NYSERDA ORECRFP23-1

Purchase of Offshore Wind Renewable Energy Credits

equinor

Submitted by Empire Offshore Wind LLC- January 25, 2024

Section 6 - Project Development Plan

Powering New York. Together

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6. PROJECT DEVELOPMENT PLAN

The Project Development Plan must be submitted as a single file, not to exceed 100 pages, with the following included subsections. The Submission must include both Confidential and Public versions of the Project Development Plan.

6.1. Project Team

This section of the Submission must describe the Project Team's experience in developing generation and transmission facilities of similar size, technology and complexity and ability to work together effectively to bring the Project to commercial operation in a timely fashion.

Proposers are required to provide the following information with their Proposal:

1. A description of the business entity structure of Proposers' organization from a financial and legal perspective, including all general and limited partners, officers, directors, and involvement of any subsidiaries supporting the Project.

This bid is being submitted by Empire Offshore Wind LLC ("Empire Wind"). Empire Wind holds lease number OCS-A 0512 and the assets associated with the Empire Wind Project, including Empire Wind 1 ("EW1" or the "Project")) and Empire Wind 2 ("EW2").

[redacted]

[redacted]

[redacted]

[redacted]

2. An organizational chart for the Project that lists the Project participants, including parent companies and joint ventures transacting business in the energy sector, identifies the corporate structure, including general and limited partners, and shows the relationship among the different Project participants.

[redacted]

[redacted]

Equinor is an international energy company, headquartered in Norway with more than 22,000 people in over 30 countries. Equinor is listed on the New York and Oslo stock exchanges and has a current market capital valuation of approximately $97 billion.

Through its subsidiaries, Equinor engages in the development of offshore wind facilities as well as the exploration, development, and production of oil and gas around the world. Equinor is the leading operator on the Norwegian continental shelf and has substantial international operations. A full

overview of Equinor and its subsidiaries' business activities is provided in the annual reports provided as Attachment 6.G.

As noted above, Equinor Wind is responsible for the day-to-day activities related to the development of Empire Wind and EW1. Equinor Wind is a wholly owned subsidiary of Equinor US Holdings Inc, which, in turn, is an indirect wholly owned subsidiary of Equinor ASA.

3. A management chart that lists the Project Team principals dedicated to this Project and a short statement for each describing the rationale for their selection based on either their experience in a technical subject matter or demonstrated similar skill sets. Identify the team members that are currently based in New York State and those team members who will relocate to New York State.

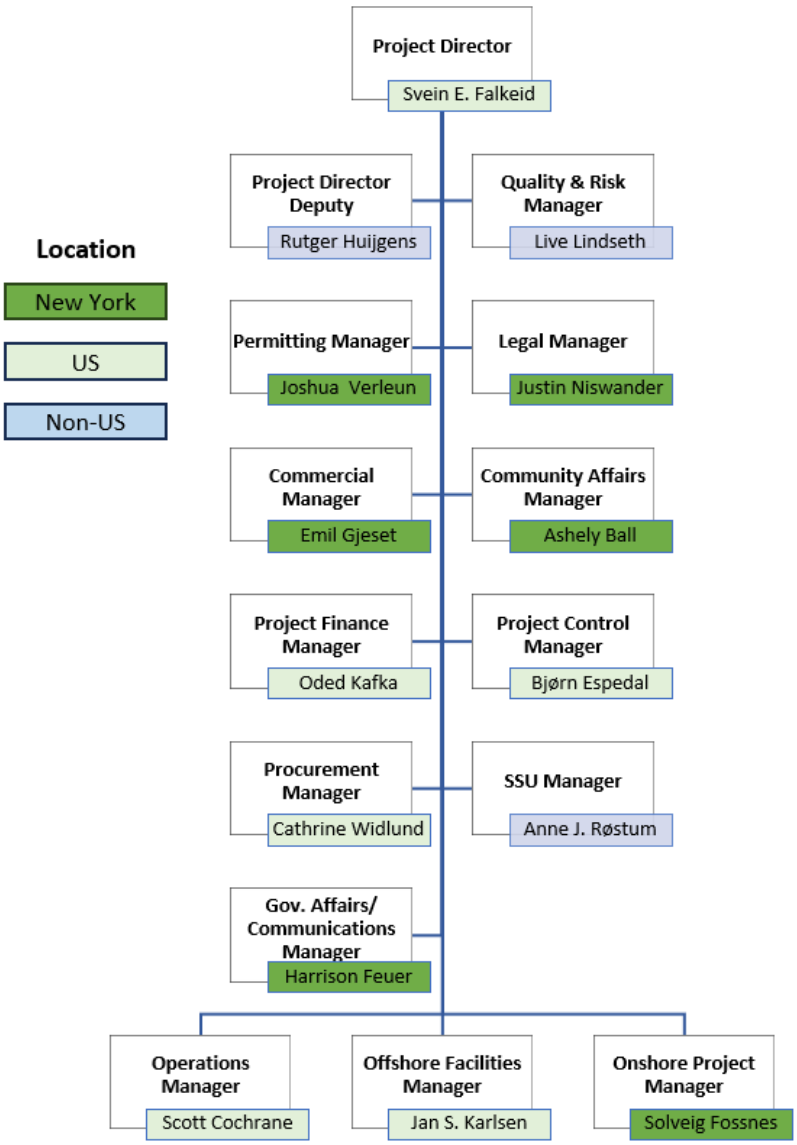
Empire Wind has assembled a highly qualified and experienced team focused on supporting the design, development, construction, and operation of the Project. To ensure the efficient and effective development of the offshore wind portfolio, a dedicated team has been assigned that is devoted to advancing the development of the Project.

