dec 2021	Shareholding in % 31 Dec 2020	Change
Affiliated companies which are included in the consolidated financial statements			
Parc Eolien Les Pierrots SAS, Clichy/France	60	100	-40
RWE Windpark Bedburg A44n GmbH & Co. KG, Bedburg	51	100	-49

4.8 Boards (part of the Notes)

As of 3 March 2022

Supervisory Board

Dr. Werner Brandt
Bad Homburg
Chairman
Chairman of the Supervisory Board of ProSiebenSat.1 Media SE
Year of birth: 1954
Member since 18 April 2013
End of term: 2025

Other appointments:
- ProSiebenSat.1 Media SE[1] until 5 May 2022 (Chairman)
- Siemens AG[1]

Frank Bsirske[2]
Isernhagen
Deputy Chairman until 15 September 2021
Former Chairman of ver.di - Vereinte Dienstleistungsgewerkschaft
Year of birth: 1952
Member from 9 January 2001 to 15 September 2021

Other appointments:
- Deutsche Bank AG[1]

Ralf Sikorski[2]
Hanover
Deputy Chairman since 21 September 2021
Deputy Chairman of IG Bergbau, Chemie, Energie
Year of birth: 1961
Member since 1 July 2014
End of term: 2026

Other appointments:
- CHEMIE Pensionsfonds AG
- Lanxess AG[1]
- Lanxess Deutschland GmbH
- RAG AG
- RWE Generation SE[3]
- RWE Power AG[3]
- KSBG Kommunale Verwaltungsgesellschaft GmbH

Michael Bochinsky[2]
Grevenbroich
Deputy Chairman of the General Works Council of RWE Power AG
Year of birth: 1967
Member since 1 August 2018
End of term: 2026

• Member of other mandatory supervisory boards as defined in Section 125 of the German Stock Corporation Act.
- Member of comparable domestic and foreign supervisory boards of commercial enterprises as defined in Section 125 of the German Stock Corporation Act.

1 Listed company.
2 Employee representative.
3 Office within the Group.

Sandra Bossemeyer[2]
Duisburg
Chairwoman of the Works Council of RWE AG
Representative of the disabled
Year of birth: 1965
Member since 20 April 2016
End of term: 2026

Martin Bröker[2]
Bochum
Head of Corporate IT & SAP at RWE AG
Year of birth: 1966
Member from 1 September 2018 to 15 September 2021

Dr. Hans Friedrich Bünting
Mülheim an der Ruhr
Independent Corporate Consultant
Year of birth: 1964
Member since 28 April 2021
End of term: 2025

Anja Dubbert[2]
Essen
Business Development Manager
Member of the Works Council of RWE Supply & Trading GmbH
Year of birth: 1979
Member from 27 September 2019 to 15 September 2021

Matthias Dürbaum[2]
Heimbach
Chairman of the Works Council of the Hambach Opencast Mine, RWE Power AG
Year of birth: 1987
Member since 30 September 2019
End of term: 2026

Ute Gerbaulet
Düsseldorf
General Partner at Dr. August Oetker KG
Year of birth: 1968
Member since 27 April 2017
End of term: 2024

Other appointments:
• Flaschenpost SE
- Dr. August Oetker Nahrungsmittel KG (Chairwoman)
- OEDIV Oetker Daten- und Informationsverarbeitung KG (Chairwoman)
- Oetker Digital GmbH (Chairwoman)
- Radeberger Gruppe KG
- NRW.Bank AöR

Prof. Dr.-Ing. Dr.-Ing. E. h. Hans-Peter Keitel
Essen
Former Chairman of the Executive Board of HOCHTIEF AG
Independent Corporate Consultant
Year of birth: 1947
Member since 18 April 2013
End of term: 2024

• Member of other mandatory supervisory boards as defined in Section 125 of the German Stock Corporation Act.
- Member of comparable domestic and foreign supervisory boards of commercial enterprises as defined in Section 125 of the German Stock Corporation Act.

1 Listed company.
2 Employee representative.
3 Office within the Group.

Mag. Dr. h.c. Monika Kircher
Krumpendorf, Austria
Independent Corporate Consultant
Year of birth: 1957
Member since 15 October 2016
End of term: 2025

Other appointments:
- Andritz AG[1]
- Kärntner Energieholding Beteiligungs GmbH (Chairwoman)
- KELAG-Kärntner Elektrizitäts AG
- Siemens AG Austria

Thomas Kufen
Essen
Mayor of the City of Essen
Year of birth: 1973
Court-appointed Member since 18 October 2021[4]

Other appointments:
• Essener Versorgungs- und Verkehrsgesellschaft mbH (EVV) (Chairman)
• Stadtwerke Essen AG (Chairman)
- Advisory Board, Sparkasse Essen (Chairman)
- RAG Foundation (Member of the Board of Trustees)

Reiner van Limbeck[2]
Dinslaken
Chairman of the Works Council of the Essen Headquarters, RWE Generation SE and RWE Technology International GmbH
Year of birth: 1965
Member since 15 September 2021
End of term: 2026

Other appointments:
• RWE Generation SE[3]

Harald Louis[2]
Jülich
Chairman of the General Works Council of RWE Power AG
Year of birth: 1967
Member since 20 April 2016
End of term: 2026

Other appointments:
• RWE Power AG[3]

Dagmar Mühlenfeld
Mülheim an der Ruhr
Former Mayor of the City of Mülheim an der Ruhr
Managing Director of JUNI gGmbH (Junior-Uni Ruhr)
Year of birth: 1951
Member from 4 January 2005 to 28 April 2021

• Member of other mandatory supervisory boards as defined in Section 125 of the German Stock Corporation Act.
- Member of comparable domestic and foreign supervisory boards of commercial enterprises as defined in Section 125 of the German Stock Corporation Act.

1 Listed company.
2 Employee representative.
3 Office within the Group.
4 The AGM on 28 April 2022 will decide on Mr. Kufen's appointment to the Supervisory Board.

Peter Ottmann
Nettetal
Former Managing Director of Verband der kommunalen RWE-Aktionäre GmbH
Attorney
Former Chief Administrative Officer of Viersen County
Year of birth: 1951
Member from 20 April 2016 to 28 April 2021

Dagmar Paasch[2]
Solingen
Head of NRW Supply and Waste Management Division at ver.di Dienstleistungsgewerkschaft
Year of birth: 1974
Member from 15 September 2021
End of term: 2026

Other appointments:
• RWE Generation SE[3]

Günther Schartz
Wincheringen
Former Chief Administrative Officer of the District of Trier-Saarburg
Year of birth: 1962
Member from 20 April 2016 to 30 September 2021

Dr. Erhard Schipporeit
Hanover
Independent Corporate Consultant
Year of birth: 1949
Member since 20 April 2016
End of term: 2024

Other appointments:
• BDO AG Wirtschaftsprüfungsgesellschaft
• Hannover Rück SE[1]
• HDI Haftpflichtverband der Deutschen Industrie VVaG
• Talanx AG[1]

Dr. Wolfgang Schüssel
Vienna, Austria
Former Federal Chancellor of the Republic of Austria
Year of birth: 1945
Member from 1 March 2010 to 28 April 2021

Other appointments:
- Adenauer Stiftung (Chairman of the Board of Trustees)
- PJSC LUKOIL[1]

Dirk Schuhmacher[2]
Rommerskirchen
Chairman of the HW Grefrath Works Council, RWE Power AG
Year of birth: 1970
Member since 15 September 2021
End of term: 2026

Ullrich Sierau
Dortmund
Independent Consultant for Companies, Administrations, Political Parties and Civil Society Initiatives
Year of birth: 1956
Member since 20 April 2011
End of term: 2024

• Member of other mandatory supervisory boards as defined in Section 125 of the German Stock Corporation Act.
- Member of comparable domestic and foreign supervisory boards of commercial enterprises as defined in Section 125 of the German Stock Corporation Act.

1 Listed company.
2 Employee representative.
3 Office within the Group.

Hauke Stars
Königstein
Member of the Executive Board of Volkswagen AG
Year of birth: 1967
Member since 28 April 2021
End of term: 2025

Other appointments:
• Audi AG
• CARIAD SE
- Kühne + Nagel International AG

Helle Valentin
Birkeroed, Denmark
Managing Partner, IBM Consulting EMEA, IBM Corporation
Year of birth: 1967
Member since 28 April 2021
End of term: 2025

Other appointments:
- PFA Holding A / S, Denmark until 7 March 2022
- PFA Pension, Forsikringsaktieselskab, Denmark until 7 March 2022
- IBM Danmark ApS, Denmark

Dr. Andreas Wagner[2]
Grevenbroich
Head of Drilling and Water Management, RWE Power AG
Year of birth: 1967
Member since 15 September 2021
End of term: 2026

Marion Weckes[2]
Dormagen
Officer of the Group Works Council of GEA Group AG
Year of birth: 1975
Member since 20 April 2016
End of term: 2026

Leonhard Zubrowski[2]
Lippetal
Chairman of the Group Works Council of RWE AG
Year of birth: 1961
Member from 1 July 2014 to 15 September 2021

Other appointments:
• RWE Generation SE[3]

• Member of other mandatory supervisory boards as defined in Section 125 of the German Stock Corporation Act.
- Member of comparable domestic and foreign supervisory boards of commercial enterprises as defined in Section 125 of the German Stock Corporation Act.

1 Listed company.
2 Employee representative.
3 Office within the Group.

Supervisory Board Committees

Executive Committee of the Supervisory Board
Dr. Werner Brandt (Chairman)
Ute Gerbaulet
Prof. Dr. Hans-Peter Keitel
Reiner van Limbeck
Dirk Schuhmacher
Ralf Sikorski

Mediation Committee in accordance with Section 27, Paragraph 3 of the German Co-Determination Act
Dr. Werner Brandt (Chairman)
Thomas Kufen
Ralf Sikorski
Marion Weckes

Personnel Affairs Committee
Dr. Werner Brandt (Chairman)
Sandra Bossemeyer
Dr. Hans Friedrich Bünting
Harald Louis
Ralf Sikorski
Hauke Stars

Audit Committee
Dr. Erhard Schipporeit (Chairman)
Michael Bochinsky
Matthias Dürbaum
Mag. Dr. h.c. Monika Kircher
Dagmar Paasch
Ullrich Sierau

Nomination Committee
Dr. Werner Brandt (Chairman)
Prof. Dr. Hans-Peter Keitel
Hauke Stars

Strategy and Sustainability Committee
Dr. Werner Brandt (Chairman)
Michael Bochinsky
Dr. Hans Friedrich Bünting
Prof. Dr. Hans-Peter Keitel
Harald Louis
Dagmar Paasch
Ralf Sikorski
Helle Valentin

Executive Board

Dr. Markus Krebber
Chief Executive Officer since 1 May 2021
Member of the Executive Board of RWE AG since 1 October 2016, appointed until 30 June 2026
Chief Financial Officer to 30 April 2021

Offices:
- Group Communications & Public Affairs
- Energy Transition & Regulatory Affairs
- Legal, Compliance & Insurance
- Mergers & Acquisitions
- Strategy & Sustainability
- Corporate Transformation

Other appointments:
- RWE Generation SE[2] (Chairman)
- RWE Power AG[2]
- RWE Renewables GmbH[2] (Chairman)
- RWE Supply & Trading GmbH[2]

Dr. Michael Müller
Chief Financial Officer since 1 May 2021
Member of the Executive Board of RWE AG since 1 November 2020, appointed until 31 October 2023
Managing Director and CFO of RWE Supply & Trading GmbH from 1 September 2016 to 30 April 2021 (posts held concurrently from 1 November 2020 to 30 April 2021)

Offices:
- Accounting
- Controlling & Risk Management
- Finance & Credit Risk
- Investor Relations
- Tax

Other appointments:
- Amprion GmbH
- RWE Generation SE[2]
- RWE Power AG[2]
- RWE Renewables GmbH[2]
- RWE Supply & Trading GmbH[2] (Chairman)

• Member of other mandatory supervisory boards as defined in Section 125 of the German Stock Corporation Act.
- Member of comparable domestic and foreign supervisory boards of commercial enterprises as defined in Section 125 of the German Stock Corporation Act.

1 Listed company.
2 Office within the Group.

Zvezdana Seeger
Chief HR Officer and Labour Director since 1 November 2020
Member of the Executive Board of RWE AG since 1 November 2020, appointed until 31 October 2023

Offices:
- HR Services & Analytics
- Employee Relations
- People Management & Talent Attraction
- Group Information Technology
- Internal Audit & Security

Other appointments:
- • Deutsche Kreditbank AG
- • RWE Generation SE[2]
- • RWE Pensionsfonds AG[2] (Chairwoman)
- • RWE Power AG[2] (Chairwoman)
- • RWE Supply & Trading GmbH[2]
- \- Kärntner Energieholding Beteilgungs GmbH
- \- KELAG-Kärntner Elektrizitäts-Aktiengesellschaft

Dr. Rolf Martin Schmitz
Chief Executive Officer of RWE AG from 15 October 2016 to 30 April 2021
Member of the Executive Board of RWE AG from 1 May 2009 to 30 April 2021
Labour Director of RWE AG from 1 May 2017 to 31 October 2020

• Member of other mandatory supervisory boards as defined in Section 125 of the German Stock Corporation Act.
\- Member of comparable domestic and foreign supervisory boards of commercial enterprises as defined in Section 125 of the German Stock Corporation Act.

1 Listed company.
2 Office within the Group.

The following copy of the auditor's report also includes a "Report on the audit of the electronic renderings of the financial statements and the management report prepared for disclosure purposes in accordance with § 317 Abs. 3a HGB" ("Separate report on ESEF conformity"). The subject matter (ESEF documents) to which the Separate report on ESEF conformity relates is not attached. The audited ESEF documents can be inspected in or retrieved from the Federal Gazette.

4.9 Independent auditor's report

To RWE Aktiengesellschaft, Essen

Report on the audit of the consolidated financial statements and of the group management report

Audit Opinions

We have audited the consolidated financial statements of RWE Aktiengesellschaft, Essen, and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at December 31, 2021, and the consolidated statement of comprehensive income, consolidated income statement, consolidated statement of changes in equity and consolidated statement of cash flows for the financial year from January 1 to December 31, 2021, and notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the group management report of RWE Aktiengesellschaft, which is combined with the Company's management report, for the financial year from January 1 to December 31, 2021.

In our opinion, on the basis of the knowledge obtained in the audit,

- the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to § [Article] 315e Abs. [paragraph] 1 HGB [Handelsgesetzbuch: German Commercial Code] and, in compliance with these requirements, give a true and fair view of the assets, liabilities, and financial position of the Group as at December 31, 2021, and of its financial performance for the financial year from January 1 to December 31, 2021, and
- the accompanying group management report as a whole provides an appropriate view of the Group's position. In all material respects, this group management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development.

Pursuant to § 322 Abs. 3 Satz [sentence] 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements and of the group management report.

Basis for the Audit Opinions

We conducted our audit of the consolidated financial statements and of the group management report in accordance with § 317 HGB and the EU Audit Regulation (No. 537 / 2014, referred to subsequently as "EU Audit Regulation") in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). We performed the audit of the consolidated financial statements in supplementary compliance with the International Standards on Auditing (ISAs). Our responsibilities under those requirements, principles and standards are further described in the "Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Group Management Report" section of our auditor's report. We are independent of the group entities in accordance with the requirements of European law and German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. In addition, in accordance with Article 10 (2) point (f) of the EU Audit

Regulation, we declare that we have not provided non-audit services prohibited under Article 5 (1) of the EU Audit Regulation. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions on the consolidated financial statements and on the group management report.

Key Audit Matters in the Audit of the Consolidated Financial Statements

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the financial year from January 1 to December 31, 2021. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our audit opinion thereon; we do not provide a separate audit opinion on these matters.

In our view, the matters of most significance in our audit were as follows:

❶ Recoverability of goodwill
❷ Recoverability in the „Coal / Nuclear" segment

Our presentation of these key audit matters has been structured in each case as follows:

① Matter and issue
② Audit approach and findings
③ Reference to further information

Hereinafter we present the key audit matters:

❶ Recoverability of goodwill

① In the consolidated financial statements of RWE Aktiengesellschaft, goodwill amounting to €2.7 billion (1.9 % of consolidated total assets; previous year: €2.7 billion, or 4.4 % of consolidated total assets) is reported under the balance sheet item "Intangible assets". Goodwill is tested for impairment annually or when there are indications of impairment, to determine any possible need for write-downs. The carrying amounts of the relevant cash-generating units, including goodwill, are compared with the corresponding recoverable amounts in the context of the impairment tests. The recoverable amount is generally calculated on the basis of fair value less costs of disposal. The impairment tests are performed at the level of the cash-generating units or groups of cash-generating units to which the respective goodwill is allocated. The measurements to calculate the fair value less costs of disposal carried out for the purposes of the impairment tests are based on the present values of the future cash flows generally derived from the planning projections for the next three years (medium-term plan) prepared by the executive directors and acknowledged by the supervisory board. Expectations relating to future market developments and country-specific assumptions about the performance of macroeconomic indicators are also taken into account. Present values are calculated using discounted cash flow models. The discount rate applied is the weighted average cost of capital for the relevant cash-generating unit. The impairment test determined that no write-downs were necessary. The outcome of these valuations is dependent to a large extent on the estimates made by the executive directors of the future cash inflows of the cash-generating units, and on the respective discount rates, rates of growth and other assumptions employed. The measurement is therefore subject to considerable uncertainty. Against this background and due to the underlying complexity of the measurement, this matter was of particular significance in the context of our audit.

② As part of our audit, we, among other things, evaluated the method used for performing impairment tests and assessed the calculation of the weighted average cost of capital. In addition, we assessed whether the future cash inflows underlying the measurements together with the weighted cost of capital used represent an appropriate basis for the impairment tests overall. We evaluated the appropriateness of the future cash inflows used in the calculations, among other things, by comparing this data with the Group's medium-term plan and by reconciling it against general and sector-specific market expectations. In this context, we also assessed whether the costs of Group functions were properly included in the respective cash-generating unit. With the knowledge that even relatively small changes in the discount rate applied can have material effects on the fair values less costs of disposal calculated in this way, we also focused our assessment on the parameters used to determine the discount rate applied, and evaluated the measurement model. Furthermore, we evaluated the sensitivity analyses performed by the Company in order to assess any impairment risk (carrying amount higher than recoverable amount) in the event of a reasonably possible change in a material assumption underlying the measurement. Overall, the measurement parameters and assumptions used by the executive directors are in line with our expectations and are also within the ranges considered by us to be reasonable.

③ The Company's disclosures relating to goodwill are contained in the notes to the financial statements in section "Notes to the Balance Sheet" in note "(10) Intangible assets".

❷ Recoverability in the „Coal / Nuclear" segment

① In the consolidated financial statements of RWE Aktiengesellschaft open cast mines (hereinafter referred to as "property, plant and equipment") in the "Coal / Nuclear" segment amounting to €0.9 billion were impaired due to the significant deterioration on market conditions stemming from regulatory climate protection measures. The recoverability of property, plant and equipment was tested on the basis of their fair values less costs of disposal that exceed their values in use. The fair values of the respective property, plant and equipment are determined by the Company as the present value of the future cash flows using discounted cash flow models. The budget projections for the coming three years (medium-term planning) prepared by the executive directors and acknowledged by the supervisory board are used as a basis and extrapolated on the basis of long-term assumptions with regard to electricity, coal, natural gas and CO_2 certificate prices as well as the planned service lives. The outcome of these valuations is dependent to a large extent on the estimates made by the executive directors of the future cash flows, and on the discount rates, rates of growth and other assumptions employed. The measurement is therefore subject to considerable uncertainties, so that this matter was of particular significance in the context of our audit.

② As part of our audit, we, among other things, evaluated the method used for testing the recoverability of property, plant and equipment and assessed the calculation of the weighted average cost of capital. In addition, we assessed whether the future cash inflows underlying the measurements together with the weighted cost of capital used represent an appropriate basis for testing recoverability overall. We assessed the appropriateness of the future cash inflows used in the measurement by, inter alia, comparing this data with the medium-term planning and reconciling it against general and sector-specific market expectations with regard to electricity, coal, natural gas and CO_2 certificate prices and the planned service lives. Furthermore, on the basis of the medium-term planning, we assessed the recoverability of the property, plant and equipment based on the evidence provided to us. With the knowledge that even relatively small changes in the discount rate applied can have material effects on the fair values calculated in this way, we also focused our assessment on the parameters used to determine the discount rate applied, and evaluated the measurement model. Overall, the measurement parameters and assumptions used by the executive directors are in line with our expectations and are also within the ranges considered by us to be reasonable.

③ The Company's disclosures relating to impairments of property, plant and equipment are contained in the notes to the financial statements in section "Notes to the Income Statement" in note "(5) Depreciation, amortization and impairment losses".

Other Information
The executive directors are responsible for the other information.

The other information comprises

- the statement on corporate governance pursuant to § 289f HGB and § 315d HGB
- the separate non-financial group report pursuant to § 315b Abs. 3 HGB
- the annual report – excluding cross-references to external information – with the exception of the audited consolidated financial statements, the audited group management report and our auditor's report

Our audit opinions on the consolidated financial statements and on the group management report do not cover the other information, and consequently we do not express an audit opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information mentioned above and, in so doing, to consider whether the other information

- is materially inconsistent with the consolidated financial statements, with the group management report disclosures audited in terms of content or with our knowledge obtained in the audit, or
- otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the Executive Directors and the Supervisory Board for the Consolidated Financial Statements and the Group Management Report
The executive directors are responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § 315e Abs. 1 HGB and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position, and financial performance of the Group. In addition the executive directors are responsible for such internal control as they have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the executive directors are responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, the executive directors are responsible for the preparation of the group management report that, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, the executive directors are responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a group management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the group management report.

The supervisory board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements and of the group management report.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Group Management Report
Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the group management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our audit opinions on the consolidated financial statements and on the group management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with § 317 HGB and the EU Audit Regulation and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) and supplementary compliance with the ISAs will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and this group management report.

We exercise professional judgment and maintain professional skepticism throughout the audit. We also

- Identify and assess the risks of material misstatement of the consolidated financial statements and of the group management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our audit opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures (systems) relevant to the audit of the group management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an audit opinion on the effectiveness of these systems.

- Evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures.

- Conclude on the appropriateness of the executive directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the consolidated financial statements and in the group management report or, if such disclosures are inadequate, to modify our respective audit opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § 315e Abs. 1 HGB.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express audit opinions on the consolidated financial statements and on the group management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinions.

- Evaluate the consistency of the group management report with the consolidated financial statements, its conformity with German law, and the view of the Group's position it provides.

- Perform audit procedures on the prospective information presented by the executive directors in the group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive directors as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate audit opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with the relevant independence requirements, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, the related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter.

Other legal and regulatory requirements

Report on the Assurance on the Electronic Rendering of the Consolidated Financial Statements and the Group Management Report Prepared for Publication Purposes in Accordance with § 317 Abs. 3a HGB

Assurance Opinion

We have performed assurance work in accordance with § 317 Abs. 3a HGB to obtain reasonable assurance as to whether the rendering of the consolidated financial statements and the group management report (hereinafter the "ESEF documents") contained in the electronic file RWE_AG_KA_KLB_ESEF_2021-12-31.zip and prepared for publication purposes complies in all material respects with the requirements of § 328 Abs. 1 HGB for the electronic reporting format ("ESEF format"). In accordance with German legal requirements, this assurance work extends only to the conversion of the information contained in the consolidated financial statements and the group management report into the ESEF format and therefore relates neither to the information contained within these renderings nor to any other information contained in the electronic file identified above.

In our opinion, the rendering of the consolidated financial statements and the group management report contained in the electronic file identified above and prepared for publication purposes complies in all material respects with the requirements of § 328 Abs. 1 HGB for the electronic reporting format. Beyond this assurance opinion and our audit opinion on the accompanying consolidated financial statements and the accompanying group management report for the financial year from January 1 to December 31, 2021, contained in the "Report on the Audit of the Consolidated Financial Statements and on the Group Management Report" above, we do not express any assurance opinion on the information contained within these renderings or on the other information contained in the electronic file identified above.

Basis for the Assurance Opinion

We conducted our assurance work on the rendering of the consolidated financial statements and the group management report contained in the electronic file identified above in accordance with § 317 Abs. 3a HGB and the IDW Assurance Standard: Assurance Work on the Electronic Rendering, of Financial Statements and Management Reports, Prepared for Publication Purposes in Accordance with § 317 Abs. 3a HGB (IDW AsS 410 (10.2021)) and the International Standard on Assurance Engagements 3000 (Revised). Our responsibility in accordance therewith is further described in the "Group Auditor's Responsibilities for the Assurance Work on the ESEF Documents" section. Our audit firm applies the IDW Standard on Quality Management 1: Requirements for Quality Management in the Audit Firm (IDW QS 1).

Responsibilities of the Executive Directors and the Supervisory Board for the ESEF Documents

The executive directors of the Company are responsible for the preparation of the ESEF documents including the electronic renderings of the consolidated financial statements and the group management report in accordance with § 328 Abs. 1 Satz 4 Nr. [number] 1 HGB and for the tagging of the consolidated financial statements in accordance with § 328 Abs. 1 Satz 4 Nr. 2 HGB.

In addition, the executive directors of the Company are responsible for such internal control as they have considered necessary to enable the preparation of ESEF documents that are free from material non-compliance with the requirements of § 328 Abs. 1 HGB for the electronic reporting format, whether due to fraud or error.

The supervisory board is responsible for overseeing the process for preparing the ESEF documents as part of the financial reporting process.

Group Auditor's Responsibilities for the Assurance Work on the ESEF Documents

Our objective is to obtain reasonable assurance about whether the ESEF documents are free from material non-compliance with the requirements of § 328 Abs. 1 HGB, whether due to fraud or error. We exercise professional judgment and maintain professional skepticism throughout the assurance work. We also:

- Identify and assess the risks of material non-compliance with the requirements of § 328 Abs. 1 HGB, whether due to fraud or error, design and perform assurance procedures responsive to those risks, and obtain assurance evidence that is sufficient and appropriate to provide a basis for our assurance opinion.

- Obtain an understanding of internal control relevant to the assurance work on the ESEF documents in order to design assurance procedures that are appropriate in the circumstances, but not for the purpose of expressing an assurance opinion on the effectiveness of these controls.

- Evaluate the technical validity of the ESEF documents, i. e., whether the electronic file containing the ESEF documents meets the requirements of the Delegated Regulation (EU) 2019/815 in the version in force at the date of the consolidated financial statements on the technical specification for this electronic file.

- Evaluate whether the ESEF documents provide an XHTML rendering with content equivalent to the audited consolidated financial statements and to the audited group management report.

- Evaluate whether the tagging of the ESEF documents with Inline XBRL technology (iXBRL) in accordance with the requirements of Articles 4 and 6 of the Delegated Regulation (EU) 2019/815, in the version in force at the date of the consolidated financial statements, enables an appropriate and complete machine-readable XBRL copy of the XHTML rendering.

Further Information pursuant to Article 10 of the EU Audit Regulation

We were elected as group auditor by the annual general meeting on April 28, 2021. We were engaged by the supervisory board on April 28, 2021. We have been the group auditor of RWE Aktiengesellschaft, Essen without interruption since the financial year 2001.

We declare that the audit opinions expressed in this auditor's report are consistent with the additional report to the audit committee pursuant to Article 11 of the EU Audit Regulation (long-form audit report).

Reference to an other matter – use of the auditor's report

Our auditor's report must always be read together with the audited consolidated financial statements and the audited group management report well as the assured ESEF documents. The consolidated financial statements and the group management report converted to the ESEF format – including the versions to be published in the Federal Gazette – are merely electronic renderings of the audited consolidated financial statements and the audited group management report and do not take their place. In particular, the "Report on the Assurance on the Electronic Rendering of the Consolidated Financial Statements and the Group Management Report Prepared for Publication Purposes in Accordance with § 317 Abs. 3a HGB" and our assurance opinion contained therein are to be used solely together with the assured ESEF documents made available in electronic form.

German Public Auditor responsible for the engagement

The German Public Auditor responsible for the engagement is Aissata Touré.

Essen, March 4, 2022

PricewaterhouseCoopers GmbH
Wirtschaftsprüfungsgesellschaft

(sgd. Markus Dittmann)	(sgd. Aissata Touré)
Wirtschaftsprüfer	Wirtschaftsprüferin
(German Public Auditor)	(German Public Auditor)

4.10 Information on the auditor

The consolidated financial statements of RWE AG and its subsidiaries for the 2021 fiscal year – consisting of the Group balance sheet, Group income statement and statement of comprehensive income, Group statement of changes in equity, Group cash flow statement and Group notes to the financial statements – were audited by PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft.

The auditor at PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft responsible for RWE is Ms. Aissata Touré. Ms. Touré performed this function for the first time.

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Further information

"The most beautiful aspect of recultivation is experiencing nature reborn in all its diversity."

Gregor Eßer, Director of the Recultivation Research Centre, RWE Power

5.1 Five-year overview

Five-year overview of the RWE Group[1]		2021	2020	2019	2018	2017
External revenue (excluding natural gas tax / electricity tax)	€ million	24,526	13,688	13,125	13,406	13,822
Adjusted EBITDA	€ million	3,650	3,286	2,489	1,538	2,149
Adjusted EBIT	€ million	2,185	1,823	1,267	619	1,170
Income before tax	€ million	1,522	1,265	-752	49	2,056
Net income / RWE AG shareholders' share in income	€ million	721	1,051	8,498	335	1,900
Earnings per share	€	1.07	1.65	13.82	0.54	3.09
Cash flows from operating activities of continuing operations	€ million	7,274	4,125	-977	4,611	-3,771
Free cash flow	€ million	4,562	1,132	-2,053	3,439	-4,439
Non-current assets	€ million	38,863	34,418	35,768	18,595	45,694
Current assets	€ million	103,446	27,224	28,241	61,513	23,365
Balance sheet equity	€ million	16,996	17,706	17,467	14,257	11,991
Non-current liabilities	€ million	28,306	27,435	26,937	20,007	36,774
Current liabilities	€ million	97,007	16,501	19,605	45,844	20,294
Balance sheet total	€ million	142,309	61,642	64,009	80,108	69,059
Equity ratio	%	11.9	28.7	27.3	17.8	17.4
Net assets (+) / net debt (–)	€ million	360	-4,432	-7,159	-19,339	-20,227
Workforce at the end of the year[2]		18,246	19,498	19,792	17,748	59,547
CO_2 emissions of our power stations	million metric tons	80.9	67.0	88.1	118.0	131.8

1 The comparability of some of the figures for various fiscal years is limited due to changes in reporting.
2 Converted to full-time positions.

5.2 Imprint

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For annual reports, interim reports, interim statements and further information on RWE, please visit us online at www.rwe.com/en.

RWE is a member of DIRK – the German Investor Relations Association.

This document was published on 15 March 2022. It is a translation of the German annual report. The consolidated financial statements and the review of operations are also published in the German Federal Gazette. These are the definitive versions.

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RWE Mediendatenbank

Financial calendar 2022 / 2023

28 April 2022	Virtual Annual General Meeting
29 April 2022	Ex-dividend date
03 May 2022	Dividend payment
12 May 2022	Interim statement on the first quarter of 2022
11 August 2022	Interim report on the first half of 2022
10 November 2022	Interim statement on the first three quarters of 2022
21 March 2023	Annual report for fiscal 2022
04 May 2023	Annual General Meeting
05 May 2023	Ex-dividend date
09 May 2023	Dividend payment
11 May 2023	Interim statement on the first quarter of 2023
10 August 2023	Interim report on the first half of 2023
14 November 2023	Interim statement on the first three quarters of 2023

The Annual General Meeting and all events concerning the publication of our financial reports are broadcast live on the internet and recorded. We will keep recordings on our website for at least twelve months.

2-3 NG COVID-19 Safe Work Guide

National Grid

Safe Work Guide

COVID Safe Work Guidance

Applicable to all regions. All facilities must first comply with all applicable laws.

nationalgrid

Version 2.10

05-19-22

A Note to all Readers

Welcome to the updated Safe Work Guide. Over the fall and winter of 2021-2022, there have been many changes in Federal, state, and local requirements related to COVID-19 protocols. National Grid's policy is to align with those legal requirements fully while minimizing additional protocols. This Safe Work Guide continues to be the primary collaborative document for COVID-19 related policies and protocols.

This Guidebook is to be used as a Corporate and Recommended Practice Guideline and aligns with legal requirements and recommendations from the Centers for Disease Control (CDC) and local Departments of Health to the greatest extent possible.

This is a working document and will be updated to reflect changes in directives and introduce new recommended practices as they become available. Please always refer to the online version for the most up to date Safe Work Guide.

nationalgrid

Table of Contents

SHE: Health & Safety

Symptoms of COVID-19

Excerpted from CDC: https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html

Symptoms to Watch for:

People with COVID-19 have had a wide range of symptoms reported – ranging from mild symptoms to severe illness. Symptoms may appear 2-14 days after exposure to the virus. People with these symptoms may have COVID-19:

- Fever or chills
- Cough, shortness of breath or difficulty breathing
- Fatigue, muscle aches, body aches, headache
- New loss of taste or smell
- Sore throat, congestion or runny nose
- Nausea, vomiting or diarrhea

How to Protect Yourself and Others

CDC detailed advice: *https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html*

Get Vaccinated and Stay Up To Date on Your Vaccines

Learn about vaccines and boosters here. Per CDC: COVID-19 vaccines are effective at preventing you from getting sick. COVID-19 vaccines are highly effective at preventing severe illness, hospitalizations, and death.

Stay 6 Feet From Others When Possible

Wear a Mask

CDC recommends that everyone ages 2 years and older should properly wear a well-fitting mask indoors in public in areas where the COVID-19 Community Level is high, regardless of vaccination status. Additional information is contained in the section "Face Coverings".

Wash Your Hands Often

Wash your hands often with soap and water for at least 20 seconds especially after you have been in a public place, or after blowing your nose, coughing, or sneezing. Avoid touching your eyes, nose, and mouth with unwashed hands. Good hand washing habits can also prevent spread of other illnesses, like colds and flu and should be continued indefinitely.

Get Tested

COVID-19 self-tests are one of many risk-reduction measures, along with vaccination, masking, and physical distancing, that protect you and others by reducing the chances of spreading COVID-19

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Site Monitors

As of February 28, 2022. National Grid will no longer require Site Monitors. The role of Site Monitors has been to assist employees in New York in understanding and adhering to the Safe Working guidelines; however, this requirement no longer exists under New York law.

Face Coverings

Current CDC guidance recommends that persons in areas of substantial or high transmission rates should wear masks indoors. Guidance may differ according to federal, state or local rules and laws. Businesses, including National Grid, may also establish their own requirements.

There have been multiple recent changes in state requirements in our jurisdictions. In MA, RI and NY, we are aligning to state and local guidelines which have relaxed mask requirements.

National Grid employees and contractors in all jurisdictions are encouraged but not required to wear a mask or social distance, regardless of vaccination status.

Please note:

- Employees that prefer to continue to wear a mask, even if fully vaccinated, are encouraged to do so.
- Face coverings must be worn when working in a customer's premises or where otherwise mandated.
- Masks will still be required in company medical offices or physical exam sites.
- Unvaccinated employees in NYC offices must continue to mask and social distance if under an accommodation from Health and Wellbeing.

National Grid may at any time seek proof of your vaccination status. Please be sure to carry your proof of vaccination on your person in the event you are asked by Health and Wellbeing to furnish it.

As always, your safety and wellbeing are our priority. We will continue taking all reasonable measures to keep you safe on the job site, in the office, and while working remotely in the hybrid working model.

Guidance for field work:

- Face coverings must be worn when working in a customer's premise or where otherwise mandated.

Employees may use either a company-issued or a personal face covering, depending on preference.

- Non-Fire-Retardant/Arc Rated Face Covering– use when there is no potential for a gas ignition or electric arc flash. This can be National Grid supplied or a personal face covering
- Fire Retardant Face Covering – must be used when there is potential for a gas ignition or electric arc flash

Face coverings, when worn, should:

- Cover both nose and mouth and fit snugly, but comfortably, against the side of the face
- Be secured with ties or ear loops, if provided
- Include multiple layers, or equivalent, of fabric

- Allow for breathing without restriction
- Be removed from behind head or ears to minimize hand contact with face
- Be laundered and machine dried if reusable

Daily Symptom Checks: Employees and Pontoon Contractors

National Grid employees and Pontoon Contractors will no longer be required to report a Daily Symptom Check or enter “home” in time entry. Visitors and Contractors other than Pontoon will still be required to report symptom checks.

