



**NYSERDA**

**KATHY HOCHUL**  
Governor

**RICHARD L. KAUFFMAN**  
Chair

**DOREEN M. HARRIS**  
President and CEO

**NOTICE OF MEETING AND AGENDA**

January 13, 2023

TO THE MEMBERS OF THE NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY:

PLEASE TAKE NOTICE that a regular (the 260<sup>th</sup>) meeting of the New York State Energy Research and Development Authority (“Authority”) will be held at the NY Green Bank Office located at 1333 Broadway, New York, New York, and at 17 Columbia Circle, Albany, New York, on Wednesday, January 25, 2023, commencing at 2:30 p.m., for the following purposes:

**I. Discussion Agenda**

1. To consider and act upon a resolution to enter into executive session for the purpose of discussing the employment history of a particular person.
2. To receive a report from the Authority’s President and CEO.
3. To receive a report from the Program Planning Committee and to consider and act upon resolutions approving:
  - a. the strategic plan entitled *Toward A Clean Energy Future – A Strategic Outlook 2023-2026*; and
  - b. revisions to the plan entitled *Operating Plan for Investments in New York Under the CO<sub>2</sub> Budget Trading Program and the CO<sub>2</sub> Allowance Auction Program*.
4. To consider and act upon a resolution approving the Authority’s FY 2023-2024 Budget.
5. To receive a report from the Waste and Facilities Management Committee.
6. To receive a report from the Audit and Finance Committee.
7. To receive a report from NY Green Bank.

**II. Consent Agenda**

1. To consider and act upon a resolution approving:

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- a. the periodic contracts report.

**III. *To transact such other business as may properly come before the meeting.***

Members of the public may attend the meeting at any of the above locations or via the video conference which can be accessed at <https://www.nyserda.ny.gov/About/Board-Governance/Board-and-Committee-Meetings>.

The Authority will be posting a video and a transcript of the meeting to the web as soon as practicable after the meeting. The video and transcript will be posted at <http://www.nyserda.ny.gov/About/Board-Governance/Board-and-Committee-Meetings>.

A handwritten signature in blue ink that reads "Peter Costello". The signature is written in a cursive, slightly stylized font.

Peter J. Costello  
Secretary

Resolution No. \_\_\_\_

RESOLVED, that pursuant to Section 105 of the Public Officers Law, the Members of the New York State Energy Research and Development Authority shall convene in executive session on January 25, 2023 for the purpose of discussing the employment history of a particular person.

**PRESIDENT & CEO**  
**(Oral Report)**

**PROGRAM PLANNING  
COMMITTEE  
(Oral Report)**

**Toward a Clean Energy Future:**

# A Strategic Outlook

2023

THROUGH



**NYSERDA**

2026

# FROM THE PRESIDENT AND CEO



**Now more than ever (and maybe for the first time), we have a fighting chance in the battle to avert the worst impacts of climate change and secure a clean, livable future.**

## **To our colleagues, partners, and fellow New Yorkers:**

As 2023 arrives, a new chapter is unfolding in the transition to a clean energy economy. 2022 was a banner year for climate policy from the landmark federal Inflation Reduction Act to New York State's finalization of the Climate Action Council Scoping Plan; the proverbial stars are aligning for climate action. With this comes the chance to bring together government, families, businesses, industry and utilities in a common effort. Now more than ever (and maybe for the first time), we have a fighting chance in the battle to avert the worst impacts of climate change and secure a clean, livable future.

Meanwhile, our society has entered the "mid-transition"—the onset of a new era where the conventional, fossil-based energy system must coexist with a growing renewable and zero-emission energy system, bringing with it novel challenges and new iterations of old problems. Simultaneously, of course, we must deal with the pressing threat of a rapidly changing climate, which itself brings impacts on infrastructure and energy delivery in unexpected and sometimes paradoxical ways. And as always, these factors intermingle with the ever-unpredictable geopolitics of energy and supply chains.

What that means is that the energy transition cannot be uncoupled from the realities of our modern world. We need to decarbonize while we ensure reliability during record-setting winter storms. We need to reduce emissions as we provide sufficient energy supply in the wake of the global energy crisis brought on by the war in Ukraine. And we need to build clean infrastructure at a time when inflation and unstable supply chains run roughshod over core commodities required to run our economy. Nobody said it would be easy; nobody said it would be this hard.

Despite the "all at once" challenges associated with mid-transition, we must also celebrate the fact that we have unprecedented opportunities to do something about it and to benefit from this transition at the same time. Thanks to Governor Kathy Hochul's leadership, here at NYSERDA and across New York State government, we have the will, the means, the wherewithal, and the plan to get it done. In the past few months alone, we've seen major new developments and milestones reached. To name just a few:

- **Scoping Plan adopted and approved:** In December 2022, by a vote of 19–3, the Climate Action Council (co-chaired by NYSERDA and the Department of Environmental Conservation (DEC)) adopted and approved a groundbreaking Scoping Plan—450+ pages filled with recommendations from the State's top experts for attaining the State's Climate Act goals. Important improvements to the draft plan were made to take account of new developments in 2022, but the headline remains the same: acting on climate will cost far less than inaction, and it will deliver immense net benefits to the residents, businesses, and communities of New York through a cleaner energy system, reduced pollution, healthier buildings and neighborhoods, significant new job creation, and so much more. I'm extremely proud to have cast an enthusiastic "aye" vote in favor of the Scoping Plan, and I could not be more excited to begin the critical work of bringing its recommendations to life.

- **Executive Order 22 issued:** In September 2022, Governor Hochul issued a comprehensive executive order to coordinate sustainability and resilience investments and drive progress across State operations. A prime example of leading by example and leveraging the State’s own purchasing power and standard-setting influence, Executive Order 22 laid out a suite of commitments that will guide state agency decision-making, procurement, and investments to reinforce the Climate Act’s impact state-wide (i.e., beyond just state government). In some cases, these new commitments even supersede the already ambitious requirements of the Climate Act, such as the directive to achieve 100% renewable electricity for state electric consumption by 2030. This is leading by doing.
- **State of the State 2023 unveiled:** Earlier this month, Governor Hochul unveiled her second State of the State agenda, which included not only major announcements in categories like building decarbonization and energy affordability, but also key new initiatives in other sectors and for the economy at-large. Specifically, in perhaps the centerpiece of this year’s climate and energy agenda, Governor Hochul announced her intent to move forward with a new, ambitious Cap-and-Invest program for New York’s entire economy. This slate of commitments and actions will drive the momentum forward for our State’s climate action in the years ahead. NYSERDA is fortunate to have helped craft and shape—and now to implement—this nation-leading agenda.
- **Emissions regulations rulemaking initiated:** Following the Scoping Plan’s adoption and Governor Hochul’s direction in the State of the State, NYSERDA will partner with DEC to commence rulemaking activities to design and implement an economywide Cap-and-Invest program. This programmatic activity, combined with broader DEC regulatory actions required under the Climate Act by the end of the year, will ensure that the State can attain a 40% reduction in emissions by 2030 and an 85% reduction by 2050.

With all this in mind, I’m very pleased to present NYSERDA’s updated Strategic Outlook for 2023–2026, which seeks to capture our global and local momentum and strive for expanded impact in all our activities—all while keeping everyday New Yorkers at the heart of our work. Our five core mission outcomes (Greenhouse Gas Reductions, Renewable Energy, Energy Efficiency and Building Decarbonization, Clean Energy Economy, and Resilient and Distributed Energy System) still undergird all our work. And, after conducting refreshed, deep-dive examinations of our strategic focus areas, these crucial priorities also continue to ring true. In these pages you will find updates and refinements to the four strategic focus areas that will continue to guide the lion’s share of our activities in the years ahead:

- Building an inclusive clean energy economy
- Supporting clean energy jobs
- Accelerating the transition from fossil natural gas to a low-carbon future
- Fostering healthy and resilient communities

These areas reflect activities already underway at NYSERDA, but which the Scoping Plan identifies must grow in prominence and impact. Through our leadership on these critical priorities, NYSERDA continues to drive economic opportunity built from the State’s unprecedented clean energy, carbon reduction, and climate equity targets. Despite the long-term nature of many of these goals and the realities of mid-transition, the imperative of climate change requires us to remain laser-focused on near-term action.

I am beyond proud to work at NYSERDA and serve the people of New York State every day. Thanks to the excellence of our teams across the Authority, the opportunities for us to create a better future for our State will only continue to grow. I hope our partners and stakeholders find this Strategic Outlook valuable, and we look forward to partnering with you in 2023 and beyond.

Sincerely,



**Doreen M. Harris, President and CEO, NYSERDA**

This forward-looking document reflects State policy and NYSERDA’s plans as of January 2023. Because New York’s energy policy objectives continue to develop in response to the evidence that aggressive action is needed to combat climate change—and greater ambition is possible—updates to particular targets will be noted on the Strategic Outlook webpage: [nyserdera.ny.gov/Strategic-Outlook](https://nyserdera.ny.gov/Strategic-Outlook).



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# NYSERDA and Its Context



## NYSERDA'S EVOLVING CHARGE

In recent years, NYSERDA has updated its mission and vision statements to better incorporate themes of climate change, equity and inclusivity, jobs and economic opportunity, public health, and resilient communities—all of which remain central to our mission and vision going forward.

As we look out to 2023 and beyond, these themes continue to resonate strongly throughout all our work and focus areas. Indeed, just as these mission and vision statements continue to ring true, so too do the strategic focus areas captured in this and last year's Strategic Outlook.

**These topics—an inclusive clean energy economy, supporting clean energy jobs, accelerating the transition from fossil natural gas, and fostering healthy and resilient communities—will unfold over many years and will require our constant and dedicated focus, working in concert with partners across State agencies, local communities, neighboring states, the federal government, private industry and stakeholders.**

NYSERDA'S MISSION AND VISION STATEMENTS GUIDE THE ORGANIZATION'S CURRENT AND FUTURE INITIATIVES.

**Our Vision:**

**New York is a global climate leader building a healthier future with thriving communities; homes and businesses powered by clean energy; and economic opportunities accessible to all New Yorkers.**

**Our Mission:**

**Advance clean energy innovation and investments to combat climate change, improving the health, resiliency, and prosperity of New Yorkers and delivering benefits equitably to all.**

**Our Promise:**

**NYSERDA provides resources, expertise, and objective information so New Yorkers can make confident, informed energy decisions.**

## STATE POLICIES AND COMMITMENTS THAT STEER NYSERDA'S WORK

Under the Climate Leadership and Community Protection Act (Climate Act), Governor Kathy Hochul is driving the most aggressive climate and clean energy agenda in the nation. The agenda sets New York State on a path for a just and equitable transition to carbon neutrality, spurring the growth of the green economy while prioritizing the needs of Disadvantaged Communities across the State. New York State—a founding member of organizations like the Regional Greenhouse Gas Initiative (RGGI) and the U.S. Climate Alliance—aims to meet the energy-related challenges posed by climate change head on, while creating economic opportunities and delivering benefits equitably.



**As co-chair of New York's Climate Action Council (CAC), NYSERDA plays a critical role in charting the direction of New York State's energy and climate policies and implementing this ambitious agenda.**

**RESILIENT and DISTRIBUTED GRID**  
1,500 MW of energy storage

**ENERGY EFFICIENCY and BUILDING DECARBONIZATION**  
185 TBtu end-use savings in buildings and industrial facilities

**GHG REDUCTION**  
40% reduction in greenhouse gas emissions from 1990 levels

**RESILIENT and DISTRIBUTED GRID**  
6,000 MW of energy storage

**ENERGY EFFICIENCY and BUILDING DECARBONIZATION**  
1 million electric homes and 1 million electrification-ready homes

**CLEAN TRANSPORTATION**  
100% light duty zero-emission vehicle sales

**CLEAN ELECTRICITY**  
100% zero-emission electricity

**GHG REDUCTION**  
85% reduction in greenhouse gas emissions from 1990 levels

**now**

**CLEAN ENERGY ECONOMY**  
over 165,000 clean energy jobs

**by 2025**

**RENEWABLE ENERGY**  
6,000 MW of distributed solar

**by 2030**

**RENEWABLE ENERGY CLEAN ENERGY STANDARD**  
70% electricity from renewable energy

**CLEAN ENERGY ECONOMY**  
More than 200,000 new jobs added

**RENEWABLE ENERGY**  
10,000 MW of distributed solar

**by 2035**

**RENEWABLE ENERGY**  
9,000 MW of offshore wind

**by 2040**

**by 2050**

## NYSERDA'S ROLE

**As New York State's clean energy and climate innovation agency, NYSERDA plays a key role in implementing the State's nation-leading policies, programs, planning, and actions, all to deliver a cleaner, healthier, and more prosperous future for all New Yorkers.**

NYSERDA is on the front lines of a global energy transition. We bring energy expertise and public service to the challenges of fighting climate change and accelerating the arrival of a green energy future across all corners of our State and our economy.

NYSERDA works to foster the adoption of clean energy technologies and the innovations needed to fight climate change and to improve our quality of life. This work helps families and businesses access clean energy, energy efficiency, all-electric homes and vehicles, and measures for resilience. At the same time, NYSERDA encourages the competition and innovation that delivers value to consumers. NYSERDA uses a data-driven, engagement-focused approach to guide program design and provide for high levels of accountability and transparency, stewarding public funds toward prudent investments in a wide variety of green infrastructure. NYSERDA focuses on:

- Enabling communities, residents, and businesses to take local action on clean energy, climate, and resilience.
- Instilling confidence in markets and consumers through information, credible analysis, and education.
- Leveraging program investments to support job creation in the clean energy economy and expanded access to economic opportunities for underserved populations and other Disadvantaged Communities.
- Providing targeted financial support where costs present a persistent barrier, such as for low- to moderate-income (LMI) consumers and residents of Disadvantaged Communities.
- Increasing customers' access to capital by creating attractive precedents and standardizing approaches that capital providers can readily replicate and scale up.
- Reducing hard and soft costs of clean energy development by driving demand and focusing the efforts of key stakeholders, as well as by supporting and focusing technological and process innovation.
- De-risking energy transitions and deployment from technological and business model innovation, to demonstration projects, to broad commercialization.
- Designing and administering novel programs and pilots to meet the needs of emerging policy priorities and deep decarbonization pathways.
- Proactively driving efforts to attract clean energy economic development, manufacturing, and supply chain growth, and helping other high-tech industries achieve robust sustainability commitments.
- Investigating and designing ambitious energy and climate strategies and policies for the long-term.

In a dynamic world filled with constantly changing external conditions, NYSERDA aims to be a beacon of certainty and reliability for stakeholders and partners in New York State, exhibiting the steadfast and focused attention that will be needed to combat the climate crisis in the decades ahead.

**Despite the ongoing challenges posed by a global pandemic, inflation, rising interest rates, supply chain disruptions, workforce shortages, and international conflict, NYSERDA continues to leverage its programs within the flourishing clean energy market in order to drive the State's progress toward its ambitious long-term climate mandates—aided by significant new investments at the federal level.**

## POLICY FRAMEWORK

The landscape and policy framework surrounding NYSERDA's work has seen significant progress over the past year. Key drivers of change include:

- Finalization of New York's Climate Act Scoping Plan. In 2019, the nation-leading Climate Act was passed and dramatically raised the bar. The newly-approved Scoping Plan sets in motion the process of regulatory action to deliver the Climate Act goals.
- Continued central focus on key priority areas stemming from the Climate Act:
  - ▶ Increasing access to (and benefits from) clean energy for residents of Disadvantaged Communities and low-income consumers.
  - ▶ Creating and maintaining quality jobs in the green economy and ensuring a just transition for all New York workers as we transition to a carbon-neutral economy.
  - ▶ Designing new policies and programs to make inroads in sectors of the economy that require deeper decarbonization (e.g., transportation, buildings, waste, HFCs).
- New State legislation enacted and signed into law spurring energy efficiency, consumer savings, emissions reductions, and high-quality job creation. The legislation is coupled with the issuance of Executive Order 22, which drives sustainability and resilience in State operations; and with the passage of the Environmental Bond Act, which received notable levels of public support.

### **Better Buildings and Jobs Package, 2022**

In July 2022, Governor Hochul signed a package of legislation to strengthen New York State's building codes and appliance standards (A.10439/S.9405), expand community/utility thermal energy networks (A.10493/S.9422), and extend prevailing wage requirements for renewable energy projects one MW and larger (A.9598/S.8648).

These bills will help the State drive real savings for consumers and building owners (\$19+ billion by 2035); advance community thermal systems that reduce fossil fuel usage for heating and cooling through community-scale infrastructure solutions; and add employment opportunities for both existing and new energy workers.

- Bold new State directives from Governor Hochul to advance an economy-wide Cap-and-Invest program for emissions reductions, as announced in the 2023 State of the State address. This program, which will include both regulatory and legislative components, will establish a gradually declining cap on greenhouse gas emissions, limit financial impact to New Yorkers, invest the proceeds in programs that drive emission reductions in an equitable manner, and maintain the competitiveness of New York's industries.
- New State proposals and directives from Governor Hochul to advance clean and resilient buildings, as announced in the 2023 State of the State address—including zero-emission new construction, ending fossil fuel heating equipment replacement, and scoring large buildings' energy consumption with letter grades.
- Action at the local level ranging from implementation of New York City's Climate Mobilization Act, adoption of voluntary stretch codes in numerous localities, and Ithaca's bold plans for a fully carbon neutral community.
  - ▶ New York City's new construction law phases fossil fuels out of new buildings starting in 2024.
- Historic new actions and investments at the federal level, which will require unprecedented coordination between the State and federal government to focus investments for maximal impact (see page 12).
- Enactment of major legislation requiring the phaseout of internal combustion vehicle sales by 2035, as signed by Governor Hochul, and accompanying regulatory action for zero-emission cars and trucks.
- Following last year's major developments in support of the "70% renewable by 2030" Clean Energy Standard (CES), 2022 saw more major renewable electricity milestones reached, including the approval and groundbreaking of two Tier 4 transmission projects, the approval of a new distributed solar goal, the filing of a roadmap for a new "6 GW by 2030" energy storage target, and more.

- Transmission planning to enable renewable development necessary to meet Climate Act goals, including the New York Independent System Operator’s (NYISO) evaluation of the Long Island Public Policy Transmission Need; the Public Service Commission’s (PSC) consideration of Phase 1, Areas of Concern, and offshore-wind-related transmission projects submitted by utilities; and the utilities’ development of a revised Coordinated Grid Planning Process (CGPP) in collaboration with the Department of Public Service (DPS), NYSERDA, and other stakeholders.
- Increased attention to mapping the transition from fossil natural gas to clean energy in light of both long-term Climate Act requirements and updated methodologies for inventorying New York State’s greenhouse gas emissions footprint.
- The ongoing efforts to align NYSERDA and utility roles for market enablement and program delivery to accelerate building efficiency and electrification, including most notably through the New Efficiency: New York and Clean Energy Review process that was launched in 2022.
- The need to build on recent policy developments to make deep in-roads in reducing emissions from transportation, which—alongside buildings—is the largest contributor of emissions in the State.
  - Public Service Commission EV Make Ready Order
  - Multi-state Medium- and Heavy-Duty Vehicles MOU
  - Adoption of Advanced Clean Trucks and Advanced Clean Cars II regulations
  - CAC Final Scoping Plan policies on transportation
  - Federal clean transportation funding
- Extreme weather events, which are increasing in frequency and severity and placing rapidly increasing strain on our infrastructure and communities, and which necessitates placing resiliency at the heart of clean energy and climate solutions.

These new and evolving drivers of change build upon ongoing challenges and priorities that must continue as core areas of focus.

- The need to ensure energy affordability for all New Yorkers as the energy system undergoes transformation.
- The importance of leveraging market activity and private capital to achieve aggressive policy goals.
- The imperative to continue building public support for complex systemic changes such as expanding support for large-scale projects and changing of everyday consumer behaviors and purchasing decisions.

**As this critical inflection point for our climate and energy systems unfolds, NYSERDA will continue to align policy and program offerings to reflect these new and significant drivers of change, including prioritization of the key strategies and policies outlined in the sections of this Outlook.**

# Climate Leadership and Community Protection Act

(Climate Act)

Lays the groundwork for achievement of New York State's nation-leading climate targets, while calling for an orderly and just transition to clean energy that creates jobs and continues growing a green economy. A minimum of 35%—with a goal of 40%—of benefits of clean energy investments will benefit Disadvantaged Communities.

This year—2023—marks a major milestone in the implementation of the Climate Act, as the Climate Action Council's Scoping Plan was deliberated, discussed, finalized, and approved at the end of last year. With that Plan now final, it will be another truly formative year. The trajectory of New York State's energy and climate journey under the Climate Act is now laid out, setting the stage for regulatory action to unfold and for agencies to begin the work of implementing the numerous recommendations approved by the Council.

## New York's Scoping Plan

Read the Executive Summary and the Full Plan, which is also available by section, at [climate.ny.gov/scoping-plan](https://climate.ny.gov/scoping-plan)

Under the Climate Act, the Climate Justice Working Group will finalize a definition/criterion of Disadvantaged Communities, which will guide the delivery of benefits of investments to these communities. Finalization is expected in the first half of 2023, setting the stage for agencies to continue orienting their clean energy investment portfolios around the imperative of benefits to Disadvantaged Communities.



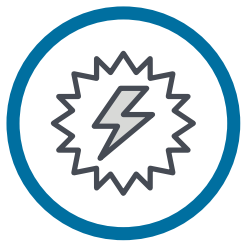
# BUILDING BLOCKS OF NEW YORK'S CLEAN ENERGY AGENDA



Transportation



Buildings



Electricity



Economy Wide



Regional



## Climate Act Scoping Plan

Creating policies and recommendations to achieve 40% GHG reduction by 2030 and 85% GHG reduction by 2050



## Clean Energy Fund

Designating more than \$7.7 billion to fund four key program portfolios:

- > NY Green Bank
- > Market Development
- > Innovation & Research
- > NY-Sun



## Clean Energy Standard



Transforming the generation of electricity to 70% renewable by 2030 and 100% zero-emission by 2040



## Zero-Emission Vehicles (ZEV) Action

Reducing transportation emissions through build-out of electric vehicle market and infrastructure, support for electrification of fleets and trucks



## New Efficiency: New York

Delivering energy efficiency savings and emissions reductions with comprehensive building strategies



## NYS Clean Heat

Replacing onsite fuel combustion for heating and cooling with efficient, electric heat pumps (air, ground)



## Regional Greenhouse Gas Initiative (RGGI)



Growing cooperative effort among northeast/mid-Atlantic states to cap and reduce CO<sub>2</sub> emissions from power plants



## Cap-and-Invest Program

New economy-wide program to drive emissions reductions, invest proceeds in an equitable manner, provide rebates to consumers, and maintain competitiveness of New York's industries

## FEDERAL INFRASTRUCTURE AND CLIMATE INVESTMENTS: PRIORITIES FOR NYSERDA AND NEW YORK


In 2021 and 2022, the federal government passed a trio of laws—the Infrastructure Investment and Jobs Act (IIJA), the CHIPS and Science Act, and the Inflation Reduction Act (IRA)—that collectively approved the largest amount of federal funding and policies to directly address climate and energy issues in our nation’s history. In combination, these transformational acts will:

- Increase domestic manufacturing capabilities for critical clean energy products
- Create family-sustaining jobs
- Lower energy costs for families
- Modernize and improve the health, comfort, and resiliency of our country’s aging homes and building stock
- Provide clean public transportation and fast charging networks across the State
- Focus investments in Disadvantaged Communities and to populations that have been historically underserved
- Reduce emissions and pollution
- Invest in innovation to drive future economic growth and job creation

With the historic passage of New York’s Climate Action Council Scoping Plan, federal funding will be an important component to New York’s achievement of its climate and clean energy goals. In particular, the passage of the robust tax credits across technologies and sectors of the economy will unlock significant private funding to invest in new technologies. More than half of the funding approved in the Inflation Reduction Act to support climate and energy work was authorized in the form of tax credits. Altogether, the passage of the Inflation Reduction Act promises to reduce the costs to New York to meeting the requirements of the Climate Act by up to \$70 billion through 2050.

### The Inflation Reduction Act reforms energy tax incentives through a mix of extensions, modifications, and new programs over the next ten years


#### Selected tax credit modifications in the Inflation Reduction Act\*



**\$2,000**

per year consumer tax credit for the purchase of heat pumps, heat pump hot water heaters, biomass stoves, and boilers


*(25C, nonbusiness energy property credit)*



**\$30**


per MWh for zero carbon electricity generation placed into service after 2024: reduces to \$23 in 2034 and \$15 in 2035

*(45D, production tax credit; 45Y, clean electricity)*



**Adders/  
Bonuses**


for prevailing wage, domestic content, energy communities, low income, and more



**\$7,500**

per vehicle consumer tax credit for qualifying electric vehicles (EVs)


*(30D, clean vehicle credit)*



**30%**

tax credit for standalone energy storage systems

*(48A, investment tax credit)\*\**



**\$3**

per kilogram for the production of qualified clean hydrogen

*(45V, clean hydrogen tax credit)*

\* Source: [www.mckinsey.com/industries/public-and-social-sector/our-insights/the-inflation-reduction-act-heres-whats-in-it](https://www.mckinsey.com/industries/public-and-social-sector/our-insights/the-inflation-reduction-act-heres-whats-in-it)

Federal funding coming to New York State will be provided by several federal agencies and administered by many state agencies. Interagency partnership and collaboration will be critical to the effective use of funds.

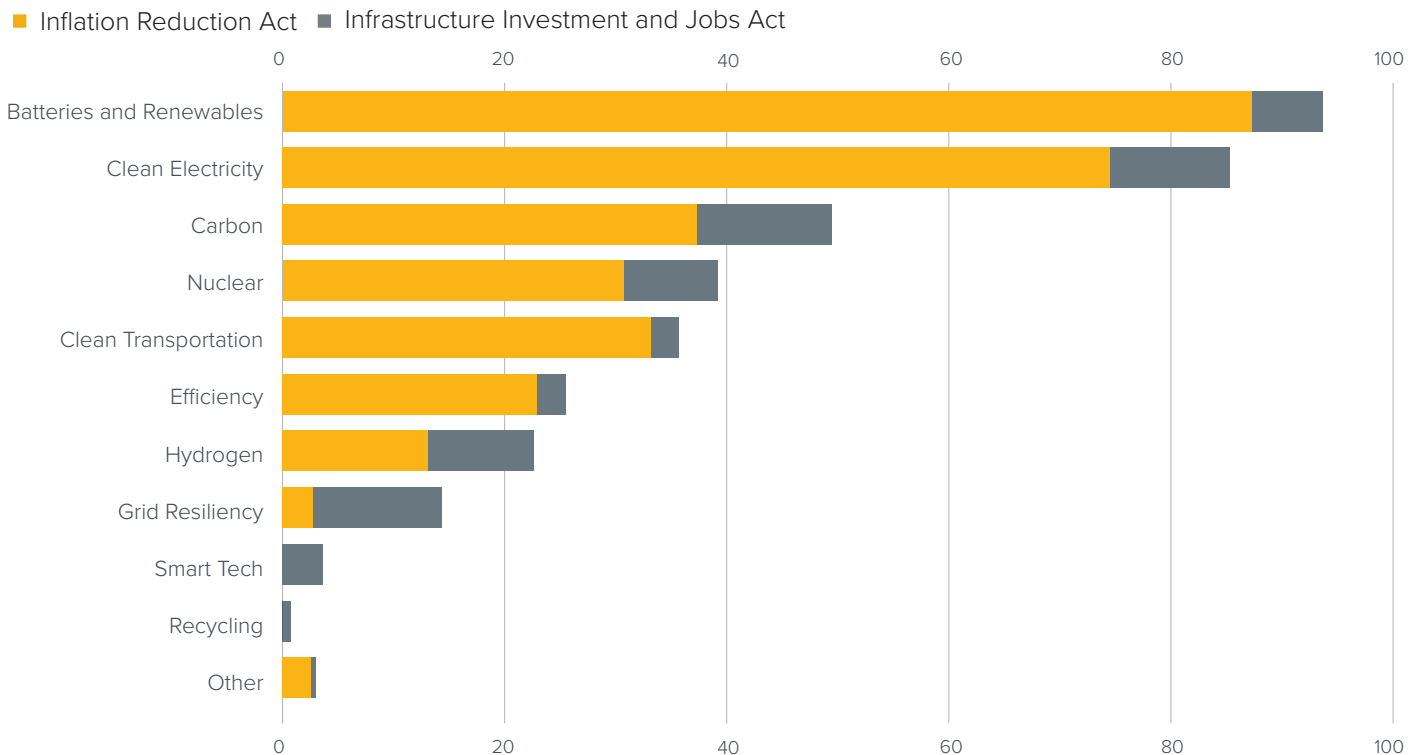
Several programs to highlight the federal investments in clean energy and this collaboration include:

- **Home Owner Managing Energy Savings (HOMES) and High-Efficiency Electric Home Rebate (HEEHR) programs:** New York will receive \$317 million in formula grants to support energy efficiency and electrification of homes, with a focus on lower income housing and housing located in Disadvantaged Communities. These two transformative programs are expected to launch by the Department of Energy in 2023.
- **Weatherization Assistance Program (WAP):** \$290 million announced (to date) supporting critical energy efficiency improvements in affordable housing.
- **National Electric Vehicle Infrastructure program:** \$175 million investment over the next five years to develop and implement a robust fast charging network across New York State.
- **Climate infrastructure resiliency grants:** \$233 million awarded to New York State, to date.

Energy funding from the Infrastructure Investment and Jobs Act and the Inflation Reduction Act spans major funding themes, totaling \$370 billion. This federal funding will address all sectors of the economy, providing important support for New York State’s national-leading Scoping Plan. Funding allocations by technology are shown in Figure 1.

NYSERDA has organized itself to track and respond to federal funding opportunities to ensure that New York State, local governments, individuals, businesses, Disadvantaged Communities, and other stakeholders can realize the maximum benefits from these investments to achieve our climate and energy goals.

**FIGURE 1. ENERGY FUNDING BY THEME AND SOURCE (\$ BILLION)**



Source for graphic: [www.mckinsey.com/industries/public-and-social-sector/our-insights/the-inflation-reduction-act-heres-whats-in-it](https://www.mckinsey.com/industries/public-and-social-sector/our-insights/the-inflation-reduction-act-heres-whats-in-it)

# Mission Outcomes and Strategic Focus Areas for 2023–2026

The following sections present NYSERDA's primary mission outcomes. Each outcome shows NYSERDA's strategies over the planning horizon as well as a summary of NYSERDA's unique role in delivering on the outcome. Indicators of progress are included to track movement in the market and to show progress toward goals.

**NYSERDA works to advance the following mission outcomes in support of New York State's energy transition:**



**GREENHOUSE GAS  
EMISSIONS REDUCTION**



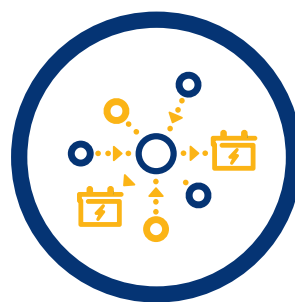
**RENEWABLE  
ENERGY**



**ENERGY EFFICIENCY AND  
BUILDING DECARBONIZATION**



**CLEAN ENERGY  
ECONOMY**



**RESILIENT AND DISTRIBUTED  
ENERGY SYSTEM**

Over the planning horizon, NYSERDA will also continue to concentrate on the following strategic focus areas to drive progress under each mission outcomes and the requirements of the Climate Act. These strategies are critical to achieving New York State’s long-term energy, greenhouse gas emission reduction, and socio-economic goals:



**BUILDING AN  
INCLUSIVE CLEAN  
ENERGY ECONOMY**



**SUPPORTING CLEAN  
ENERGY JOBS**



**ACCELERATING THE  
TRANSITION FROM  
FOSSIL NATURAL GAS  
TO A LOW-CARBON  
FUTURE**



**FOSTERING HEALTHY  
AND RESILIENT  
COMMUNITIES**

For each of these strategic focus areas, statewide priorities are presented along with key NYSERDA actions for 2023–2026. As characterized last year:

**These strategic focus areas center on people—the residents and communities across New York State who utilize the energy system every day and have the potential to benefit from NYSERDA’s programs and policies.**

These strategies will be crucial for achieving our ambitious and necessary climate objectives. Critical focus will be on helping historically marginalized New Yorkers access the growing green energy economy and clean energy job opportunities; supporting families to learn about and choose cleaner home appliances; and empowering neighbors, communities, and businesses to drive climate action and public health wins.

Many efforts will begin producing tangible outcomes in the near term, while others represent an acceleration in focus for a transition that will take many decades to unfold.



# Greenhouse Gas Emissions Reduction

STATE POLICY GOAL  
FOR GREENHOUSE GAS (GHG) EMISSIONS REDUCTION

**The Climate Act sets annual greenhouse gas emission limits at 40% lower than 1990 levels by 2030 and 85% by 2050, and sets a carbon neutrality goal by 2050.**

Achieving these limits will enable the State to advance economy-wide carbon neutrality. It will mean that New York State is doing its part to reduce GHG emissions that cause climate change, while establishing a model for other jurisdictions to follow. The Climate Act also set in motion a process to develop an updated GHG accounting methodology, which the Department of Environmental Conservation (DEC) has implemented. Due to these methodological changes—accounting for the upstream emissions associated with New York’s fossil fuel use and using a 20-year global warming potential for all emissions—achieving a 40% reduction in GHG emissions by 2030 and 85% by 2050 has become significantly more difficult, requiring swifter, more transformative changes to our energy systems and economy.

**December 2022:** New York State’s Climate Action Council approved and adopted a Final Scoping Plan that charts the course to the State’s ambitious 2030 and 2050 goals.

**January 2023:** Governor Hochul announced an economy-wide Cap-and-Invest program, directing DEC and NYSERDA to begin program design and implementation according to principles of affordability, climate leadership, creating jobs and preserving competitiveness, investing in Disadvantaged Communities, and funding a sustainable future.



**2020–2021** Climate Action Council and Advisory Panel work



**December 30 2021** Draft Scoping Plan issued (Economy-Wide)



**Throughout 2022** Public engagement hearings and stakeholder input



**December 19 2022** Final Scoping Plan released\* (Economy-Wide)

**Throughout 2023** Climate Act-required emissions regulations

**2030** 40% reduction in annual GHG emissions, relative to 1990 levels

**2050** 85% reduction in annual GHG emissions, relative to 1990 levels

\* View the Final Scoping Plan at [climate.ny.gov/Scoping-Plan](https://climate.ny.gov/Scoping-Plan)



## NYSERDA'S ROLE

As Climate Action Council Co-Chair, **help implement the roadmap of policies and recommendations** to achieve the Climate Act's goals under the Scoping Plan.

**Guide and facilitate State Energy Plan** development and shape energy policies throughout New York State, by catalyzing market transformation and through development and implementation of mandates and Executive Orders.

**Identify and implement strategies** for energy, buildings, and transportation sector emissions reductions and other GHG mitigation strategies.

**Support development** of statewide GHG inventory, supporting DEC in updated emissions methodology rulemaking and implementation.

**Facilitate State agencies' efforts** to lead by example and drive toward operations with reduced or eliminated emissions.

## INDICATORS OF PROGRESS

- Levels and trends in GHG emissions and emissions intensity from sources statewide and within priority sectors

## STRATEGIES FOR 2023–2026

- Support policy development and planning, which includes finalizing and implementing the Two Million Climate-Friendly Homes Action Plan with the Building Electrification Roadmap, ZEV Market Development Plan, 6-GW Energy Storage Roadmap, a second (updated) Offshore Wind Master Plan, Hydrogen Roadmap, and more.
- Coordinate investment of federal climate and clean energy funds made available under the Infrastructure Investment and Jobs Act, the CHIPS and Science Act, Inflation Reduction Act, and other federal funding in partnership with other New York State agencies and authorities to maximize equitable deployment of low-emission technologies and optimally leverage other funding sources to reduce costs to ratepayers.
- “What can I do, what should I do?”— Develop communications strategies that support individual and local understanding of the Scoping Plan and translate the plan to facilitate individual action.
- Advance solutions to drive emissions reductions in all areas of New York's economy—through a foundation of energy efficiency, clean electricity supply, and beneficial electrification of buildings, transportation, and industrial applications, and other zero-emission solutions.
- Spur development of innovative, next-generation solutions driving emissions reductions in hard-to-reach sectors and hard-to-electrify applications, from hardware, software, and materials to natural carbon solutions.
- Refocus efforts to market segments needing attention, such as medium- and heavy-duty vehicles and non-road engines, as the market-based movement towards light-duty electric vehicles continues to grow. Collaborate with other public entities, including work with DPS to expand the EV make-ready program for trucks and with New York State Department of Transportation (DOT) to support the buildout of fast charging stations along New York State's major travel corridors.
- Help spearhead regional GHG program reviews alongside other states, including, notably, the periodic RGGI program review that began in Fall 2021 and is expected to conclude early 2023.
- Support communities across the State in implementing their own sustainability and clean energy goals, including local clean heating and cooling campaigns, and widespread adoption of new stretch energy/building codes.
- Work in close partnership with other agencies and authorities including DPS, Department of Environmental Conservation (DEC), DOT, Homes and Community Renewal (HCR), New York Power Authority (NYPA), Long Island Power Authority (LIPA), and others; and provide support with data, analysis, policy options development and evaluation, lead-by-example exemplars, strategic planning, and budgetary engagement.





- Conduct analyses and program development to better spotlight and target the co-benefits of GHG reductions, especially the public health benefits that can be delivered to Disadvantaged Communities via reduction in co-pollutant emissions, as seen in the Clean Energy Standard Tier 4 petition/filing.
- Support schools in implementing legislation requiring that, by 2027, all new school bus purchases will be zero-emissions, and by 2035, all school buses on the road will be zero-emissions, including developing a School Bus Electrification Roadmap.

## TRANSFORMATION 2030

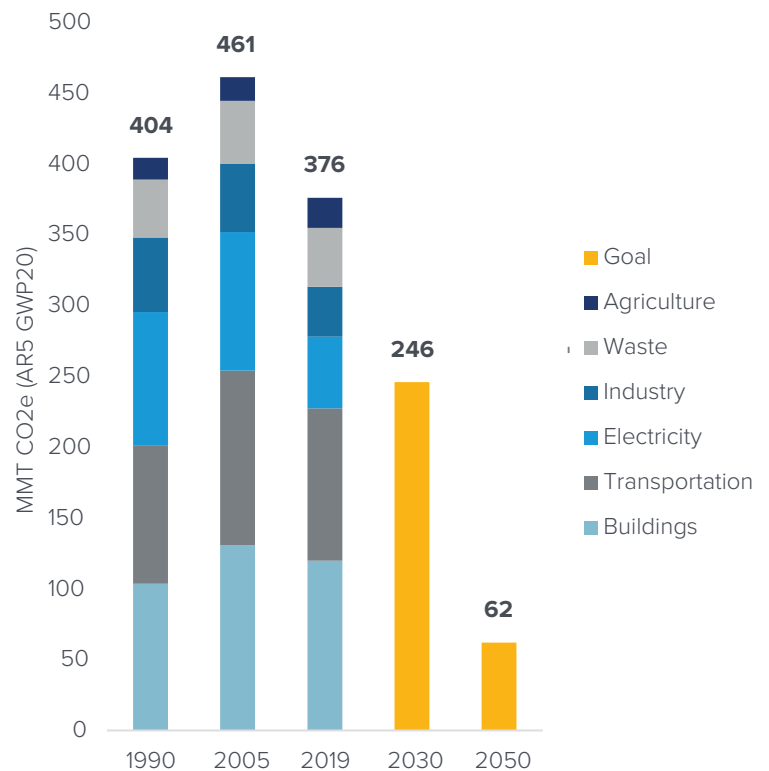
**2030 target:**  
**40% reduction**  
**in annual emission**  
 relative to 1990 emissions baseline

**Today, we are in the middle of a transformation that will lead to New York State looking radically different. It will be a “40% less GHG emitting society” only seven years from now.**

- 20,000 MW of new power generation fueled by wind, water, and sun will account for at least 70% of the State’s electricity needs, with commensurate reductions in power and emissions from fossil fuel generators.
- Service improvements will make public transit viable for even more New Yorkers and the auto industry will be well on its way to a new era of electrified transportation, with EVs comprising over 90% of new car sales in 2030.
- Home energy efficiency upgrades have made modern and efficient heat pumps the preferred option for customers, with two million out of New York’s eight million homes having already switched or ready for the switch.
- Businesses across the State will be embracing environmental, social, and governance goals and showing that sustainability can be aligned with their bottom line.
- This transformation will have driven a thriving clean energy industry with nearly a half a million people employed in the sector and improved local air quality for all New Yorkers.

**2050 target:**  
**85% reduction**  
 Relative to 1990 emissions baseline

*NOTE: all emissions inventory numbers were updated at the end of 2021 following DEC rulemaking on emissions accounting methodology to align with the Climate Act. The new inventory numbers put New York’s baseline of emissions at roughly 70% higher than pre-Climate Act accounting, due to the changes in accounting for upstream emissions, global warming potential, and other updates to more properly gauge the near-term impact of our emissions.*



*Due to methodological updates included in DEC’s GHG Emissions Report, the 1990 baseline differs slightly from the 1990 baseline incorporated into DEC’s Statewide Greenhouse Gas Emission Limits regulation (Part 496) that informed the establishment of the 2030 and 2050 values. The 2030 and 2050 values shown here are based on regulation, while the 1990 value shown here is based on the latest information developed for the annual GHG Emissions Report.*

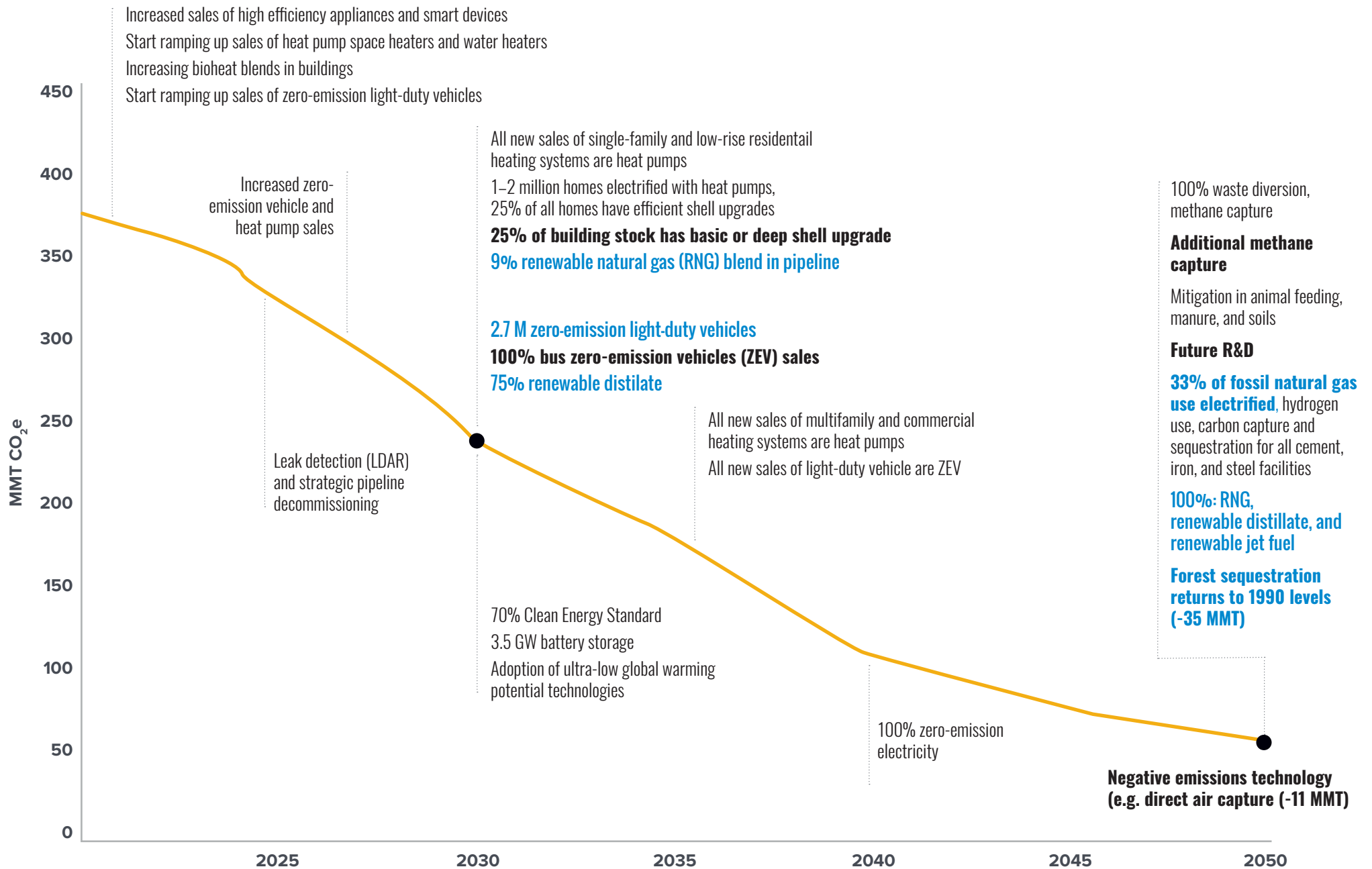


# CLIMATE ACTION SNAPSHOT: NEW YORK'S SCOPING PLAN

Highlights from the 2022 Final Scoping Plan issued by the Climate Action Council in December 2022

— Climate Act Scoping Plan - Mitigation Scenario

● Climate Act gross emissions limits





## HIGHLIGHTED PROGRAMS AND INITIATIVES

**Clean Energy Fund** accelerates the deployment of clean energy solutions in buildings (and other sectors), including towards achieving Two Million Climate Friendly Homes by 2030.

**Clean Energy Standard** provides the framework for achieving 70% renewable electricity by 2030 via the build-out of large-scale renewable resources for New York State. Achievement supported by complementary actions initiated in 2020 legislation (Build Ready, Office of Renewable Energy Siting [ORES], Power Grid Study), Coordinated Grid Planning Process [CGPP] and 2021 budget provisions (Prevailing Wage/Project Labor Agreements, MWBE/SDVOB requirements; Buy America preferences, renewable taxation model).

**Accelerate energy innovation** via a multitude of projects and initiatives including energy storage deployment, coordination of a multi-state effort to launch a new hydrogen hub, NYSERDA's tech-to-market efforts, which bring leading-edge technologies to commercialization, and more.

**Energy storage deployment** and other renewable energy integration measures to interconnect more renewables on the grid, minimize and avoid delivery impacts, bolster system flexibility, and support resiliency.

**Regional Greenhouse Gas Initiative (RGGI)** assigns a price to power plant emissions and directs revenue to clean energy initiatives.