The following sections provide an overview of the project team assigned to EW1. In addition to the individuals listed below, Molly Smith Morris, the President of Equinor Renewables Americas, will be a member of the team. Ms. Smith Morris oversees renewables activities in the Americas including Empire Wind. She assumed this role in November 2022 after serving as Special Advisor, US Renewables.

A brief description of the experience of each of the members of the project team is provided below. In addition to these teams, Empire Wind will be able to seamlessly leverage the expertise of over 4,500 additional employees, with subject matter expertise covering the full range of subjects and technical skills relevant to the development of offshore wind resources.

Figure 6.2 provides an overview of the key employees of the EW1 team.

Figure 6.2: Empire Wind Key Employees



Svein Erik Falkeid – Project Director

Mr. Svein Erik Falkeid, Vice President of Project Management, currently serves as Project Director for the Project. He has more than 35 years of project execution experience for large development projects within Equinor. He has held various leadership roles in Equinor, both in Norway and internationally. He has been with Equinor for 38 years and has spent more than 15 years working on international projects. He formerly served as Project Director for the Peregrino Phase II project in Brazil where he led the development of a new well head platform with subsea connection to the main Peregrino field. Mr. Falkeid holds degrees in mechanical engineering and business administration. Mr. Falkeid was selected

as Project Director due to his extensive experience managing large, international development projects.

Cathrine Sværen Widlund – Procurement Manager

Ms. Cathrine Sværen Widlund currently serves as the Procurement Manager for the Project. She has almost 20 years of experience working in various positions at Equinor. She gained great experience in understanding business cases during her many years as an economic analyst on different investment projects. From 2013-2017, she served as Procurement Manager for offshore subsea projects in the oil and gas industry. Building on this experience, she has held manager positions over the last 6 years within offshore wind both in Norway and internationally. Ms. Sværen has extensive experience managing large contracts and driving negotiations. Ms. Widlund was selected as Procurement Manager due to her extensive experience driving procurement strategy processes, strategic commercial discussions and supplier relations.

Scott Cochrane – Operation Manager

Mr. Scott Cochrane currently serves as the Operation Manager for the Empire Wind Project. Since 2020, he has held various positions across Equinor's existing portfolio of offshore wind assets within day-to-day operation and maintenance, back-office support to operational projects, and technical and operational support to projects in development. Mr. Cochrane brings a wide range of international experience from negotiating and managing operational contracts, managing multi-disciplinary offshore maintenance projects, leading supplier quality assurance activities, developing operational and technical strategies, and managing technical integrity. Mr. Cochrane holds a Bachelor's Degree in mechanical engineering from the University of Robert Gordons. Mr. Cochrane was selected as Empire Wind's Operations Manager based on his mechanical engineering background and experience with complex operational projects at Equinor and Sparrows Group. His responsibilities include ensuring operational readiness, establishing facilities, developing strategies, and procuring necessary equipment. Mr. Cochrane was selected as Operation Manager due to his extensive experience delivering technical performance and fostering collaboration.