Employees and Pontoon Contractors should continue to conduct symptom checks prior to arriving at the workplace; however, you no longer need to report those symptoms through MyCority. Scientific evidence shows that daily monitoring can be highly effective in promoting individual awareness of mild symptoms and help ill individuals prevent the spread of the virus to others. As a community, daily adherence by all will also provide a level of assurance to all employees regarding their welfare in the workplace.

Symptom Checks: Visitors, Non-Pontoon Contractors, and Vendors

Any non-employees entering a company facility or office will be required to provide their contact information for COVID-19 contact tracing purposes and must also perform a symptom check to monitor potential symptoms and/or exposure to COVID-19. Delivery people are excluded from this requirement.

Signage has been posted at every door with both a link and a QR code to the visitor symptom check.

Symptom-checks must be performed either before leaving home or immediately upon arrival at the workplace. Symptom checks are required once per calendar work day and do not need to be repeated if you are called back to work, unless you develop symptoms, or you work into a new calendar day.

How to Access the Symptom Check for Your Visitor

Visitors should access the symptom check at visitorhealth.nationalgrid.com or via phone at 833-986-1441. (This site cannot be accessed from company devices due to an issue with zcaler).

For technical issues, please check the IT Portal visit the Virtual Techbar, or call the IT Service Desk at 1-877-373-1112.

Privacy and Confidentiality

All responses will be stored within the employee’s medical chart as part of their occupational health records. These records are secure, private and confidential. Access is strictly limited to the Health & Wellbeing department.

If you answer yes to any questions

If you answer yes to any questions, stay home or leave the workplace, notify your supervisor and call our COVID-19 hotline at (888) 483-2123 to be connected to a Nurse.

Suspected or Confirmed COVID-19 Illness

If you are sick, or have an ill person in your home, please do not come to work. If you become ill while at work, immediately isolate yourself, tell your supervisor, and go home.

Call our COVID-19 hotline at (888) 483-2123 if you have symptoms associated with COVID-19, have tested positive or have been in contact with someone who has been diagnosed with, or is showing symptoms of, COVID-19.

By acting quickly, we can also determine if other close contacts need to be quarantined and if deep cleaning may be required for any company facilities and vehicles. If quarantined, it is imperative that employees DO NOT enter ANY National Grid property/facility/worksite until they are cleared by Sedgwick.

Facilities Notification

COVID-19 related requests for facility and vehicle cleaning will be issued solely through Health Services. If you have a concern about a workplace exposure, please call our COVID-19 hotline at (888) 483-2123 to be connected to a company Nurse.

Quarantine, Isolation and Close Contacts

Quarantine is used to keep someone who may have been **exposed** to COVID-19 away from others. Quarantine helps prevent spread of disease that can occur before a person knows they are sick or if they are asymptomatic. Quarantine is no longer required for those who are up to date on their vaccinations. See below chart for more details.

Quarantine durations may differ by jurisdiction, as mandated by local public health authorities. The quarantine end date is calculated from your last date of exposure to the sick individual. Be aware that in the case of a sick household member or someone you are caring for daily, your last day of exposure may be the end of their isolation period, as described below under “isolation”.

Isolation is used to separate people infected with the virus (symptomatic and asymptomatic) from people who are not infected.

1. Read important information about how to care for yourself and help protect other people in your home and community: https://www.cdc.gov/coronavirus/2019-ncov/if-you-are-sick/steps-when-sick.html

Close Contact is defined as being within 6 feet of someone who is suspected of having COVID-19 for 15 minutes or more (10 in NY) cumulatively over a 24 hour period, in the past 48 hours, or:

- You provided care to anyone who is sick with COVID-19
- You had direct physical contact with the person (hugged or kissed them)
- You shared eating or drinking utensils
- They sneezed, coughed, or somehow got respiratory droplets on you

The CDC, Massachusetts, New York, and Rhode Island have adopted new recommendations for reduced quarantine durations.

If you tested positive, have COVID symptoms or may be a close contact, call National Grid's COVID Hotline at 888-483-2123 to speak to a nurse. Below is a summary of current protocols.

"Fully Vaccinated" as defined by CDC	2 weeks after second dose of Pfizer/Moderna or single dose of J&J
"Up-to-Date" as defined by CDC	Immediately after getting first booster OR if it is less than 5 months since final dose of Pfizer/Moderna/J&J
Calculating quarantine or isolation	Quarantine (close contact exposure): • The date of your **last** exposure is considered Day 0 • Day 1 is the first full day after your last contact with a person who has had COVID-19 Isolation (positive test or symptomatic) • Day 0 is the day your symptoms first emerge or the collection date of your positive test • Day 1 is the first full day after your symptoms developed or your test specimen was collected
Quarantine for close contact	Up-to-date on COVID vaccinations: • Wear a mask around others for 10 days. • Test on day 5, if possible. • If you develop symptoms get a test, stay home, call the hotline Had confirmed COVID-19 in the past 90 days: • Wear a mask around others for 10 days. • If you develop symptoms get a test, stay home, call the hotline. Not up-to-date on COVID-19 vaccinations: • Stay home for 5 days. • Avoid being around people who may get very sick from COVID-19 • After that continue to wear a mask around others for 5 additional days. • Test on day 5 if possible. • If you develop symptoms get a test, stay home, call the hotline
Isolation: Symptomatic or Positive Test Result	Regardless of vaccination status: • Stay home for 5 days. If you have no symptoms or your symptoms are resolving after 5 days, you can leave your house. • Continue to wear a mask around others for 5 additional days. • If you have a fever, continue to stay home until your fever resolves. *If you tested positive but are asymptomatic at the time of your screening, the nurse will advise 5 full days of isolation with precautions for 10 days such as mask wearing.* *If symptomatic at time of screening, the nurse will advise you to plan for an estimated 10 full days of isolation with the option to call back for clearance after Day 5 if symptoms resolve.* *If immunocompromised, regardless of symptoms, 10 days of isolation is recommended.*

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Wellness Checks

Out of a sense of care and concern, the company will endeavor to reach out to employees who are absent due to COVID-19 related illness or exposure.

Wellness calls are intended as a check-in to ensure employees are faring well, that they understand the tools and resources available, and to provide them an opportunity to ask questions. Calls will be made by the Health & Wellbeing team and are considered part of the employee's private medical records.

Contractor Illness

Health & Wellbeing does not manage the absences of other companies' employees. However, to protect our employees, we are interviewing sick contractors who were in the vicinity of our employees to determine the need for quarantine or if a facilities/vehicle deep cleaning is required.

Contractor employees with suspected/confirmed COVID infection, who have were in one of our facilities in the 48 hours prior to symptom emergence or testing, or who were working in close contact with our employees on a job site, are required to call our COVID-19 hotline at (888) 483-2123. If the contractor does not call, the National Grid supervisor may call to report the contractor out of work and to initiate contact tracing.

Contractors must be cleared to return to National Grid jobsites or workplaces by their employer.

Reporting Process:

- Contractors call our COVID-19 hotline at (888) 483-2123 for screening.
- Nurse Practitioner (NP) screens the contractor to determine National Grid close contacts, or if a National Grid facility or vehicle requires deep cleaning.
- NP obtains employer name and contact email from contractor.
- NP advises contractor to contact their doctor and their employer.
- An email will be sent to National Grid supervisor and the contractor's employer with the start and end date of their quarantine from National Grid property/sites...
- NP will individually notify National Grid close contacts to quarantine for up to 10 days and email National Grid supervisor(s).
- After 10 days have elapsed, the contractor's employer must send an email to NP confirming that the contractor has returned to work o the attention of Mary Brown, NP Mary.Brown2@nationalgrid.com

Contractor's National Grid Supervisor:

If you are calling our COVID-19 hotline at (888) 483-2123 to report a contractor out of work so that we may initiate contact tracing, or a facilities deep cleaning, please be prepared to answer the following questions when speaking with the NP regarding your contractor:

- Contractor's employee name?
- Employer?
- Employer supervisor and email address?
- Last date contractor was on National Grid worksite?
- National Grid employees the contractor has been in close contact with?
- Facilities/vehicle the contractor has been in contact with for deep cleaning required?

Travel Guidance

Travel restrictions have been greatly eased under Federal and State laws. Therefore, National Grid has eliminated the need for pre-approval of travel by the Plan Forward team. Business travel must be reviewed and pre-approved within each business at the director level or higher. Factors to consider are necessity of travel and safety of the trip. Infection rates and safety should be monitored at both the ultimate destination and at any stopover locations, keeping in mind that international travel poses heightened risk. Where possible, virtual/digital solutions are preferable to travel, not only for safety, but also in consideration of costs borne by ratepayers and employee work/life balance.

Some government restrictions on travel still exist. Highlights of existing restrictions have been provided below, however this is not intended to provide full details and travelers must research current guidance at the links provided below.

If you are required to quarantine under any of the following travel restrictions, you must contact our COVID-19 hotline at (888) 483-2123 after traveling for a determination of quarantine period.

Federal

CDC: https://www.cdc.gov/coronavirus/2019-ncov/travelers/index.html

US State Dept: https://travel.state.gov/content/travel/en/traveladvisories/traveladvisories.html

New York

https://coronavirus.health.ny.gov/covid-19-travel-advisory

Massachusetts

https://www.mass.gov/info-details/covid-19-travel-advisory

Rhode Island

https://covid.ri.gov/covid-19-prevention/travel-tofrom-ri

New Hampshire

https://www.covidguidance.nh.gov/out-state-visitors

Reasonable Accommodations

Any employee in need of a special accommodation due to a health concern regarding COVID-19, is asked to speak to a company Nurse Practitioner by calling our COVID-19 hotline at (888) 483-2123. This includes employees with pre-existing accommodations requesting new action due to work at home situations.

According to the CDC's review of currently available information and clinical expertise, certain individuals might be at higher risk for severe illness from COVID-19, including:

Older adults

People of all ages with underlying medical conditions, particularly if not well controlled.

For the current list of conditions, please refer to the CDC site, here.

Please note that while not included in the CDC's list of people at increased risk of serious illness, there are other populations that are encouraged to take extra precautions, such as those nursing or pregnant or those with disabilities. Please access the CDC guidance, here.

At no time should supervisors initiate uninvited discussions with employees regarding perceived health issues.

Employees are encouraged to call our COVID-19 hotline at (888) 483-2123 regarding any COVID-19 related medical conditions or concerns for which they have. The Nurse Practitioner (NP) and employee will engage in private discussions to come to mutual understanding on such topics as the nature of the issue, what accommodation the employee is requesting, what, if any, other alternative accommodations may be effective, and the duration of the accommodation period.

All medical information, such as diagnosis or symptoms, discussed with the NP will be kept strictly confidential. Depending on the nature of the request, the Nurse Practitioner will either inform the employee's supervisor and HR of the need to accommodate or will inquire of same as to the company's ability to provide the accommodation.

The company's normal Reasonable Accommodation process, as outlined in policy SHW-102, will be adapted for accommodations arising out of COVID-19 issues. Depending on the nature of the accommodation requested, requirements for supporting medical documentation may be waived initially, as recommended by CDC and other government agencies, in order to minimize unnecessary visits to healthcare facilities and avoid burdening healthcare workers.

Health and Safety Plan (HASP)

Safety Policy A-116 has been retired because the policies and procedures regarding the safety and wellbeing of employees are covered in this playbook.

Entering Customer Premises

Talking Points – Engage the Customer

Prior to entry, engage the customer. Here are some sample questions and statements

- Has anyone in the premises recently been diagnosed with Covid-19 or been experiencing covid symptoms? If so, has that person been isolated within the premises?
- Do you mind if I follow social distancing practice today?
- Would you mind remaining in another room while I am working so that we can maintain distancing?

If someone in the home is ill, inquire if the job can be rescheduled and if so, notify your supervisor, dispatcher or work coordinator.

General Hygiene Practices

Masking requirements are outlined in a previous page in the SHE section of this playbook but are always required when entering a customer's premise.

Maintain at least 6 feet of distance between yourself and the customer whenever able.

Avoid touching anything in the customers' premises other than equipment related to the job.

Wear disposable latex or nitrile gloves to prevent touching contaminated surfaces. If work gloves are needed, remove and discard disposable gloves. Once the task is complete, remove work gloves and don a new pair of disposable gloves.

Use alcohol based hand sanitizer before and after each premise visit or wash hands using soap and water for 20 seconds.

Entering a Premise Where a Known Covid Case is Present

In addition to the general hygiene listed above the following additional steps may be followed:

When able, ask the customer to open windows or ventilate the space you are working in.

If possible, the infected customer should be asked to stay in a separate room before entering the premise.

The wearing of an N-95 or KN-95 mask is recommended instead of a face covering.

Wellbeing Resources: EAP and Crisis Hotlines

Employee Assistance Program

If you or someone you care about are feeling overwhelmed by emotions of sadness, anxiety or grief, the most important thing to remember is you're not alone. Support is available and effective.

CCA can help by providing free, confidential access to emotional and mental well-being resources, including:

- 24/7 phone access to counselors—with referrals to telephonic or video counseling
- Articles, tips, and self-assessments to help identify signs, symptoms and treatment options for various conditions
- Resources and referrals to support medication management, and self-care for the mind, body, and spirit

1-800-833-8707 (24 hour coverage)
myccaonline.com
Company ID is "NationalGrid"

Hotlines:

National Suicide Prevention Lifeline: 1-800-273-8255

Domestic Violence

National Domestic Violence Hotline: 1 800 799 SAFE (7233)
New York – Domestic Violence Helpline (can text): 1 844 997 2121
Massachusetts Safelink: 1 877 785 2020
Rhode Island Helpline: 1 800 494 8100

Addiction

Employee Assistance Program
1-800-833-8707

NYS HOPEline: 24/7 help with addiction, substance use, and gambling
Call 877-846-7369 | Text HOPENY (467369)

Massachusetts Substance Use Hotline
800-327-5050

Rhode Island Hotline
401-414-5465

Rhode Island Opioid Hotline
401-606-5456

Facilities

Building Technical Readiness Evaluations

Facilities has assessed the state of building equipment, to ensure which systems are fully operational, which are in standby mode, and which are non-operational due to issues that should be addressed priorto re-entry.

Engineering Controls

The Facilities team has implemented OSHA and ASHRAE recommended COVID guidelines and is complying with state mandates by introducing more outside fresh air into the buildings. As a consequence, the building temperatures will be affected which typically means our offices will be warmer than usual in the summer and cooler in the winter months.

Examples of System Assessments:

Critical Infrastructure: Electric Power: Generators, Transformers, Batteries, UPS, ATS, PDU, etc. HVAC: Chillers, Cooling Towers, CRAC Units, Air Handlers, etc.

Safety: Fire Alarm Systems

Other: Lighting, Elevators

Facility and Space Restrictions

At this time, Facilities has re-opened all company areas for use and has resumed daily cleaning and trash removal in these spaces. Building air conditioning and heating is in line with CDC recommendations and increased outside air will be introduced to the space. This might mean your workspace maybe a little cooler or warmer based on outside temperatures.

Any questions regarding access to company assets including furniture are addressed in the Human Resources section of this guidebook.

Common Work Spaces

- Please see cleaning protocols on Pg.13 for details on site cleaning
- Sanitizing wipes or sanitizing spray with paper towels will be available for employees to disinfect the workspaces they use. After use, please return these items back for others to use, they are for use by all employees on the floor. If more are needed, please contact Facilities
- In high traffic areas, situational waiting line markers on the floor indicate where to keep 6-feet of distance. If by chance, there are no line markers please have situational awareness to maintain 6 ft distancing when required. Areas where you will see them will be at elevators, bathrooms, print/copy machines, etc. anywhere queuing may routinely occur
- Employees need to remember to wear face coverings when required, avoid touching their face and wash hands thoroughly with soap and water for at least 20 seconds several times during the work hours to reduce risk and prevent person to person potential infections

Break Rooms & Food Preparations

Employees will be able to use the coffee machines or products (coffee, tea, sugars, stirrers, etc.), if all products are individually wrapped and coffee cups can be used from a dispenser. Shared products are not allowed.

With the following protocols, company refrigerators, freezers and microwaves will be made available for use. Employees should use disinfectant spray and paper towels or disinfectant wipes to clean handles and all touch points every time these appliances are used. It is the responsibility of the user to wipe down the appliances before and after each use.

Facilities will schedule a full cleaning and sanitizing of company refrigerators and freezers at the end of each month. Personal refrigerators, freezers, coolers, etc. are not sanctioned by National Grid and should not be within our buildings and therefore are not part of the monthly cleaning schedule. A cleaning schedule will be posted on each refrigerator. We ask that all employees remove all objects, i.e.: foods, containers, bottles, etc. the night before the scheduled cleaning day so that cleaning crews can access and perform this service. The cleaning crews will not save any foods or objects within the refrigerator. The cleaning crews will be instructed to assume that all contents of the refrigerator / freezer will be considered potentially contaminated and will be thrown out, no exceptions.

If the refrigerator that your department is using does not have a monthly cleanout schedule posted to it,please contact Facilities so they can arrange to have it added to the monthly cleaning schedule. It is entirely possible that Facilities may not be aware of all refrigerators in every building, so please assist us by reaching out.

Bathrooms

Office bathroom cleaning will include day-time intervals to promote clean environment. Bathroom check-in sheets for cleaners will be posted on the back of the door of each bathroom and require the cleaning team to check off the frequency and time cleaned.

The are no restrictions on capacity within bathrooms. Please notify the Facilities team if any parts of the bathroom are off-limits for social distancing reasons.

Locker Rooms & Showers

Facilities in NY and MA will reopen March 1 and those in RI will reopen March 7.

Cafeterias (Full Service)

Cafeterias are currently closed and their opening will be re-evaluated sometime in the future. Cafeteria operations typically require minimum daily participation in order to make the operation profitable for the food management company. They may not be operational until sufficient employee occupancy is obtained over time and when it can be operated in a safe and practical manner. Cafeteria Seating areas will be open.

Grab N Go facilities are being made available at some sites.

Mail Services

If your building has a staffed and operational mail center, mail will continue to be processed and will be available for pickup at the mail center.

- If you are receiving non-business critical mail (magazine subscriptions, newspapers, etc.), redirect these items to your home by contacting the subscription and have the mailing address changed. We ask that you consider changing to a virtual or on-line subscription and reduce the use of paper and waste
- If you do not pick up non-business critical mail, it will be disposed of
- We remind everyone that personal mail and packages (Amazon etc.) should never be sent to the National Grid mail room to handle. That is considered an abuse of National Grid's assets.

Print Services

Print services has changed to an external service provider and can be reached at https://nationalgrid.cgconverge.com

Examples of Print Services available.

- Black & white or full color copies and brochures
- Manuals and binders
- Corporate forms, letterhead & envelopes
- Specialized forms
- Binding
- Laminating

Examples of forms/items that can be ordered.

- Door hanger cards
- Tags
- Labels
- Meter cards
- Expense envelopes
- P-card envelopes

Evacuation Planning

As you return to the office, you may working in areas of the building that you may not be familiar with. Please take the time to walk the space you will be using and become familiar with the evacuation routes and exit doorways around you.

Safety Compliance and Risk Inspections

Facilities has been working very closely with our cleaning company partners to develop enhanced cleaning protocols (see below). The Facilities team has put in a governance model that includes receiving daily reports from the cleaning management company verifying the cleaning has taken place.

In addition, the Facilities team members provide oversight by spot checking locations to ensure protocols are being adhered to.

We encourage all National Grid employees to take safety seriously and to please report to Facilities any issue or concern with respect to cleaning. We promise that we will attend to any safety/cleaning issues swiftly. You can report the issues to 888-483-2123.

Daily Cleaning Protocols

When	Where	How	Who
Day-Time Cleaning	Break Room, Kitchenettes, CafeteriaTables	Spray and Handwipecleaning	Cleaning Company &Employees
	Flex Workstations, PublicConference Room Tables,	Spray and Handwipecleaning	Cleaning Company
	Private Offices, AssignedWorkstations, Private Conference Rooms	Spray and Handwipecleaning	Employees during the day, Cleaners at night ifdoor unlocked or being unused
Evening Cleaning	Lobby Reception Desk,Chairs, tables	Spray and handwipecleaning	Cleaning Company
	Private Offices andPrivate Conference Rooms, Assigned Workstations	Spray and handwipecleaning	Cleaning Company
	Unassigned – Flex workstations	Spray and handwipecleaning	Cleaning Company
	Bathrooms	Spray and handwipe cleaning	Cleaning Company
	Locker rooms and Showers	Spray and handwipe cleaning	Cleaning Company
	Pantry, Kitchenette	Spray and handwipe cleaning	Cleaning Company
	Refrigerators & Microwaves	Throw out contents and Spray and handwipe cleaning	Cleaning Company
	Cafeteria Kitchen and Serving Area	Spray and handwipe cleaning	Cafeteria Employees
	Cafeteria, Pantry, Kitchenette seating area	Spray and handwipe cleaning	Cleaning Company

	Trash Removal		Cleaning Company
Reactive Cleaning when Directed by Health Services	Office Space	CDC recommended cleaning (Disinfectant)	Cleaning Company
Proactive Cleaning	Office Space	Electrostatic cleaning using disinfectant and Goldshield	Cleaning Company

Waste and Trash Removal Safety

We are all expected to wear PPE properly and there may be occasions to dispose of worn masks, gloves, etc. When doing do, please do not throw these items on the ground in the parking lots, or on the floor. Dispose of them properly in the trash. Remember, you are putting someone else at risk when you disregard these used items inappropriately.

High Touch Protocols

High touch areas – defined as interior **common spaces** where employees gather or enter/exit the buildings. High-touch cleaning has ended as of April 4, 2022.

- **Breakrooms/Kitchenettes** – These areas are open. High touch areas will be cleaned, such as faucet handles, refrigerator door handles and door edges (where used to open door), microwave oven handles and touchpad buttons, vending snack machines.
- **Restrooms** – Door panels, stall doors, faucet handles, soap dispensers, entrance door handles
- **Elevator buttons** – Both inside the elevator and outside call buttons
- **Meeting Rooms** – Doors, light switches
- **Staircase** – Handrails, entrance/exit doorknobs
- **Locker Room** – Doors and handles
- **Shower Rooms** – Doors and handles, On/off knobs
- **Exterior doors** – Door panels and doorknobs
- **Entrance/Exit Turnstiles** – CARD reader and turnstile bar
- **Main Lobbies** – Flat surfaces at reception, pens that people use to sign in, visitor seating (chair arms).
- **Security Booth/Office** – Flat surfaces where people sign for badges and/or any electronic sign-in surfaces
- **Cafes and dining areas** – Doors and handles. Employees should clean their own table-tops after use
- **Doors** – (if they are not auto-opening) flat surfaces where hands frequently push/pull
- **Fitness Centers** – Doors and handles. Employees should clean gym equipment after use

- **Mail Rooms** – Doors, and high touch equipment
- **Mail stations** – File cabinet handle
- **Mobile or free address desks** – Flat surface, chair arms, any electronics (keyboard and mouse)
- **Printers – Common area printers** – printer controls, handles. Use caution to not have free liquid on controls
- **Dedicated Workstations, Meeting Rooms and Offices** – Afterhours cleaning – Must be unlocked to access – table and chair surfaces

Reactive Cleaning

Corona Virus COVID-19 – Deep Cleaning and Disinfection

COVID-19 "deep-cleaning" is triggered when the Health Services department determines that COVID-19 is either suspected for confirmed in the space within CDC timeframes. The scope and size of the deep cleaning is also determined by the Health Services team though their investigative discussions with the person reporting the concern. Deep cleaning will be performed as soon after Health Services notifies Facilities Services.

The Facilities team in advance does the following:

1. Identify an approved external company that should carry out the deep cleaning activity, this company must have the minimum requirements of:
    - Trained personnel to execute the process of cleaning and disinfection
    - Proper equipment and PPE to perform the task
    - All necessary procedures and local authorizations or permit to perform disinfection services and manage any wastes generated.
    - Use of CDC and OSHA approved COVID-19 disinfectant chemicals to perform this activity

Note: For the company's purpose, deep cleaning is defined as a more comprehensive cleaning with the option of using advanced technologies and more aggressive cleaning solutions that are administered by an external 3rd party if required.

2. Personal Protective equipment (PPE) requirements for the Deep Cleaning team:
    - The use of PPE is to be determined by the cleaning contractor and CDC recommendation based on the chemicals used to conduct the disinfecting process including proper wearing, storage, cleaning, decontamination and disposal of PPE as biohazard waste
3. Disposal
    - At the end of the process, the Cleaning company will follow the local regulations to dispose all the PPE and cleaning material used in the proper manner

Aviation Hangar and Operations

Please see appendix for more information. Passenger aviation operations have been suspended as of August, 2021.

Disinfecting Protocols

Hand Cleaning and Disinfection Process:

STEP 1

Detail hand-wipe-cleaning and disinfecting surfaces by using simple cleaning product (soap/water) or similar product. Surfaces cleaned will include, but not limited to cleared cubical work station surfaces, desk tops, conference room tables, file cabinets, chairs, work area countertops and cabinet door handles and surfaces, café area tables, chairs, countertops, cabinet handles and surfaces, appliance exteriors, doors handles and push plates, switches, restroom fixtures and partitions, flush handles, showers, dispensers, stairwell railings, elevator call panels, conference room and common area phone handsets, etc.

STEP 2

Wait until the surface is completely dry.

STEP 3

Areas noted above (in Step 1) will apply CDC approved disinfectant.

Pandemic Inventory Supply

nationalgrid

Pandemic Inventory Supply

This section describes the types of pandemic inventory supplies which you will be provided access to and will be required to use on a day to day basis. In this section we reinforce when and where different PPE and sanitization supplies are needed as well as the supplies which will be made available to you. Instructions for how to pick up your pandemic supplies, who to contact and how to escalate is also included.

PPE & Disinfectant Supplies:

- PPE & Disinfectant supplies will be available through your field supervisor & at office central distribution points where established. Additional supplies for locations not covered with distribution points can be ordered through the allocation process by contacting Jared Bechard.
- Required PPE is to be worn all the times while on the job
- NG will ensure adequate stock of PPE/disinfectant inventory is available for all employees required to be in the office/field.

Required Personal Pandemic Inventory by Job Type & Location

The required pandemic supplies for job type and location may differ slightly between roles and work locations. Those details are depicted below in table 1.1.

Table 1.1

PPE/Supplies	CMS: Customer Homes*	All Field: In Public*	Crew Yards, Ready Rooms, etc.*	Critical: LNG, Generation, Control Rooms*	Office facilities*	Training Centers*
Face Covers (Reusable or disposable)	x	x	x	x	x	x
N-95 Face Covers**	x					
Face Shields**	x					
Gloves**	x					
Hand Sanitizer/Soap & Water	x	x	x	x	x	x
Surface Sanitizer	x	x	x	x	x	x

**Required PPE for NG employees unless otherwise noted by state or federal guidelines.*

*** N-95 face covers, Face shield and gloves are only required when entering a home where there is a suspected COVID-19 case. Where N-95 face coverings are mandated, training will be provided in accordance with OSHA guidelines.*

Required Pandemic Inventory Specifications & Quantities

The pandemic supplies we provide must meet certain specifications to ensure they protect our employees. Though it is important to note that the available inventory could differ from time to time as these supplies are in high demand around the world. NG will always ensure that you have the required supplies to work safely however you will see there are several interchangeable solutions when it comes to face covers, hand sanitizer, and surface sanitizer. **At least one of the interchangeable solutions will always be available to you, but which one may differ over time.**

Table 1.2

PPE/Supplies	Options & Required Specifications	Minimum Quantity per person
Face Covers	Reusable Face Covers – multi layered recommended. Launder daily.	2 per month
	Disposable Face Covers – multi layered recommended.	1 per day = 5-7 per week
KN/N-95 Respirators	KN-95* or N-95 both meet COVID filtration requirements. 95% filtration or greater.	As needed to perform specific job tasks.
Face Shields	FR & arc flash rated face shields.	As needed to perform specific job tasks.
Gloves	Nitrile gloves preferred. Come in S, M, L & XL.	As needed to perform specific job tasks.
Hand Sanitizer/Soap & Water	Hand Soap & Water	As needed
	Personal Hand Sanitizer – minimum alcohol content of 60%	1 per week
	Dual Use Disinfectant Spray – 70% alcohol minimum	1 for 2 ppl per week
Surface Sanitizer	Dual Use Disinfectant Spray – 70% alcohol minimum	1 for 2 ppl per week
	Surface Sanitizers** – Any EPA registered household disinfectant for use against the virus that causes COVID-19	1 for 2 ppl per week
	Sanitization Wipes** – Any EPA registered household disinfectant for use against the virus that causes COVID-19	1 for 2 ppl per week

**KN-95 masks meet filtration requirements for COVID-19 but are not interchangeable for standard jobs where N-95 face covers are a requirement (ie. Welding).*

***Link to EPA-registered disinfectants*

How to Get PPE

Employees must have the required supplies as described in table 1.1 and 1.2.

General Use Pandemic Supplies

General use pandemic supplies include all the supplies required for day to day work by most employees and will be available to all at ~140 distribution points around NG and all operational crew locations. A full list of all distribution points, pick up hours and POC details can be found on the Plan Forward Grid:Home page under "How to get your PPE…" (link to plan forward GridHome page). Supplies at any of the listed locations will be made available to all NG employees regardless of Business Unit or Function.

- Pandemic items carried at all locations include: Disposable Masks, Reusable Mask, Dual Use Personal Hand/Surface Disinfectant & Nitrile Gloves.

- When an individual visits the distribution point we ask that they stick to the below pick up quantities to ensure an adequate supply remains available to others. Please note that there will also be sanitization and hand washing stations scattered throughout the buildings for public use. These distribution point supplies are intended for personal use.

General Use Pandemic Supplies	Quantity Available Per Person
Re-usable Face Covers	2 per month
Disposable Face Covers	5 per week
Dual Use Personal Hand/Surface Disinfectant	1 per week
Nitrile Gloves	1 box for 2 months

Specialty Pandemic Supplies

These items are only required for certain roles or tasks and include items like Fire Rated (FR) face covers and Gaiters. These items can be ordered via shopping cart or can be picked up at one of the crew stockroom distribution points (if/when available).

- Standard procedures for ordering must be followed to guarantee delivery and can be found on the Plan Forward Grid:Home page under "How to get your PPE…" (link to plan forward GridHome page).

- Shopping cart Items should be ordered in one-month quantities.

- Shopping carts are monitored to control usage and to ensure supplies are utilized properly.

Human Resources

Contact List

Benefit/Payroll Issues - Contact Employee Services – 888-483-2123

Labor Relations Issues - Contact your Local Steward or Labor Relations Manager

Management Employee Issues - Contact your HR Business Partner

Employee Assistance Program (CCA)

Link to FAQs -

http://infonet2/Pages/Coronavirus_US.aspx

HR Policies and Guidance

Vacation Carry-over

There was no vacation carry-over option from 2021 to 2022.

Work from Home Guidance

All offices have now been re-opened and are available for use by individuals and teams. People leaders should communicate clearly with their employees as to their timelines and expectations for the implementation of hybrid working. Hybrid working guidance is described in the Hybrid Working Policy (a US HR Policy for management employees):

- Refer to the Hybrid Working Policy for information on flexible working, home office guidelines, and ergonomics. https://gridhome.nationalgrid.com/documents/sppreview/f3d672d0-bbad-4ec0-908c-bd32d1705b65 [added the new to link here]

Sick-In-Family Policy -

Effective June 1, 2020 and continuing through the later of December 31, 2022, Sickness In Family leave for management now includes time off for COVID related caregiving needs. Employees can use up to 56 hours* to care for their dependents if they are sick, need to attend doctor appointments or for caregiving needs. http://infonet2/OurOrganisation/USHumanResources/Documents/Sickness%20in%20Family%20Leave%20Policy%20for%20Management%20Employees%20-COVID19.pdf

Travel Policy

Refer to Travel Guidance protocols located in the SHE section and in the linked document below.

http://infodocs/USHumanResources/HRPolicies/US_Business_Travel_Policy_2019-04-01.pdf

Multi State Tax Reporting Policy

- For employees living in one state but generally report to another state please consult with your tax professional for guidance.

https://gridhome.nationalgrid.com/documents/sppreview/8f614223-7e0f-44f0-a4bc-ddf4c18b4629

Emergency Response Guidelines, Storm Assignments

National Grid has established Electric and Gas Emergency Response Plans (ERP) for the purpose of preparing for and responding to operational disruptions to our electric and gas services, such as storms or major equipment failure. To this end, managing disruptions of electric and or gas service to our customers is a core expectations of our teams under any circumstance including alternate work modes in the context of the COVID Pandemic response. Employees are reminded that:

- During a disruption of service (example: major storm or gas event) employees with an emergency response assignment will be activated to fulfill their assigned role.
- Notification of activation will be sent to employees through various methods that can include electronic notification such as through SendWordNow, text, email, phone call or personal contact
- All employees are expected to respond to the notification and report for duty at the assigned time and location (or an agreed upon alternate time/location)
- Any employee who is unable to accept their emergency response assignment when activated must immediately notify their direct blue-sky supervisor/manager to inform them that they will not be reporting for duty
- Failure to report for an emergency response assignment shall be considered the same as not reporting for work

Employees who anticipate having trouble fulfilling their emergency response assignment responsibilities should proactively contact their direct blue-sky supervisor/manager as soon as possible (i.e.: prior to/before any actual or anticipated emergency event) and discuss an alternate or modified emergency role.

Ethics Department Guidance

If you observe misconduct, behaviors that are not in line with our Code of Ethics or values or something that doesn't seem right, you should voice your concerns. Equally, if we are in the wrong, or if we made a mistake, we should speak up about it. Following the guidelines in our Code of Ethics is critical as we move through these unique times.

If you raise a concern, this includes concerns regarding COVID safety compliance, please note that the Company takes each and every concern seriously. Remember, as part of the company's investigation process, all allegations of misconduct and subsequent information regarding the review process remains confidential. The Company also prohibits retaliation of any kind.

As always, we should take the opportunity to first raise our concern with our Supervisor/Manager. Alternatively, the Ethics and Compliance Team is always available to discuss your concerns, answer your questions or provide guidance. We continue to offer an internal helpline as well as a 24-hour confidential Alertline staffed by an independent company to provide for anonymous reporting if desired.

Ethics Reporting Channels

US Ethics Team Direct Contact Information:

Thomas Clark (interim)	929-324-5064
Kellie Knickerbocker	315-428-6604
Internal Helpline:	1-888-867-6759
	Businessconduct@nationalgrid.com
Alertline(*):	1-800-465-0121
	https://nationalgrid.alertline.com/gcs/welcome

** Staffed by a third party for anonymous reporting*

https://gridhome.nationalgrid.com/sites/ethics-compliance-and-risk-us/SitePageModern/87739/us-ethics

Labor Relations

The Unions that represent National Grid's employees have been working diligently with the Company to adapt to the risks associated with the COVID Pandemic and to ensure, as best we can, the health and safety of their members.

The Company understands and will continue to abide by all of our Labor Agreements. While some pauses may have been taken in some of our Labor Relations related procedures due to health and safety protocols (grievance procedure, investigatory procedures, disciplinary procedures for example) all are still in effect and operating in compliance to our Collective Bargaining Agreements.

Please contact your LR Manager and/or Union Steward/Delegate if there are any questions.

US academy: Guidance for delivering technical training during COVID-19

Basic Infection Prevention Measures to be practiced at all Academy Learning Centers

Support from Facilities/Materials Management

- Implement cleaning protocols to conduct cleaning of all the touchpoints including door handles, doors, light switches, electronics, etc. along with normal nighttime cleaning and sterilization.
- Ensure bathrooms are stocked with soap and paper towels or air dry to wash hands. Post handwashing signs in the restrooms.

Internal Academy Guidelines

- Local PPE coordinator to supply instructors and students with necessary PPE (face masks, face shields, gloves, sanitizing wipes, hand sanitizer, etc.)