### Clean Transportation Prizes and NY Truck Voucher Incentive Program

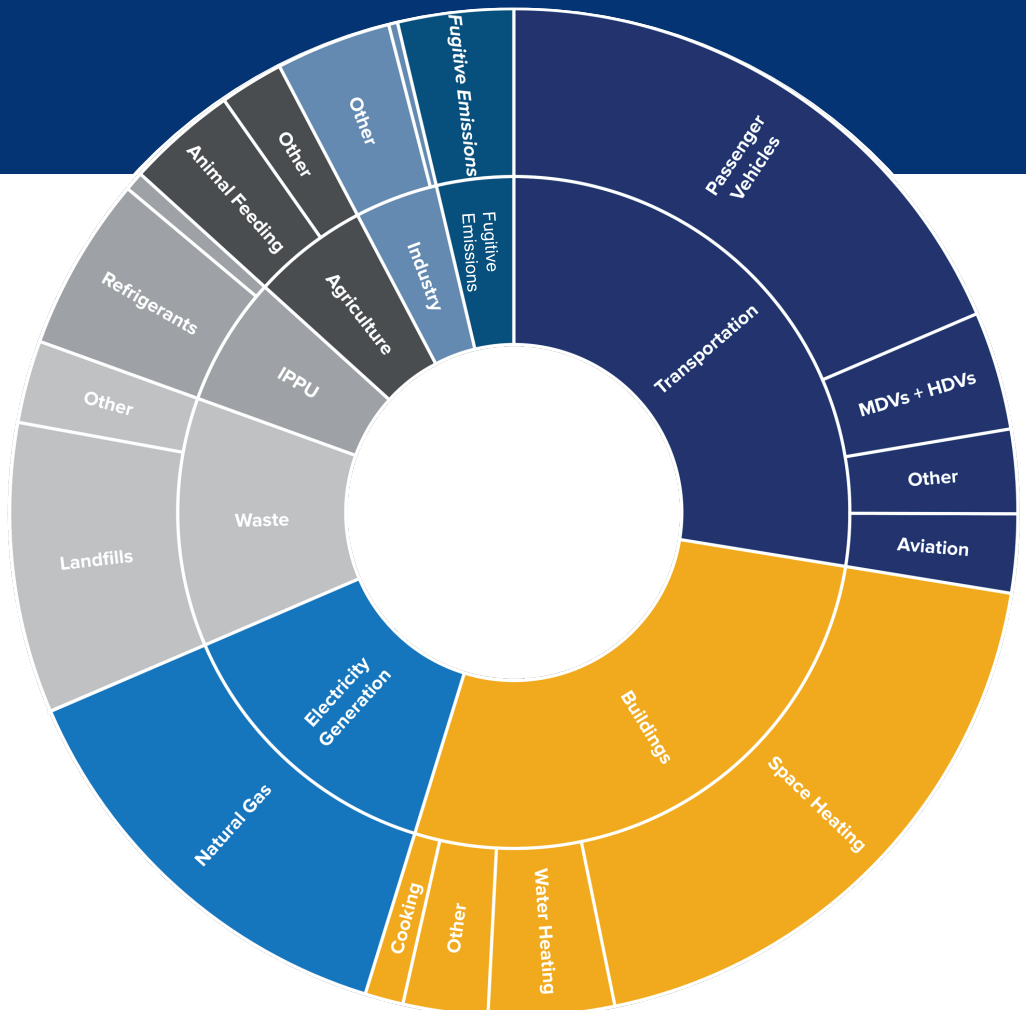
represent efforts to address the air quality and quality of life impacts that the legacy transportation system have created in overburdened communities. These NYSERDA-run programs focus on community-scale transportation solutions, advanced mobility, and electric truck and bus innovation as well as rebates for the purchase of medium- and heavy-duty electric vehicles accompanied by the destruction of equivalent older, dirty diesel vehicles.

### Clean Energy Communities

recognizes and rewards communities for implementing clean energy actions that save taxpayer dollars, create jobs, and improve the environment.

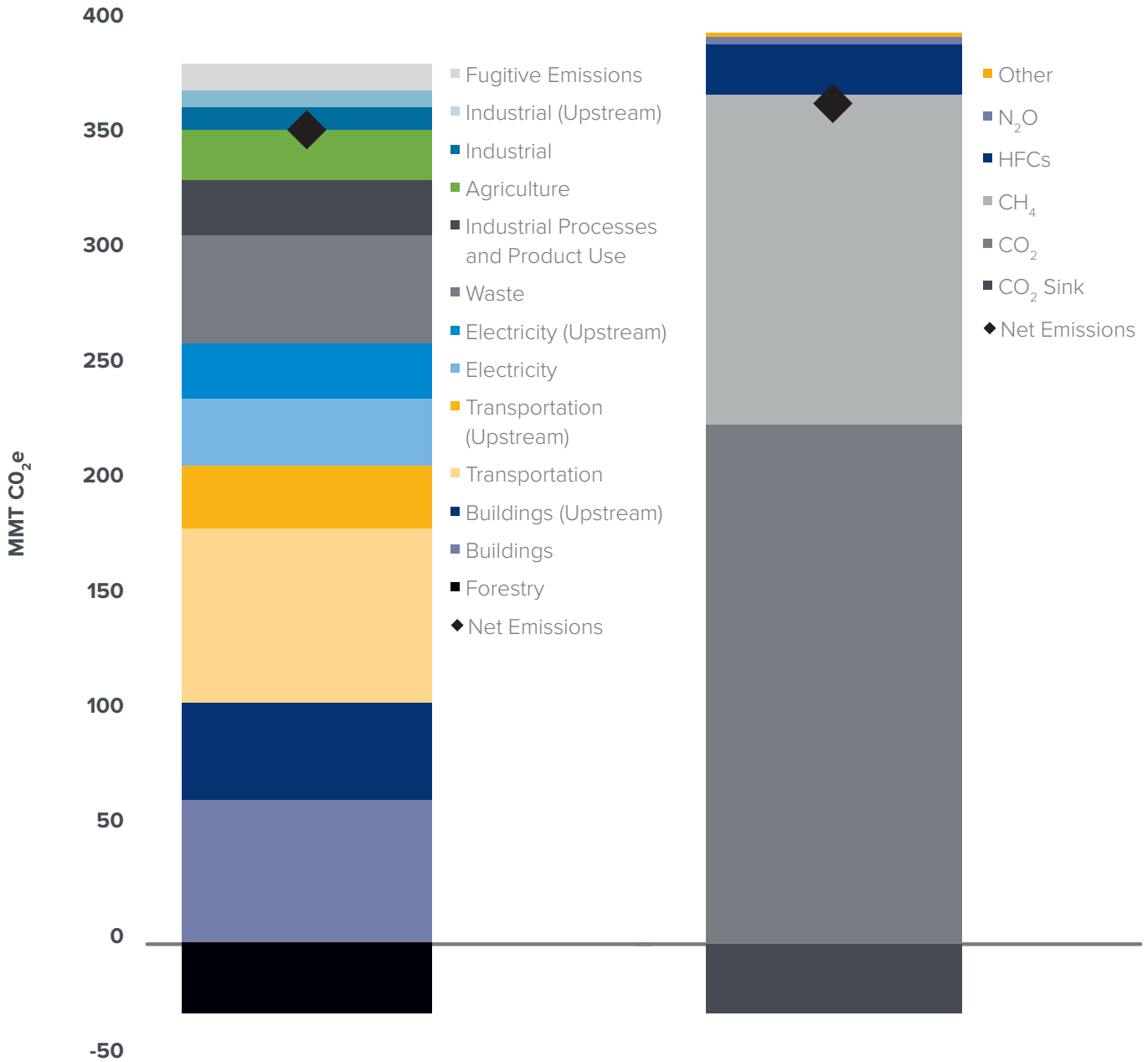
## CURRENT ESTIMATED 2020 GREENHOUSE GAS EMISSIONS BY SECTOR

*Draft 2020 results are in line with DEC Climate Act accounting, including upstream emission factors, 20-year Global Warming Potential (GWP), and estimates from NY PATHWAYS analysis. Sub-sector figures are not yet re-benchmarked to DEC's updated GHG Inventory Report issued December 2022.*





## CURRENT ESTIMATED 2020 GREENHOUSE GAS EMISSIONS BY SECTOR AND TYPE





# Renewable Energy

## STATE POLICY GOAL FOR RENEWABLE ENERGY

**The Climate Act mandates that at least 70% of New York State’s electricity come from renewable energy sources such as wind and solar by 2030 (70x30).**

Armed with climate goals among the most aggressive in the nation and with the expedited processes to match, achievement of the 70x30 mandate will move the State closer to delivering just, equitable climate action to New Yorkers, including improving air quality, buttressing a more resilient grid, and spurring a clean economy through supply chain investments, workforce development, and job creation.

The State’s nation-leading climate and energy policies and initiatives have set the stage for success in New York State, and the recent passage of historic federal investment in climate and energy work authorized as part of the Bipartisan Infrastructure Act and the Inflation Reduction Act will help New York State address some of the many challenges and risks to this groundbreaking work. This historic level of investment from the federal government will provide significant tax credits, loans, grants, and technical assistance to all sectors of the economy—including grid infrastructure and grid modeling and planning—to improve resiliency and to better integrate renewables into the safe operation of the electric grid.

In the 21st century, the future is electric. NYSERDA is working tirelessly to remove barriers and deliver our State’s goals and benefits to New Yorkers—including almost \$25 billion in net societal benefits estimated over the lifetime of Tier 1, Tier 4, and offshore wind procurements under the Clean Energy Standard.



## NYSERDA'S ROLE

**Facilitate continued ramp-up of steady, predictable procurements** for renewable generation and energy storage, offering market confidence and supply chain stability.

**Partner with local governments to support smart siting policies** that maximize co-benefits between industries, cultivate infrastructure ecologies, and build community engagement.

**Support climate equity** through the prioritization of benefits (including energy bill savings from renewable energy) and workforce development delivered to Disadvantaged Communities across the State.

**Drive supply chain localization**, local port and manufacturing investments, and job creation and training, through new \$500 million State investment to support offshore wind ports and manufacturing.

**Reduce costs** by delivering economies of scale, removing barriers to deployment, reducing risk, and supporting innovation.

**Inform transmission planning** processes to drive investment critical to enabling the integration of 25+ GW of Tier 1 and offshore wind renewable projects anticipated for State goals.

**Develop a blueprint** to guide the retirement and redevelopment of the State's oldest and most-polluting fossil facilities by 2030, working with DEC and DPS.

## INDICATORS OF PROGRESS

- MWh: progress toward the 70x30 and 100x40 targets
- MW and facilities (large-scale, offshore, behind-the-meter, and transmission) completed and in the pipeline: progress toward goals
- Benefits of renewable energy investments accruing for Disadvantaged Communities and Minority and Women-Owned Business Enterprise (M/WBE) engagement
- Private market investment, clean energy jobs, and costs per Renewable Energy Certificate (REC)

## STRATEGIES FOR 2023–2026

- Accelerate efforts to achieve the Climate Act's 70x30 renewable goal. This will happen via build-out of on- and off-shore resources, and construction of the new Tier 4 transmission line projects into Zone J/New York City and associated transmission improvements needed to ensure deliverability of NY-Sun, large-scale renewables, and energy storage generation projects.
- Continue the sprint toward and reach beyond goals of 10 GW of solar by 2030, 6 GW of storage by 2030, and 9 GW of offshore wind by 2035.
- Collaborate with market participants to complete technical studies, such as New York State Cable Corridor Study; promote infrastructure investments such as transmission and energy storage that will unlock system efficiencies; and unbottle resources to drive progress on our goals and ensure cost savings to ratepayers.
- Collaborate with utilities and other market participants to build transparency in interconnection processes, overcome grid constraints on project capacity, and alleviate pricing/curtailment issues through innovative and cost-effective solutions to grid constraints. Potential solutions include the use of hybrid transmission and storage solutions and expanded integration of grid enhancing technologies, such as dynamic line ratings and power flow control devices.
- Launch a new Offshore Wind Master Plan 2.0: Deep Water. The plan will serve as an organizational framework to continue procuring offshore wind to achieve at least 9 GW of offshore wind installed by 2035, and inform approaches to maximize the benefits of further offshore development. Further development may include next-generation floating turbine technologies and the preparation for a meshed offshore network to achieve broader interregional Climate Act goals.



- Procure at least a further 2 GW of new offshore wind projects via the 2022 “NY3” RFP to support the development of a robust offshore wind supply chain and workforce and stimulate economic activity in New York State and the region.
- Expand efforts to advance energy storage in New York State through the 6 GW Energy Storage Roadmap and the PSC’s subsequent directives for next steps on energy storage programs.
- Engage in detailed sector studies of evolving resiliency design approaches and best practices to mitigate future climate risks and to deepen the carbon performance of projects through reducing embodied carbon.
- Continue supporting communities navigating reduced project development timelines under new 94-c siting process and work to improve interconnection inefficiencies.
- Work closely with communities to inform and spur adoption of smart local siting rules/laws and cultivate welcoming and cultivating adoption of renewable technologies in areas best suited to interconnect to the grid.
- Continue to engage with NYS Tax and Finance in its implementation of model renewable energy taxation law and policy.
- Engage in interregional coordination with the federal government and neighboring states to address mutual challenges and opportunities related to transmission, supply chain, benefits to Disadvantaged Communities, workforce, and environmental concerns.
- Develop a blueprint to guide the retirement and redevelopment of New York State’s oldest and most-polluting fossil facilities by 2030, working with DEC and DPS.

## TRANSFORMATION 2030

- New York is well on its way to powering electricity with wind, water, and solar, with 70% renewable electricity statewide
- Virtually all large-scale resources procured by 2026/2027 to comprise 2030 portfolio
- At least 10 GW of distributed solar, roughly 16 GW of large-scale solar, approximately 4 GW of onshore wind, and at least 6 GW of offshore wind to serve expected statewide annual load
- 50,000+ new jobs created in the electricity sector (renewables, T&D, storage, etc.)
- Build-out of inter- and intra-regional transmission infrastructure, long-duration storage underway



## The Climate Act and new, expanded goals ramp up renewable energy, including:

QUADRUPLING NEW YORK'S OFFSHORE WIND TARGET TO AT LEAST

# 9,000 MW by 2035

up from 2,400 MW by 2030

BOLSTERING DISTRIBUTED SOLAR DEPLOYMENT TO AT LEAST

# 10,000 MW BY 2030

up from 6,000 MW by 2025

## New York State continues to grow a strong pipeline of projects to meet the 70x30 goal.

AS OF DECEMBER 2022,  
THERE WERE APPROXIMATELY:

# 38 GW

**OF ACTIVE ONSHORE  
RENEWABLE ENERGY  
PROJECTS IN THE NYISO  
INTERCONNECTION QUEUE**

Additionally, there are currently **MORE THAN 30 PROJECTS** in or in the process of applying for the Article 94c (ORES) queues, with 15 certificates/permits granted in 2021 and 2022—which indicates more of the pipeline is coming to fruition.

**MORE THAN 1.3 GW OF ENERGY STORAGE** awarded statewide, with another 200+ MW proceeding to contracting in utility procurements as of the end of 2022 and several hundred MWs expected to be built in 2023.

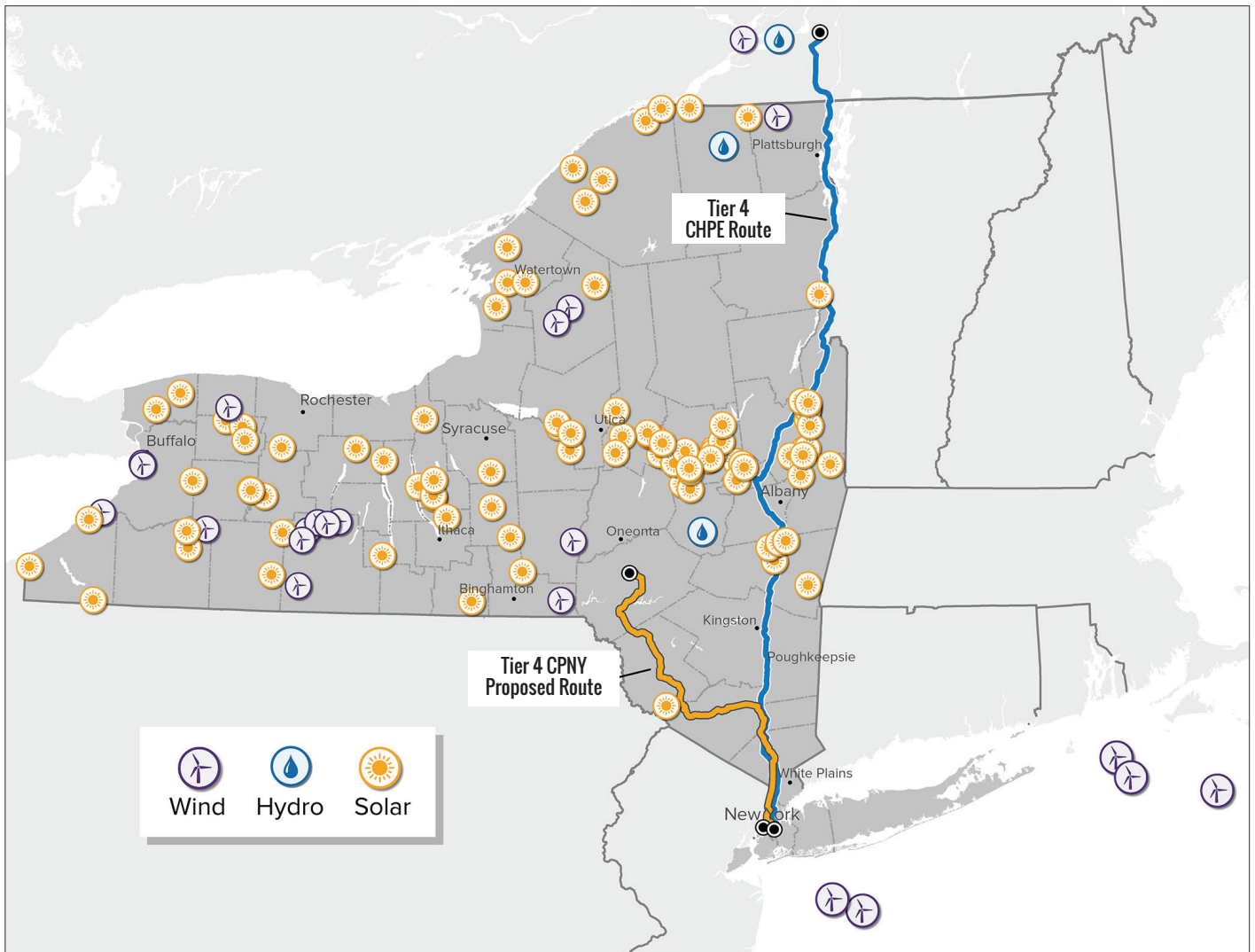
**NINE LEASE AREAS** of uncontracted offshore wind, enough to support over 14 GW of offshore generation capacity.

**MORE THAN 4 GW OF DISTRIBUTED SOLAR** installed statewide, with a **PIPELINE OF 3.4 GW** (high project maturity – lower than 10% attrition).





# MAP OF NEW YORK CONTRACTED LARGE-SCALE RENEWABLE PROJECTS (AS OF DECEMBER 2022)



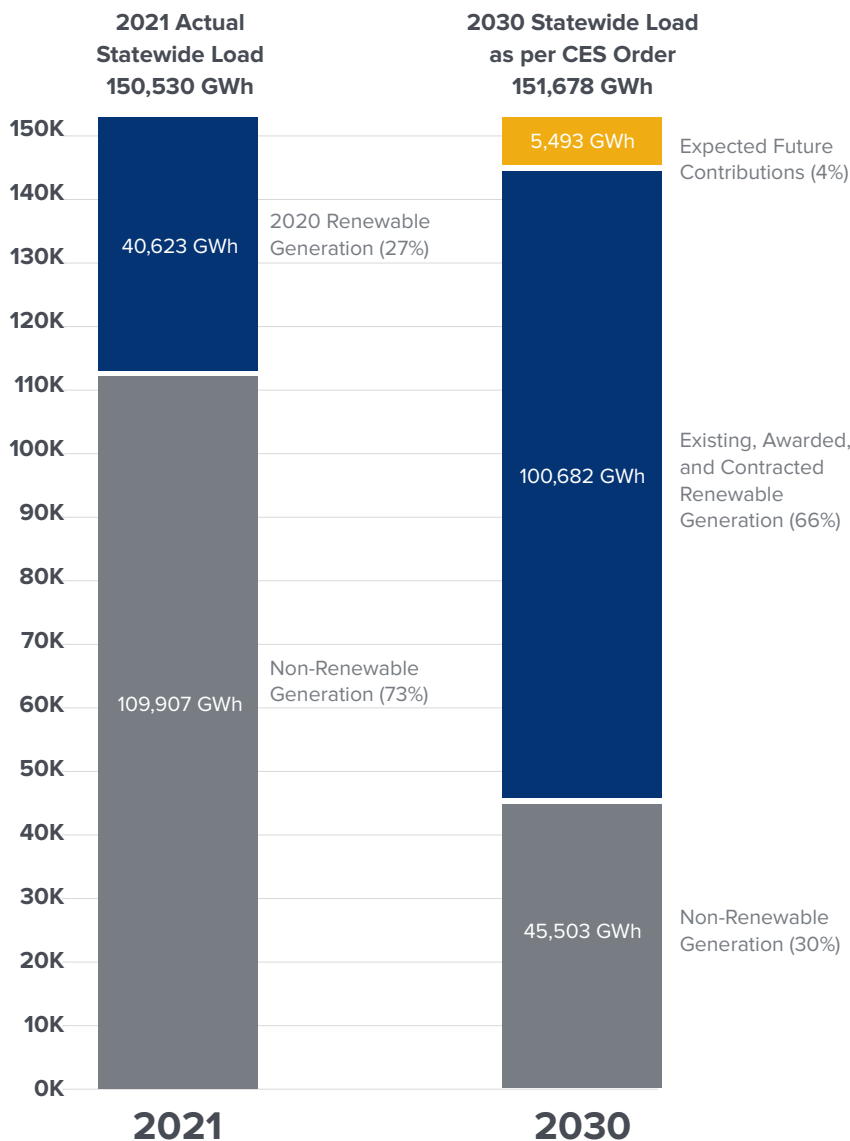


# 2030 Clean Energy Standard target: 70% electricity from renewable sources

## PROGRESS TOWARDS 70X30 GOAL

**106,175 GWh to reach goal\***

*\* GWh required to meet goal is based on 2020 Clean Energy Standard Order load projection for 2030 and is subject to future adjustment.*



## HIGHLIGHTED PROGRAMS AND INITIATIVES

### Large-Scale Renewables

supports the development of large-scale renewable energy and energy storage projects.

**Offshore Wind** establishes a significant, cost effective, renewable generation source with promise of new industry in New York State.

**Tier 4** is a new tier of the Clean Energy Standard helping bring forth new transmission and new renewables to serve New York City, via two major projects approved by the PSC in 2022.

**Build-Ready** complements private sector development and expedites the pre-development of large-scale renewable assets with a focus on underutilized, previously developed sites.

**Community Solar** makes solar affordable and accessible for all New Yorkers.

**Solar for All** makes subscriptions to community solar projects available at no cost for low-income residents.

**NY Sun** drives distributed solar adoption through residential/commercial rooftop and larger community solar projects. These programs reduce costs and make solar accessible to all New Yorkers.

The **Energy Storage** program supports the roll-out of renewable energy generation through deployment of at least 1,500 MW of energy storage by 2025 with an expanded goal of 6,000 MW by 2030.



# Energy Efficiency and Building Decarbonization

STATE POLICY GOAL FOR ENERGY EFFICIENCY AND BUILDING DECARBONIZATION

**The Climate Act codifies a 2025 statewide energy efficiency target of 185 TBtu (trillion British thermal units) of cumulative end-use energy savings in New York’s buildings and industrial facilities. Governor Hochul, in her 2022 State of the State Address, called for two million climate friendly homes by 2030, across energy efficient homes and apartments that are electrified and electrification-ready.**

The 2025 Climate Act energy efficiency target will deliver near-term progress toward New York State’s 40x30 climate goals, but it is only the beginning of a much more ambitious effort to modernize and decarbonize the State’s six million buildings so that they are healthier, cleaner, and more resilient.

Building energy efficiency and electrification will play a dominant role in putting the State’s building sector on a course to carbon neutrality, while creating better living and working spaces for New Yorkers, and economic opportunity in the form of clean energy jobs. Investments in energy efficiency and advances in load flexibility will minimize the grid impacts of statewide beneficial electrification of buildings. Efforts will focus on delivering benefits to Disadvantaged Communities and low- and moderate-income New Yorkers while protecting energy affordability.



Looking to the future, NYSERDA's strategy will need to go beyond building-by-building upgrades to approaches that can work block-by-block and community-by-community—such as through the deployment of clean thermal energy networks—to achieve at the scale and pace needed to address the climate crisis.

## NYSERDA'S ROLE

**Deliver policy and strategic leadership** on energy efficiency and building electrification through the Climate Action Council, Carbon Neutral Buildings Roadmap, Building Electrification Roadmap, Two Million Climate Friendly Homes Action Plan and decarbonization partnerships with other State agencies.

**Provide technical and regulatory assistance** to advance codes and standards that send a clear signal to the market that New York State is phasing out the use of fossil fuel in buildings and moving to cleaner, healthier options.

**Develop and manage programs** to eliminate barriers and increase adoption of carbon neutral building strategies, providing financial and technical assistance to solution providers and consumers, prioritizing low- and moderate-income homes, schools and other buildings located in Disadvantaged Communities.

**Support product innovation** to deliver better solutions for the New York State market, lower the cost of the transition away from fossil fuels, and build a local clean energy industry.

**Provide financing** for energy efficiency and building electrification market participants and enable private financing of clean energy projects on a larger scale.

**Help advance and implement new policy directives** in the building sector, such as zero-emission new construction, fossil fuel heating equipment phaseout, and letter grades for large buildings' energy consumption—as announced by Governor Hochul in the 2023 State of the State address.

## INDICATORS OF PROGRESS

- GHG emission reduction from the building sector (annual CO<sub>2</sub>e)
- Energy savings: total TBtus across all fuels (fossil natural gas, electricity, etc.)
- Buildings that are efficient and decarbonized, as a percent of New York's six million buildings
- Prioritized investment in buildings and homes located in under-resourced and historically marginalized Disadvantaged Communities
- New York's Clean Energy Dashboard can be used to track indicators of progress, found at [nysenda.ny.gov/view-clean-energy-dashboard](https://nysenda.ny.gov/view-clean-energy-dashboard)

## STRATEGIES FOR 2023–2026

- Leverage insights from the forthcoming Carbon Neutral Buildings Roadmap and Building Electrification Roadmap in designing market interventions to incorporate deep efficiency, more efficient electric heating and cooling technologies, and grid-connected capability.
- Advance the market for resilient, carbon neutral buildings including supporting deeper levels of efficiency using a variety of strategies such as peer-based challenges and public-private demonstration partnerships; support of long-term energy planning within the capital improvement cycle; support of health-based studies; demand aggregation, supply-side engagement, community-scale systems, the development and demonstration of new solutions to deliver higher performing buildings products and systems, and other cost reduction strategies; as well as development and demonstration of new solutions to deliver higher performing buildings products and systems.
- Advance and deepen partnerships and programs that create cleaner, healthier, and more resilient homes and buildings for low-income families and in under-resourced and historically marginalized Disadvantaged Communities, with a focus on schools and affordable housing, in coordination with housing agencies and utilities—including through HCR's new \$25 billion, five-year housing capital plan (2022–2027).
- In partnership with utilities, deliver weatherization and efficient electrification of buildings through consumer incentives and market support, including development of relevant workforce and supply chains to move New York toward all-electric buildings and accelerate the transition away from fossil fuels.



- Build market demand by increasing consumer awareness and providing timely and accurate information, tools, and playbooks on energy efficiency and building electrification opportunities for building owners and tenants—capitalizing on key points in a building life cycle (e.g., tenant turnover, major renovations, property transfer, equipment replacement).
- Support statewide building decarbonization in new construction through a combination of market demonstrations over the next three years to help assess a mandatory low energy-use-intensity and zero on-site GHG new construction code phasing in from 2025 through 2028.
- Support strategies for statewide building decarbonization in the existing building stock, such as development of appliance efficiency standards, fossil fuel heating equipment phaseout, letter grades for large buildings, home energy disclosure upon property sale, and building performance standards.
- Advance the development of clean thermal energy networks by supporting feasibility studies, detailed design studies, development of new business models, and construction funding for private developers and municipalities, as well as coordinate with DPS and utilities on the roll out of the Utility Thermal Energy Networks and Jobs Act.

## TRANSFORMATION 2030

By 2030 New York State will need to have 1–2 million homes and buildings equipped with modern electric heating and cooling and paired with energy efficiency, as an essential part of achieving New York State’s climate goals. This will create better living and working spaces for New Yorkers—especially low- and moderate-income New Yorkers—and will build healthier communities. Achieving these goals calls for a skilled workforce and will create job opportunity throughout the State, with the potential to create 100,000 jobs in the coming decade.

## Future of Buildings

NYSERDA’s Future of Buildings report series will lay out comprehensive efforts by the State to modernize New York State’s buildings while reducing or eliminating their use of fossil fuels and associated GHG emissions, in alignment with the [Climate Action Council Scoping Plan](#). The series includes the following reports:

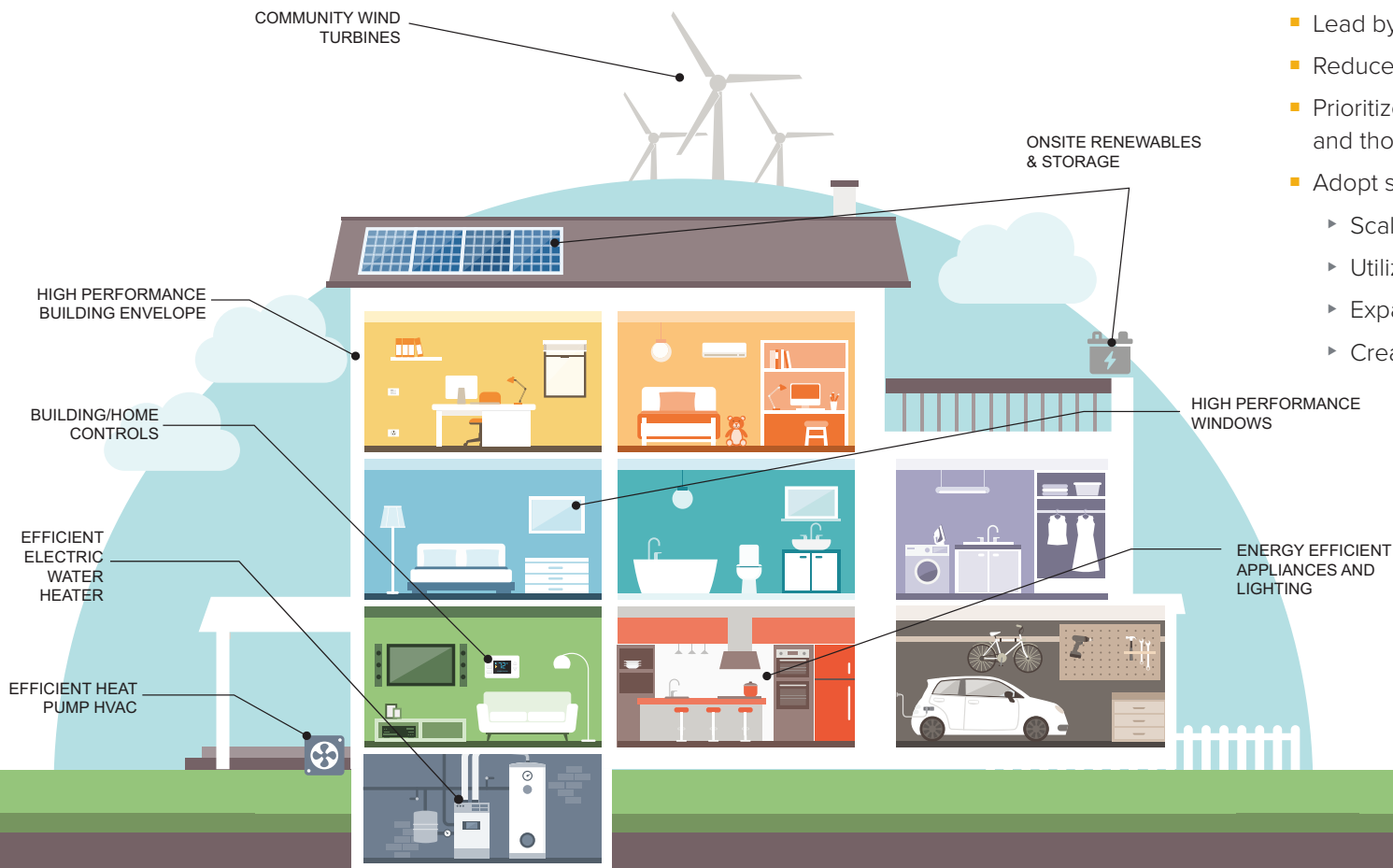
- **The Carbon Neutral Buildings Roadmap** will provide a guiding framework, general solution sets, and long-term vision through 2050 for this critical work. The Roadmap will lay out policy recommendations, areas for technology advancement, and key near-term activities such as workforce development and expansive outreach for consumer education and awareness.
- **The Building Electrification Roadmap**, will examine policies and actions to accelerate heat pump adoption paired with thermal efficiency through 2030, including scenario analysis of achievable adoption in residential and commercial buildings.
- **Two Million Climate Friendly Homes Action Plan**, an interagency plan directed by Governor Kathy Hochul, will operationalize the path to achieving the State’s goals for clean, resilient buildings—specifically to achieve two million combined electrified and electrification-ready energy efficient homes and apartments by 2030 and to ensure that at least 800,000 of these homes support low- to moderate-income households.



# ATTRIBUTES OF A CARBON NEUTRAL BUILDING

- Maximizes energy efficiency
- No fossil fuel combustion for building energy services (all-electric end uses)
- Produces or procures zero-emission electricity
- Designed with flexible loads and/or storage that can respond to grid conditions
- Features resiliency measures that protect building occupants
- Designed with attention to embodied carbon and refrigerants

[nyscrda.ny.gov/Carbon-Neutral-Buildings](https://nyscrda.ny.gov/Carbon-Neutral-Buildings)



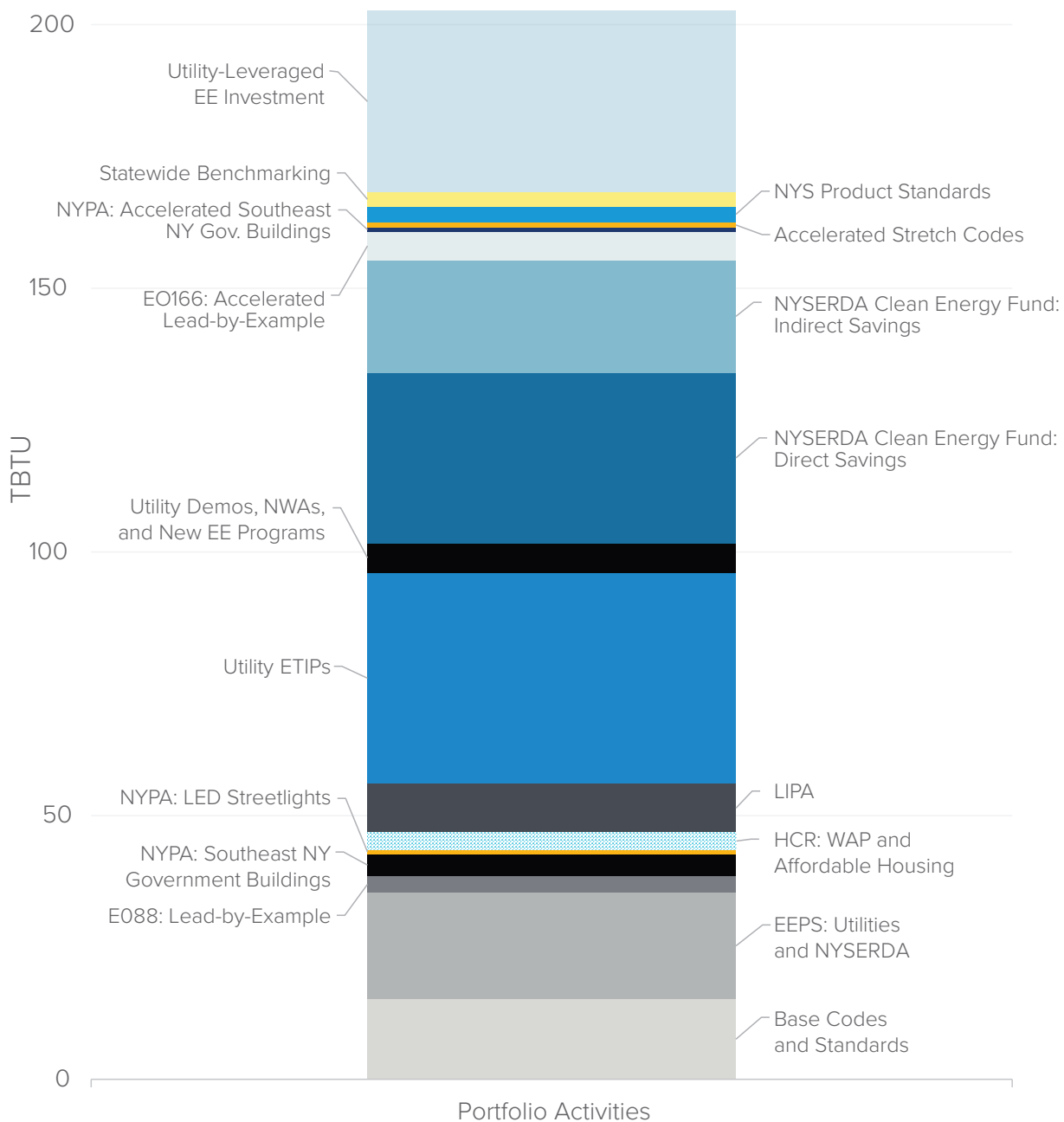
## STRATEGIES NEEDED TO DRIVE PROGRESS IN CARBON NEUTRAL BUILDINGS

- Advanced codes for new construction
- Prohibit replacement of fossil-fuel heating and hot water equipment
- Benchmarking and disclosure of energy performance
- Performance requirements for existing buildings to improve energy efficiency
- Plan for the gas transition
- Fund research development and demonstrations
- Lead by example on embodied carbon
- Reduce the use of hydrofluorocarbons (HFCs)
- Prioritize low- and moderate-income residents and those in Disadvantaged Communities
- Adopt supporting policies to drive action:
  - Scale-up the workforce
  - Utilize partnerships
  - Expand incentives
  - Create low-cost financing



# 2025 target: 185 TBtu of onsite energy savings\*

ENERGY EFFICIENCY ACTIVITIES TOTAL SITE TBTU SAVINGS  
BY 2025 (CUMULATIVE ANNUAL, 2015–2025)



\* Graphic does not reflect roughly 15 TBtu of overlap between policies.





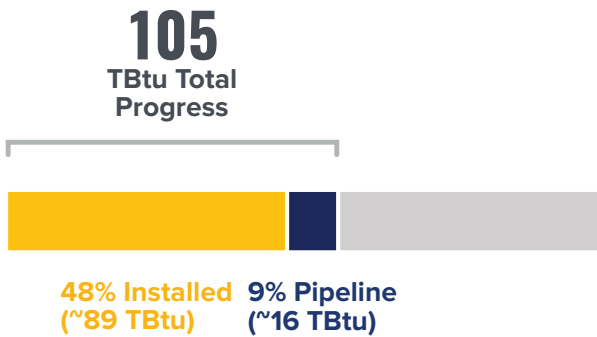
## PROGRESS TOWARD THESE GOALS

The combined activities of NYSERDA, investor-owned utilities, and LIPA across historic and ongoing energy efficiency programs have so far achieved more than 89 TBtu of avoided energy use in the building sector—equivalent to fueling and powering more than 860,000 New York homes.

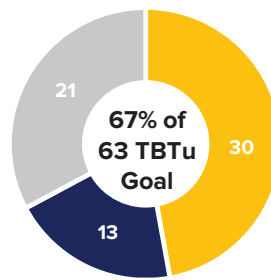
## 185 TBtu New Efficiency: New York Energy Goal

Progress data is through Q3 2022 for NYSERDA and utilities, and through Q4 2021 for LIPA.

■ Pipeline ■ Installed ■ Future Contribution



NYSERDA Progress



## Clean Heat for All

In December 2021, NYCHA, NYPA, and NYSERDA launched the **Clean Heat for All Challenge**, an industry competition aimed at incentivizing heating and cooling equipment manufacturers to develop a new low-cost, easy-to-install packaged window heat pump (PWHP) system for existing multifamily buildings.

The PWHP would fit within a standard window frame, be installed by property management staff, not necessitate any drilling for condensate disposal or running refrigerant lines, and operate efficiently in downstate New York cold weather design temperatures. It would also replace and provide better insulation than the ubiquitous window air-conditioning unit. Such a design would significantly minimize costs associated with installing traditional heat pump systems.

NYCHA in turn, committed to purchase and install the winning model(s), positioning NYCHA as an early adopter of this new heat pump model design and proving public housing residents with access to improved, clean, and reliable sources of heating and cooling.

**In August of 2022, Governor Hochul announced a \$70 million purchase order award to the two winning manufacturers, which will be used to initially procure 30,000 heat pumps to electrify approximately 10,000 NYCHA homes.**

## HIGHLIGHTED PROGRAMS AND INITIATIVES

**New York State Clean Heat** provides consumer incentives and develops the market for building electrification in coordination with utilities.

**Empire Building Challenge** demonstrates low-carbon solutions for tall buildings, in partnership with real estate industry and solution providers; the Empire Technology Prize program spurs new innovations.

**Buildings of Excellence** supports the design, construction, and operation of carbon neutral multifamily buildings, which includes affordable housing.

**EmPower Plus** will provide no-cost efficiency and electrification solutions to income-eligible New Yorkers, in conjunction with new energy affordability pilots.

**Clean Energy Partnership** in collaboration with HCR to deliver energy efficiency and electrification right into affordable housing financing transactions.

**Clean Heat For All Challenge** partners with New York City Housing Authority (NYCHA) and NYPA to develop and deploy affordable window-based heat pumps in thousands of low-income apartments.

**Clean Green Schools** provides assistance to more than 1,000 public schools in under-resourced communities to improve environmental sustainability, create healthier learning environments, and build the clean energy talent pipeline.





# Clean Energy Economy

STATE POLICY GOAL FOR  
THE CLEAN ENERGY ECONOMY

**With over 165,000 clean energy jobs across the State at the end of 2021—and with hundreds of thousands of new jobs to be created by Climate Act investments on the near-horizon—New York’s nation-leading climate policies continue to drive investment and job-creation.**

During the coronavirus pandemic, the sector showed tremendous resilience. Only 4% of New York State’s clean energy workers lost their job as of the end of 2020, compared to 9% of clean energy workers nationally, and in 2021 clean energy jobs grew to surpass pre-pandemic levels.

Looking forward, the State has an unprecedented opportunity to harness the economic development benefits expected from the bold, new federal incentives through the Inflation Reduction Act (IRA), the Bipartisan Infrastructure Act, and the Chips and Science Act. Combined, these federal programs are expected to invest more than \$500 billion to support clean energy deployment as well as domestic manufacturing of clean energy products and services. These federal programs offer a generational opportunity to create over nine million jobs across the U.S. and significantly increase the pace of U.S. manufacturing supply projects over the coming years.

New York State also has the opportunity to position itself as the innovation, research, and development capital of clean technology, focusing investment on next generation technology development at New York’s global research universities and industry research facilities. Combined, these activities will create thousands of jobs for all New Yorkers—establishing the supply chain for clean energy equipment and technologies in the State, as well as attracting national and global attention to New York’s education and industrial institutions to design the decarbonized economy of the future.



## NYSERDA'S ROLE

- **Unlock new job growth**, harnessing the momentum created by historic level of clean energy investments being made at the federal level and the driving forces of innovation to create new opportunities for job growth. Additionally, leveraging public sector investment, with follow-on private sector investments, will attract global industries to New York.
- **Provide workforce development and training programs** to grow the training capacity and human resources needed to build the clean energy economy, while supporting a just transition for historically disadvantaged populations and those industries affected by the transition away from fossil fuels. Work closely with partners such as unions, SUNY, CUNY, NYS DOL, ESD, technical high schools and others to develop training that prepares new workers and those with jobs in fossil fuels and related fields for clean energy jobs.
- **Incorporate new progressive labor and economic development provisions**, including prevailing wage/project labor agreements, MWBE/SDVOB prioritization, Buy America provisions, and more.
- **Cultivate demand for clean energy solutions** to attract clean energy companies from all ends of the global supply chain looking to serve the growing local market, supported by proactive cross-agency attraction efforts.
- **Foster capital attraction and support commercialization** of products, services, and business models (deployment models) from clean energy startups and maturing companies.
- **Deliver more targeted assistance** to energy startups/innovation firms, leveraging support from federal stimulus efforts and future federal incentives to advance clean energy innovation.
- **Establish precedent for encouraging greater private sector investment and business models** through new, substantial commitments of institutional capital in the clean energy economy.
- **Leverage NYSERDA's position as a professional and skilled program administrator** to act in a critical role as a regional leader among states and within New York State, while helping unlock the benefit of federal programs to accelerate job and economic growth in New York.
- **Provide input to help inform the development of the new Office of Just Transition (OJT)**, as announced by Governor Hochul in her 2023 State of the State address, including through collaboration with NYS Department of Labor and other sister agencies.

## INDICATORS OF PROGRESS

- Statewide clean energy industry jobs, job creation supported by Climate Act investments
- Number of New Yorkers, including people from priority populations, trained and employed in clean energy
- Commercialized climate solutions and launches of incubated firms, including related revenues
- Total value of capital mobilized using NY Green Bank support, and capital mobilized in Disadvantaged Communities



Achieving the Climate Act's nation-leading goals and building a thriving industry sector will mean expanded deployment of existing technologies as well as substantial investment in the State's clean energy innovation economy to develop new solutions for a low-carbon future.

To build an inclusive clean energy economy and cultivate a just transition, NYSERDA, along with other State agencies and clean energy industry partners will be ramping up efforts to develop a pipeline of skilled labor. Economic opportunities will open up to workers, communities, historically disadvantaged populations, and others who may be transitioning from fossil fuel-based economic activities. If New York State is going to be a strong competitor in the national race to domesticate the clean energy supply chain, our economic development initiatives need to be strategic, aggressive, and send strong signals to the market that New York is open for business.

## STRATEGIES FOR 2023–2026

### NY Green Bank

- Alleviate financing gaps in sustainable infrastructure markets by developing replicable, scalable financing products that encourage private sector lenders and investors to expand their activity in New York State's clean energy markets.
- By 2025, achieve investment targets in clean transportation (\$100M), building electrification (\$100M), affordable housing (\$150M), and energy storage (\$200M).
- Demonstrate the attractiveness and viability of investments in projects benefitting the State's disadvantaged communities by investing at least 35% of total capital commitments between January 1, 2020, and December 31, 2025, in these types of projects, consistent with the Climate Act.
- Launch the Community Decarbonization Fund in 2023, a \$250M concessionary wholesale funding pathway to support financiers in making sustainable infrastructure and decarbonization investments in Disadvantaged Communities.
- Continuously enhance operations and process management to create transactional efficiencies and ensure NY Green Bank is applying industry best practices to its investment, operational, and risk management procedures.
- Continue to explore and refine innovative financing models (e.g., lending alongside PACE) to help other financiers gain comfort with funding new asset classes, cash flow and risk profiles, and structures and approaches.
- Pursue federal funding opportunities available for green banks specifically—and sustainable infrastructure generally—to expand impact, boost liquidity, and deliver value for the State.

### Innovation

- Support the development of climate technologies necessary to meet the State's Climate Act goals through the implementation of competitive solicitations, the awarding of funds, and the strategic investment in technology, communities, and individuals.
- Address barriers to transformative innovation; support regulations, processes, and rulemaking that enable the future climate innovation economy; stimulate demand; and support public-private partnership cross-sector innovation efforts.
- Invest in the development of New York State's economy by supporting recruitment and relocation of climate-tech companies to New York; encouraging the growth of existing companies already in the State; and increasing the vitality of the innovation ecosystem across the State.
- Continue to pursue transformational technology-specific programs for job growth, including offshore wind, battery, and hydrogen technologies; low embodied carbon materials; buildings; renewables; and resilience and grid technologies.
- Consistent with the goals of the Climate Act, ensure the State's innovation ecosystem—as well as the innovations developed—deliver benefits to historically underserved and other Disadvantaged Communities.
- Coordinate with State and national innovation ecosystem partners to align and leverage State priorities and support New York State climate-tech companies' access to finance and expertise.
- Demonstrate the role of innovation in deep decarbonization, helping New York State to develop pathways to achieve the most challenging last 20% of our long-term emission reduction goals.