Justin Niswander – Legal Manager

Mr. Justin Niswander is senior legal counsel at Equinor and a member of the Project's management team. Mr. Niswander has served as the lead commercial and transactional lawyer for Empire Wind since joining Equinor in 2021. Prior to joining Equinor, Mr. Niswander was a senior associate in the project finance practice of Milbank LLP where he was seconded for a period to BlackRock (infrastructure and real assets portfolio). Mr. Niswander has over a dozen years of experience advising on energy and infrastructure transactions (financings, equity investments, disposals, joint ventures, and strategic alliances) and related commercial matters (e.g., PPAs, REC agreements, supply chain arrangements, and other commercial contracts). Mr. Niswander holds a juris doctor degree from American University Washington College of Law and two Bachelor of Arts degrees from Michigan State University. He also completed an executive education program at Harvard University. Mr. Niswander

was selected as Legal Manager for the Project based on his deep experience advising sponsors on the development and financing of complex energy and infrastructure projects.

Bjørn Espedal – Project Control Manager

Mr. Bjørn Espedal serves as the Project Control Manager in the Empire Wind Project. Mr. Espedal has more than 30 years of experience in the energy industry. He has worked as Technical Manager, Site Manager, Project Manager, Company Representative and Project Control Manager, and has deep experience and knowledge of all the different aspects of Project Development within the project control disciplines (planning, cost control, project control, estimation, quality and risk management, and contract follow-up). Mr. Espedal has experience from roles in both energy and contractor companies. Mr. Espedal holds a Master of Business Administration degree from McGill University in Montreal, Canada, and a Master of Mechanical Engineering from the Norwegian University of Science and Technology in Trondheim, Norway. Mr. Espedal was selected as Project Control Manager based on this extensive management experience on large and complex projects in offshore wind and oil and gas.

Rutger Huijgens – Project Director Deputy

Mr. Rutger Huijgens is a Dutch National and joined bp in 1995 from a petroleum engineering consultancy in the Netherlands. In his early career with bp, he held a variety of engineering and commercial roles in bp's Upstream assets in Vietnam, Venezuela and Alaska. Starting in 2002, he worked for several years in gas, power & renewables, focused on the LNG and New Markets business. In 2005, Mr. Huijgens was appointed Asset Manager of the Wamsutter field, located in Wyoming, North America, where he was accountable for resource development and operations of this large tight gas resource. In 2008, he joined the Middle East & South Asia business as Technical Director leading technical support, new business development and technology implementation for bp in the region, after which he was appointed VP Ops, HSSE & Engineering Performance in the Upstream global team in 2010. Rutger moved to Egypt in early 2011 to become the Operations General Manager of the Gulf of Suez Petroleum Company ("GUPCO"), bp's oil joint venture in Egypt, for which he took over as General Manager & Managing Director (CEO) in early 2013. He led GUPCO until his appointment as Director, European Government Affairs in September 2016, based in Brussels. In February 2021, when bp initiated its offshore wind business, Mr. Huijgens was appointed Senior Director Offshore Wind and joined the Project, a development offshore New York, as part of bp's strategic offshore wind partnership with Equinor. Mr. Huijgens sits on the board of BP Management International and Castrol Belgium. Mr. Huijgens holds a MSc in petroleum engineering and a PhD in reservoir engineering, both from the Delft University of Technology in The Netherlands. Mr. Huijgens was chosen for this project because of his extensive leadership skills, experience in offshore project development and operations, and familiarity with government affairs.

Live Lindseth – Quality and Risk Manager

Ms. Live Lindseth currently serves as the Quality and Risk Manager for the Project. Her professional history comprises over 30 years in the offshore oil, gas, and wind industries within the areas of financial management, risk management, quality management and compliance management. She has wide

experience from different parts of the company, from corporate risk management to project development. Since 2013, Ms. Lindseth has, as Quality and Risk Manager, been a part of Equinor's Project Management teams for several multi-disciplinary offshore wind projects, including the Dudgeon Offshore Wind Project, Dogger Bank Offshore Wind Project, and Empire Wind. Ms. Lindseth holds a Master of Science in general business, with a major in international business management from the BI Norwegian Business School in Oslo, Norway. Ms. Lindseth was selected as Quality and Risk Manager for this project based on her many years of experience serving in the same role in other international offshore wind projects, from development until handover to operation, in addition to her deep experience with risk management and overall governance/ management system processes.