All instructors shall implement good hygiene and infection control practices; including the following:

Classrooms/Labs

- Consider strategies to minimize face-to-face contact
- Maintain regular housekeeping practices, including routine cleaning and disinfecting of surfaces, equipment, and other elements of the classroom environment
- Make personal hygiene resources available: provide tissues, no-touch trash cans, hand soap, alcohol-based hand rubs containing at least 60 percent alcohol, disinfectants, and disposable towels for workers to clean their work surfaces
- Have facemasks available as needed by the students.

Additional Responsibilities

- Keep a log of each person's name. This could potentially be used for "contact tracing" if an employee is determined to be infected in order limit any further spread
- Watch for symptoms – People with COVID-19 have had a wide range of symptoms reported – ranging from mild symptoms to severe illness. Symptoms may appear 2-14 days after exposure to the virus. People with these symptoms or combinations of symptoms may have COVID-19:
    - Fever or chills
    - Cough, shortness of breath or difficulty breathing
    - Fatigue, muscle aches, body aches, headache
    - New loss of taste or smell
    - Sore throat, congestion or runny nose
    - Nausea, vomiting or diarrhea

Academy-Delivered Technical Training Policy

- Remind students of the policy to stay home if they are sick and notify their respective Supervisor
- Review the symptoms of COVID-19 with the class; reference above information
- Remind student to avoid touching their mouth, eyes and nose with their hands
- Promote frequent and thorough hand washing with either soap and water or alcohol-based hand rubs containing at least 60% alcohol. Workers should always wash hands when they are visibly dirty and after removing any PPE
- Encourage respiratory etiquette, including covering coughs and sneezes
- Discourage workers from using other workers' phones, tables or other work tools and equipment
- Inform and encourage employees to self-monitor for signs and symptoms of COVID-19 if they suspect possible exposure
- Demonstrate and enforce the use of protecting clothing and equipment: how to put it on, use/wear it, and take it off correctly
    - Properly fitted and periodically refitted, as applicable (e.g., respirators)
    - Consistently and properly worn when required
    - Regularly inspected, maintained, and replaced, as necessary

    - Properly removed, cleaned, and stored or disposed of, as applicable, to avoid contamination of self, others, or the environment
- Ensure any personal face covering does not have loose ends or strings which may pose an added hazard based on the task being performed. The use of facemasks or face coverings is encouraged but not required indoors.
- Direct students to wipe down equipment before and after each use utilizing disinfecting wipes/disinfectant sanitizer cleaner

Additional Information

Prompt Identification and Isolate Sick People – Prompt identification and isolation of potentially infectious individuals is a critical step in protecting workers and others at a Learning Center.

- Follow the corporate policies to report when you are sick, are experiencing symptoms or caring for someone in your household with COVID-19 or suspected of having the virus.
- Immediately isolate people who have signs and/or symptoms of COVID-19. Move potentially infectious people to a location away from workers and others. Although most worksites do not have specific isolation rooms, designated areas with closable doors may serve as isolation rooms until potentially sick people can be removed from the worksite
- Take steps to limit spread of the respiratory secretions of a person who may have COVID-19. Provide a face mask, if feasible and available, and ask the person to wear it, if tolerated. The face mask acts to contain potentially infectious respiratory secretions at the source (i.e., the person's nose and mouth)
- Restrict the number of personnel entering isolation areas
- Protect workers in close contact with (i.e., within 6 feet for 15 minutes or more (10 in NY) cumulatively over a 24 hour period, in the past 48 hours of) a sick person or who have prolonged/repeated contact with such persons by using additional engineering and administrative controls, safe work practices, and PPE
- Arrange for the sick individual to be removed and contact Health and Wellbeing to trigger contact tracing and facilities deep cleaning procedures.

Employee Training

Return to Work Training Plans

Employees are no longer required to complete Return-to-Work training plans.

IT Team

Contacts

The IT Service Desk is available 24/7 and can be reached at 1-877-373-1112. Please refer to **How to Get IT Help** later in this section for information on additional ways to get IT support.

Transition to National Grid work locations

In most cases, the transition from working remotely to a National Grid office or field site will involve taking a laptop device back to the location and connecting to the network either through the docking station or the wireless network. **Please note, the IT Department will not be replacing peripherals taken home such as docking stations, keyboards, and monitors.** IT support will be provided as described in the support section below.

As groups return to the office, IT will assist them in assessing the need for any special technology or support, based on operational needs.

Testing and monitoring of application performance, networks and Wi-Fi connectivity will be conducted for each location.

How to Get IT Help

IT technicians will directly support larger locations as operational needs dictate. Listed below are the resources in place for employees to receive the help they need:

1. IT ServiceDesk – you can call the service desk 24/7 at 1-877-373-1112
2. IT Portal – you can raise an incident for help or a service request online. The IT Portal is accessible via either clicking on the icon on your laptop desktop screen or by the following link **IT Portal**
3. Chat – You can live chat online with IT staff via the IT Portal, just use the above link or shortcut and select the icon to begin your session
4. The US Virtual **Techb@r** – our knowledgeable technicians are available Monday-Friday, 7:00 am – 5:00 pm EDT. Users can schedule an appointment online for help with all National Grid mobile devices, laptops, IT systems, and services

Tip: Before making a techb@r appointment, check the self-help library on the **IT Portal** to see if your issue can be resolved there. This can save you time as our self-service portal offers support and guidance for the IT tools and technology you use every day. And if you haven't yet, join one of our newest Yammer groups – collaborate with colleagues about remote working technology and even crowdsource an idea or solution!

Working From Home – Let's Stay Connected!

Zscaler – New Remote Access Solution

Tips For Working Remotely

The ability to work remotely has been scaled to support any number of National Grid employees. This capability will remain in place to provide maximum operational flexibility to the organization.

To ensure a successful remote work experience, Multi-Factor Authentication (MFA) will enable you to access certain files and applications (such as O365 applications) when working away from the NG network and is required for using Zscaler, one of our remote access methods described below.

- Check that you have registered and have set up MFA. If not already registered, you will need to register on the NG network. Follow this **quick guide** to register and set up.
- Make sure your authentication method is working – e.g. if you have the "text code" feature enabled, make sure it is your correct phone number. The easiest way to authenticate is via the Microsoft Authenticator app.

There are three ways to work remotely:

5. **MFA** – When you are registered for Multi-Factor Authentication (MFA), you can access Office 365 (Outlook, OneDrive, SharePoint), WebEx and Skype. Visit https://portal.office.com to access your Office 365 applications from any location.
6. **Zscaler** – With Zscaler, our new remote access solution, you can access additional network applications such as MyHub, MySAP, and the IT Portal.

RSA VPN (Network Connect) – The existing RSA VPN service which relies on a token to authenticate remains in place at this time. IT has asked all Network Connect VPN token holders to consider switching to Zscaler, and donating their token to help an employee whose work prevents them from using Zscaler at this time.

Security

nationalgrid

Contact List: Physical Security

To report suspicious activity or security incidents, please call the Security Control Center at 508-421-7970 or email Security@nationalgrid.com

Contact List – Cyber Security

To report suspicious emails, content or incidents call 781-907-3745 or email cyberresponse@nationalgrid.com

Visitor Restrictions

- Visitors to NYC offices must provide proof that they are in compliance with the NYC vaccine mandate.
- Visitors are allowed in all facilities. All visitors must complete daily symptoms check. It is the responsibility of the escort to make sure this is complete.
- Where business-critical, in-person, un-badged contractors must enter a facility to allow equipment or facilities to remain operational they must be escorted in accordance with Security's Access Control Policy http://infodocs/Security/2014-US-Policy/NGSP%204%20Access%20Control%20Policy.pdf
- Delivery personnel will not be required to complete daily symptom checks but must wear a face covering and practice social distancing.

Suspicious Activity

Remember – As employees of National Grid you are our eyes and ears, therefore, if you **See Something, Say Something!** Report suspicious activity to the Security Control Center at Security@nationalgrid.com, or by calling the Emergency Number on the back of your National Grid Identification Badge.

Global Acceptable Use of Devices

Please remember to follow our Acceptable Use of Devices Policy. This policy details the requirements for acceptable use of National Grid devices and for acceptable use of personal devices using the National Grid Wi-Fi or where they are used for work purposes. Acceptable use of devices is a core element of our security management framework designed to protect our assets: our people, operational and non-operational sites, equipment, information systems and data. http://infodocs/DRS/Policies/Acceptable%20Use.pdf

Security Knowledge Zone

Good security relies on us all acting responsibly and doing the right thing every day. The Security Knowledge Zone aims to give all our people an overview of the security threats National Grid faces and a clear understanding of what is required of them. Together we can help protect each other and keep National Grid secure. http://infonet2/OurOrganisation/IS/DRS/SecurityZone/Pages/default.aspx?mid=4

Personal Safety/Security

In general people may become concerned, frustrated, or frightened when faced with sudden change to their routine and/or surroundings. People who are normally level headed may quickly become agitated & hostile.

If confronted by an agitated, hostile or disgruntled person, whether the threat comes from a single hostile person or a group of agitated bystanders beginning to gather, remain focused on safety at all times.
If you feel threatened in anyway, remove yourself from the situation. Your safety is the most important thing to consider.

Recognize the body language of hostility:

Eyes	Staring at you, glaring, head is forward of the shoulders. It may look like the person is leaning in towards you.
Breathing	Anxiety increases blood supply, causing an increase in heart rate and breathing.
Body	Shaking, rocking, swaying.

If you see any of these signs, try to take a few steps back to create space.

Always be aware of your surroundings especially in high crime areas:

- Be on the lookout for signs of gangs and/or drug activity
- Answer questions & speak in a sympathetic manner

If the person perceives you are "just doing your job," you may be able to avoid a potentially dangerous confrontation.

Keep your tone moderate, accept differences of opinion & always maintain professionalism:

- Remain calm & professional, don't argue
- People will copy your decibel level
- If you talk loudly, they'll reply loudly
- If you talk softly, they'll lower their voice

If you feel at risk, make every effort to remove yourself from the situation as quickly as possible:

- Notify the Supervisor. You can always come back later with assistance
- If you can, safely call the police, dial 911. Report the address, any physical descriptions & exact words spoken

If detained against your will, and in the presence of the person, use duress code 100 – Your ID# – 100 with your supervisor or dispatcher to request help without alerting the person. Even if you can only say code 100 once, do so. Say anything you can!

If a crew member is assaulted by an unknown individual or feels threatened, call 911, a supervisor, and the Security Control Center (508-421-7970).

Fleet Services

Maintenance

Fleet Services team of professionals are committed to providing full repair and maintenance services and PM inspections to internal clients and enabling them to serve gas and electric customers. The purpose of this plan is to assure everyone's health, safety, and wellbeing is protected to the fullest extent practical when interacting with Fleet employees. Fleet technicians will perform all repairs and comply with all inspection protocols as needed. Fleet expects cooperation by all vehicle users to fulfill all social distancing and PPE guidance as well as making vehicles available for repair.

Fleet Services will follow all guidance listed in the ***Safe Work Guidebook*** offers the additional items below for unique items associated with fleet.

- Safety protocols must be complied with for all individuals on National Grid property

Fleet Services shops and facilities

- We are seeking to minimize face-to-face contact with those outside our department focusing on social distancing
    - To help with this, we are making alternate arrangements to submit truck repair tickets and complaints on a site by site basis. Please follow local guidance protocol
- Driving vehicles in/out of fleet shops will *only* be at the direction of fleet services

Fleet Services Visitors

- Entrance to fleet workspace is for fleet employees only

All others must

- Be escorted or approved by fleet services to enter our space
- All parts delivery drivers are required to call and make drop off arrangements prior to coming on site

Fleet Services vehicle practices

- Fleet services current cleaning and sanitizing practice
    - Prior to touching/entering/operating vehicles and/or equipment Fleet sprays and wipes all touch points and body contact points with disinfecting solution
    - Upon exiting after operating/completing work, Fleet wipes all touch points and body contact points with disinfecting solution
- Fleet mobile service trucks
    - From time to time we must perform repairs on the road and/or at other remote company sites. In addition to our practices and PPE, we will observe all remote site requirements while performing mobile repairs
    - When called for road calls, we will observe all PPE and social distance guidance. We expect all others to do the same
    - When we are called for road service, sometimes we must bring other company employees with us. In these circumstances, the other employees are expected to use all social

distancing and PPE protocols stated. We will bring additional PPE for other company employees to utilize before they permitted to enter the cab of our truck.

Additional Information

1. We **strongly recommend** users sanitize their way into their company provided vehicle on a daily basis (or more frequently if various people enter the cab). We require:
   - Follow all company PPE requirements and CDC guidance
   - Prior to touching/entering/operating vehicles and/or equipment spray and wipe all touch points and body contact points with disinfecting solution
   - Wipe all touch points and body contact points with disinfecting solution upon exiting vehicle after operating/completing work (see “safeguarding your vehicle” in the SHE: Health & Safety section)
2. Fleet Services and Property Services:
   - Fleet Services coordinate with Property Services to relocate vehicles requiring sanitization away from private property and back to company location. All sanitization is to take place at company location
3. Visitors:
   - Have truck parts delivery drivers call ahead and make arrangements to drop off parts. We have arranged for outside secure/weathertight areas for delivery. And for large items we are coordinating our forklift with the delivery driver schedule

Finance

For questions related to timekeeping, please contact Employee Services using: 888-483-2123.

Appendix

Site Specific Requirements

For certain sites, there are specific requirements. See below the list for each respective site

New Hampshire

Conforming Audit Card

Shift:	Card #

Inspection Area:

General Disinfection Measures

1. Did the cleaning crew/employees receive training about the disinfection method and frequency?
2. Was hospital grade disinfectant or fresh 10% chlorine bleach solution (sodium hypochlorite solution) used as appropriate?
3. Did the team conduct a comprehensive cleaning in all work cell common surfaces (control buttons, tools conveyors, trays, containers, forklifts, machines)?
4. Did the team conduct a comprehensive cleaning in all offices, desk and conference rooms (cabinets, desk, table and chair surface)?
5. Did the team conduct a comprehensive cleaning in all general objects often used or touched (doors, windows, handles, faucets, sinks, bathrooms)?
6. Did the team conduct a comprehensive cleaning in cafeteria/canteen (tables, chair surfaces, dispensers, vending machines, etc.)?
7. Did the team conduct a comprehensive cleaning in all common surfaces of personnel buses (Seat surfaces, rails, belts, door, windows, floor)?
8. Did the team conduct a comprehensive cleaning in floors, walls and multiuse areas (tables, chair surfaces, dispensers, vending machines, etc.)?

2nd Layer Audit	3rd Layer Audit
Audit of the above performed by a higher-level manager.	Audit of Layer 2 by EHS or a higher-level manager.
9. Were non-conformities raised? Y/N	12. Were all non-conformities closed? Y/N
10. If yes, were they actioned?	13. If no, please provide reasons:
11. If no, please provide reasons:	

Business Travel Guide

See SHE: Health and Safety section for additional details

General Recommendations

CDC recommends delaying travel until you are fully vaccinated. The below tips are provided as a resource to help make your trip safer.

- If travel by plane is necessary, same day travel is recommended;
- Review infection rates and rules at destination;
- Goal is to touch the least number of surfaces as possible (bring your own pen with you) and only travel to the required destinations (no sightseeing);
- Handshaking is not advised;
- Stay away from any large meetings/gatherings of 10 or more people and maintain social distance;
- No dining out or receptions (room service, drive-throughs, take out or curbside delivery)

Air

- Window seat is safest
- If possible, remain seated for the entire flight. Avoid airplane restroom, if possible. If a trip to the restroom is necessary inflight, do not congregate near the restroom door;
- Required PPE would be face covering worn for the duration of the flight, sanitizing wipes, eye protection and hand sanitizer (TSA is allowing one 12 oz bottle);
- Carry-on should be stored under the seat (to avoid touching the overhead bins);
- Prior to sitting, wipe down all touchpoints: seatbelt, tray table, armrests, window screen and overhead controls;
- Do not eat or drink, if possible (bring your own, if needed);
- Deplane last to avoid aisle congestion after landing, if possible (otherwise, follow instructions of airline)

Car

- Rental cars should be used rather than ride-sharing (Uber, etc);
- Use of the "skip the counter" service recommended;
- If traveling with a coworker and sharing a car, use of face coverings and no front seat passenger to maintain social distance and drive with the windows open

Hotel

- Use options for online check-in, mobile room key, and contactless payment;
- Use a face covering in the lobby or any other common areas (hallways, etc.);
- Upon arrival to the hotel room, wipe down all frequently touched surfaces with sanitizing wipes (ie. door knobs, light switches, TV remote, bathroom faucets, toilet handle)
- Use stairs, if possible, to avoid the elevator

Holistic Approach to Re-Entering the Workplace

Prepare your workspace and your people to safely and efficiently resume operations

Building and office operations
- Building technical readiness evaluations
- Safety, compliance and risk inspections
- WELL strategy & implementation plan
- Energy cost control
- Facility mothballing
- Engineering continuity planning
- Remote monitoring of dark buildings
- JiLL - AI-based digital assistant

Employee & visitor screening
- Visitor screening services
- Temperature screening

Employee health and wellness
- Wellbeing toolkit
- Experience ambassadors
- Mobility ambassadors

Janitorial
- Preventative, reactive, and decontamination cleaning
- Enhanced standards

Food and beverage
- Food service optimization

Mail services
- Amended mail service
- Digital mail lockers

Space guidelines and adjustments
- Occupancy (re) entry guidelines & policies
- Social distancing strategy and enablement
- Foot traffic management and wayfinding
- Attendance monitoring & self-reporting
- Meeting and collaboration space management
- Progressive workstyle support
- Project delivery services
- Flexible space risk advisory

Guide to COVID-19 Safety for Barns and Trucks

Prepare your workspace to safely and efficiently resume operations

Follow Social Distancing Protocols
- Staying 6 feet away from others as a normal practice
- Eliminating contact with others, such as handshakes
- Applies to:
  - Yard meetings
  - Locker rooms
  - Garages
  - Parking lots
  - Conference/meeting rooms
  - Elevators
  - Bathrooms
  - Pantries
  - Hallways & Common Areas
  - Entrances / Exits
  - Offices

Garages and Docks / Shipping
- Driving vehicles in/out of fleet shops will only be at the direction of fleet services.
- Preventative, reactive, and decontamination cleaning with enhanced standards
- Ensuring delivery personnel adhere to protocols

Fleet Management
- Enhanced cleaning as part of shift rotations and maintenance procedures

Garbage/ Waste Management
- Ensuring service personnel adhere to protocols

Crew Locker Rooms & Showers
- Defined capacity listed and
- Any demand in excess of capacity will be required to queue
- If employees need to clean out lockers
  - schedules to be created to access space, retrieve belongings

Areas with High Touch Protocols
- Cleaning with enhanced standards
  - Preventative, reactive, decontamination
- Includes:
  - Breakrooms
  - Restrooms
  - Elevators
  - Doors / Entries
  - Security Booth / Office
  - Mail Rooms / Stations
  - Printers
  - Workstations

Inventory Area
- Controlled occupancy / access protocols
- Cleaning with enhanced standards
  - Preventative, reactive, decontamination

Work and Break Areas
- Break rooms will not provide or permit:
  - Sharing of resources for food preparation and storage
- Employees who come into the offices will not be able to use:
  - Refrigerators, coffee machines or products, toasters, etc.
- Employees must wipe down equipment after use

Site Listing

Property Name/Site	Building Name	Address	City	St	Zip Code
AMESBURY	AMESBURY OPERATIONS CENTER	7 North Hunt Road	Amesbury	MA	01913
BEVERLY – ELECTRIC	BEVERLY ELECTRIC MAIN BUILDING	44 River Street	Beverly	MA	01915
EVERETT	EVERETT OPERATIONS CENTER (TRAILER)	Rover & Robins Road	Everett	MA	02149
HAVERHILL	HAVERHILL MAIN BUILDING	185 Water Street	Haverhill	MA	01832
LOWELL	LOWELL MAINTENANCE BLDG	775 Dutton Street	Lowell	MA	01854
MALDEN – COMMERCIAL ST	MALDEN OPERATIONS CENTER – COMMERCIAL ST	100 Commercial Street	Malden	MA	02148
MALDEN – MEDFORD ST	MALDEN MEDFORD ST MAIN BUILDING	170 Medford Street	Malden	MA	02148
METHUEN	METHUEN MAIN BUILDING	15 Pelham Avenue	Methuen	MA	01844
NORTH ANDOVER	NORTH ANDOVER MAIN BUILDING	1101 Turnpike Street	North Andover	MA	01845
TEWKSBURY	TEWKSBURY MAIN BUILDING	Dock Street	Tewksbury	MA	01876
WILMINGTON	WILMINGTON STOREROOM	326 Ballardvale Street	Wilmington	MA	01887
BOURNE	BOURNE CATAUMET LOCATION	997 County Road	Bourne	MA	02532
BRAINTREE	BRAINTREE OPERATIONS CENTER	39 Quincy Avenue	Braintree	MA	02184
BROCKTON – ASHLAND ST	BROCKTON ASHLAND ST BUILDING	100 East Ashland Street	Brockton	MA	02302
BROCKTON – MULBERRY ST	BROCKTON MULBERRY ST BUILDING	161 Mulberry Street	Brockton	MA	02302
DORCESTER – FREEPORT ST	DORCESTER FREEPORT BUILDING	90 Freeport Street	Dorchester	MA	02125
DORCHESTER – VICTORY RD	DORCHESTER LNG LOCATION	220 Victory Road	Dorchester	MA	02122
HANOVER	HANOVER MAIN BUILDING	19 Philips Lane	Hanover	MA	02339
NANTUCKET	NANTUCKET MAIN BUILDING	32 Bunker Road	Nantucket	MA	02554

Property Name/Site	Building Name	Address	City	St	Zip Code
NORWOOD	NORWOOD TRAINING CENTER	127 Dean Street	Norwood	MA	02062
QUINCY	QUINCY FIELD ST MAIN BUILDING	76 Field Street	Quincy	MA	02169
WALTHAM – NEWTON ST	WALTHAM GARAGE – NEWTON ST	160 Newton Street	Waltham	MA	02453
WALTHAM – WEST ST	WALTHAM WEST ST OPERATIONS CENTER	130 West Street	Waltham	MA	02451
WEST ROXBURY	WEST ROXBURY MAIN BUILDING	201 Rivermoor Street	West Roxbury	MA	02132
YARMOUTH	YARMOUTH ANNEX – METER SHOP	127 Whites Path	South Yarmouth	MA	02664
WALTHAM – SYLVAN RD	WALTHAM OFFICE	40 Sylvan Road	Waltham	MA	02451
WALTHAM – WYMAN ST	WALTHAM WYMAN ST	404 Wyman Street	Waltham	MA	02451
CLAYTON	CLAYTON MAIN BUILDING	799 Graves Street	Clayton	NY	13624
GOUVERNEUR	GOUVERNEUR MAIN BUILDING	359 West Main Street	Gouverneur	NY	13669
MALONE	MALONE MAIN BUILDING	133 Finney Blvd.	Malone	NY	12953
OGDENSBURG	OGDENSBURG MAIN BUILDING	2005 Linden Street	Ogdensburg	NY	13669
OLD FORGE	OLD FORGE MAIN BUILDING	Route 28, Po Box 168	Thendera	NY	13472
OSWEGO	OSWEGO MAIN BUILDING	490 West First Street	Oswego	NY	13126
POTSDAM	POTSDAM MAIN BUILDING	20 Pine Street	Potsdam	NY	13676
PULASKI	PULASKI MAIN BUILDING	5010 North Jefferson Street	Pulaski	NY	13142
SARANAC LAKE	SARANAC LAKE MAIN BUILDING	Lake Colby Dr. Rr1 Box 440	Saranac Lake	NY	12983
UTICA – CAMPION RD	UTICA CAMPION RD MAIN BUILDING	221 Old Campion Road	New Hartford	NY	13413
VOLNEY	VOLNEY MAIN BUILDING	99 Howard Road	Volney	NY	13069
WATERTOWN	WATERTOWN ENERGY SERVICES HEATED STOR	21265 State Route 232	Watertown	NY	13601
HERKIMER	HERKIMER CREW FACILITY	183 Marginal Road	Herkimer	NY	13350
LOWVILLE	LOWVILLE SERVICE CENTER	5806 Number 4 Road	Lowville	NY	13367

Property Name/Site	Building Name	Address	City	St	Zip Code
BAYRIDGE SATELLITE	BAYRIDGE SATELLITE STATION (NEW TRAILER)	860 65th Street	Brooklyn	NY	11220
CANARSIE	CANARSIE BLDG 23	8302-8624 Ditmas Avenue	Brooklyn	NY	11236
GREENPOINT	GREENPOINT MILLER ENVIRONMENTAL BLDG (TRAILERS)	287 Maspeth Avenue & 370 Vandoorvort	Brooklyn	NY	11211
QUEENS	QUEENS SERVICE STATION	127-11 Farmers Blvd	Jamaica	NY	11434
RED HOOK	RED HOOK SATELLITE STATION	651 Court Street	Brooklyn	NY	11231
STATEN ISLAND – GULF AVE	STATEN ISLAND SERVICE CTR – GULF AVE	200 Gulf Avenue	Staten Island	NY	10303
JAMAICA	JAMAICA CUSTOMER OFFICE	89-67 162 Street	Jamaica	NY	11432
STATEN ISLAND – FOREST AVE	STATEN ISLAND CUST OFFICE – FOREST AVE	2031 Forest Avenue	Staten Island	NY	10303
PITKIN DO	PITKIN CUSTOMER OFFICE	1535 Pitkin Avenue	Brooklyn	NY	11212
BROOKLYN – METROTECH CTR	METROTECH OFFICE	1 Metrotech Ctr	Brooklyn	NY	11201
COBLESKILL	COBLESKILL MAIN BUILDING	3794 State Route 145	Cobleskill	NY	12043
GLENS FALLS – QUAKER RD	GLENS FALLS MAIN BUILDING	1 Apollo Dr./636 Quaker Road.	Glens Falls	NY	12801
GLOVERSVILLE	GLOVERSVILLE GAS WELD SHOP	20 Hill Street	Gloversville	NY	12078
NORTH CREEK	NORTH CREEK OLD GARAGE	3182 State Route 28	North Creek	NY	12853
NORTHVILLE	NORTHVILLE MAIN BUILDING	411 Reed Street	Northville	NY	12134
SARATOGA – WEIBEL AVE	SARATOGA WEIBEL AVENUE BLDG 1	40 Weibel Avenue	Saratoga Springs	NY	12866
WARRENSBURG	WARRENSBURG MAIN BUILDING	3690 Main Street	Warrensbu rg	NY	12885
MIDDLE FALLS	MIDDLE FALLS MAIN BUILDING	58 County Route 53	Middle Falls	NY	12848
TICONDEROGA	TICONDEROGA SERVICE CENTER	5 Commerce Drive	Ticonderog a	NY	12883
ALBION	ALBION MAIN BUILDING	236 West Avenue	Albion	NY	14411

Property Name/Site	Building Name	Address	City	St	Zip Code
ANGOLA	ANGOLA MAIN BUILDING	179 North Main Street	Angola	NY	14006
AVON	AVON MAIN BUILDING	1570 East Avon-Rochester Road	Avon	NY	14414
BATAVIA	BATAVIA MAIN BUILDING	5100 East Main Street	Batavia	NY	14020
BUFFALO – DEWEY KENSINGTON	BUFFALO DEWEY AVE BLDG 1	93 Dewey Ave/144 Kensington Ave	Buffalo	NY	14214
FRANKLINVILLE	FRANKLINVILLE MAIN BUILDING	89 South Main Street	Franklinville	NY	14737
FREDONIA	FREDONIA MAIN BUILDING	401 Water Street	Fredonia	NY	14063
NIAGARA FALLS	NIAGARA FALLS MAIN BUILDING	1720 New Road	Niagara Falls	NY	14304
OLEAN	OLEAN MAIN BUILDING	1411 West Henley Street	Olean	NY	14760
STOW	STOW MAIN BUILDING	3685 W. Lake Road, Box 48	Stow	NY	14710
TONAWANDA	TONAWANDA MAIN BUILDING	489 Robinson Street	Tonawanda	NY	14120
WELLSVILLE	WELLSVILLE MAIN BUILDING	Wellsville-Airway Road	Wellsville	NY	14895
ATTLEBORO	ATTLEBORO ADMIN BUILDING	87 West Street	Attleboro	MA	02703
CHOPMIST	CHOPMIST MAIN BUILDING	ChopmiStreet Hill Road – Rte 102	Scituate	RI	02857
LINCOLN	LINCOLN MAIN BUILDING	642 George Washington Highway	Lincoln	RI	02865
MIDDLETOWN	MIDDLETOWN MAIN BUILDING	12 Turner Road	Middletown	RI	02842
NORTH KINGSTOWN	NORTH KINGSTOWN MAIN BUILDING	4145 Quaker Lane	No. Kingstown	RI	02852
NORTHBORO	NORTHBORO MAIN BUILDING	55 Bearfoot Road	Northborough	MA	01532
PROVIDENCE – ALLENS AVE	PROVIDENCE ALLENS AVE MAIN BLDG	642 Allens Avenue	Providence	RI	02905
PROVIDENCE – DEXTER ST	PROVIDENCE DEXTER ST MAIN BLDG	439 Dexter Street	Providence	RI	02907
PROVIDENCE – MELROSE ST	PROVIDENCE MELROSE ST OFFICE	280 Melrose Street	Providence	RI	02904

Property Name/Site	Building Name	Address	City	St	Zip Code
SOMERSET	SOMERSET MAIN BUILDING	1250 Brayton Point Road	SOMERSET	MA	02725
WESTERLY	WESTERLY STORES BUILDING	69 Canal Street	Westerly	RI	02891
CAZENOVIA	CAZENOVIA MAIN BUILDING	Clarke Street	Cazenovia	NY	13035
CORTLAND	CORTLAND MAIN BUILDING	1303 Fisher Avenue	Cortland	NY	13045
SYRACUSE – AIR CRAFT HANGAR	SYRACUSE AIR CRAFT HANGAR BLDG	813 Malden Road	Mattydale	NY	13211
BREWERTON	BREWERTON MAIN BLDG	5425 Baldwin Street	Brewerton	NY	13029
SYRACUSE – BEACON NORTH	SYRACUSE BEACON NORTH MAIN BUILDING	7496 Round Pond Road	North Syracuse	NY	13212
SYRACUSE – HENRY CLAY BLVD	SYRACUSE HCB METER & TEST BUILDING	7437 Henry Clay Blvd.	Liverpool	NY	13088
SYRACUSE – HINSDALE AVE	SYRACUSE HINSDALE MAIN BUILDING	513 Hinsdale Road	Camillus	NY	13031
SYRACUSE – INVESTMENT RECOVERY	SYRACUSE INVESTMENT RECOVERY BLDG	4651 Crossroads Park	Liverpool	NY	13088
SYRACUSE – ERIE BLVD	SYRACUSE OFFICE GUARD BLDG	300 Erie Blvd. West	Syracuse	NY	13202
ATHOL	ATHOL MAIN BUILDING	20 Harrison	Athol	MA	01331
GARDNER	GARDNER MAIN BUILDING	91 Fredette Street	Gardner	MA	01440
GREAT BARRINGTON	GREAT BARRINGTON MAIN BUILDING	927 South Main Street	Great Barrington	MA	01230
HOPEDALE	HOPEDALE MAIN BUILDING	245 S. Main Street	Hopedale	MA	01747
LEOMINSTER – VISCOLOID AVE	LEOMINSTER VISCOLOID AVE MAIN BLDG	164 Viscoloid Avenue	Leominster	MA	01453
MARLBOROUGH	MARLBOROUGH MAIN BUILDING	82 Florence Street	Marlborough	MA	01752
MILLBURY	MILLBURY MAIN BUILDING	449 SouthweStreet Cutoff	Worcester	MA	01604
MILLBURY #1		33 Providence Road	Millbury	MA	01590
MONSON	MONSON MAIN BUILDING	134 Palmer Road	Monson	MA	01057
NE CDC	NE CDC MAIN OFFICE	1152 Main Street	Whitinsville	MA	01588
NORTH ADAMS	NORTH ADAMS MAIN BUILDING	Brown Street	North Adams	MA	01247

Property Name/Site	Building Name	Address	City	St	Zip Code
NORTHAMPTON	NORTHAMPTON MAIN BUILDING	548 Haydenville Road	Leeds	MA	01053
SPENCER	SPENCER MAIN BUILDING	9 Meadow Street	Spencer	MA	01562
UXBRIDGE	UXBRIDGE LEASED AREA	44 Depot Street	Uxbridge	MA	01569
WEBSTER	WEBSTER GARAGE	10 Union Street	Webster	MA	01570
WORCESTER	WORCESTER MAIN BUILDING	939 Southbridge Street	Worcester	MA	01610
BAYSHORE	BAYSHORE OPERATIONS BUILDING	80 N Clinton Avenue	Bay Shore	NY	11706
BELLMORE	BELLMORE CUSTOMER OFFICE	2400 Sunrise Hwy	Bellmore	NY	11710
BRENTWOOD	BRENTWOOD GENERAL SHOPS	1650 Islip Avenue	Brentwood	NY	11717
BRIDGEHAMPTON	BRIDGEHAMPTON OPERATIONS AND OFFICE	1000 Montauk Hwy	Bridgehampton	NY	11932
GREENLAWN	GREENLAWN OPERATIONS AND OFFICE	288 Pulaski Road	Greenlawn	NY	11740
HEWLETT	HEWLETT OFFICE BUILDING	455 Mill Road	Hewlett	NY	11557
Hicksville 100 OCR Office	HICKSVILLE – 100 OLD CNTRY OFFICE	100 East Old Country Road		NY	11801
Hicksville	MAIN BUILDING	175 East Old Country Road	Hicksville	NY	11801
PATCHOGUE	PATCHOGUE DISTRICT CUST OFFICE	460 E Main Street	Patchogue	NY	11772
RIVERHEAD	RIVERHEAD OFFICE AND OPERATIONS	117 Doctor's Path	Riverhead	NY	11901
ROSLYN	ROSYLYN CUSTOMER OFFICE	250 Willis Avenue	Roslyn Heights	NY	11577
BRIGHTWATERS	BRIGHTWATERS OFFICE BUILDING	1 Orinoco Drive	Brightwaters	NY	11718
MELVILLE – HUB DR	MELVILLE HUB DRIVE OFFICE	25 Hub Drive	Melville	NY	11747
CLIFTON PARK	CLIFTON PARK MAIN BUILDING	723 Pierce Avenue	Clifton Park	NY	12065
GLENMONT	GLENMONT MAIN BUILDING	14 Plank Road	Glenmont	NY	12077
GUIDERLAND – ERCC	GUIDERLAND ERCC BUILDING	5215 Western Turnpike Road 3	Altamont	NY	12009
HUDSON	HUDSON MAIN BUILDING	100 Fairview Avenue	Hudson	NY	12534

Property Name/Site	Building Name	Address	City	St	Zip Code
NORTH ALBANY	NORTH ALBANY SUPERPOWER BLDG 7	1125 Broadway	Albany	NY	12204
RENSSELAER	RENSSELAER MAIN BUILDING	Third Avenue	Rensselaer	NY	12144
SCHENECTADY – BROADWAY	SCHENECTADY BWAY MAIN BLDG	734 Broadway	Schenectady	NY	12305
SCHENECTADY – SENECA ST	SCHENECTADY SENECA MAIN BUILDING	300 Seneca Street	Schenectady	NY	12308
SCOTIA	SCOTIA OP CTR MAIN BUILDING	406 7th Street	Glenville	NY	12302
TROY – OAKWOOD AVE	TROY OAKWOOD AVE MAIN BUILDING	235 Oakwood Avenue	Troy	NY	12182
TROY – SMITH AVE	TROY SMITH AVE MAIN BUILDING	17 Smith Avenue	Troy	NY	12180

Facilities Contact List US Office, Electric and Gas Operations Locations

Name	Title	Primary Contact
Bob Paul	Director Property Services - NY	347-452-8491
Monica Tawfik	Director Property Services - NE	781-879-3573
Ausra Mateikis	Office Services	617-581-2537
Kris Thebado	Facilities Manager NE Facilities	508-254-2127
Bob Conti	Facilities Manager UNYFacilities	917-635-4806
TBD	Facilities Manager DNYFacilities	