## Workforce Development

- Prioritize and scale-up our impact on the recruitment, training, job preparedness, and placement while providing wrap-around support for priority populations and Disadvantaged Communities.
- Work closely with pre-apprenticeship programs that provide pathways to registered apprenticeship programs (direct-entry programs), prioritizing programs that serve new workers who face barriers to employment, and leverage programs that can provide wrap-around services.
- Develop training infrastructure to upskill existing workers and prepare the next generation of clean energy workers in high-growth sectors like high-efficiency HVAC, building electrification, electric vehicle repair and charging stations, energy storage, and large-scale renewables.
- Ensure training curricula and programmatic support respond to industry and market needs focusing on stackable credentials, transferable skills, and hands-on training.
- Provide targeted support to reduce the time it takes to bring a new worker to full productivity and offset risks that might prevent clean energy firms from hiring or training new workers, particularly workers who face additional barriers to employment.
- Continue to support businesses and individuals entering into the clean energy sector through internships, fellowships and new jobs supported by on-the-job training incentives.
- Boost partnership and collaboration with labor unions, community-based organizations, helping develop and place employees firmly in career pathways.

## Economic Development

- Establish and refine a strategy to help organize and make State economic development resources more impactful. This can be done via greater strategic alignment and less episodic engagement on supply chain and community-center developments.
- Strengthen and formalize working partnerships with key economic development stakeholders including Empire State Development, the Department of Labor, and regional and local economic development organizations. Coordinate clean energy business recruitment, site and infrastructure development, competitive advantage positioning (e.g., leveraging research and development assets), and incentive and resource administration to assure a seamless and impactful offering to clean energy industry decision-makers.
- Partner with economic development stakeholders to continuously examine, refine, and make recommendations to enhance the State's clean energy economic development "toolkit" focusing on New York-based companies seeking to pivot to clean energy supply chain businesses; more aggressive competition with other states for clean energy manufacturing projects; and offering incentives to non-clean energy companies seeking to fully decarbonize their businesses.
- Stimulate economic development in New York State through direct investments and other supportive action. For example:
  - ▶ **OSW Ports** – NYSERDA is investing \$200 million in offshore wind port infrastructure. The goal is to attract and drive the private investment required for this industry to establish operations in New York State that support the State's offshore wind investments. But—more importantly—by anchoring the "export potential" of these projects and supporting this growing industry across the U.S., long-term economic benefits to the State are maximized.
  - ▶ **Micron** – The \$100 billion Micron investment in Upstate New York is a transformational project to the State in terms of jobs, wages, community, and sustainability because investments can be made at the Micron facility as well as the surrounding community. As the project gets underway, it offers unique innovation opportunities that could inform the development of future incentives related to energy-intensive companies. As sustainability becomes a business imperative, companies like Micron can be attracted to New York because of its rich renewable asset base, sustained clean energy investment horizon, and policies driving the clean energy economy
  - ▶ **Electrovaya** – This producer of lithium-ion batteries announced in October 2022 that it will create up to 250 jobs at its first US plant. State funding will be used to support its battery technology and manufacturing facility and directly supports and leverages the recently announced Next-Generation Battery Production initiative, with ambitions to make New York State a National Hub for Battery Innovation and Manufacturing.

The recent passage of the IRA will significantly increase the opportunities to attract these kinds of projects to New York State.



## TRANSFORMATION 2030

- Nearly half-a-million Climate Jobs in New York by 2030.
- Good-quality clean energy jobs supporting workers' families and delivering high-value to customers
- Fine-tuned matching of workforce development programs to the job creation from expected Climate Act investments
- An additional approximate \$12–\$15 billion in capital leveraged via NY Green Bank Innovation, with further capital mobilized through the generational opportunity to leverage federal funds under the Infrastructure Investment and Jobs Act, the CHIPS and Science Act, and Inflation Reduction Act.
- Comprehensive economic development strategy has made New York the leading market for clean energy business growth and supply chain localization.
- The Southern Tier of New York State has become the nation's next battery manufacturing and research hub.

## HIGHLIGHTED PROGRAMS AND INITIATIVES

**NY Green Bank** works with the private sector to increase investments into the State's clean energy markets, including through transactions related to:

- Community solar/community distributed generation
- Affordable housing and building decarbonization
- Electric vehicles, charging infrastructure, and clean transportation
- Energy storage and hydrogen

**Innovation** supports an affordable and just transition and the achievement of New York's climate goals through investments in and market engagement activities including:

- Carbontech support programs with Activate NY and the Carbontech Development Initiative with Columbia University
- Hydrogen and other solutions for deep decarbonization and a resilient energy system
- Long-duration energy storage solutions that support a resilient, flexible, clean grid
- Natural solutions to mitigation greenhouse gases
- Building the grid of the future
- Clean heating and cooling research and development
- Tech-to-Market resources that include accelerators such as the Clean Fight and Cleantech Open Northeast; the M-Corps manufacturing scaleup program; and the Entrepreneur in Residence (EIR) mentorship program

**Workforce Development** supports training for new clean energy workers, driven by industry needs, and develops the clean energy sector talent pipeline:

- Career Pathway training in clean energy technology area
- Climate Justice Fellowship Program
- Building Operation and Maintenance Staff Training
- On-the-Job Training
- Offshore wind training to support the supply chain's needs for new and existing workers
- Clean Energy Internships
- Clean Energy Training, which builds training capacity that supports business hiring needs



Through programs, partnerships, and catalytic investments, NYERDA's **innovation** team is mitigating technical and commercial risk for key climate solutions. This enables faster, broader commercialization for the innovations New York State needs to meet our ambitious climate goals.

## MANUFACTURING CORPUS (M-CORPUS)

### Bringing innovative climate technology and climate tech manufacturing products to New York State

The M-Corpus program connects startups who are scaling products that lower greenhouse gases or reduce energy consumption with local supply chain partners, manufacturers, and suppliers—prioritizing connections in underserved communities.

**4,300**  
participants  
engaged

**51**  
cohort  
members  
to date

**\$414 M**  
capital raised

**\$33 M**  
revenue earned

by the 51 cohort companies

The M-Corpus program has gained recognition outside of New York State and is attracting new technologies to the State.

Compared to the previous cohort, Cohort 4 (Fall 2021) attracted

**27% more applicants**  
**70% from out of state**

### NYERDA's Performance Management Study (Sept 2021):

- Estimated the average decrease in time to manufacturing for cohort participants has been **17 months**

### Company Readiness Levels:

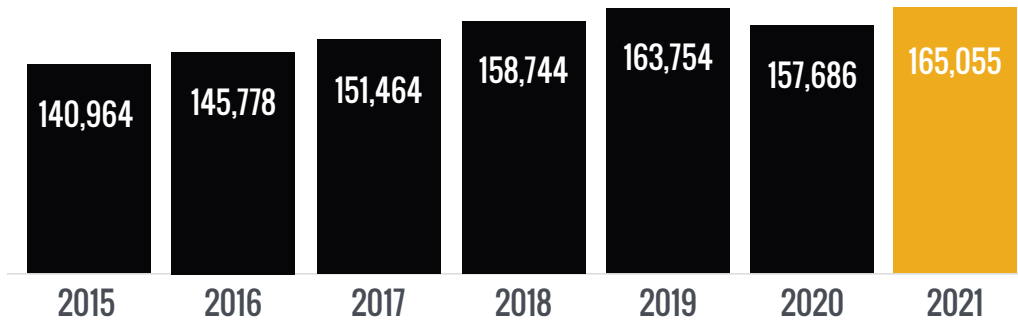
- During the 1-year program, cohort members have achieved average increases of:
  - Manufacturing Readiness Level (MRL): **1.6**
  - Commercial Readiness Level (CRL): **1.6**
  - Technology Readiness Level (TRL): **2.5**




# 165,000+ clean energy jobs in 2021

across New York State

ANNUAL CLEAN ENERGY EMPLOYMENT IN NEW YORK



CLEAN ENERGY EMPLOYMENT  
BY TECHNOLOGY  
(number of jobs, December 2021)

 **Building Electrification and Decarbonization**  
**123k**

 **Renewable Electric Power Generation**  
**25k**

 **Clean and Alternative Transportation**  
**11k**

 **Renewable Fuels**  
**2.7k**

 **Grid Modernization and Energy Storage**  
**2.5k**

New York lost approximately 6,000 clean energy jobs amidst the COVID-19 pandemic. This represents the first employment decline since the annual Clean Energy Industry reporting series began in 2015.

**However, New York State recovered more than the 6,000 jobs lost in 2020 and gained over 7,000 jobs between 2020 and 2021, leading to a record-setting number of clean energy jobs at more than 165,000.**

The number of individuals with green jobs in New York State has reached a record level. Despite COVID-19's impact to our economy over the past few years, the Empire State has not only recouped the clean energy jobs lost in 2020, but has now exceeded pre-COVID employment levels. And furthermore, the burgeoning clean energy sector experienced a faster recovery when compared to other industries in New York State, a true reason for optimism about this industry's bright future.

[nyserdera.ny.gov/Clean-Energy-Jobs](https://nyserdera.ny.gov/Clean-Energy-Jobs)



# Resilient and Distributed Energy System

STATE POLICY GOAL  
FOR THE ENERGY SYSTEM

**Build a resilient and distributed energy system—and supportive social infrastructure—that can anticipate, absorb, adapt to, and recover quickly from a wide range of shocks and stresses, including climate, environmental, cyber, financial, aging infrastructure, and other emerging vulnerabilities.**

In this period of dynamic and fast-paced change—marked by a global pandemic, wildfires, extreme storms, record-breaking heat, and cyber threats—the energy system faces a range of new risks and disruptions. Even as the system moves away from a more vulnerable centralized power generation towards an increasingly balanced, diversified, and digitalized network, the risks are real.





# As New York State strives to meet its aggressive climate targets, we will need to contend with new risks and opportunities.

With electric power enabling nearly all critical infrastructure and services, including communications, emergency systems, banking, heating and cooling, and transportation, it is crucial that the transition to clean energy and net zero emissions also advances via a resilient and modernized grid. This includes needed actions to ensure infrastructure is designed for changing flood zones, sea level rise, and storm surge zones as well as new solutions and designs to withstand high windspeed, hail, and higher temperatures, and advancements in flexible, responsive resources such as energy storage and building load flexibility. Measuring and valuing risk reduction and resilience can help catalyze opportunities to harness the market system in service of these important goals.

A changing climate disproportionately impacts residents of Disadvantaged Communities—people who often have fewer resources to respond. Therefore, it is vital that investments also address questions of equity with targeted approaches for vulnerable communities. To this end, building a resilient and distributed energy system can also generate new workforce opportunities and create avenues to strengthen social cohesion, a quality of community resilience, through citizen engagement with shared energy and infrastructure.

## NYSERDA'S ROLE

**Lead-by-example** by factoring resilience and clean energy goals in State operations.

**Partner with other State agencies** to identify and implement best practices around climate resilience, through the Extreme Heat Action Plan (EHAP), announced in January 2022. The EHAP will include the development and implementation of an extreme heat adaptation plan and a comprehensive State extreme heat emergency response as part of the State Comprehensive Emergency Management Plan in partnership with DEC, DOH and dozens of other agencies. This complements the energy assurance planning and coordination by NYSERDA and other State agencies to bolster the resilience of energy supply chain serving our State.

**Spearhead next generation of climate adaptation research** to provide insights for infrastructure, investment, and energy system planning decisions based on new/updated climate projection data.

**Spur development and integration of a wide array of smart grid technologies** that support a distributed energy system and advance resilience including energy storage, smart demand response, and vehicle to home/grid (V2H/G) flexible charging.

**Continue to administer and refine flagship distributed energy resources (DER) programs** like NY-Sun, and energy storage incentive programs that boost resilience, provide grid value, and reduce costs.

## INDICATORS OF PROGRESS

- Progress toward energy storage (6,000 MW by 2030) and distributed solar (10,000 MW by 2030) deployment goals
- Statewide grid-interactive building load
- Percentage of NYSERDA solicitations that incorporate resilience provisions
- Penetration of homes and buildings equipped with clean onsite technologies such as solar, energy storage, or electric vehicles.



## STRATEGIES FOR 2023–2026

- Accelerate pace of deployment for energy storage technologies to achieve updated 2030 goal of 6 GWs, as submitted for PSC approval in December 2022.
- Incorporate resilience considerations and incentives into NYSERDA programs, including floodplain mapping, onsite generation and storage, and other means that ensure investments factor in shifts such as increased electrification, future climate impacts, and other energy system disruptions.
- Explore potential mechanisms for the finance and insurance of resilient energy infrastructure, in partnership with the Department of Financial Services; support efforts to price resilience into energy, transport, and buildings, from insurance to construction codes and utility regulation.
- Spur development and integration of smart grid technologies to ensure buildings are flexible and responsive under changing conditions, with a focus on load pockets where environmental and health outcomes are critical (e.g., Disadvantaged Communities).
- Work with Public Service Commission to make better use of DER, including transportation and storage, in a way that fully integrates them to effectuate systemic grid operation changes that support grid resiliency and grid flexibility, such as balancing the growing intermittent renewable resources and enabling grid self-healing activities after an event.
- Coordinate and collaborate with key stakeholders on major activities aimed at integrating resilience planning and operations into New York State’s energy systems; for example, the Joint Utilities of New York and their climate change vulnerability studies and implementation plans.
- Continue efforts to scale up energy storage to achieve statewide goals, with a focus on the Downstate region where energy storage is critically needed to replace dirty peaker plants, and support grid congestion and offshore wind procurements.
- Foster virtual power plant (VPP) pilots into robust, mature programs offered ubiquitously by utilities.
- Drawing from the Carbon Neutral Buildings Roadmap work, develop solutions and playbooks for resilient communities and resilient housing focusing on passive survivability, resilience solutions for all-electric buildings and facilities of refuge to withstand future disruptions to the energy system—all recognizing that in an electrified future, efficiency is an inherent resilience measure.
- Leverage engagement with communities to catalyze county and municipal resilience strengthening, from backup for critical loads to physical spaces embodying a comprehensive vision for social cohesion and emergency resilience.
- Partner with NYS Division of Homeland Security and Emergency Services (DHSES) to refine model local laws based on climate assessment study findings, integrate clean resilience solutions into State hazard mitigation plan program and funding for backup power, and develop local guidebooks for resilience to supplement Community Risk and Resilience Act (CRRRA) plans.
- Incorporate strategies to optimize for resilience in an electrified future as homes are decarbonized, such as preparing homes for backup systems according to the occupants’ needs and the heating and cooling systems’ replacement cycle.
- Guide New York State Government towards the climate, energy, and sustainability goals set forth in Executive Order No. 22, while continuing to lead by example through NYSERDA’s own operations.

## TRANSFORMATION 2030

- At least 10 GW of distributed solar; 6 GW of energy storage; and more.
- Ubiquitous and actionable energy data-access, allowing thousands of distributed energy assets (PV, EV, grid-interactive buildings) to communicate and participate responsively, delivering value to customers and to grid.
- Resilience considerations and investments imbedded in all energy/clean energy infrastructure and programming, with near full GHG-alignment for resilience solutions.
- Community-, neighborhood-, and household-level infrastructure investments to boost social cohesion and people-centric resilience, with physical refuges from extreme heat and weather events.



## HIGHLIGHTED PROGRAMS AND INITIATIVES

The **New York State Climate Impacts Assessment**, launched in November 2021, is a multi-year study to explore how climate change affects New York State communities, ecosystems, and economy. Led and funded by NYSERDA, this collaborative climate research effort is being conducted in partnership with academic institutions, science organizations, community leaders, and industry representatives. Nearly 80 individuals from various organizations across New York State, the U.S., and Canada are assessing the state of the science on climate change impacts and adaptation for eight sectors across the state (agriculture, buildings ecosystems, energy, health, society & economy, transportation, and water). Additionally, Columbia University is developing downscaled climate projections for 12 regions of New York, and Industrial Economics is performing an economic analysis of climate impacts to the State. The results of this assessment, to be released in early 2023, will provide the scientific foundation for climate resilience efforts at all levels of decision-making across the State, including within NYSERDA.

Innovation's Smart Grid and Technology to Market teams will launch **initiatives to support a resilient, affordable, flexible clean grid**. Both teams combined cover a broad range of the innovation spectrum, from incubating new companies to applying new innovative products in a field setting for integration into the energy stem. Smart Grid is leading initiatives to help build communities of practice and develop needed solutions in key areas like resilience. Smart Grid initiatives will also focus on piloting and demonstrating

solutions aimed at increasing grid affordability and flexibility that are both effective and scalable. Tech to Market will continue to offer a variety of programs and services aimed at helping climatetech startups develop, commercialize, and scale their solutions in New York State, including solutions that support the transition to a clean grid. These interventions have taken and could continue to take the form of incubators, accelerators, corporate challenges, prize programs, and more.

**Energy Storage** engages those involved in building, installing, integrating, or researching energy storage technology, including efforts to expand opportunities to pair solar and storage statewide (continuing and expanding the strong Residential PV + Storage program on Long island through the DLM tariff). Energy Storage funds mature projects that can be deployed on the grid at scale to help integrate renewable energy, reduce the cost of grid operation, and maintain reliability and resiliency of electric infrastructure.

NYSERDA and DEC will collaborate with more than 20 other state agencies active in the **Extreme Heat Action Plan Work Group** to deliver a first of its kind comprehensive State plan to address present and future extreme heat. This will include developing a heat adaptation plan to address structural risks of extreme heat and heat inequities as well as a comprehensive response for the State to manage heat emergencies through the development of a heat annex for the State's Comprehensive Emergency Management Plan.

**Offshore Wind**, seeks to advance the cost-effective and responsible development of at least 9GW by 2035 while building a competitive and sustainable offshore wind industry in the U.S. This includes launching a "Masterplan 2.0: Deep Water" to plan for future actions to take advantage of a rapidly expanding industry, investing \$700 million in supply chain development in the State and training the associated workforce, effectuating transmission and grid improvements through a planned procurement process and in partnership with New York State Department of Public Service, and earnest engagement with regulators, industry, underserved communities, and a broad set of stakeholders to inform approaches and workstreams such as new research, analysis and program measures related to resilience and sustainability to reduce risks and improve outcomes.

**Building Efficiency and Operations** through Real Time Energy Management provides the ability to shed or shift loads in response to grid needs as well as the capability to stage critical equipment to maintain building services most needed to support safety and recovery. Programs such as Buildings of Excellence and Empire Building Challenge are demonstrating repeatable approaches to electrify heating loads in both new and existing buildings while also reducing buildings' peak demand through energy recovery, efficiency, and thermal storage, leading to clean and resilient buildings that also reduce strain on the electric system.



# Building an Inclusive Clean Energy Economy

## LONG-TERM VISION AND VALUE PROPOSITION

**A strong and inclusive clean energy economy will lead to economic opportunities, improved health, and engagement for all New Yorkers especially those who have not benefitted in the past.**

New York State's communities on the frontlines of the climate crisis, including environmental justice, low- and moderate-income families, communities of color, and otherwise Disadvantaged Communities, have disproportionately been impacted by energy costs; pollution from fossil fuel combustion; disinvestment in housing; structural inequities in education and workforce opportunities; and lack of access and inclusion in planning and policy making that affects their communities.



Realizing the objectives of the Climate Act will require foundational shifts in the development and implementation of clean energy policy, programs, and processes to ensure opportunities for residents and communities to participate in and benefit from the clean energy economy.

In advancement of the Climate Act objectives, the NYSERDA clean energy portfolio will focus investments to:

- Improve energy affordability.
- Reduce pollution from fossil fuel combustion across all sectors for environmental justice.
- Create new economic development opportunities for communities.
- Advance workforce development and training.

NYSERDA will focus on community capacity development and engagement to ensure the perspectives of residents are incorporated in the development and implementation of clean energy initiatives. NYSERDA is particularly focused on moving toward approaches that center the lived experiences and priorities of frontline communities. NYSERDA recognizes the role state policy has played in perpetuating inequities faced by historically marginalized communities. This includes low-income communities, Black people and other People of Color, Indigenous Nations and people, hard-to-reach underserved rural communities, and other areas of the State with high levels of poverty and limited access to resources.

In response, NYSERDA is working to leverage its critical role in addressing the climate crisis, energy injustice, and the legacy of environmental racism by engaging frontline communities and ensuring equity of process and outcomes for those disproportionately burdened by the current energy system and excluded from past waves of economic development. Specifically, NYSERDA is working to address the challenges historically marginalized communities have faced in accessing programs and using their lived experience to inform solutions that support an inclusive clean energy transition. With the creation of an Energy & Climate Equity team, NYSERDA is working to conduct more equitable, meaningful, and diverse community engagement. By working with community stakeholders to create pathways for meaningful input to shape energy policies and programs, NYSERDA will ensure historically marginalized communities are essential partners and beneficiaries in the transition to a clean energy economy.

Improving diversity, equity, and inclusion within and across NYSERDA's teams and functions has been prioritized to ensure the people, operations, and practices are more representative and responsive to the diverse needs of New Yorkers.

In addition, new Federal programs and initiatives aimed at delivering benefits to underserved communities include:

- **Greenhouse Gas Reduction Fund** — This \$27 billion first-of-its-kind program will provide competitive grants to mobilize financing and leverage private capital for clean energy and climate projects that reduce greenhouse gas emissions—with an emphasis on projects that benefit low-income and disadvantaged communities.
- **HOMES and HEEHR Rebate Programs** — New York will receive \$317 million in formula grants to support energy efficiency and electrification of homes, with a focus on lower income housing and housing located in disadvantaged communities.
- **Environmental and Climate Justice Block Grants** — Will provide grants and technical assistance to implement community led projects in Disadvantaged Communities to address environmental and public health harms related to pollution and climate change.
- **Weatherization Assistance Program (WAP)** — \$290 million announced (to date) supporting critical energy efficiency improvements in affordable housing.
- **Clean Buses programs** — Awarded \$70 million for clean school buses and \$173 million for clean transit buses announced (to date).
- **Climate Resiliency** — More than \$233 million announced (to date) supporting infrastructure resiliency.
- **Brownfield Grants** — Over \$10.5 million awarded to twelve communities (to date) to clean up clean up abandoned properties and complete lead and asbestos remediation.

**NYSERDA is building its capacity to drive equity and help realize an inclusive clean energy economy through its direct investment, as well as through its work with State agencies, utility companies, and community-based organizations.**



## KEY CHALLENGES AND BARRIERS

- Systemic and institutional inequities have led to limited opportunities for communities of color and other frontline or Disadvantaged Communities to participate in and benefit from the clean energy economy, including access to green jobs, ownership of distributed energy resources, and informing policy and programs.
- Energy burden for lower-income households can exceed 20% of annual income, and nearly half of New York State's population has annual income below 80% of the Area Median Income, especially within communities of color.
- Access to capital, misaligned incentives, and historically fragmented administration of key programs present barriers to scaling clean energy solutions within the LMI market segment and Disadvantaged Communities.
- The size of income-eligible and disadvantaged populations requires innovative approaches to achieve adoption at scale, with careful attention to program/policy designs to avoid regressive outcomes/impacts.
- Engaging with residents of Disadvantaged Communities and bringing their diverse voices to the table is inherently lagging given the legacy of State policies that have marginalized and limited access to resources and power within low-income communities of color and others facing systemic inequities.

## PRIORITY ACTIONS FOR NEW YORK

- Work toward the Climate Act goal of driving 40% of the benefits of clean energy spending to Disadvantaged Communities, which includes a finalized definition for Disadvantaged Communities from the Climate Justice Working Group, and an accompanying Benefits Framework.
- Increase engagement of frontline, climate-vulnerable communities in developing the clean energy economy, including ensuring community representation in decision-making and policymaking.
- Align State resources and strategy to increase impact from public investments in energy affordability and expand access to clean energy solutions for lower-income households, affordable housing, and Disadvantaged Communities.
- Leverage regulatory, policy, and financing mechanisms to increase adoption of clean energy solutions in affordable housing, including beneficial electrification.
- Facilitate a just transition to a clean energy economy by supporting unemployed or underemployed workers and priority populations, including workers in fossil-based industries, by addressing barriers to training and job opportunities for residents of Disadvantaged Communities and priority populations.
- Advance resilience to climate change and extreme weather events including within affordable housing and Disadvantaged Communities through clean energy solutions such as solar, energy storage, and passive house standards.
- Advance access to clean transportation for residents of Disadvantaged Communities and accelerate the transition to electric vehicles within Environmental Justice areas to reduce emissions and improve air quality.
- Develop solutions and models for deploying utility-scale DER, clean transportation, and energy efficiency in the built environment to reduce emissions and co-pollutants especially within Disadvantaged Communities.
- Quantify and maximize health and economic benefits from deploying clean energy solutions, especially within Disadvantaged Communities.
- Develop a path for decarbonizing affordable housing, including models that advance beneficial electrification across the LMI housing sector.
- Implement recommendations from the NYS Disadvantaged Communities Barriers and Opportunities Report as part of the Climate Act Scoping Plan.





## Disadvantaged Communities Barriers and Opportunities Report

Released at the end of 2021, the report identifies the barriers faced by Disadvantaged Communities in accessing and owning certain services and commodities related to distributed renewable energy, energy efficiency and weatherization, low and no emissions transportation, adaptation and resilience, and other services and infrastructure that can reduce the risks of climate hazards. The report also identifies 35 opportunities to overcome these barriers, organized under eight principles and three themes that are: 1) ensure processes are inclusive; 2) streamline program access; 3) address emerging issues. The Scoping Plan expects all State entities to incorporate these themes into their programs, with NYSERDA leading the way by modeling best practices.

### NYSERDA KEY ACTIONS FOR 2023–2026

- **Build community capacity** through the Clean Energy Hubs. Hubs offer the opportunity to engage residents and increase awareness of clean energy solutions, advance job opportunities and economic development, and facilitate community input in policy and program decision-making.
- **Ensure robust engagement opportunities** for historically marginalized communities. Opportunities will exist to identify cross-cutting issues, to provide input into the energy and climate equity strategy especially during the early stages of initiative planning via the Energy Equity Collaborative, and to get involved in program planning and design with financial support provided via a Disadvantaged Community stakeholder service provider pool and a Disadvantaged Community stakeholder reimbursement.
- **Expand workforce development** to include more comprehensive wrap-around support. Partner organizations will forge effective partnerships with organized labor and other clean energy employers. They will work to expand energy- and climate-related job opportunities for all New Yorkers, especially those from Disadvantaged Communities, underserved populations, and those transitioning to the clean energy industry from a fossil-based job.
- **Training for clean energy jobs** will continue to support internships, pre-apprenticeships, and fellowships. Participants will be introduced to clean energy jobs and financial assistance will be provided to employers to hire interns and fellows as a first step. With continued support, the interns and fellows will be brought on as full-time employees through the on-the-job training program. Additionally, opportunities to provide pre-apprentices with direct entry into Registered Apprenticeships will continue to be explored.
- **Facilitate partnerships** between training providers, employers, and the community-based organizations that are providing support services to people with barriers to training and employment. Employer partnerships are critical to developing training that will meet employer needs and increase the likelihood that workers will have the right skills and be strong candidates for jobs.
- **Evaluate different models to provide more comprehensive, longer-term financial support to employers for training and maintaining worker's skills**, such as employers serving the LMI market, that commit to hiring workers who face barriers to training and employment and providing them good paying jobs, benefits, on-the-job training, professional development, access to wrap around support and a workplace culture that is supportive and inclusive.
- **Develop replicable solutions** to advance beneficial electrification across the LMI market.
- **Advance models** that maximize community benefits from distributed energy resources, including ownership models.
- **Ensure all New Yorkers**, and especially those that have been historically marginalized and excluded from clean energy opportunities, are able to help shape and benefit from clean energy investments.



- **Implement a statewide portfolio** of energy efficiency initiatives with utilities to increase the impact and reach of LMI clean energy investments, which includes more community-centric offerings moving forward.
- **Integrate clean energy subsidies** from NYSERDA and utilities into affordable housing finance. This will advance the energy performance of these buildings and deliver co-benefits to tenants.
- **Launch the Community Decarbonization Fund**, a \$250 million concessionary wholesale funding pathway to support financiers in making sustainable infrastructure and decarbonization investments in Disadvantaged Communities (NY Green Bank).
- **Develop a more holistic set of community-centric program offerings**, providing multi-technology, place-based solutions to boost resilience and health outcomes in underserved and other Disadvantaged Communities.

## HIGHLIGHTED INITIATIVES TO ADVANCE AN INCLUSIVE CLEAN ENERGY ECONOMY BY PORTFOLIO

### NY-SUN / DISTRIBUTED ENERGY RESOURCES

**Solar for All** – utility bill assistance program funding solar for the benefit of homeowners/renters unable to access solar.

**Affordable Multifamily Housing Incentive** – photovoltaic (PV) installations serving affordable housing properties.

**Technical Assistance and Predevelopment** – grants to address key barriers to PV and storage projects providing benefits to LMI, Environmental Justice and Disadvantaged Communities.

**Community Solar, Solar Paired with Storage, and Energy Efficiency** – incentive adders for community PV, projects that pair PV with energy storage and provide resiliency and/or financial benefits to LMI customers and those living in affordable housing.

**Peaker Reduction and Replacement** – project deployments that support the potential for solar and energy storage to repower, replace, and back-down electric generating peaker units.

**Good-Paying Community Solar Jobs** – requires prevailing wage for workers on projects above 1 MW.

**Place-Based Decarbonization Models** – work with sister agencies to demonstrate novel partnerships surrounding place-based decarbonization with a focus on historically underserved and other Disadvantaged Communities, for example, the efforts to drive decarbonization at Hunts Point in the Bronx.

**Clean Neighborhoods Challenge** – scalable, community-aligned clean transportation solutions that reduce local air pollution and remove barriers to widespread electric and active transportation use in disadvantaged communities.

**Electric Mobility Challenge** – community-informed clean transportation solutions that transform access to electric mobility options and reduce emissions in disadvantaged communities.

**Electric Truck & Bus Challenge** – innovative demonstrations that accelerate medium- and heavy-duty vehicle electrification, expand access to cost-effective, user-friendly solutions, and reduce emissions.

### NY GREEN BANK / FINANCE

**Financing for Affordable Housing and Energy Efficiency in Disadvantaged Communities** to catalyze clean energy within the existing capital stack for affordable housing, aiming to invest at least \$150 million in clean energy and energy efficiency solutions that benefit the State's affordable multifamily housing market.

**Exploring tariff-backed and other innovative, inclusive financing models** with approaches to overcome LMI/Disadvantaged Communities finance challenges, stabilize energy costs, and improve air quality in Disadvantaged Communities.

**Partnering with other agencies** to explore innovative opportunities to put NY Green Bank capital to work, including new areas such as energy resiliency.

**Using Green Jobs – Green New York** to provide New Yorkers with access to energy assessments, installation services, low-interest financing, and pathways to training for various green-collar careers.

**Cultivating diverse ecosystem of investment partners and counterparties** to explore funding to cover transaction costs and/or pro bono/in-kind transaction support.





## INNOVATION AND RESEARCH

**Innovation for Affordable Decarbonization** – investments designed to reduce the cost of clean energy through optimization of the power grid, clean building technologies, and clean gas and liquid fuels.

**Evolving work on resilience** – tools to support adaptation to climate change for all New Yorkers, including those most vulnerable.

## LARGE-SCALE RENEWABLES

**RFP Design** – when evaluating projects' economic benefits, prioritize disadvantaged communities, the role of renewables, and energy storage that supports the phaseout of the most polluting fossil generators downstate.

**Agriculture, natural resources and smart siting policies** – maximize co-benefits between industries and cultivate infrastructure ecologies (e.g., supporting supplemental income diversification, promoting carbon sequestration through soil enrichment, water quality improvements).

**Implement 2021 Executive Budget proposals** – complete Buy American market assessment, MWBE and SDVOB assessment, and implement updated prevailing wage requirements for project construction and operation.

**Transmission planning** – active participation in transmission planning to align with project development and seek important partnerships and cultivate benefits with communities, including via Tier 4.

**Dedicated workforce development funding for offshore wind** – follow-through on new solicitation focused on workforce development and training for existing and new workers, with major focus on residents of Disadvantaged Communities and other priority populations.

## OTHER AUTHORITY-WIDE PRIORITY EFFORTS

**Capacity-building and community engagement** – Clean Energy Hubs to build local capacity and advance opportunities for residents within the clean energy economy; development of multilingual communication materials; providing financial support to encourage stakeholder engagement in processes; streamlining stakeholder engagement Authority-wide through equitable engagement framework that includes an Energy Equity Collaborative stakeholder forum and compensation for Disadvantaged Community stakeholders.

**Community ownership of clean energy and distributed energy resources** – new models for community ownership of distributed energy resources.

**NYSERDA Diversity, Equity, and Inclusion (DEI)** – implementation of DEI Strategic Plan released in 2021 to promote DEI progress Authority-wide, focused on engagement, updates to policies and processes, accountability and metrics, and leading by example in the clean energy sector.

**Increasing supplier diversity** – NYSERDA to increase utilization of MWBE, SDVOB and NYS Small Business Enterprise contractors.

**Partnerships with labor unions** – expand work with the organized trades and skilled labor providers to ensure increased opportunities for residents of Disadvantaged Communities and other priority populations through vocational training, pre-apprenticeships, and apprenticeships.

LEARN MORE ABOUT  
NYSERDA'S DE&I EFFORTS

[nyserdera.ny.gov/DEI](https://nyserdera.ny.gov/DEI)



## CLEAN AND RESILIENT BUILDINGS

**Clean Green Schools** – funding solutions for eligible P-12 schools to reduce school energy use and assist in the conversion to carbon-free fuels while educating students, teachers, and the community about clean energy.

**EmPower Plus New York** – no-cost and discounted efficiency and electrification solutions that will help income-eligible New Yorkers save energy and money—boosted by a new infusion of State funding and a new 6% affordability pilot for participating customers who fully electrify.

**Equitable Electrification for LMI and Affordable Housing** – replicable solutions for heat pump adoption in the LMI and affordable housing sectors, which will ensure customer protections.

**NYSERDA/HCR Clean Energy Partnership** – pre-development support, grants, and financing for building decarbonization measures deployed in Homes and Community Renewal's (HCR) affordable housing portfolio.

## COMMUNITIES AND PARTNERSHIPS

**Technical Assistance and Planning** – support for housing agencies, contractors, developers, and builders for clean energy, high-performance building, and retrofits.

**Community-Based Workforce Development** – community-based training partnerships between clean energy businesses, training organizations, industry associations, and un/underemployed residents in Disadvantaged Communities.

**On-the-job training for priority populations** – support for clean energy businesses to hire persons from priority populations.

**Career Pathways Funding and Training** – solicitation to train and place new entrants in the clean energy industry.

**Climate Justice Corps** – funding for fellows to improve engagement with residents of Disadvantaged Communities; to identify community-based, climate justice focused projects and solutions; and to build capacity of local organizations to advance climate justice.

**Building Training Capacity** – supports new and existing works in clean energy areas such as energy efficiency, building electrification, offshore wind, and electric vehicle charging stations.

**Career Awareness and Exploration** – leverages the work of RoadTrip Nation to develop a clean energy career awareness campaign for high school students and young adults.



# Supporting Clean Energy Jobs

## LONG-TERM VISION AND VALUE PROPOSITION

**New York State’s nation-leading climate action policies and investments have driven steady growth in the State’s clean energy economy, outpacing economy-wide growth for the past three years.**

The clean energy industry demonstrated resilience during the pandemic, suffering fewer job losses than other sectors, and rebounding strongly in 2021. Continued investment is needed to build labor capacity and ensure that New Yorkers and New York firms reap the financial benefits that will result from delivering clean energy solutions at the scale needed to meet Climate Act goals. The State’s continued leadership and investment in its clean energy workers and businesses will also create the foundation for a just transition in the decades to come, beginning with prioritizing inclusive recruitment, training, job placement, and wrap-around support for individuals from Disadvantaged Communities, underserved populations, or those entering the clean energy workforce from a fossil-based job .



## KEY CHALLENGES/BARRIERS

- Historically marginalized populations face greater barriers to employment.
- At a time when works' priorities and needs have changed, businesses are challenged with recruitment, training, and retaining workers.
- As public, private, and philanthropic resources are increasing, better coordination is needed across stakeholders. That way, resources can be maximized to better meet the needs of incumbent and new workers as they go through the process of recruitment, placement, and professional development.
- Ongoing demographic transitions and retirements require the State to entice new entrants to this energy field and ensure that training is in sync with job placement opportunities.

## PRIORITY ACTIONS FOR NEW YORK

- Harness the State's clean energy investments to provide economic opportunity and quality jobs for New Yorkers, including LMI and historically disadvantaged populations.
- Support the work of the Climate Action Council and Just Transition Working Group to ensure workforce development considerations are prioritized.
- Integrate the final definition of Disadvantaged Communities and guidance from the Climate Justice Working Group into workforce-related programs and offerings
- Adopt best practices for inclusive stakeholder engagement in workforce development program design, such as compensation for consultation and input.

## NYSERDA KEY ACTIONS FOR 2023–2026

- **Scale-up Career Pathways** and other successful models for clean energy apprenticeships, pre-apprenticeships, and job-readiness programs to build a talent pipeline especially from individuals within Disadvantaged Communities, priority populations, and fossil-based incumbent workers transitioning into clean energy.
- **Support build-out of OSW workforce training** coordinating with SUNY in advancing the Offshore Wind Training Institute (OSWTI) and other industry efforts already underway.
- **Leverage NYSERDA's purchasing power, procurements, and program design** to maximize opportunities for New Yorkers and New York firms—especially MWBE and Service-Disabled Veteran-Owned Businesses—installing, servicing, and supplying clean energy solutions.
- **Identify and work with partners** including Empire State Development's new Office of Strategic Workforce Development to grow key supply chains where New York firms can have a competitive advantage.
- **Support community based economic development projects** by leveraging existing NYSERDA clean energy programs, identifying more comprehensive funding strategies, and working with State, local, and utility partners.
- **Focus NYSERDA's relationship with other agencies and channel partners** on workforce development and training to develop complementary offers that increase collective impact and serve a wider base of workers.
- **Pursue funding opportunities** to complement/supplement our traditional funding sources to deliver wrap-around services (such as funding for transportation, tools, daycare, etc.) to help priority populations pursue clean energy workforce opportunities.
- **Continue to provide support for fellows, full-time hires, and others** to place individuals working in and for Disadvantaged Communities to advance local climate action priorities.
- **Explore novel community-based clean energy investments**, including Build-Ready project development to provide workforce support alongside renewable development and leveraging DOL resources where feasible.
- **Harness the State's clean energy investments** to provide economic opportunity and quality jobs for all New Yorkers, especially priority populations living in communities on the frontlines of the climate crisis.



# Spotlight

## New York State Climate Jobs Study

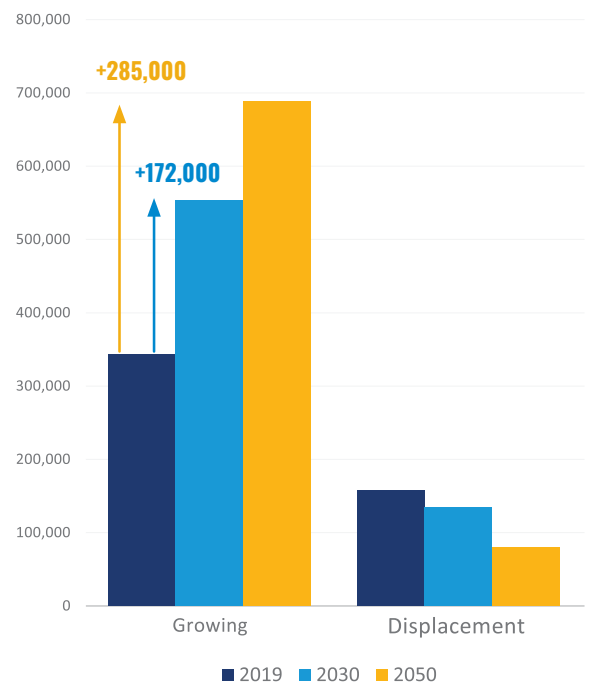
Based on independent research conducted for New York's Just Transition Working Group, Climate Act Scoping Plan Investments are expected to spur hundreds of thousands of new jobs in coming decades.

Expected clean energy job growth 2X greater than 2016–2020

More than half of new jobs will tackle building decarbonization

Offshore wind will be one of the fastest growing sectors

- Employment in growth sub-sectors increases by at least 172,000 jobs by 2030, a 55% increase in the workforce from 2019 to 2030.
- Employment grows in these sub-sectors by at least 285,000 jobs through 2050.
- In New York State, clean energy jobs, in their comparable sub-sectors, are expected to grow annually at more than twice the rate from 2021 through 2030 as the growth experienced between 2016 through 2020.
- By 2050, growth sub-sectors in New York State will reach nearly 600,000 jobs.



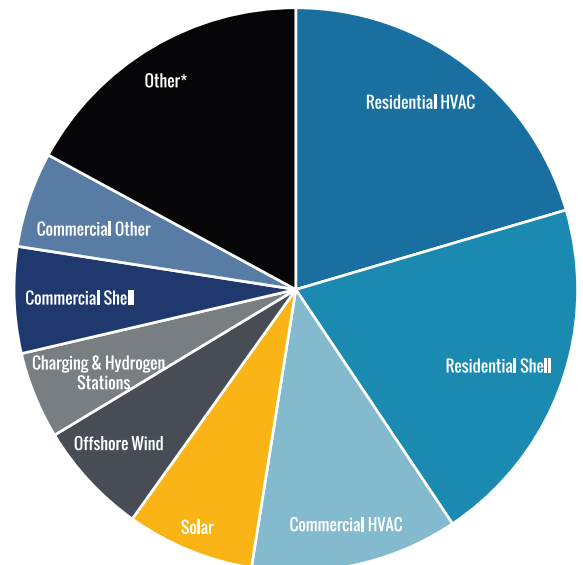
### Key Employment Findings\*\*

Sub-Sectoral Breakdown of 172,000 jobs added by 2030

- Over half of the new jobs, in the growth sub-sectors, from 2019 to 2030, will be found in the buildings sub-sectors (shaded blue).
- The next largest growth sub-sectors are solar and offshore wind electricity generation, and electric vehicle charging and hydrogen fueling stations.

\* Includes Transmission, Storage, Other Generation, Bioenergy, Residential Other, Hydrogen, Onshore Wind, and Vehicle Manufacturing

\*\* Key employment findings derived from S2: LCF Scenario. Learn more by reading the [New York State Just Transition Working Group Jobs Study](#).





**Anode Cage:** Dimensions differ depending on the foundation of a turbine but the component is scaling to 37' in diameter x 14' in height and weighing 21 tons (42,000 lbs) and protect steel foundations from corroding under the conditions of the ocean.

## Partners:



A CENTURI COMPANY

LJUNGSTRÖM



Ørsted

## CASE STUDY

### OFFSHORE WIND ADVANCED FOUNDATION COMPONENTS

New York State's goal of 9,000 MW of offshore wind by 2035 is working to spur capital investment and development of New York into the manufacturing hub of the offshore wind industry.

One example is the fabrication of Advanced Foundation Components for New York's **924 MW Sunrise Wind Farm**, which is being developed by **Ørsted** and **Eversource**. With more than 80 offshore wind turbines, the Sunrise Wind project alone will require many large components and will rely on the competency and capability of New York State manufacturers. An \$86 million dollar Advanced Foundation Component contract with project partner **Riggs Distler** will create over 100 new manufacturing jobs in Western New York and an additional 100+ union jobs assembling the components at the Port of Coeymans.

Advanced Foundation Components or Secondary Steel are components that are connected to the foundations of offshore wind turbines and serve several functional roles.

Boat landings and external ladders provide access at sea level for offshore wind technicians, internal suspended platforms are used to support electrical equipment and provide working space, and anode cages that are installed externally and below the waterline around a steel foundation provide corrosion protection from salt water. The anodes are fabricated with zinc and aluminum and cast around steel pipe. The anodes are then connected to metal collars forming the cages that installed over the foundation.

**Ljungström** is one of the New York companies that will be contributing to Sunrise Wind by manufacturing Anode Cage Assemblies, Monopile Door Assemblies and Supported Internal Platform Assemblies for Riggs Distler. Located in Wellsville, NY, Ljungström is embracing the clean energy transition by expanding their manufacturing capabilities and retrofitting their existing facility to break into the green economy. Ljungström invested in brand new equipment, ranging from cutting and bending machines, to a state-of-the-art paint and coating, and is hiring workers in Alleghany County to support the new work.

As New York's offshore wind ambitions grow, companies like Ljungström are poised to capture future business and drive the State's green economy forward.





# Accelerating the Transition from Fossil Natural Gas to a Low-Carbon Future

## LONG-TERM VISION AND VALUE PROPOSITION

**In order to realize its goals of a carbon neutral economy by mid-century, New York needs to move away from its dependence on the combustion of fossil natural gas to heat homes and businesses and power industrial processes.**

This transition away from fossil natural gas to lower-carbon energy sources may be one of the most challenging pieces of our decarbonization agenda.

New York State needs to scale up demand-reducing solutions such as energy efficiency and electrification for heating, which will be the State's core strategy and priority path for space heating and cooling needs.

In strategic hard-to-electrify use cases, the State will need to pursue R&D to prove and deploy deep decarbonization innovations to replace fossil natural gas with alternatives with lower climate impact—such as green hydrogen and renewable natural gas, among others. That is one reason why New York State is pursuing a federal clean hydrogen hub award from the Department of Energy (DOE).

Additionally, given the global warming potential of methane, losses/emissions of gas will need to be reduced throughout the gas infrastructure for safety and environmental reasons.



## KEY CHALLENGES/BARRIERS

- The cost that consumers pay for fossil natural gas does not reflect its full negative societal cost, especially in terms of environmental and climate impacts, resulting in a market signal that is inconsistent with the State's public policy objectives.
- Over the last decade, the relative affordability of gas has made it favorable among residents for home heating and hot water, and also among businesses and particularly industrial users, where high quality heat for process applications is prized and there are few commercially available electric solutions. However, gas market prices have shifted structurally in the last one to two years, which seems likely to signal increased prices in the decade ahead. This price risk is not yet considered in most consumer decisions.
- While efficient, all-electric alternatives can fulfill most residential applications and many commercial ones, such alternatives do face several limitations, including high upfront cost, lack of awareness among consumers, lack of market infrastructure (familiar installers, marketing), and technical barriers for certain buildings.
- As consumers proactively transition away from using fossil natural gas, this may raise the burden of paying for the cost of gas infrastructure for those remaining on the gas system who may not have the resources to swiftly move off.
- The existing gas distribution system is a multibillion-dollar asset that will exist even as consumption is reduced, and it needs investments to be maintained to keep people safe.
- Similarly, the existing fossil natural gas sector employs thousands of workers statewide that will need to be transitioned to other clean energy industries and otherwise supported in the transition.
- Low-carbon fuels, including hydrogen and renewable natural gas, still emit air pollutants when used in combustion processes, such as emissions of nitrogen oxides (NO<sub>x</sub>), which can pose additional burdens on environmental justice and other vulnerable communities when compared to non-emitting alternatives.

## PRIORITY ACTIONS FOR NEW YORK

- Address near-term downstate gas supply constraints minimizing investment in infrastructure and maximizing demand-side solutions to reduce winter gas peak including energy efficiency, demand response, and electrification.
- Advance a comprehensive gas transition planning process toward a managed, phased, and just transition from fossil natural gas, focusing on safety, equity, reliability, and affordability.
- Build market capacity, expand product availability, and drive cost reductions in commercially available fossil natural gas alternatives like electrification (through NYS Clean Heat), while developing new long-term solutions.
- Advance recommendations for building and industrial sectors via Climate Action Council, including codes and standards aimed at driving adoption of efficient, low-carbon solutions and clean alternatives for heat/industrial process.
- Level the playing field for clean energy alternatives and end the legal obligation to serve customers with fossil natural gas, while maintaining affordability for New York's most vulnerable customers.