Anne Jorunn Røstum – Safety, Sustainability, and Security Manager

Ms. Anne Jorunn Røstum currently serves as the Safety, Security, and Sustainability Manager for the Project. Her professional history comprises over 30 years in the offshore oil, gas, and wind industries as well as experience from onshore industrial development projects and plant operation in Norway and the UK. Røstum has offshore wind experience from the Hywind Demo in the North Sea, Sheringham Shoal in UK and Empire Wind. Røstum has had several management positions within SSU in different projects. Ms. Røstum's primary experience has been related to safety, sustainability, working environment, and permitting/authority processes for green field projects and modification projects both in an early phase and in the execution phase of a project. Ms. Røstum holds a Master of Science in chemical engineering from the Norwegian University of Science and Technology in Trondheim, Norway. Ms. Røstum was selected as Safety, Sustainability, and Security Manager based on her extensive offshore wind experience and proven leadership.

Ashley Ball – Director of Community Affairs

Ms. Ashley Ball is the Director of Community Affairs at Equinor Renewables US and is responsible for strategic planning, leading the community engagement for the Project in the U.S. Northeast, and supporting cross-business area strategy across the Northeast and in collaboration with global networks. Before joining Equinor in June 2023, Ms. Ball led the government relations, public policy, and engagement teams at Opportunities for a Better Tomorrow in Sunset Park, Brooklyn. Ms. Ball started her career as a local government officer at the London Fire and Emergency Planning Authority, working in major corporate procurement for the London Fire Brigade. She later went to work in the Office of the Chief Executive at the London Borough of Lambeth, where she oversaw a wide range of policy and community affairs projects, the most notable being Made In Lambeth, a hackathon community that redefined the relationship between local citizens and the council. In 2017, Ms. Ball joined Teach for America and led instruction for third and fourth-grade social studies in greater New Orleans. From 2019 - 2021, Ms. Ball held school leadership roles in New York City public schools, overseeing all non-instructional business and operational programs for public schools during the COVID-19 pandemic. Ms. Ball graduated with a joint honors degree in American Studies and International Relations from London Metropolitan University and has a master's degree in Anthropology and Cultural Politics from Goldsmiths College, University of London. Ms. Ball was selected as Director of Community Affairs based

on her 16 years of experience in community affairs work, from organizing, to communications, to project management in both the United States and Europe.

Harrison Feuer – Government Affairs/Communications Manager

Mr. Harrison Feuer serves as Senior Director of Public Affairs for Equinor's renewables portfolio across the Americas. Prior to this role at Equinor, Harrison served as Equinor's New York Director of Public Affairs. He has over 10 years of extensive government and communications experience across the federal, state, and local levels in New York. Described by *City and State NY* as "a veteran government communications professional," Harrison served as a long-time staffer for Congressman Steve Israel both while he was in the House Democratic Leadership as well as at his institutes at Cornell and Long Island Universities. Harrison also served in the Office of New York State Assemblyman Charles Lavine as well as several other governmental offices. A lifelong New Yorker, Harrison sits on the Board of Directors of the Long Island Association and holds a Bachelor of Arts in history from the State University of New York at Binghamton. Mr. Feuer was selected as Government Affairs/Communication Manager based on his more than 10 years of extensive government and communications experience across the federal, state, and local levels in New York.

Emil Gjeset – Commercial Manager

Mr. Emil Gjeset currently serves as Commercial Director for the Project. Mr. Gjeset has a decade of experience working in the energy sector across five continents, including five years in offshore wind and onshore renewables leading large-scale projects in business development and mergers and acquisitions, and negotiating commercial transactions. He has extensive experience in business case management, economic analysis, and stakeholder management. He holds a Bachelor of Arts from LaTrobe University in Melbourne Australia and a Masters in International Relations with a major in International Political Economy from Peking University in Beijing, China. Emil Gjeset was selected as Commercial Manager for the Project due to his extensive experience managing the commercial aspects of offshore wind, including valuation, business development, mergers and acquisitions, and transaction and partnership agreements.

Oded Kafka – Project Finance Manager

Mr. Oded Kafka currently serves as the Project Finance Manager for the Project. Since 2012, he has held several Project Finance positions in the U.S. renewable energy industry. Mr. Kafka brings a range of experience in Project Finance covering the lifecycle of debt and tax-equity financing agreements from strategy and origination through operations and compliance. Mr. Kafka holds a Bachelor of Arts from Brown University and an MBA from the Zicklin School of Business at Baruch College in New York City. Mr. Kafta was selected as Project Finance Manager due to his experience over the past 12 years where he has held leadership positions with U.S. Renewable Energy developers and operators. He has focused on originating project debt and equity financings and managing engagement with financial stakeholders.