Facilities Supervisor by Site:

Region	Building Name	Address	Supervisor Name	Primary Phone	Secondary Phone
DSLI	BRIGHTWATERS OFFICE BUILDING	1 Orinoco Drive	Richard Zavada	516-790-0188	516-545-5903
DSLI	HICKSVILLE – 100 OLD CNTRY OFFICE	100 East Old Country Road Hicksville, NY 11801	Richard Zavada	516-790-0188	516-545-5903
DSLI		1000 Montauk Highway Bridgehampton, NY 11932	Richard Zavada	516-790-0188	516-545-5903

Region	Building Name	Address	Supervisor Name	Primary Phone	Secondary Phone
DSLI	BRIDGEHAMPTON OPERATIONS AND OFFICE	1000 Montauk Hwy	Richard Zavada	516-790-0188	516-545-5903
DSLI	RIVERHEAD OFFICE AND OPERATIONS	117 Doctor's Path	Richard Zavada	516-790-0188	516-545-5903
DSLI	District Office and Ops Center	117 Doctor's Path Riverhead, NY 11901	Richard Zavada	516-790-0188	516-545-5903
DSLI	MELVILLE CAC (PSE&G)	15 Park Drive	Richard Zavada	516-790-0188	516-545-5903
DSLI	BRENTWOOD ELEC STOR – BUTLER BLDG	1650 Islip Avenue	Richard Zavada	516-790-0188	516-545-5903
DSLI	MAIN BUILDING	175 East Old Country Road Hicksville, NY 11801	Richard Zavada	516-790-0188	516-545-5903
DSLI	HICKSVILLE CAFETERIA	175 Old Country Road	Richard Zavada	516-790-0188	516-545-5903
DSLI	BELLMORE CUSTOMER OFFICE	2400 Sunrise Hwy	Richard Zavada	516-790-0188	516-545-5903
DSLI	MELVILLE HUB DRIVE OFFICE	25 Hub Drive	Richard Zavada	516-790-0188	516-545-5903
DSLI	ROSYLYN CUSTOMER OFFICE	250 Willis Avenue	Richard Zavada	516-790-0188	516-545-5903
DSLI	GREENLAWN OPERATIONS AND OFFICE	288 Pulaski Road	Richard Zavada	516-790-0188	516-545-5903
DSLI	HEWLETT OFFICE BUILDING	455 Mill Road	Richard Zavada	516-790-0188	516-545-5903
DSLI	PATCHOGUE DISTRICT CUST OFFICE	460 E Main Street	Richard Zavada	516-790-0188	516-545-5903
DSLI	GARDEN CITY 600 BUILDING	600 Stewart Avenue	Richard Zavada	516-790-0188	516-545-5903
DSLI	BAYSHORE OPERATIONS BUILDING	80 N Clinton Avenue	Richard Zavada	516-790-0188	516-545-5903
DSNY	METROTECH OFFICE	1 Metrotech Ctr	Diane Sherald	347-756-1053	718-270-0151
DSNY	QUEENS SERVICE STATION	127-11 Farmers Blvd	Diane Sherald	347-756-1053	718-270-0151

Region	Building Name	Address	Supervisor Name	Primary Phone	Secondary Phone
DSNY	PITKIN CUSTOMER OFFICE	1535 Pitkin Avenue	Diane Sherald	347-756-1053	718-270-0151
DSNY	STATEN ISLAND SERVICE CTR – GULF AVE	200 Gulf Avenue	Diane Sherald	347-756-1053	718-270-0151
DSNY	STATEN ISLAND CUST OFFICE – FOREST AVE	2031 Forest Avenue	Diane Sherald	347-756-1053	718-270-0151
DSNY	GREENPOINT	287 Maspeth Avenue & 370 Vandoorvort	Diane Sherald	347-756-1053	718-270-0151
DSNY	RED HOOK SATELLITE STATION	651 Court Street	Diane Sherald	347-756-1053	718-270-0151
DSNY	CANARSIE BLDG 23	8424 ditmas ave 1st floor facilities office. 11236	Diane Sherald	347-756-1053	718-270-0151
DSNY	BAYRIDGE SATELLITE STATION (NEW TRAILER)	860 65th Street	Diane Sherald	347-756-1053	718-270-0151
DSNY	JAMAICA CUSTOMER OFFICE	89-67 162 Street	Diane Sherald	347-756-1053	718-270-0151
NEMA	MALDEN OPERATIONS CENTER – COMMERCIAL ST	100 Commercial Street	Bob Goodwin	978-804-8039	978-725-1444
NEMA	GLOUCESTER MAIN BUILDING	109 Rogers Street	Bob Goodwin	978-804-8039	978-725-1444
NEMA	NORTH ANDOVER MAIN BUILDING	1101 Turnpike Street	Bob Goodwin	978-804-8039	978-725-1444
NEMA	METHUEN MAIN BUILDING	15 Pelham Avenue	Bob Goodwin	978-804-8039	978-725-1444
NEMA	MALDEN MEDFORD ST MAIN BUILDING	170 Medford Street	Bob Goodwin	978-804-8039	978-725-1444
NEMA	HAVERHILL MAIN BUILDING	185 Water Street	Bob Goodwin	978-804-8039	978-725-1444
NEMA	WILMINGTON STOREROOM	326 Ballardvale Street	Bob Goodwin	978-804-8039	978-725-1444
NEMA	BEVERLY ELECTRIC MAIN BUILDING	44 River Street	Bob Goodwin	978-804-8039	978-725-1444
NEMA	AMESBURY OPERATIONS CENTER	7 North Hunt Road	Bob Goodwin	978-804-8039	978-725-1444

Region	Building Name	Address	Supervisor Name	Primary Phone	Secondary Phone
NEMA	LOWELL BOILER BLDG	775 Dutton Street	Bob Goodwin	978-804-8039	978-725-1444
NEMA	LYNN MAIN BUILDING	80 Marine Blvd	Bob Goodwin	978-804-8039	978-725-1444
NEMA	NEWBURYPORT MAIN BUILDING	87 Water Street	Bob Goodwin	978-804-8039	978-725-1444
NEMA	TEWKSBURY MAIN BUILDING	Dock Street	Bob Goodwin	978-804-8039	978-725-1444
NEMA	EVERETT OPERATIONS CENTER (TRAILER)	Rover & Robins Road	Bob Goodwin	978-804-8039	978-725-1444
NEMA	LAWRENCE MAIN BUILDING	West Street	Bob Goodwin	978-804-8039	978-725-1444
NEMA	WEST LEBANON BUILDING	17 Interchange Drive	Bob Goodwin	978-804-8039	978-725-1444
NEMA	BROCKTON ASHLAND ST BUILDING	100 East Ashland Street	Brendan Lundberg	508-330-8049	781-794-3556
NEMA	NORWOOD TRAINING CENTER	127 Dean Street	Brendan Lundberg	508-330-8049	781-794-3556
NEMA	YARMOUTH ANNEX – METER SHOP	127 Whites Path	Brendan Lundberg	508-330-8049	781-794-3556
NEMA	WALTHAM WEST ST OPERATIONS CENTER	130 West Street	Brendan Lundberg	508-330-8049	781-794-3556
NEMA	WALTHAM GARAGE – NEWTON ST	160 Newton Street	Brendan Lundberg	508-330-8049	781-794-3556
NEMA	BROCKTON MULBERRY ST BUILDING	161 Mulberry Street	Brendan Lundberg	508-330-8049	781-794-3556
NEMA	HANOVER MAIN BUILDING	19 Philips Lane	Brendan Lundberg	508-330-8049	781-794-3556
NEMA	DORCHESTER ANNEX BUILDING	220 Victory Road	Brendan Lundberg	508-330-8049	781-794-3556
NEMA	NANTUCKET MAIN BUILDING	32 Bunker Road	Brendan Lundberg	508-330-8049	781-794-3556
NEMA	BRAINTREE ANNEX BLDG	39 Quincy Avenuenue	Brendan Lundberg	508-330-8049	781-794-3556
NEMA	WALTHAM OFFICE	40 Sylvan Road	Brendan Lundberg	508-330-8049	781-794-3556

Region	Building Name	Address	Supervisor Name	Primary Phone	Secondary Phone
NEMA	WALTHAM WYMAN ST	404 Wyman Street	Brendan Lundberg	508-330-8049	781-794-3556
NEMA	QUINCY FIELD ST MAIN BUILDING	76 Field Street	Brendan Lundberg	508-330-8049	781-794-3556
NEMA	DORCESTER FREEPORT BUILDING	90 Freeport Street	Brendan Lundberg	508-330-8049	781-794-3556
NEMA	BOURNE CATAUMET LOCATION	997 County Road	Brendan Lundberg	508-330-8049	781-794-3556
NEMA	SOMERSET MAIN BUILDING	1250 Brayton Point Road	Glenn Davis	508-277-4100	
NEMA	NORTHBORO MAIN BUILDING	55 Bearfoot Road	Glenn Davis	508-277-4100	
NEMA	FALL RIVER MAIN BUILDING	60 Hartwell Street	Glenn Davis	508-277-4100	
NEMA	ATTLEBORO ADMIN BUILDING	87 West Street	Glenn Davis	508-277-4100	
NEMA	WEBSTER GARAGE	10 Union Street	Michael Brochu	508-736-3914	508-482-1271
NEMA	NE CDC MAIN OFFICE	1152 Main Street	Michael Brochu	508-736-3914	508-482-1271
NEMA	MONSON MAIN BUILDING	134 Palmer Road	Michael Brochu	508-736-3914	508-482-1271
NEMA	LEOMINSTER VISCOLOID AVE MAIN BLDG	164 Viscoloid Avenue	Michael Brochu	508-736-3914	508-482-1271
NEMA	ATHOL MAIN BUILDING	20 Harrison	Michael Brochu	508-736-3914	508-482-1271
NEMA	HOPEDALE MAIN BUILDING	245 S. Main Street	Michael Brochu	508-736-3914	508-482-1271
NEMA	PROVIDENCE	33 Providence Road	Michael Brochu	508-736-3914	508-482-1271
NEMA	LEOMINSTER ANNEX BLDG	36 Mill Street	Michael Brochu	508-736-3914	508-482-1271
NEMA	UXBRIDGE LEASED AREA	44 Depot Street	Michael Brochu	508-736-3914	508-482-1271
NEMA	MILLBURY MAIN BUILDING	449 SouthweStreet Cutoff	Michael Brochu	508-736-3914	508-482-1271
NEMA	NORTHAMPTON MAIN BUILDING	548 Haydenville Road	Michael Brochu	508-736-3914	508-482-1271

Region	Building Name	Address	Supervisor Name	Primary Phone	Secondary Phone
NEMA	MARLBOROUGH MAIN BUILDING	82 Florence Street	Michael Brochu	508-736-3914	508-482-1271
NEMA	SPENCER MAIN BUILDING	9 Meadow Street	Michael Brochu	508-736-3914	508-482-1271
NEMA	GARDNER MAIN BUILDING	91 Fredette Street	Michael Brochu	508-736-3914	508-482-1271
NEMA	GREAT BARRINGTON MAIN BUILDING	927 South Main Street	Michael Brochu	508-736-3914	508-482-1271
NEMA	WORCESTER MAIN BUILDING	939 Southbridge Street	Michael Brochu	508-736-3914	508-482-1271
NEMA	NORTH ADAMS MAIN BUILDING	Brown Street	Michael Brochu	508-736-3914	508-482-1271
NERI	MIDDLETOWN MAIN BUILDING	12 Turner Road	Glenn Davis	508-277-4100	
NERI	CUMBERLAND BUILDING A	1595 Mendon Road	Glenn Davis	508-277-4100	
NERI	PROVIDENCE MELROSE ST OFFICE	280 Melrose Street	Glenn Davis	508-277-4100	
NERI	WARREN MAIN BUILDING	31 Main Street	Glenn Davis	508-277-4100	
NERI	NORTH KINGSTOWN MAIN BUILDING	4145 Quaker Lane	Glenn Davis	508-277-4100	
NERI	PROVIDENCE DEXTER ST MAIN BLDG	439 Dexter Street	Glenn Davis	508-277-4100	
NERI	PROVIDENCE ALLENS AVE MAIN BLDG	642 Allens Avenue	Glenn Davis	508-277-4100	
NERI	LINCOLN MAIN BUILDING	642 George Washington Highway	Glenn Davis	508-277-4100	
NERI	CHOPMIST MAIN BUILDING	ChopmiStreet Hill Road – Rte 102	Glenn Davis	508-277-4100	
USNY	MALONE POLE BARN	133 Finney Blvd.	Chris Sanderlin-White	315-466-1923	315-785-7257
USNY	HERKIMER CREW FACILITY	183 Marginal Road	Chris Sanderlin-White	315-466-1923	315-785-7257
USNY	POTSDAM STORAGE FACILITY	20 Pine Street	Chris Sanderlin-White	315-466-1923	315-785-7257

Region	Building Name	Address	Supervisor Name	Primary Phone	Secondary Phone
USNY	OGDENSBURG POLE BARN	2005 Linden Street	Chris Sanderlin-White	315-466-1923	315-785-7257
USNY	WATERTOWN ENERGY SERVICES STORAGE	21265 State Route 232	Chris Sanderlin-White	315-466-1923	315-785-7257
USNY	GOUVERNEUR MAIN BUILDING	359 West Main Street	Chris Sanderlin-White	315-466-1923	315-785-7257
USNY	OSWEGO MAIN BUILDING	490 West First Street	Chris Sanderlin-White	315-466-1923	315-785-7257
USNY	PULASKI MAIN BUILDING	5010 North Jefferson Street	Chris Sanderlin-White	315-466-1923	315-785-7257
USNY	LOWVILLE SERVICE CENTER	5806 Number 4 Road	Chris Sanderlin-White	315-466-1923	315-785-7257
USNY	CLAYTON MAIN BUILDING	799 Graves Street	Chris Sanderlin-White	315-466-1923	315-785-7257
USNY	VOLNEY STORAGE BUILDING	99 Howard Road	Chris Sanderlin-White	315-466-1923	315-785-7257
USNY	SARANCA LAKE CARPORT	Lake Colby Dr. Rr1 Box 440	Chris Sanderlin-White	315-466-1923	315-785-7257
USNY	OLD FORGE STORAGE BUILDING	Route 28, Po Box 168	Chris Sanderlin-White	315-466-1923	315-785-7257
USNY	UTICA HARBOR PT MHF BUILDING	Washington Street	Chris Sanderlin-White	315-466-1923	315-785-7257
USNY	GLENS FALLS VEHICLE STORAGE BUILDING (Pole Barn)	1 Apollo Dr./636 Quaker Road.	Ken Keenahan	518-416-7018	518-761-5845
USNY	GLOVERSVILLE GAS WELD SHOP	20 Hill Street	Ken Keenahan	518-416-70418	518-761-5845
USNY	NORTH CREEK NEW GARAGE	3182 State Route 28	Ken Keenahan	518-416-70418	518-761-5845
USNY	WARRENSBURG METAL BUILDING (Pole Barn)	3690 Main Street	Ken Keenahan	518-416-70418	518-761-5845
USNY	COBLESKILL METAL BUILDING (Pole Barn)	3794 State Route 145	Ken Keenahan	518-416-70418	518-761-5845
USNY	SARATOGA WEIBEL AVENUE BLDG 2	40 Weibel Avenue	Ken Keenahan	518-416-70418	518-761-5845
USNY	NORTHVILLE MAIN BUILDING	411 Reed Street	Ken Keenahan	518-416-70418	518-761-5845
USNY	TICONDEROGA SERVICE CENTER	5 Commerce Drive	Ken Keenahan	518-416-70418	518-761-5845

Region	Building Name	Address	Supervisor Name	Primary Phone	Secondary Phone
USNY	MIDDLE FALLS STORAGE BUILDING	58 County Route 53	Ken Keenahan	518-416-70418	518-761-5845
USNY	SARATOGA SUBSTATION BUILDING	Excelsior Avenue	Ken Keenahan	518-416-70418	518-761-5845
USNY	OLEAN POLE BARN	1411 West Henley Street	Ken Wojciechowski	716-525-0494	716-831-7456
USNY	AVON STORAGE BUILDING	1570 East Avon-Rochester Road	Ken Wojciechowski	716-525-0494	716-831-7456
USNY	NIAGARA FALLS BACKFLOW PREVENTER	1720 New Road	Ken Wojciechowski	716-525-0494	716-831-7456
USNY	ANGOLA STORAGE BUILDING	179 North Main Street	Ken Wojciechowski	716-525-0494	716-831-7456
USNY	ALBION METAL BUILDING	236 West Avenue	Ken Wojciechowski	716-525-0494	716-831-7456
USNY	STOW METAL BUILDING	3685 W. Lake Road, Box 48	Ken Wojciechowski	716-525-0494	716-831-7456
USNY	NEWFANE MAIN BUILDING	3768 Main Street	Ken Wojciechowski	716-525-0494	716-831-7456
USNY	FREDONIA STORAGE BUILDING	401 Water Street	Ken Wojciechowski	716-525-0494	716-831-7456
USNY	TONAWANDA MAIN BUILDING	489 Robinson Street	Ken Wojciechowski	716-525-0494	716-831-7456
USNY	BATAVIA METAL BUILDING	5100 East Main Street	Ken Wojciechowski	716-525-0494	716-831-7456
USNY	FRANKLINVILLE METAL BUILDING 1	89 South Main Street	Ken Wojciechowski	716-525-0494	716-831-7456
USNY	BUFFALO KENSINGTON BLDG 14	93 Dewey Ave/144 Kensington Ave	Ken Wojciechowski	716-525-0494	716-831-7456
USNY	WELLSVILLE MAIN BUILDING	Wellsville-Airway Road	Ken Wojciechowski	716-525-0494	716-831-7456
USNY	SYRACUSE AIR CRAFT HANGAR BLDG	813 Malden Road	Lisa Lang	315-466-8948	
USNY	CORTLAND MAIN BUILDING	1303 Fisher Avenue	Lisa Lang	315-466-8948	
USNY	SYRACUSE OFFICE BLDG A	300 Erie Blvd. West	Lisa Lang	315-466-8948	

Region	Building Name	Address	Supervisor Name	Primary Phone	Secondary Phone
USNY	SYRACUSE INVESTMENT RECOVERY BLDG	4651 Crossroads Park	Lisa Lang	315-466-8948	
USNY	SYRACUSE HINSDALE MAIN BUILDING	513 Hinsdale Road	Lisa Lang	315-466-8948	
USNY	BREWERTON MAIN BLDG	5425 Baldwin Street	Lisa Lang	315-466-8948	
USNY	SYRACUSE BEACON N UNHEATED STOR BLDG	7496 Round Pond Road	Lisa Lang	315-466-8948	
USNY	CAZENOVIA MAIN BUILDING	Clarke Street	Lisa Lang	315-466-8948	
USNY	HUDSON MASONRY BUILDING	100 Fairview Avenue	Steven Plansker	518-641-9847	518-801-5744
USNY	NORTH ALBANY TSD FACILITY	1125 Broadway	Steven Plansker	518-641-9847	518-801-5744
USNY	GLENMONT MAIN BUILDING	14 Plank Road	Steven Plansker	518-641-9847	518-801-5744
USNY	TROY OAKWOOD AVE POLE BARN	235 Oakwood Avenue	Steven Plansker	518-641-9847	518-801-5744
USNY	SCHENECTADY SENECA STORAGE BUILDING	300 Seneca Street	Steven Plansker	518-641-9847	518-801-5744
USNY	SCOTIA OP CTR MAIN BUILDING	406 7th Street	Steven Plansker	518-641-9847	518-801-5744
USNY	GUIDERLAND ERCC EMERGENCY GEN BLDG	5215 Western Turnpike Road 3	Steven Plansker	518-641-9847	518-801-5744
USNY	CLIFTON PARK POLE BARN	723 Pierce Avenue	Steven Plansker	518-641-9847	518-801-5744
USNY	SCHENECTADY BWAY CARPORT	734 Broadway	Steven Plansker	518-641-9847	518-801-5744
USNY	RENSSELAER STORAGE BUILDING	Third Avenue	Steven Plansker	518-641-9847	518-801-5744

Contact Air Craft and Hanger:
813 Malden Road Mattydale NY 13212

Name	Title	Office	Cell
Michael Capucilli (Primary)	Manager, Aviation Operations	315-552-9227	315-529-6822

Niki Walto	Staff Assistant, Aviation	315-552-9213	315-418-0381
David Morse	Supervisor, Aviation Maintenance	315-552-9226	315-350-0694

Contact Fleet Operations:

William Hilbrunner – Director Fleet Services
Office: 781-907-3679Cell: 617-212-0096

Contact Other

1700 Montgomery St San Francisco, CA 94111
Local office contact: Valerie Aubel, EA
Exec: Lisa Lambert
Add'l office contact: Linda Ponikvar, direct report to Lisa Lambert (sits in Los Gatos but helpful with San Fran if needed)

720 University Ave Los Gatos, CA 95022
Local office contact: Kathleen Stannard, EA
Exec: Lisa Lambert
Add'l office contact: Linda Ponikvar, direct report to Lisa Lambert

701 Pennsylvania, Ave Washington DC 20004
Local office contact: Emily Duncan
Exec: Nelson Perez

Lebanon Point NH
On Site: – Leonard Parker, Sr. Supervisor
Reports to: Stephen Katinas, Manager
Reports to: Robert Brawley, Director
Reports to: Mike McCallan, VP

Contact LNG Locations Contacts

Commercial Point	Josh Cardoso – 857-939-3862
South Yarmouth	Josh Cardoso – 857-939-3862
Providence	Joe Connor – 401-479-3732
Exeter	Jay Costa – 781-290-3515
Haverhill	Joe Pierzynski – 781-281-5338
Lynn	Christopher Copson – 339-440-3527
Salem	Bill Osborn – 617-593-1572
Tewksbury	Christopher Livingstone – 978-460-9411
Holtsville	Paula Gendreau 516-419-0253
Greenpoint	Brendan Murray 631-560-8872

Contact List: Health & Safety

If you, or an employee, have contracted or are suspected of having COVID-19 or an exposure to COVID-19, call our COVID-19 hotline at 888-483-2123 to be connected to a Nurse Practitioner.

Contact Name	Role	Office	Mobile	Department
Minero, Kim	Absence Mgmt: DNY		516-243-5284	Health & Wellness
Daruwalla, Ann Marie	Absence Mgmt: NE		508-662-9722	Health & Wellness
Andrews, Ruthann	Manager and Absence Mgmt: UNY		315-436-2170	Health & Wellness
Griffing, Denise	Director: Health & Wellbeing		516-238-4465	Health & Wellness
Frank, Kathleen	Drug & Alcohol: DNY	516-545-5618	516-421-0421	Health & Wellness
Etre, Kimberly	Drug & Alcohol: NE	508-421-7941	774-329-4496	Health & Wellness
Mahoney, Patrick	Drug & Alcohol: UNY	315-428-6980	315-484-4156	Health & Wellness
Manion, Lorraine	LTD and Leave Mgmt		315-727-5470	Health & Wellness
Stevenson, Ann	Manager: DNY		516-238-0546	Health & Wellness
Price, Charlene	Manager: NE		508-282-9351	Health & Wellness
Overdyk, Tess	Manager: UNY		315-396-6622	Health & Wellness
Forde, Tracy	Manager: Wellbeing		978-290-0844	Health & Wellness
Hewit, John	NP/PA: Brockton			Health & Wellness
Fernando, Nora	NP/PA: Brooklyn, Queens			Health & Wellness
Simpson, Heather	NP/PA: Brooklyn, Queens			Health & Wellness
Rosario, Rachel	NP/PA: Long Island	Please call Employee Services at 888-483-2123 for all COVID related issues.		Health & Wellness
Lavalle, Sarah	NP/PA: N Andover. Malden			Health & Wellness
Biswas, Arya	NP/PA: Rhode Island	Your call will be assigned to the next available Nurse Practitioner.		Health & Wellness
Gayle, Priscilla	NP/PA: UNY Central			Health & Wellness
Robl, Sara	NP/PA: UNY Central			Health & Wellness
MacDougal, Julie	NP/PA: UNY East			Health & Wellness
Brown, Mary	NP/PA: UNY West			Health & Wellness
Freel, Beth	NP/PA: Worcester			Health & Wellness
Dionisio, Richard	LTD and Leave Mgmt	516-545-2275	631-901-3490	Health & Wellness
Preshong, Robert	Director: Field Safety	N/A	617-842-2042	Field Safety
Dresser, Alexandria	Manager: DNY	N/A	781-296-4290	Field Safety

Nickl, Michael	Manager: NE Elec	N/A	781-264-29636	Field Safety
Dinneen, Ryan	Manager: NE Gas	N/A	978-412-2539	Field Safety
Brown, Robert W.	Manager: UNY	716-831-7619	716-207-7354	Field Safety
Krimberg, Aleksander	Safety Rep: DNY	N/A	917-618-2636	Field Safety
Langhorn, Amanda	Safety Rep: DNY	631-348-6117	631-459-7826	Field Safety
Milord, Marie	Safety Rep: DNY	516-545-4681	631-388-0713	Field Safety
Bergeron, Luke	Safety Rep: NE Elec	N/A	781-290-3973	Field Safety
Casey, Jennifer L.	Safety Rep: NE Elec	N/A	401-255-5177	Field Safety
Diorio, William	Safety Rep: NE Elec	N/A	508-380-7948	Field Safety
Hopkins, James	Safety Rep: NE Elec	N/A	401-302-6615	Field Safety
Covitz, Dan	Safety Rep: NE Gas	N/A	781-227-1473	Field Safety
Denoncourt, Mitchell	Safety Rep: NE Gas	N/A	781-309-3677	Field Safety
Laubach, Nicole	Safety Rep: NE Gas	N/A	781-664-3681	Field Safety
Malin, Walter	Safety Rep: NE Gas	N/A	978-230-5699	Field Safety
Bressett, Ashley	Safety Rep: UNY Central	315-428-6277	315-212-0545	Field Safety
Brown, Joshua	Safety Rep: UNY Central	315-798-1965	315-795-6227	Field Safety
Bush, Michael J.	Safety Rep: UNY Central	315-785-7123	315-416-2175	Field Safety
Donohue, Sean	Safety Rep: UNY East	N/A	518-248-1151	Field Safety
Magill, Devon	Safety Rep: UNY East	N/A	518-764-4502	Field Safety
Paciello, Daniel	Safety Rep: UNY East	N/A	518-312-5479	Field Safety
St. Laurent, Austin	Safety Rep: UNY West	N/A	716-349-0894	Field Safety
Adley, Sara	Corporate Safety	N/A	781-250-9369	Corporate Safety
Cameron, John M.	Corporate Safety	781-907-3638	978-725-1466	Corporate Safety
George, Erin	Corporate Safety	315-428-6266	315-720-6392	Corporate Safety
Kaeding, Lindsay	Corporate Safety	508-860-6367	508-868-7558	Corporate Safety
O'Neil, Ryan	Corporate Safety	781-9074565	508-269-7928	Corporate Safety
Virkler, Tyler	Corporate Safety	315-428-6088	315-466-3583	Corporate Safety
Thomas, Sue	Director: Corporate Safety	315-428-5048	315-247-8477	Corporate Safety
Soucy, Scott	Industrial Hygiene	781-907-4055	781-248-6071	Corporate Safety
Shatraw, Carl	Manager: OSHA and Reporting	315-428-5059	315-926-9409	Corporate Safety
Murray, Samantha	Manager: Vehicle Safety	516-545-2483	516-633-8917	Corporate Safety
Guardino, Alexandra	OSHA and reporting	631-348-6287	631-431-0235	Corporate Safety

Unander, Jeffrey	OSHA and reporting	781-907-3884	N/A	Corporate Safety
Younge, Tina	OSHA and reporting	781-907-3698	857-526-2570	Corporate Safety
Stewart, Natalie	Executive Assistant	781-907-3593	781-227-0800	SVP Office

Contact List: Physical Security

To report suspicious activity or security incidents, please call the Security Control Center at 508-421-7970 or email Security@nationalgrid.com

Employee Name	Office Address	Role	Work Phone #	Cell Phone #
Warren Bamford	Waltham, MA	Vice President Security	781-907-2682	339-222-7919
Kathy Judge	Northboro, MA	Head of US Physical Security	508-860-6040	508-439-3691
Randy Jarvis	Hanover, MA	Director, Security Operations	781-392-4631	781-392-4631
Brad Newman	Northboro, MA	Regional Security Manager Massachusetts	508-421-7973	508-328-0877
John Jackson	Northboro, MA	Regional Security Manager Rhode Island	508-421-7979	401-374-9487
Matthew Probst	Clifton Park, NY	Regional Security Manager USNY East	518-406-7028	518-275-1892
Tom Irwin	Syracuse, NY	Regional Security Manager USNY Central	315-428-5132	315-237-3651
Paul Jackson	Buffalo, NY	Regional Security Manager USNY West	716-831-7741	716-861-1006
Ed Graham	Hicksville, NY	Regional Security Manager Long Island	516-545-2490	516-523-7265
Jack Kelly	Hicksville, NY	Regional Security Manager Long Island	516-545-5183	516-779-1718
Ron Thompson	Brooklyn, NY	Regional Security Manager NYC	929-324-4010	516-315-8281

Fleet Locations and Contact List

Management Staff – New England and New York				
Name	**Titles**	**Location**	**OFFICE**	**MOBILE**
William Hilbrunner	Director Fleet Services	Waltham	781-907-3679	617-212-0096
Flanigan, John	Manager NY West	Buffalo	716-831-7161	716-867-5659
Reisigl, Larry A.	Manager, Eastern NY/Western MA	Albany	518-433-3640	518-496-7629
Reppucci, Donald	Manager, New England	North Andover	978-725-1427	978-771-4592
Schiavone, Brian	Mgr, Fleet Assets & Performance	Syracuse	315-428-5327	315-416-8605
Vetrano, Louis	Manager, NYC & LI	Hicksville	516-545-5098	347-386-0800
Wilson, Stephen	Manager NY Central	Beacon North	315-452-7612	315-243-1502
Garage Staff – New York City & Long Island (Lou Vetrano, Manager)				
Canarsie, Greenpoint, Staten Island, Bellmore, Brentwood, Bridgehampton, Greenlawn, Hewlett, Hicksville, Patchogue, Riverhead, Roslyn				
Victor Araujo	Senior Supervisor	Canarsie; Greenpoint;Staten Island	718-982-7334	516-493-7840
Glen FitzSimons	Senior Supervisor	Brentwood; Bridgehampton; Greenlawn; Patchogue; Riverhead	631-758-5063	516-667-5341
Kerry Martin	Senior Supervisor	Canarsie; Greenpoint;Staten Island	718-963-5442	347-609-3436
Mario Mucciacciaro	Lead Supervisor	Bellmore; Hewlett; Hicksville; Roslyn	718-963-5446	347-672-9955
Michael Natoli	Lead Supervisor	Bellmore; Hewlett; Hicksville; Roslyn	516-545-4151	347-522-6466
Jason Parks	Senior Supervisor	Canarsie; Greenpoint;Staten Island	718-963-5442	516-924-8984
Margaret Scardino	Senior Analyst	Downstate New York	516-545-5364	631-559-7040
Frank Stallone	Senior Supervisor	Brentwood; Bridgehampton; Greenlawn; Patchogue; Riverhead	631-348-6239	631-487-2725
Louis Vetrano	Manager	Downstate New York	516-545-5098	347-386-0800
Garage Staff – New England (Don Reppucci, Manager)				

Andover, Beverly, Braintree, Brockton, Commercial Pt., Cumberland, Hanover, Lincoln, Lowell, Malden,				
Nantucket, N. Kingstown, Providence, Quincy, Somerset, S. Yarmouth, Waltham, West Roxbury				
Carmichael, Richard A.	Senior Supervisor	Bra, Comm Pt., Brockton/Nantucket, Cape, Somerset	781-794-3517	617-212-0092
Melvin, Paul	Supervisor	Malden, Waltham, W. Roxbury	781-388-5326	978-482-5645
Steve Johnson	Senior Supervisor	Lowell, N Andover, Beverly	978-725-1430	978-482-6037
Ruxton, Mike	Senior Supervisor	Lincoln, Cumberland	401-642-2150	401-439-1045
Watts, Bruce N.	Supervisor	Prov., N Kingstown, Middletown	401-525-5548	508-509-2592
Wilson, Kyle	Supervisor	Floating	781-794-3517	508-930-9354
Garage Staff – West Side of New England and New York East (Larry Reisigl, Manager)				
Albany, Athol, Glenmont, Glens Falls, Gloversville, Leominster, Northampton, North Adams,				
Saratoga, Schenectady, Troy, Utica, Webster, Westborough, Worcester				
Alcock, Glenn	Supervisor	Sutton, Hopedale, Marlborough, Uxbridge	508-372-4139	508-277-4429
Brown, Vincent	Supervisor	Schenectady, Gloversville, Utica, Hill St.	518-775-2820	315-401-5281
Connors, Vicki L.	Supervisor	Troy, Schenectady	518-433-3063	518-860-8387
McGetrick, James	Supervisor	GlensFalls, Saratoga	518-761-5876	518-421-7653
Gurney, Kenneth A.	Supervisor	N Adams, NHampton, Worcester	508-860-6294	508-954-0860
Litchfield, Richard	Supervisor	Sutton, Hopedale, Marlborough, Uxbridge	508-372-4140	508-509-5067
Lobban, Derek	Supervisor	Albany, Glenmont, Hudson	518-416-8635	518-416-8635
Garage Staff – Western New York (John Flanigan, Manager)				
Batavia, Buffalo, Fredonia, Niagara Falls, Olean				
Bly, Timothy D.	Supervisor	Buffalo, Kensington	716-831-7490	716-868-6114
Richardson, Art	Supervisor	Buffalo	716-831-7494	716-364-9646
Mayerat, Brian	Supervisor	Batavia, Niagara Falls	585-344-5833	716-383-6991
Goodwin, Matt	Supervisor	Fredonia, Olean	716-673-7231	716-364-9670
Garage Staff – Central New York (Stephen Wilson, Manager)				
Beacon North, Henry Clay Blvd., Oswego, Potsdam, Rome, Saranac Lake, Watertown				
Collver, Jim	Supervisor	Beacon North	315-452-7782	315-400-9714
Peebles, Jeffrey	Supervisor	Watertown, Oswego, Rome	315-785-7253	315-317-3689

Richards, Wayne, L	Supervisor	Potsdam, Saranac Lake	315-267-5240	315-244-6954
Taite, Kenneth W.	Supervisor	Henry Clay Blvd.	315-460-4257	315-420-5357
Administrative Staff – New England and New York (Brian Schiavone Manager)				
NAME	**Titles**	**Location**	**OFFICE**	**MOBILE**
Cericola, Jacki	Senior Analyst	Syracuse	315-428-6931	315-263-5854
Cole, Scott L.	Senior Analyst	Syracuse	315-428-6161	315-447-5394
Doyle, Rosemarie	Senior Analyst	Hicksville	516-545-5796	N/A
Ebner, Brent J.	Lead Specialist	Reservoir Woods	781-907-3669	603-380-0837
Goodwin, Mike	Contractor	Reservoir Woods	781-907-3461	N/A
Mahaffy, Richard E.	Senior Analyst	Syracuse	315-428-6861	315-439-9531
Nicholson, Steve	Lead Engineer	Syracuse	315-428-5249	315-466-9641
Boyce, Michael	Associate Engineer	Hicksville	315-428-5943	315-466-8328
Stone, Thomas	Senior Analyst	Syracuse	(315) 428-3146	
Smith, Debra	Senior Analyst	Reservoir Woods	(781) 907-4414	
Smith, Robert P.	Senior Analyst	Reservoir Woods	781-907-3678	508-641-3187
Smith, Robert P.	Senior Analyst	Reservoir Woods	781-907-3678	508-641-3187

2-4 NG COVID Quarantine and Isolation – CDC Guidelines

COVID quarantine and isolation summary

As of January 4, 2022, all three of the states in our region adopted the new CDC recommendations for reduced quarantine durations for colleagues who have been exposed to the Coronavirus.