## NYSDOT KEY ACTIONS FOR 2023–2026

- **Develop and publish long-term roadmaps** for advancing all-electric clean homes and buildings and advancing green hydrogen, as alternatives to fossil natural gas.
- **Phase out support for fossil natural gas** in all programs within two years and reorient investments around building shell improvements, electrification, and development of deep decarbonization alternatives.
- **Provide thought leadership** for gas system transition and engage in transition-related proceedings.
- **Prove-out solution set for LMI/Disadvantaged Communities electrification**—tailored to building stock and housing energy affordability needs.
- **Finalize and implement the 2 Million Climate Friendly Homes Action Plan** to accelerate the transition of homes, including LMI households, off of inefficient and fossil-based heating systems.
- **Maintain energy affordability for all New Yorkers**, prioritizing LMI households and strategies that can limit energy cost burden to below 6% of income.
- **Focus on reducing cost of alternative clean heating/cooling through innovation**—demonstrate heat pump technologies (and other carbon-reducing solutions) in large commercial/multifamily buildings, working with property owners, and engaging manufacturers to define/deliver/tailor products to meet New York’s building needs.
- **Support cutting edge innovations** to reduce dependence on fossil natural gas for heating, process loads and peak demand needs including long-duration storage.
- **Build understanding of and momentum for deep decarbonization technologies**, including clean hydrogen, carbon capture, and other forms of carbon-neutral tech, leveraging federal funding opportunities—including via New York Clean Hydrogen Hub efforts.
- **Critically evaluate and assess holistic impacts from deep decarbonization technologies**, including ongoing work to assess air pollution, land use and affordability impacts, and identifying and advancing opportunities with the greatest decarbonization potential.
- **Conduct and publish a statewide study of the decarbonization potential of clean hydrogen** across the key pathways of energy efficiency, industrial electrification, low-carbon fuels, and carbon capture utilization and storage to enable state-wide activities to pursue federal funding to accelerate the deployment of innovative technologies within New York.
- **Support the development of next-generation thermal energy districts** that can deliver affordable, resilient heating and cooling to buildings while providing direct employment opportunities to support the transition of the gas workforce—including through the advancement of utility thermal energy network pilots where feasible and the development of a regulatory framework for these systems.

### Hydrogen Roadmap

A comprehensive strategy to advance green hydrogen as a solution in New York State, considering technology needs and risks, infrastructure, resiliency, costs, and environmental justice. Along with several other actions announced in January 2022, including a regulatory framework and prize program, the Hydrogen Roadmap will help position the State to compete for nearly \$10 billion in federal funding for green hydrogen R&D.



# Fostering Healthy and Resilient Communities

## LONG-TERM VISION AND VALUE PROPOSITION

**New York’s diverse communities have a critical role to play in the State’s clean energy transition.**

They are essential partners both in the rapid expansion of clean energy generation as well as the decarbonization of society—including the built environment and the transportation and industrial sectors— hereby creating healthy, livable environments and supporting larger projects with far-reaching statewide benefits.

But to succeed, we need to provide communities with the necessary tools and other resources to carry out this work. On the renewable generation side, efforts such as the Office of Renewable Energy Siting (ORES), NYSERDA’s Build-Ready program, and the new host community benefits framework, are designed to reduce barriers for localities and overcome obstacles to mutually beneficial project development.



In order to decarbonize the State's building stock by mid-century, New York will have to quickly move beyond a building-by-building approach to a neighborhood-by-neighborhood approach, developing carbon neutral communities.

NYSERDA provides planning resources for community-scale decarbonization projects, and is supporting several communities as they embark on the decarbonization transition. Integrating decarbonized transportation solutions will also be paramount in providing holistic community-scale climate solutions with neighborhood-level impact.

The disparate health and air quality impacts borne by Disadvantaged Communities as a result of historical and continuing environmental injustice remain front of mind, a reality that has been underscored and exacerbated by the COVID-19 pandemic. We can begin to reverse and repair these inequitable community outcomes by providing resources to Disadvantaged Communities that ensure all New Yorkers benefit from the clean energy transition. Decarbonized communities will have improved outdoor air quality (e.g., through the elimination of peaker plants and on-site combustion of fossil fuels), safer and healthier buildings (through electrification, energy efficiency and measures to guard against airborne pathogens), job and economic opportunities, and increased economic activity, collectively fostering healthy communities.

**There are more than 6 million buildings in New York State.**

**More than 200,000 buildings per year would need to be decarbonized for the next 30 years to address the entire existing building stock by 2050. The State needs to build scale to succeed, and action at the community-level will be critical.**

## **New York State Communities**

New York's communities are as diverse as New Yorkers themselves, spanning 932 towns, 62 cities, and 10 Indigenous Nations. More broadly, though, communities throughout the State have shared interests in preserving and expanding quality of life including affordable housing, education, job opportunities, clean air and water, and health and safety.

**New York's communities are essential partners in this clean energy transition and must be engaged in planning, coordination, and decisions that will impact generations to come.**



## KEY CHALLENGES/BARRIERS

- Communities lack resources to adequately address many on-the-ground challenges associated with the energy transformation—from competing interest for land use and challenging siting issues, to a diverse building stock coupled with complex and evolving building codes and aging infrastructure.
- Local resource constraints were exacerbated by COVID-19 and the associated economic challenges.
- Some communities have a negative perception of large-scale renewable projects, and are negatively disposed to development of these projects.
- Disadvantaged communities face disparate exposure to air pollution from multiple sources (vehicles, power plants, industrial facilities) and often are burdened with a building stock that does not provide healthy indoor air quality.
- Health and safety benefits that result from community decarbonization are not always well understood and can be difficult to quantify and monetize.

## PRIORITY ACTIONS FOR NEW YORK

- Continue to provide and expand upon training and technical resources to help communities prepare for responsible renewable energy development, embrace decarbonization and energy efficiency, and support progressive building codes.
- Facilitate paths for community engagement on decarbonization wherever possible, including through grants and financial support, local coordinators, clear technical guidance and templates, recognition, and interagency coordination.
- Leverage the 12 Regional Clean Energy Hubs announced in 2022 to connect local residents with clean energy solutions including through NYSERDA and their local electric utility programs as well as workforce development opportunities.
- Incorporate decarbonization into various existing State funding programs, like the Downtown and Upstate Revitalization Initiatives and other opportunities under the Consolidated Funding Application.
- Adopt equitable engagement strategies and holistic, multi-sector approaches to investment in order to address longstanding disparities in exposure to air pollution and inadequate building stock investment.
- Develop and establish a robust framework for host community benefit agreements as part of large-scale renewable projects clarifying local benefits and making benefits packages more compelling.
- Through the Office of Renewable Energy Siting, issue new uniform, standardized guidelines for responsible large-scale renewable siting to improve consistency, expedite approval of projects not located on greenfield sites, and reduce burdens for local community intervention.
- Focus on turning underutilized lands—such as brownfields, landfills, and former industrial properties—into revenue-generating clean energy projects, and advance project development on other sites that present development challenges for commercial developers.
- Facilitate passage and/or implementation of proactive community-level clean energy policies such as benchmarking, and other climate-friendly codes, standards, and mandates recommended by the Climate Action Council.



## NYSDERDA KEY ACTIONS FOR 2023–2026

- **Site and build renewable power and distributed clean energy projects** that provide community benefits by providing guidance on project economics, taxes, siting assistance to local governments, and ensuring projects deliver tangible benefits to residents of host communities.
- **Grow local partnerships and drive investment** in clean energy on brownfields or otherwise underutilized land, offering support like Just Transition site reuse planning grants.
- **Implement programs that provide technical and financial assistance, build local capacity, and facilitate local engagement** for communities to support community-scale decarbonization through the Clean Energy Communities Program and the Clean Energy Hubs.
- **Directly partner with municipalities, communities, and individual landowners** to promote neighbor-to-neighbor clean energy campaigns and testimonials, sharing best practices by local government champions for clean energy.
- **Partner with stakeholders and Community-Based Organizations (CBOs) within Disadvantaged Communities** to co-develop local clean energy agendas and deploy climate resilience hubs that enable residents to safely shelter in place through community-scale distributed energy resources including solar, storage, green hydrogen, and district geothermal systems.
- **Catalyze novel clean transportation and zero-emission vehicle/mobility deployments** with prize funding supporting clean vehicles, personal mobility, and medium- and heavy-duty transportation transformations that benefit environmental justice communities.
- **Help communities address the dual challenges of sustainability and indoor air quality**, providing building science expertise and creating greener and healthier schools.
- **Leverage funds that can drive novel approaches** to realizing health and energy benefits, including the Healthy Homes pilot that is using health dollars and avoided health/insurance costs to finance electrification, energy efficiency, and clean energy upgrades.
- **Develop and implement the Extreme Heat Action Plan** in partnership with DEC, DOH, and dozens of other State Agencies as well as municipal and community stakeholders as announced in January 2022, to address the threat of extreme heat in Disadvantaged Communities, areas of employment, and recreational zones across the State and to mitigate neighborhood climate impacts associated with extreme heat through measures such as shade structures, cool roofs, cool pavements, parks, natural canopies, spray pads, expanding access to home cooling solutions, and more.
- **Incorporate strategies to optimize for resilience** in an electrified future as homes are decarbonized, such as preparing homes for backup systems according to the occupants' needs and the heating and cooling systems' replacement cycle.
- **Provide communities with planning services** to inform future decision making at the local level to help mitigate negative impacts of pending or future fossil fuel power plant closures.
- **Support municipal utilities and rural electric cooperatives** to undertake climate vulnerability assessments and undertake measures that strengthen the resilience of the electric grid.
- **Increase energy efficiency and renewable energy generation** at State-owned buildings and public schools.

# Funding

## FUNDING SOURCES

Several funding sources help NYSERDA advance the State’s clean energy goals and achieve its mission. NYSERDA invests these funds in a fiscally responsible manner that maximizes benefits to New Yorkers, fills critical gaps, and addresses the needs of the market.

### **Clean Energy Fund**

Authorized by the Public Service Commission (PSC) and derived from an assessment on retail sales of electricity by State utilities—it is comprised of four portfolios: Market Development, Innovation and Research, NY-Sun, and NY Green Bank. The CEF was reaffirmed by PSC Order in August 2021, and is also being considered alongside other State clean energy programs in the New Efficiency: New York review.

### **Clean Energy Standard**

As authorized by the PSC, these funds are realized by NYSERDA through the sale of Tier 1 Renewable Energy Credits (RECs), Tier 4 RECs, Offshore Wind Renewable Energy Credits (ORECs), and Zero Emission Credits (ZECs) as well as receipt of Alternative Compliance Payments from New York’s Load Serving Entities (LSEs). Through PSC orders, LSEs are obligated to meet annual compliance obligations for RECs, ORECs and ZECs, though a pending NYSERDA petition proposes to modify this process moving forward. As needed, utility financial backstop collections may be called on to meet funding shortfalls. These commitments are typically paid out over a 20–25 year contract term upon delivery of RECs (for Tier 1, OSW, and Tier 4; contract terms are shorter for Tier 2 RECs and ZECs).

### **Regional Greenhouse Gas Initiative (RGGI)**

Derived from sale of carbon emission allowances as set forth in 6 NYCRR Part 242 and 21 NYCRR Part 507. The amount of revenues available is dependent on the variable auction prices for the allowances. Per requirements in 21 NYCRR 507, RGGI funds are used to advance energy efficiency, renewable energy, and carbon abatement projects in New York State.

### **Federal Funding**

Federal funding will be leveraged to enhance NYSERDA’s most critical efforts and topline mission outcomes, including via partnership with sister State agencies. NYSERDA will be targeting, on a strategic basis, block grant and competitive funding opportunities via the Infrastructure Investment and Jobs Act, Chips and Science Act, and Inflation Reduction Act, as well as through additional spending appropriations made in 2023 and beyond.

### **Other Funds**

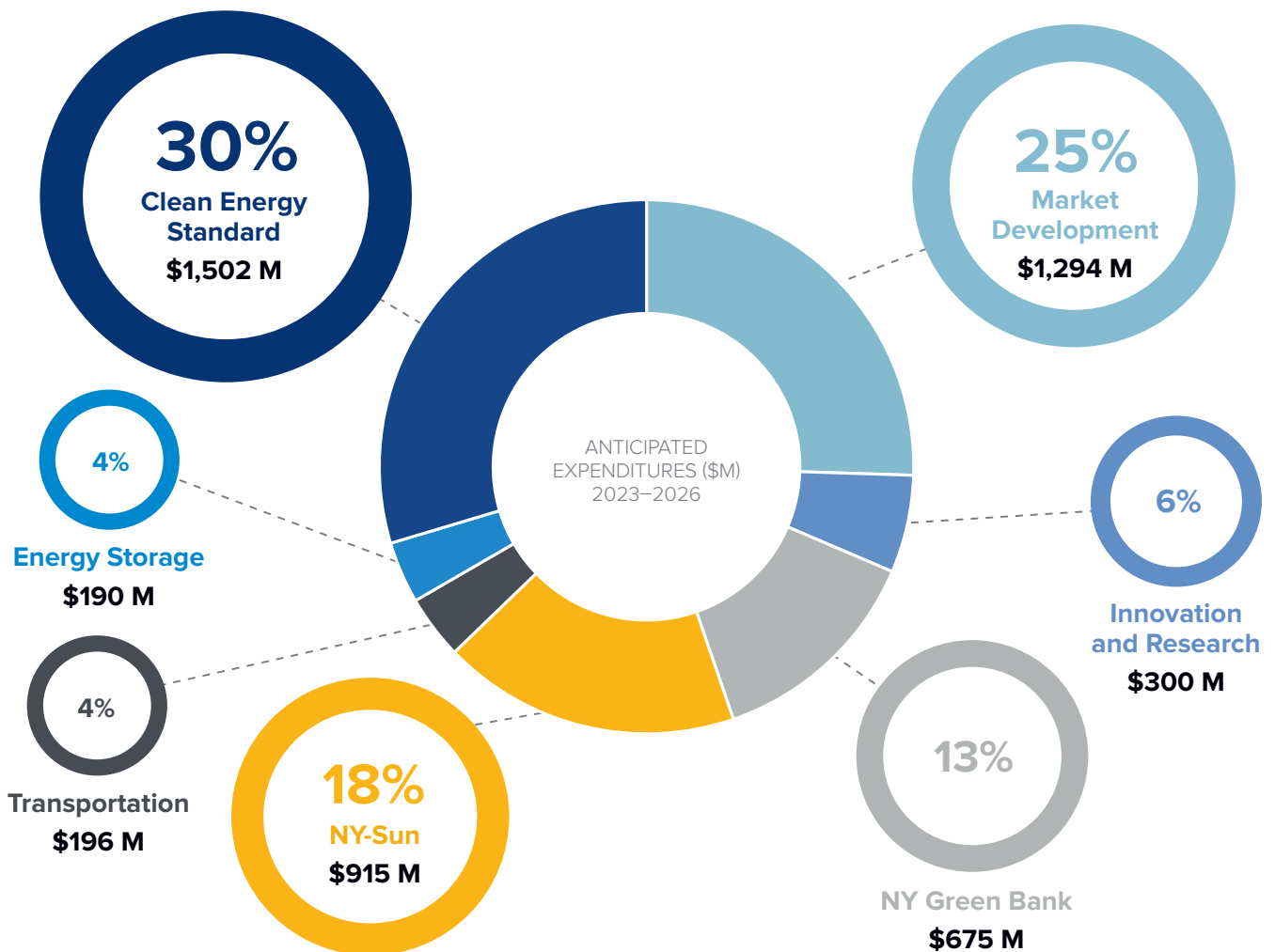
Includes sources provided by various sponsors used for specific purposes. Public funds are leveraged considerably with private sector funding through NYSERDA programs.

# PLANNED FUNDING (2023-2026)

RENEWABLES  
ENERGY EFFICIENCY & BUILDINGS  
EMISSIONS REDUCTIONS  
CLEAN ENERGY ECONOMY  
DISTRIBUTED ENERGY SYSTEM

INVESTMENT AREAS & PRIORITY INITIATIVES	ESTIMATED 3-YEAR INVESTMENT LEVEL	% OF TOTAL	NYSERDA MISSION OUTCOME(S) ICONS INDICATE RELEVANCE FOR PLANNED FUNDING				
Clean Energy Standard	\$1,502,439,483	29.6%					
Market Development	\$1,293,854,534	25.5%					
NY-Sun	\$915,366,442	18%					
NY Green Bank	\$675,000,000	13.3%					
Innovation and Research	\$299,712,291	5.9%					
Transportation	\$196,000,000	3.9%					
Energy Storage	\$189,526,635	3.7%					
<b>Total</b>	<b>\$5,071,899,384</b>						

Note: the anticipated expenditures represented in the table are based on currently approved funding (Orders of the Public Service Commission, NYS Appropriations, Regional Greenhouse Gas Operating Plan, Federal Grants, and the NYS Bond Act). The funding table does not include future funding not yet approved (Energy Storage Road Map 2.0, Federal funding for the Hydrogen Hub, broader funding for the Two Million Combined Electrified and Electrification-Ready Homes by 2030, etc).



# Appendix: NYSERDA's Structure

## NYSERDA BOARD MEMBERS

**Richard L. Kauffman**

NYSERDA Chair

**Charles Bell**

NYSERDA Vice Chair

**Sherburne B. Abbott**

Johns Hopkins University

**Rory M. Christian**

Chair and CEO, New York State Public Service Commission

**Marie Therese Dominguez**

Commissioner, New York State Department of Transportation

**Justin E. Driscoll**

Interim President and Chief Executive Officer, New York Power Authority

**Arturo Garcia-Costas**

Program Officer for the Local, National and International Environment, The New York Community Trust

**Jay L. Koh**

Managing Director and Founder, Lightsmith Group

**Frances A. Resheske**

Con Edison (Retired.)

**Basil Seggos**

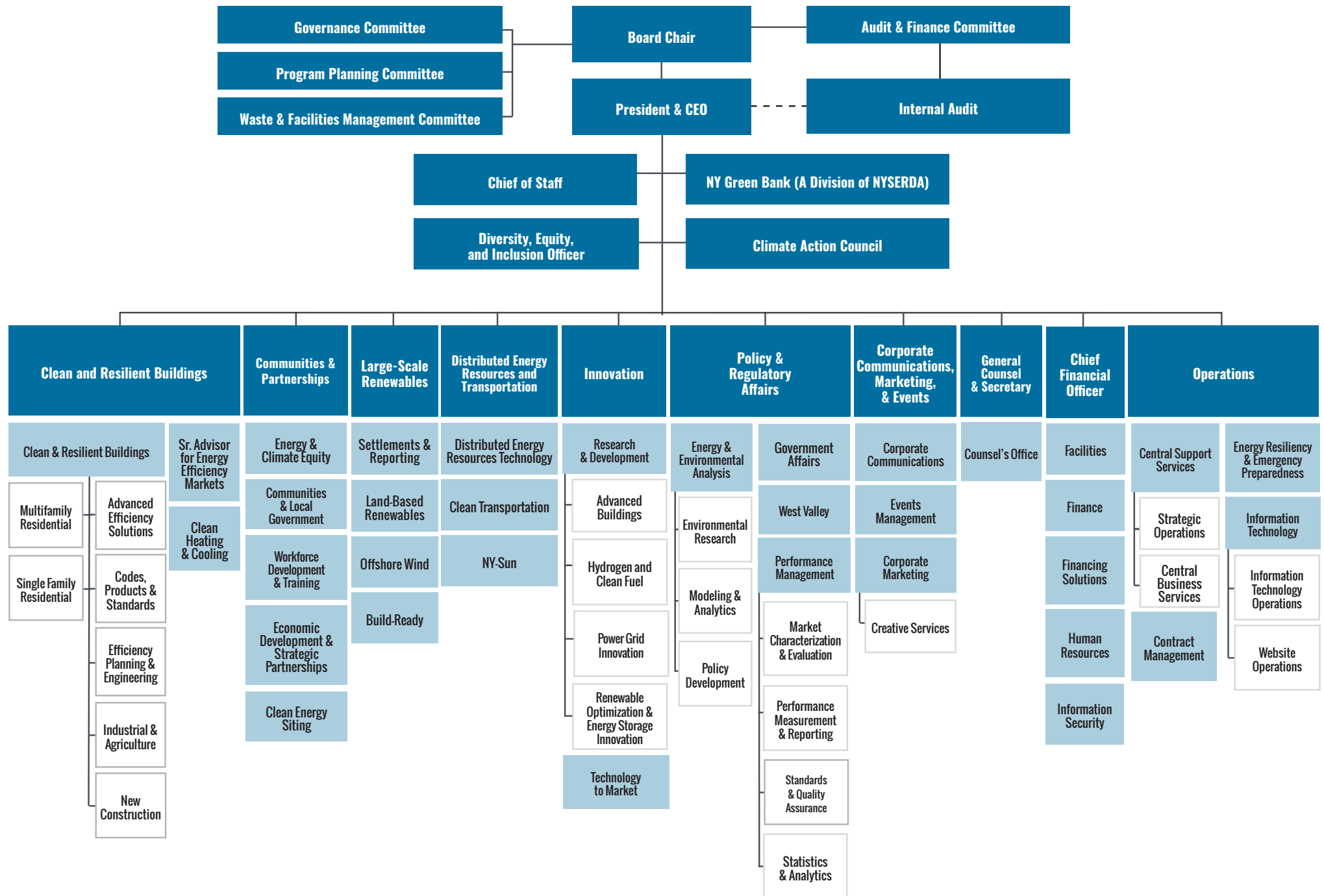
Commissioner, New York State Department of Environmental Conservation

**Sarah Sadie McKeown**

President, The Community Preservation Corporation



# NYSERDA ORGANIZATION CHART





**NYSERDA**

**State of New York**

Kathy Hochul, Governor

**New York State Energy Research and Development Authority**

Richard L. Kauffman, Chair | Doreen M. Harris, President and CEO

Resolution No. \_\_\_\_\_

RESOLVED, that the outlook for the Authority's energy, economic environmental program priorities and strategic vision entitled *Toward a Clean Energy Future: A Strategic Outlook 2023-2026*, submitted to the Members for consideration at this meeting with such non-substantive, editorial changes and supplementary schedules as the President, in her discretion, may deem necessary or appropriate, is adopted and approved by the Board as the Authority's updated Strategic Outlook.

# New York’s Regional Greenhouse Gas Initiative Operating Plan Amendment for 2023

## Background

In New York, responsibility for implementing the Regional Greenhouse Gas Initiative (RGGI) is shared by the Department of Environmental Conservation (DEC) and the New York State Energy Research and Development Authority (NYSERDA). DEC and NYSERDA program responsibilities are contained in coordinated regulations:

- DEC established New York's CO2 Budget Trading Program and the State’s share of the total regional cap through a rule (6 NYCRR Part 242) and revisions to an existing rule (6 NYCRR Part 200, General Provisions). Part 242 establishes the cap-and-trade provisions, as well as program compliance responsibilities and other program aspects.
- NYSERDA set up the CO2 Allowance Auction Program through regulations (21 NYCRR Part 507). Part 507 establishes administrative procedures for the auction process and provides that proceeds from the sale of the allowances will fund projects and programs for “energy efficiency, renewable or non-carbon emitting technologies, and innovative carbon emissions abatement technologies with significant carbon reduction potential, and for reasonable administrative costs incurred by the Authority.”

The NYSERDA regulations include a provision to annually convene a group of stakeholders representing a broad array of energy and environmental interests. This group advises NYSERDA regarding strategies to best utilize RGGI funds. NYSERDA’s RGGI Operating Plan is reviewed and revised on an annual basis. NYSERDA holds an open meeting of the stakeholder group each year, inviting input on how to achieve greater scale of implementation, advance activities that realize benefits in disadvantaged communities, expand private investments and partnerships, and address barriers to program success.

The Draft 2022 Operating Plan Amendment was presented to stakeholders for comment in December 2021 and was approved by NYSERDA's Board in January 2022. Subsequently, there was a mid-cycle planning update where NYSERDA compiled a 2022 Operating Plan Amendment (Revised), presented that to stakeholders for comment in May 2022, and which was approved by NYSERDA’s Board in June 2022. The 2022 Operating Plan was then compiled based on the NYSERDA Board approval.

This document represents the Draft 2023 Operating Plan Amendment and provides program descriptions and funding levels through March 2026. Appendix 1 provides an analysis of the revenues and program funding allocations planned for the fiscal years ending March 31<sup>st</sup>, as compared to actual/projected results.

## Review of Programs and Budgets for the 2023 Operating Plan

New York State invests RGGI proceeds to support comprehensive strategies that best achieve the RGGI greenhouse gas emissions reduction goals, through energy efficiency, renewable energy, and carbon abatement strategies, pursuant to 21 NYCRR Part 507. The programs in the portfolio of initiatives are designed to support the pursuit of the State’s greenhouse gas emissions reduction goals by:

- Deploying commercially available energy efficiency and renewable energy technologies;
- Building the State’s capacity for long-term carbon reduction;
- Empowering New York communities to reduce carbon pollution, and transition to cleaner energy;
- Stimulating entrepreneurship and growth of clean energy and carbon abatement companies in New York; and

- Creating innovative financing to increase adoption of clean energy and carbon abatement in the State.

The initiatives described below represent program activity proposed for the 2023 Operating Plan. The 2023 Operating Plan portfolio builds on the 2022 portfolio, with an increased focus on disadvantaged communities. The funding level for each program previously approved and the amounts planned for FY23-24 through FY25-26 are reflected in Table 1 on page 9.

RGGI programs have and will continue, alongside other state programs, to contribute to economy-wide greenhouse gas emissions reductions and provide benefits to New York’s historically overburdened and underserved communities. NYSERDA’s CO<sub>2</sub> Allowance Auction Program regulations reflect the provision of the Climate Leadership and Community Protection Act “that 40%, and no less than 35%, of the overall benefits from the investment of the [CO<sub>2</sub> Allowance Auctions] proceeds” will be realized in disadvantaged communities. Appendix 2 of this Operating Plan amendment provides an estimate of how RGGI program commitments are anticipated to result in benefits for disadvantaged communities based on an interim definition of disadvantaged communities and low-to-moderate-income investments, as the Climate Justice Working Group continues its work to arrive at a long-term definition. As such, Appendix 2 tracks post-2019 cumulative commitments, as this is the timeframe in which benefits are subject to the Climate Act. NYSERDA estimates that 42% of post-2019 commitments are expected to provide benefits to disadvantaged communities.

The funding allocation values represented in Table 1 provide an estimate of when funds will be assigned to each program. These figures do not reflect when funds will be spent or when contracts will be signed. The table also reflects cumulative funding allocations through FY21-22, original and revised funding allocations for FY22-23, and estimated allocations for FY23-24 through FY25-26.

Multi-year programs that have remaining funds available for program expenditures but are not receiving additional funding under this Plan Amendment are not described below. Those programs will continue with the planned expenditure of their previously allocated funding as outlined in the 2022 RGGI Operating Plan.

For all RGGI-funded activities, NYSERDA will provide timely progress reports utilizing best practice protocols for project tracking and evaluation.

## **Program Descriptions**

### **NY-Sun Statewide Customer Incentives**

The NY-Sun initiative is driving the growth of the solar industry and makes solar technology more affordable for all New Yorkers. The program provides declining incentives for the installation of systems and works to reduce solar electric balance-of-system costs through technology advancements, streamlined processes, and customer aggregation models. NY-Sun includes the Solar Energy Equity Framework, which supports projects that benefit low-to-moderate income (LMI) customers, affordable and public housing, environmental justice communities, schools, and disadvantaged communities (DACs). This Amendment allocates a total of \$54.82 million to these efforts during the planning period, which includes \$6.97 million during FY23-24, \$30 million during FY24-25, and \$17.85 million during FY25-26. This funding allows customers of Upstate municipal utilities and the New York Power Authority, who do not pay CEF surcharges, to receive NY-Sun incentives. It is expected to primarily fund NY-Sun incentives for solar installations on New York City public schools and other New York City public buildings that are served by NYPA, but will also fund NY-Sun incentives for residential and commercial installations in areas served by municipal utilities in Upstate NY.

## **Community Heat Pump Systems**

Heat pump technology has become a proven decarbonization solution, providing buildings with clean thermal energy for space heating, cooling and domestic hot water. Existing heat pump programs to-date have targeted customers on an individual building-by-building basis, but community heat pump systems use a network of pipes to share heating water among a cluster of buildings. This amendment proposes an additional \$6 million in funding, totaling \$15.7 million, to continue and build upon the success of the program developing viable pathways for community scale district thermal networks.

## **Agrivoltaics**

This amendment proposes \$5 million to establish a new partnership between NYSERDA, New York State Department of Agriculture and Markets, as well as higher education institutions to further promote agrivoltaics. This is a practice of siting clean energy generation technologies on agricultural lands to maximize value of the two complementary uses of the land. The investment of RGGI proceeds will enable the development of guidance and education materials on the use of agrivoltaics in farming in New York State.

## **LIPA Energy Efficiency and Renewable Energy**

These funds enhance the portfolio of clean energy activities for energy consumers on Long Island, as approved by the Long Island Power Authority (LIPA) and administered by PSEG-Long Island. Funding and reporting requirements are established through a Memorandum of Understanding between NYSERDA and LIPA, which ensure that RGGI funds meet the requirements of the RGGI regulations that funds are used to support energy efficiency and clean energy activities, as well as advancing the goal of benefits of investments in disadvantaged communities. NYSERDA is working with LIPA to maintain the level of market activity designed with the previous RGGI allocations. With this funding re-allocation, as well as additional funds, the Operating Plan is proposed to maintain support for LIPA-implemented energy efficiency and clean energy activity in the amount of \$20 million each year for the calendar years 2023-2025. The LIPA Board of Trustees approves an annual energy efficiency program plan, which details the activities that these funds will support.

## **EmPower Plus: Decarbonizing Homes for Low- and Moderate-Income Households**

To maintain statewide access to fuel neutral, whole buildings energy efficiency and electrification opportunities, these funds will maintain support for low-to-moderate-income (LMI) customers statewide, including customers of municipal utilities and customers using delivered fuel, which cannot be funded through the Clean Energy Fund, to access incentives through EmPower or Assisted Home Performance with ENERGY STAR, jointly called EmPower Plus, which provides comprehensive energy efficiency services programs for low- and moderate-income-qualified households in existing one-to-four family homes. An additional \$65 million in proposed funding over FY23-26, totaling \$176 million, will fund home efficiency and electrification upgrades for LMI residents.

## **Multifamily Low Carbon Capital Planning / Pathway Projects**

The proposed \$25 million will enable NYSERDA to support more projects participating in the Low Carbon Capital Planning (LCCP) and Low Carbon Pathways (Pathways) programs, which will enable more building electrification throughout the state. LCCP offers a 75% cost share for building and portfolio-level energy studies that include an

assessment of electrification and electrification-ready measures informing building owners about the actionable steps they can take to prepare their buildings for electrification. Pathways program provides incentives for building owners that install a package of measures resulting in reduction of on-site carbon emissions. The additional funding will prevent a disruption in service prior to 2025, due to the anticipated steady demand for the program and will support any ramp-up in demand anticipated from Local Law 97 (LL97). These investments will support electrification in both market-rate and affordable multifamily housing.

## **New Construction & Challenges**

This amendment proposes \$35 million to continue and build upon the success of key NYSERDA initiatives, such as Buildings of Excellence, the Carbon Challenge, and/or the Empire Building Challenge. These initiatives are competitive challenges pursuing exemplary design and high performance for new construction buildings. NYSERDA's investments provide funding to leverage design professionals and new technical solutions to create economically viable pathways for replicable approaches to removing emissions from existing commercial and industrial buildings and the design and construction of new buildings.

## **Climate Resiliency**

A proposed \$15 million over FY24-26 will support research and analysis to perform a climate change risk assessment for clean energy and electrification assets and investments to help ensure they will remain durable solutions over time. It also includes the research and development of NYS Climate Resiliency Design Guidelines in conjunction with DEC and OGS. This work will ensure that New York State begins to develop a clear roadmap for integrating climate risks as per Executive Order 22 (signed September 20, 2022).

## **Support for 2 Million Climate Friendly Homes Initiative**

The amendment proposes to allocate \$20 million toward programs supporting the [2 Million Climate Friendly Homes Initiative](#); aiming to achieve 1 million electrified and 1 million electrification-ready homes by 2030 including clean energy upgrades for more than 800,000 low-to-moderate income households. The \$20 million will be allocated across the following activities.

### **Comfort Home**

The proposed allocation of \$10 million in FY25-26 will allow for the Comfort Home Pilot to continue to offer services across New York State to approximately 7,700 additional homes beyond its current funding capacity. Comfort Home provides homeowners with an energy assessment focused on reducing heating and cooling energy load and provides incentives and financing for air sealing, insulation, and/or window upgrades. The program prepares homes for electrification and facilitates optimized heat pump equipment selection and design.

### **Climate Action Consumer Awareness & Education:**

The amendment proposes an additional \$5 million, which will focus on extending awareness and education efforts to increase demand for and acceptance of efficient electrification solutions, reinforcing the values and benefits of critical measures such as air sealing and insulation and heat pumps to accelerate adoption. Together, the \$17 million of total funding will sustain existing market rate efforts and expand to support efforts for low- and moderate-income audiences, and contractors whose growth and capacity will ensure consumer demand can be satisfied.

## **Financing Solutions:**

A proposed \$2.5 million will support research, analysis, piloting and market testing of a subset of high-impact financing interventions that mobilize private capital in support of outcomes from the 2 Million Climate Friendly Homes Initiative. These interventions will make financing more available for electrification projects as well as installing other measures preparing homes for electrification.

## **Supply Chain Support (Equipment & Installers):**

This \$2.5 million allocation will bolster supply chain initiatives that address the specific challenges hindering expansion of supply side support for weatherization and heat pump adoption at all points along the supply chain and support the buildout of a contractor infrastructure capable of delivering residential weatherization and heat pump installations at the scale required to meet electrification goals. Two primary initiatives, Clean Heat Connect and Experience Clean Heat will be amplified to deliver the necessary tools and resources to increase confidence around electrification measures and the potential business opportunity for service providers, and to educate the technicians and contractors who touch homes every day. Support research and deployment on housing-sector wide market-focused interventions that substantially reduce the cost of solutions, result in an increase in private investment in supply chain capacity and capability, and drive innovation and the deployment of new business models.

## **ChargeNY**

ChargeNY has been pursuing four strategies to promote plug-in electric vehicle (PEV) adoption by consumers across New York. First, NYSERDA implemented the Drive Clean rebate program for PEVs in March 2017, accelerating purchases of PEVs by reducing higher upfront costs. Second, NYSERDA will continue to invest in marketing and awareness-building activities to build interest in PEVs among the public. A focus on building greater public knowledge and awareness of the capabilities of PEVs is essential to spur more private investment in PEV purchases and PEV charging stations. This work may also include other market development activities, such as policy and business model development studies that support new ways for critical stakeholders, such as utilities, local governments, and car dealers, to get involved in the PEV market. Third, NYSERDA will also support the installation of PEV charging stations at workplaces, multi-family buildings, and targeted public locations – location types that have been seen to be effective drivers for PEV adoption based on usage data reported from previous installations – and work with the site owners to further promote PEV adoptions. Fourth, NYSERDA will support the planning and demonstration of expanded electric mobility and transit options with a focus on disadvantaged communities and underserved areas. This work will address community-identified needs that expand access to public transportation and improve equitable access to PEVs and other electric mobility systems in a replicable and scalable way. This Operating Plan Amendment proposes to provide an additional \$15 million during FY25-26 to now total \$171.3 million through the planning period, which will be used to support continuation of current and additional ChargeNY strategies to ensure effective engagement with the market to build scale and ensure a focus on an equitable transition into future years.

## **Hydrogen Hubs**

This amendment proposes \$5 million in funding to support the deployment of clean hydrogen infrastructure as part of this regional initiative. Of this funding, \$2 million will be allocated to support pre-engineering work for projects and the remaining \$3 million will be allocated for stakeholder engagement, administration and project development.



## **Scoping Plan Implementation Research**

The Climate Leadership and Community Protection Act (Climate Act) was signed into law in 2019 as one of the most ambitious climate laws in the world, putting the State on a course to reduce greenhouse gas emissions and achieve net-zero emissions, increase renewable energy usage, and ensure climate justice.

In anticipation of supporting work to realize recommendations included in the Climate Action Council's final Scoping Plan, this funding may include technical analysis to support activity requiring more detailed information, such as natural gas system planning for decarbonized future, planning an economy wide cap-and-invest program, or support for a clean transportation standard.

For the purpose of developing this proposed Operating Plan Amendment, NYSERDA assumes investment of \$5 million for these initiatives during FY23-24, and \$3 million during FY24-25, for a total of \$8 million throughout the planning period.

## **Clean Energy Workforce Development**

This amendment proposes investing an additional \$45 million over FY24-26 to support the just transition of fossil fuel workers to the clean energy workforce. This funding will be used to partner with labor unions to expand training programs offered to workers with fossil fuel jobs; namely, to develop training curriculum and equip training locations with technology to further enable the reskilling and upskilling of workers in these areas. Other activities from this investment will enable career literacy programs for K-12 schools covering clean energy jobs.

## **Clean Energy Hubs: Community and Stakeholder Engagement**

NYSERDA will continue building local capacity within disadvantaged communities and improve stakeholder engagement by adding \$6 million from FY23-24 through FY25-26 to increase engagement of residents and communities in New York City and Long Island, support the participation of community-based and advocacy organizations in stakeholder meetings, and support local projects. This will leverage the more than \$40 million for Clean Energy Hubs supported by the Clean Energy Fund. In 2022, NYSERDA launched this network of 12 Community Energy Hubs, one in each region of the state and three serving New York City. The Hubs build on the success of the Community Energy Engagement Program, wherein community and locally-based organizations across New York State provided outreach and education services to help low-income residents and small businesses make informed energy choices and access incentives and other resources to implement clean energy projects. The Hubs will enhance community-level engagement and capacity building by supporting clean energy concierge services and helping residents understand different clean energy solutions and apply for relevant programs. These services will be provided to residents, small businesses, nonprofits, and multifamily building owners in disadvantaged and underserved communities to increase awareness and adoption of clean energy programs and solutions, with the focus of creating a more inclusive clean energy economy.

In addition, NYSERDA will help to increase the potential of community-based organizations to advance clean energy projects in historically underserved communities by advancing a pilot effort to increase the capacity to plan for and develop community-scale clean energy projects with capacity development grants. Funds allocated in this operating plan will allow for statewide activities alongside efforts supported through the Clean Energy Fund.

## **Federal Program Match Opportunities**

This amendment proposes that NYSERDA invest up to \$159 million of RGGI proceeds in federal grant programs that require a funding match, thus allowing RGGI funds to be leveraged to secure additional federal funding to deliver greater relative benefit in areas aligned with RGGI objectives. One such example is the U.S. Department of Energy's Funding Opportunity Announcement (FOA) for Grid Resilience and Innovation Partnerships. This FOA – a formula grant that is guaranteed if the funding match is provided – helps build New York State's capacity for long-term carbon reduction through greater adoption of monitoring and control devices that enhance distributed energy resources, allows for improved transmission and access to renewable energy resources across the state, and supports increasing the adaptive capacity of the electrical distribution system during disruptive events. NYSERDA will continue to monitor federal grant programs throughout the planning period, and where matched to RGGI objectives expects to utilize RGGI proceeds alongside other funds to fulfill matching contribution requirements.

## **Clean Energy Fund**

Through the Clean Energy Fund (CEF) and its portfolios, NYSERDA is advancing the goals of the Climate Act. As approved by the Commission, the CEF delivers on its primary goals to reduce greenhouse gas emissions, increase renewable energy generation, increase energy efficiency, and attract greater private investment in clean energy, with investment portfolios that are designed to achieve scale in clean energy markets. These key CEF objectives dovetail with the RGGI investment parameters, creating a unique opportunity to leverage CEF and RGGI funds to help achieve New York's broader Climate Act and clean energy objectives. In designing the CEF, NYSERDA planned to dedicate \$250 million in RGGI funds to the CEF portfolio over 10 years, supporting the \$3.42 billion Market Development and Innovation and Research activities.

In keeping with this plan, while accounting for new revenue and commitment projections, NYSERDA will allocate to the CEF approximately \$68 million throughout the planning period from FY23-24 through FY25-26, thus fulfilling the \$250 million commitment noted above.

## **Green Jobs-Green New York**

The Green Jobs-Green New York (GJGNY) Program, created under the Green Jobs-Green New York Act of 2009, provides New Yorkers with access to energy assessments, installation services, low interest financing, and pathways to training for various green-collar careers. The GJGNY program was originally funded with \$112 million of RGGI funds, and approximately \$93.4 million in additional RGGI funds approved by NYSERDA's Board, of which about \$112.2 million was allocated for a GJGNY Revolving Fund for residential loans to provide low interest financing for residential energy efficiency improvements, residential solar photovoltaic (PV) systems and other renewable technologies (effective April 2014). Interest rate changes reviewed with the GJGNY Advisory Council and effectuated in September 2016 resulted in a reduced level of RGGI funds required to support the financing of GJGNY loans.

In June of 2020, as part of our pandemic economic stimulus portfolio, NYSERDA launched a 0% financing loan initiative available for up to 12 months or until \$20 million in loans were approved. Demand far exceeded estimates after only 15 days. Most of these loans were issued in FY20-21 and funded from the revolving loan fund (resulting in an increase in the funding allocation required for the program for FY20-21). Loan participation sales partially reimbursed the funding in FY21-22. The Amendment proposes RGGI funding of \$16 million in FY25-26 for continuation of GJGNY residential financing, including making 15-year unsecured financing at market or below-market interest rates available to consumers living in federal census block groups where more than 50 percent of households have household income less than 120% of area median income (and allowing consumers living outside of

these communities to qualify for this rate if they meet this income threshold), and also offering access to financing for consumers who may not qualify for traditional unsecured loan underwriting criteria and meet NYSERDA's "Tier 2" underwriting criteria. GJGNY is periodically updated within the parameters allowed by this program, such as to support heat pump installations as a clean energy complement to traditional energy efficiency measures.

### **Transfer to State – Environmental Protection Fund**

The New York State Budget for FY22-23 directed NYSERDA to transfer \$5 million in RGGI funds to the Environmental Protection Fund (EPF). This operating plan assumes annual funding to support EPF programs that advance New York's leadership in reducing greenhouse gas emissions such as Climate Smart Communities, Smart Growth, and Greenhouse Gas Management. This proposed plan assumes NYSERDA will be similarly directed for the upcoming fiscal years.

### **Program Evaluation**

This amendment proposes an allocation of \$2 million per year, starting in FY23-24 through FY25-26. This \$6 million in total will fund Market Impact and Evaluation studies, which assess how these RGGI-funded programs are having lasting impacts in the market and will assess technology performance. Studies assessing stand-alone RGGI programs will be undertaken, as well as studies that support programs funded through RGGI and other funding portfolios (e.g., Clean Energy Fund). RGGI Semi-annual Status Reports will summarize findings from these completed studies.

### **Anticipated Future Funding Allocations**

The projected revenues and program funding allocations are presented below in Table 1. Additionally, the table presents program administration and evaluation costs, ongoing RGGI, Inc. costs, State Cost Recovery Fees, and other factors. The table below presents an increase in program administration funding, which reflect the projected increased need to support additional activities anticipated due to new program activity. As noted, program funding allocations are equal to projected revenues on an annual basis.

### **Funding Assumptions**

This Amendment assumes that future auction proceeds are based on an auction allowance price of \$11.85 that is sustained through the end of the planning period. This figure is based on a lookback average of the past six auctions, which coincides with the release by RGGI states of a preliminary timeline for conducting the Third Program Review. Relatedly, the revised auction allowance for FY22-23 is \$12.78, which is an average of the results of the two RGGI auctions already conducted this fiscal year and the \$11.85 per allowance estimate that is conservatively used going forward.