Joshua Verleun – Permitting Manager

Mr. Joshua Verleun currently serves as Director of Permitting for the Empire Wind Project. In this role, he leads the team responsible for securing all federal, state, and local permits for the wind farm, transmission systems, and substations for EW1 and EW2, as well as the Operations & Maintenance Base, and Wind Energy Staging Port at the South Brooklyn Marine Terminal. Mr. Verleun has more than 15 years of experience as an attorney, consultant, and LEED certified professional. Prior to joining Equinor, he was an attorney in private practice representing clients in permitting, environmental impact review, project consents & entitlements, land use, and other regulatory matters; he served as a senior environmental and energy law subject matter expert for Thomson Reuters Practical Law and a Staff Attorney and Chief Investigator for Hudson Riverkeeper. He is a 2007 Graduate of Pace University Haub School of Law and resides in Gardiner, New York, where he serves on the Town of Gardiner Planning Board. Mr. Verleun was selected as Director of Permitting due to his more than 15 years of experience as an environmental and energy attorney and consultant, with significant experience in permitting and siting for electrical and other infrastructure under federal, NY State, and local laws and regulations.

Solveig Midtbust Fossnes – Onshore Project Manager

Ms. Solveig Midtbust Fossnes currently serves as the Onshore Project Manager for the Project. She joined the Project two years ago, first working in a liaison role to interconnect permitting and technical development, then as Technical Manager, and now is the Onshore Project Manager where she is responsible for activities at South Brooklyn Marine Terminal ("SBMT"). Ms. Fossnes has more than 17 years of experience working in energy megaprojects from various key positions in all phases of the project development timeline (from Concept Select to post-handover to Operations). Ms. Fossnes has in-depth knowledge within project management, engineering, procurement, technical integration, permitting, planning and change control. Ms. Fossnes has held positions as Planner, Interface Coordinator, Engineering & Procurement Manager, Technical Manager and Platform Development Manager in several multi-billion-dollar development projects. Ms. Fossnes holds a Master of Science Degree in Communication Technology from the Norwegian University of Science & Technology. Ms. Fossnes was selected for this project in particular due to her extensive experience in development and execution of complex megaprojects.

Jan Smedsvig Karlsen – Offshore Facilities Manager

Mr. Jan Smedsvig Karlsen currently serves as the Project Manager for the offshore facilities on the Project. He has 28 years of industry experience covering a range of offshore projects in the North Sea, Gulf of Mexico, West Africa, Brazil, and the New York Bight. Since 2013, he has held various project manager positions within the Equinor project portfolio, such as Technical Manager for the Johan Sverdrup project, Project Manager for the Peregrino 2 Living Quarter, Project Manager for the Peregrino 2 Subsea Scope, and now as Project Manager for the Project's wind turbine generators ("WTGs"), foundations, offshore substation, offshore cables, and marine operations. Mr. Karlsen holds a Master of Science in Marine Hydrodynamics from the Norwegian University of Science and

Technology in Trondheim. Mr. Karlsen was chosen as Project Manager for the Offshore Facilities scope based on his extensive project execution experience, specifically his in-depth knowledge of Equinor project processes and strategies combined with U.S.-specific experience.

4. Identify and describe, including relevant experience, the entity or entities responsible for the following, as applicable:

a. Construction Period Lender, if any

b. Community Liaison Officer

c. Diversity, Equity, and Inclusion Officer

d. Environmental Consultant

e. EPC Contractor (if selected)

f. Facility Operator and Manager

g. Financial Advisor

h. Health and Safety Consultant

i. Labor Liaison

j. Legal Counsel

k. Operating Period Lender and/or Tax Equity Provider, as applicable

l. Owner's Engineer

m. Transmission Consultant

Empire Wind has extensive in-house capabilities and resources devoted to offshore wind development. In addition to their own experience, our team leverages strong relationships with outside consultants and companies focused on supporting the development of offshore wind resources.