If you tested positive, have COVID symptoms or may be a close contact, call the COVID Hotline at 888-483-2123. They may suggest a quarantine period per the below:

- If you have tested positive but are **asymptomatic** at time of your screening, Health & Wellbeing will advise 5 days of isolation (not counting the day of testing) with additional precautions for a full 10 days such as mask wearing.

- If you are **symptomatic** at time of screening, H&W will advise you to *plan* for 10 days of isolation (not counting the day of testing or day that symptoms first emerged), with the option to reduce quarantine on Day 5, if symptoms resolve, and advise you to call back for clearance if applicable. You should stay out of work as long as your symptoms persist.

- If immunocompromised, H&W will advise 10 days of isolation.

If you are a close contact and not having symptoms, your vaccination status will determine your quarantine duration.

COVID quarantine and isolation summary

"Fully Vaccinated", as defined by CDC	2 weeks after second dose of Pfizer/Moderna or single dose of J&J.
"Up-To-Date", as defined by CDC	Immediately after getting first booster OR if it is less than 5 months since final dose of Pfizer/Moderna or 2 months since final dose of J&J https://www.cdc.gov/coronavirus/2019-ncov/vaccines/stay-up-to-date.html
Calculating quarantine or Isolation	Quarantine (close contact exposure): The date of your exposure is considered Day 0. Day 1 is the first full day after your last contact with a person who has had COVID-19. Isolation (postive test or symptomatic) Day 0 is your first day of symptoms or a positive viral test. Day 1 is the first full day after your symptoms developed or your test specimen was collected.
Quarantine for close contact	1. Up-to-date on Covid vaccinations • Wear a mask around others for 10 days and avoid people likely to get very sick. • Test on day 5, if possible. • If you develop symptoms get a test and stay home. 2. Had confirmed Covid-19 in the past 90 days: • Wear a mask around others for 10 days and avoid people likely to get very sick. • If you develop symptoms get a test and stay home. 3. Not up-to-date on Covid-19 vaccinations: • Stay home for 5 days. • Avoid being around people who are more likely to get very sick from Covid-19. • After that continue to wear a mask around others for 5 additional days. • Test on day 5 if possible. • If you develop symptoms get a test and stay home These recommendations do not supersede state, local, tribal, or territorial laws, rules, and regulations, nor do they apply to healthcare workers for whom CDC has updated guidance.

2-5 NG US Pandemic Plan

National Grid Pandemic and Domestic Communicable Disease Plan

Effective Date: December 1, 2021

Table of Contents

1. INTRODUCTION

The purpose of this plan is to provide guidance in the event of a pandemic or domestic communicable disease outbreak in National Grid's service territory. This plan is an approach to the prevention, response, and recovery regarding a pandemic or domestic communicable disease. Many activities described in this plan are similar, if not the same as those required to combat other infectious diseases, such as Severe Acute Respiratory Syndrome (SARS), avian/swine flu or coronavirus.

In the event of a pandemic or domestic communicable disease outbreak, businesses play a critical role in protecting employees' health and safety as well as limiting the negative impact to the economy and society. Planning for a potential pandemic or domestic communicable disease is critical. Vaccines and other medicine may not be available to employees for 9-12 months; it is National Grid's responsibility to reduce the contamination within their facilities during the initial stages of an outbreak and to maintain the corporate response throughout the pandemic or domestic communicable disease.

Response planning for a pandemic or domestic communicable disease is unique from other business continuity incidents because it requires National Grid to prepare to operate with a significantly reduced work force. Vendor supply systems and dependent utility support services are also vulnerable, causing potential impact to utility operations for an extended period of time. Each strain, infection rate and mortality are diverse and until the virus starts circulating, it is impossible to predict its full effects. Planning for these disasters is significantly different than a natural disaster because it is much more employee oriented, with little to any infrastructure concerns or impacts.

A well-developed business continuity program coupled with planning and training will aid in protecting employees and ensure operations and infrastructures are adequately supported.

Purpose

This plan may utilize the World Health Organization's (WHO) pandemic phases as a reference point for implementing response activities. National Grid may use the WHO phases as a trigger to implement Key Actions for a pandemic outbreak and will utilize certain other methods as a trigger for a less impactful domestic communicable disease.

Additional guidance for implementing these Key Actions is acquired from the following:

- World Health Organization (WHO)
- Center for Disease Control (CDC)
- Actions implemented or recommendations by Massachusetts, Rhode Island, New York State, New York City Department of Health (NYC DOH)
- Edison Electric Institute (EEI)
- UK National Grid Influenza Planning Team (IPT)
- US and UK Crisis Management Teams (CMT)

Accountability

The Vice President of Emergency Planning and Resiliency is responsible for maintaining this procedure. Annually or sooner, if warranted, the procedure content will be updated or revised to stay current with changes in the company's organization or policies, Emergency Planning regulations, or best management practices. All revisions and/or additions shall detail a revision date as well as a brief description in the Document Revision History in Appendix F.

All comments or questions should be addressed to the Vice President of Emergency Planning and Resiliency.

References

World Health Organization (WHO) - http://www.who.int/en/

Center for Disease Control (CDC) - http://www.cdc.gov/

Actions implemented or recommendations by Massachusetts, Rhode Island, New York State, New York City Department of Health (NYC DOH)

Edison Electric Institute (EEI) - http://www.eei.org/Pages/ma1.htm

UK National Grid Influenza Pandemic Plan – UK Sharepoint Site Sharepoint site

Chapter 2: Development of Pandemic & Domestic Communicable Disease Plan

2. DEVELOPMENT OF PANDEMIC & DOMESTIC COMMUNICABLE DISEASE PLAN

Introduction

A well-developed business continuity program coupled with planning and training will aid in protecting employees and ensure operations and infrastructures are adequately supported.

2.1. Incorporation to Business Continuity Planning

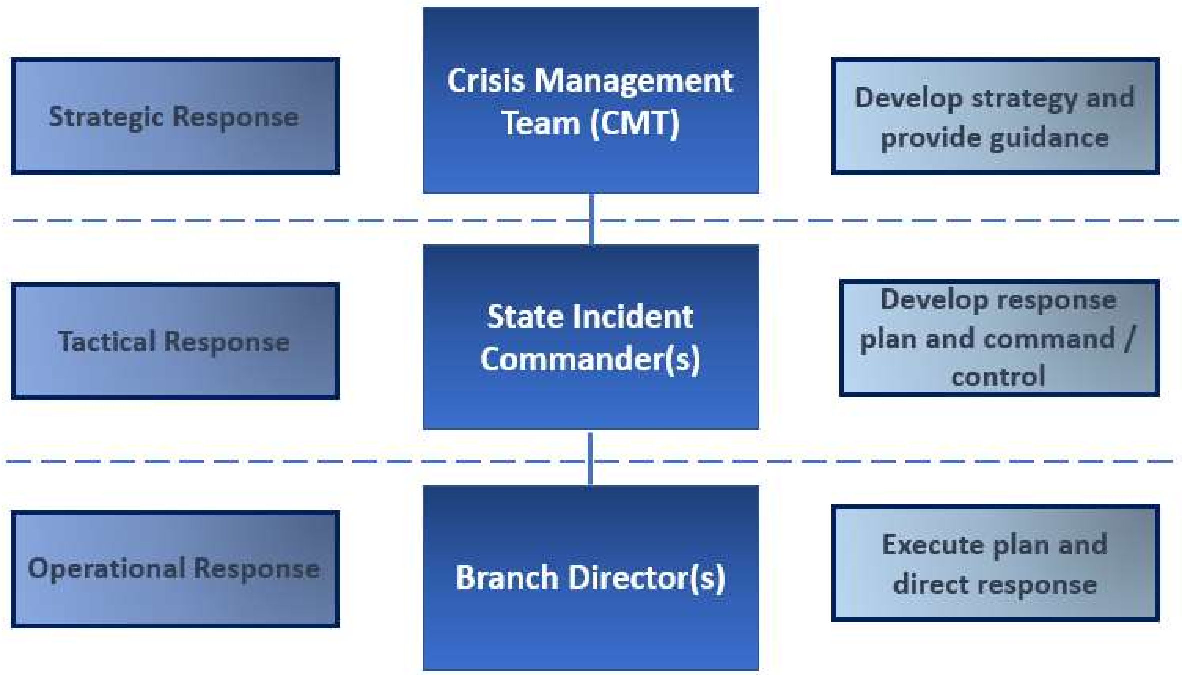
As part of the annual Business Continuity Program, each department within National Grid will define and document both critical and non-critical processes. Within the Business Continuity Program, each department should have developed plans to sustain critical utility operations for a reduced workforce scaled up to 40%. As the incident unfolds, Health & Wellbeing (H&W), in conjunction with Human Resources, will establish the monitoring program to determine the number of employees affected and those unable to report to their work locations.

2.2. National Grid Group Crisis Management Framework and the ICS Philosophy

National Grid has developed and implemented the Group Crisis Management Framework (GCMF) which establishes an all-hazard approach to crisis management and the mechanisms used to manage the most serious of emergencies. A crisis may include all types of emergencies and events including severe weather, loss of business continuity, loss of critical infrastructure, etc., or any combination of these.

The GCMF also establishes, at a high level, guidelines for key leaders at the Strategic Level. The GCMF provides a scalable approach to emergency response based upon the type, severity, and impact of the event.

The roles and activities of Company personnel involved in an event response at the Strategic Level are covered in the GCMF.



The Strategic Level is activated when an Emergency has escalated across multiple business areas or has met other crisis triggers.

2.3. Roles and Responsibilities

2.3.1. Crisis Management Team (CMT) and Chair

As a severe incident affects National Grid's employees and operations, the Group Crisis Management Framework (GCMF) is invoked. In response, the CMT Chair will hold a Crisis Assessment Meeting (CAM) to determine if the Crisis Management Team (CMT) should be activated. The CMT may decide to activate the **Pandemic Incident Command System Organization** to support on a tactical level.

2.3.2. Incident Command System (ICS) Commander

The CMT Chair will assess, activate and assign the Incident Commander (IC) which may be the VP Safety, Health and Wellness (SHE) depending on the impact and severity. As part of this plan, the Incident Commander will coordinate the response and ensure the actions outlined in the plan and Key Actions are effectively implemented. A typical Incident Command System (ICS) will be maintained throughout the incident period. The ICS organization process is flexible and therefore not all sections may be applicable. If the ICS is mobilized only and the CMT is not activated, the IC shall report to any and all UK or Global structures (Gold or Silver Commands).

2.3.3. Pandemic Incident Command System (ICS) Organization

The Incident Command System (ICS) comprises the various departments that play a key role in the response and recovery of the outbreak. As leaders and subject matter experts, members will be expected to provide the wider business with guidance and information to assist them in planning and managing a potential outbreak. **The roles are Incident Commander, Planning Officer, Customer Support Section Chief, Finance Officer, Human Resources Officer, Emergency Planning & Business Resiliency, IT Event Lead, Security Officer, Legal Officer, Liaison Officer, Safety, Health & Environmental Officer, Logistics Officer, Public Information Officer, Operations Section Chief, and various other support roles.**

1) Health & Wellbeing (H&W) will monitor the CDC and state health organizations.
2) H&W to notify EP&BR and elevate to US CMT for assessment utilizing the a Crisis Assessment Meeting (CAM).
3) CMT makes determination to activate the ICS organization.
4) If ICS organization is activated, notify CMT once the outbreak has been elevated to WHO's "Pandemic" phase or the CDC and state health organizations have made mandates and executive orders through the governors' offices.
5) ICS organization will collaborate with H&W and EP&BR in order to determine which pandemic phase or level of a domestic communicable disease applies to National Grid.
6) Throughout the most severe level of a pandemic or domestic communicable disease, the ICS organization shall update the CMT (if activated) and either the UK or Global structures and provide recommendations on actions to be taken outlined in **Appendix A**.

During this time, the ICS organization could be managing a potential outbreak and may not be able to perform their normal day-to-day functions for their business area; therefore, all the ICS organization members should ensure they have identified a successor to fill their normal responsibilities prior to activation.

2.3.4. Health & Wellbeing (H&W), Corporate Communications and Public Information Officer (PIO) Support

The Health & Wellbeing (H&W) organization will collect data for pandemic response, monitor health agency recommendations, monitor and report on worker health and absence impacts. Throughout each level of the pandemic, H&W in conjunction with Corporate Communications and the PIO will ensure timely information is provided to the workforce and various stakeholder groups. Appropriate messaging and education materials will be provided to employees, customers and media that correspond to the phase of the pandemic. Information will be disseminated to employees via such mechanisms as call centers, hotlines, e-mail systems, Everbridge®, video conferencing, intranets and websites, call trees etc. The PIO, with the approval of the Incident Commander, is to lead/approve all communications and coordinate the release of all emergency-related communications.

The plan enables the H&W organization to share information on operational capacities, response options and preparedness with national, regional and local health care agencies.

H&W will establish occupational health protocols for employees (i.e., personal hygiene, workspace disinfecting measures, use of personal protective equipment, travel, distancing). Guidance and recommendations from the WHO, the Center for Disease Control (CDC) and other experts will be utilized in the decision-making process. H&W will maintain a database of employees who are adversely affected by the pandemic and if needed ensure adequate recuperation time prior to returning to work.

During a pandemic or other public health emergency, vaccine and anti-viral supplies will most likely be under the full control and discretion of government agencies. H&W will attempt to procure stock through normal supply channels or will interact with local and regional municipal health organizations to procure vaccines, anti-virals and other medical supplies.

H&W will determine prioritization of vaccine/equipment distribution based on disease transmission vectors, exposures and criticality of job functions.

2.3.5. Emergency Planning & Business Resiliency

Emergency Planning & Business Resiliency (EP&BR) will work closely with all organizations to assist in the corporate response to a pandemic event. If deemed necessary, EP will open an Emergency Operations Center to coordinate activities. Essential to this response function will be the implementation of existing Business Continuity plans and the Group Crisis Management Framework (GCMF). EP&BR will act as a liaison between the UK Influenza Planning Team (IPT) and the US ICS organization, share updates and provide best practices between teams.

2.3.6. Electric & Gas Operations

Electric and Gas Operations will work with all support organizations, (Jurisdictional Teams inclusive of Government, Community, and Corporate Communications, Regulatory Support, Customer Relations, Inventory Management/Procurement/Contracts Administration, Fleet, Resource Planning, Information Technology, Facilities, EP&BR) to maintain a safe and reliable electric and gas system. Protocols will be implemented to optimize operations and minimize exposure to field workers and the respective management team. Electric and Gas Operations along with their support organizations will effectively communicate regulatory mandated programs status and abilities to meet or identify requirements likely to be impacted. If work schedules are impacted customers, municipalities and regulators are to be contacted and new expectations communicated.

2.3.7. Business Services

The following teams are represented by Business Services: Operational Finance, Payroll and Time, Employee Services, Account Maintenance and Operations, Revenue Assurance, Procure to Pay, Credit & Collections, Payment Processing, Customer Billing, SAP (Non-Utility) Billing, Strategy & Performance and Fleet. The Business Services Teams will work collaboratively with Compensation, Health & Welfare, Employee Relations/Labor Relations, and any other internal or external support organization required to ensure the designated support is provided for all of our internal stakeholders and employees. This support includes, but is not limited to the establishment of FAQs, fielding queries related to absences or the event (e.g. time coding, pay, and/or benefits), consultation and administration regarding any special handling (non-punitive, liberal leave, etc.) of compensation or sick leave absences that are unique to a pandemic event.

2.3.8. Customer Delivery Centers

Customer Delivery Centers will engage directly with Facilities to disinfect work areas and follow all agreed guidelines to prevent contamination. In the event of depleted workforce, the Customer Delivery Centers will deploy business continuity plans leveraging third-party vendors and load balancing across call centers if needed. In addition, the team will work collaboratively with other customer facing organizations to ensure the customer experience is not affected.

2.3.9. Customer Response Center

The Customer Response Center (CRC) will work with the PIO to align internal teams in developing a customer communications strategy for the pandemic. The CRC will lead the customer-facing channel owners in ensuring the appropriate direct customer messaging is delivered as planned. Channels include, but are not limited to web, social media, call center scripts, outbound calls, direct mail pieces, posters and customer handouts.

2.3.10. Facilities Management and Corporate Security

To reduce exposure, Facilities Management will implement disinfecting protocols, including but not limited to the following: common rooms, vehicles, workstations, and shared employee cubicles. Additionally, if needed Facilities Management and Corporate Security will initiate building closures and/or consolidating corporate operations.

2.3.11. Global Procurement & Supply Chain

Global Procurement will identify and establish relationships with back-up vendors and suppliers to purchase the necessary products and services as well as establishing protocols to reduce the risk that vendors may spread the flu virus to employees. Supply Chain (Inventory Management Warehouse Management) will work with other teams to make sure they have all the necessary material to help mitigate the spread of the flu or any other disease. Supply Chain will set up distribution points where none normally exist

2.3.12. Human Resources (HR) and Labor Relations (LR)

HR will work with labor representatives and supervisors, collaborate with Corporate Communications on all messaging to employees, and provide a forum for employees to reach out for assistance.

2.3.13. Global Information Technology (IT)

Global IT has (2) operational critical functions supporting the business; Global CIO/Business Partners and Infrastructure and Operations (I&O) whose critical functions include, but are not limited to Global Technology Operations, Security, CNI and End User Experience (EUX). These teams will respond to pandemic influenza continuum shifts ensuring the oversite and management technology suppliers and direct services to the business.

Key continuity service objectives will include enhanced monitoring of the remote network access used by remote employees/contractors working outside a National Grid facility for an extended length of time or contractors connecting from outside the NG firewall.

Specific IT services to be monitored will include but not be limited too;

- End User Experience
- Enhanced Cyber Security activity
- Z-Scaler / VPN remote access
- Application Support including O365, through NG internal network or through internet
- Group communication tools like Microsoft Teams / GridHome / Yammer
- Verizon Network for remote voice and data access
- Direct business support tools or services including Service Now, Field Force, and traditional Helpdesk Services.
- Specific focus on customer service platforms, web or voice based will be priorities
- Coordinate supplier access to technology infrastructure with Security and Facilities.

Global CIO/BP teams are embedded into the New England and New York jurisdictions with respective CIO directly supporting the respective jurisdiction.

Physical Security will be conducting their BAU activities supporting employees and NG physical locations.

Sequestering Critical IT Personnel: This decision will be coordinated by IT Managers, their staff and Corporate HR. Appropriate sequester plans will be submitted to CMT.

2.3.14. Planning Officer

The Planning Officer is responsible for leading the data analytics team in order to capture KPIs and metrics such as severity levels and employee absenteeism using high level dashboards so that leadership is able to monitor and measure the pandemic response.

2.3.15. US Legal

US Legal will provide legal advice and support to the CMT, the ICS Organization and various departments across the business. This support includes, but is not limited to, legal advice regarding policy and significant business decisions, formal documentation and communications to regulatory bodies and government authorities. Legal will monitor for notices and orders issued by government agencies.

2.3.16. US Regulatory

US Regulatory will work closely with all Federal and State regulators/ agencies overseeing the affected territories of our business: among these, the Federal Energy Regulatory Commission (FERC), the New York Public Service Commission (NY PSC), the Massachusetts Department of Public Utilities (MA DPU), and the Rhode Island Public Utilities Commission (RI PUC). Communications will entail keeping regulatory bodies and government authorities apprised of the Company's plan to maintain business continuity, as well as any issues impacting the Company and our customers in New York and New England. US Regulatory will coordinate any formal responses to Federal and State agencies with US Legal. Additionally, US Regulatory will ensure that all mandatory filings proceed in a complete, accurate, and timely manner.

2.3.17. US Finance

US Finance will serve as a strategic advisor to incident commander and all Business units providing critical data, analysis, and insights to guide decision making to protect critical assets of the organization during the pandemic. Finance will assess the organization's overall financial health while providing financial planning guidance and analysis through contributing scenario planning and modeling driven by cost variances. To do this, Finance will collaborate with other key functions to determine and estimate overall cost impacts caused by pandemic event implications; increased supply chains (Procurement), insurance and claims coverage, funding, managing liquidity & cash flow (US Treasurer), payroll implications from overtime and sequestering (HR/Business Services), Billing & customer collection payment impacts (Business Services), future rate case recovery; bad debt reserve, deferrals & future fillings (Regulatory), stimulus regulation impacts (Tax), and stranded CAPEX (Capital Delivery)

Finance will also execute a risk assessment and consider the impact of the pandemic on the overall framework of Internal Control over Financial Reporting. This will provide assurance regarding the ability to effectively execute and test those controls such that management can attest to the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles on behalf of the NGUSA business during the pandemic.

2.4. Activation Triggers

National Grid US preparations align with the four phases of the World Health Organization (WHO). In addition, H&W monitors the CDC, MA, NY and RI Departments of Public Health (DPH) emerging diseases notifications and will comply with executive orders through the various governors' offices.

The key actions to take are part of an all-hazards approach to emergency risk management in the context of preparedness, response and recovery.

H&W along with EP&BR and the Incident Commander will determine if the CMT (if activated) should be notified of any upcoming diseases or outbreaks. The decision to enact key actions resides with the Incident Commander. Infection rates can occur quickly and develop from Preparedness phase to a Response phase in a matter of days.

All departments must be prepared to coordinate the pandemic influenza response within their jurisdiction. Departments' main focus during a pandemic or communicable disease should be healthcare planning and infection control.

2.5. Planning Assumptions

- Unlike seasonal flu which mostly affects the young and old, an outbreak of a new virus can have an impact on anyone.
- Sickness peaks are likely to last for 2 to 3 weeks.
- Those infected are likely to be absent from work for a period of 6 to 8 weeks.
- Those that have been exposed to a virus but not infected themselves may have to quarantine for 2 weeks.
- The virus is likely to be cyclical, with two or more waves. The second wave being more severe than the first. There could be several months between each wave.
- Vaccines or anti-viral applications may not be available in sufficient quantities to reduce the outbreak severity.
- Schools and Day Care centers may be closed, and transport infrastructure could be disrupted.
- Each business unit will develop their own detailed plans and contingencies for managing business interruptions due to a Pandemic and will train and test their teams accordingly.

	Base Case	(Reasonable) Worst Case
Employee sickness due to pandemic	15%	40%
Peak absence due to sickness & caring for others	7% (weeks 6 – 8)	15%
Peak absence, confined teams	14% (week 2)	30%
Normal sickness absence	5%	5%
Total peak absence during pandemic	**9%**	**17%**

Staff in close working environments – such as control rooms, contact centers or workspaces where desks and equipment may be shared could experience a sharper peak of absenteeism than a largely field-based team.

Business Continuity Plans will be activated based upon business needs during a pandemic. Generally, the activation of a plan will occur sometime within two weeks after the occurrence of the disruptive event, but it could be outside of this window as well. Employees could be out of the office for three weeks at a time on a rolling basis; not all employees would be out for three weeks. In a pandemic event this would continue for a six- to eight-week period while the virus is active.

Business Continuity Plans should be developed to sustain critical utility operations for a reduced workforce scaled up to 40%, recognizing that an element of absenteeism would come from employees looking after other family members who are ill, or child care when schools are closed. Modeling suggests that such teams would experience a higher sickness rate, but the peak would be short and soon after the first infection.

2.6 Review and Maintenance of Plan

This plan shall be maintained to ensure currency, accuracy, and effectiveness. This plan must be reviewed to ensure that it accurately reflects all business processes. This is accomplished by:

- Reviewing the plan at least once a year to ensure that it includes and accurately reflects all response and recovery requirements. Any changes to team personnel requires immediate update of the plan.

- EP&BR is responsible for maintenance of the plan. All updates to and questions about the plan should be directed to EP&BR.

2.7 Training and Exercises

Detailed training for newly assigned employees should take place immediately after they have been identified. The purpose of this training is to ensure that these employees can safely and efficiently perform their assigned responsibilities during such an Emergency. EP&BR shall oversee, schedule, develop and facilitate the training.

The Company shall conduct a pandemic tabletop exercise annually. Exercises identify capability gaps and areas for improvement in the implementation of the Plan during a pandemic event. The exercises should include:

- Simulations of all team member roles, and
- Communication with vendors, outside agencies, local governments, and others who would normally be included in a pandemic event.

Consideration should be given to the following when planning the Company’s pandemic tabletop exercise:

- Recent events and Emergencies
- Recent modification to plans and procedures

Chapter 3: Pandemic and Domestic Communicable Disease Plan

3. PANDEMIC AND DOMESTIC COMMUNICABLE DISEASE PLAN OVERVIEW

This document outlines the Key Actions for planning, reacting to and recovering from a virus outbreak. A domestic communicable disease which impacts just the United States may also trigger plans identified below. Key planning actions have also been addressed in National Grid's Business Continuity Plans.

The severity index or absentee rates are grouped into three scenarios;

a. MILD: absentee rates of up to 15% for a week of the pandemic wave and 10% for the rest of the wave,

b. MODERATE: absentee rates of up to 25% for a week of the pandemic wave and 15% for the rest of the wave, and

c. SEVERE: absentee rates of up to 40% or greater for a week of the pandemic wave and 20% for the rest of the wave.

Note: The decisions for the disposition of many of the key action items will be made utilizing the guidance and recommendations from WHO, the CDC, NERC, EEI and Massachusetts, Rhode Island and New York State, NYC DOH.

3.1. Suggested Key Actions

A more detailed list of actions within each role's checklists are listed in Appendix A.

Planning & Preparedness	• **Provide consistent and timely messaging on pandemic related items (i.e. status, hygiene, flu protective measures)** • **Provide guidelines for office and personal hygiene to mitigate the pandemic effect** • **Maintain BCP plans** • **Encourage employees to obtain seasonal flu vaccines** • **H&W to monitor health threats via official bulletins and web sites & consult with health authorities** • **Activate ICS organization and notify CMT (if activated) of any issues** • **Identify critical processes and employees** • **Communicate early and regularly with staff on recommendations to minimize transfer of infectious agents** • **Initiate plan for health office procedures and protection of health care workers** • **H&W and EP&BR to work with Legal to monitor any state border closures and/or travel restrictions between states.** • **Work with suppliers or local government health departments to obtain vaccines or antivirals** • **Put in place provisions for employees to work from home** • **Evaluate HR services to employee families** • **Assess employee distancing policies, and the need to vacate non-critical employees** • **If necessary, separate work force (clean site)** • **Expand teleconferencing to reduce face to face contacts**

	• **Evaluate financial & budgetary concerns due to reduced revenues, increase costs (i.e. Insurance, overtime etc.)** • **Initiate clean work area protocols (employee and contractor based)** • **Provide disinfectants to employees and in common areas** • **Acquire sufficient quantities of PPE, masks, wipes & sanitizers** • **Test and drill existing plans** • **Provide travel policy and quarantine provisions for those traveling from infected areas** • **Develop visitor policy and sign-in process** • **Initiate employee exposure tracking system** • **Monitor health threats via official bulletins and web sites & consult with health authorities** • **Conduct regular communication with senior management, employees, contractors and labor organizations** • **Begin to assign resources, ready staffing and implement contingency plans** • **Conduct an information distribution program to promote appropriate responses by employees** • **Implement workforce deployment policies regarding teams and crews working together and the potential need to keep employees separated**
Response	• **Monitor health threats via official bulletins and web sites & consult with health authorities** • **Conduct regular communication with senior management, employees, contractors, and labor organizations** • **Consider the need and conditions for more extreme measures such as sequestering on-site critical staff. See Section 3.2.4.** • **Employees suspected of being infected will notify their supervisors and condition will be monitored/tracked by company medical** • **Employees/visitors to critical facilities will be subject to screening to aid in identifying whether they are a potential risk** • **Medical staff siting should be reviewed daily to determine where in-house medical support is most needed Consider absence hot spots and factor in the availability of local clinics/medical resources.** • **If appropriate, a cleaning service/contractor will be used to disinfect employee workstations, shared work areas and equipment as well as assess the need for separation of staff** • **Assess employee distancing policies, and the need to vacate non-critical employees** • **Consider providing each workstation with disinfecting agent, wipes, hand sanitizers, latex/vinyl gloves and directions for cleaning each workstation between shifts if applicable** • **Provide communications to employees on the latest advisories and recommended actions** • **Decide if on-site critical staff require PPE** • **Decide if quarantining is appropriate** • **Implement visitor policy and sign-in process** • **H&W will establish a return to work protocol based on the virus strain and CDC recommendations, possibly allowing employees to return when they are fever free for 24 hours without fever reducing medications. This depends on the type of virus and how long an employee must self-quarantine after being infected. Ie. Coronavirus required that people quarantine for 14 days after being infected.**

	• Employee must keep supervisors informed of their condition throughout their absence • Isolate the facilities, post signs stating temporary quarantine, and restrict card access, if applicable • Identify the most effective surveillance and control measures for subsequent waves and update plans accordingly • Provide guidance on ways to optimize employee care in the work place • Establish awareness that extensive work conditions may result in employee stress and that employees are provided opportunities for rest and recuperation • Activate Plan Forward team and prepare to transfer from and demobilize ICS organization.
Recovery	• Advise of change from response to recovery and brief CMT (if still activated) on status • Develop and distribute communications to US employees of the transition from a response phase to a recovery phase. • Demobilize ICS and CMT teams (if still activated at this point). Demobilize Plan Forward team. • Conduct an After Action Review and cascade lessons learned to the ICS and CMT teams. • Where necessary, update BCPs, Pandemic Plan and GCMF as a result of lessons learned. • Continue surveillance to detect subsequent waves and maintain awareness by effective communication methods • Stand down reporting requirements when advised • Continue to communicate and reassure employees of the recovery process. • Continue to support employees, contractors and external stakeholders with ongoing issues. • Return to business as usual

3.2. Prerequisites

3.2.1. Equipment Requirements

To mitigate the effects of the influenza pandemic, the company will make available, through its warehouses, masks (N95), disinfectant sprays, antimicrobial wipes, nitrile disposable gloves, hand sanitizers and personal protective equipment (PPE). During the inter-pandemic phase, warehouses will maintain minimal quantities on hand, except as noted below. During the Alert phase, the ICS organization will provide recommendations for ordering, based on disease vectors. Distribution of these items will be at the recommendation of the SHE organization, based on risk and role criticality.

- Stockpiled quantities of N95 masks shall be calculated to ensure a 3 day supply according to staffing levels for customer facing employees such as Customer Meter Services (CMS) and critical 24-hour operations (such as Dispatch, Control Centers and Call Centers), assuming two masks per day for field based employees in these populations.
- Masks have a shelf life of 5 years. They cannot be recertified and must be disposed of.

3.2.2. Communications: Employee Protection & Hygiene – Protecting the Employee and Minimizing Exposure to the Virus

Annually, prior to flu season, National Grid rolls out an employee health awareness program that provides information on the coming flu season and makes available flu vaccines to all employees. The vaccine program is voluntary and is offered throughout the company. It is recommended for those employees who work in control centers and those who have direct contact with the customer (i.e., district offices, meter readers and field service personnel) receive flu shots.

To reduce illnesses throughout the year, hand sanitizers are located in all buildings, near restrooms and common areas.

To reduce the risk of becoming infected with the influenza, National Grid employees are provided pre-crafted personal hygiene information via Corporate Communications. Below are several of the topics:

3.2.2.1. Hand Hygiene

a. Facilities will ensure that sinks with warm and cold running water, plain or antimicrobial soap, disposable paper towels, and alcohol-based hand disinfectants are readily accessible for employee use.

b. When hands are visibly dirty or contaminated with respiratory secretions, wash hands with soap (either non-antimicrobial or antimicrobial) and water.

c. When washing hands with soap and water, wet hands first with water, apply the amount of product recommended by the manufacturer to hands, and rub hands together vigorously for at least 15 seconds, covering all surfaces of the hands and fingers. Rinse hands with water and dry thoroughly with a disposable towel. Use a disposable towel to turn off the faucet.

d. If hands are not visibly soiled, use an alcohol-based hand rub for routinely decontaminating hands in all clinical situations including contact, whether gloved or ungloved.

e. When decontaminating hands with an alcohol-based hand rub, apply product to the palm of one hand and rub hands together, covering all surfaces of hands fingers, until hands are dry.

f. Always use hand hygiene after removing gloves and other PPEs.

g. Any further hand hygiene instructions would be provided by H&W.

3.2.2.2. Contact Hygiene

In addition to standard precautions, contact precautions are indicated for employees known or suspected to have serious illnesses easily transmitted by direct human contact or by contact with items in the employee's environment. In addition to standard precautions, contact precautions include:

a. Avoid touching their eyes, nose, or mouth with contaminated hands (gloved or ungloved) to avoid self-inoculation with the pandemic influenza virus.

b. Cover their mouths and noses with a tissue and dispose of used tissues in no-touch waste containers

c. Use a mask when tolerated, especially during periods of increased respiratory infection activity in the community.

d. Perform hand hygiene after contact with respiratory secretions and contaminated objects or materials (e.g., hand washing with soap and water, alcohol-based hand rub, or antiseptic hand wash).

e. Stand or sit at least 3 feet from other infected people, if possible.

f. Any further contact hygiene instructions would be provided by H&W.

3.2.3. Telecommuting

The business will ensure that all network access requirements for critical staff are in place and current as part of their preparation / review process. Employees and contractors required to work remotely are kitted with appropriate voice and/or data devices with directions remotely connecting them to the National Grid Network. All this should be documented in the business continuity plans owned by the business. IT will provide support via service request opened with Helpdesk or with business directly.

For critical employees at NG locations, the "work from home" solution should be tested monthly to ensure full network access and complete functionality. Note: ZScaler / VPN remote access does not guarantee that external Internet Service Providers (ISPs) will have enough network capability to handle additional traffic during an event like a pandemic influenza outbreak.

National Grid's MS Office 365 service can be accessed via internet @ **portal.office365.com** along with regular access provided through NG Network. The O365 user should have an account setup with proper login credentials. This activity will be authorized by the manager.

Emergency Planning, by way of the US Incident Command, may request that business-critical areas conduct an exercise of their Business Continuity Plans, remote access/working strategies with 40% of the associated workforce working from offsite. This live exercise (as opposed to a tabletop exercise) shall verify employees can work off-site. Results of the exercises should be submitted to EP to ensure these critical business areas are appropriately prepared.

3.2.4. Critical Staff and Sequestering/Desequestering

More extreme measures such as sequestering on-site critical staff may need to be considered depending on the conditions.

3.2.4.1 Sequestration

The following are considerations to think about before or during the pandemic:

Staffing

- Adequate number of operators sequestered to allow scheduled and future work to continue.
  - Plan allows for an operator to leave for any emergent issue(s) at home
- Sequester EMS/CNI personnel to maintain critical control room assets
- Sequester Facilities personnel to ensure functioning and cleanliness of control room buildings
- Sequester Security Control Center personnel to monitor critical sites and respond to security incidents
- Plan for a 30-day rotation of control center staff where possible, subject to review / change.
  - Re-evaluate duration of sequester (waves). During Covid-19, our "waves" were too long and staff became burnt out.
- Restrict access to only people who work in a Control Room building (no visitors).
- Restrict access to only 24x7 functions in a Control Room building and send staff that can work from home to do so.
- Restrict access to the Control Room building to critical operations staff only.
- Cancel all unnecessary travel. Utilize video conferencing when practical.
- Expedite training of unqualified operators/staff for additional personnel.
  - Ensuring timely training of operators would prevent hastening the process or sequestering trainers. Doing so means that there is always a full and qualified staff.

- Rehiring ex-operators/supervisors. Internal and retirees.
- Limit unnecessary physical interactions by having fieldworkers remain in personal vehicles to receive work
- Utilize fieldworkers' personal vehicles to report to job sites
- Implement take-home company vehicles for fieldworkers
- Have fieldworkers report directly to job sites
- Have fieldworkers stage in smaller groups at various sites (substations, garages, etc.) as an alternative to reporting to their platforms at start of their shift
- Continuity – keep same crew complements throughout duration of pandemic
- Implement staggered shifts
- Work with unions to increase rosters for off-shift schedules
- Communicate to staff not currently sequestered and/or not working to provide better updates and awareness to all staff.