**Table 1: Revenues and Program Funding Allocations**

Category	Program	Cumulative					Total
		FY21-22	FY22-23	FY23-24	FY24-25	FY25-26	
Proceeds	Number of allowances	435,218,013	21,132,232	20,043,750	19,163,257	19,440,617	514,997,868
	Allowance price	\$3.90	\$12.78	\$11.85	\$11.85	\$11.85	\$5.17
	RGGI Auction Proceeds	1,697,544,050	270,043,962	237,518,435	227,084,592	230,371,306	2,662,562,345
	Interest Earnings	18,258,081	7,815,000	11,022,000	12,345,000	12,464,000	61,904,081
	<b>Total Revenues</b>	<b>1,715,802,131</b>	<b>277,858,962</b>	<b>248,540,435</b>	<b>239,429,592</b>	<b>242,835,306</b>	<b>2,724,466,426</b>
Renewable Energy	NY-Sun Statewide Customer Incentives	29,000,000	1,000,000	6,970,000	30,000,000	17,850,000	84,820,000
	NY-Sun Community Solar/K-solar	7,500,000	-	-	-	-	7,500,000
	NY-Sun Long Island incentives	55,000,000	-	-	-	-	55,000,000
	Residential PV Plus Storage	-	-	6,000,000	3,000,000	-	9,000,000
	Renewable Heat NY	10,300,083	-	-	-	-	10,300,083
	Community Heat Pump Systems	-	5,000,000	7,700,000	3,000,000	-	15,700,000
	Agrivoltaics	-	-	5,000,000	-	-	5,000,000
	Advanced Renewable Energy	2,837,698	-	-	-	-	2,837,698
	NYS Generation Attributes Tracking System	789,933	-	-	-	-	789,933
	NYSERDA PV incentives	5,319,821	-	-	-	-	5,319,821
Energy Efficiency / Building Electrification	Clean Energy Workforce Opportunity Program	15,000,000	-	-	-	-	15,000,000
	LIPA Efficiency and RE	249,600,000	20,000,000	20,000,000	20,000,000	20,000,000	329,600,000
	Energy Storage (LIPA territory)	12,926,434	-	-	-	-	12,926,434
	Empower Plus	55,475,905	16,000,000	30,000,000	30,000,000	45,000,000	176,475,905
	Pilot Projects with Municipal Utilities	1,000,000	1,000,000	1,000,000	-	-	3,000,000
	Disadvantaged Communities Schools/Buildings	13,000,000	12,600,000	17,300,000	6,500,000	-	49,400,000
	Multifamily Low Carbon Capital Planning / Pathway Projects	-	-	5,000,000	5,000,000	15,000,000	25,000,000
	New Construction and Challenges	-	-	10,000,000	10,000,000	15,000,000	35,000,000
	Climate Resiliency	-	-	5,000,000	5,000,000	5,000,000	15,000,000
	Support for 2 Million Homes Goal	-	-	-	-	15,000,000	15,000,000
	Multifamily Performance Program	15,046,683	-	-	-	-	15,046,683
	Multifamily Carbon Emissions Reduction	5,833,019	-	-	-	-	5,833,019
	Solar Thermal incentive	4,226,947	-	-	-	-	4,226,947
	Municipal Water/Wastewater	1,245,242	-	-	-	-	1,245,242
	Green Residential Buildings	2,744,601	-	-	-	-	2,744,601
Innovative GHG Abatement Strategies	Southern Tier Competition (76 West)	11,000,000	-	-	-	-	11,000,000
	Brookhaven National Lab- ION Collider	25,000,000	-	-	-	-	25,000,000
	Electric Vehicle/Charge NY	60,000,000	42,400,000	23,000,000	30,900,000	15,000,000	171,300,000
	Advanced Buildings & Industrial Innovations	13,307,654	-	-	-	-	13,307,654
	Climate Research & Analysis	8,729,296	-	-	-	-	8,729,296
	Competitive GHG Reduction Pilot	972,650	-	-	-	-	972,650
	Clean Energy Business Development	5,809,987	-	-	-	-	5,809,987
	Transportation Research	3,819,311	-	-	-	-	3,819,311
	Natural Carbon Solutions	-	2,000,000	3,000,000	2,000,000	-	7,000,000
	Equity and Climate Transformation Research	-	800,000	900,000	900,000	-	2,600,000
	Climate Mitigation and Resilience Research	500,000	500,000	500,000	-	-	1,500,000
	Scoping Plan Implementation Research	-	-	5,000,000	3,000,000	-	8,000,000
	Hydrogen Hubs	-	-	5,000,000	-	-	5,000,000
PV Manufacturing consortium	8,480,000	-	-	-	-	8,480,000	
Carbon Sequestration	1,000,000	-	-	-	-	1,000,000	
Community Clean Energy	Cleaner Greener Communities	94,261,895	-	-	-	-	94,261,895
	Clean Energy Communities	7,273,120	3,000,000	3,000,000	3,000,000	-	16,273,120
	Climate Smart Communities	7,674,999	-	-	-	-	7,674,999
	Community Energy Engagement	2,400,000	2,000,000	-	-	-	4,400,000
	Economic Development Growth Extension	5,843,047	-	-	-	-	5,843,047
	Energy to Lead	3,000,000	-	-	-	-	3,000,000
	Renewable/Net-Zero Energy Demonstrations	7,000,000	500,000	-	-	-	7,500,000
	Healthy New Home Design & Construction Challenge	-	1,000,000	3,000,000	3,000,000	-	7,000,000
	Clean Energy Workforce Development	2,000,000	2,000,000	26,000,000	19,000,000	15,000,000	64,000,000
	Clean Energy Hubs	-	10,700,000	-	-	6,000,000	16,700,000
	Climate Action Consumer Awareness & Education	-	1,500,000	6,000,000	4,500,000	5,000,000	17,000,000
	Air Monitoring	8,000,000	-	-	-	-	8,000,000
	Regional Economic Development & GHG Reduction	10,246,443	-	-	-	-	10,246,443
Directed	NYS Environmental Tax Credits	179,000,000	-	-	-	-	179,000,000
	NYS Environmental Protection Fund	10,000,000	5,000,000	5,000,000	5,000,000	5,000,000	30,000,000
	Electric Generation Facility Cessation Mitigation/ Just Transition	50,000,000	-	-	-	-	50,000,000
	Green Jobs-Green NY- Original Legislation	112,000,000	-	-	-	-	112,000,000
	Green Jobs-Green NY- Additional Funding	154,725,275	29,936,974	14,300,560	14,300,560	16,000,000	229,263,369
	Transfer to Clean Energy Standard	719,424	-	-	-	-	719,424
	NYS Budget Transfer	90,000,000	-	-	-	-	90,000,000
Federal Program Match Opportunities	-	-	50,000,000	54,000,000	55,000,000	159,000,000	
CEF	Transfer to(from) Clean Energy Fund	164,226,804	22,000,000	22,000,000	22,000,000	19,773,196	250,000,000
Administration and Other Non-Program Costs	Program Administration	47,096,359	12,800,000	16,500,000	16,500,000	16,500,000	109,396,359
	Program Evaluation	9,155,429	1,000,000	2,000,000	2,000,000	2,000,000	16,155,429
	Commensurate Benefit/Litigation reserve	21,900,366	-	-	-	-	21,900,366
	RGGI Inc Startup Costs	1,598,204	-	-	-	-	1,598,204
	RGGI Inc pro-rata costs	10,008,667	825,000	825,000	825,000	825,000	13,308,667
	State Cost Recovery	15,289,657	2,700,440	2,375,184	2,270,846	2,303,713	24,939,840
<b>Total Funding Allocations</b>		<b>1,638,884,953</b>	<b>196,262,413</b>	<b>302,370,745</b>	<b>295,696,406</b>	<b>291,251,909</b>	<b>2,724,466,426</b>
Unprogrammed/(Overcommitment)		76,917,178	81,596,549	(53,830,310)	(56,266,814)	(48,416,604)	0
<b>Cumulative Unprogrammed(Overcommitment)</b>		<b>76,917,178</b>	<b>158,513,727</b>	<b>104,683,417</b>	<b>48,416,604</b>	<b>0</b>	<b>0</b>

**Note:** \*Totals may not sum exactly due to rounding. Fiscal years begin on April 1<sup>st</sup> and end on March 31<sup>st</sup>.  
 Highlighted programs indicate newly funded programs or additional funding to existing programs  
 \*\* The 2 Million Homes Goal is supported by other programs than those referenced here

**Table 2: RGGI Cash Flow**

Category		Cumulative 3/31/22	FY22-23	FY23-24	FY24-25	FY25-26	Thereafter
Proceeds	Number of allowances	435,218,013	21,132,232	20,043,750	19,163,257	19,440,617	
	Allowance price	\$3.90	\$12.78	\$11.85	\$11.85	\$11.85	
	RGGI Auction Proceeds	1,697,544,050	270,043,962	237,518,435	227,084,592	230,371,306	
	Interest Earnings	18,258,082	7,815,000	11,022,000	12,345,000	12,464,000	
	<b>Total Revenues</b>	<b>1,715,802,131</b>	<b>277,858,962</b>	<b>248,540,435</b>	<b>239,429,592</b>	<b>242,835,306</b>	
Renewable Energy	NY-Sun Statewide Customer Incentives	6,672,296	1,600,000	5,431,500	10,000,000	10,000,000	51,116,204
	NY SUN Community Solar/K-solar	1,891,320	500,000	775,000	775,000	775,000	2,783,680
	NY SUN Long Island incentives	48,415,357	1,200,000	1,800,000	1,800,000	1,784,643	-
	Residential PV Plus Storage	-	1,000,000	2,667,000	2,667,000	2,666,000	-
	Renewable Heat NY	9,440,200	195,000	200,000	200,000	200,000	64,883
	Community Heat Pump Systems	-	-	4,000,000	4,000,000	4,000,000	3,700,000
	Agrivoltaics	-	-	500,000	1,000,000	2,000,000	1,500,000
	Advanced Renewable Energy	2,837,698	-	-	-	-	-
	NYS Generation Attributes Tracking System	688,443	101,490	-	-	-	-
NYSERDA PV incentives	5,319,821	-	-	-	-	-	
Energy Efficiency / Building Electrification	Clean Energy Workforce Opportunity Program	15,000,000	-	-	-	-	-
	LIPA Efficiency and RE	249,600,000	20,000,000	20,000,000	20,000,000	20,000,000	-
	Energy Storage (LIPA territory)	3,307,761	500,000	3,500,000	3,500,000	2,118,673	-
	EmPower Plus	54,981,841	2,250,000	25,000,000	25,000,000	40,000,000	29,244,064
	Pilot Projects with Municipal Utilities	-	-	500,000	1,500,000	1,000,000	-
	Disadvantaged Communities Schools/Buildings	36,404	50,000	2,998,000	13,700,000	14,322,000	18,293,596
	Multifamily Low Carbon Capital Planning / Pathway Projects	-	-	2,000,000	4,000,000	5,000,000	14,000,000
	New Construction and Challenges	-	-	500,000	3,000,000	3,000,000	28,500,000
	Climate Resiliency	-	-	2,000,000	4,000,000	5,000,000	4,000,000
	Support for 2 Million Homes Goal	-	-	-	-	6,000,000	9,000,000
	Multifamily Performance Program	14,773,871	-	50,000	50,000	50,000	122,812
	Multifamily Carbon Emissions Reduction	5,833,019	-	-	-	-	-
	Solar Thermal incentive	4,226,947	-	-	-	-	-
	Municipal Water/Wastewater	1,245,242	-	-	-	-	-
Green Residential Buildings	2,744,601	-	-	-	-	-	
Innovative GHG Abatement Strategies	Southern Tier Competition (76 West)	10,720,193	-	279,807	-	-	-
	Brookhaven National Lab- ION Collider	24,999,638	362	-	-	-	-
	Electric Vehicle/Charge NY	56,895,652	18,410,603	20,000,000	25,000,000	25,000,000	25,993,745
	Advanced Buildings & Industrial Innovations	10,869,772	50,000	320,000	1,000,000	1,067,882	-
	Climate Research & Analysis	8,644,525	40,000	44,771	-	-	-
	Competitive GHG Reduction Pilot	972,650	-	-	-	-	-
	Clean Energy Business Development	5,696,185	21,841	91,961	-	-	-
	Transportation Research	3,773,206	46,105	-	-	-	-
	Natural Carbon Solutions	-	-	500,000	1,500,000	2,000,000	3,000,000
	Equity and Climate Transformation Research	-	600,000	800,000	1,200,000	-	-
	Climate Mitigation and Resilience Research	-	1,000,000	500,000	-	-	-
	Scoping Plan Implementation Research	-	-	2,000,000	2,000,000	3,000,000	1,000,000
	Hydrogen Hubs	-	-	500,000	2,000,000	2,000,000	500,000
	PV Manufacturing consortium	8,480,000	-	-	-	-	-
Carbon Sequestration	1,000,000	-	-	-	-	-	
Community Clean Energy	Cleaner Greener Communities	74,893,635	1,500,000	2,500,000	6,000,000	4,777,327	4,590,933
	Clean Energy Communities	1,665,092	500,000	500,000	2,500,000	3,704,683	7,403,345
	Climate Smart Communities	5,200,169	300,000	400,000	800,000	600,000	374,830
	Community Energy Engagement	1,297,727	102,273	-	-	-	-
	Economic Development Growth Extension	5,562,723	280,324	-	-	-	-
	Energy to Lead	1,326,565	500,000	500,000	500,000	173,435	-
	Renewable/Net-Zero Energy Demonstrations	5,000,000	-	500,000	500,000	500,000	1,000,000
	Healthy New Home Design & Construction Challenge	-	-	-	500,000	1,000,000	5,500,000
	Clean Energy Workforce Development	40,349	1,000,000	5,000,000	7,500,000	9,000,000	41,459,651
	Clean Energy Hubs	-	3,000,000	3,500,000	3,500,000	4,000,000	5,700,000
	Climate Action Consumer Awareness & Education	-	1,500,000	5,500,000	5,000,000	5,000,000	-
	Air Monitoring	-	5,000,000	3,000,000	-	-	-
	Regional Economic Development & GHG Reduction	9,807,611	438,832	-	-	-	-
Directed	NYS Environmental Tax Credits	179,000,000	-	-	-	-	-
	NYS Environmental Protection Fund	10,000,000	5,000,000	5,000,000	5,000,000	5,000,000	-
	Electric Generation Facility Cessation Mitigation	45,014,955	-	500,000	1,500,000	1,900,000	1,085,045
	Green Jobs-Green NY- Original Legislation	112,000,000	-	-	-	-	-
	Green Jobs-Green NY- Additional Funding	154,725,275	29,936,974	14,300,560	14,300,560	16,000,000	-
	Transfer to Clean Energy Standard	719,424	-	-	-	-	-
	NYS Budget Transfer	90,000,000	-	-	-	-	-
	NYS Temporary Budget Transfer	4,846,649	(859,581)	(3,306,082)	(680,986)	-	-
	Federal Program Match Opportunities	-	-	1,000,000	5,000,000	10,000,000	143,000,000
CEF	Transfer to Clean Energy Fund	164,226,804	22,000,000	22,000,000	22,000,000	19,773,196	-
	Transfer to NY Green Bank	-	-	-	-	-	-
Administration and Other Non-Program Costs	Program Administration	46,261,777	12,800,000	16,500,000	16,500,000	16,500,000	834,582
	Program Evaluation	6,445,427	200,000	450,000	500,000	1,000,000	7,560,002
	Commensurate Benefit/Litigation reserve	21,900,366	-	-	-	-	-
	RGGI Inc Startup Costs	1,598,204	-	-	-	-	-
	RGGI Inc pro-rata costs	8,644,798	825,000	825,000	825,000	825,000	1,363,869
	State Cost Recovery	14,897,461	781,326	1,384,181	1,785,791	2,086,122	4,004,958
<b>Total Expenses</b>	<b>1,524,141,653</b>	<b>132,370,549</b>	<b>177,011,698</b>	<b>221,422,366</b>	<b>252,823,961</b>	<b>416,696,199</b>	
Cash Increase/(Decrease)	191,660,478	145,488,413	71,528,737	18,007,227	(9,988,656)	(416,696,199)	
<b>Cash Balance</b>	<b>191,660,478</b>	<b>337,148,891</b>	<b>408,677,628</b>	<b>426,684,855</b>	<b>416,696,199</b>	<b>-</b>	

**Note:** \*Totals may not sum exactly due to rounding. Fiscal years begin on April 1<sup>st</sup> and end on March 31<sup>st</sup>. Highlighted programs indicate newly funded programs or additional funding to existing programs

Appendix 1

January 2022 Operating Plan Revenues and Program Funding Allocations Compared to Actuals/Projections

Category	Program	FY21-22 Revision	FY21-22 Actual
Proceeds	Number of allowances	21,502,096	22,706,145
	Allowance price	\$8.32	\$11.04
	RGGI Auction Proceeds	178,881,539	250,634,361
	Interest Earnings	217,000	101,385
	<b>Total Revenues</b>	<b>179,098,539</b>	<b>250,735,746</b>
Renewable Energy	NY-Sun Statewide Customer Incentives	3,000,000	3,000,000
	NY-Sun Community Solar/K-solar	-	-
	NY-Sun Long Island incentives	-	-
	Residential PV Plus Storage	-	-
	Renewable Heat NY	-	-
	Community Heat Pump Systems	-	-
	Advanced Renewable Energy	-	-
	NYS Generation Attributes Tracking System	-	-
	NYSERDA PV incentives	-	-
Energy Efficiency / Building Electrification	Clean Energy Workforce Opportunity Program	-	-
	LIPA Efficiency and RE	20,000,000	20,000,000
	Energy Storage (LIPA territory)	-	-
	EmPower Plus	1,500,000	1,500,000
	Pilot Projects with Municipal Utilities	1,000,000	1,000,000
	Disadvantaged Communities Schools/Buildings	13,000,000	13,000,000
	Multifamily Performance Program	-	-
	Multifamily Carbon Emissions Reduction	-	-
	Solar Thermal incentive	-	-
	Municipal Water/Wastewater	-	-
	Green Residential Buildings	-	-
Innovative GHG Abatement Strategies	Southern Tier Competition (76 West)	-	-
	Brookhaven National Lab- ION Collidor	-	-
	Electric Vehicle/Charge NY	21,500,000	36,500,000
	Advanced Buildings & Industrial Innovations	-	-
	Climate Research & Analysis	-	-
	Competitive GHG Reduction Pilot	-	-
	Clean Energy Business Development	-	-
	Transportation Research	-	-
	Natural Carbon Solutions	-	-
	Equity and Climate Transformation Research	-	-
	Climate Mitigation and Resilience Research	-	500,000
	PV Manufacturing consortium	-	-
	Carbon Sequestration	-	-
Community Clean Energy	Cleaner Greener Communities	-	-
	Clean Energy Communities	3,000,000	3,000,000
	Climate Smart Communities	-	-
	Community Energy Engagement	1,000,000	1,000,000
	Economic Development Growth Extension	-	-
	Energy to Lead	-	-
	Renewable/Net-Zero Energy Demonstrations	1,000,000	1,000,000
	Healthy New Home Design & Construction Challenge	-	-
	Clean Energy Workforce Development	2,000,000	2,000,000
	Clean Energy Hubs	-	-
	Climate Action Consumer Awareness & Education	-	-
	Air Monitoring	2,000,000	8,000,000
	Regional Economic Development & GHG Reduction	-	-
Directed	NYS Environmental Tax Credits	23,000,000	23,000,000
	NYS Environmental Protection Fund	5,000,000	5,000,000
	Electric Generation Facility Cessation Mitigation/ Just Transition	-	-
	Green Jobs-Green NY- Original Legislation	-	-
	Green Jobs-Green NY- Additional Funding	12,000,000	12,000,000
	Transfer to Clean Energy Standard	-	-
	NYS Budget Transfer	-	-
	NYS Temporary Budget Transfer	-	-
CEF	Transfer to(from) Clean Energy Fund	33,789,264	33,789,264
Administration and Other Non- Program Costs	Program Administration	7,500,000	7,500,000
	Program Evaluation	-	-
	Commensurate Benefit/Litigation reserve	-	-
	RGGI Inc Startup Costs	-	-
	RGGI Inc pro-rata costs	825,000	825,000
	State Cost Recovery	1,204,304	1,204,304
<b>Total Funding Allocations</b>		<b>152,318,568</b>	<b>173,818,568</b>
Unprogrammed/(Overcommitment)		26,779,971	76,917,178
<b>Cumulative Unprogrammed(Overcommitment)</b>		<b>26,779,971</b>	<b>76,917,178</b>



Appendix 2

RGGI Commitments Benefiting Disadvantaged Communities

Category	Program	CUMULATIVE			SUBJECT TO CLCPA			Total	
		Commitments 12/31/19	Estimated LMI/ Disadvantaged Community Benefit	%	Post-2019 Commitments	Estimated LMI/ Disadvantaged Community Benefit	%		
SUBJECT TO CLCPA	Renewable Energy	NY-Sun Statewide Customer Incentives	9,706,046	3,397,116	35%	75,113,954	26,289,884	35%	84,820,000
	NY SUN Community Solar/K-solar	1,249,272	-	0%	6,250,728	-	0%	7,500,000	
	NY SUN Long Island incentives	51,200,565	-	0%	3,799,435	-	0%	55,000,000	
	Residential PV Plus Storage	-	-	40%	9,000,000	3,600,000	40%	9,000,000	
	Renewable Heat NY	9,634,826	-	0%	665,257	-	0%	10,300,083	
	Community Heat Pump Systems	-	-	66%	15,700,000	10,362,000	66%	15,700,000	
	Agrivoltaics	-	-	0%	5,000,000	750,000	15%	5,000,000	
	Advanced Renewable Energy	2,837,698	-	0%	-	-	0%	2,837,698	
	NYS Generation Attributes Tracking System	789,933	-	0%	-	-	0%	789,933	
	NYSEEDA PV incentives	5,319,821	-	0%	-	-	0%	5,319,821	
	Energy Efficiency / Building Electrification	Clean Energy Workforce Opportunity Program	15,000,000	-	0%	-	-	0%	15,000,000
	LIPA Efficiency and RE	204,600,000	61,380,000	30%	125,000,000	37,500,000	30%	329,600,000	
	Energy Storage (LIPA territory)	301,575	-	0%	12,624,859	-	0%	12,926,434	
	EmPower Plus	52,857,971	52,857,971	100%	123,617,934	65,170,760	53%	176,475,905	
	Pilot Projects with Municipal Utilities	-	-	35%	3,000,000	1,050,000	35%	3,000,000	
	Disadvantaged Communities Schools/Buildings	-	-	100%	49,400,000	49,400,000	100%	49,400,000	
	Multifamily Low Carbon Capital Planning / Pathway Projects	-	-	45%	25,000,000	11,250,000	45%	25,000,000	
	New Construction and Challenges	-	-	35%	35,000,000	12,250,000	35%	35,000,000	
	Climate Resiliency	-	-	40%	15,000,000	6,000,000	40%	15,000,000	
	Support for 2 Million Homes Goal	-	-	35%	15,000,000	4,500,000	35%	15,000,000	
	Multifamily Performance Program	15,046,683	-	0%	-	-	0%	15,046,683	
Multifamily Carbon Emissions Reduction	5,833,019	-	0%	-	-	0%	5,833,019		
Solar Thermal incentive	4,226,947	-	0%	-	-	0%	4,226,947		
Municipal Water/Wastewater	1,245,242	-	0%	-	-	0%	1,245,242		
Green Residential Buildings	2,744,601	-	0%	-	-	0%	2,744,601		
Innovative GHG Abatement Strategies	Southern Tier Competition (76 West)	10,262,850	-	0%	737,150	-	0%	11,000,000	
Brookhaven National Lab- ION Collidor	25,000,000	-	0%	-	-	0%	25,000,000		
Electric Vehicle/Charge NY	11,188,399	-	0%	160,111,601	32,766,740	20%	171,300,000		
Advanced Buildings & Industrial Innovations	13,307,654	-	0%	-	-	0%	13,307,654		
Climate Research & Analysis	8,729,296	-	0%	-	-	0%	8,729,296		
Competitive GHG Reduction Pilot	972,650	-	0%	-	-	0%	972,650		
Clean Energy Business Development	5,809,987	-	0%	-	-	0%	5,809,987		
Transportation Research	3,819,311	-	0%	-	-	0%	3,819,311		
Natural Carbon Solutions	-	-	50%	7,000,000	3,500,000	50%	7,000,000		
Equity and Climate Transformation Research	-	-	100%	2,600,000	2,600,000	100%	2,600,000		
Climate Mitigation and Resilience Research	-	-	0%	1,500,000	-	0%	1,500,000		
Scoping Plan Implementation Research	-	-	-	8,000,000	3,200,000	40%	8,000,000		
Hydrogen Hubs	-	-	-	5,000,000	1,750,000	35%	5,000,000		
PV Manufacturing consortium	8,480,000	-	0%	-	-	0%	8,480,000		
Carbon Sequestration	1,000,000	-	0%	-	-	0%	1,000,000		
Community Clean Energy	Cleaner Greener Communities	94,261,895	-	0%	-	-	0%	94,261,895	
Clean Energy Communities	2,086,963	-	0%	14,186,157	4,539,570	32%	16,273,120		
Climate Smart Communities	5,321,157	-	0%	2,353,842	-	0%	7,674,999		
Community Energy Engagement	675,730	-	0%	3,724,270	3,000,000	81%	4,400,000		
Economic Development Growth Extension	5,562,723	-	0%	280,324	-	0%	5,843,047		
Energy to Lead	3,000,000	-	0%	-	-	0%	3,000,000		
Renewable/Net-Zero Energy Demonstrations	3,000,000	-	0%	4,500,000	-	0%	7,500,000		
Healthy New Home Design & Construction Challenge	-	-	0%	7,000,000	-	0%	7,000,000		
Clean Energy Workforce Development	-	-	0%	64,000,000	32,850,000	51%	64,000,000		
Clean Energy Hubs	-	-	100%	16,700,000	16,700,000	100%	16,700,000		
Climate Action Consumer Awareness & Education	-	-	50%	17,000,000	8,500,000	50%	17,000,000		
Air Monitoring	-	-	100%	8,000,000	8,000,000	100%	8,000,000		
Regional Economic Development & GHG Reduction	10,246,443	-	0%	-	-	0%	10,246,443		
Directed	NYS Environmental Tax Credits	133,000,000	19,950,000	15%	46,000,000	6,900,000	15%	179,000,000	
NYS Environmental Protection Fund	-	-	35%	30,000,000	10,500,000	35%	30,000,000		
Electric Generation Facility Cessation Mitigation/ Just Transition	30,000,000	30,000,000	100%	20,000,000	20,000,000	100%	50,000,000		
Green Jobs-Green NY- Original Legislation	112,000,000	39,200,000	35%	-	-	35%	112,000,000		
Green Jobs-Green NY- Additional Funding	105,025,275	36,758,846	35%	124,238,094	77,027,618	62%	229,263,369		
Transfer to Clean Energy Standard	719,424	-	0%	-	-	0%	719,424		
NYS Budget Transfer	90,000,000	-	0%	-	-	0%	90,000,000		
Federal Program Match Opportunities	-	-	0%	159,000,000	55,650,000	35%	159,000,000		
<b>SUBTOTAL</b>	<b>1,066,063,956</b>	<b>243,543,933</b>	<b>23%</b>	<b>1,221,103,605</b>	<b>515,606,573</b>	<b>42%</b>	<b>2,287,167,561</b>		
Excluded	Administration and Other Non-Program Costs	Transfer to/from Clean Energy Fund	73,790,932	-	-	-	-	250,000,000	
	Program Administration	31,931,071	-	-	77,465,288	-	109,396,359		
	Program Evaluation	5,999,519	-	-	10,155,910	-	16,155,429		
	Commensurate Benefit/Litigation reserve	21,900,366	-	-	-	-	21,900,366		
	RGGI Inc Startup Costs	1,598,204	-	-	-	-	1,598,204		
	RGGI Inc pro-rata costs	7,746,048	-	-	5,562,619	-	13,308,667		
	State Cost Recovery	12,606,619	-	-	12,333,221	-	24,939,840		
	<b>SUBTOTAL</b>	<b>155,572,759</b>	<b>-</b>	<b>-</b>	<b>281,726,106</b>	<b>-</b>	<b>-</b>	<b>437,298,865</b>	
<b>TOTAL</b>	<b>1,221,636,715</b>	<b>243,543,933</b>	<b>23%</b>	<b>1,502,829,711</b>	<b>515,606,573</b>	<b>42%</b>	<b>2,724,466,426</b>		

Resolution No. \_\_\_\_\_

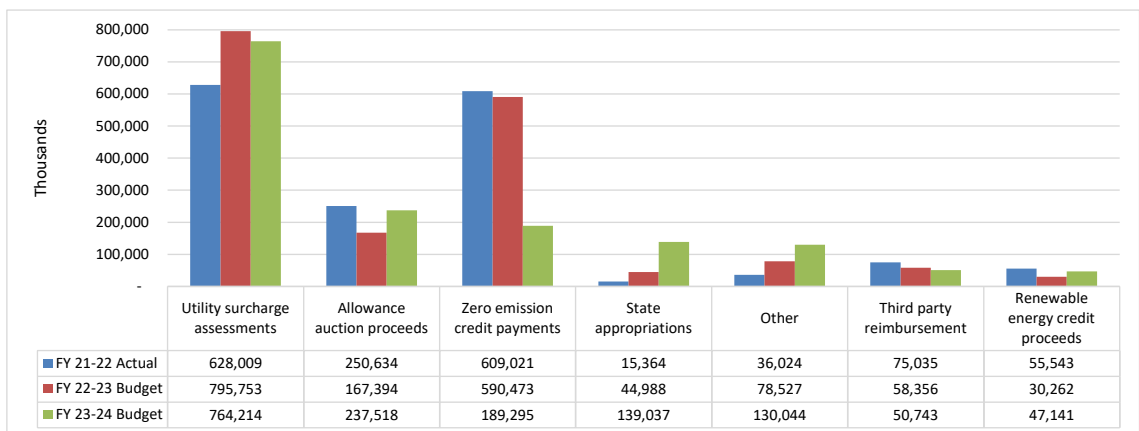
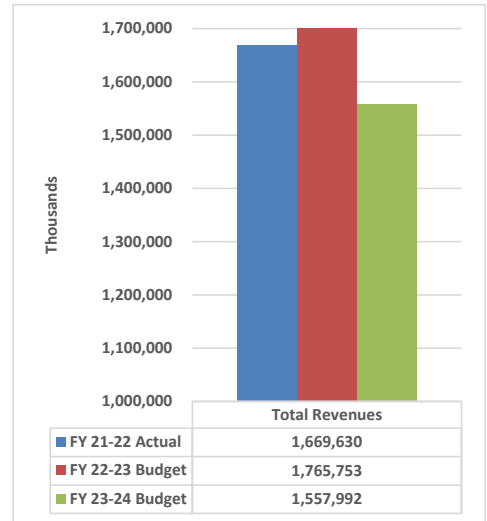
RESOLVED, that revisions to the “Operating Plan for Investments in New York Under the CO<sub>2</sub> Budget Trading Program and the CO<sub>2</sub> Allowance Auction Program” as presented to the Members for consideration at this January 25, 2023 meeting, with such non-substantive, editorial changes and supplementary schedules as the President and Chief Executive Officer, in their discretion, may deem necessary or appropriate, are approved.



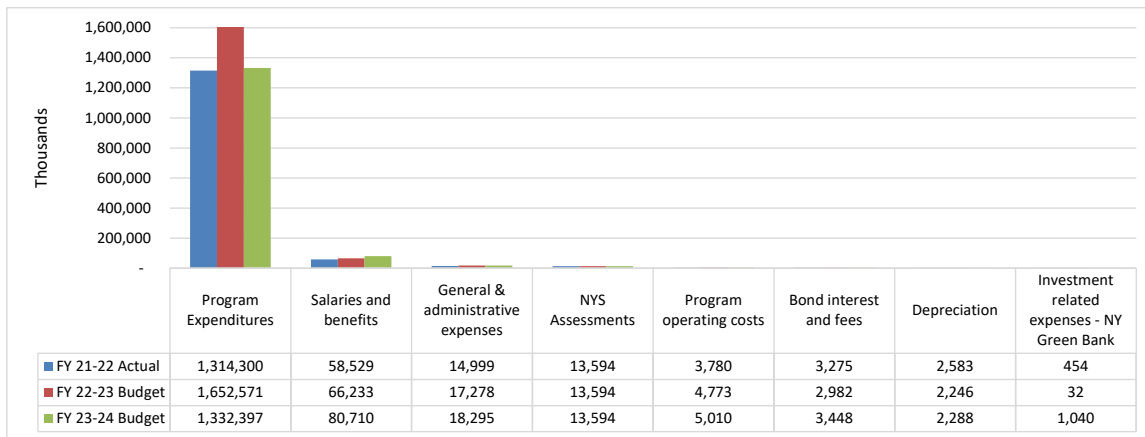
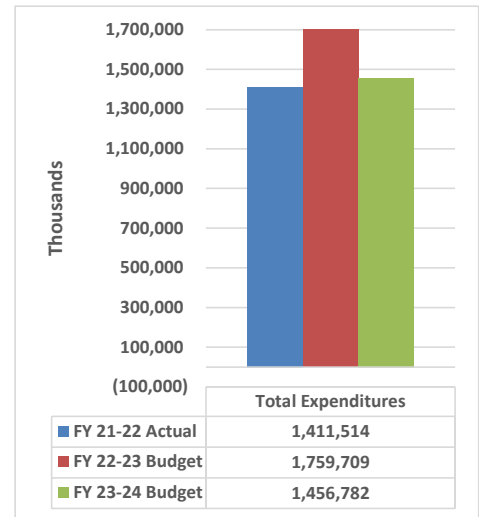
- **Revenues** total \$1.56 billion, a decrease of \$207.8 million (-11.8%) from the FY 2022-23 Budget, primarily from a decrease of \$401 million in Zero emission credits, a decrease of \$32 million in Utility Surcharge Assessments, offset in part by anticipated increases in NY State appropriations of \$94 million, \$70 million in RGGI auction proceeds, and \$49.2 million in interest earnings.

The decrease in the ZEC assessments is based on original program forecasted prices. Updated prices will be approved by the Public Service Commission after the adoption of this budget. Such prices may vary from estimates, and if determined to be material, a mid-year budget update will be presented to the Board for approval. Since ZEC revenues and expenditures are closely correlated any such pricing update should have minimal impact on net revenue. The decrease in Utility Surcharge Assessments is due to the timing

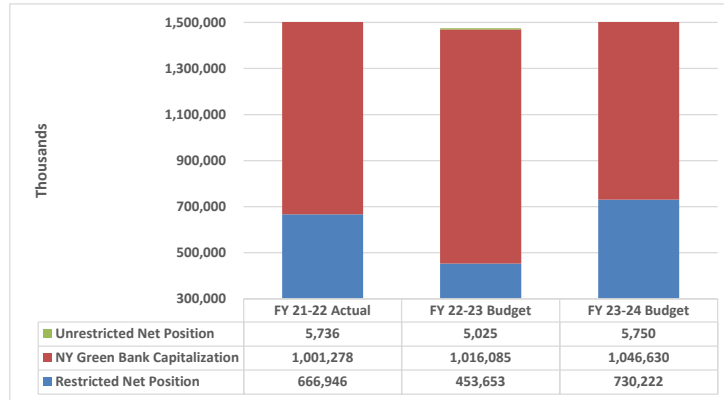
of anticipated ratepayer expenditures and amounts projected to maintain a two-month working capital balance of funding under the Bill-As-You-Go funding mechanism. The increase in NY State Appropriations is due to an investment of \$55 million in the offshore wind port infrastructure development initiative and \$32 million under the recently passed NYS Environmental Bond Act. The increase in RGGI Allowance auction proceeds of \$70 million reflects an increase in the allowance price and a slight reduction in the number of allowances to be auctioned consistent with the FY 23-24 approved RGGI operating plan. Interest income is anticipated to increase by \$49 million due to a significant rise in investment yields as compared to a year ago (prior year yields were less than 4/10<sup>ths</sup> of one percent compared to a 4% yield which is based on a weighted average of a one-year treasury obligation).



- **Expenditures** total \$1.46 billion, a decrease of \$302 million (-19.4%) from the FY 2022-23 Budget. This decrease is primarily due to a reduction in Clean Energy Standard ZEC program expenditures of \$403 million and \$42 million in NY-Sun program expenditure projections, offset in part by increase in investment of \$55 million in the Offshore Wind Port Development Initiative and \$32 million under the recently passed NYS Bond Act which are both are funded by offsetting NY State Appropriations.



- Net Position restricted for specific programs (generally the difference between cumulative revenues and expenditures) increases \$70,000 to \$730 million primarily due to the timing of program revenues and expenditures.
- NY Green Bank capitalization increases slightly by \$30,000 and remains around \$1.0 billion, due to the net effect of anticipated capital calls, matured and recycled capital, and the cumulative result of revenues exceeding expenditures.
- Unrestricted Net Position is anticipated to be \$5.7 million (0.4% of total funding as compared to 0.3% in the prior year budget). This provides modest resources to meet temporary working capital needs and address unanticipated but necessary expenditures.



- A detailed explanation of changes in each Budget revenue and expense category is included in pages 14-16 of the full Budget document enclosed in your Board materials.

## **Discussion**

The Budget complies with regulations (2 NYCRR Part 203) adopted by the State Comptroller in March 2006. These regulations set forth the requirements for annual budgets of public authorities, including: providing a certification by the President and Chief Executive Officer and the Chief Financial Officer that the budget materials are based on reasonable assumptions and methods of estimation; providing a summary of the Authority's programs, a description of principal budget assumptions, and a self-assessment of budgetary risks; providing a Financial Plan to include the Budget and projected revenues and expenditures for three subsequent fiscal years; providing a Cash-based Budget; providing a detailed Debt Schedule; and providing a detailed Capital Budget. In accordance with these regulations, the proposed Budget and Financial Plan have been made available for public inspection at least 30 days before approval by the Members, and for not less than 45 days, in five public places; the approved Budget and Financial Plan will be submitted to the State Comptroller within 7 days of approval by the Members, and to provide access to the public, will be posted on the Authority's website.

For each Program/Function, the Budget identifies the anticipated Net Position balance from FY 2022-23, and the anticipated revenues, expenditures, inter-Program/Function transfers, and anticipated Net Position balance at the end of FY 2023-24.

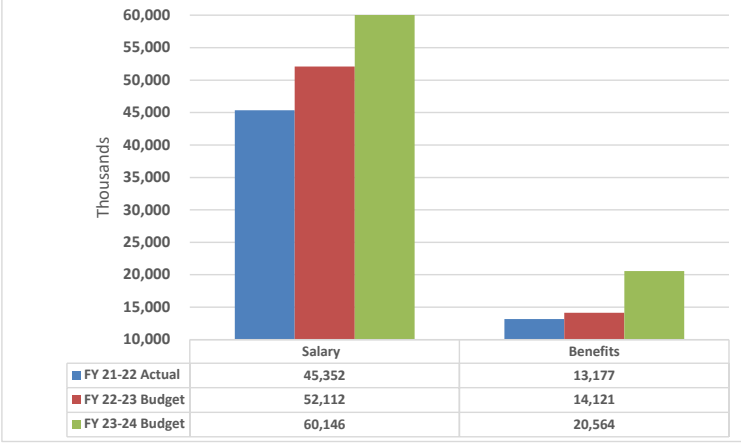
### **General NYSERDA Expenses:**

### Salaries and Benefits

Given the ambitious agenda with which we are charged, we have carefully assessed our projected work scope and identified the human capital needed to successfully advance the goals established by the CLCPA and recently approved Scoping Plan. We have also assessed relative cost of employee vs. contractor positions in an effort to utilize the most economic mix of resources. Based on that assessment, and given recent Public Service Commission Orders, anticipated NYS Bond Act appropriations, the approved RGGI operating plan, and other approved work scope and funding, this budget reflects an assumed average employee headcount of approximately 453 FTE's. Note the budget also reflects an anticipated lower vacancy rate of just 2% (vs. 5% in the last two years) in light of potential recessionary trends that may slowdown labor turnover rates in general. We anticipate this to be a conservative estimate; actual vacancy rates may well be higher and expenses lower accordingly.

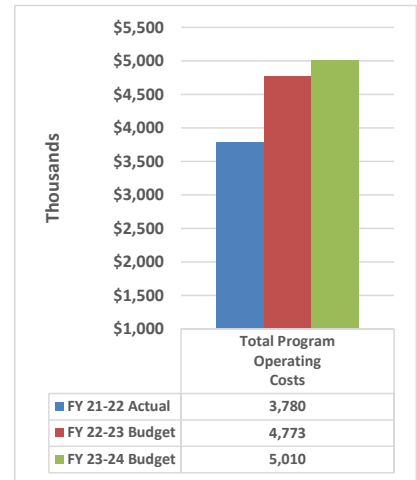
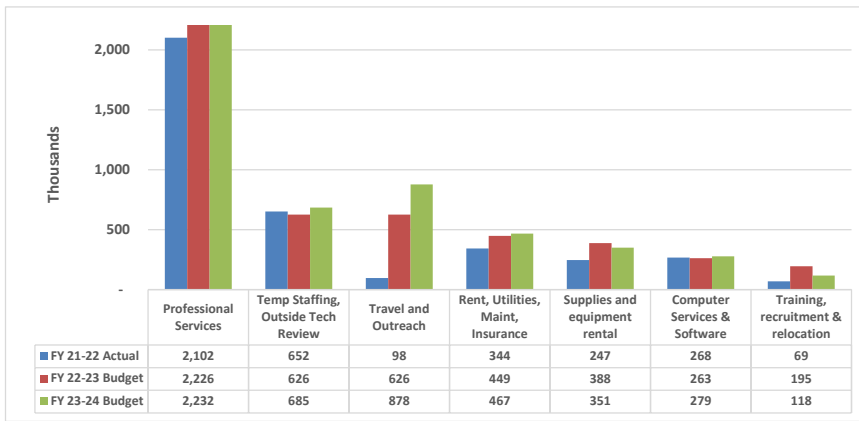
The compensation budget reflects anticipated salary and fringe expenses for current staff and funded vacant positions, which translates to Salary and Benefit costs for FY 2023-24 estimated at \$80.7 million. This reflects an increase in salary expense of approximately \$8 million or 15.4%, while fringe benefits are anticipated to increase by \$6.4 million or 45.6%.

Salaries are benchmarked to the State Management/Confidential (M/C) employee salary grades. Salary expense as estimated includes an anticipated 2% cost-of-living-adjustment (COLA) to be effective April 1, 2023, pending authorization by the State., a placeholder for performance-based salary increases and payments comparable to those which may be authorized for state employees, and an allocation for potential adjustments that may result from a pay equity study underway. The budget for estimated fringe benefit costs reflects higher expected pension costs based on an average of the past ten year's pension expense, higher health premiums costs based on the staffing and market trends, and higher retirement health insurance expense based on the most recent actuarial valuation.



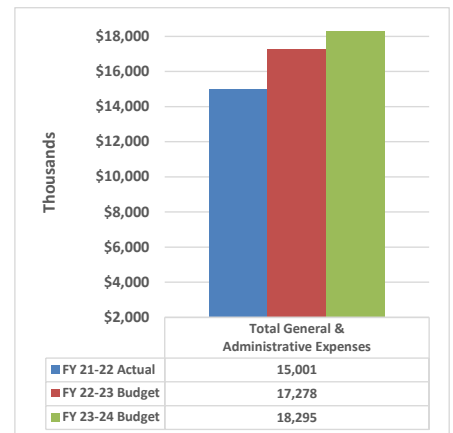
Program Operating Costs

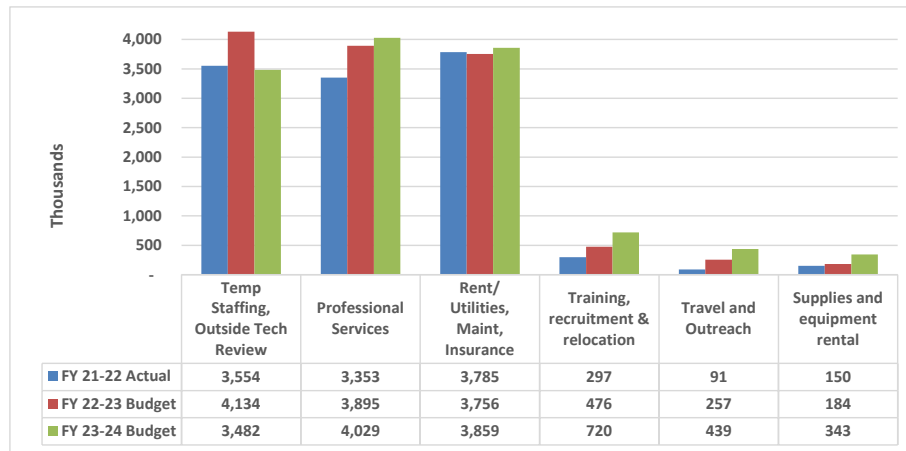
The Budget includes \$5.0 million for Program Operating Costs, an increase of \$237,000 (5.0%) from the prior year, primarily due to an increase in program travel costs to support the increased work scope to meet CLCPA goals.



General and Administrative Expenses

The Budget includes \$18.3 million for General and Administrative Expenses, an increase of \$1.0 million (5.9%) from the prior year. This reflects a higher investment in technology solutions to efficiently support growing program needs, expanded call center services for timely response to increased public inquiries in light of Scoping Plan, Bond Act, and the Inflation Reduction Act, and professional development to build staff skills and expertise in priority focus areas.



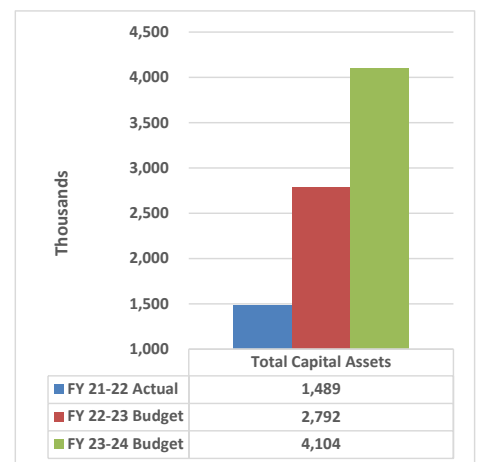


NYS Cost Recovery Fee

NYSERDA pays to the State an annual fee assessed under Public Authorities Law Section 2975 for general governmental services, which is allocated among program activities in proportion to each program’s expenditures. The Budget includes \$12.7 million, which reflects no change in the amount to be assessed for FY 2023-24. Additionally, since fiscal year 2004-05, NYSERDA has been required to make an annual payment to the State general fund pursuant to Article VII budget bill language; the FY 2023-24 payment obligation is anticipated to be \$913,000. This is also allocated among program activities in proportion to each program’s expenditures.

Capital Assets

The Budget includes \$4.1 million in capital asset purchases, an increase of \$2.8 million from our FY 2022-23 approved budget. The capital asset budget includes \$2.5 million set aside for building improvements to expand, preserve functioning, and extend life, \$145,000 for leasehold improvements, and \$72,000 for fixture and furniture. The majority of this proposed building investment is contemplated to support a potential update to NYSERDA Albany headquarters configuration to allow for office space consolidation to reduce overhead costs ongoing and allow for more sustainable reduction to NYSERDA emissions over the next 2-3 years. Decisions on this front will be closely coordinated with the Waste and Facilities management committee and this investment will occur only if it is net budget positive in a reasonable timeframe. This budget also includes \$1.3 million for information technology upgrades (including \$500,000 for a program database upgrade and various IT infrastructure upgrades for



improved functionality and security), and \$51,000 for vehicles per a standard update schedule as they approach end-of-life, which will allow for timely conversion to zero-emission vehicles.

### Financial Plan

In accordance with the Public Authorities Reform Act, the Budget package includes a four-year Financial Plan (the Plan). The Plan includes the Authority's Budget for FY 2023-24 and a projection of total revenues, expenditures, and net position for the following three fiscal years (FY 2024-25, FY 2025-26, and FY 2026-27) based on projected revenues and expenses by Function/Program. During the three-year period, total annual revenues are projected to increase \$883.3 million to \$2.4 billion from the FY2023-24 Budget primarily from an increase in the CES Renewable Energy Credit Proceeds (primarily from the Tier One and Offshore Wind REC programs), offset in part by anticipated reductions in the CES (Zero emission credit payments) in accordance with Public Service Commission Orders and from Utility surcharge assessments resulting from anticipated decreases in program expenditures under the BAYG funding mechanism. Total annual expenses are projected to increase \$1.1 to \$2.5 billion primarily from increases in purchases for renewable energy credits under the CES State-mandated compliance programs (primarily from Tier One and the Offshore Wind REC programs), offset in part by a reduction in program expenses under the CES (Zero emission credit program). Net position is projected to increase \$100.7 million to \$1.8 billion primarily from an increase in NY Green Bank capitalization. Future Public Service Commission Orders, federal grant approvals, and other variables could alter existing revenues and expenditures projections contained in the Budget and Financial Plan. We anticipate that there is more upside risk than downside to such adjustments in the near term. However, there is also material uncertainty over the medium-long term horizon, especially regarding work scope and funding for buildings-related decarbonization and innovation, as we approach 2025 and await key decisions from New Efficiency/New York and Clean Energy Fund reviews currently underway. We aim to continue to work collaboratively with DPS staff to facilitate a timely review. NYSERDA will look to amend the Budget and Financial Plan if material estimates are identified.



**DRAFT**

New York State Energy Research and Development Authority

Fiscal Year 2023-24 Budget and Financial Plan

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CERTIFICATION

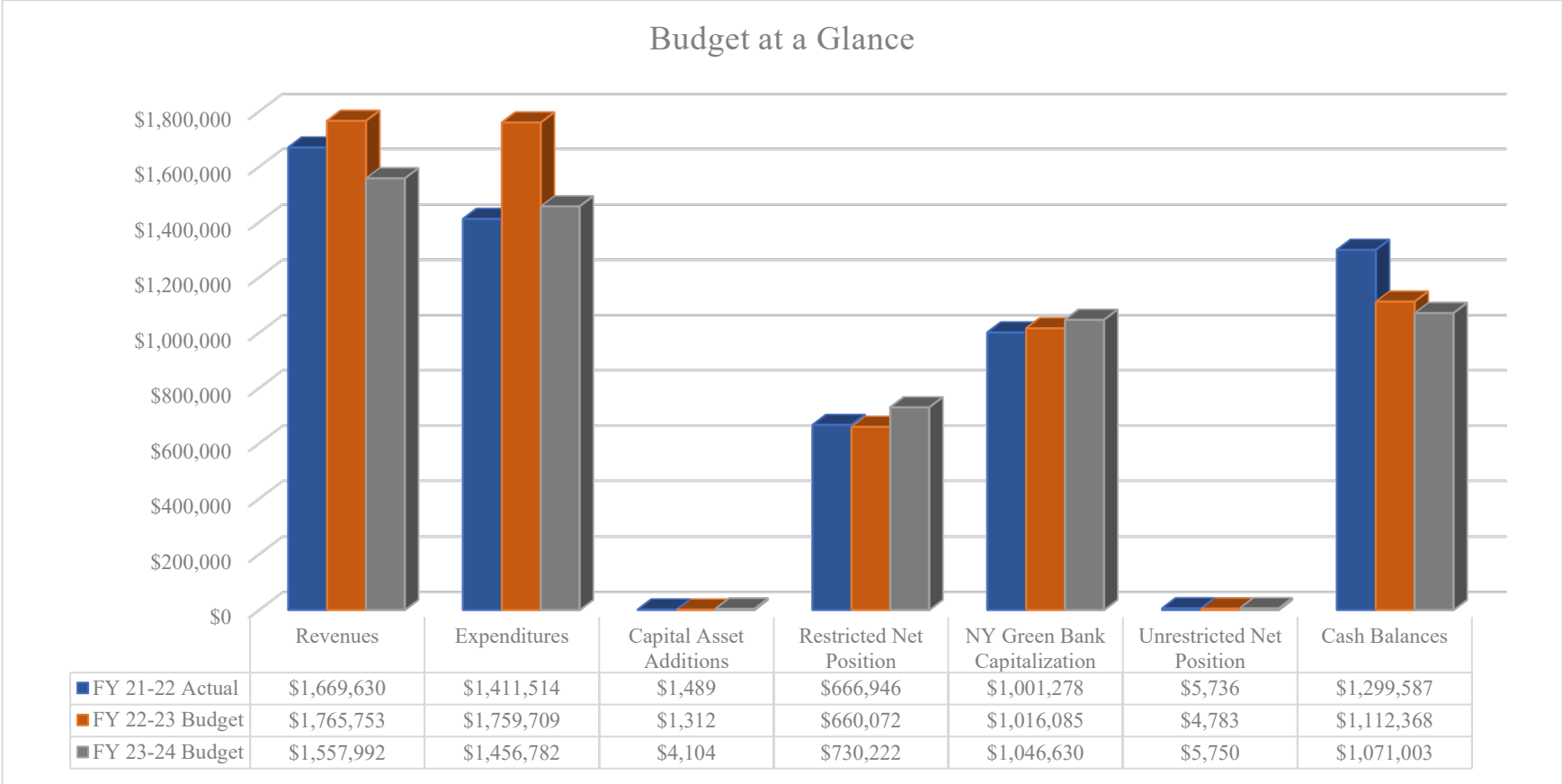
I hereby certify that, to the best of my knowledge and belief after reasonable inquiry, the budget information contained herein for the fiscal year ending March 31, 2024 has been developed based on reasonable assumptions and methods of estimation.