a. **Construction Period Lender:** Further details regarding the financing of the Project is provided in Section 6.3.
b. **Community Liaison Officer**: Ashley Ball is the Director of Community Affairs who will interact with the local community and serve as a consistent point of contact with key stakeholders.
c. **Diversity, Equity, and Inclusion Officer**: Empire Wind has assigned Gail Winiecki as the Diversity, Equity, and Inclusion Officer.
d. **Environmental Consultant:** Tetra Tech, SeaRisk Solutions, AECOM, Anatec, and SEARCH Inc. are each providing environmental consulting services for the Project. Each of these companies has extensive experience providing support for the permitting of large infrastructure projects, including offshore wind resources.
e. **Owner's Engineer/EPC Contractor:** The procurement and development strategy for the Project will consist of multiple contracts with qualified contractors chosen through a rigorous vetting and selection process, as described further in Section 6.4. This approach has been used successfully for the construction of other offshore wind projects in Europe and around the

world. Empire Wind has mandated DNV, an experienced and well-trusted independent engineering firm, to act as lenders' technical advisor related to the project financing.

f. **Facility Operator and Manager:** Equinor Wind (or an affiliate) will be responsible for managing and operating the Project, leveraging the expertise of its parent and its affiliates in operating offshore projects around the world.
g. **Financial Advisor**: As further discussed in Section 6.3, Societe Generale serves as Empire Wind's Financial Advisor.
h. **Health and Safety Consultant**: Anne Jorunn Røstum is the Health and Safety Consultant for the Project.
i. **Labor Liaison:** Marc Hanan, US Labor Relations Leader and Lead Negotiator, Renewables US, Equinor. Having joined the Equinor team in December of 2022, Mr. Hanan has 25 years of applicable professional experience, including more than 15 years with a labor relations focus spanning a multitude of industries. Mr. Hanan has supported organizations with US and international interests. In his time with Equinor, Mr. Hanan has worked to build relationships with labor organizations at the local, state, and national levels, while leading the development and negotiation of Project Labor Agreements.
j. **Legal Counsel:** In addition to its own internal legal counsel, Empire Wind has engaged Bracewell LLP, Sive Paget Riesel P.C., Barclay Damon, LLP and Akin Gump Strauss Hauer & Feld LLP to advise on regulatory and commercial matters in the development of the project. Milbank LLP serves as Empire Wind's finance legal advisor in connection with the project financing. Jackson Lewis has advised Empire Wind on labor matters.
k. **Operating Period Lender, and/or Tax Equity Provider:** Further details regarding the financing of the Project are provided in Section 6.3.
l. **Transmission Consultant:** Empire Wind has engaged Sargent & Lundy, Mott MacDonald, SNC Lavalin, PowerGem, and Tetra Tech to advise Empire Wind on matters concerning the interconnection of EW1 to the grid and its impact on the New York transmission system. Each of these organizations regularly advises entities participating in NYISO and other wholesale markets on transmission and interconnection issues.

5. A list of projects of similar type, size, technology and/or complexity that each of the Project participants (Proposer and any development partners) has had a role in developing, financing, owning, and operating generation and transmission facilities, and any evidence that the Project participants have worked jointly on other projects. Identify the specific members of the Project Team that worked on each project listed.

The following sections provide an overview of offshore wind projects that are being developed by affiliates of Empire Wind.

6.1.1. United States Projects

Empire Wind, Phase 2

The Empire Wind Project, Phase 2, located south of Long Island in the same lease area as EW1, will have a total nameplate capacity of more than 2 GW, when combined with the EW1 capacity being offered through this solicitation. On January 3, 2024, Equinor and bp announced a mutual agreement with New York State Energy Research and Development Authority ("NYSERDA") to terminate the OREC purchase and sale agreement associated with EW2. [redacted]

Beacon Wind

The Beacon Wind Project, located east of Long Island, will have a total nameplate capacity of more than 2.5 GW. Beacon Wind currently has a standalone project management team as detailed below:

Atlas Wind

The commercial lease for Atlas Wind Project was signed by Equinor in 2023 following the Bureau of Ocean Energy Management's ("BOEM") lease auction in December 2022. The project is located 60 miles from Morro Bay and will have a total nameplate capacity of 2 GW. Atlas Wind currently has a standalone Project Management Team as detailed below:

[redacted]

6.1.2. Global Portfolio

Given that Empire Wind or an Equinor affiliate will serve as the managing interest of EW1 responsible for day-to-day operations, the following sections focus on Equinor's global offshore wind portfolio.

North Sea

Sheringham Shoal

The Sheringham Shoal Project, located north of Sheringham, UK, was completed in 2012. Equinor is the operator of the joint venture company Scira, which owns Sheringham Shoal. The wind farm is located 11 miles from shore and consists of 88 turbines on monopile foundations with a total nameplate capacity of 317 MW. The project is connected to the grid through two offshore substations, two offshore cables, and an onshore cable.