Health and Wellness / Facilities

- Consider an electrostatic spray (or similar product) that is antibacterial/antiviral for Control Rooms and Backup Control Rooms.
- Install HEPA air filters in air handling units and/or near doors to control rooms
- Tested all sequestered personnel in our control center facilities for disease prior to staying onsite to verify healthy condition
- Daily checkups with visiting healthcare personnel to measure temperature and check for other symptoms
- Fitness facilities are located on all sites and within sequestration areas to provide access to exercise equipment
- Increase cleaning and sanitizing of Control Room building and Backup Control Rooms.
- Acquire sanitizing supplies to supplement stock.
- Install barriers between desks in field offices

Food/Living Necessities

- On site food service to be provided to sequestered personnel. Purchase and cook on site, hire a service to cook, etc)
    - Evaluate other food vendors such as local establishments. They may be significantly cheaper than natural disaster response companies.
- Where applicable, to supplement on site shower facilities, shower trailers have been set up within the sequestered region to eliminate the need to go to a space outside the controlled areas.
- Laundry trailers delivered and set up to provide on-site, self-contained laundry service to those sequestered.
- Sleep trailers and other means provided on site to provide for self-contained rest quarters to those sequestered. Sleeping accommodations (Air mattresses/cots, sheets, pillows, campers, hotels, etc)
- All living necessities provided so that all services are located within the building and grounds proper – no need to leave premises and risk exposure. Purchase personal items to supplement stock (toiletries, etc.)

Miscellaneous

- Procedure developed for deliveries of required good and services
- 24/7 Security provided to control access to only those employees and or service providers sequestered
- Daily Incident Command Organization meetings and department communications with control room leadership and employees
- Work with HR for a compensation plan
- Plan for the facilities repairs
- Monitoring employees for symptoms of pandemic or other communicable diseases
- Return to work policy after contracting pandemic
- Alternate emergency responder access (police, fire, ambulance)
- Mail and package delivery
- Process for entering “dirty areas”of building for non-sequestered employees

3.2.4.2 Desequestration

- Advanced Data Analytics develops data tracking tool and weekly report (one for each control room) for the following data points:
  - 14 day rolling average of new cases reported in the community (reported by NG region, filtered for only those counties/cities within our service territory)
  - 14 day rolling average of positive test results reported in the community community (reported by NG region, filtered for only those counties/cities within our service territory)
  - Internal absence rate for pandemic related cases
  - Critical/minimum staffing thresholds for each control room
- SHE/H&W applies analytic and regulatory criteria and makes recommendations to Operations in a weekly meeting:
  - Downward trajectory of new cases
  - Downward trajectory of positive test results
  - Downward trajectory of external forecast models
  - Absence rates by facility against critical staffing levels
  - Review current mandates on mobility or lockdowns
  - Testing options, vaccination and treatment options available
  - PPE and sanitizer availability
- Operations Leadership applies non-analytic criteria and makes final determination:
  - Ability to sustain operations with heightened risk of absence after de-sequester
  - Ability to isolate the building; assess impacts to other departments
  - Assess impact to employees due to timing and rotating shifts
  - Ability to split crews into shifts and backup locations
  - Implement enhanced health/safety protocols including potential temperature checks or weekly testing

3.2.5. Vendor Services

The ICS organization shall instruct the heads of all departments to identify vendors/suppliers providing services and/or supplies essential to their operations. The heads will work with Global Procurement to identify and establish relationships with back-up vendors and suppliers. The ICS organization will establish protocols to reduce the risk that vendors may spread the flu virus to employees. These protocols will include rules requiring vendors to wear protective gear when entering National Grid facilities during periods that require National Grid employees to do the same.

3.2.6. Data Analytics

The measure of various data points:

- IT Average Response Times
- IT Top 5 Issues by Business Unit
- Employee Pandemic Reported Cases including: Confirmed, Suspected and Exposed.
- Employees Absences by function
- Percentage of Remote Work Force by Executive
- ICS Readiness of BCPs and Pandemic actions completed.
- Resource Request Status
- Contractor Metrics such as absences, vacations, active on property, layoffs and furloughed.
- Health Check Compliance – During Covid (in 2020), employees were required to enter their time with “Home” in the comments section. If they were reporting to the office or the field, they had to fill out a daily MyCority survey attesting to their health.

APPENDIX A: Checklists

APPENDIX A – Checklists

This is a living document that will continually increase in comprehensiveness over time. When activated, the Incident Commander and the various other roles in the ICS should refer to their checklists provided for direction regarding their actions throughout the event. The checklists outline actions for planning, reacting to and recovering from a virus outbreak. A domestic communicable disease which impacts just the United States must also be a consideration in triggering actions identified in the checklists. Key planning actions should be addressed in National Grid's Business Continuity Plans. **Note: where National Grid employees are mentioned, it is assumed that contractors and consultants are included.** See **Appendix G** for acronyms

Incident Commander

Key Actions	Substeps	Date	Initials
PLANNING & PREPAREDNESS			
Maintain Awareness & Communicate			
Review ICS Organization and ensure all roles and names are appropriate.	Work with Emergency Planning to develop the organization chart. Keep to executive leadership on the org chart due to significant impact to customers and employees. Have alternates identified.		
Consider and decide cadence of ICS briefings.	Work with Emergency Planning to schedule briefings.		
Establish Objectives			
Communicate with Executive President and CMT Chair if activated.			
Instruct IC team members to take time to review BCPs and the actions in the Pandemic Phase of the Pandemic plan.			
RESPONSE			
By National Grid when Outbreak Occurs			
Remind team that we are still expected to deliver on all business deliverables despite this scenario.			
Remind IC team members to take time to review BCPs and the actions in the Pandemic Phase of the Pandemic plan			
Activate Plan Forward team and prepare to transfer from and demobilize ICS organization.			
Instruct IC team members to take the time to start bringing their backups up to speed so they can substitute in.			
Make sure we have plans for prioritizing work, be ready to communicate effectively what work will drop off.			
Consider what the impact is to Capex plans.			
RECOVERY			
Advise of change to the phase level and brief CMT (if still activated) on status.			
Demobilize ICS and CMT teams (if still activated at this point). Demobilize Plan Forward team.			

Contact Center

Key Actions	Substeps	Date	Initials
PLANNING & PREPAREDNESS			
Continue to maintain standard BCPs	Update procedures for activating/terminating response plan, altering business operations, and transferring knowledge to key staff		
Maintain Awareness & Communicate			
Notify vendors, Procurement, and local unions.	Put plans in place with the approval of the Contact Center Directors. Call existing vendors. Notify local unions to assist in the procurement of staffing if possible. If unable to, state intention to use outsourced vendors to fill in any gaps.		
RESPONSE			
By National Grid when Outbreak Occurs			
Direct staff to maintain an appropriate distance from each other.			
Assess the need for complete separation of staff including the activation of any backup facilities. This type of event may prevent the workforce from either primary or backup locations so it would require special handling including a temporary increase in the Work at Home Union Staff. Where possible for areas unable to staff union jobs with at home union employees it may be necessary to activate Management employees.	Contact Centers will implement internal backup plans to handle calls with overtime and employ messaging to defer call volume., route calls to Vendors, Northboro Call Center and/or Long Island.		
RECOVERY			
NONE			

Corporate Communications (PIO)

Key Actions	Substeps	Date	Initials
PLANNING & PREPAREDNESS			
Maintain Awareness & Communicate			
Continue to maintain standard BCPs	Update procedures for activating/terminating response plan, altering business operations, and transferring knowledge to key staff		
Continue to coordinate and update information to ensure message consistency and to quickly respond to inaccurate information to minimize concerns.	Continued message/material development and education for personnel		
	Hotline/Listserv e-mail - facts, Q&A		
	Update Grid:Home and other employee social media channels		
Develop communications announcing modification of the frequency and type of face-to-face contact (i.e. handshaking, seating in meetings, shared/close workstations) among and between employees.	Follow CDC Guidance when it is shared		
Communicate early and regularly to employees. Develop communications to make employees aware that the ICS org exists and that we have a Corporate Pandemic Plan in place. Additional communications should include recommendations to minimize potential transfer of infectious agents within company facilities so that these measures can be practiced and internalized.	Utilize Grid:Home and other employee social media channels as communication vehicles (cough etiquette, social distancing, etc.)		
	Develop Safety instructions for field employees on how to clean/disinfect workplaces & trucks; disinfection materials distributed on request.		
	Develop do's and don'ts for those who share vehicles to minimize risk.		
Medical resource shall monitor for health threats via official bulletins or web sites.	Provide regular communication to senior management, employees, labor organizations, staff and decision makers		
	Provide to the groups listed above the latest health advisories/information available by documenting specific characteristics of the contagion and recommend adherence to all suggested actions.		
	Work with H&W and HR/LR to provide to the following to employees: ● Mechanism(s), speed, and ease of transmission by which the contagion is spread, and mode(s) of transmission, such as touch, airborne, etc. ● Time the contagion remains active on surfaces, such as door handles. ● Incubation period, time to exhibit symptoms, and maximum contagious period. ● Expectations of employees, supervisors and managers to help reduce the risk of spreading the disease.		
Set expectations with health team members to elevate any issues to ICS org.	Instruct health team members to report to the ICS org any issues that employees may have in order to determine if a communication is necessary.		
Develop Plans			
Develop an emergency communications plan that includes key contacts, back-ups, medical contacts, communication chains and processes to track and communicate business and employee status.	Corporate Comms would assist in crafting message to departments to confirm internal departmental call trees and email distribution lists; Each department would be responsible for conducting their own drill of the call trees / email dist. lists.		

	Utilize Everbridge (emergency notification tool), email, etc.		
Plan and procedures shall include providing support and assistance from Human Resources staff to employee families.	Review current FAQs (on Grid:Home but not live until activated during a pandemic) addressing answers to anticipated questions and update where necessary; distribute to employees upon outbreak. Include names and #s of helpful agencies or support services that the employee's family may want to contact.		
Equipment, Facilities & Inventory			
Provide each workstation with a disinfecting agent	Establish procedures for maintaining equipment and facility infrastructure - Corporate Comms shall assist in sending message to employees once procedures are established.		
Advise that antibacterial waterless hand cleaner, antibacterial cleansers, and/or wipes will be placed at key communal areas (washrooms, kitchens, workstations).			
Recommend that the company plane be limited to critical business need and approved by Band B.			
Develop Policies			
Corporate Communications is responsible to communicate any developed policies as and when directed to do so.			
Develop policy on formal documentation of significant business decisions made during pandemic outbreak, disruption and recovery phases. Significant decisions impacting employees (e.g. time, pay, benefits, etc. will need to be communicated to Financial Services and Business Services to ensure intended effect is carried through.	● Business decisions made by the ICS org will be communicated by Corporate Comms (communication distributions) and EP (strategic plan updates). ● High level decisions will be made & documented by CMT.		
RESPONSE			
Maintain Awareness and Communicate			
Medical resource should monitor for health threats via official bulletins or web sites. Provide regular communication to senior management, employees, labor organizations, staff and decision makers, as well as the latest health advisories and most up-to-date information available by documenting specific characteristics of the contagion and recommend adherence to all suggested actions.	● Mechanism(s), speed, and ease of transmission by which the contagion is spread, and mode(s) of transmission, such as touch, airborne, etc. ● Time the contagion remains active on surfaces, such as door handles. ● Incubation period, time to exhibit symptoms, and maximum contagious period. ● Expectations of employees, supervisors and managers to help reduce the risk of spreading the disease.		
Response Actions			
By Employees			
When an employee has contracted or suspects that they have contracted a virus or have been exposed to a virus, the employee is to seek medical attention and advise his/her supervisor.	● Absence reporting will follow existing protocol. Reporting may require disclosure of flu-like symptoms ● Sedgwick to monitor & contact designee ● Develop backup plan if Sedgwick is compromised *H&W will disseminate aggregate data from Sedgwick for corporate wide distribution but due to HIPAA, names will not be released.		
By National Grid when Outbreak Occurs			
Company medical or occupational health nurse to follow up on the employees and notify supervisor. Follow current protocol with vendor (Sedgwick/NG's managed service provider; accelerate notice to supervisor as required.	Absence reporting will follow existing protocol. Absence reporting may require disclosure of flu-like symptoms.		

	*H&W will disseminate aggregate data from Sedgwick for corporate wide distribution but due to HIPAA, names will not be released.		
If appropriate, contract a cleaning service/agency and request the disinfection of the affected employee's workstation and shared work areas as well as all shared equipment and facilities (including washrooms, kitchen areas and meeting rooms). Assess the need for separation of staff.	Disinfecting of offices & trucks; reinforce disinfecting practices to employees. Provide instruction to field forces on disinfecting practices. *Communication tasks should be combined with a larger communication so as not to inundate employees with multiple messages.		
Close non-critical common areas, such as exercise room, or the cafeteria. If the pandemic has resulted in a "lock down" in critical operating functions (control rooms), determine how employees will be accommodated.	● Identify common areas by facility ● Review the cafeteria's Pandemic Plan ● Enhanced PPE's for food service workers - self-provided ● Track contractor absences ● Consider requesting the cafeteria limit the menu ● If on-site cafeteria, stock up on water, beverages, and food, especially items that require heating. *Communication tasks should be combined with a larger communication so as not to inundate employees with multiple messages.		
Establish PIO (Public Information Officer) Structure to develop broader communications to both internal and external stakeholders.	● Develop key messages and talking points in advance to respond to potential inquiries by media / news outlets, regulatory bodies and government officials. ● Develop comms aimed at our customers for both CMS and the Call Centers as to the steps we are taking to protect the safety of our customers and the employees.		
Direct staff to maintain an appropriate distance from each other.	*Communication tasks should be combined with a larger communication so as not to inundate employees with multiple messages.		
Provide each workstation with a disinfecting agent. Have each shift employee wipe down all equipment and surfaces before and after each shift.	● Office disinfection plan for employees' workplaces - 1 wipe per day distributed by janitorial staff in evenings ● Truck disinfection plan for Ops employees ● Distribute instruction to employees how to clean /disinfect office/trucks, etc.		
Provide regular communication to all staff of the latest medical advisories and recommend adherence to all actions suggested.	● Daily scan of WHO / Pandemic.gov websites ● Post updates on Grid:Home and other employee social media channels.		
Notify all staff on site to leave their full name, employee ID, and after-hours contact number(s), including numbers where they may potentially be located, such as parents, other family etc. Instruct all employees when they will be allowed to return to work, i.e. the following business day, not until notified, etc.	Supervisors will report this information to Employee Services to maintain in SAP.		
Provide accounting and time entry guidance and treatment for company to charge their time during pandemic event to ensure accurate reporting. See Appendix F of the Pandemic Plan.	• Build comprehensive communication plan utilizing several channels- email, yammer, at-a-glance, live & recorded Web-ex meetings. • Execute communication plan on accounting, time entry, and any applicable expense account guidance for employee population • Tax implication guidance		
Maintain Awareness and Communicate			
Identify the most effective surveillance and control measures for subsequent waves	If necessary, communicate out any mitigation steps and measures used to defend again subsequent waves.		
Develop Policies			
Corporate Communications is responsible to communicate any developed policies as and when directed to do so.			
Implement Staffing Plans			

Ensure that overworked staff have opportunities for rest and recuperation	As necessary, develop messaging to be sent to Management to cascade to employees.		
RECOVERY			
Maintain Awareness and Communicate			
Continue to communicate and reassure employees of the recovery process.	Develop and distribute communications to US employees of the transition from a response phase to a recovery phase.		
Continue surveillance to detect subsequent waves and maintain awareness by effective communication methods			
Demobilize			
Transition to BAU Financial practices	Communication on transition back to pre-event accounting, time entry and expense account procedures		

Corporate Security

Key Actions	Substeps	Date	Initials
PLANNING & PREPAREDNESS			
Continue to maintain standard BCPs	Update procedures for activating/terminating response plan, altering business operations, and transferring knowledge to key staff		
Maintain Awareness & Communicate			
Discuss with Corporate Security staff regarding promoting awareness of International SOS *International SOS is a travel vendor that NGrid uses and also offers free information to the public. It also offers an iPhone app. You don't have to be a member to access these tools.	● Make employees aware of this service. ● Develop a communication or a pamphlet to let employees know about this service.		
Develop Plans			
Consider security issues and the limitations law enforcement agencies will face during an influenza pandemic.	Adjust National Grid's plans to be more self-contained (Work Prioritization, investigations cease unless priority, contact security companies for additional support.)		
Develop Policies			
Develop a visitor's policy including a sign-in process that is to be implemented in the event of an employee health incident or threat.	Security to develop procedure for screening employees & visitors entering the building during cluster outbreak Pandemic Period. This can be done quickly when an event occurs. We could use the current visitor log for this.		
RESPONSE			
By National Grid when Outbreak Occurs			
Implement a process such that all visitors entering critical facilities are subject to an appropriate screening questionnaire to aid in identifying whether they are a potential risk, (i.e., have you visited a high-risk location in the past week?). Post screening questionnaire(s) at all entrances.	Post screen procedures: instruct guards on the procedures		
If appropriate, isolate the building, post signs stating temporary quarantine at all exits, and suspend electronic card access.			
Notify all staff on site to leave their full name, employee ID, and after-hours contact number(s), including numbers where they may potentially be located, such as parents, other family etc. Instruct all employees when they will be allowed to return to work, i.e. the following business day, not until notified, etc.	Supervisors will report this information to Employee Services to maintain in SAP.		
Provide support for PPE Distribution if requested by H&W and Logistics.			
RECOVERY			
NONE			

Emergency Planning & Resiliency

Key Actions	Substeps	Date	Initials
PLANNING & PREPAREDNESS			
Maintain Awareness & Communicate			
Continue to maintain standard BCPs	Update procedures for activating/terminating response plan, altering business operations, and transferring knowledge to key staff		
Continue to coordinate and update information to ensure message consistency and to quickly respond to inaccurate information to minimize concerns.	Continued message/material development and education for personnel		
Identify those functions critical to continue operations and identify the people needed to fill those positions. Cross train personnel and review outsourcing options for critical functions.	Identify Critical Functions and notify employees when they should begin to limit exposure to the public.		
	Review and update BCPs where necessary		
	Conduct training & drilling		
Create incident in WebEOC and grant access to ICS org.	Create incident in WebEOC, the virtual emergency operations center, for up to the minute status reports, statistics, significant events, actions, lessons learned, etc.		
Develop Plans			
Initiate conditions for the recognition of the threat, and appropriate response levels.	Identify critical functions of the organization that must be kept in operation, e.g. control rooms, system switching.		
	Identify functions of the organization that can be suspended, e.g. meter reading [consider resulting need to estimate bills], training, etc. *Engage BCP Leads to convey information to the Business		
	Establish members of the Crisis Management Team who will monitor operations during outbreak response and recovery.		
Define the roles and responsibilities of employees, labor organizations, staff, supervisors, managers, staff medical personnel during a pandemic.	Ensure all Departments review and update Staffing Plans		.
Develop an emergency communications plan that includes key contacts, back-ups, medical contacts, communication chains and processes to track and communicate business and employee status.	Corporate Comms would assist in crafting message to departments to confirm internal departmental call trees and email distribution lists; Each department would be responsible for conducting their own drill of the call trees / email dist. lists.		
Put plans in place to have an increased number of employees work from their home. Ensure IT is prepared to support this action.			
Consider the need to send home non-critical staff. *Recommendation w/CMT ratification	Determine trigger for closing work location and compensation issues if sending employees home. BU leadership decision to tell employees to stay home.		
Initiate a BCP process to establish accountabilities, and identify the criticality of operations including mutual inter-dependencies, the loss of which would have a direct and serious detrimental impact on the public. The occurrence of a severe storm or other electric emergency during a pandemic should be considered.	Work with other utilities (PSC's Pandemic Planning Summit); Industry consensus on mutual aid during outbreak.		
Drills & Exercises			
Periodically test and verify preparedness plans and procedures via a simulation exercise, tabletop exercise or process walk through.	Exercise the ICS org to familiarize team members with their roles and uncover any gaps or deficiencies in the plan.		

	Departments without a staffing strategy will be asked to complete a staffing plan, train & drill to prepare them for possible influenza outbreaks		
Develop Policies			
Develop policy on formal documentation of significant business decisions made during pandemic outbreak, disruption and recovery phases.	● Business decisions made by the ICS org will be communicated by Corporate Comms (communication distributions) and EP (strategic plan updates). ● High level decisions will be made & documented by CMT. *Significant decisions impacting employees (e.g. time, pay, benefits, etc. will need to be communicated to Financial Services and Business Services to ensure intended effect is carried through.		
Implement Plans			
Governments and electricity sector entities begin to assign resources, ready staffing and implement contingency plans. Begin an information distribution program to promote appropriate responses by employees, including sharing of policy.)	Ready staffing		
RESPONSE			
Maintain Awareness and Communicate			
Review/revise plans in anticipation of subsequent wave(s)			
Work with Legal to monitor any state border closures and/or travel restrictions between states.			
RECOVERY			
Maintain Awareness and Communicate			
Advise of change to the phase level & brief Crisis Management Team on status			
Continue surveillance to detect subsequent waves and maintain awareness by effective communication methods			
Demobilize			
Demobilize ICS Pandemic and Crisis Management teams			
Update Plans			
Conduct an After Action Review and cascade lessons learned to the ICS org and Crisis Management Team	Where necessary, update BCPs, Pandemic Plan and Group Crisis Management Framework as a result of lessons learned.		

Employee Services (Business Services)

Key Actions	Substeps	Date	Initials
PLANNING & PREPAREDNESS			
Continue to maintain standard BCPs	Update procedures for activating/terminating response plan, altering business operations, and transferring knowledge to key staff		
Develop Policies			
Develop/update policies for employee compensation and sick-leave absences unique to a pandemic. Employee Services department will need to be advised of this in advance in order to support employee questions and to also communicate to our Benefit Administrator Vendor.	Consider amendments to existing policies; identify triggers for release of these policies.		
RESPONSE			
Maintain Awareness and Communications			
Notify all staff on site to leave their full name, employee ID, and after-hours contact number(s), including numbers where they may potentially be located, such as parents, other family etc. Instruct all employees when they will be allowed to return to work, i.e. the following business day, not until notified, etc.	Supervisors will report this information to Employee Services to maintain in SAP. There is functionality through Employee Self Service (ESS) or via form entry to update the employee's Emergency Address		
RECOVERY			
NONE			

Facilities

Key Actions	Substeps	Date	Initials
PLANNING & PREPAREDNESS			
Maintain Awareness & Communicate			
Continue to maintain standard BCPs	Update procedures for activating/terminating response plan, altering business operations, and transferring knowledge to key staff		
Equipment, Facilities & Inventory			
Contract with a company that will clean/disinfect computer equipment, common areas, work stations, etc.			
Provide disinfecting agent for employees to clean their workstation, collaboration and conference room areas.	Establish procedures for maintaining equipment and facility infrastructure - Corporate Comms shall assist in sending message to employees once procedures are established.		
Advise that antibacterial waterless hand cleaner, antibacterial cleansers, and/or wipes will be placed at key communal areas (washrooms, kitchens, workstations).			
Develop communications to employees regarding what office equipment can and can't be taken for remote work.	If employees are mandated to work remotely, office desks and chairs may not be taken home. If a desk or chair is needed for medical reasons, employees can contact Employee Health Services who in turn will direct Facilities to ship a desk or chair for medical reasons to use at home.		
RESPONSE			
By National Grid when Outbreak Occurs			
Implement a process such that all visitors entering critical facilities are subject to an appropriate screening questionnaire to aid in identifying whether they are a potential risk, (i.e., have you visited a high-risk location in the past week?). Post screening questionnaire(s) at all entrances.	Post screen procedures; instruct guards to screen incoming employees and any visitors		
If appropriate, contract a cleaning service/agency and request the disinfection of the affected employee's workstation and shared work areas as well as all shared equipment and facilities (including washrooms, kitchen areas and meeting rooms). Assess the need for separation of staff.	Disinfecting of offices & trucks; reinforce disinfecting practices to employees. Provide instruction to field forces on disinfecting practices.		
Close non-critical common areas, such as exercise room, or the cafeteria. If the pandemic has resulted in a "lock down" in critical operating functions (control rooms), determine how employees will be accommodated.	● Identify common areas by facility ● Review the cafeteria's Pandemic Plan ● Enhanced PPE's for food service workers - self-provided ● Track contractor absences ● Consider requesting the cafeteria limit the menu ● If on-site cafeteria, stock up on water, beverages, and food, especially items that require heating.		
Direct staff to maintain an appropriate distance from each other.			
Provide disinfecting agent for employees to clean their workstation, collaboration and conference room areas	● Office disinfection plan for employees' workplaces - 1 wipe per day distributed by janitorial staff in evenings ● Truck disinfection plan for Ops employees ● Distribute instruction to employees how to clean / disinfect office/trucks, etc.		
Provide on-site critical operations staff with personal protective equipment.	Activate disinfection procedures for Super-Critical processes (24/7 centers)		
If appropriate, isolate the building, post signs stating temporary quarantine at all exits, and suspend electronic card access.			
Equipment and Facilities			

If appropriate, isolate the building, post signs stating temporary quarantine at all exits, and restrict electronic card access to critical staff.			
Communicate to employees regarding what office equipment can and can't be taken for remote work.	If employees are mandated to work remotely, office desks and chairs may not be taken home. If a desk or chair is needed for medical reasons, employees can contact Employee Health Services who in turn will direct Facilities to ship a desk or chair for medical reasons to use at home.		
RECOVERY			
NONE			

Finance

Key Actions	Substeps	Date	Initials
PLANNING & PREPAREDNESS			
Maintain Awareness & Communicate			
Continue to maintain standard BCPs	Update procedures for activating/terminating response plan, altering business operations, and transferring knowledge to key staff		
Develop Plans			
Develop decision making process involving finance to ensure reasonability and sound financial stewardship	**Finance/BU heads**: Any potential significant financial transactions caused by pandemic Finance to collaborate with BU's to guide strategic decisions making to drive accuracy & accountability (Ex: procurement purchasing; material, vendor contracts & fiscal agreements).		
Identify and prep proper accounting for Incident Command Structure (ICS) and business to charge their time towards a potential future pandemic event. See Appendix F of the Pandemic Plan for templates.	**Finance/ Payroll:** Payroll develop blank accounting codes to ensure structure in properly capturing costs specific to address the sequestered employees, union and all other management population.		
Perform financial SOX controls risk assessment	**Finance RCC/Controllership:** Distribute controls assessment survey to all key control owners, operators, and reviewers to determine potential risks to continue control operations as a result of the change in working practices.		
RESPONSE			
By National Grid when Outbreak Occurs			
Provide accounting and time entry guidance and treatment for company to charge their time during pandemic event to ensure accurate reporting. See Appendix F of the Pandemic Plan for templates.	**Finance/ Corporate communications:** • Build comprehensive communication plan utilizing several channels- email, yammer, at-a-glance, live & recorded Web-ex meetings. • Execute communication plan on accounting, time entry, and any applicable expense account guidance for employee population • Tax implication guidance		
Identify and activate Financial team to collect data to track incremental costs, spending, and accruals	**Finance Business Partnering/Controllership:** • Team to monitor, track and report out costs (incurred, estimate remaining, employee hours charged, sequestering impacts, consultant spend, stranded CAPEX) to ICS • Communicate financial reporting updates, close, and capital impacts to Business Units (sequestering, OT, etc.) to drive decision making • Lead approach for controlling costs in conjunction with Business units in managing event		
Develop a Finance committee to quantify pandemic risks and identify scenarios to understand potential impacts	**FBP, FP&A, Controllership, Customer, Business Services, Procurement, Treasury:** • Develop and build scenario planning into forecasting modeling for future business planning • Analyze cost scenarios and funding sourcing • Bad debt reserve and cash flow projection impacts Managing potential cash flow issues and liquidity		
Manage monthly close, reporting, and audit processes (*depending on event timing*)	**Controllership:** • Within Finance Controllership and Business Services appoint one single point of contact • Institute a hard-close		

RECOVERY			
Demobilize			
Transition to BAU Financial practices	**Finance/ Corporate communications:** Communication on transition back to pre-event accounting, time entry and expense account procedures		
Regulatory follow-up (similar to storm quality review)	**Finance/ Regulatory:** Support regulatory filing and after-action reviews Analyze event related costs		

Health & Wellness

Key Actions	Substeps	Date	Initials
PLANNING & PREPAREDNESS			
Maintain Awareness & Communicate			
Continue to maintain standard BCPs	Update procedures for activating/terminating response plan, altering business operations, and transferring knowledge to key staff		
Continue to coordinate and update information to ensure message consistency and to quickly respond to inaccurate information to minimize concerns.	Continued message/material development and education for personnel		
Develop communications announcing modification of the frequency and type of face-to-face contact (i.e. handshaking, seating in meetings, shared/close workstations) among and between employees.	Follow CDC Guidance when it is shared		
Identify those functions critical to continue operations and identify the people needed to fill those positions. Cross train personnel, review outsourcing options for critical functions.	Identify Critical Functions and notify employees when they should begin to limit exposure to the public.		
Develop a medical roll-out plan for health office procedures, vaccine distribution, patient care, and protection of health care workers.	● Determine vaccine distribution prioritization for key pandemic emergency personnel focusing first on those working on critical processes and factoring disease transmission vectors ● Health & Wellness added to critical worker list ● Develop guidance for supervisors on steps to take if employees become ill at work		
Communicate early and regularly to employees. Develop communications to make employees aware that the ICS org exists and that we have a Corporate Pandemic Plan in place. Additional communications should include recommendations to minimize potential transfer of infectious agents within company facilities so that these measures can be practiced and internalized.	Utilize Grid:Home and other employee social media channels as communication vehicles (cough etiquette, social distancing, etc.)		
	Develop Safety instructions for field employees on how to clean/disinfect workplaces & trucks; disinfection materials distributed on request.		
	Develop do's and don'ts for those who share vehicles to minimize risk.		
Medical resource shall monitor for health threats via official bulletins or web sites.	Provide regular communication to senior management, employees, labor organizations, staff and decision makers		
	Provide to the groups listed above the latest health advisories/information available by documenting specific characteristics of the contagion and recommend adherence to all suggested actions.		
	Work with H&W and HR/LR to provide to the following to employees: ● Mechanism(s), speed, and ease of transmission by which the contagion is spread, and mode(s) of transmission, such as touch, airborne, etc. ● Time the contagion remains active on surfaces, such as door handles. ● Incubation period, time to exhibit symptoms, and maximum contagious period. ● Expectations of employees, supervisors and managers to help reduce the risk of spreading the disease.		

Set expectations with health team members to elevate any issues to ICS org.	Instruct health team members to report to the ICS org any issues that employees may have in order to determine if a communication is necessary.		
Develop Plans			
	Evaluate employee access to and knowledge of mental health and other support services		
	Encourage and track annual seasonal influenza vaccinations for employees		
Define the roles and responsibilities of employees, labor organizations, staff, supervisors, managers, staff medical personnel during a pandemic.	Medical staff to develop health office procedures		
	Supervisors/Managers assist with absence monitoring and reporting to Health *Union Supervisors call Labor Relations concerning absence monitoring, such as how to report an absence and the process to return to work. Employee Services could be positioned to support Labor Relations.		
	Obtain State Health Dept Pandemic Plans		
Develop an emergency communications plan that includes key contacts, back-ups, medical contacts, communication chains and processes to track and communicate business and employee status.	Develop and maintain a current list of names and numbers of appropriate Health Department personnel at State and County levels.		
	Corporate Comms would assist in crafting message to departments to confirm internal departmental call trees and email distribution lists; Each department would be responsible for conducting their own drill of the call trees / email dist. lists.		
Equipment, Facilities & Inventory			
Maintain a three-day supply of personal protective equipment, ready for deployment to identified critical personnel *See Appendix D	Determine employee counts in customer facing (CMS) and 24-hour operations (Dispatch, Control Centers, Call Centers)		
Provide each workstation with a disinfecting agent	Establish procedures for maintaining equipment and facility infrastructure - Corporate Comms shall assist in sending message to employees once procedures are established.		
Determine what personal protective equipment will be effective and consider acquiring sufficient quantities (masks, gloves and wipes). Availability of critical personal protective equipment may approach zero during the onset of an influenza pandemic. *See Appendix D The CDC recommends NIOSH approved **N95** disposable face masks. These face masks have a shelf life of 5 yrs from the date of manufacture assuming they are stored in the original packaging. Note: Each employee will need to be “Fit Tested” in order to wear a mask. Fit tests can be conducted by a NG Nurse Practitioner or outside vendor and take 15 minutes per test. Masks are disposable and are intended to be worn continuously until visibly soiled. CMS will need to ensure an ample supply of masks and should assume 2 masks per day on average.	● Assess best products for use ● Assess necessary quantities		

For airborne protection and touching door knobs and other items, add masks and gloves when not working in a flammable electric or gas situation. We still must continue to wear all appropriate PPE and these or any other protection either must come off when the procedure dictates or be flame resistant.			
	● Assess necessary PPE for CMS Org when entering customer facilities/homes (but is not required for outdoor work). ● Masks can be requested for crew locations, or internal use within the warehouses they reside in themselves if the need arises. ● Respirators: if the need arises, then a bulletin/notice from the Pandemic Strategy team should be sent out with instructions and a reference to the specific material #'s we are keeping in stock. Once this happens then employees will put in their own shopping cart orders to request a delivery to their worksites.		
	● Work with Global Procurement to acquire goods & have them stocked in predesignated locations. ● Obtain instructions on where and how to dispose of these products.		
Assess vaccine availability and procurement options *Government supplies will be distributed according to CDC determination of at-risk populations, not infrastructure need	● Determine if vaccine has been developed and released ● Determine if anti-virals are recommended or available ●Determine if supply is available on open market or government controlled		
Develop Policies			
Corporate Communications is responsible to communicate any developed policies as and when directed to do so.			
Develop/update staff travel policy, including possible provisions for quarantine after returning from an area where an outbreak has occurred. This would apply to work and non-work-related travel. * Follow CDC Guidance when it is shared. HR to write the policy, and H&W to provide advice.	Travel restrictions should follow federal and local guidelines as monitored by S&H.		
Develop/update policy for sharing information with essential governmental authorities (Health Department, Law Enforcement, Emergency Management, etc.)	HIPPA Regulations		
Consult with health authorities to update confidentiality policies to manage staff that potentially has been exposed, to allow effective exposure tracking to be completed. Establish reporting mechanism internally and externally with recordkeeping	Contact Sedgwick & Pontoon & develop a reporting plan.		
Governments and electricity sector entities begin to assign resources, ready staffing and implement contingency plans. Begin an information distribution program to promote appropriate responses by employees, including sharing of policy.)	Take direction from Government Health Agencies and CMT.		
RESPONSE			
Maintain Awareness and Communicate			
Medical resource should monitor for health threats via official bulletins or web sites. Provide regular communication to senior management, employees, labor organizations, staff and decision makers, as well as the latest health advisories and most up-to-date information available by documenting specific characteristics of the	● Mechanism(s), speed, and ease of transmission by which the contagion is spread, and mode(s) of transmission, such as touch, airborne, etc. ● Time the contagion remains active on surfaces, such as door handles. ● Incubation period, time to exhibit symptoms, and maximum contagious period.		

contagion and recommend adherence to all suggested actions.	● Expectations of employees, supervisors and managers to help reduce the risk of spreading the disease.		
Work with Legal to monitor any state border closures and/or travel restrictions between states.			
Response Actions			
By Employees			
When an employee has contracted or suspects that they have contracted a virus or have been exposed to a virus, the employee is to seek medical attention and advise his/her supervisor.	● Absence reporting will follow existing protocol. Reporting may require disclosure of flu-like symptoms ● Sedgwick to monitor & contact designee ● Develop backup plan if Sedgwick is compromised *H&W will disseminate aggregate data from Sedgwick for corporate wide distribution but due to HIPAA, names will not be released.		
By National Grid when Outbreak Occurs			
Advise the exposed or infected employees to contact their doctor and notify their supervisor.	Absence reporting will follow existing protocol. Absence reporting may require disclosure of flu-like symptoms *H&W will disseminate aggregate data from Sedgwick for corporate wide distribution but due to HIPAA, names will not be released.		
Company medical or occupational health nurse to follow up on the employees and notify supervisor. Follow current protocol with vendor (Sedgwick/NG's managed service provider; accelerate notice to supervisor as required.	Absence reporting will follow existing protocol. Absence reporting may require disclosure of flu-like symptoms. *H&W will disseminate aggregate data from Sedgwick for corporate wide distribution but due to HIPAA, names will not be released.		
If appropriate, contract a cleaning service/agency and request the disinfection of the affected employee's workstation and shared work areas as well as all shared equipment and facilities (including washrooms, kitchen areas and meeting rooms). Assess the need for separation of staff.	Disinfecting of offices & trucks; reinforce disinfecting practices to employees. Provide instruction to field forces on disinfecting practices. *Communication tasks should be combined with a larger communication so as not to inundate employees with multiple messages.		
Close non-critical common areas, such as exercise room, or the cafeteria. If the pandemic has resulted in a "lock down" in critical operating functions (control rooms), determine how employees will be accommodated.	● Identify common areas by facility ● Review the cafeteria's Pandemic Plan ● Enhanced PPE's for food service workers - self-provided ● Track contractor absences ● Consider requesting the cafeteria limit the menu ● If on-site cafeteria, stock up on water, beverages, and food, especially items that require heating. *Communication tasks should be combined with a larger communication so as not to inundate employees with multiple messages.		
Direct staff to maintain an appropriate distance from each other.	*Communication tasks should be combined with a larger communication so as not to inundate employees with multiple messages.		
Provide each workstation with a disinfecting agent. Have each shift employee wipe down all equipment and surfaces before and after each shift.	● Office disinfection plan for employees' workplaces - 1 wipe per day distributed by janitorial staff in evenings ● Truck disinfection plan for Ops employees ● Distribute instruction to employees how to clean /disinfect office/trucks, etc.		
Provide regular communication to all staff of the latest medical advisories and recommend adherence to all actions suggested.	● Daily scan of WHO / Pandemic.gov websites ● Post updates on Grid:Home and other employee social media channels.		
Provide on-site critical operations staff with personal protective equipment.	Activate disinfection procedures for Super-Critical processes (24/7 centers)		
If appropriate, isolate the building, post signs stating temporary quarantine at all exits, and suspend electronic card access.	Supervisors will report this information to Employee Services to maintain in SAP.		