Doreen M. Harris  
President and Chief Executive Officer

Pamela C. Poisson  
Chief Financial Officer

# Budget FY 2023-24

(Amounts in Thousands)



## **INTRODUCTION**

The New York State Energy Research and Development Authority (NYSERDA) is a public benefit corporation established in 1975 pursuant to Title 9 of Article 8 of the Public Authorities Law of the State of New York. NYSEDA is a component unit of the State of New York and, as such, the results of operations are reported in the State of New York's Comprehensive Annual Financial Report. The mission of NYSEDA is to advance clean energy innovation and investments to combat climate change, improving the health, resiliency, and prosperity of New Yorkers and delivering benefits equitably to all.

New York continues to find economic, environmental, and energy security opportunities by advancing a clean energy agenda and reducing the State's emissions of greenhouse gases that continue to contribute to climate change. As the State pursues programs that advance energy efficient and renewable technologies and builds local markets that provide energy consumers with greater choice for energy services, New York is building a stronger and cleaner economy.

Supporting this, NYSEDA plays a key role in implementing the State's nation-leading clean energy and climate policies, programs and actions, delivering a cleaner, healthier, and more prosperous future for all New Yorkers. With the enactment of the Climate Leadership and Community Protection Act (CLCPA) in 2019, and the final Scoping Plan now providing a supporting framework to realize the goals called out therein, NYS is progressing well toward achievement of CLCPA goals. Future milestones to which we are working include attaining a 100% zero-emission electricity sector by 2040, eliminating 85% greenhouse gas emissions from the state's economy by 2050, and delivering a minimum of 35% (with a goal of 40%) of investments in this work to benefit disadvantage communities.

NYSERDA consistently prepares plans and budgets with the intent to utilize all funding it receives prudently and in the interest of the public. NYSEDA's budget processes build on sound fiscal policy and aim to be responsive, collaborative, innovative, and transparent. In alignment with state guidance amidst a backdrop of global geopolitical tension, severe weather events, and heightened climate and energy security risk, NYSEDA's budget for the coming fiscal year takes into account the need to be fiscally ready for unforeseen events, includes focused technology investments to streamline and automate processes for improved efficiency, and reinforces our commitment to skill-building and equitable compensation to boost effectiveness while better attracting and retaining talent with the expertise needed for the road ahead.

The Budget for the fiscal year ending March 31, 2024 (FY 2023-24), and the Financial Plan for FY's 2024-25 to 2026-27 were prepared in accordance with accounting principles generally accepted in the United States of America. Note that the Budget incorporates work scope and funding anticipated as a result of the recently passed Environmental Bond Act as well as recently-finalized federal formula grants. Given the prospect of potential additional federal funding sources through the Inflation Reduction Act, Infrastructure Act, and Chips and Science Act, NYSEDA is actively monitoring federal opportunity notices and expects to apply for those that efficiently support attainment of NYS goals and help stretch state funds further. If/as those materialize, a revised budget will be provided to our Board and stakeholders for consideration.

## **PROGRAM SUMMARY**

In fulfilling its mission, NYSERDA maintains a dual focus: advancing clean energy innovation and investments to combat climate change and ensuring the core safety and security of NYS' energy supply. NYSERDA programs focused on the former are funded through a combination of vehicles primarily including the PSC-approved Clean Energy Fund (CEF) and Clean Energy Standard (CES) suite of programs, Regional Greenhouse Gas Initiative (RGGI) allowance auction proceeds which are used to complement and amplify those PSC programs, and certain related grants. These programs allow investments to advance renewable energy, update and decarbonize the state's buildings and vehicles, cultivate business opportunities and jobs for New Yorkers, and help communities stay resilient. A relatively small share of the budget is funded by direct state allocations and appropriations; however, that funding is a critical component of the NYSERDA budget to help ensure steady state energy resilience, reliability, and public safety.

Following is a summary of the major functions/activities included in the Budget, listed by primary funding source:

### **Clean Energy Fund (CEF)**

Pursuant to a January 2016 Order (CEF Order) and subsequent Orders, the Public Service Commission (PSC) authorized a ten-year commitment through 2025 of approximately \$5.322 billion to clean energy programs through a CEF. The CEF is designed to meet four primary objectives: greenhouse gas emission reductions; energy affordability; statewide penetration and scale of energy efficiency and clean energy generation; and growth in the State's clean energy economy. Building on this, the Climate Leadership and Community Protection Act (Climate Act) passed by NYS in 2019 calls for the state to invest or direct resources to ensure that disadvantaged communities receive at least 35 percent, with the goal of 40 percent, of overall benefits of spending on clean energy and energy efficiency programs, as well as projects or investments in housing, workforce development, pollution reduction, low-income energy assistance, energy, transportation, and economic development.

The original CEF Order ten-year funding authorized \$3.43 billion for Market Development and Innovation & Research activities, \$781.5 million to establish a NY Green Bank, and \$960.6 million for the NY-Sun program to catalyze solar energy growth.\* Since that time, the state has set expanded goals, such as upshifting from the original solar energy target to the current goal of 10,000 MW of Distributed Solar by 2030, with corresponding additional funding commitments. Total funding for the CEF and its respective portfolios now stands at \$7.64 billion.

### **Market Development and Innovation & Research**

The CEF Market Development activities are designed to reduce costs, accelerate customer demand, and increase private investment for energy efficiency and other behind-the-meter clean energy solutions through strategies including financial support, technical knowledge, data, education to customers and service providers, and advanced workforce training. The CEF Innovation & Research activities are designed to invest in cutting-edge technologies that will meet increasing demand for clean energy including: smart grid technology, renewables and distributed energy resources, high performance buildings, transportation, and clean tech startup and innovation development.

*\*It also provided \$150 million for the Renewable Portfolio Standard Program for a 2016 "Main Tier" solicitation for renewable energy procurement; such efforts have since been rolled under the Clean Energy Standard program discussed below.*

### NY-Sun

Pursuant to a 2012 Order and subsequent Orders, the NY-Sun program is designed to develop a sustainable and ultimately subsidy-free solar electric industry through a megawatt block approach. The CEF Order established the incremental collection schedule by utilities and reallocation of NYSERDA clean energy uncommitted funds to support program activities approved through the 2012 Order. A May 2020 Order was approved by the PSC to increase the NY-Sun funding level by \$573 million to expand the capacity target from 3 GW by 2023 to 6 GW by 2025. In April 2022, the PSC approved an Order expanding the NY-Sun installation target of the NY-Sun Program from 6 GW to 10 GW of distributed solar generation projects by 2030, and its funding level by approximately \$1.474 billion. The budget presented herein reflects funding from the aforementioned orders.

### NY Green Bank

The key elements of NY Green Bank's mission are collaborating with private sector participants, implementing structures that overcome barriers and address gaps in current clean energy financing markets, and transforming those markets by enabling greater scale, new and expanded asset classes and liquidity. These factors combined have the objectives to motivate faster and more extensive implementation of clean energy assets within New York State, foster greater energy choices, reduce environmental impacts and accrue more green energy advantages per public dollar spent for the benefit of all New Yorkers. As noted in its published annual plan and impact reports, the Green Bank also plays an important role demonstrating the attractiveness and viability of investments into projects benefiting the State's Disadvantaged Communities.

NY Green Bank's initial capitalization was established from \$315.6 million in uncommitted utility surcharge assessment funds and RGGI allowance auction revenues. As discussed above, the CEF Order, and a subsequent Order authorized incremental collections for the remaining \$631.5 million of NY Green Bank's capitalization.

### Clean Energy Standard (CES)

Pursuant to an August 2016 and subsequent Orders, the Clean Energy Standard was established adopting a State Energy Plan goal that 50% of New York's electricity is to be generated by renewable sources by 2030, as part of a strategy to reduce statewide greenhouse gas emissions by 40% by 2030. In October 2020 the PSC approved an Order adopting modifications to the CES to implement New York's CLCPA, including an expanded goal to ensure that by 2030 70% of the state's electricity load is served by renewable resources. The mandated actions supporting this goal are divided into two categories, a Renewable Energy Standard (RES) and a Zero-Emissions Credit (ZEC) requirement

The RES directs NYSERDA to procure renewable energy credits from renewable energy generation from qualifying facilities through competitively selected long-term contracts, and to offer such credits for periodic sale to Load Serving Entities (LSE) to meet their obligations to serve their retail customers through the procurement of a minimum percentage of qualifying renewable energy credits. The RES also includes an obligation on distribution utilities on behalf of all retail customers to continue to invest in the maintenance of existing at-risk renewable generation attributes and a program to maximize the value potential of new offshore wind resources.

The ZEC requirement consists of an obligation for NYSERDA to provide payments to certain nuclear generation facilities for the production of zero-emissions attributes from such facilities, funded from monthly installment payments collected from LSEs for their proportionate share of

such attributes to serve their retail customers evidenced by the procurement of qualifying zero emission credits.

In support of clean energy goals, the PSC-approved CES Orders have enabled “Tier 1” solicitations for new renewable energy development, a competitive “Tier 2” program to ensure the continued availability of legacy baseline resources to meet the State’s renewable energy goals, and a competitive “Tier 4” program to increase penetration of renewable energy and reduce reliance on fossil fuels in New York City. The orders also supported the creation of NYSERDA’s Build Ready program to facilitate the competitive development of renewable generation at existing or abandoned commercial sites, brownfields, landfills, former industrial sites, and other abandoned or underutilized sites. Finally, they have supported continuation of periodic offshore wind solicitations to achieve the statewide goal of 9,000 megawatts of offshore wind energy developed by 2035.

### **Regional Greenhouse Gas Initiative (RGGI)**

The Regional Greenhouse Gas Initiative, or RGGI, is an agreement among twelve Northeastern and Mid-Atlantic States to reduce greenhouse gas emissions from power plants. The RGGI states (Participating States) have committed to cap and then reduce the amount of carbon dioxide that certain power plants are allowed to emit, limiting the region’s total contribution to atmospheric greenhouse gas levels. The Participating States have agreed to implement RGGI through a regional cap-and-trade program whereby the Participating States have agreed to auction annual regional emissions. Rules and regulations promulgated by the NYS Department of Environmental Conservation (DEC) call for NYSERDA to administer periodic auctions for annual emissions. Pursuant to these regulations, the proceeds will be used by NYSERDA in consultation with stakeholder advisory group to administer energy efficiency, renewable energy, and/or innovative carbon abatement programs, including reasonable costs to administer such programs.

### **State Energy Resilience, Reliability, and Safety**

#### West Valley

NYSERDA manages, on behalf of the State, the Western New York Nuclear Service Center (West Valley), which is the site of a former plant for reprocessing used nuclear fuel. Through 1972, the former plant operator, Nuclear Fuel Services, Inc., generated as a by-product of its reprocessing operations, more than 600,000 gallons of liquid, high-level radioactive waste, which were stored at the site. In 1980, Congress enacted the West Valley Demonstration Project Act (West Valley Act). Pursuant to the West Valley Act, the U.S. Department of Energy (DOE) is carrying out a demonstration project to: (1) solidify the liquid high-level radioactive waste at West Valley; (2) transport the solidified waste to a permanent federal repository; and (3) decontaminate and decommission the reprocessing plant and the facilities, materials, and hardware used in the project. NYSERDA and the Federal government share the combined expenses incurred for this program.

NYSERDA also maintains, on behalf of the State, the State-Licensed Disposal Area (SDA), which is a shut-down commercial low-level radioactive waste disposal facility at West Valley. NYSERDA is evaluating how to remediate and close this facility in accordance with regulatory requirements.

#### Energy and Environmental Analysis

Through this program, NYSERDA provides objective and credible analyses of energy issues to various stakeholders. The program also includes activities for energy-related emergency planning



and response, and support for State energy planning functions. NYSERDA is also responsible for coordination of nuclear material matters, including serving as the State liaison with the Nuclear Regulatory Commission, and for managing certain state fuel reserves. These activities are primarily funded through an assessment authorized under Section 18-a of Public Service Law and a Federal State Energy Program (SEP) grant.

Pursuant to the State Low-Level Radioactive Waste (LLRW) Management Act of 1986, NYSERDA is responsible for collecting information and providing regular reports to the Governor and Legislature on LLRW generation in the State. These activities are funded with a State appropriation sub-allocated from an appropriation provided to the NYS Department of Health, which is funded through an assessment collected on operating nuclear power plant licensees.

#### Other

Other programs represent an aggregate of smaller programs/functions. These activities are primarily funded through Commission Orders, Memoranda of Understanding with various utilities pursuant to Commission Orders, various third-party reimbursements, federal energy grants., State appropriations and assessments authorized under Section 18-a of the Public Service Law.

### **BUDGETARY ASSUMPTIONS**

The following are the principal budget assumptions used in developing the Budget and Financial Plan:

- Collection of funding for the CEF programs will be according to the “Bill-As-You-Go” approach effective January 1, 2016, as per the CEF Order. Under this approach, incremental CEF ratepayer collections will be held by the electric and gas utilities and used to reimburse NYSERDA for actual CEF program expenses provided that the reimbursement allows NYSERDA to maintain a sufficient cash balance based on projected expenses for the subsequent two-month period, subject to the utilities’ unremitted collection balances approved in the CEF Order. Utility surcharge assessment revenue is based on anticipated expenditures, prior fiscal year projected cash balances, and the resulting collections projected to maintain working capital pursuant to this approach. The change in expenditures from year to year will have a direct relationship to the amount of Utility surcharge assessments required to be collected by the utilities pursuant to the BAYG Order but does not change the overall assessment of the ratepayer.
- CES Financial Backstop Collection Process. In the Order Approving Administrative Cost Recovery, Standardized Agreements and Backstop Principles issued and effective November 17, 2016, the Commission directed that the electric distribution customers of the electric distribution companies (EDCs) serve as a financial backstop to ensure that NYSERDA has sufficient funds to make timely payments to generators. In collaboration with the EDCs, on July 1, 2021, NYSERDA filed a proposed CES Backstop Collection process. It’s anticipated that the Commission will issue an upcoming Order approving the process. Upon approval of the Order NYSERDA will immediately seek to recover the cumulative amounts due under the ZEC program for the first three compliance years ending March 31, 2019. Based on the timing of the approved Order its anticipated that NYSERDA will receive \$21.4 million in backstop revenues during FY 2023-24.

- CES Tier-1 Index REC Structure. In a January 16, 2020, Order modifying the Tier-1 Renewable Procurements, the PSC directed NYSERDA to include additional options for bidders to offer an Index REC price starting with the 2020 solicitation. In an October 15, 2020, Order, the PSC also authorized NYSERDA to offer existing Tier-1 renewable energy projects in development and not yet operational a voluntary conversion to the Index REC structure. NYSERDA's analysis indicates this shift is likely to result in significant cost benefits to ratepayers including REC pricing benefits in comparison to Fixed-Price REC contracts. Besides reduced costs, an Index Rec structure will likely have other ancillary benefits for ratepayers, such as reduced financing costs and a reduction in volatility of their energy bills. Staff have formulated several cost scenarios ranging from low case to high case price forecasts. A mid-range base case scenario has been used in projecting Tier-1 REC costs and revenues. The related assumptions and methodology used in the FY 2023-24 budget have been reviewed by an independent consulting firm.
- NY Green Bank loan interest and fees are based on estimates of committed and deployed capital.
- Allowance auction proceeds for the Regional Greenhouse Gas Initiative (RGGI) are based on an indicative price derived from the average of the prices realized in the six auctions up to and including the September 2022 auction, applied to the number of allowances projected to be allocated to NYS in the coming fiscal year.
- West Valley's State appropriation revenue for FY 2023-24 through FY 2026-27 is based primarily on the State's 10% share of West Valley Demonstration Project costs and the State's share under the Consent Decree. These estimates assume future U.S. Department of Energy (DOE) annual funding of approximately \$93.4 million for FY 2023-24 through FY 2026-27, for its share of project costs.
- Interest income is based on assumed balances available for investment and based on a weighted average one-year U.S. Treasury bond index yield.
- GJGNY budgeted loan interest income assumes additional loans to be issued during FY 2023-24 of up to \$36.5 million based on current loan origination volume. Debt service amounts reflect scheduled principal and interest expense payments based on each series' outstanding principal balance and rate of interest.
- Federal Funding as reflected in the budget is based on anticipated reimbursable expenditures of existing grants. NYSERDA intends to leverage available federal funding to enhance our most critical efforts and topline mission outcomes and goals. It's anticipated that NYSERDA will also administer federal funds from the recent passing of the Federal Infrastructure Investment and Jobs Act, the Inflation Reduction Act of 2022, and the CHIPS and Science Act but that amount is not yet known and therefore not included in this budget and financial plan. Some federal grants require state cost share. To avoid missing key time-bounded federal funding opportunities that provide important leverage to state efforts, NYSERDA has proactively included in this budget a reasonable set aside of RGGI funds to cover anticipated cost-share requirements.
- New York State Bond Act: On November 8, 2022, the voters of New York State passed the \$4.2 billion Clean Water, Clean Air and Green Jobs Environmental Bond Act. The

Bond Act will support various environmental capital improvements and enhancements throughout New York State. It is anticipated that NYSERDA will directly manage \$100 million of the Green Buildings funding and \$400 million of the Zero Emissions School Bus program funding. Anticipated expenditures and offsetting State Appropriation revenues have been included in the FY 2023-24 Budget and Financial Plan.

- Offshore wind port development: As announced in last year's State of the State address, NY will invest an additional \$500 million in the ports, manufacturing, and supply chain infrastructure needed to advance its offshore wind industry, leveraging private capital to deliver more than \$2 billion in economic activity while creating good-paying green jobs for a total of \$600 million. Anticipated expenditures and offsetting State Appropriation revenues associated with this investment have been included in the FY 2023-2024 Budget and Financial Plan. Given inflation, interest rates, and permitting considerations, it is possible some of these expenditures will be deferred to a future time period.
- Saratoga Technology + Energy Park (STEP): In 2017, management determined that land development, leasing, and maintenance of STEP was outside of NYSERDA's core mission and as a result a 2017 resolution to dispose of STEP was approved by the Board. After some long-term planning, in the fall of 2021 NYSERDA had placed the STEP facility on the market for disposition. The timing of such disposition is unknown and as a result no assumptions for disposition have been incorporated in the budget. The Board resolution provided that the net proceeds from the sale or sales of real and personal property located at Saratoga Technology + Energy Park shall be redirected to mission aligned Authority programs and initiatives and that such redirection of net proceeds furthers the public interest in safe, reliable and economical energy supplies.
- Salary and benefits: Given the ambitious agenda with which we are charged, we have carefully assessed our projected work scope and identified the human capital needed to successfully advance the goals established by the CLCPA and recently approved Scoping Plan. We have also assessed relative cost of employee vs. contractor positions in an effort to utilize the most economic mix of resources. Based on that assessment, and given recent Public Service Commission Orders, anticipated NYS Bond Act appropriations, the approved RGGI operating plan, and other approved work scope and funding, this budget reflects an assumed average employee headcount of approximately 453 FTE's. The compensation budget reflects anticipated salary and fringe expenses for current staff and funded vacant positions, as follows:
  - Salaries are benchmarked to the State Management/Confidential (M/C) employee salary grades. Salaries include an anticipated 2% cost-of-living-adjustment (COLA) to be effective April 1, 2023, pending authorization by the State. The salary budget also includes a placeholder for performance-based salary increases and payments comparable to those which may be authorized for state employees, as well as an allocation for potential adjustments that may result from a pay equity study underway.
  - Fringe benefit costs are generally based on prior year actual costs as a percentage of salary costs. NYSERDA's actual annual pension expense is based on an actuarial calculation and is dependent upon multiple conditions and assumptions as of the last day of the applicable fiscal year. Given past volatility in the market, the budget is based on an average of the past ten years' pension expense. The OPEB (health care plan) expense under Governmental Accounting Standards

Board Statement No. 75 is based on preliminary actuarial estimates calculated, but the final amount may differ once a final actuarial calculation is prepared.

- The NYS Cost Recovery Fee represents the fee paid to the State under Section 2975 of the Public Authorities Law (Governmental Cost Recovery System) for general governmental services. The Budget assumes that NYSERDA's assessment will be \$12.7 million, which is based on the prior year assessed value.
- The Budget includes no significant or non-recurring revenue-enhancement or cost-reduction initiatives which shift resources from one year to another.

### **BUDGETARY RISKS**

The following is a summary of significant budgeting risks:

- NYSERDA's budgeting process is subject to inherent risks regarding the ability to accurately forecast revenues and expenditures. Over the past several years, NYSERDA has assumed responsibility for administering certain new programs, and additional program responsibilities may be added during the coming fiscal year that have not been included in the Budget. NYSERDA's programs can be impacted by a number of factors including, but not limited to, general economic conditions, energy prices, energy reliability, and energy technology advancements.
- Program expenditures for most programs are funded with revenues which are generally received in advance of those expenditures. Under the modified accrual basis of accounting, these funds are recorded as revenue when received, with any unexpended funds recorded as Restricted Net Position. Timing of program activity may result in either: (1) revenues exceeding expenses during the Budget period; or (2) expenditures funded in part, by unexpended revenues from prior fiscal periods.
- Revenues resulting from auctions of allowances under the Regional Greenhouse Gas Initiative (RGGI) have shown some volatility over the past few years. NYSERDA has developed a multi-year program planning approach for these revenues, but variations in actual proceeds realized makes it challenging to complete accurate long-term planning. Given that uncertainty, we take a conservative stance in projecting future auction proceeds and have also pre-identified several priority initiatives that could be readily added for high positive program impact should auction proceeds trend higher than what our budget estimates reflect.
- CES Tier-1 Indexed Rec revenues: Several ranges of possibilities were modeled using future price data with implied volatility scenarios and the most probable base case scenario is being incorporated in the budget and financial plan. These revenues may vary depending on future energy prices, future capacity prices, and the quantity of megawatts produced. The program is designed for NYSERDA to recover its costs through the quarterly sale of REC's to LSEs for satisfying their Tier 1 compliance obligations. Any shortfalls created through these sales will be fully recovered through the CES financial backstop collection process.

- Expenditures for the West Valley program are based primarily on the amount anticipated to meet the State's share of costs for West Valley under the Cooperative Agreement and the Consent Decree which are dependent upon funds provided in the federal budget to the U.S. Department of Energy (DOE).
- Although DOE and NYSERDA have reached agreement on the allocation of costs (percentages) to be paid by each entity for remediating the West Valley site, the remedial action decisions for several significant facilities will not be finalized prior to 2024. In addition, DOE has taken the position that the State will be responsible for waste disposal fees when high level waste on-site reaches an ultimate repository destination, a figure to be calculated at the time of disposal pursuant to the Nuclear Waste Policy Act, 42 U.S.C. 10101 et seq. The agreement between the parties left this issue unresolved, as no national repository option will be in place for many years. Although NYSERDA has advanced, and will continue to advance, legal arguments as to why this responsibility is not one that rightfully falls on the State, additional State funding may be required once the issue is resolved.
- Pension costs and retirement health insurance costs are based on actuarial valuations, and such valuations could be impacted by a number of assumptions, general economic conditions, and future events which could lead to variances from estimated annual expenses.

NYSERDA  
 Budget FY 2023-24  
 (Amounts in thousands)

	<b>Budget FY 2023-24</b>	<b>Budget FY 2022-23</b>
<b><u>Revenues:</u></b>		
State appropriations		
Offshore wind port development	\$ 75,721	20,000
NYS Bond Act	32,256	-
Other	31,060	24,988
Total State Appropriations	139,037	44,988
Third party reimbursement	50,743	58,356
Utility surcharge assessments	764,214	795,753
Renewable energy credit proceeds	47,141	30,262
Zero emission credit payments	189,295	590,473
Clean energy standard backstop charge	21,387	21,375
Allowance auction proceeds	237,518	167,394
Project repayments	293	215
Federal grants	13,781	9,416
Rentals from leases	1,011	1,005
Interest income	49,804	611
Loan interest	36,263	34,639
QECCB interest subsidy	211	258
Fees and other income	7,294	11,008
Total Revenues	1,557,992	1,765,753
<b><u>Expenses:</u></b>		
Salaries and benefits		
Salaries	60,146	52,112
Benefits	20,564	14,121
Salaries and benefits	80,710	66,233
Program expenditures		
Clean Energy Fund	373,608	363,013
NY-Sun	263,455	305,156
Clean Energy Standard - Tiers 1,2,4,OREC	69,248	45,648
Clean Energy Standard - Tier 3 (ZEC)	187,019	590,473
Clean Energy Standard - Port Development	75,000	20,000
Regional Greenhouse Gas Initiative	124,733	116,477
Other	239,334	211,804
Program expenditures	1,332,397	1,652,571
Investment related expenses	1,040	32
Program operating costs	5,010	4,773
General & administrative expenses	18,295	17,278
Depreciation	2,288	2,246
NYS Assessments	13,594	13,594
Bond interest and fees	3,448	2,982
Total Expenses	1,456,782	1,759,709
<b>Net (expense) revenue and change in net position</b>	101,210	6,044
<b>Net position beginning of year</b>	1,693,647	1,685,336
<b><u>Net position end of year:</u></b>		
Restricted for specific programs	730,222	660,072
NY Green Bank Capitalization	1,046,630	1,016,085
Net Investment in Capital Assets	12,255	10,440
Unrestricted	5,750	4,783
Total net position end of year	\$ 1,794,857	1,691,380

See pages 14-16 for explanations of budget changes.

NYSERDA  
Budget FY 2023-24  
(Amounts in thousands)

<b>Functions/Programs</b>										
	Market Development / Innovation & Research	NY Green Bank	NY-Sun	Clean Energy Standard	RGGI	Energy & Environmental Analysis	West Valley	Other	<b>Budget FY 2023-24</b>	Budget FY 2022-23
Net position, beginning of year	\$ 66,599	1,016,083	52,053	44,414	170,783	2,951	-	347,816	<b>1,693,647</b>	<b>1,685,336</b>
<u>Revenues:</u>										
State appropriations	-	-	-	75,721	5,110	150	25,800	32,256	<b>139,037</b>	44,988
Third party reimbursement	16,000	-	-	-	-	-	2,361	32,382	<b>50,743</b>	58,356
Utility surcharge assessments	369,404	-	259,805	15,830	-	13,832	-	105,342.44	<b>764,214</b>	795,753
Renewable energy credit proceeds	-	-	-	47,141	-	-	-	-	<b>47,141</b>	30,262
Zero emission credit payments	-	-	-	189,295	-	-	-	-	<b>189,295</b>	590,473
Clean energy standard backstop charge	-	-	-	21,387	-	-	-	-	<b>21,387</b>	21,375
Allowance auction proceeds	-	-	-	-	237,518	-	-	-	<b>237,518</b>	167,394
Project repayments	-	-	-	-	-	-	-	293	<b>293</b>	215
Federal grants	-	-	-	-	-	3,183	-	10,598	<b>13,781</b>	9,416
Rentals from leases	-	-	-	-	-	-	-	1,011	<b>1,011</b>	1,005
Interest income	3,124	16,720	2,849	7,426	11,022	-	-	8,663	<b>49,804</b>	611
Loan interest	-	28,200	-	-	-	-	-	8,063	<b>36,263</b>	34,639
QECB interest subsidy	-	-	-	-	-	-	-	211	<b>211</b>	258
Fees and other income	-	4,100	-	3,000	-	-	-	194	<b>7,294</b>	11,008
Total Revenues	<b>388,528</b>	<b>49,020</b>	<b>262,654</b>	<b>359,800</b>	<b>253,650</b>	<b>17,165</b>	<b>28,161</b>	<b>199,014</b>	<b>1,557,992</b>	<b>1,765,753</b>
<u>Expenses:</u>										
Salaries and benefits	24,635	11,816	2,739	9,869	11,909	6,980	2,622	10,140	<b>80,710</b>	66,233
Program expenditures	373,608	-	263,455	331,267	124,733	7,350	24,460	207,524	<b>1,332,397</b>	1,652,571
Investment related expenses	-	1,040	-	-	-	-	-	-	<b>1,040</b>	32
Program operating costs	480	2,541	72	249	32	952	154	530	<b>5,010</b>	4,773
General & administrative expenses	5,584	2,666	618	2,245	2,702	1,581	600	2,299	<b>18,295</b>	17,278
Depreciation	627	234	152	318	237	138	57	525	<b>2,288</b>	2,246
NYS Assessments	3,895	176	2,569	3,309	1,343	164	268	1,870	<b>13,594</b>	13,594
Bond interest and fees	-	-	-	-	-	-	-	3,448	<b>3,448</b>	2,982
Total Expenses	<b>408,829</b>	<b>18,473</b>	<b>269,605</b>	<b>347,257</b>	<b>140,956</b>	<b>17,165</b>	<b>28,161</b>	<b>226,336</b>	<b>1,456,782</b>	<b>1,759,709</b>
Net sources / (uses) of net position other than transfers	(20,301)	30,547	(6,951)	12,543	112,694	-	-	(27,322)	<b>101,210</b>	6,044
Inter-program transfers	22,000	-	-	-	(36,301)	-	-	14,301	-	-
Net Investment in Capital Assets	(138)	-	(98)	(122)	-	-	(5)	2,178	<b>1,815</b>	(936)
<u>Net Position End of Year:</u>										
Restricted for specific programs	68,276	-	45,032	56,902	247,177	2,951	(189)	310,073	<b>730,222</b>	660,072
NY Green Bank Capitalization	-	1,046,630	-	-	-	-	-	-	<b>1,046,630</b>	1,016,085
Net Investment in Capital Assets Unrestricted	22	-	70	55	-	-	189	11,919	<b>12,255</b>	10,440
Unrestricted	-	-	-	-	-	-	-	5,750	<b>5,750</b>	4,783
Net position end of year	<b>\$ 68,298</b>	<b>1,046,630</b>	<b>45,102</b>	<b>56,957</b>	<b>247,177</b>	<b>2,951</b>	<b>-</b>	<b>327,742</b>	<b>1,794,857</b>	<b>1,691,380</b>

**NYSERDA  
FY 2023-24 Budget**

**Reconciliation of Budget Changes**

	<u>Actual</u> <u>FY 2021-22</u>	<u>Budget</u> <u>FY 2022-23</u>	<u>Change</u>	<u>Budget</u> <u>FY 2023-24</u>	<u>Explanation for change</u>
Revenues:					
State appropriations					
Clean Energy Standard (Port Development)	-	20,000	55,721	75,721	Reflects reimbursement of the anticipated increase in reimbursable expenditures for the offshore wind port infrastructure development initiative.
NYS Bond Act	-	-	32,256	32,256	Reflects reimbursement of anticipated spending for the School Bus Electrification and Green Buildings programs under the newly approved 2022 NYS Bond Act.
West Valley	14,126	23,600	2,200	25,800	Reflects reimbursement of NYSERDA's share of federal and state spending at West Valley which is expected to increase.
RGGI	273	860	4,250	5,110	Reflects reimbursement for an increase in anticipated expenditures under the RGGI Cleaner Greener Community program (repayment of the FY 13-14 transfer of \$25 million to the State General Fund).
Energy & Environmental Analysis - Low-Level Radioactive Waste	139	150	-	150	(No change)
Other Programs - Energy/Environmental projects	826	378	(378)	-	(Minor change)
Total State appropriations	15,364	44,988	94,049	139,037	
Utility surcharge assessments					
Market Development/ Innovation & Research	278,473	336,246	33,158	369,404	Reflects an increase in anticipated expenditures resulting from the implementation of an increase in approved program initiatives. Revenues for these reimbursable expenditures and appropriate working capital balances are collected under the "Bill-As-You-Go" (BAYG) funding approach.
NY-Sun	188,553	290,414	(30,609)	259,805	These BAYG revenues reflect a decrease in anticipated program expenditures based on project completion dates and timing of incentive payments.
RPS/SBC	41,292	38,065	(5,076)	32,989	Decrease reflects lower anticipated expenditures collected via BAYG, due to the wind down and closure of legacy RPS and SBC programs.
Energy Storage	31,326	77,460	(50,416)	27,044	Reflects revised program spending which is based upon updated project completion dates. This program was authorized by the Public Service Commission in January 2019 and revenues are collected under the BAYG funding approach.
EV Prize	3,525	21,485	2,282	23,766	These BAYG revenues reflect an increase in anticipated program expenditures based on timing of incentive payments under the Clean Transportation Prize program.
18-a funding	22,700	22,700	175	22,875	(Minor change)
Build Ready	5,025	9,384	6,446	15,830	Reflects an increase in anticipated program expenditures based on project completion dates and timing of certain developed sites.
Electric Generation Cessation Mitigation	12,863	-	12,500	12,500	FY 2023-24 reflects the PSC Ordered annual funding for the electric generation facility cessation mitigation program.
NY Green Bank	44,252	-	-	-	(No change)
Total Utility surcharge assessments	628,009	795,753	(31,539)	764,214	
Renewable energy credit proceeds	55,543	30,262	16,879	47,141	Primarily reflects an increase in Tier One proceeds due to greater production of RECs resulting from more facilities becoming operational.
Zero emission credit assessments	609,021	590,473	(401,178)	189,295	Decrease in assessment is based on original program forecasted prices. Updated prices will be approved by the Public Service Commission after the adoption of this budget. Such prices may vary from estimate, and if determined to be material, a mid-year budget update will be presented to the Board for approval. Since ZEC revenues and expenditures are closely correlated any such pricing update should have minimal impact on net revenue.
ZEC Backstop Charge	-	21,375	12	21,387	Anticipated funding from FY 2022-23 has been deferred to FY 2023-24. Funding reflects the anticipated collection of electric distribution companies' payments to support the Clean Energy Standard ZEC program's accumulated deficit pursuant to a November 2016 Order and expected Order authoring the collection process.
Allowance auction proceeds	250,634	167,394	70,124	237,518	Reflects an increase in the anticipated auction allowance price and a slight reduction in the number of allowances to be offered consistent with the FY 23-24 RGGI Operating Plan. The allowance price is an average based on the last six auction results through September 2022 plus inflationary assumptions.
Third party reimbursements	75,035	58,356	(7,613)	50,743	Reflects a decrease in funding to be received under the Office of Temporary & Disability Assistance to help support the Empower Plus program, offset in part by an increase in the funding to be received from the "New Efficiency New York" initiative.
Federal grants	7,845	9,416	4,365	13,781	Reflects an increase in anticipated NYS Department of Transportation Congestion Mitigation Air Quality grant spending, as well as an anticipated increase in reimbursable expenditures under several U.S. Department of Energy (DOE) formula grants.
QECB interest subsidy	306	258	(47)	211	Principally due to a lower outstanding principal balance on the 2013 Energy Efficiency Financing Revenue Bonds generating less interest expense qualifying for the subsidy.
Project repayments	450	215	78	293	(Minor change)
Rentals from leases	1,041	1,005	6	1,011	(Minor change)



**NYSERDA  
FY 2023-24 Budget**

**Reconciliation of Budget Changes**

	Actual <u>FY 2021-22</u>	Budget <u>FY 2022-23</u>	<u>Change</u>	Budget <u>FY 2023-24</u>	<u>Explanation for change</u>
Fees and other income					
NY Green Bank	10,386	4,662	(562)	4,100	Reflects a slight decrease in estimated NY Green Bank closing and undrawn fees.
Clean Energy Standard	6,920	6,150	(3,150)	3,000	Reflects a reduction in anticipated offshore-wind bid fees as no 2023 procurement is anticipated under the program. FY 2023-24 balance represents bid fees for the anticipated Tier One 2023 procurement.
Annual Bond Fees/Other	1,209	196	(2)	194	(Minor change)
Total Fees and other income	18,515	11,008	(3,714)	7,294	
Loan interest - NY Green Bank	13,811	26,010	2,190	28,200	Reflects an increase in anticipated loan activity.
Loan interest - GJGNY/Other	7,672	8,629	(566)	8,063	Reflects a slight decrease in anticipated loan activity.
Interest income	(73)	611	49,193	49,804	Increase reflects significantly higher investment yields than compared to the prior year. Yields are based on a weighted average one year U.S. Treasury bond index rate.
Loss on sale of Loans and Financing Receivables	(13,543)	-	-	-	(No change)
<b>Total Revenues</b>	<b>1,669,630</b>	<b>1,765,753</b>	<b>(207,761)</b>	<b>1,557,992</b>	
<b>Expenses:</b>					
Salaries	45,352	52,112	8,034	60,146	Anticipated salary expense reflects higher costs due to increased staffing needs consistent with NYSERDA's growing work-scope and complexity needed to deliver on Climate Leadership and Community Protection Act (CLCPA) goals. Salaries also include a 2% COLA and performance-based pay adjustments predicated on state approval of similar awards for NYS employees.
Benefits	13,177	14,121	6,443	20,564	Anticipated fringe benefits reflect higher expected pension costs based on an average of the past ten year's pension expense, higher health premiums costs based on the increased staffing and market trends, and higher retirement health insurance expense based on the most recent actuarial valuation.
Salaries and Benefits	58,529	66,233	14,477	80,710	
Program expenditures					
Market Development/ Innovation & Research	306,430	363,013	10,595	373,608	Reflects an overall increase in anticipated program activity resulting from the implementation of an increased number of approved initiatives.
NY-Sun	151,144	305,156	(41,701)	263,455	Reflects a decrease in anticipated expenditures based on project completion dates and timing of incentive payments.
Clean Energy Standard - Tiers 1, 2, 4, & OREC	19,898	38,981	19,067	58,048	Reflects an increase in anticipated purchases of renewable energy credits under the Tier One State-mandated compliance program resulting from more facilities coming on line.
Clean Energy Standard - ZEC	594,174	590,473	(403,454)	187,019	The decrease in payments to zero-emission generation facilities is based on original program forecasted prices. Updated prices will be approved by the Public Service Commission after the adoption of this budget. Such prices may vary from estimate, and if determined to be material, a mid-year budget update will be presented to the Board for approval.
Regional Greenhouse Gas Initiative	98,934	116,477	8,256	124,733	Reflects an increase in anticipated expenditures based on amounts included in the FY 23-24 RGGI Operating Plan.
Other Programs	94,280	98,237	22,289	120,526	Represents an overall increase in anticipated expenditures for the following: "New Efficiency New York" initiative to support NYS's strategy to combat climate change and achieve efficiency goals established by a December 2018 PSC Order; NY Clean Transportation Prize; Electric Facility Cessation Mitigation; and the Build Ready programs, offset in part by a decrease in RPS program expenditures from cancelled Main Tier contracts and from a reduction in incentive payments for Customer-sited Tier technology projects based on program wind down.
Offshore Wind Port Development	-	20,000	55,000	75,000	Reflects an increase in investment in the offshore wind port infrastructure development initiative.
Energy Storage	23,117	65,215	(22,515)	42,700	Reflects lower anticipated expenditures due to revised projections of project completion dates.
NY Bond Act	-	-	29,250	29,250	Anticipated spending for the School Bus Electrification and Green Buildings programs under the newly approved 2022 NYS Bond Act.
Volkswagen	4,282	24,315	1,915	26,230	Reflects an increase in anticipated expenditures under the Volkswagen settlement programs.
West Valley	15,305	22,754	1,724	24,478	Reflects an increase in anticipated program expenditures for NYSERDA's share of federal and state spending at West Valley.
Energy & Environmental Analysis	6,736	7,950	(600)	7,350	(Minor change)
Total Program Expenditures	1,314,300	1,652,571	(320,174)	1,332,397	

**NYSERDA  
FY 2023-24 Budget**

**Reconciliation of Budget Changes**

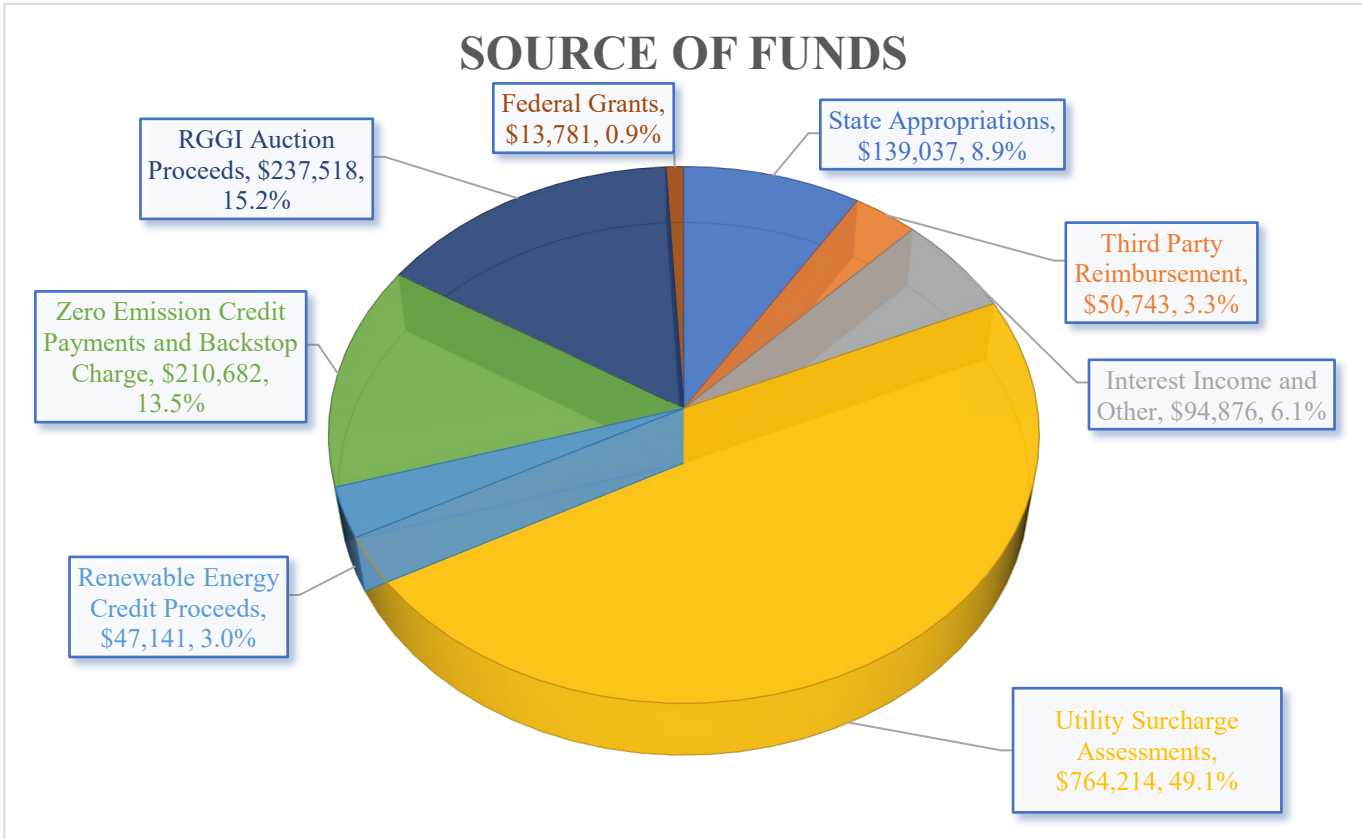
	<b>Actual</b>	<b>Budget</b>		<b>Budget</b>	
	<b><u>FY 2021-22</u></b>	<b><u>FY 2022-23</u></b>	<b><u>Change</u></b>	<b><u>FY 2023-24</u></b>	<b><u>Explanation for change</u></b>
Investment related expenses - NY Green Bank	454	32	1,008	1,040	Represents an increase in estimated non-reimbursed investment related costs to support the Community Decarbonization Fund * initiative where such expenses are anticipated to be capped for borrowers.
Program operating costs	3,780	4,773	237	5,010	Primarily reflects an increase in anticipated program travel costs to support the increased work scope to meet CLCPA goals.
General & administrative expenses	14,999	17,278	1,017	18,295	Reflects higher investment in technology solutions to efficiently support growing program needs, expanded call center services for timely response to increased public inquiries in light of Scoping Plan, Bond Act, and IRA, and professional development to build staff skills and expertise in priority focus areas.
Depreciation	2,583	2,246	42	2,288	Reflects a decrease in projected depreciation on existing capital assets which is offset in part from planned additions in FY 23-24.
NYS Assessments	13,594	13,594	-	13,594	(No change)
Bond interest and fees	3,275	2,982	466	3,448	Increase reflects scheduled interest expense payments based on higher aggregate outstanding principal balances, principally due to the recently issued 2022 Residential Solar and Energy Efficiency Financing Green Revenue Bonds.
<b>Total Expenses</b>	<b>1,411,514</b>	<b>1,759,709</b>	<b>(302,927)</b>	<b>1,456,782</b>	
Net (expense) revenue and change in net position	258,116	6,044	95,166	101,210	
Net position beginning of year	1,427,220	1,685,336	6,044	1,691,380	
Known timing differences to FY 2022-23 budget	-	-	-	2,267	Reflects adjustments for known timing differences (in FY 22-23).
Net position end of year:					
Restricted for specific programs	666,946	660,072	70,150	730,222	Reflects the cumulative effect of restricted program revenues exceeding program expenditures. Net increase is primarily due to RGGI revenues exceeding expenditures, offset in part by a decrease in Clean Energy Fund reserves.
NY Green Bank Capitalization	1,001,278	1,016,085	30,545	1,046,630	Reflects the net effect of all undrawn capital, deployed capital, matured/recycled capital, and a cumulative result of revenues exceeding expenditures.
Net Investment in Capital Assets	11,376	10,440	1,815	12,255	Reflects anticipated asset purchases less depreciation.
Unrestricted	5,736	4,783	967	5,750	Primarily due to the substantial increase in the interest earnings yield on investments.
<b>Total net position end of year</b>	<b>1,685,336</b>	<b>1,691,380</b>	<b>103,477</b>	<b>1,794,857</b>	

\* The Community Decarbonization Fund is a NY Green Bank initiative that provides low-cost capital to affordable housing and/or disadvantaged community serving projects.