An extension of the Sheringham Shoal Offshore Wind Farm is currently under development which will add 317 MW of total capacity to the north of the current array. The extension project has been selected by the UK Energy Minister to progress as a "Pathfinder" under the Offshore Transmission Network Review ("OTNR") designed to develop an increasingly coordinated offshore transmission network to minimize the impact on the community and the environment, reduce costs, and support the acceleration of offshore wind deployment in line with the British Energy Security Strategy.

Dudgeon

The Dudgeon Offshore Wind Farm, located north of Cromer, UK, was completed in 2017. Equinor is the operator of the joint venture company that owns Dudgeon. The wind farm is located 20 miles from shore and consists of 67 turbines on monopile foundations with a total nameplate capacity of 402 MW. The project is connected to the grid through an offshore substation and two export cables consisting of both onshore and offshore facilities. On December 14, 2018, Equinor, along with the joint owners of Dudgeon, completed a hybrid refinancing of the project totaling more than $1.7 Billion (£1.4 Billion).

An extension of the Dudgeon Offshore Wind Farm is currently under development, which will add 402 MW of total capacity to the north and southeast of the current array. The extension project has been selected by the UK Energy Minister to progress as a "Pathfinder" under the OTNR program described above.

Hywind Demo

The Hywind Demo, located west of Karmøy, Norway, was completed in 2009 and is the world's first floating wind turbine. Equinor designed and developed the project, which consists of a single turbine on a floating spar foundation anchored to the seafloor. The turbine has produced electricity for more than 11 years without any major component failures and continues to generate electricity. Over that

time period, it has withstood wind speeds reaching 89 mph and waves in excess of 60 feet. Equinor operated the Hywind Demo until February 1, 2019, when ownership of the facility was transferred to Unitech Offshore. Unitech plans to use the project as a platform for teaching and training as well as research and development of new offshore wind technologies.

Hywind Scotland

The Hywind Scotland floating wind farm, located east of Peterhead, Scotland, was completed in 2017. Equinor designed, developed, and operates the project, which incorporates experience gained from Hywind Demo. With a total installed capacity of 30 MW, the project consists of five 6 MW turbines on floating spar foundations anchored in a water depth of 328 feet. The project consists of a mixture of available technology and new patents developed and owned by Equinor. Through this experience, Equinor continues to expand its expertise in this new model of offshore wind development. The floating wind farm is owned by Equinor and Masdar and for its third consecutive year, Hywind Scotland – the world's first floating offshore wind farm – reached the highest average capacity factor for any wind farm in the UK.

Dogger Bank

Dogger Bank Wind Farm is an offshore wind farm being developed in three phases – Dogger Bank A, B, and C. Collectively, they will become the world's largest offshore wind farm with an installed capacity of 3.6 GW and will utilize turbines with capacities of 13 MW or more on monopile foundations in water depths of 65 to 114 feet. The 400,000-acre development is located 80–120 miles offshore the Northeast coast of England. Construction started in 2020 and has utilized a new generation of installation vessels with ultra-low emissions. Dogger Bank A and B phases will connect via an HVDC transmission system to the national grid near Beverley in East Riding of Yorkshire, while Dogger Bank C will connect to the grid near Redcar, in Teesside. The first turbine at Dogger Bank A has started producing electricity.

The Dogger Bank offshore wind farm (phases A, B and C) is a joint venture between SSE Renewables (40%), Equinor (40%), and Vårgrønn (20%). Equinor will operate the wind farm on completion and during its expected operational life of around 35 years.

Equinor and SSE Renewables also hold a 50% stake each in the up to 2GW Dogger Bank D project. Thus far, the two companies have awarded green hydrogen engineering contracts tied to Dogger Bank D for the feasibility and optimization of a large-scale green hydrogen development option at the proposed project. The studies will focus on various interdependent variables required to optimize a potential green hydrogen production facility, including offshore wind farm sizing, electrolysis capacity, transport and storage capacity, water availability and offtake optionality.