By Medical Resource			
Advise any exposed employee to contact their doctor and to adhere to the advice given.	Absence reporting will follow existing protocol. Reporting may require disclosure of flu-like symptoms (confirm if HIPAA exemption applies).		
Advise any exposed employee to contact their direct supervisor immediately, even if already working from home under provisions of their departmental pandemic plan.	Once exposed and IF sent home, employee will coordinate return to work with **Sedgwick** and Health & Wellness. **Sedgwick** must be notified by any employee who is sent home by the Company.		
Ill employees not to return to work until fever free 24 hours w/o fever reducing meds. Then follow return to work policies in place. Employees must keep supervisors informed of their condition throughout absence.	Absence reporting will follow existing protocol. Absence reporting may require disclosure of flu-like symptoms (confirm if HIPAA exemption applies). The reintegration process may include not only obtaining doctor's clearance but an additional screening by NGrid Nurse Practitioner as well.		
Medical staff siting shall be reviewed daily to determine where in-house medical support is most needed. Consider absence hot spots and factor in the availability of local clinics/medical resources. There is more risk to field employees if they make contact with customers in their homes and business.			
Maintain Awareness and Communicate			
Identify the most effective surveillance and control measures for subsequent waves	If necessary, communicate out any mitigation steps and measures used to defend again subsequent waves.		
Review/revise plans in anticipation of subsequent wave(s)			
Develop Policies			
Provide guidance on ways to optimize patient care with limited resources	Supervisor Guidance - send home if infected and Nurse Practitioners are unavailable.		
Implement Staffing Plans			
Ensure that overworked staff have opportunities for rest and recuperation	As necessary, develop messaging to be sent to Management to cascade to employees.		
RECOVERY			
Maintain Awareness and Communicate			
Advise of change to the phase level & brief Crisis Management Team on status			
Continue to communicate and reassure employees of the recovery process.	Develop and distribute communications to US employees of the transition from a response phase to a recovery phase.		
Continue surveillance to detect subsequent waves and maintain awareness by effective communication methods			
Continue to support employees, contractors and external stakeholders with ongoing issues.	Continue absence reporting and coordination with Sedgwick		
Demobilize			
NONE			

Human Resources / Labor Relations

<table>
<tr><th>Key Actions</th><th>Substeps</th><th>Date</th><th>Initials</th></tr>
<tr><td colspan="4">PLANNING & PREPAREDNESS</td></tr>
<tr><td colspan="4">Maintain Awareness & Communicate</td></tr>
<tr><td>Continue to maintain standard BCPs</td><td>Update procedures for activating/terminating response plan, altering business operations, and transferring knowledge to key staff</td><td></td><td></td></tr>
<tr><td rowspan="3">Continue to coordinate and update information to ensure message consistency and to quickly respond to inaccurate information to minimize concerns.</td><td>Continued message/material development and education for personnel</td><td></td><td></td></tr>
<tr><td>Hotline/Listserv e-mail - facts, Q&A</td><td></td><td></td></tr>
<tr><td>Update Grid:Home and other employee social media channels</td><td></td><td></td></tr>
<tr><td>Develop a medical roll-out plan for health office procedures, vaccine distribution, patient care, and protection of health care workers.</td><td>● Determine vaccine distribution prioritization for key pandemic emergency personnel focusing first on those working on critical processes and factoring disease transmission vectors
● Health & Wellness added to critical worker list
● Develop guidance for supervisors on steps to take if employees become ill at work</td><td></td><td></td></tr>
<tr><td>Communicate early and regularly to employees. Develop communications to make employees aware that the ICS org exists and that we have a Corporate Pandemic Plan in place. Additional communications should include recommendations to minimize potential transfer of infectious agents within company facilities so that these measures can be practiced and internalized.</td><td>Utilize Grid:Home and other employee social media channels as communication vehicles (cough etiquette, social distancing, etc.)

● Develop Safety instructions for field employees on how to clean/disinfect workplaces & trucks; disinfection materials distributed on request.

● Develop do's and don'ts for those who share vehicles to minimize risk.

*Corp Comms - Send out direct email updates only when something specific or important happens; don't inundate employees with unnecessary info. Otherwise use website. Possibly an email box. Supervisors need to post where employees do not have email access.</td><td></td><td></td></tr>
<tr><td rowspan="3">Medical resource shall monitor for health threats via official bulletins or web sites.

H&W will need to work with Corporate Comms and HR / LR to provide employees with necessary information.</td><td>Provide regular communication to senior management, employees, labor organizations, staff and decision makers</td><td></td><td></td></tr>
<tr><td>●Provide to the groups listed above the latest health advisories/information available by documenting specific characteristics of the contagion and recommend adherence to all suggested actions.</td><td></td><td></td></tr>
<tr><td>● Mechanism(s), speed, and ease of transmission by which the contagion is spread, and mode(s) of transmission, such as touch, airborne, etc.
● Time the contagion remains active on surfaces, such as door handles.
● Incubation period, time to exhibit symptoms, and maximum contagious period.
● Expectations of employees, supervisors and managers to help reduce the risk of spreading the disease.</td><td></td><td></td></tr>
<tr><td colspan="4">Develop Plans</td></tr>
<tr><td rowspan="2">Define the roles and responsibilities of employees, labor organizations, staff, supervisors, managers, staff medical personnel during a pandemic.</td><td>Cross-trained staff can support functions as needed</td><td></td><td></td></tr>
<tr><td>Supervisors/Managers assist with absence monitoring and reporting to Health</td><td></td><td></td></tr>
</table>

Union Supervisors call Labor Relations concerning absence monitoring, such as how to report an absence and the process to return to work. Employee Services could be positioned to support Labor Relations.	Labor Relations to discuss with Union leaders		
Develop an emergency communications plan that includes key contacts, back-ups, medical contacts, communication chains and processes to track and communicate business and employee status.	Corporate Comms would assist in crafting message to departments to confirm internal departmental call trees and email distribution lists; Each department would be responsible for conducting their own drill of the call trees / email dist. lists.		
Plan and procedures shall include providing support and assistance from Human Resources staff to employee families. Vendor under PO: ● Employee Assistance Program provides referrals for multiple services to employees and families	Employees families shall have access to the Employee Services call center for assistance in reporting absences or questions about benefits.		
	Review current FAQs (on Grid:Home but not live until activated during a pandemic) addressing answers to anticipated questions and update where necessary; distribute to employees upon outbreak. Include names and #s of helpful agencies or support services that the employee's family may want to contact.		
Evaluate potential insurance costs for increased medical costs.	Based on total members, estimate number affected at 33%, cost to dx and treat estimated to be at least **1,000,000** with hospitalization expected to be an additional **80k** per episode.		
Evaluate budgetary implications for overtime and/or additional salary issues related to fulfilling tasks of unavailable staff.			
Consider the need to send home non-critical staff.	Determine trigger for closing work location and compensation issues if sending employees home. BU leadership decision to tell employees to stay home.		
Equipment, Facilities & Inventory			
Provide each workstation with a disinfecting agent	Establish procedures for maintaining equipment and facility infrastructure - Corporate Comms shall assist in sending message to employees once procedures are established.		
Determine what personal protective equipment will be effective and consider acquiring sufficient quantities (masks, gloves and wipes). Availability of critical personal protective equipment may approach zero during the onset of an influenza pandemic.	● Assess best products for use ● Assess necessary quantities		
	● Assess necessary PPE for CMS Org when entering customer facilities/homes (but is not required for outdoor work). ● Masks can be requested for crew locations, or internal use within the warehouses they reside in themselves if the need arises. ● Respirators: if the need arises, then a bulletin/notice from the Pandemic Strategy team should be sent out with instructions and a reference to the specific material #'s we are keeping in stock. Once this happens then employees will put in their own shopping cart orders to request a delivery to their worksites.		
Advise that antibacterial waterless hand cleaner, antibacterial cleansers, and/or wipes will be placed at key communal areas (washrooms, kitchens, workstations).			
Develop Policies			
Corporate Communications is responsible to communicate any developed policies as and when directed to do so.			
Develop/update staff travel policy, including possible provisions for quarantine after returning from an area where an outbreak has occurred. This would apply to work and non-work-related travel.			

Consult with health authorities to update confidentiality policies to manage staff that potentially has been exposed, to allow effective exposure tracking to be completed. Establish reporting mechanism internally and externally with recordkeeping	Contact Sedgwick & Pontoon & develop a reporting plan.		
Develop/update telecommuting policy for office staff.			
Develop/update policies for employee compensation and sick-leave absences unique to a pandemic. Employee Services department will need to be advised of this in advance in order to support employee questions and to also communicate to our Benefit Administrator Vendor.	Consider amendments to existing policies; identify triggers for release of these policies.		
Develop policy on formal documentation of significant business decisions made during pandemic outbreak, disruption and recovery phases. Significant decisions impacting employees (e.g. time, pay, benefits, etc. will need to be communicated to Financial Services and Business Services to ensure intended effect is carried through.	● Business decisions made by the ICS org will be communicated by Corporate Comms (communication distributions) and EP (strategic plan updates). ● High level decisions will be made & documented by CMT.		
Implement Policies			
Develop/update workforce deployment policies regarding teams and crews working together and the potential need to keep employees separated. *w/guidance from H&W	Communicate cleaning policy for field workers sharing trucks.		
RESPONSE			
Maintain Awareness and Communicate			
Medical resource should monitor for health threats via official bulletins or web sites. Provide regular communication to senior management, employees, labor organizations, staff and decision makers, as well as the latest health advisories and most up-to-date information available by documenting specific characteristics of the contagion and recommend adherence to all suggested actions.	● Mechanism(s), speed, and ease of transmission by which the contagion is spread, and mode(s) of transmission, such as touch, airborne, etc. ● Time the contagion remains active on surfaces, such as door handles. ● Incubation period, time to exhibit symptoms, and maximum contagious period. ● Expectations of employees, supervisors and managers to help reduce the risk of spreading the disease.		
Implement Staffing Policies			
Pull trigger on those policies previously defined for this phase; communicate to staff	Policies impacting employees (e.g. time, pay, benefits, etc. must be communicated to Financial Services and Business Services for administrative purposes.		
Response Actions			
By Employees			
When an employee has contracted or suspects that they have contracted a virus or have been exposed to a virus, the employee is to seek medical attention and advise his/her supervisor.	● Absence reporting will follow existing protocol. Reporting may require disclosure of flu-like symptoms ● Sedgwick to monitor & contact designee ● Develop backup plan if Sedgwick is compromised *H&W will disseminate aggregate data from Sedgwick for corporate wide distribution but due to HIPAA, names will not be released.		
By National Grid when Outbreak Occurs			
Advise the exposed or infected employees to contact their doctor and notify their supervisor.	Absence reporting will follow existing protocol. Absence reporting may require disclosure of flu-like symptoms. *H&W will disseminate aggregate data from Sedgwick for corporate wide distribution but due to HIPAA, names will not be released.		

Company medical or occupational health nurse to follow up on the employees and notify supervisor. Follow current protocol with vendor (Sedgwick/NG's managed service provider; accelerate notice to supervisor as required.	Absence reporting will follow existing protocol. Absence reporting may require disclosure of flu-like symptoms. *H&W will disseminate aggregate data from Sedgwick for corporate wide distribution but due to HIPAA, names will not be released.		
Implement a process such that all visitors entering critical facilities are subject to an appropriate screening questionnaire to aid in identifying whether they are a potential risk, (i.e., have you visited a high-risk location in the past week?). Post screening questionnaire(s) at all entrances.	Post screen procedures; instruct guards to screen incoming employees and any visitors		
If appropriate, contract a cleaning service/agency and request the disinfection of the affected employee's workstation and shared work areas as well as all shared equipment and facilities (including washrooms, kitchen areas and meeting rooms). Assess the need for separation of staff.	Disinfecting of offices & trucks; reinforce disinfecting practices to employees. Provide instruction to field forces on disinfecting practices.		
Close non-critical common areas, such as exercise room, or the cafeteria. If the pandemic has resulted in a "lock down" in critical operating functions (control rooms), determine how employees will be accommodated.	● Identify common areas by facility ● Review the cafeteria's Pandemic Plan ● Enhanced PPE's for food service workers - self-provided ● Track contractor absences ● Consider requesting the cafeteria limit the menu ● If on-site cafeteria, stock on water, beverages, and food, especially items that require heating.		
Provide each workstation with a disinfecting agent. Have each shift employee wipe down all equipment and surfaces before and after each shift.	● Office disinfection plan for employees' workplaces - 1 wipe per day distributed by janitorial staff in evenings ● Truck disinfection plan for Ops employees ● Distribute instruction to employees how to clean / disinfect office/trucks, etc.		
Provide regular communication to all staff of the latest medical advisories and recommend adherence to all actions suggested.	● Daily scan of WHO / Pandemic.gov websites ● Post updates on Grid:Home and other employee social media channels.		
If appropriate, isolate the building, post signs stating temporary quarantine at all exits, and suspend electronic card access.			
Notify all staff on site to leave their full name, employee ID, and after-hours contact number(s), including numbers where they may potentially be located, such as parents, other family etc. Instruct all employees when they will be allowed to return to work, i.e. the following business day, not until notified, etc.	Supervisors will report this information to Employee Services to maintain in SAP. There is functionality through Employee Self Service (ESS) or via form entry to update the employee's Emergency Address.		
By Medical Resource			
Advise any exposed employee to contact their doctor and to adhere to the advice given.	Absence reporting will follow existing protocol. Reporting may require disclosure of flu-like symptoms (confirm if HIPAA exemption applies).		
Advise any exposed employee to contact their direct supervisor immediately, even if already working from home under provisions of their departmental pandemic plan.	Once exposed and IF sent home, employee will coordinate return to work with **Sedgwick** and Health & Wellness. **Sedgwick** must be notified by any employee who is sent home by the Company.		
Ill employees not to return to work until fever free 24 hours w/o fever reducing meds. Then follow return to work policies in place. Employees must keep supervisors informed of their condition throughout absence.	Absence reporting will follow existing protocol. Absence reporting may require disclosure of flu-like symptoms (confirm if HIPAA exemption applies).		
Maintain Awareness and Communicate			
Identify the most effective surveillance and control measures for subsequent waves	If necessary, communicate out any mitigation steps and measures used to defend again subsequent waves.		
Develop Policies			
Provide guidance on ways to optimize patient care with limited resources	Supervisor Guidance - send home if infected and Nurse Practitioners are unavailable.		

Implement Staffing Plans			
Ensure that overworked staff have opportunities for rest and recuperation	As necessary, develop messaging to be sent to Management to cascade to employees.		
RECOVERY			
Maintain Awareness and Communicate			
Continue to communicate and reassure employees of the recovery process.	Develop and distribute communications to US employees of the transition from a response phase to a recovery phase.		
Continue surveillance to detect subsequent waves and maintain awareness by effective communication methods			
Continue to support employees, contractors and external stakeholders with ongoing issues.	Continue absence reporting and coordination with Sedgwick		
Demobilize			
NONE			

Global Procurement / Supply Chain

Key Actions	Substeps	Date	Initials
PLANNING & PREPAREDNESS			
Maintain Awareness & Communicate			
Continue to maintain standard BCPs	Update procedures for activating/terminating response plan, altering business operations, and transferring knowledge to key staff		
Equipment, Facilities & Inventory			
Maintain a three-day supply of personal protective equipment, ready for deployment to identified critical personnel. *See Appendix D	Determine employee counts in customer facing (CMS) and 24-hour operations (Dispatch, Control Centers, Call Centers)		
Develop Plans			
Identify and establish relationships with back-up vendors and suppliers and establish protocols to reduce the risk that vendors may spread the flu virus to employees.	● The ICS org shall instruct the heads of all departments to identify vendors/suppliers providing services and/or supplies essential to their operations. ● The heads will work with Global Procurement to identify and establish relationships with back-up vendors and suppliers. ● ICS org will establish protocols to reduce the risk that vendors may spread the flu virus to employees. These protocols will include rules requiring vendors to wear protective gear when entering National Grid facilities during periods that require NGrid employees to do the same.		
Work with H&W to determine what personal protective equipment will be effective and consider acquiring sufficient quantities (masks, gloves and wipes). Availability of critical personal protective equipment may approach zero during the onset of an influenza pandemic.	● Assess necessary PPE for CMS Org when entering customer facilities/homes (but is not required for outdoor work). ● Masks can be requested for crew locations, or internal use within the warehouses they reside in themselves if the need arises. ● Respirators: if the need arises, then a bulletin/notice from the Pandemic Strategy team should be sent out with instructions and a reference to the specific material #'s we are keeping in stock. Once this happens then employees will put in their own shopping cart orders to request a delivery to their worksites.		
	● Work with H&W to acquire goods & have them stocked in predesignated locations. ● Obtain instructions on where and how to dispose of these products.		
Assess inventory parts and supply, and potential impact or delays in material deliveries.	● During a pandemic, send communications out to all our distribution centers to make sure they're aware and taking the necessary steps ● Continue to order the necessary (7 major) materials (throughout the pandemic) - as usage will ramp up for these items significantly ● Reorder points may be increased during this time to ensure that we can continue to supply the necessary materials throughout the length of the pandemic ● IMWM will confirm with Global Procurement that they develop & maintain relationships with backup		

	vendors to second source the necessary materials if the need arises		
RESPONSE			
NONE			
RECOVERY			
Demobilize			
NONE			

Global Information Technology (GIT)

Key Actions	Substeps	Date	Initials
PLANNING & PREPAREDNESS			
Maintain Awareness & Communicate			
Continue to maintain standard BCPs NOTE: Physical Security has separate section in Appendix	Update procedures for activating/terminating response plan, altering business operations, and transferring knowledge to key staff		
Develop Plans			
Activate IT BC Plans Review / Update / Modify service delivery strategy and all the support plans supporting work from home strategies owned by the business Review / Update / Modify Cyber Operations strategy and plans Recheck critical suppliers list and coordinate access for the supplier National Grid facilities with Security and Facilities. Consider the possibility of IT Critical Employee Sequestering. Ensure Global CIO / Business Partners are engaged in IT service delivery planning, particularly with any IT BAU process changes; communicate with the business. Ensure ITLT briefed on the overall service delivery and security plan highlights	IT Mgmt. will direct NG Service Delivery Org to review their Pandemic Checklist and begin pre-check resiliency tasks related to the following areas: • Network Access including: o Zscaler/VPN & O365 o Check videoconferencing services o Application Support (0365) (SNOW) o Infrastructure Support o Business Support including Helpdesk Services • High State of Alert (HSoA) o Inform suppliers that National Grid will formally transition to High State of Alert. o Direct suppliers to review support plans and provide escalated monitoring and reporting of network, infrastructure, applications and managed print services. • Increase network cyber security CSOC/Northboro.		
RESPONSE			
Plan Implementation / response			
Ensure appropriate status reports getting to ITLT. Global CIO/BPs are in regular contact with businesses Ensuring two-way communications Service Delivery teams are in place executing the plan. EUX works directly with the business and will communicate appropriate Employee Support Plans • Develop communications to employees regarding what office IT equipment can and can't be taken for remote work such as monitors, keyboards, etc. Northboro CSOC online performing enhanced security activities	Hybrid workers are primarily working from home and returning to the work place to collaborate one or multiple days/week, sitting in an unassigned desk and should already have what is needed at home to be productive, work safely/ergonomically, and achieve necessary outcomes. If another pandemic occurs, employees should already have what is needed at home without taking anything from an unassigned desk. If most office workers are considered hybrid, then only a small number will have assigned desks. Those employees may need to move their essential peripheral equipment home in line with the hybrid standards that would be in place.		
RECOVERY			
NONE			

Legal

Key Actions	Substeps	Date	Initials
PLANNING & PREPAREDNESS			
Maintain Awareness & Communicate			
Continue to maintain standard BCPs	Update procedures for activating/terminating response plan, altering business operations, and transferring knowledge to key staff		
Develop/update policy for sharing information with essential governmental authorities (Health Department, Law Enforcement, Emergency Management, etc.)	HIPPA Regulations		
Develop policy on formal documentation of significant business decisions made during pandemic outbreak, disruption and recovery phases.	● Business decisions made by the ICS org will be communicated by Corporate Comms (communication distributions) and EP (strategic plan updates). ● High level decisions will be made & documented by CMT. *Significant decisions impacting employees (e.g. time, pay, benefits, etc. will need to be communicated to Financial Services and Business Services to ensure intended effect is carried through.		
RESPONSE			
By National Grid when Outbreak Occurs			
Establish PIO (Public Information Officer) Structure to develop broader communications to both internal and external stakeholders.	● Develop key messages and talking points in advance to respond to potential inquiries by media / news outlets, regulatory bodies and government officials. ● Develop comms aimed at our customers for both CMS and the Call Centers as to the steps we are taking to protect the safety of our customers and the employees.		
RECOVERY			
NONE			

Logistics

Key Actions	Substeps	Date	Initials
PLANNING & PREPAREDNESS			
Maintain Awareness & Communicate			
Equipment, Facilities & Inventory			
RESPONSE			
Response Actions			
By National Grid when Outbreak Occurs			
Request that Security provides support for PPE Distribution if necessary.			
Equipment and Facilities			
RECOVERY			
NONE			

Operations Section Chief

Key Actions	Substeps	Date	Initials
PLANNING & PREPAREDNESS			
Continue to maintain standard BCPs	Update procedures for activating/terminating response plan, altering business operations, and transferring knowledge to key staff		
Maintain Awareness & Communicate			
Determine if Control room buildings will need to be locked down and teams sequestered.	Schedule meeting with Control Center VPs to work with Ops, Facilities and comms team.		
Work with Corporate Communications to develop a comms plan for non-employees of the control rooms building.			
Develop Plans			
Develop plans to have a storm or gas event during the outbreak.	Consider: • External and internal crews and contractors to work any storm or gas events • some employees working emergency assignments remotely could lose power and will need time traveling to an office. • an issue with some employees reporting to duty and the procedure to obtain masks.		
Develop Policies			
Develop a procedure to have face coverings stock at 8 different office type facilities for employees going into office buildings. Send out communications that will identify which 8 buildings, contacts and hours.			
RESPONSE			
Maintain Awareness & Communicate			
Put a scorecard together as to where we are 1) Control Center buildings 2) Field Ops and essential employees, 3) Non-Essential employees and ops buildings.			
Consult with Security regarding the storage of company vehicles at other yards or homes.	This will allow Security to be aware of different vehicles at different locations in order to monitor any increase in theft of equipment and break ins.		
Work with IT to have field designers able to work remotely using specific applications that are not normally accessed remotely.			
Coordinate with Facilities on getting routine cleaning and specialized cleaning, laundry services, food prep and sleeping facilities ready.	• Need to focus on protocols on getting food, medicines and anything employees might need into sequestered areas. • May need Verizon if anything technical goes down. • Obtain buy-in from ICS to spend some money on contracted services. • Work with Incident Commander and Finance team to get the proper DOAs.		
Coordinate with Incident Commander, Business Services and Customer to discuss non-emergency/discretionary work.			
Gain clarification on what the fuel plan will be.			
Sequestering: Ensure medical procedures are the following: 1) getting food and people inside the sequestered zone 2) continued wellness monitoring on continuous basis 3) initial screening before sequestering.			

Control centers: general concept will be A and B Team and will rotate every two weeks. 12 hour shifts and rotate in and out every 2 weeks.			
Prepare for external social pressure regarding protecting workers. The public may be questioning if the continued work is really critical.			
Consider shifting work in to the bigger barns.			
Put out a report to the ICS the state of the workplan including critical work that needs to be done.			
	Document actions to take should other emergencies take place during a pandemic such as a storm, cyber incident		
RECOVERY			
Demobilize			

Planning Officer

Key Actions	Substeps	Date	Initials
PLANNING & PREPAREDNESS			
Maintain Awareness & Communicate			
Continue to utilize Severity Level Index by applying existing metric tools such as PowerBI.			
RESPONSE			
Response Actions			
By National Grid when Outbreak Occurs			
Activate Data analytics Team			
Identify categories of data needed and to be provided by others.			
Collect data from others and populate metrics tool such as the Severity Level Index	Tie severity levels of State and governor's offices to create a matrix and show it in an easy to read fashion such as graphs and bar charts.		
Work with H&W to obtain absenteeism numbers.			
Ensure all leaders provide necessary data in order to populate the metrics tool.			
RECOVERY			
Transition to and support Plan Forward team.			

Regulatory

Key Actions	Substeps	Date	Initials
PLANNING & PREPAREDNESS			
Continue to maintain standard BCPs	Update procedures for activating/terminating response plan, altering business operations, and transferring knowledge to key staff		
Continue to coordinate and update information to ensure message consistency and to quickly respond to inaccurate information to minimize concerns.	Update Grid:Home and other employee social media channels		
Maintain Awareness & Communicate			
Identify those functions critical to continue operations and identify the people needed to fill those positions. Cross train personnel and review outsourcing options for critical functions.	Identify Critical Functions and notify employees when they should begin to limit exposure to the public. Regulatory (to maintain mandatory filings with regulating Federal and State agencies)		
Communicate early and often with Federal and State regulators/ agencies, keeping government authorities and regulatory bodies apprised of Company actions as related to its employees and customers.	Ensure messaging is thorough, consistent, and timely, reaching all key stakeholders.		
	Liaison between all Federal and State regulators and Company, including FERC, NY PSC, MA DPU, and RI PUC.		
	Provide regulators with Company's continuity plan regarding both employees (i.e., shift to telecommuting, whether filings will continue) and customers (i.e., collections, payment arrangements, rate changes, rate impacts)		
	Address regulatory agency ad hoc information requests on state-by-state basis.		
	Relay directives/ requests from regulatory agencies to corporate leadership for review and potential implementation.		
Develop Plans			
Develop an emergency communications plan that includes key contacts, back-ups, medical contacts, communication chains and processes to track and communicate business and employee status.	Corporate Comms would assist in crafting message to departments to confirm internal departmental call trees and email distribution lists; Each department would be responsible for conducting their own drill of the call trees / email dist. lists.		
Develop Policies			
Develop a visitor's policy including a sign-in process that is to be implemented in the event of an employee health incident or threat.	Security to develop procedure for screening employees & visitors entering the building during cluster outbreak Pandemic Period. This can be done quickly when an event occurs. We could use the current visitor log for this.		
RESPONSE			
Maintain Awareness & Communicate			
Maintain communications with Federal and State regulators/ agencies, continuing to keep government authorities and regulatory bodies apprised of any Company actions as related to its employees and customers.	Continue to liaison between all Federal and State regulators and Company, including FERC, NY PSC, MA DPU, and RI PUC.		
RECOVERY			

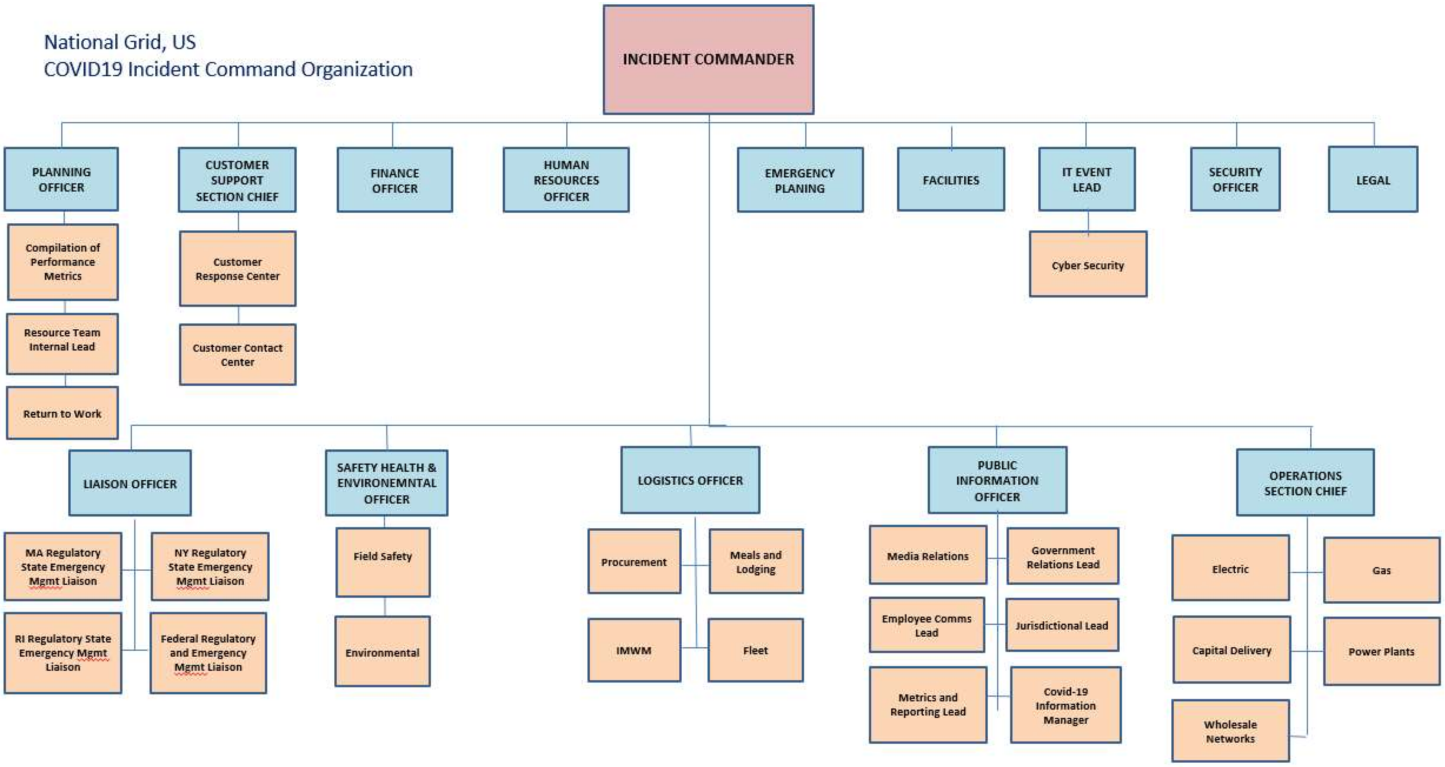
Demobilize			
Regulatory follow-up (similar to storm quality review)	Support regulatory filing and after-action reviews Analyze event related costs		

The **Operations Section Chief** directs and supports all areas of Operations. The following organizations will follow the procedures and checklists outlined in their Business Continuity Plans and emergency response plans and therefore a checklist is not included within this plan. **See Appendix E for Operations Response Guidance during a Pandemic.**

- CMS
- Gas Operations
- Electric Operations
- Control Centers

Appendix B – Pandemic Incident Command System (ICS) Organization

APPENDIX B - Pandemic Incident Command System (ICS) Organization



The following lists the organizations that are represented in this plan and the names of the individuals who are responsible for updating their organizations portions of the plan.

Department / LOB	Executive	Plan Update Contacts
Business Services	Edward VanDam	Owen McGraw (ES) / Thomas LaVeck / Julia Brokhoff (Payroll Ops)
Business Services: Facilities	Kristin DeSousa Shri Madhusudhan	Bob Paul / Monica Tawfik
CMS / Gas Operations	Fred Amaral Tim Graham	Jeff McPolin (CMS)
Corporate Communications	Bryan Grimaldi	Kerry Burns
Corporate Security	Kathy Judge	Randy Jarvis
Customer Delivery Centers	Helen Burt	Arlene Gas / Nancy Concemi / Margaret Gordon
Customer Response Center	Helen Burt	Courtney Colón
Electric Operations	Mike McCallan Matt Barnett	Jeff Faber & Omar Muneeruddin / Kim Agedal
Emergency Planning	Reihaneh Irani-Famili	Christine Curren
Finance	Dave Campbell Chris McConnachie	Aaron Benoit
Global Procurement & Supply Chain	Simon Harnett	Bob Wind / James Lingard (IM)
Human Resources	Jennifer Briere Celeste Schneider	Selena Alcover

Department / LOB	Executive	Plan Update Contacts
Information Technology	Krishna Seetharam Robert Lorkiewicz	Don Kass
Legal	Keri Sweet-Zavaglia	Joe Giordano
Regulatory	Pam Viapiano James Molloy	Alenka Kain
SHE: Health & Wellbeing	Chris Paglia Monica Alston	Denise Griffing

Appendix C – Situation Report Template

APPENDIX C – Situation Report Template

US Pandemic Influenza Planning

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Situation Report #[X] as of [date and time]

This report is produced by Emergency Planning. The purpose of this report is to provide situational awareness to the Incident Command Structure Team throughout a pandemic event. This report will be distributed weekly**.**

KEY HIGHLIGHTS AND ACCOMPLISHMENTS

For week ending May 3

- Ninety (90) employees confirmed positive (as of 5/3)
- 1091 employees are returning to work after being quarantined for 14 days due to exposure.
- Absence rate is continuing to trend favorably.
- CDC updated their symptom guidance to add chills, muscle pain, headache, sore throat, new loss of taste and smell.
- De-sequestration strategy developed, two sites recommending move toward de-sequestration/remain in isolation.
- CARES campaign launched this week.
- NY PSC wants us to work and coordinate across state lines on how we restart clean energy programs.
- Received feedback and lessons learned from > three dozen employees.
- Transition team kicked off this week with almost every role filled, solidified our planning construct and worked with Chris Kelly's team help us advance the work.
- Covid-19 costs to date is $37m.
- We have previously communicated that we are pausing our collections activities through April 30th. Implementing new policy regarding pausing collection activities in alignment with jurisdictions parameters.
- In April we have seen the highest trust score we have seen in 4 months. Customers have given us high marks for commitments to communities. High scores in comms questions we have asked.
- In RI we filed our comments in PUC docket on collections and terminations. Set out the financial impact and explained what we are doing for customers and proposed restrictions be relaxed going forward.
- We received masks this week from partnership with EEI.