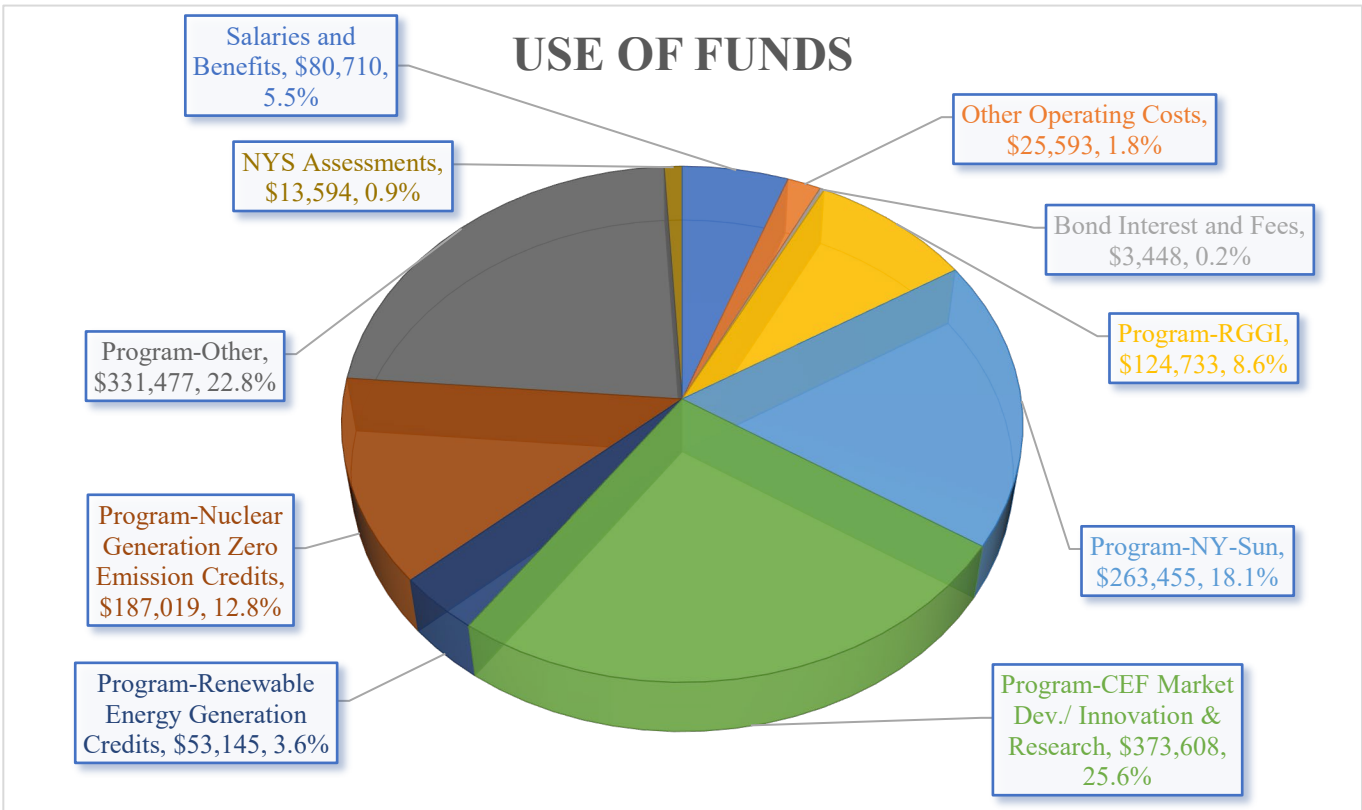
# Budget FY 2023-24

(Amounts in Thousands)

## SOURCE OF FUNDS



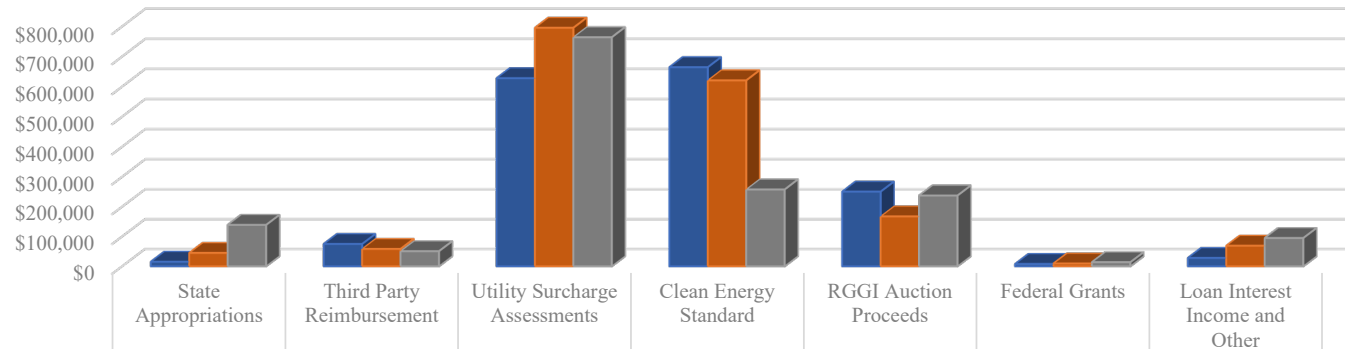
## USE OF FUNDS



# Budget FY 2023-24

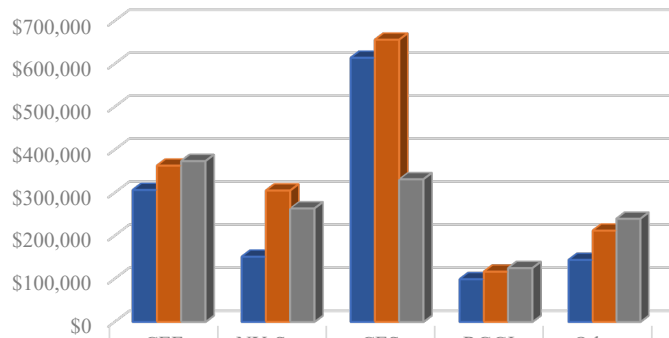
(Amounts in Thousands)

## Budget Comparison: Revenue Source



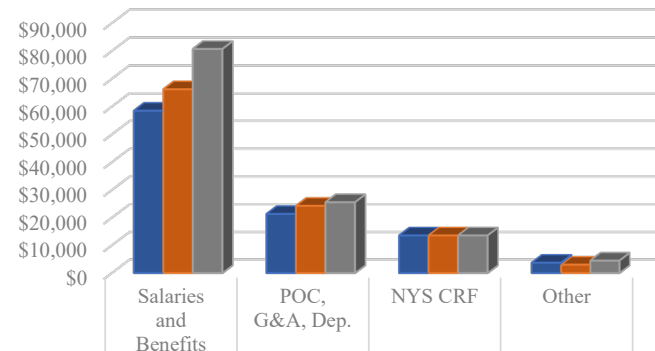
■ FY 21-22 Actual Total: \$1,669,630	\$15,364	\$75,035	\$628,009	\$664,564	\$250,634	\$7,845	\$28,179
■ FY 22-23 Budget Total: \$1,652,573	\$44,988	\$58,356	\$795,753	\$620,735	\$167,394	\$9,416	\$69,111
■ FY 23-24 Budget Total: \$1,557,992	\$139,037	\$50,743	\$764,214	\$257,823	\$237,518	\$13,781	\$94,876

## Program Expenditure



■ FY 21-22 Actual Total: \$1,314,300	\$306,430	\$151,144	\$614,072	\$98,934	\$143,720
■ FY 22-23 Budget Total: \$1,652,571	\$363,013	\$305,156	\$656,121	\$116,477	\$211,804
■ FY 23-24 Budget Total: \$1,332,397	\$373,608	\$263,455	\$331,267	\$124,733	\$239,334

## Other Expenditures



■ FY 21-22 Actual Total: \$97,214	\$58,529	\$21,362	\$13,594	\$3,729
■ FY 22-23 Budget Total: \$107,138	\$66,233	\$24,297	\$13,594	\$3,014
■ FY 23-24 Budget Total: \$124,385	\$80,710	\$25,593	\$13,594	\$4,488

NYSERDA FY 2023-24 Budget  
 Detail schedule: Salaries and benefits  
 (Amounts in thousands)

	<u>Actual</u> <u>FY 2021-22</u>	<u>Budget</u> <u>FY 2022-23</u>	<u>Change</u>	<u>Budget</u> <u>FY 2023-24</u>
<b>Salaries</b>	45,352	52,112	8,034	60,146
<b>Fringe Benefits:</b>				
Pension	1,861	36	4,404	4,440
Health insurance	5,004	5,685	935	6,619
Postemployment health insurance (GASB 75)	(64)	524	607	1,131
Social Security/Medicare taxes	3,339	3,837	380	4,217
Voluntary Defined Contribution Plan	1,013	1,419	193	1,612
Compensated absence leave accruals	1,460	1,729	109	1,838
Other employee benefits	564	891	(184)	707
sub-total benefits	<u>13,177</u>	<u>14,121</u>	<u>6,443</u>	<u>20,564</u>
Percentage of Salaries	29.1%	27.1%	80.2%	34.2%
<b>Total Salaries and Benefits</b>	<u><u>58,529</u></u>	<u><u>66,233</u></u>	<u><u>14,477</u></u>	<u><u>80,710</u></u>

NYSERDA FY 2023-24 Budget  
 Detail schedule: Program Expenditures  
 (Amounts in thousands)

<u>Function/Program</u>	<u>Budget FY 2023-24</u>	<u>Financial Plan FY 2024-25</u>	<u>Financial Plan FY 2025-26</u>	<u>Financial Plan FY 2026-27</u>
Market Development/ Innovation & Research	373,608	414,934	385,664	272,995
NY-Sun	263,455	304,479	306,292	299,846
NY Green Bank	-	660	660	660
Clean Energy Standard - Offshore Wind	4,325	3,914	142,077	462,360
Clean Energy Standard - REC Tier 1	53,145	132,676	250,689	348,693
Clean Energy Standard - REC Tier 2	578	-	-	-
Clean Energy Standard - REC Tier 4	-	-	90,793	455,295
Clean Energy Standard - ZEC	187,019	186,650	65,411	65,411
Offshore wind port development	75,000	180,000	100,000	150,000
RGGI	124,733	167,017	197,465	136,351
Energy & Environmental Analysis	7,350	9,150	9,150	9,150
West Valley	24,460	24,306	24,218	24,150
Other Programs	218,724	282,009	260,523	185,766
Total	1,332,397	1,705,795	1,832,942	2,410,677

NYSERDA FY 2023-24 Budget  
 Detail schedule: Program Operating Costs  
 (Amounts in thousands)

	<b><u>Actuals</u></b> <b><u>FY 2021-22</u></b>	<b><u>Budget</u></b> <b><u>FY 2022-23</u></b>	<b><u>Change</u></b>	<b><u>Budget</u></b> <b><u>FY 2023-24</u></b>
Professional Services:				
STEP & Other Consulting	96	55	71	126
NY Green Bank	2,006	2,171	(65)	2,106
Total Professional Services	<u>2,102</u>	<u>2,226</u>	<u>6</u>	<u>2,232</u>
Travel and Outreach Costs	98	626	252	878
Temporary Staffing, Outside Technical Reviewer	652	626	59	685
Rent, Maintenance & Repairs, Utilities, Insurance	344	449	18	467
Office Supplies, Equipment Rental, and Other	247	388	(37)	351
Computer Services and Software	268	263	16	279
Training, Recruitment & Relocation	69	195	(77)	119
Total Program Operating Costs	<u><u>3,780</u></u>	<u><u>4,773</u></u>	<u><u>238</u></u>	<u><u>5,010</u></u>

NYSERDA FY 2023-24 Budget

Detail schedule: General & Administrative Expenses

(Amounts in thousands)

	<b>Actuals</b>	<b>Budget</b>		<b>Budget</b>
	<b><u>FY 2021-22</u></b>	<b><u>FY 2022-23</u></b>	<b><u>Change</u></b>	<b><u>FY 2023-24</u></b>
Computer Services and Software	3,768	4,576	847	5,423
Professional Services:				
Communication and consumer support services	101	155	365	520
Other Consulting	149	400	270	670
Fiscal Agent, audit and third-party payroll and Human Resource services	547	539	48	587
Marketing	108	280	-	280
Internal Audit support services	11	50	-	50
Information security	17	35	-	35
Website support services	91	720	(120)	600
Information Technology	2,327	1,716	(429)	1,287
Total Professional Services	<u>3,351</u>	<u>3,895</u>	134	<u>4,029</u>
Training, Recruitment & Relocation	298	476	244	720
Travel and Outreach Costs	92	257	182	439
Office Supplies, Equipment Rental, and Other	151	184	159	343
Rent, Maintenance & Repairs, Utilities, Insurance	3,785	3,756	104	3,859
Temporary Staffing, Outside Technical Reviewer	3,554	4,134	(653)	3,482
Total General & Administrative Expense	<u><u>14,999</u></u>	<u><u>17,278</u></u>	1,017	<u><u>18,295</u></u>



NYSERDA FY 2023-24 Budget  
 Detail schedule: Capital Budget  
 (Amounts in thousands)

	<b>Actual</b>	<b>Budget</b>		<b>Budget</b>
	<b><u>FY 2021-22</u></b>	<b><u>FY 2022-23</u></b>	<b><u>Change</u></b>	<b><u>FY 2023-24</u></b>
Building improvements	-	673	1,848	2,521
Information technology upgrades	992	565	750	1,315
Leasehold improvements	133	-	145	145
Furniture, fixtures and equipment	166	31	41	72
Vehicles	-	43	8	51
Clean Energy Standard system development costs	198	-	-	-
Total Capital Asset Additions	<u>1,489</u>	<u>1,312</u>	<u>2,792</u>	<u>4,104</u>

NYSERDA FY 2023-24 Budget  
 Detail schedule: Debt Schedule  
 (Amounts in thousands)

**Purpose: Refinancing of loans issued through the Green Jobs-Green New York financing program**

	Principal	Anticipated Total	Pledged	Debt service % of Pledged	FY 2023-24 Debt Service	FY 2023-24 Outstanding Principal	FY 2024-25 Debt Service	FY 2024-25 Outstanding Principal	FY 2025-26 Debt Service	FY 2025-26 Outstanding Principal	FY 2026-27 Debt Service	FY 2026-27 Outstanding Principal
	<u>Issued</u>	<u>Debt Service</u>	<u>Revenues</u>	<u>Revenues</u>	<u>Service</u>	<u>Principal</u>	<u>Service</u>	<u>Principal</u>	<u>Service</u>	<u>Principal</u>	<u>Service</u>	<u>Principal</u>
<b>Residential Energy Efficiency Financing Revenue Bonds</b>												
Series 2013A (NYS EFC Guarantee)	24,300	29,651	37,436	79.2%	1,697	5,845	1,582	4,460	1,492	3,110	1,460	1,735
Series 2015A	46,358	53,824	67,991	79.2%	3,657	21,050	3,630	17,850	3,560	14,650	3,443	11,495
Series 2016A	23,180	27,539	34,473	79.9%	1,785	12,730	1,784	11,240	1,780	9,720	1,780	8,165
<b>Residential Solar Loan Revenue Bonds, Series 2015A</b>	48,536	75,406	86,927	86.7%	1,883	7,411	1,882	5,845	1,883	4,203	1,746	2,618
<b>Residential Solar Loan Revenue Bonds, Series 2018A</b>	18,500	21,908	30,732	71.3%	1,614	7,180	1,373	6,080	1,331	4,980	1,192	3,980
<b>Residential Solar and Energy Efficiency Financing Green Revenue Bonds, Series 2019A</b>	15,510	18,339	21,257	86.3%	1,497	6,225	1,386	5,040	1,257	3,945	1,167	2,900
<b>Residential Solar and Energy Efficiency Financing Green Revenue Bonds, Series 2020A</b>	16,690	19,859	22,611	87.8%	2,079	9,205	1,861	7,570	1,698	6,065	1,529	4,695
<b>Residential Solar and Energy Efficiency Financing Green Revenue Bonds, Series 2022A</b>	25,600	37,431	40,026	0.0%	2,098	24,670	3,172	22,575	2,983	20,580	2,745	18,740
<b>Total</b>	<b>218,674</b>	<b>283,957</b>	<b>341,453</b>	<b>83.2%</b>	<b>16,310</b>	<b>94,316</b>	<b>16,670</b>	<b>80,660</b>	<b>15,984</b>	<b>67,253</b>	<b>15,062</b>	<b>54,328</b>

\* No new debt issues are included in the Budget and Financial Plan as additional debt issues will require approval by the NYSERDA Board and the Public Authorities Control Board.

NYSERDA  
 FY 2023-24 Financial Plan  
 (Amounts in thousands)

	Budget FY 2023-24	Projection FY 2024-25	Projection FY 2025-26	Projection FY 2026-27
<u>REVENUES:</u>				
State appropriations	\$ 139,037	288,916	222,700	274,950
Third party reimbursement	50,743	18,361	18,361	18,361
Utility surcharge assessments	764,214	933,736	863,754	668,936
Renewable energy credit proceeds	47,141	110,384	395,102	1,070,605
Zero emission credit payments	189,295	186,650	65,411	65,411
Clean energy standard backstop charge	21,387	7,129	-	-
Allowance auction proceeds	237,518	227,085	230,371	230,371
Federal grants	13,781	22,767	21,660	18,731
Other income	94,876	94,967	95,330	93,941
<b>TOTAL REVENUES</b>	<b>1,557,992</b>	<b>1,889,995</b>	<b>1,912,689</b>	<b>2,441,306</b>
<u>EXPENSES:</u>				
Salaries and benefits	80,710	87,158	89,772	92,466
Program expenditures	1,332,397	1,705,795	1,832,942	2,410,677
Investment related expenses	1,040	1,071	1,103	1,136
Program operating costs	5,010	5,085	5,162	5,240
General & administrative expenses	18,295	18,875	19,441	20,024
Depreciation	2,288	2,149	1,849	1,851
NYS assessments	13,594	13,594	13,594	13,594
Bond interest and fees	3,448	3,016	2,575	2,137
<b>TOTAL EXPENSES</b>	<b>1,456,782</b>	<b>1,836,743</b>	<b>1,966,438</b>	<b>2,547,125</b>
Net (expense) revenue and change in net position	101,210	53,252	(53,749)	(105,819)
Net position beginning of year	1,693,647	1,794,857	1,848,109	1,794,360
<b>Total net position end of year</b>	<b>\$ 1,794,857</b>	<b>1,848,109</b>	<b>1,794,360</b>	<b>1,688,541</b>

NYSERDA  
 FY 2023-24 Cash-Based Budget  
 (Amounts in thousands)

	<b>Functions/Programs</b>								<b>FY 2023-24 Cash Budget</b>
	Market Development / Innovation & Research	NY Green Bank	NY-Sun	Clean Energy Standard	RGGI	Energy & Environmental Analysis	West Valley	Other	
<b>RECEIPTS:</b>									
State appropriations	\$ -	-	-	75,721	5,110	150	25,800	32,256	139,037
Third party reimbursement	16,000	-	-	-	-	-	2,361	32,382	50,743
Utility surcharge assessments	369,404	-	259,805	-	-	13,832	-	105,342	748,383
Renewable energy credit proceeds	-	-	-	47,141	-	-	-	-	47,141
Zero emission credit payments	-	-	-	189,295	-	-	-	-	189,295
Clean energy standard backstop charge	-	-	-	21,387	-	-	-	-	21,387
Allowance auction proceeds	-	-	-	-	237,518	-	-	-	237,518
Project repayments	-	-	-	-	-	-	-	293	293
Federal grants	-	-	-	-	-	3,183	-	10,598	13,781
Rentals from leases	-	-	-	-	-	-	-	1,011	1,011
Interest income	3,124	16,720	2,849	7,426	11,022	-	-	8,663	49,804
Loan interest	-	28,200	-	-	-	-	-	8,063	36,263
Loan principal repayments	-	124,240	-	-	-	-	-	20,510	144,750
QECB interest subsidy	-	-	-	-	-	-	-	211	211
Fees and other income	-	4,100	-	3,000	-	-	-	194	7,294
<b>TOTAL REVENUES</b>	<b>388,528</b>	<b>173,260</b>	<b>262,654</b>	<b>343,970</b>	<b>253,650</b>	<b>17,165</b>	<b>28,161</b>	<b>219,523</b>	<b>1,686,912</b>
<b>DISBURSEMENTS:</b>									
Salaries and benefits	24,635	11,816	2,739	9,869	11,909	6,980	2,622	10,140	80,710
Program expenditures	373,608	-	263,455	331,267	124,733	7,350	24,460	207,524	1,332,397
Investment related expenses	-	1,040	-	-	-	-	-	-	1,040
Other Operating costs	480	2,541	72	249	32	952	154	530	5,010
General & administrative expenses	5,584	2,666	618	2,245	2,702	1,581	600	2,299	18,295
Capital asset additions	490	235	54	196	237	139	52	201	1,604
Deployed Capital	-	221,710	-	-	-	-	-	-	221,710
Bond interest and fees	-	-	-	-	-	-	-	3,448	3,448
Principal bond payment	-	-	-	-	-	-	-	14,256	14,256
Loan purchases	-	-	-	-	-	-	-	36,214	36,214
NYS Assessments	3,895	176	2,569	3,309	1,343	164	268	1,870	13,594
<b>TOTAL EXPENSES</b>	<b>408,692</b>	<b>240,184</b>	<b>269,507</b>	<b>347,135</b>	<b>140,956</b>	<b>17,166</b>	<b>28,156</b>	<b>276,480</b>	<b>1,728,276</b>
Net (expense) revenue and change in cash position	(20,164)	(66,924)	(6,853)	(3,165)	112,694	(1)	5	(56,957)	(41,365)
Cash and investments, beginning of year	90,785	309,701	82,911	211,186	181,372	3,237	-	233,175	1,112,368
Inter-program transfers	22,000	-	-	-	(36,301)	-	-	14,301	-
Cash and investments, end of year	\$ 92,622	242,777	76,058	208,021	257,766	3,236	5	190,519	1,071,003

Resolution No. \_\_\_\_\_

RESOLVED, that the proposed fiscal year 2023-24 Budget and Financial Plan submitted to the Members for consideration at this meeting, with such non-material, editorial changes and supplementary schedules as the President and Chief Executive Officer, in their discretion, may deem necessary or appropriate, be and it hereby is approved by the Board for submission to the persons designated in Sections 1867(4) and 2801 of the Public Authorities Law.

**WASTE AND FACILITIES  
MANAGEMENT  
COMMITTEE  
(Oral Report)**

**AUDIT AND FINANCE  
COMMITTEE  
(Oral Report)**

**NY GREEN BANK  
(ORAL REPORT)**





**NYSERDA**

**KATHY HOCHUL**  
Governor

**RICHARD L. KAUFFMAN**  
Chair

**DOREEN M. HARRIS**  
President and CEO

**NOTICE OF MEETING AND AGENDA**

January 13, 2023

TO THE MEMBERS OF THE NEW YORK STATE ENERGY RESEARCH AND DEVELOPMENT AUTHORITY:

PLEASE TAKE NOTICE that a regular (the 260<sup>th</sup>) meeting of the New York State Energy Research and Development Authority (“Authority”) will be held at the NY Green Bank Office located at 1333 Broadway, New York, New York, and at 17 Columbia Circle, Albany, New York, on Wednesday, January 25, 2023, commencing at 2:30 p.m., for the following purposes:

**I. *Discussion Agenda***

1. To consider and act upon a resolution to enter into executive session for the purpose of discussing the employment history of a particular person.
2. To receive a report from the Authority’s President and CEO.
3. To receive a report from the Program Planning Committee and to consider and act upon resolutions approving:
  - a. the strategic plan entitled *Toward A Clean Energy Future – A Strategic Outlook 2023-2026*; and
  - b. revisions to the plan entitled *Operating Plan for Investments in New York Under the CO<sub>2</sub> Budget Trading Program and the CO<sub>2</sub> Allowance Auction Program*.
4. To consider and act upon a resolution approving the Authority’s FY 2023-2024 Budget.
5. To receive a report from the Waste and Facilities Management Committee.
6. To receive a report from the Audit and Finance Committee.
7. To receive a report from NY Green Bank.

**II. *Consent Agenda***

1. To consider and act upon a resolution approving:

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**New York State Energy Research and Development Authority**

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**New York City**  
1359 Broadway  
19th Floor  
New York, NY  
10018-7842  
(P) 212-971-5342  
(F) 518-862-1091

**West Valley Site  
Management Program**  
9030-B Route 219  
West Valley, NY  
14171-9500  
(P) 716-942-9960  
(F) 716-942-9961

- a. the periodic contracts report.

**III. *To transact such other business as may properly come before the meeting.***

Members of the public may attend the meeting at any of the above locations or via the video conference which can be accessed at <https://www.nyserda.ny.gov/About/Board-Governance/Board-and-Committee-Meetings>.

The Authority will be posting a video and a transcript of the meeting to the web as soon as practicable after the meeting. The video and transcript will be posted at <http://www.nyserda.ny.gov/About/Board-Governance/Board-and-Committee-Meetings>.

A handwritten signature in blue ink that reads "Peter Costello". The signature is written in a cursive, flowing style.

Peter J. Costello  
Secretary

## Periodic Contracts Approvals

From Date  
8/16/2022

Contracts executed or modified during the period - 8/16/2022  
to 12/15/2022

To Date  
12/15/2022

	Count of Contracts	Committed this Period
Procurement Contracts > 1year	130	\$36.3M
Competitive Program Contracts > \$3M	26	\$166.5M
Grand Total	156	\$202.8M

Contracts anticipated to be executed or modified during the  
period - 8/16/2022 to 12/15/2022

	Count of Contracts	Anticipated Amount
Procurement Contracts > 1year	51	\$34.0M
Competitive Program Contracts > \$3M	7	\$28.8M
Non-competitive Program Contracts > \$1M	0	\$0.0M
Grand Total	58	\$62.8M

**NYSERDA PERIODIC CONTRACTS APPROVAL REPORT: Section 1**  
**Summary - 8/16/2022 to 12/15/2022**

<b>Category</b>	<b>Report Type</b>	<b>Type</b>	<b>Count of Contracts</b>	<b>Committed this period</b>
<b>PCMT</b>	Procurement	Competitive	101	\$33,347,327
		Discretionary	16	\$1,103,247
		Non-Competitive	13	\$1,801,190
	<b>Total</b>		130	\$36,251,763
<b>PGRM</b>	Procurement	Competitive	26	\$166,515,429
		Non-Competitive	0	
	<b>Total</b>		26	\$166,515,429
<b>Grand Total</b>			156	\$202,767,192

**NYSDA PERIODIC CONTRACTS APPROVAL REPORT - 8/16/2022 to 12/15/2022**

Category	Initiative	Type	Term > 1 Year	Contract ID	Contractor	Contract Description	Date	Committed this period	Committed to Date	Amt Paid this Period	Amt Paid to Date
PCMT		Competitive	Y	159181	DNV GL Energy Services USA Inc.	TWO 2 - EIP	10/06/2020	\$98,615	\$98,615		
		Competitive	Y	192890	Kelliher Samets LTD	TWO 8 - Induction Cooking	08/26/2022	\$270,000	\$270,000	\$86,862	\$86,862
		Competitive	Y	193547	Kelliher Samets LTD	TWO 10 - Climate Act Mktg	09/06/2022	\$82,900	\$82,900	\$79,093	\$79,093
		Competitive	Y	194108	Illume Advising LLC	TWO 1 - CJWG Facilitation	09/14/2022	\$200,000	\$200,000	\$27,347	\$27,347
		Competitive	Y	195555	TRC Energy Services	SA.103_TWO #34-IEDR_PM-1	10/06/2022	\$372,582	\$372,582	\$20,608	\$20,608
		Discretionary	Y	198474	Integrated Staffing Corporation	TS.037 - SQA Coordinator	11/21/2022	\$99,045	\$99,045		
Capital Planning		Competitive	Y	196486	Kelliher Samets LTD	TWO 12 - Low Carbon Pathways	10/24/2022	\$12,580	\$12,580		
		Non-Competiti..	Y	194815	Elizabeth Derry Kelly	Two Million Homes Financing	09/26/2022	\$300,000	\$300,000	\$6,113	\$6,113
CI Carbon Challenge		Competitive	Y	ADH0014878	CHA Consulting Inc.	SA.034_TWO#5 - Industrial	11/25/2020	\$189,257	\$339,399	\$20,533	\$134,930
CI Engy Siting & Soft Cost Red		Competitive	Y	191331	Levitan & Associates, Inc.	TWO 4 - Tax Model Tech Support	08/02/2022	\$500,000	\$500,000	\$44,824	\$44,824
		Competitive	Y	194661	TRC Energy Services	SA.102_TWO#32 - CES_PM-2	09/22/2022	\$714,118	\$714,118	\$28,520	\$28,520
Clean Energy Communities		Competitive	Y	197221	Randstad North America, Inc.	TWO #74_Communitis_PM-1	11/03/2022	\$177,450	\$177,450	\$4,778	\$4,778
CLEAN TRANSPORTATION		Competitive	Y	114065	Center for Sustainable Energy	Centralized Services & Support	05/25/2017	\$150,000	\$1,894,633	\$357,000	\$1,032,841
Cleantech ICC Engage		Competitive	Y	160596	Randstad North America, Inc.	Payroll Services_Innovation	11/09/2020	\$15,850	\$321,747	\$46,274	\$319,615
Cleantech Ignition		Competitive	Y	151220	Mintz, Levin, Cohn, Ferris, Glovsky and	RFP 12 - NYGB Legal Services	02/11/2020	\$12,607	\$87,858	\$12,607	\$87,858
		Competitive	Y	194660	Booz Allen Hamilton, Inc.	TWO16 T2M	09/22/2022	\$1,000,000	\$1,000,000		
Cleantech Incubator		Competitive	Y	159390	Willdan Energy Solutions	SA.062a_TWO#4 Tech to Market	10/09/2020	\$9,848	\$338,528	\$35,716	\$338,001
Code to Zero		Competitive	Y	104542	The Cadmus Group, LLC	RFQ3183 Umbrella Agreement	10/05/2016	\$144,114	\$2,545,858	\$117,032	\$2,323,222
		Competitive	Y	191813	New Buildings Institute, Inc.	TWO #7 NBI Contractor Support	08/09/2022	\$250,000	\$250,000		
		Competitive	Y	192889	Battelle Memorial Institute	TWO #4 DOS DBSC Staff Support	08/26/2022	\$250,000	\$250,000		
		Competitive	Y	198245	Battelle Memorial Institute	Modeling & Cost Methodology	11/17/2022	\$234,267	\$234,267		
Consumer Ed and Market Support		Competitive	Y	175999	Kelliher Samets LTD	TWO#45 SFR	10/22/2021	\$50,000	\$1,270,000	\$375,725	\$483,119
ENERGY ANALYSIS		Competitive	Y	135251	Industrial Economics, Incorporated	TWO 1 EE Supply Curve Analysis	12/17/2018	\$50,000	\$508,668		\$457,254
		Competitive	Y	147152	TRC Energy Services	SA.053a_TWO #20 - EEA	11/05/2019	\$72,150	\$567,706	\$56,508	\$460,052
		Competitive	Y	161130	The Cadmus Group, LLC	TWO #10 Climate Facilitation	11/19/2020	\$169,000	\$1,414,072	\$223,242	\$1,194,985
		Competitive	Y	182702	The Cadmus Group, LLC	TWO #1 BEEM Revision	03/15/2022	\$350,000	\$350,000	\$8,367	\$8,367
		Competitive	Y	190918	Energy and Environmental Economics Inc.	TWO #6 Complement Analysis	07/27/2022	\$689,252	\$989,252	\$458,187	\$458,187
		Competitive	Y	192297	Integrated Staffing Corporation	TS.032 - EEA_Coordinator	08/17/2022	\$149,526	\$149,526	\$17,560	\$17,560
		Competitive	Y	ADH0014695	TRC Energy Services	SA.018_TWO #11_EEA_PM	02/25/2021	\$124,527	\$124,527	\$0	\$0

NYSERDA PERIODIC CONTRACTS APPROVAL REPORT - 8/16/2022 to 12/15/2022

Category	Initiative	Type	Term > 1 Year	Contract ID	Contractor	Contract Description	Date	Committed this period	Committed to Date	Amt Paid this Period	Amt Paid to Date
PCMT	ENERGY ANALYSIS	Non-Competiti..	Y	156808	Abt Associates Inc.	TWO 2 formerly 30191 TWO #5	08/10/2020	\$248,441	\$453,204	\$61,337	\$265,637
	Energy Storage Tech/Prod Dev	Competitive	Y	190928	Booz Allen Hamilton, Inc.	TWO 12 Hydrogen & Clean Fuels	07/27/2022	\$1,736,356	\$1,736,356		
		Competitive	Y	190929	Booz Allen Hamilton, Inc.	TWO 13 Renewable Opt & Storage	07/27/2022	\$1,448,004	\$1,448,004		
		Competitive	Y	192002	Kearns & West, Inc.	TWO 12-H2 Stakeholder Engagemen	08/11/2022	\$125,000	\$125,000	\$121,697	\$121,697
	ENVIRONMENTAL RESEARCH	Competitive	Y	139864	Abt Associates Inc.	TWO#1 Pathways Health	05/02/2019	\$60,000	\$525,000	\$96,244	\$434,123
		Competitive	Y	154274	Tetra Tech, Inc.	PON 4270 PV Site Design	05/19/2020	\$14,695	\$247,695	\$27,402	\$148,083
		Competitive	Y	156225	Fund for Public Health in New York, Inc.	Assessment for Energy Policy	07/27/2020	\$36,800	\$310,700	\$31,816	\$171,345
		Competitive	Y	191328	NESCAUM	TWO 15 In-situ An of Wood Heat	08/02/2022	\$525,000	\$525,000		
		Competitive	Y	195228	The Cadmus Group, LLC	TWO 14 - Heat Adaptation Plan	10/04/2022	\$800,000	\$800,000	\$9,478	\$9,478
	Eval MDCDC EE Master Soft Cost	Competitive	Y	137083	The Cadmus Group, LLC	TWO#4 Soft Cost study	02/12/2019	\$158,012	\$812,898	\$29,524	\$564,608
	Eval MDCDC: CEF-NENY Support	Discretionary	Y	196411	Firefly Energy Consulting, LLC	Supp ClnEney Interim Review	10/20/2022	\$60,000	\$60,000		
	Future Grid Perf. Challenges	Competitive	Y	190927	Booz Allen Hamilton, Inc.	TWO 11 Grid Modernization	07/27/2022	\$1,736,356	\$1,736,356		
	Home Perf w Energy Star	Competitive	Y	107771	CLEAResult Consulting, Inc.	Centralized Services & Support	12/08/2016	\$10,000	\$15,410,989	\$1,408,542	\$14,625,245
	Industrial Process Effic	Competitive	Y	121104	CHA Consulting Inc.	Outreach Support	11/29/2017	\$200,000	\$1,960,060	\$58,321	\$1,679,917
	Innovation	Competitive	Y	198797	TRC Energy Services	SA.106_TWO#38-Innovation_BA	11/25/2022	\$468,090	\$468,090		
	K-12 SCHOOLS	Competitive	Y	191422	Illume Advising LLC	TWO #3 - P-12 Schools Work Pla	08/03/2022	\$495,358	\$495,358	\$20,925	\$20,925
	Market Tests	Competitive	Y	198807	Kelliher Samets LTD	TWO 21 - Multifamily Program	11/28/2022	\$21,060	\$21,060		
	Multifam New Construction	Non-Competiti..	Y	165541A	DNV Energy Insights USA Inc.	TWO 2 - New Construction Eval	07/13/2021	\$103,800	\$103,800		
	Multifam Performance Pgm	Competitive	Y	ADH0014394	TRC Energy Services	SA.014_TWO #7_MF_PM	02/25/2021	\$135,775	\$296,343	\$37,730	\$123,632
		Competitive	Y	ADH0014395	TRC Energy Services	SA.016_TWO #8_MF_APM	02/25/2021	\$23,434	\$82,689	\$0	\$0
		Competitive	Y	ADH0014399	TRC Energy Services	SA.017_TWO #9_MF_APM	02/25/2021	\$186,791	\$364,518	\$74,666	\$152,984
		Discretionary	Y	129937	TRC Energy Services	Program Tool Services for MPP	08/10/2018	\$50,000	\$100,000	\$2,562	\$52,526
	Net Zero Energy for Eco Dev	Competitive	Y	180891	South Front Street Holdings LLC	New Construction CNPD	02/07/2022	\$1,503,675	\$1,503,675		
	New Construction Housing	Competitive	Y	166994	New Buildings Institute, Inc.	BoE Rnd.1 Perform. Validation	04/13/2021	\$48,839	\$293,032	\$3,825	\$144,562
		Competitive	Y	192658	EME Consulting Engineering Group, LLC	SA.098 - New Con_PM-1	08/23/2022	\$965,094	\$965,094	\$37,013	\$37,013
		Competitive	Y	192664	EME Consulting Engineering Group, LLC	SA.099 - New Construction_PM-1	08/23/2022	\$965,094	\$965,094	\$20,755	\$20,755
		Competitive	Y	195092	TRC Energy Services	SA.040_TWO#33-New Con_PM-1	09/29/2022	\$133,754	\$133,754		
		Competitive	Y	198050	TRC Energy Services	SA.040_TWO #36-New Con_PM-1	11/16/2022	\$104,646	\$104,646		
		Competitive	Y	198051	TRC Energy Services	SA.040_TWO #37-New Con_PM-1	11/16/2022	\$48,242	\$48,242		

NYSERDA PERIODIC CONTRACTS APPROVAL REPORT - 8/16/2022 to 12/15/2022

Category	Initiative	Type	Term > 1 Year	Contract ID	Contractor	Contract Description	Date	Committed this period	Committed to Date	Amt Paid this Period	Amt Paid to Date
PCMT	New Construction Housing	Non-Competiti..	Y	190327	Passive House Accelerator LLC	PHA Event sponsorship	07/19/2022	\$50,000	\$50,000	\$16,800	\$16,800
	New Construction-Commercial	Competitive	Y	196981	TRC Engineers, Inc.	TWO #1 New Con Shared Services	11/01/2022	\$50,000	\$50,000		
		Non-Competiti..	Y	152645	New Buildings Institute, Inc.	CNB Roadmap Writing	03/17/2020	\$140,942	\$725,000		\$362,542
NEW YORK GREEN BANK		Competitive	Y	149695	Holland & Knight LLP	RFP 12 - NYGB Legal Services	12/31/2019	\$211,810	\$689,601	\$205,322	\$629,167
		Competitive	Y	149696	Nixon Peabody LLP	RFP 12 - NYGB Legal Services	12/31/2019	\$50,000	\$235,842	\$50,000	\$235,842
		Non-Competiti..	Y	98838	DealCloud Inc.	DealCloud Licensing	05/24/2016	\$3,848	\$614,326		\$610,378
		Non-Competiti..	Y	153693	Adviser Compliance Associates, LLC	ACA - PPP Compliance Assistanc	04/24/2020	\$10,000	\$60,000	\$14,087	\$58,988
NYCH: Comfort Home		Competitive	Y	148531	TRC Energy Services	Comfort Home Implementation	12/07/2019	\$150,000	\$1,137,979	\$246,716	\$945,991
NYCH: Critical Tools		Competitive	Y	197785	Kelliher Samets LTD	TWO 14 - Heat Pump Planner	11/10/2022	\$98,625	\$98,625		
NYCH: District		Competitive	Y	193358	Hodgson Russ LLP	TWO 2 - Comm HP Const Projects	09/01/2022	\$30,000	\$30,000		
NYSERDA ADMINISTRATION		Competitive	Y	109917	BDO USA LLP	Background Investigation Servi	02/07/2017	\$18,200	\$205,970	\$18,200	\$196,770
		Competitive	Y	152081	ADP, Inc.	ADP Payroll and HR Services	03/03/2020	\$22,000	\$232,104	\$22,227	\$196,489
		Competitive	Y	159691	CVENT, Inc.	Event Management/Virtual Event	10/19/2020	\$21,465	\$211,740	\$21,465	\$172,689
		Competitive	Y	159710	TRC Energy Services	SA.069_TWO#19 - Contracts	10/20/2020	\$309,264	\$602,193	\$46,342	\$296,807
		Competitive	Y	161628	Randstad North America, Inc.	Payroll Services_SS APM	12/04/2020	\$218,010	\$405,600	\$32,900	\$171,858
		Competitive	Y	173006	Tech Valley Talent, LLC	TWO #12 Project Mgr GIS, Brad	08/20/2021	\$181,350	\$362,700	\$64,639	\$200,673
		Competitive	Y	173007	Tech Valley Talent, LLC	TWO #11 Info Security Services	08/20/2021	\$204,750	\$395,850	\$63,575	\$221,687
		Competitive	Y	174853	Tech Valley Talent, LLC	TWO #14 Salesforce BA - Robles	09/30/2021	\$218,400	\$436,800	\$66,867	\$215,647
		Competitive	Y	176209	Technology Professionals Group Inc.	TWO #1 Salesforce PM Kerollos	10/27/2021	\$224,250	\$448,500	\$72,680	\$238,280
		Competitive	Y	178422	Tech Valley Talent, LLC	TWO #16 Technical BA - Garrett	12/13/2021	\$194,025	\$388,050	\$79,208	\$176,836
		Competitive	Y	179242	Tech Valley Talent, LLC	TWO #17 .Net Software Dev.	01/04/2022	\$182,325	\$364,650	\$78,331	\$165,779
		Competitive	Y	191998	Tech Valley Talent, LLC	TWO #22 Software QA - Adnan	08/11/2022	\$130,000	\$130,000	\$19,142	\$19,142
		Competitive	Y	191999	Tech Valley Talent, LLC	TWO #23 Software QA Shaun H	08/11/2022	\$130,000	\$130,000	\$22,379	\$22,379
		Competitive	Y	192760	NEPC, LLC	Investment Advisory Services	08/24/2022	\$135,000	\$135,000		
		Competitive	Y	192880	Unique Comp Inc.	TWO #8 Tableau Dev. Yogi P	08/25/2022	\$204,360	\$204,360	\$30,654	\$30,654
		Competitive	Y	192881	ESRI, Incorporated	ArcGIS Desktop and Server 1yr	08/25/2022	\$20,200	\$20,200	\$20,200	\$20,200
		Competitive	Y	193166	ePlus inc	VMware Support Renewal 22-23	08/30/2022	\$84,428	\$84,428	\$84,428	\$84,428
		Competitive	Y	193175	SHI, Inc.	Tenable License 1 year	08/31/2022	\$41,484	\$41,484	\$41,484	\$41,484
		Competitive	Y	193351	Tech Valley Talent, LLC	TWO # 24 Server Ops Ahmed Hamm	09/01/2022	\$185,250	\$185,250	\$31,904	\$31,904

NYSERDA PERIODIC CONTRACTS APPROVAL REPORT - 8/16/2022 to 12/15/2022

Category	Initiative	Type	Term > 1 Year	Contract ID	Contractor	Contract Description	Date	Committed this period	Committed to Date	Amt Paid this Period	Amt Paid to Date
PCMT	NYSERDA ADMINISTRATION	Competitive	Y	194821	Tech Valley Talent, LLC	TWO #25 Service Desk Tech.	09/26/2022	\$97,500	\$97,500		
		Competitive	Y	196180	22nd Century Technologies, Inc.	TWO #3 Service Desk Tech.Jame	10/18/2022	\$84,825	\$84,825	\$1,958	\$1,958
		Competitive	Y	196316	Gartner Inc.	Gartner 2023 Renewal	10/19/2022	\$42,301	\$42,301		
		Competitive	Y	196688	Carahsoft Technology Corporation	Salesforce Licensing 2023	10/27/2022	\$1,423,966	\$1,423,966		
		Competitive	Y	196982	Zones LLC	SMARTnet - Maintenance FY 23	11/01/2022	\$22,287	\$22,287	\$22,287	\$22,287
		Competitive	Y	197787	Info-Tech Research Group Inc.	Info-Tech Research Group 1yr	11/10/2022	\$44,030	\$44,030	\$44,030	\$44,030
		Competitive	Y	198150	TRC Engineers, Inc.	TWO #3 Call Center SS	11/17/2022	\$674,962	\$674,962		
		Discretionary	Y	141800	Employee Leasing of Greater NY	TS016_Marketing	06/25/2019	\$31,000	\$262,000	\$12,665	\$185,197
		Discretionary	Y	161086	Randstad North America, Inc.	TS.018 - Marketing _APM	11/18/2020	\$81,081	\$222,264	\$25,052	\$120,734
		Discretionary	Y	163305	Promantek Inc.	Employee Web-based tool	01/14/2021	\$4,281	\$46,590		\$28,206
		Discretionary	Y	174625	OwnBackup Inc.	Own backupSalesforce.KeyMgt.	09/27/2021	\$4,590	\$40,667	\$4,590	\$40,667
		Discretionary	Y	193367	New York State Forum for IRM	NYS Forum Membership 22 – 23	09/02/2022	\$5,500	\$5,500		
		Discretionary	Y	193914	Walrath Recruiting, Inc.	TS.035 - Financing Sol_Analyst	09/12/2022	\$380,250	\$380,250	\$1,950	\$1,950
		Discretionary	Y	194008	ThunderCat Technology LLC	Atlassian Licenses – Jira 2022	09/13/2022	\$44,064	\$44,064	\$44,064	\$44,064
		Discretionary	Y	197684	ThunderCat Technology LLC	Checkmarx licensing/ support	11/10/2022	\$65,050	\$65,050	\$65,050	\$65,050
		Discretionary	Y	198148	OwnBackup Inc.	Own backup for Salesforce, Key	11/16/2022	\$49,847	\$49,847	\$49,847	\$49,847
		Discretionary	Y	199078	ThunderCat Technology LLC	DocuSign Subscription 2023	11/30/2022	\$131,584	\$131,584		
		Non-Competiti..	Y	157686	inMotion, Inc.	inMotion Subscription	09/02/2020	\$1,583	\$94,807	\$34,567	\$94,807
		Non-Competiti..	Y	171657	NYS Office for Technology	Office 365: 4/2021 - 3/2022	07/21/2021	\$3,296	\$175,364	\$44,486	\$175,364
		Non-Competiti..	Y	192219	Astron Solutions LLC	Pay Equity Study	08/16/2022	\$99,000	\$99,000	\$33,000	\$33,000
Non-Competiti..	Y	195899	Terri Hartwell Easter Consulting LLC	DEI Consultant - TH Easter	10/12/2022	\$192,000	\$192,000	\$36,720	\$36,720		
OREC: Technical Support		Competitive	Y	175173	Worley Group, Inc.	Determination Study Buy Americ	10/07/2021	\$140,000	\$321,400	\$120,698	\$284,881
		Competitive	Y	197340	Bond, Schoeneck & King, PLLC	TWO 8 - Labor Law Matters	11/04/2022	\$50,000	\$50,000		
		Discretionary	Y	189442	Kearns & West, Inc.	TWO #2 Agmt No. 140392	07/07/2022	\$49,954	\$49,954	\$10,904	\$10,904
OTHER PROGRAM AREA		Competitive	Y	190925	Booz Allen Hamilton, Inc.	TWO 9 Climate Resilience	07/27/2022	\$724,002	\$724,002		
		Competitive	Y	190926	Booz Allen Hamilton, Inc.	TWO 10 Negative Emissions Tech	07/27/2022	\$1,592,180	\$1,592,180		
		Discretionary	Y	194122	DIBD NYC Inc.	2022 Danish/NYSERDA Event	09/15/2022	\$12,000	\$12,000	\$12,000	\$12,000
		Non-Competiti..	Y	192897	University System of New Hampshire	Resilience Underwriting Tool	08/26/2022	\$500,000	\$500,000		
REC:CES REC System Dev Costs		Competitive	Y	143059	Fusco Personnel, Inc.	TS.007 - LSR_Office Admin	07/30/2019	\$62,400	\$258,471	\$17,328	\$177,558