SITUATION IN NUMBERS

National Grid Confirmed Cases:
(as of 5/3)

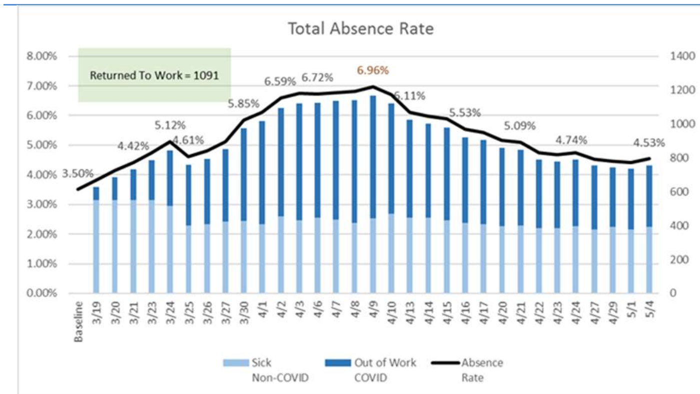
90	**Total NG Cases**
16	MA
68	DNYC
4	UNY
1	RI
1	US Other

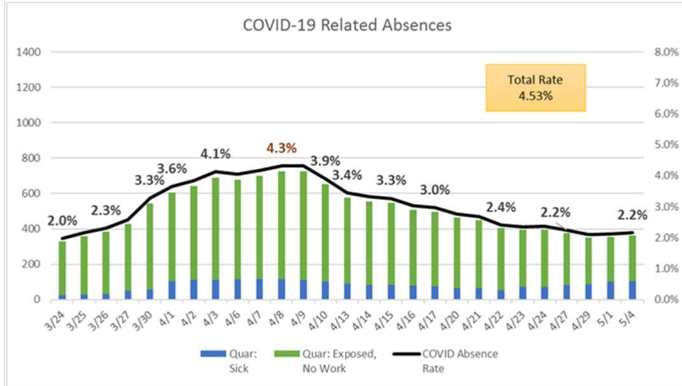
Note: Cumulative, excludes recovered/returned to work

External Confirmed Cases – National Grid Service Territory:
(as of 5/3)

	Confirmed	Recovered	Deaths
NY	312,977	17,089	18,909
MA	66,263	4,316	3,846
RI	9,289	0	296

(Source: https://google.com/covid19-map/)





STRATEGIC OBJECTIVES

- **Provide key communications and situational awareness**
- **Execute appropriate actions in the Pandemic Plan through the "Pandemic Period"**
- **Continue to update business performance, and impact on fiscal year plan**
- **Develop return to work plans**

DECISIONS AND KEY ISSUES FOR THE CMT

[Are there any strategic level decisions that you need the Crisis Management Team to make?]

[Are there any key issues that you want the Crisis Management Team to be aware of?]

- None at this time

OTHER ISSUES / IMPACTS

HR Impacts - Outlines any specific issues encountered. Not personal cases.	• The emergency stipend for day care for critical workers is being worked on and how to implement.
Transportation and Travel Impacts - Details any transportation or travel issues, such as travel restrictions.	*Travel restrictions and policies*: • Business related travel has been stopped until further notice.
Network and IT Impacts – Detail any disruption of networks or applications due to an increased number of employees working remotely.	• No issues currently.
Supplier Disruptions – Detail issues obtaining supplies of key products or services. Provide situational update on current stock supply and the time it will take for supplies to be depleted if they can't be replenished over time.	• No issues currently.
Customer Impacts – Detail any emerging issues for customers and end users.	• No issues currently.

Facilities Impacts – Detail any issues that need to be considered by property or facilities management.	• No issues currently.

MEDIA, COMMUNICATIONS & STAKEHOLDERS

[List or identify any communications sent to employees, media, social media]

- **All Employee Comms – April 27, 2020: Updated FAQs**
- **All Employee Comms – May 1, 2020**: Message from Badar Khan – Customers at the heart of all we do
- Tableau Metrics Dashboard
    - **.box.COVID19PLANNING** has been established for the purposes of:
        - Feedback
        - Daily submission of performance information
        - Requests for resources
        - Requests for additions to the dashboard

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Appendix D –Supplies Stocked at National Grid Warehouses

APPENDIX D - Supplies Stocked at National Grid Warehouses

1101 - NEDC - New England							
Material	**Description**	**MFR**	**MFR #**	**Standard Package**	**UOM**	**Reorder Point (Min. Qty)**	**EQ**
9393177	DISINFECTANT, SPRAY HAND SURF [8oz bottle]	OTIS TECHNOLOGY	FG-HSAN80P8-40	40	EA	6,000	0
9393091	WIPE, ANTIMICROBIAL ALC [80ct Tub]	DYNA WIPES	473	6	EA	2,000	0
9354672	RESPIRATOR, DISPOSABLE FLTR N95 20/BOX	3M; Moldex	8210; 2200N95	20	CAR	300	250
9394099	GLOVE, DISPOSABLE SM NITRILE PDR FREE	ANSELL	6034301	100/BX	CAR	5,000	2,000
9394098	GLOVES, DISPOSABLE MDM NITRILE PDR FREE	ANSELL	6034302	100/BX	CAR	20,000	5,000
9394105	GLOVES, DISPOSABLE LGE NITRILE PDR FREE	ANSELL	6034303	100/BX	CAR	30,000	10,000
9394095	GLOVE, DISPOSABLE XL NITRILE PDR FREE	ANSELL	6034304	100/BX	EA	35,000	10,000
9393305	MASK, FR RATED SURG REUSABLE	TYNDALE	*Varies*	10/BX	EA	5,000	4,000
9393268	MASK, SURG STYLE PANDEMIC USE ONLY	ALTOR SAFETY	92014	100/BX	EA	25,000	5,000

1102 - SYRACUSE - Central NY							
Material	**Description**	**MFR**	**MFR #**	**Standard Package**	**UOM**	**Reorder Point (Min. Qty)**	**EQ**
9393177	DISINFECTANT, SPRAY HAND SURF [8oz bottle]	OTIS TECHNOLOGY	FG-HSAN80P8-40	40	EA	3,000	0
9393091	WIPE, ANTIMICROBIAL ALC [80ct Tub]	DYNA WIPES	473	6	EA	1,000	0
9354672	RESPIRATOR, DISPOSABLE FLTR N95 20/BOX	3M; Moldex	8210; 2200N95	20	CAR	250	200
9394099	GLOVE, DISPOSABLE SM NITRILE PDR FREE	ANSELL	6034301	100/BX	CAR	5,000	2,000
9394098	GLOVES, DISPOSABLE MDM NITRILE PDR FREE	ANSELL	6034302	100/BX	CAR	10,000	5,000
9394105	GLOVES, DISPOSABLE LGE NITRILE PDR FREE	ANSELL	6034303	100/BX	CAR	15,000	7,000
9394095	GLOVE, DISPOSABLE XL NITRILE PDR FREE	ANSELL	6034304	100/BX	EA	20,000	10,000
9393305	MASK, FR RATED SURG REUSABLE	TYNDALE	varies	10/BX	EA	4,000	3,000
9393268	MASK, SURG STYLE PANDEMIC USE ONLY	ALTOR SAFETY	92014	100/BX	EA	5,000	5,000

1103 - BUFFALO - Western NY							
Material	**Description**	**MFR**	**MFR #**	**Standard Package**	**UOM**	**Reorder Point (Min. Qty)**	**EQ**
9393177	DISINFECTANT, SPRAY HAND SURF [8oz bottle]	OTIS TECHNOLOGY	FG-HSAN80P8-40	40	EA	2,000	0
9393091	WIPE, ANTIMICROBIAL ALC [80ct Tub]	DYNA WIPES	473	6	EA	1,000	0
9354672	RESPIRATOR, DISPOSABLE FLTR N95 20/BOX	3M; Moldex	8210; 2200N95	20	CAR	100	100
9394099	GLOVE, DISPOSABLE SM NITRILE PDR FREE	ANSELL	6034301	100/BX	CAR	0	0
9394098	GLOVES, DISPOSABLE MDM NITRILE PDR FREE	ANSELL	6034302	100/BX	CAR	4,000	0
9394105	GLOVES, DISPOSABLE LGE NITRILE PDR FREE	ANSELL	6034303	100/BX	CAR	5,000	0
9394095	GLOVE, DISPOSABLE XL NITRILE PDR FREE	ANSELL	6034304	100/BX	CAR	10,000	0

1104 - CLIFTON PARK (ALBANY) Eastern NY							
Material	**Description**	**MFR**	**MFR #**	**Standard Package**	**UOM**	**Reorder Point (Min. Qty)**	**EQ**
9393177	DISINFECTANT, SPRAY HAND SURF [8oz bottle]	OTIS TECHNOLOGY	FG-HSAN80P8-40	40	EA	2,000	0
9393091	WIPE, ANTIMICROBIAL ALC [80ct Tub]	DYNA WIPES	473	6	EA	1,000	0
9354672	RESPIRATOR, DISPOSABLE FLTR N95 20/BOX	3M; Moldex	8210; 2200N95	20	CAR	100	100
9394099	GLOVE, DISPOSABLE SM NITRILE PDR FREE	ANSELL	6034301	100/BX	CAR	0	0
9394098	GLOVES, DISPOSABLE MDM NITRILE PDR FREE	ANSELL	6034302	100/BX	CAR	4,000	0
9394105	GLOVES, DISPOSABLE LGE NITRILE PDR FREE	ANSELL	6034303	100/BX	CAR	5,000	0
9394095	GLOVE, DISPOSABLE XL NITRILE PDR FREE	ANSELL	6034304	100/BX	CAR	10,000	0

2201 - GREENPOINT - Downstate NY							
Material	**Description**	**MFR**	**MFR #**	**Standard Package**	**UOM**	**Reorder Point (Min. Qty)**	**EQ**
9393177	DISINFECTANT, SPRAY HAND SURF [8oz bottle]	OTIS TECHNOLOGY	FG-HSAN80P8-40	40	EA	10,000	0
9393091	WIPE, ANTIMICROBIAL ALC [80ct Tub]	DYNA WIPES	473	6	EA	2,000	0
9354672	RESPIRATOR, DISPOSABLE FLTR N95 20/BOX	3M; Moldex	8210; 2200N95	20	CAR	200	150
9394099	GLOVE, DISPOSABLE SM NITRILE PDR FREE	ANSELL	6034301	100/BX	CAR	5,000	2,000
9394098	GLOVES, DISPOSABLE MDM NITRILE PDR FREE	ANSELL	6034302	100/BX	CAR	20,000	5,000
9394105	GLOVES, DISPOSABLE LGE NITRILE PDR FREE	ANSELL	6034303	100/BX	CAR	20,000	8,000
9394095	GLOVE, DISPOSABLE XL NITRILE PDR FREE	ANSELL	6034304	100/BX	CAR	35,000	10,000
9393305	MASK, FR RATED SURG REUSABLE	TYNDALE	*varies*	10/BX	EA	4,000	2,000
9393268	MASK, SURG STYLE PANDEMIC USE ONLY	ALTOR SAFETY	92014	100/BX	EA	30,000	5,000

Appendix E – Operations Response Guidance during a Pandemic

APPENDIX E – Operations Response Guidance during a Pandemic

The following protocols can be used to minimize transmission and provide a safe environment for employees responsible for responding to a operational event.

Below is a summary of what National Grid Operations did in response to COVID in 2020.

At the onset of the COVID Crisis; National Grid immediately initiated a capabilities assessment based on the functions within our Electric and Gas Emergency Response Plans that evaluated our ability to adequately respond to the equivalent of a "Type-3" storm given the CDC recommendations and multitude of State Mandates that significantly influenced how we operate across the National Gird U.S. footprint.

As part of our review - National Grid evaluated more than 250 processes captured in our Emergency Response Plans, making changes and introducing new procedures where necessary to comply with COVID initiatives.

<u>A high level summary of the most notable items includes:</u>

- Extensive work performed across all three (3) States around the decentralization of our storm rooms
  - Moving those functions that could operate virtually to a "work from home" platform
  - For those functions that required to be on-property; social distancing, increased sanitizing, and moving to the utilization of more facilities – and dispersed operations
  - Utilization of recommended PPE
- Detailed review of all Emergency Response Organization personnel and WFH capabilities
  - Shifting any storm assignments that could be done virtually to a virtual platform
- Assessment of NE and NY Community Liaison roles and activities
  - Working closely with State and County Emergency Management Officials – initiated a virtual interface for all emergency support that would typically be provided in-person and the Municipal, County, or State Level Emergency Operations Centers
- NE and NY Damage Assessment review, inclusive of electronic work packets
  - Utilization of electronic work plackets minimized the direct hand-off of work to 3rd party resources during an emergency
  - Review included the use of 3rd party resources, and on-boarding requirements
- NE and NY Wire Guard
  - Review included the use of 3rd party resources and on-boarding requirements
- Resource Acquisition for 3rd party resources (Mutual Assistance and external contractors) that would be secured to support restoration efforts
  - Resource Types – OH-Line and Forestry
  - Comprehensive review between Capital Delivery, Safety, and Emergency Planning
  - Enhanced our already electronic crew transfer sheet procedures
  - Added a health screening mechanism for all 3rd party resources to our on-boarding procedures
  - Performed as much of the health screening and on-boarding virtually to minimize personal interactions
  - Rolled out and used in NE and NY for the several emergencies we responded to during the COVID Crisis
  - Process includes (during blue-sky conditions) the regularly canvassing of contractors to maintain awareness on availability
- Staging site review
  - Predominately in NE
  - Examined the need for additional staging sites to accommodate the use of more locations with less people to maintain distancing requirements
- Potential exposure for employees and customers while distributing dry ice (NY only)

    - Establish protocols for dry ice distribution, following CDC guidelines - Face masks secured from Warehouse
    - Outreach to Dry Ice Suppliers for status of product availability
    - Contact PSC Staff for recommendations on dry ice distribution
- Access to permitting process, with reduced agency staffing and technology
    - Permitting process can be completed post-event, still satisfies regulatory obligations
- Limit unnecessary physical interactions by having fieldworkers remain in personal vehicles to receive work
- Utilize fieldworkers' personal vehicles to report to job sites
- Implement take-home company vehicles for fieldworkers
- Have fieldworkers report directly to job sites
- Have fieldworkers stage in smaller groups at various sites (substations, garages, etc.) as an alternative to reporting to their platforms at start of their shift
- Continuity – keep same crew complements throughout duration of pandemic
- Implement staggered shifts
- Work with unions to increase rosters for off-shift schedules
- Install barriers between desks in field offices
- Transitioned employees to laptops from desktop computers to enable remote working

APPENDIX F: Financial Templates

APPENDIX F – Financial Templates

Guidance for Employees to be Sequestered (Update #1)

EMERGENT EVENT

Update

Guidance for Employees to be Sequestered (As DATE)

Thank you for your commitment to our purpose during these critical times. You are playing an important role in helping our communities to manage through this crisis. As you enter sequestration, we want you to know we appreciate you and recognize the important role our organization plays:

- When hospitals are treating patients– we're behind that. We're maintaining the flow of electricity that powers ERs and life-saving medical devices.
- When a child is feeling fearful about what's happening in the world– We're giving them comfort, providing the gas that warms the homes where they sleep at night.
- When people are feeling distant from older loved ones during this time of isolation – Our work powers the computers, cameras, phones and devices that are keeping people connected.
- When parents are home keeping their families occupied (and sane) as schools shut down – We're lighting their stoves and helping them to cook meals that provide nourishment and togetherness during these times.

The list could go on, and whether people realize it or not, it's our work that is helping them through these times.

Please know that ensuring the health and safety of our employees and customers is our number one priority. We have identified a subset of employees to be sequestered in specific locations. These are challenging times and leading through ambiguity and change is crucial at this time. We are confident all of you will show resilience by maintaining emotional strength and courage, communicating with clarity, being agile, and taking care of yourself and each other.

Thank you for your personal sacrifice and please be sure to extend our gratitude to your family for their sacrifice as well. Your commitment to our customers is not lost on the leadership team.

To support you with sequestering, included in this document is guidance related to:

- Logistics
- Accounting Guidance
- Employee & Family Resources
- A link to the EMERGENT EVENT Grid:Home and Employee Guide/FAQs

Important Note:

To assist employees with any questions related to the EMERGENT EVENT situation, we are staffing Employee Services as a focal point to capture all inquiries. **Please call 888-483-2123** where an Employee Services team member will take your information and forward the information to the appropriate party to follow up with you.

If a health official confirms that you have contracted EMERGENT EVENT, please call Employee Services to report this. The case will then be directed to the appropriate people in Health & Safety and Facilities.

For concerns about a specific employee situation, a health matter, or an absence issue, please reach out to Employee Services for guidance and to be connected to medical staff of the Health and Wellbeing team. Employee Services is currently available from 6:00 AM – 8:00 PM 7 days a week.

If you feel sick, please tell your manager and do not come to work.

Logistics:

National Grid has teams dedicated to providing accommodations for all sequestered employees. Sleeping arrangements, meals, and laundry services will be provided. Television, WiFi, and exercise equipment are being made available where possible for sequestered individuals to use in their down time.

Guest WiFi information can be found below. Wifi can be accessed when inside National Grid offices and plant buildings.

National Grid -
Guest Registra...

Accounting Guidance:

For Delivery to Sequestered LNG Union Employees (Local 251 / 318 / 12003 / 12012-04 / 12431-01 / 13507)

Purpose: To inform employees how to enter time during EMERGENT EVENT sequestering.

Action Required:
1. Monday – Friday Scheduled Time / Time Worked Outside Schedule – A/A Code 1000 (Pays Per CBA*)
2. Saturday – Sunday Time Worked Outside Schedule – A/A Code 4200 (Pays 2.0X)
    a. Time worked on first Sunday of sequestering should be coded as 1000 (Pays 1.5X)
3. Rest Time Outside Schedule – A/A Code 2280 (Pays 1.0X)

Time Entry Example:

Week 1	Work @ 1.0	Work @ 1.5	Work @ 2X	Rest @ 1.0	Total Hours Pay	Monday – Friday (8:00 – 16:00) Paid Lunch Schedule in SAP
Sunday	0	16	0	8	32	Code 2280 00:00 - 08:00, code 1000 08:00 - 00:00

Monday	8	8	0	8	28	Code 2280 00:00 - 08:00, code 1000 08:00 - 00:00
Tuesday	8	8	0	8	28	Code 2280 00:00 - 08:00, code 1000 08:00 - 00:00
Wednesday	8	8	0	8	28	Code 2280 00:00 - 08:00, code 1000 08:00 - 00:00
Thursday	8	8	0	8	28	Code 2280 00:00 - 08:00, code 1000 08:00 - 00:00
Friday	8	8	0	8	28	Code 2280 00:00 - 08:00, code 1000 08:00 - 00:00
Saturday	0	0	16	8	40	Code 2280 00:00 - 08:00, code 4200 08:00 - 00:00

Week 2	Work @ 1.0	Work @ 1.5	Work @ 2X	Rest @ 1.0	Total Hours Pay	Monday – Friday (8:00 – 16:00) Paid Lunch Schedule in SAP
Sunday	0	0	16	8	40	Code 2280 00:00 - 08:00, code 4200 08:00 - 00:00
Monday	8	8	0	8	28	Code 2280 00:00 - 08:00, code 1000 08:00 - 00:00
Tuesday	8	8	0	8	28	Code 2280 00:00 - 08:00, code 1000 08:00 - 00:00
Wednesday	8	8	0	8	28	Code 2280 00:00 - 08:00, code 1000 08:00 - 00:00
Thursday	8	8	0	8	28	Code 2280 00:00 - 08:00, code 1000 08:00 - 00:00
Friday	8	8	0	8	28	Code 2280 00:00 - 08:00, code 1000 08:00 - 00:00
Saturday	0	0	16	8	40	Code 2280 00:00 - 08:00, code 4200 08:00 - 00:00

Schedule: Employees must be on a Monday – Friday, 8 Hour Per Day, Paid Lunch Schedule in SAP.

Accounting: BOS LNG (5330 - N0000264976) / COL LNG (5340 - N0000264977) / RI LNG (5360 - N0000264978)

Scheduled hours will pay straight time. Time worked outside of schedule will be paid at time and a half. Consecutive day eligible Saturday / Sunday hours will be paid at double time. For questions on time entry or sequestered employee pay please email TimeGovernance@nationalgrid.com

Employee & Family Resources:

Maintaining physical and mental wellbeing

In stressful times, it's even more important to nourish ourselves, stay hydrated and be as well-rested as possible to maintain immunity and resilience to physical and mental illness. In this unusual and less than ideal situation, create the conditions that will make it easier to practice healthy habits:

Physical Comfort:

- Stand, move and stretch frequently to improve comfort, circulation and alertness.
- Every hour during wakeful time, take time for a few deep breaths to calm the nervous system and mind.
- During breaks, take time for any physical activity you can such as walking or other exercise.

Nutrition:

- Select healthy snacks such as fruit, vegetables, whole grains, nuts and seeds to satisfy your hunger/ urges and maintain energy. Avoid or limit exposure to "quick fix" high sugar, high fat food items – they will be hard to resist in times of stress.
- Stay hydrated with water, limit sweetened and artificially-sweetened beverages.

Sleep:

- Avoid caffeine at least 4 hours before scheduled sleep time.
- Wear a sleep mask and earplugs to create a more peaceful environment.
- Allow sufficient time for quality sleep each night/day. Even a few days of inadequate sleep can have a dramatic negative impact on the immune system and our mental wellbeing.
- Avoid use of electronic devices (sources of blue light) at least 2 hours before sleep time.
- Use relaxation and meditation apps or music to induce sleep: Headspace and Calm are offering free access during the EMERGENT EVENT crisis.

Mental health:

- Be mindful of the purpose of your role – you are providing a valuable service.
- Stay connected to family for support and encouragement.
- Remember that you're not alone in the effort – seek support and support your colleagues.
- Limit exposure to rumors and sensational media.
- Avoid a "gloom and doom" mindset and negative conversations with colleagues.
- If negative thoughts, concerns and stress become overwhelming, don't hesitate to reach out for professional support and guidance.

Additional information:

- National Grid is committed to aiding employees who are experiencing stress associated with the Coronavirus. Assistance is available through Corporate Counseling Associates (CCA). CCA can be reached 24/7 at (800) 833-8707.

- Our Employee Coronavirus Infonet Site contains the most recent updates and resources. Please be sure to check out the 'Useful Resources' section for (8) bite-size e-Learnings on knowing yourself, building resilience, and more! The company will update US-wide FAQs in Grid:News each week.

Accounting Guidance (Update #2)

Emergent Event
Accounting Guidance
Update #2 – DATE

Audience: This announcement should be read by all US employees.

Many areas of the company are encountering additional costs in response to EMERGENT EVENT. We want to be able to capture these incremental costs in a consistent way for reporting purposes. As you can imagine, there will be many impacts to our business from this event. Incremental costs will be driven by many areas like having to purchase additional supplies or services; we will have impacts on our capital programs; might impact pay and overtime and many other areas.

Payroll and non-payroll costs will be handled separately. The guidance below is focused on non-payroll costs. There will be separate guidance issued to deal with unique payroll charging including those who have been appointed to the ICS or those working to directly support the ICS on the EMERGENT EVENT response.

Guidance for incremental non-payroll costs:

We are asking employees to use the enclosed accounting codes per the guidance below. Please do not open your own accounting codes.

The costs charged to these accounting codes should be incremental, meaning above and beyond what you would normally expect to pay as part of normal operations, and be directly tied to our coronavirus response. For example, additional bandwidth capacity costs to support the increased volume of employees working remote would be considered an incremental expense for coronavirus and charged using the enclosed accounting.

If you have any questions, free to reach out to your Finance Business Partner.

Please use these numbers only when doing work directly related to this event.

***PLEASE USE THE OPERATIONS THAT MOST ACCURATELY DESCRIBE THE WORK YOU PERFORMED, AND IF UNSURE, CONSULT WITH YOUR SUPERVISOR.**

Below are the SAP Work Order numbers to charge costs directly associated with EMERGENT EVENT response. **Only Opex costs are approved to be charged into these orders are below. See examples below:**

- Incremental cleaning directly related to the event

- Masks and equipment used for protection
- Incremental subcontractor or vendor costs that are a direct result of a) incremental work, b) delays in work, or c) validated increased costs related to EMERGENT EVENT
- Incremental IT costs correlated to the work from home policy
- Time entry for those on or directly supporting the coronavirus ICS (Work Order details, with proper accounting splits, to follow)

We realize people may be in unique circumstances that are not outlined. **Please reach out to your Finance Business Partner if you have any questions or concerns.**

Please follow corporate guidance. Click here for the most recent employee FAQ document.

NOTE: If you need to use a capital order, please reach out to your Finance Business Partner.

Company	**Work Order**	***Operation**
Mass Electric - Expense	10029602265	1071
Narragansett Electric - Expense	10029602523	1071
Nantucket Electric - Expense	10029602733	1071
Niagara Mohawk Electric - Expense	90000209523	1071

Gas Companies

Company	**Work Order**	***Operation**
Niagara Mohawk Gas - Expense	N0000264914	N/A
KEDNY – Expense	N0000264915	N/A
KEDLI – Expense	N0000264916	N/A
Boston Gas – Expense	N0000264917	N/A
Colonial Gas – Expense	N0000264918	N/A
Narragansett Gas	N0000264919	N/A

Transmission Companies

Company	**Work Order**	***Operation**
Mass Electric T-Line/Subs - Expense	90000209525	3018/3229/3011/3228
NEP T-Line/Sub - Expense	90000209157	3018/3229/3011/3228
Narragansett T-Line/Subs - Expense	90000209156	3018/3229/3011/3228

Service Company Charges ONLY – Expense

Company	Work Order	*Operation
Audit	XG012022648	N/A
Business Services (Excluding Fleet)	XG012022644	N/A
Capital Delivery	XX134022632	N/A
Corp. Affairs	XG012022647	N/A
Customer Ops	XC175022634	N/A
Electric BU (General Allocator)	XG198022625	N/A
Fleet Management (L4)	XT134022645	N/A
Gas - LNG	X5420022629	N/A
Gas BU (Gen. Allocator)	XG210022627	N/A
Global Proc. (excluding IMWM)	XG012022642	N/A
Human Resources	XN012022639	N/A
Hydro Companies	XT323022631	N/A
Inventory Mgmt & We Mgmt (L4)	XG004022643	N/A
IT	XG020022590	N/A
MA JDx	XG278022623	N/A
NY JDx	XG116022622	N/A
Property Services (L4)	XG012022641	N/A
RI JDx	XG316022624	N/A
SHE	XN012022589	N/A
SHEA (Excluding Integ Health Mgmt)	XN012022638	N/A
Strategy & Regulation	XG012022636	N/A
Transformation Office	XG012022633	N/A
Transmission Companies	XT220022630	N/A
US Finance (excl Prop Services)	XG012022640	N/A
US Legal	XG012022646	N/A

Please note additional accounting to support service company functions and other areas are being developed and will be included in subsequent releases of the guidance.

A Note from the CFO

A message from CFO: Time entry during Emergent Event

Over the past several weeks our teams have come together to deliver for customers during very challenging times. The shifts that we've made in the way we're conducting business has also prompted us to make some shifts in the way we're capturing our time entry during this period.

There are changes in the way that we'd like employees to enter their time during this period. I realize that this adds complexity to an already challenging situation, but there is a necessity for us to ensure we're charging our time correctly so that we can obtain potential reimbursements from regulators, so that we understand all National Grid resources currently focused on **Emergent Event**, and for refinement of our business continuity plans.

Here is a summary of the changes that we would like for you to implement until further notice:

- We are asking **all management employees** to begin **entering their time weekly** so that all time worked for the prior week is entered and **approved on Mondays prior to 4:00PM.** There is no change to the existing entry/approval timetable for represented employees.

- We would like employees to begin tracking hours that are spent working on **Emergent Event** work. Please make note of that by adding the word **Emergent Event** in the comments section of Fiori or SAP after entering your hours.
    - For a screenshot on how to do that in both systems, click link. **Update link to revised training**
    - COVID-related work is defined as time spent directly supporting the Covid-19 response. This includes, but is not limited to, meetings, task forces and activities such as cleaning or security details.
    - You should still enter your time-worked as '1000 – Time Worked' using the accounting codes and orders that you normally would, with the addition of the COVID comment.
    - Time entry restrictions will remain in effect. Please enter time for regularly scheduled working time only.

- All 'unproductive working hours' resulting from **Emergent Event** also require a "**Emergent Event**" comment. Unproductive working hours is downtime from blue sky work as result of **Emergent Event** (e.g. field operations crews that are on standby because of **Emergent Event**).

- If you are working normal 'blue sky' hours for work that is not specifically related to our **Emergent Event** response, please enter your time using attendance type '1000 – Time Worked.' You do not need to add a comment.

Thank you for your attention to these protocols, which are effective from **Monday, March 9, 2020**. Kindly include the **Emergent Event** comment for any time previously entered which relates to the **Emergent Event** response. If you have questions or need assistance, please call or email TimeGovernance@nationalgrid.com.

Sincerely,

CFO

ID4440-IO WBS Upload Template Screenshot– Future Emergency Events

	A	B	C	D	E	F	G	H	I	J	N
1	Tracker	Co_Code	Order	Order Description	Order_Type	Wbs_element	Order Cost Center	Profit_Center	Costing_Sheet	Tax_Jur_Cd	
2	ID4440	5110	XG116024545	5110S-EMERGENCY EVENT Exp-NY JDx	NGSI	X022326.AG0001	10105110S	SVC8000	NNIMEX	USMA02451XXXX0	
3	ID4440										
4	ID4440										
5	ID4440										
6	ID4440										
7	ID4440										
8	ID4440	5110	XG278024546	5110S-EMERGENCY EVENT Exp-MA JDx	NGSI	X022327.AG0001	10305110S	SVC8000	NNIMEX	USMA02451XXXX0	
9	ID4440										
10	ID4440										
11	ID4440										
12	ID4440										
13											
14											
15											
16											
17											

	O	P	Q	R	S	T	U	V	W	X	Y	
1	Tracker	Project_company_cc	Project	Project_Description	(Alloc) USER_Field	WBS_level	Activity	WBS_Element	WBS_Description	USER_Field1 (FER	Responsible_cost_center	Profi
2	4440	5110	X022326	5110S-EMERGENCY EVENT-NY JDx-G116	G116	2	AG0001	X022326.AG0001	FUTURE EMERGENCY EVEN	9210	10105110S	SV
3	4440	5210	Y110823	5210E-EMERGENCY EVENT-NY JDx		2	AG0001	Y110823.AG000	FUTURE EMERGENCY EVEN	9210	10105210E	NY
4	4440	5210	Y110824	5210G-EMERGENCY EVENT-NY JDx		2	AG0001	Y110824.AG000	FUTURE EMERGENCY EVEN	9210	10105210G	NY
5	4440	5210	Y110825	5210T-EMERGENCY EVENT-NY JDx		2	AG0001	Y110825.AG000	FUTURE EMERGENCY EVEN	9210	10105210T	NY
6	4440	5220	Y110826	5220G-EMERGENCY EVENT-NY JDx		2	AG0001	Y110826.AG000	FUTURE EMERGENCY EVEN	9210	10105220G	NY
7	4440	5230	Y110827	5230G-EMERGENCY EVENT-NY JDx		2	AG0001	Y110827.AG000	FUTURE EMERGENCY EVEN	9210	10105230G	NY
8	4440	5110	X022327	5110S-EMERGENCY EVENT-MA JDx-G278	G278	2	AG0001	X022327.AG0001	FUTURE EMERGENCY EVEN	9210	10305110S	SV
9	4440	5310	Y110828	5310E-EMERGENCY EVENT-		2	AG0001	Y110828.AG000	FUTURE EMERGENCY EVEN	9210	10305310E	MA
10	4440	5320	Y110829	5320E-EMERGENCY EVENT-		2	AG0001	Y110829.AG000	FUTURE EMERGENCY EVEN	9210	10305320E	MA
11	4440	5330	Y110830	5330G-EMERGENCY EVENT-		2	AG0001	Y110830.AG000	FUTURE EMERGENCY EVEN	9210	10305330G	MA
12	4440	5340	Y110831	5340G-EMERGENCY EVENT-		2	AG0001	Y110831.AG000	FUTURE EMERGENCY EVEN	9210	10305340G	MA
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APPENDIX G: Acronyms

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- BCP – Business Continuity Plan
- CAM – Crisis Assessment Meeting
- CDC – Center for Disease Control
- CMS – Customer Meter Services
- CMT – Crisis Management Team
- EP – Emergency Planning
- EQ – Emergency Quantity
- ES – Employee Services
- FERC – Federal Energy Regulatory Commission
- GCMF – Group Crisis Management Framework
- H&W – Health & Wellbeing (part of SHE organization)
- HR – Human Resources
- IC – Incident Commander
- ICS – Incident Command System
- IAP – Incident Action Plan
- IPT – Influenza Planning Team
- ISP – Internet Service Providers
- IT – Information Technology
- LR – Labor Relations
- MA DPU - Massachusetts Department of Public Utilities
- NERC – North American Electric Reliability Corporation
- NYPSC – New York Public Service Commission
- PIO – Public Information Officer
- PPE – Personal Protective Equipment
- RI PUC - Rhode Island Public Utilities Commission
- SDC – Service Delivery Center
- UOM – Unit of Measure
- WHO – World Health Organization

APPENDIX H: Document Revision History

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Version	Date	Description
0	03/06/07	Initial Issue
1	04/28/09	Update –Swine Flu
2	2/15/2011	General Revision
3	09/04/12	Revision to organizational changes and cohesive Company plan
4	07/31/14	General Revision – includes updating WHOs 6-phase approach to the continuum of pandemic phases, removing LIPA references, updating Appendix A – Strategic Plan and updating entire layout and format of the plan.
5	5/1/15	Added PIP Task Force members table as Appendix B.
6	6/1/15	Updated Section numbers in Purpose Section and updated Accountability section with correct name of Document Revision History. Added "UK National Grid Influenza Planning Team (IPT)" and "US and UK Crisis Management Teams (CMT) to additional guidance. Added "UK National Grid Influenza Pandemic Plan" to References. Changed Global Security to Corporate Security. Updated tasks in Strategic plan to include lessons learned from the 2013 Ebola outbreak. Added Situation Report template and Stock Supply in appendices. Updated IS role description and Telecommunications section in 3.2.3. Added additional actions in Appendix A per CMS. Updated Employee Services role description and steps in Appendix A. Added Vendor Services Section in 3.2.4 and steps to Appendix A. Added note in Appendix A heading. "where National Grid employees are mentioned, it is assumed that contractors and consultants are included."
7	10/8/15	Updated formatting such as bold or underlining text. Added System PIO Support and Global Procurement roles. Changed wording in Section 3.1 Suggested Key Actions by Phase. Updated Appendix A as a result of the Pandemic Exercise. Updated Appendix B PIP Task Force members. Appendix B, identified Incident Commander and Alternate.
8	1/14/16	Updated Section 2.3.3 to enhance the role description of the PIP Taskforce noting that during a pandemic, the team members should not expect to perform their normal day job functions. Updated Appendix B with team member names for CMS, HR and Labor.
9	3/22/16	Added Operations representative to team.
10	9/15/16	Updated team members and added alternates. Consolidated BR&C and Emergency Planning into one group. Changed Employee Comms to Corporate communications. Added Gas Operations to App A.
11	6/29/17	Updated Team Executives: Charles Dickerson, Jeannette Mills and Shri Madhusudhan.
12	7/26/17	Added Sections 2.7 Review and Maintenance of Plan and 2.8 Training and Exercises.
13	9/27/17	Updated Emergency Planning to Emergency Planning & Business Resilience (EP). Renamed Integrated Health and Wellness to Health & Wellness, Service Delivery Center to Employee Services (ES). Updated H&W text to add vaccine distribution procedure and metrics of how to identify quantity of masks to procure. Updated web links. Updated Appendix B with new team members; Appendix D – Supplies Stock. Added Appendix E – Acronyms. Updated absentee rates to match Business Continuity Plans.
14	10/10/18	Updated Emergency Planning's department name. Updated IS to IT and all sections of IT. Updated team members.
15	02/25/19	Added Call center and Supply Chain to team. Added WebEOC to actions.
16	12/2019	Updated PIP Team members, updated 2.3, 3.2.1 and Appendix A and D.
17	2/24/2020	Added Customer Response Center, Powerplants and all of Business Services to PIP Team.
18	3/19/2020	Removed two example graphs from Situation Report in Appendix C
19	8/1/2020	Updated Actions in Appendix A, removed PIP Taskforce and renamed ICS organization. Added org chart in Appendix B. Added Finance, Legal and Regulatory to plan.
20	2/16/2021	Changed Send Word Now to Everbridge. Updated names in plan update team. Added assumption.
21	10/13/2021	Converted actions to checklists, updated Appendix E, added actions based on AAR held in June 2021. Updated Situation Report Template. Removed the alignment with the WHO Phases. Added Finance documents in appendices. Added sequestered procedures, protocols on responding to a storm event.