**NYSDA PERIODIC CONTRACTS APPROVAL REPORT - 8/16/2022 to 12/15/2022**

Category	Initiative	Type	Term > 1 Year	Contract ID	Contractor	Contract Description	Date	Committed this period	Committed to Date	Amt Paid this Period	Amt Paid to Date
PCMT	REC.CES REC System Dev Costs	Competitive	Y	199620	Sive Paget & Riesel PC	TWO 6 - Tier 1 REC Agreement	12/08/2022	\$30,000	\$30,000		
	Retrofit NY	Competitive	Y	196160	Kelliher Samets LTD	TWO 9 - RetrofitNY	10/17/2022	\$59,000	\$59,000		
		Non-Competiti..	Y	194822	Bureau Door	Bureau Door Knowledge Sharing	09/26/2022	\$148,280	\$148,280		
	Rmve Barriers Dist Energy Storg	Competitive	Y	159704	Wadsworth Energy LLC	TWO #2 MDIWG Support	10/20/2020	\$50,000	\$125,000	\$13,050	\$68,160
	Statewide EE&BE PotentialStudy	Competitive	Y	174807	The Cadmus Group, LLC	TWO 12 StWide Potential Study	09/29/2021	\$100,000	\$989,862	\$127,141	\$772,123
	Strategic Energy Manager	Competitive	Y	198794	EME Consulting Engineering Group, LLC	SA.034_TWO#20-Industrial_PM-1	11/25/2022	\$97,969	\$97,969		
		Competitive	Y	ADH0014470	CHA Consulting Inc.	SA.019_TWO#1 - Industrial	11/20/2020	\$376,362	\$678,710	\$51,237	\$254,409
		Competitive	Y	ADH0014842	TRC Energy Services	SA.026a_TWO#13 - EPE	11/19/2020	\$410,000	\$756,403	\$73,786	\$306,480
		Competitive	Y	ADH0014876	CHA Consulting Inc.	SA.031_TWO#3 - Industrial	11/24/2020	\$252,370	\$409,870	\$28,481	\$138,732
		Competitive	Y	ADH0014877	CHA Consulting Inc.	SA.035_TWO#4 - EPE	11/20/2020	\$197,000	\$365,695	\$31,349	\$144,329
	Subscription/Data Access	Discretionary	Y	183154	ACEEE	Industrial Heat Pump Phase 2	03/23/2022	\$35,000	\$35,000	\$17,500	\$17,500
	Thermal Energy Storage	Competitive	Y	190924	Booz Allen Hamilton, Inc.	TWO 8 Buildings Innov	07/27/2022	\$2,896,008	\$2,896,008		
	WEST VALLEY DEVELOPMENT PROGRAM	Competitive	Y	155706A	JR & SONS EXCAVATING INC.	Ops and Maintenance	06/30/2022	\$1,841,601	\$1,841,601	\$608,336	\$608,336
Competitive		Y	193896	Highland Planning LLC	WEST VALLEY DEVELOPMENT PROGRAM	09/12/2022	\$474,652	\$474,652	\$16,780	\$16,780	
PGRM	Clean Energy Hub	Competitive	Y	184800	Cornell Cooperative Extension of Nassau	Long Island Clean Energy Hub	04/25/2022	\$3,373,238	\$3,373,238	\$337,323	\$337,323
		Competitive	Y	193634	TFR Holdings Corp	Electric Microtransit in LI	09/07/2022	\$7,000,000	\$7,000,000		
	Clean Energy Communities	Competitive	Y	155908	Central New York Regional Planning and	Clean Energy Communities	07/17/2020	\$1,983,292	\$3,484,811	\$236,236	\$1,043,489
	Clean Energy Hub	Competitive	Y	184661	Cornell Cooperative Extension - Tompkins	Regional Clean Energy Hub	04/21/2022	\$3,232,740	\$3,232,740	\$17,833	\$17,833
		Competitive	Y	184664	Climate Solutions Accelerator of the	Regional Clean Energy Hub	04/21/2022	\$3,285,014	\$3,285,014	\$331,076	\$331,076
		Competitive	Y	184665	Adirondack North Country Association	Regional Clean Energy Hub	04/21/2022	\$3,549,404	\$3,549,404	\$354,940	\$354,940
		Competitive	Y	184794	Affordable Housing Partnership	Regional Clean Energy Hub	04/25/2022	\$3,038,546	\$3,038,546	\$303,854	\$303,854
		Competitive	Y	184796	Cornell Cooperative Ext. Dutchess County	Regional Clean Energy Hub	04/25/2022	\$3,447,627	\$3,447,627		
		Competitive	Y	184798	Neighborhood Housing Services Staten Isl	Regional Clean Energy Hub	04/25/2022	\$5,423,726	\$5,423,726		
		CLEAN TRANSPORTATION	Competitive	Y	168772	ChargePoint, Inc.	DCFC - VW Settlement	05/24/2021	\$1,493,102	\$7,012,396	
	Cleantech POCC	Competitive	Y	141799	New Energy Nexus New York LLC	Cleantech Accelerator	06/25/2019	\$4,000,000	\$10,375,000	\$402,000	\$5,784,050
		Competitive	Y	182700	New Energy Nexus New York LLC	PON4856 Empire Tech Prize	03/15/2022	\$9,500,000	\$9,500,000	\$325,000	\$325,000
	Electric Vehicles - Innovation	Competitive	Y	193639	Krueger Transport LLC	Fuel Cell Bus Project	09/07/2022	\$8,000,000	\$8,000,000		
EVPRZ.Clean MD & HD Veh Innov	Competitive	Y	193633	NYC School Bus Umbrella Services Inc.	Electrifying School Buses	09/07/2022	\$8,000,000	\$8,000,000			
	Competitive	Y	193640	Calstart	FEaST Project	09/07/2022	\$8,000,000	\$8,000,000			

**NYSDA PERIODIC CONTRACTS APPROVAL REPORT - 8/16/2022 to 12/15/2022**

Category	Initiative	Type	Term > 1 Year	Contract ID	Contractor	Contract Description	Date	Committed this period	Committed to Date	Amt Paid this Period	Amt Paid to Date
PGRM	EVPRZ:Clean Personal Mobility	Competitive	Y	193631	Tompkins Consolidated Area Transit Inc	Ithaca Electric Transportation	09/07/2022	\$7,000,000	\$7,000,000		
		Competitive	Y	193636	Innoenergy USA, LLC	Project MOVER	09/07/2022	\$7,000,000	\$7,000,000		
	EVPRZ:EJ Comm Clean Veh Trans	Competitive	Y	193632	Volvo Technology of America, LLC	The Bronx Is Breathing	09/07/2022	\$10,000,000	\$10,000,000		
		Competitive	Y	193637	Dollaride, Inc.	Clean Transit Access Program	09/07/2022	\$10,000,000	\$10,000,000		
		Competitive	Y	193638	Local Initiatives Support Corporation	Buffalo Clean Mobility Future	09/07/2022	\$10,000,000	\$10,000,000		
	HCR Direct Injection	Competitive	Y	177056	Housing Trust Fund Corporation	HCR 2021	11/15/2021	\$25,000,000	\$32,500,000	\$6,387,500	\$13,887,500
	Home Perf w Energy Star	Competitive	Y	186724	DirectApps Inc	RFP4886 RES Market Engagement	05/26/2022	\$4,188,740	\$4,188,740	\$655,841	\$655,841
	NYCH: Empire Build Challenge	Competitive	Y	178606	Empire State Realty Trust, Inc.	EBC Phase 2 - ESRT	12/16/2021	\$5,000,000	\$5,000,000		
		Competitive	Y	178607	Trinity Hudson Holdings, LLC	EBC Phase 2 - Trinity Hudson	12/16/2021	\$5,000,000	\$5,000,000		
		Competitive	Y	178680	WY Manor LP	EBC Phase 2 - WY Manor LP Omni	12/17/2021	\$5,000,000	\$5,000,000		
Competitive		Y	178681	Heritage Holdings, LLC	EBC Phase 2 -Heritage Holdings	12/17/2021	\$5,000,000	\$5,000,000			
<b>Grand Total</b>								<b>\$202,767,192</b>	<b>\$260,262,395</b>	<b>\$16,318,741</b>	<b>\$58,347,057</b>

**NYSERDA PERIODIC CONTRACTS APPROVAL REPORT: Contractor Addresses - 8/16/2022 to 12/15/2022**

Contractor	SupplierAddress	SupplierCity	SupplierState	SupplierZipCode	Business Type	WBE	MBE	SDVOB	SBE
22nd Century Technologies, Inc.	220 Davidson Ave., Ste 118	Somerset	NJ	08873	FSBE				
Abt Associates Inc.	6130 Executive Boulevard	Rockville	MD	20852	FSBE				
ACEEE	529 14th St. NW, Suite 600	Washington	DC	20045	FSBE				
Adirondack North Country Association	67 Main Street, Suite 201	Saranac Lake	NY	12983	NYSBE				
ADP, Inc.	PO Box 842875	Boston	MA	02284-2875	FSBE				
Adviser Compliance Associates, LLC	1370 Braodway	New York	NY	10018	NYSBE				
Affordable Housing Partnership	255 Orange St	Albany	NY	12210-2400	NYSBE				
Astron Solutions LLC	508 8th Ave	New York	NY	10018	NYSBE				
Battelle Memorial Institute	902 Battelle Blvd	Richland	WA	99352	FSBE				
BDO USA LLP	PO Box 642743	Pittsburgh	PA	15264-2743	FSBE				
Bond, Schoeneck & King, PLLC	22 Corporate Woods Blvd., Ste 501	Albany	NY	12211-2503	NYSBE				
Booz Allen Hamilton, Inc.	8283 Greensboro Dr	McLean	VA	22102	FSBE				
Bureau Door		Amsterdam		1013 XG	FSBE				
Calstart	48 S Chester Avenue	Pasadena	CA	91106	FSBE				
Carahsoft Technology Corporation	11493 Sunset Hills Road	Reston	VA	20190	FSBE				
Center for Sustainable Energy	3980 Sherman St., Ste 170	San Diego	CA	92110	FSBE				
Central New York Regional Planning and	Development Board	Syracuse	NY	13202-1065	NYSBE				
CHA Consulting Inc.	3 Winners Circle	Albany	NY	12205	NYSBE				
ChargePoint, Inc.	254 East Hacienda Avenue	Campbell	CA	95008	FSBE				
CLEAResult Consulting, Inc.	4301 Westbank Dr., A-150	Austin	TX	78746	FSBE				
Climate Solutions Accelerator of the	Genesee-Finger Lakes Region	Rochester	NY	14620	NYSBE				
Cornell Cooperative Ext. Dutchess County	2715 Rte. 44 Suite 1	Millbrook	NY	12545	NYSBE				
Cornell Cooperative Extension - Tompkins	615 Willow Ave	Ithaca	NY	14850-3555	NYSBE				
Cornell Cooperative Extension of Nassau	P.O. Bo 148	East Meadow	NY	11554	NYSBE				
CVENT, Inc.	1765 Greensboro Station Pl	Mc Lean	VA	22102-3467	FSBE				
DealCloud Inc.	300 S. Tryon St., Suite 1200	Charlotte	NC	28202	FSBE				
DIBD NYC Inc.	Danish Cleanted Hug	Brooklyn	NY	11201	NYSBE				
DirectApps Inc	3009 Douglas Blvd, Suite 200	Roseville	CA	95661	FSBE				
DNV Energy Insights USA Inc.	1400 Ravello Drive	Katy	TX	77449	FSBE				
DNV GL Energy Services USA Inc.	67 South Bedford St., Ste 201E	Burlington	MA	01803	FSBE				

NYSERDA PERIODIC CONTRACTS APPROVAL REPORT: Contractor Addresses - 8/16/2022 to 12/15/2022

Contractor	SupplierAddress	SupplierCity	SupplierState	SupplierZipCode	Business Type	WBE	MBE	SDVOB	SBE
Dollaride, Inc.	84 Chauncey Street #1S	Brooklyn	NY	11233	NYSBE				
Elizabeth Derry Kelly	EDK Solutions LLC	Brooklyn	NY	11215	NYSBE				
EME Consulting Engineering Group, LLC	550 Seventh Avenue 10th Floor	New York	NY	10018	NYSBE				
Empire State Realty Trust, Inc.	111 West 33rd Street	New York	NY	10120	NYSBE				
Employee Leasing of Greater NY	2137 Router 35 Suite 160	Holmdel	NJ	07733	FSBE		X	X	
Energy and Environmental Economics Inc.	2401 E Katella Ave.	Anaheim	CA	92806	FSBE				
ePlus inc	13595 Dulles Technology Dr	Herndon	VA	20171-3413	FSBE				
ESRI, Incorporated	380 New York Street	Redlands	CA	92373	FSBE				
Firefly Energy Consulting, LLC	4227 Calculus Dr.	Dallas	TX	75244	FSBE	X			
Fund for Public Health in New York, Inc.	22 Cortlandt Street, Suite #802	New York	NY	10007	NYSBE				
Fusco Personnel, Inc.	4 Executive Park Dr Ste B	Albany	NY	12203-3718	NYSBE	X			
Gartner Inc.	56 Top Gallant Rd	Stamford	CT	06902	FSBE				
Heritage Holdings, LLC	1865 Palmer Ave	Larchmont	NY	10538	NYSBE				
Highland Planning LLC	17 Mulberry Street	Rochester	NY	14620	NYSBE				
Hodgson Russ LLP	140 Pearl Street, Suite 100	Buffalo	NY	14202	NYSBE				
Holland & Knight LLP	PO Box 864084	Orlando	FL	32886	FSBE				
Housing Trust Fund Corporation	38-40-State Street	Albany	NY	12207	NYSBE				
Illume Advising LLC	440 Science Dr., Suite 202	Madison	WI	53711	FSBE	X			
Industrial Economics, Incorporated	2067 Massachusetts Avenue	Cambridge	MA	02140	FSBE				
Info-Tech Research Group Inc.	3960 Howard Hughes Parkway, Suite 500	Las Vegas	NV	89169	FSBE				
inMotion, Inc.	d/b/a Lytho Inc	Atlanta	GA	30384-4276	FSBE				
Innoenergy USA, LLC	444 Somerville Avenue	Somerville	MA	02143	FSBE				
Integrated Staffing Corporation	463 Maple Avenue	Saratoga Springs	NY	12866	NYSBE	X			
JR & SONS EXCAVATING INC.	3715 SCHOOL ST	EDEN	NY	14057	NYSBE				
Kearns & West, Inc.	1990 K Street Inc	Washington	DC	20006	FSBE				
Kelliher Samets LTD	d/b/a KSV	Burlington	VT	05401	FSBE	X			
Krueger Transport LLC	1237 S. Val Visa Drive	Mesa	AZ	85204	FSBE				
Levitan & Associates, Inc.	20 Custom House Street	Boston	MA	02110	FSBE				
Local Initiatives Support Corporation	28 Liberty Street, 34th Floor	New York	NY	10005	NYSBE				
Mintz, Levin, Cohn, Ferris, Glovsky and	One Financial Center	Boston	MA	02111	FSBE				

**NYSDA PERIODIC CONTRACTS APPROVAL REPORT: Contractor Addresses - 8/16/2022 to 12/15/2022**

Contractor	SupplierAddress	SupplierCity	SupplierState	SupplierZipCode	Business Type	WBE	MBE	SDVOB	SBE
Neighborhood Housing Services Staten Isl	192 Corson Avenue	Staten Island	NY	10301	NYSBE				
NEPC, LLC	255 State Street	Boston	MA	02109	FSBE				
NESCAUM	89 South Street	Boston	MA	02111	FSBE				
New Buildings Institute, Inc.	623 SW Oak Street	Portland	OR	97205	FSBE				
New Energy Nexus New York LLC	298 Garfield Place #3	Brooklyn	NY	11215	NYSBE				
New Leaf Energy, Inc.	55 Technology Dr	Lowell	MA	01851	FSBE				
New York State Forum for IRM	24 Aviation Rd., Suite 206	Albany	NY	12205	NYSBE				
Nixon Peabody LLP	1300 Clinton Square	Rochester	NY	14604	NYSBE				
NYC School Bus Umbrella Services Inc.	NYCSBUS	Brooklyn	NY	11222	NYSBE				
NYS Office for Technology	1 S Swan St Fl 3rd	Albany	NY	12210-2416	NYSBE				
OwnBackup Inc.	940 Sylvan Ave FL 1	Englewood Cliffs	NJ	07632	FSBE				
Passive House Accelerator LLC	20 Vesey Street # 900	New York	NY	10007	NYSBE				
Promantek Inc.	d/b/a TrakStar	Seattle	WA	98122	FSBE				
Randstad North America, Inc.	PO Box 2084	Carol Stream	IL	60132-2084	FSBE	X			
SHI, Inc.	P.O. Box 952121	Dallas	TX	75395	FSBE				
Sive Paget & Riesel PC	560 Lexington Ave., Floor 15	New York	NY	10022-1994	NYSBE				
South Front Street Holdings LLC	550 Biltmore Way	Coral Gables	FL	33134	FSBE				
Tech Valley Talent, LLC	20 Prospect St. Suite 200, Building 1	Ballston Spa	NY	12020	NYSBE	X			
Technology Professionals Group Inc.	D/B/A Cloud and Things	Loudonville	NY	12211	NYSBE	X	X		
Terri Hartwell Easter Consulting LLC	1875 K Street NW	Washington	DC	20006	FSBE				
Tetra Tech, Inc.	6410 Enterprise Lane	Madison	WI	53719	FSBE				
TFR Holdings Corp	360 Montauk Hwy	Wainscott	NY	11975	NYSBE				
The Cadmus Group, LLC	410Totten Pond Road	Waltham	MA	02451	FSBE				
ThunderCat Technology LLC	1925 Isaac Newton Square	Reston	VA	20190	FSBE			X	
Tompkins Consolidated Area Transit Inc	737 Willow Ave	Ithaca	NY	14850-3214	NYSBE				
TRC Energy Services	21 Griffin Rd North	Windsor	CT	06095	FSBE				
TRC Engineers, Inc.	21 Griffin Rd North	Windsor	CT	06095	FSBE				
Trinity Hudson Holdings, LLC	345 Hudson Street	New York	NY	10014	NYSBE				
Unique Comp Inc.	2708 42nd Road	Long Island City	NY	11101	NYSBE	X	X		
University System of New Hampshire	51 College Rd	Durham	NH	03824	FSBE				

**NYSERDA PERIODIC CONTRACTS APPROVAL REPORT: Contractor Addresses - 8/16/2022 to 12/15/2022**

Contractor	SupplierAddress	SupplierCity	SupplierState	SupplierZipCode	Business Type	WBE	MBE	SDVOB	SBE
<b>Volvo Technology of America, LLC</b>	7900 National Service Road, AP1 3/41	Greensboro	NC	27409	FSBE				
<b>Wadsworth Energy LLC</b>	16378 Viansa Way, Unit 302	Naples	FL	34110	FSBE				
<b>Walrath Recruiting, Inc.</b>	3 Winners Circle	Albany	NY	12205	NYSBE	X			
<b>Willdan Energy Solutions</b>	Wall Street Plaza	New York	NY	10005	NYSBE				
<b>Worley Group, Inc.</b>	181 West Huntington Dr	Monrovia	CA	91016	FSBE				
<b>WY Manor LP</b>	909 Third Avenue	New York	NY	10022	NYSBE				
<b>Zones LLC</b>	1102 15th St. SW. STE 102	Auburn	WA	98001	FSBE				

**NYSDA PERIODIC CONTRACTS APPROVAL REPORT: Anticipated Contracts - 8/16/2022 to 12/15/2022**

Category	Type	Term > 1 Year	Contract ID	Contractor	Contract Description	Reason	Date	Anticipated Amount	Total Contract Amount
PCMT	Competitive	Y	104542	The Cadmus Group, LLC	RFQ3183 Umbrella Agreement	Added New Tasks	10/05/2016	\$82,407	\$2,628,265
	Competitive	Y	116844	CLEAResult Consulting, Inc.	Technical Support SFR	New Agreement	08/09/2017	\$130,000	\$23,589,887
	Competitive	Y	153100	Knoll, Inc.	Furniture for Green Bank Offi	Added New Tasks	04/02/2020	\$1,780	\$187,328
	Competitive	Y	155547	Green Light New York, Inc.	Energy Efficiency Training TWO	Added New Tasks	07/08/2020	\$20,850	\$579,822
	Competitive	Y	159691	CVENT, Inc.	Event Management/Virtual Event	Added New Tasks	10/19/2020	\$2,413	\$214,153
	Competitive	Y	160541	The Cadmus Group, LLC	Statewide Multifamily Baseline	Added New Tasks	11/05/2020	\$1,197,245	\$4,697,245
	Competitive	Y	166992	Resource Refocus LLC	Task Work Order No. 3	New Agreement	04/13/2021	\$85,289	\$511,744
	Competitive	Y	176637	Northeast States for Coordinated Air Use	RFQL4810 Umbrella Contract	New Agreement	11/04/2021	\$306,270	\$306,270
	Competitive	Y	177105	People United for Sustainable Housing In	New Construction CNPD	New Agreement	11/16/2021	\$137,817	\$137,817
	Competitive	Y	179849	Sive Paget & Riesel PC	TWO 1 - West Valley SEQRA	Added New Tasks	01/13/2022	\$50,000	\$65,000
	Competitive	Y	182085	Arcadis of New York, Inc.	Tech Support NYGATS - TWO	Added New Tasks	03/04/2022	\$30,000	\$50,000
	Competitive	Y	182703	Energy and Environmental Economics Inc.	TWO #3 Complement. Analysis	Added New Tasks	03/15/2022	\$300,000	\$300,000
	Competitive	Y	185454	KPMG LLP	NYSDA Audit Services	New Agreement	05/06/2022	\$24,488	\$695,488
	Competitive	Y	192653	Milliman, Inc.	Investment Advisory Services	Added New Tasks	08/23/2022	\$60,000	\$60,000
	Competitive	Y	195970	Bergmann Associates, Architects,	CGSI Program M&V Support	Added New Tasks	10/14/2022	\$300,000	\$300,000
	Competitive	Y	195971	Bergmann Associates, Architects,	CGSI Program Technical Review	Added New Tasks	10/14/2022	\$80,000	\$80,000
	Competitive	Y	195972	TRC Engineers, Inc.	CGSI Program Technical Review	New Agreement	10/14/2022	\$80,000	\$80,000
	Competitive	Y	195973	AECOM USA INC.	CGSI Program Strategic Guide	New Agreement	10/14/2022	\$100,000	\$100,000
	Competitive	Y	195974	TRC Engineers, Inc.	CGSI Program Strategic Guide	Added New Tasks	10/14/2022	\$100,000	\$100,000
	Competitive	Y	195975	Meister Consultants Group, Inc.	CGSI Program Strategic Guide	New Agreement	10/14/2022	\$100,000	\$100,000
	Competitive	Y	198248	Kelliher Samets LTD	TWO 20 - Loan Loss Reserve	Added New Tasks	11/17/2022	\$38,601	\$38,601
	Competitive	Y	198798	Arcadis of New York, Inc.	SA.100a_TWO#6-LSR_PM-1	New Agreement	11/25/2022	\$315,654	\$315,654
	Competitive	Y	198800	Kelliher Samets LTD	TWO 15 - Codes	Added New Tasks	11/28/2022	\$179,998	\$179,998
	Competitive	Y	198801	Kelliher Samets LTD	TWO 16 - Bldgs of Excellence	Added New Tasks	11/28/2022	\$310,712	\$310,712
	Competitive	Y	198802	Kelliher Samets LTD	TWO 17 - Workforce Dev Mark	Added New Tasks	11/28/2022	\$527,255	\$527,255
	Competitive	Y	198803	Kelliher Samets LTD	TWO 18 - Single Family Mktg	Added New Tasks	11/28/2022	\$740,925	\$740,925
	Competitive	Y	198804	Kelliher Samets LTD	TWO 19 - NY Energy Advisor	Added New Tasks	11/28/2022	\$1,434,385	\$1,434,385
	Competitive	Y	198805	Performance Systems Development	TWO 1 - Compass system CH	Added New Tasks	11/28/2022	\$380,550	\$380,550
	Competitive	Y	198808	Kelliher Samets LTD	TWO 22 - Website User Exp	Added New Tasks	11/28/2022	\$30,663	\$30,663
	Competitive	Y	198809	Kelliher Samets LTD	TWO 23 - Building Labeling	Added New Tasks	11/28/2022	\$87,079	\$87,079
Competitive	Y	198810	Kelliher Samets LTD	TWO 24 - Predevelopment Loan	Added New Tasks	11/28/2022	\$100,325	\$100,325	
Competitive	Y	198811	Kelliher Samets LTD	TWO 25 - NY-Sun Marketing	Added New Tasks	11/28/2022	\$1,972,042	\$1,972,042	

**NYSERDA PERIODIC CONTRACTS APPROVAL REPORT: Anticipated Contracts - 8/16/2022 to 12/15/2022**

Category	Type	Term > 1 Year	Contract ID	Contractor	Contract Description	Reason	Date	Anticipated Amount	Total Contract Amount
PCMT	Competitive	Y	198939	Kelliher Samets LTD	TWO 28 - Clean Heat Marketing	Added New Tasks	11/29/2022	\$5,905,123	\$5,905,123
	Competitive	Y	198941	Kelliher Samets LTD	TWO 29 - Clean Heating/Cooling	Added New Tasks	11/29/2022	\$769,624	\$769,624
	Competitive	Y	199197	USGS National Center MS270	ALTM Category B & C - Streams	Added New Tasks	12/01/2022	\$242,267	\$242,267
	Competitive	Y	199434	InnSure Corporation	Climate-Oriented Solutions Pro	Added New Tasks	12/05/2022	\$6,500,000	\$6,500,000
	Competitive	Y	199435	Kelliher Samets LTD	TWO 31 - RetrofitNY Marketing	Added New Tasks	12/05/2022	\$9,088	\$9,088
	Competitive	Y	199921	Kelliher Samets LTD	TWO 30 - BR Marketing Support	New Agreement	12/13/2022	\$160,135	\$160,135
	Competitive	Y	199925	Paul Smith's College	ALTM Lakes Monitoring 2023-27	New Agreement	12/13/2022	\$451,270	\$451,270
	Competitive	Y	200118	SHI, Inc.	Azure Commercial cloud add on	New Agreement	12/14/2022	\$6,331	\$6,331
	Competitive	Y	ADH0014924	TRC Energy Services	SA.041_TWO#14 - NCP PM	New Agreement	11/30/2020	\$300,000	\$719,522
	Competitive	Y	ADH0014941	TRC Energy Services	SA.042_TWO#17 - NCP NYC PM	New Agreement	12/03/2020	\$300,000	\$917,547
	Discretionary	Y	174684	Pivotal 180, LLC	NYGB New Hire Course	New Agreement	09/28/2021	\$8,160	\$38,160
	Discretionary	Y	184448	Rise to Equity Excellence, LLC	DEI Training Plan	New Agreement	04/19/2022	\$16,680	\$130,920
	Discretionary	Y	184797	Cornell University	Fish Mercury Climate Study	New Agreement	04/25/2022	\$26,168	\$26,168
	Discretionary	Y	199902	Dodge Data & Analytics	Dodge Business Intelligence	New Agreement	12/12/2022	\$30,557	\$30,557
	Discretionary	Y	200117	Walrath Recruiting, Inc.	TS.036-Communities_PM-1	New Agreement	12/14/2022	\$214,500	\$214,500
	Discretionary	Y	200119	CDATA SOFTWARE, INC.	DBAmp Pro. Edition Unlimited	New Agreement	12/14/2022	\$11,687	\$11,687
	Non-Competitive	Y	178067	New York State Builders Association	Single Family New Construction	New Agreement	12/07/2021	\$50,000	\$50,000
	Non-Competitive	Y	192002	Kearns & West, Inc.	TWO 12-H2 Stakeholder Engagemen	Added New Tasks	08/11/2022	\$700,000	\$825,000
	Non-Competitive	Y	199431	New York Power Authority,	NYP&A GEMINI	New Agreement	12/05/2022	\$9,000,000	\$9,000,000
PGRM	Competitive	Y	135614	L&S Energy Services, Inc.	L&S GJGNY Energy Audits	Added New Tasks	12/28/2018	\$43,693	\$3,938,641
	Competitive	Y	167521	Alliance for Sustainable Energy, LLC	TWO #7 T&D Tool Dev Co-Optimiz	New Agreement	04/26/2021	\$2,280,000	\$3,580,000
	Competitive	Y	185700	ZBF Geothermal LLC	PON 4614 Round #5	New Agreement	05/10/2022	\$3,928,000	\$3,928,000
	Competitive	Y	186724	DirectApps Inc	RFP4886 RES Market Engagement	New Agreement	05/26/2022	\$632,270	\$4,821,010
	Competitive	Y	193635	Revel Transit, Inc.	Red Hook Recharge Zone	Extend Contract Term	09/07/2022	\$5,929,428	\$7,000,000
	Competitive	Y	197788	TRC Companies, Inc.	WFD Implementation Contractor	New Agreement	11/10/2022	\$4,000,000	\$4,000,000
	Competitive	Y	199909	Form Energy, Inc	LDES Tech & Product Dev	New Agreement	12/13/2022	\$12,000,000	\$12,000,000
<b>Grand Total</b>								\$62,821,729	\$106,176,758



**NYSERDA PERIODIC CONTRACTS APPROVAL REPORT: Section 1**  
**Summary - 8/16/2022 to 12/15/2022**

<b>Category</b>	<b>Report Type</b>	<b>Type</b>	<b>Count of Contracts</b>	<b>Committed this period</b>
<b>PGRM</b>	Program	Competitive	1,618	\$416,247,604
		Discretionary	6	\$747,794
		Non-Competitive	5	\$530,000
<b>Total</b>			1,629	\$417,525,398
<b>Grand Total</b>			1,629	\$417,525,398

## NYSERDA PERIODIC PROGRAM REPORT

8/16/2022 to 12/15/2022

**Table: All Market Focus Committed this Period**

<b>MarketFocus</b>	<b>Count of Contracts</b>	<b>Committed this Period</b>
<b>Agriculture</b>	3	\$623,000
<b>Building Innovation</b>	8	\$11,936,764
<b>Clean Heating and Cooling</b>	8	\$2,123,804
<b>Clean Trans (Innov &amp; Research)</b>	20	\$80,706,924
<b>Codes</b>	9	\$2,040,630
<b>Commercial</b>	74	\$16,707,573
<b>Communities and Local Governme</b>	12	\$3,199,712.
<b>Energy &amp; EnvironmentalAnalysis</b>	2	\$225,000
<b>Energy Storage</b>	82	\$37,277,000
<b>Energy-Rltd Environmental Res</b>	6	\$887,184
<b>Evaluation</b>	2	\$2,124,376
<b>Grid Modernization</b>	2	\$7,124,340
<b>Industrial</b>	8	\$2,469,881
<b>Innovation</b>	4	\$823,500
<b>Large Scale Renewables</b>	7	\$1,334,526
<b>LMI</b>	54	\$72,572,400
<b>Low Income</b>	1	\$1,937,203
<b>Mkt Char &amp; Design (Mkt Dev)</b>	1	\$300,000
<b>Moderate Income</b>	1	\$527,174
<b>Multifamily (Mkt Rate Only)</b>	66	\$9,035,661

## NYSERDA PERIODIC PROGRAM REPORT

8/16/2022 to 12/15/2022

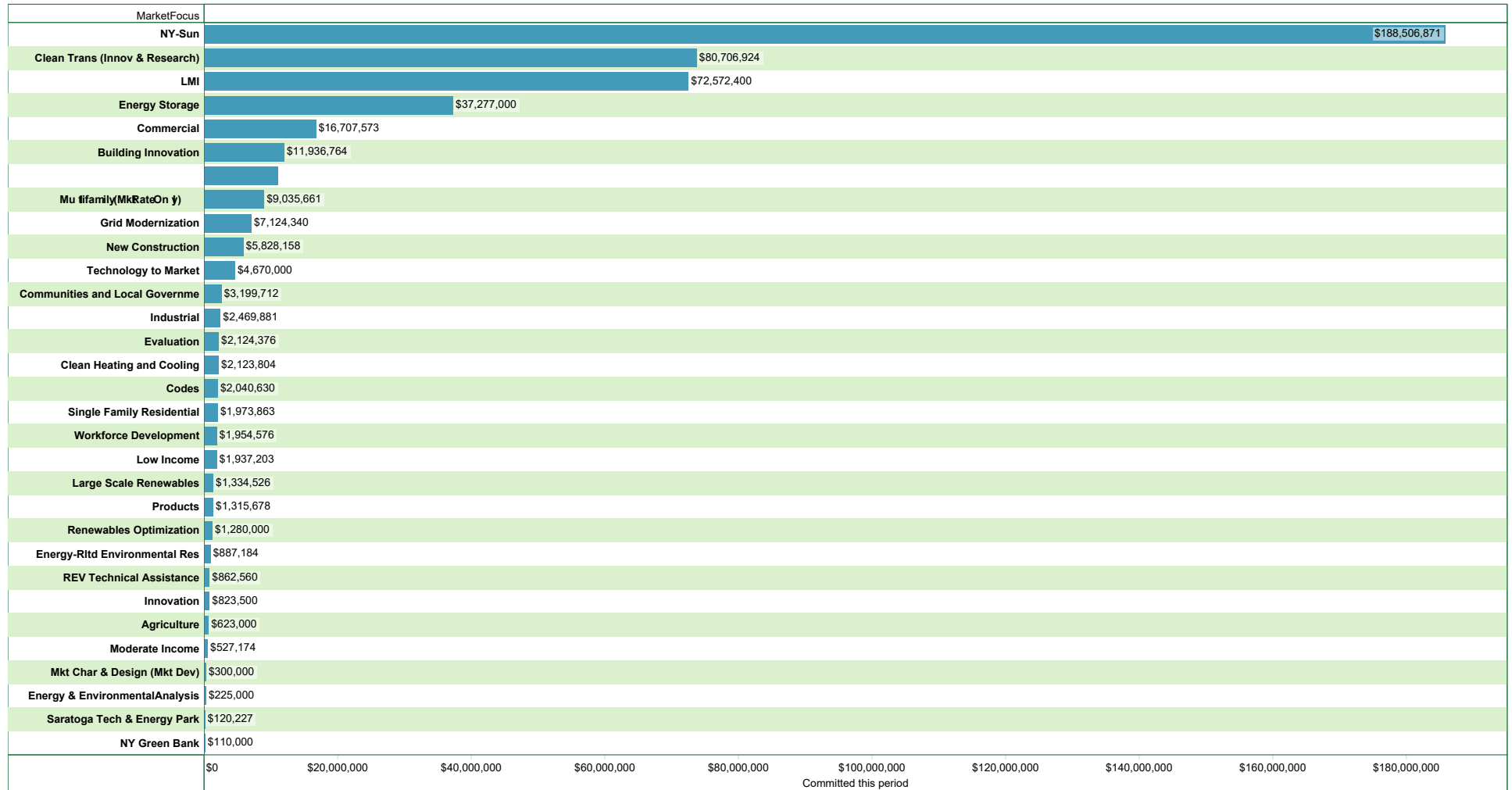
Table: All Market Focus Committed this Period

MarketFocus	Count of Contracts	Committed this period
New Construction	26	\$5,828,158
NY Green Bank	1	\$110,000
NY-Sun	1 272	\$188,506,871
Products	1	\$1,315,678
Renewables Optimization	2	\$1,280,000
REV Technical Assistance	1	\$862,560
Saratoga Tech & Energy Park	1	\$120,227
Single Family Residential	3	\$1,973,863
Technology to Market	3	\$4,670,000
Workforce Development	153	\$1,954,576
Grand Total	1,833	\$463,967,113

NYSDERDA PERIODIC PROGRAM REPORT

8/16/2022 to 12/15/2022

Graph: All Market Focus Committed this Period



**NYSDERDA PERIODIC PROGRAM REPORT**  
**8/16/2022 to 12/15/2022**  
**Table: By REDC Region and County**

<b>REDC Region</b>	<b>County</b>	<b>Count of Contracts</b>	<b>Committed this period</b>
<b>Capital Region</b>	Albany	31	\$10,217,471
	Columbia	32	\$296,913
	Greene	20	\$1,429,624
	Rensselaer	21	\$8,372,318
	Saratoga	34	\$7,600,996
	Schenectady	15	\$2,884,820
	Warren	12	\$4,183,113
	Washington	12	\$4,708,868
	<b>Total</b>	<b>177</b>	<b>\$39,694,123</b>
<b>Central New York</b>	Cayuga	6	\$3,750,601
	Cortland	4	\$1,946,682
	Madison	6	\$1,724,396
	Onondaga	37	\$1,754,554
	Oswego	15	\$3,568,029
	<b>Total</b>	<b>68</b>	<b>\$12,744,262</b>
<b>Finger Lakes</b>	Genesee	11	\$1,059,282
	Livingston	12	\$3,757,019
	Monroe	44	\$4,615,287
	Ontario	36	\$338,723
	Orleans	7	\$4,808,990
	Seneca	7	\$118,724

**NYSERDA PERIODIC PROGRAM REPORT**  
**8/16/2022 to 12/15/2022**  
**Table: By REDC Region and County**

<b>REDC Region</b>	<b>County</b>	<b>Count of Contracts</b>	<b>Committed this period</b>
<b>Finger Lakes</b>	Wayne	18	\$2,161,088
	Wyoming	2	\$156,080
	Yates	2	\$11,616
	<b>Total</b>	139	\$17,026,808
<b>Long Island</b>	Nassau	35	\$901,071
	Suffolk	58	\$445,966
	<b>Total</b>	93	\$1,347,037
<b>Mid-Hudson</b>	Dutchess	119	\$1,495,717
	Orange	148	\$3,790,663
	Putnam	33	\$247,878
	Rockland	51	\$491,463
	Sullivan	19	\$143,802
	Ulster	80	\$4,176,105
	Westchester	101	\$27,831,433
	<b>Total</b>	551	\$38,177,061
<b>Mohawk Valley</b>	Fulton	7	\$5,773,748
	Herkimer	12	\$3,816,871
	Montgomery	7	\$3,711,858
	Oneida	37	\$10,659,193
	Otsego	7	\$5,625,104
	Schoharie	2	\$11,680

**NYSERDA PERIODIC PROGRAM REPORT**  
**8/16/2022 to 12/15/2022**  
**Table: By REDC Region and County**

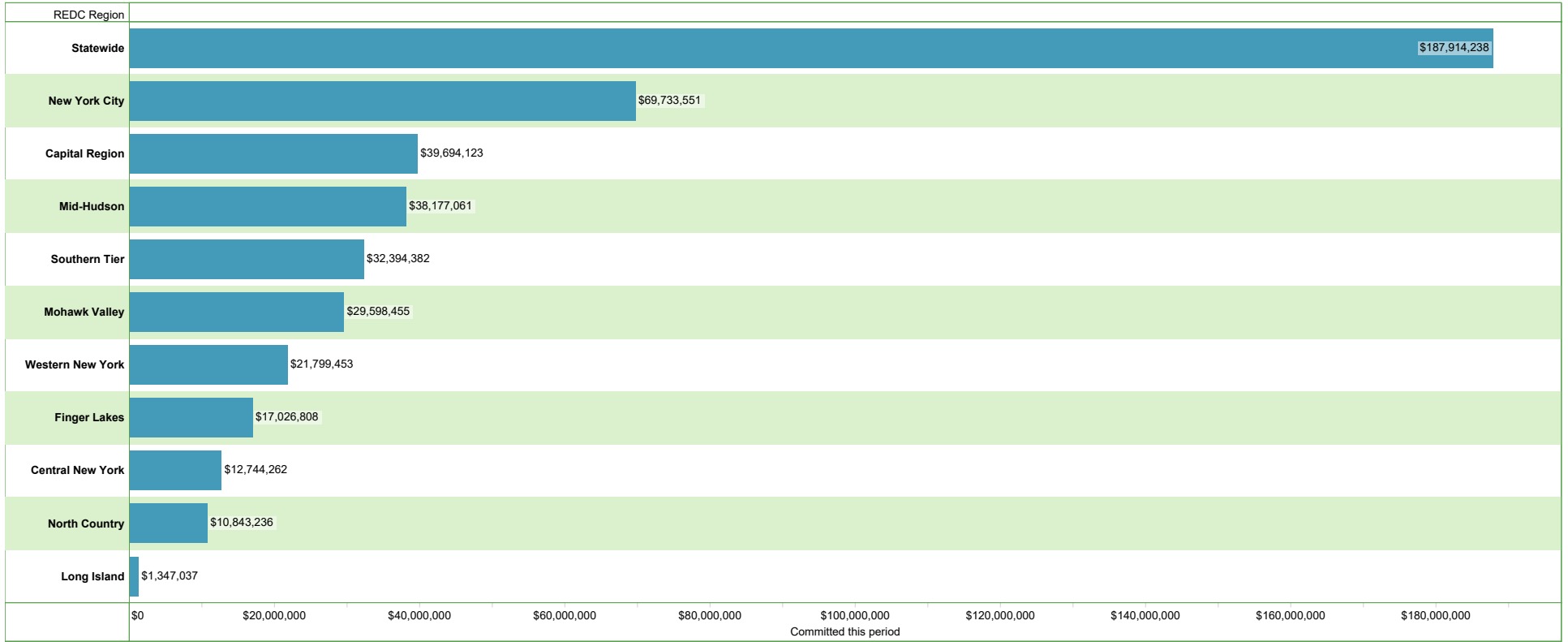
<b>REDC Region</b>	<b>County</b>	<b>Count of Contracts</b>	<b>Committed this period</b>
<b>Mohawk Valley</b>	<b>Total</b>	72	\$29,598,455
<b>New York City</b>	Bronx	68	\$4,336,253
	Kings	93	\$10,737,082
	New York	117	\$22,069,862
	Queens	74	\$8,347,989
	Richmond	28	\$24,242,365
	<b>Total</b>	380	\$69,733,551
<b>North Country</b>	Clinton	9	\$2,107,331
	Essex	6	\$40,092
	Franklin	2	\$1,807,354
	Jefferson	12	\$1,266,518
	Lewis	5	\$430,834
	St. Lawrence	11	\$5,191,107
	<b>Total</b>	45	\$10,843,236
<b>Southern Tier</b>	Broome	32	\$10,537,318
	Chemung	5	\$2,967,713
	Chenango	3	\$525,220
	Delaware	4	\$30,348
	Schuyler	4	\$1,671,636
	Steuben	12	\$5,477,490
	Tioga	5	\$1,739,103

**NYSERDA PERIODIC PROGRAM REPORT**  
**8/16/2022 to 12/15/2022**  
**Table: By REDC Region and County**

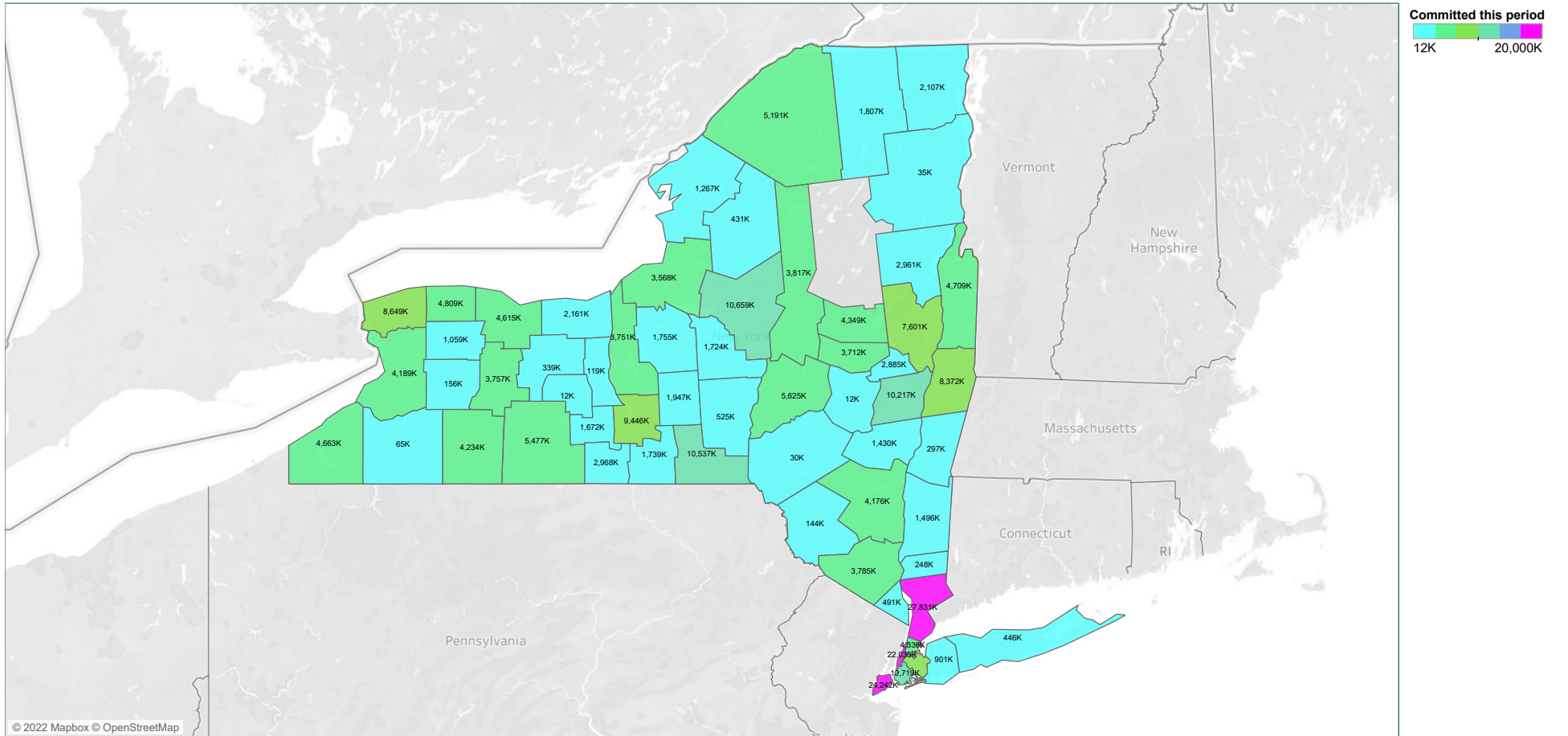
<b>REDC Region</b>	<b>County</b>	<b>Count of Contracts</b>	<b>Committed this period</b>
<b>Southern Tier</b>	Tompkins	24	\$9,445,553
	<b>Total</b>	89	\$32,394,382
<b>Statewide</b>	STATEWIDE	103	\$187,914,238
	<b>Total</b>	103	\$187,914,238
<b>Western New York</b>	Allegany	7	\$4,233,517
	Cattaraugus	4	\$64,842
	Chautauqua	15	\$4,662,993
	Erie	57	\$4,188,876
	Niagara	16	\$8,649,225
	<b>Total</b>	99	\$21,799,453
<b>Grand Total</b>		1,816	\$461,272,605



**NYSDERDA PERIODIC PROGRAM REPORT**  
**8/16/2022 to 12/15/2022**  
**Graph: By REDC Region**



NYSERDA PROCUREMENT CONTRACTS REPORT - Contracts Executed or Modified  
8/16/2022 to 12/15/2022



**NYSDA PERIODIC PROGRAM REPORT**  
**8/16/2022 to 12/15/2022**  
**Table: By Electric Utility**

<b>Electric Utility</b>	<b>Count of Contracts</b>	<b>Committed this period</b>
<b>Central Hudson Gas and Electric</b>	251	\$8,114,651
<b>Consolidated Edison</b>	466	\$91,166,665
<b>Long Island Power Authority</b>	92	\$1,350,747
<b>Municipal Utilities</b>	8	\$4,734,529
<b>National Grid</b>	397	\$101,320,661
<b>NYS Electric and Gas</b>	280	\$59,153,439
<b>Orange and Rockland Utilities</b>	161	\$3,232,487
<b>Rochester Gas and Electric</b>	58	\$4,285,189
<b>Statewide</b>	103	\$187,914,238
<b>Grand Total</b>	1,816	\$461,272,605

Resolution No. \_\_\_\_

RESOLVED, that the Periodic Contracts Report, covering the period August 16, 2022 through December 15, 2022, as presented at this meeting, including but not limited to the contracts identified therein which have been, or are expected to be, executed and which do have, or are expected to have, a period of performance in excess of one year, is hereby approved in accordance with Public Authorities Law Section 2879.