Hywind Tampen

In Norway, Equinor is the developer and operator of the 88 MW Hywind Tampen Project to provide power to offshore oil and gas platforms located in the North Sea. Together with its partners Petoro, OMV, Vår Energi, Wintershall Dea, and INPEX Idemitsu Norge AS, the project is the largest floating

offshore wind project in the world. Located approximately 86 miles off the Norwegian coast in the North Sea, the Hywind Tampen project is the world's first floating wind turbine project to provide power directly to offshore oil and gas. The project is estimated to meet about 35% of the annual power demands of five oil and gas platforms on the Snorre and Gullfaks fields. This creative approach to meeting the platforms' energy demand is expected to help reduce the use of gas turbine power on the platforms while also offsetting 200,000 tons of CO_2 emissions and 1,000 tons of NO_x emissions per year demonstrating Equinor's commitment to help decarbonize infrastructure and a common value with New York State. The project consists of 11 wind turbines on Equinor's pioneering floating offshore wind foundation technology anchored in water depths of between 260m and 300m. Power production from the first turbines in the floating wind farm Hywind Tampen started in November 2022 and the remaining turbines were installed and put into operations this year.

Baltic Sea

Baltyk

Equinor, together with its 50/50 JV partner, Polenergia, a Polish privately owned energy company, are maturing three offshore wind projects in the Polish part of the Baltic Sea towards construction phase. These are Bałtyk I, Bałtyk II and Bałtyk III offshore wind farms of the total capacity up to 3GW. Bałtyk II and Bałtyk III, each with a capacity of 720 MW, will be one the first offshore wind farms in the Polish waters of the Baltic Sea with the aim to deliver first power in 2027 and be in full commercial operations in 2028. Bałtyk I with a capacity up to 1560 MW is the most advanced project of the second phase of the Polish offshore wind development and is being matured targeting a Contract for Difference ("CfD") auction planned in 2025. Equinor is the designated operator of the project through the development, construction, and operations phases.

Arkona

The Arkona Offshore Wind Farm, located northeast of Sassnitz, Germany, was completed in 2019. Equinor and Credit Suisse Energy Infrastructure Partners each own 25% of the project, and RWE Renewables owns the remaining 50% and is operating the wind farm on behalf of the consortium. The wind farm is located 22 miles from shore and consists of 60 turbines with a nameplate capacity of 385 MW. The turbines utilize monopile foundations and are connected to the grid through an offshore substation and cables running to shore.

Southern Europe

Equinor and Naturgy Energy Group ("NEG") are currently looking into opportunities for offshore wind power in Spain. The Floating Offshore Wind Canarias ("FOWCA") is a 200 MW floating wind project off the coast of Gran Canaria with a tie-in to Barranco de Tirajana. Equinor and NEG will jointly bid in the region's upcoming first auction.

Equinor, as a leading developer and operator of floating offshore wind, has, together with our French partners RES and Green Giraffe, joined forces and formed Océole, a partnership dedicated to

developing floating offshore wind in France. France has set an ambition of becoming among the top markets for floating offshore wind in the next decade. Equinor participated in the first offshore wind tender held by the French government and the result is expected to be communicated Q1 2024.

Asia Pacific

South Korea Leases

Equinor opened its South Korean office in 2014 with the ambition of becoming the leading offshore wind developer in the market by 2030. Equinor is currently pursuing several development opportunities together with its strategic partners.

- **Firefly Project** – Equinor is maturing an early phase development of 750 MW floating offshore wind project off the coast of Ulsan. The project will bid for commercial offtake agreement in 2024 with a planned commercial operation date before 2030.
- **Donghae 1 Project** – Together with Korea National Oil Company and Korea East-West Power, Equinor is currently maturing the early phase development of a 200 MW floating offshore wind project outside the coast of Ulsan. Commercial operation date is expected to be in 2031.
- **Hoopong and Chujin Projects** – Equinor collaborates with four major Korean corporations (Hyundai Engineering, LG Chem, POSCO E&C and SK ecoplant) on two offshore wind projects near Chuja island, Hoopong and Chujin. Both projects have a capacity of 1400 MW each. Hoopong will consist of a combination of floating and bottom fixed turbines, while Chujin will be a bottom fixed project.

Japan Leases

Equinor opened an office in Japan in 2018 in preparation for offshore wind leases. The Japanese government has set an ambitious target for offshore wind with 45 GW auctioned by 2040, where 35 GW will be floating offshore wind technology. Japan is an attractive market that Equinor wants to be part of, and which requires local presence. Equinor has therefore partnered with domestic Japanese companies to work towards offshore wind auctions to obtain the rights to pursue both bottom fixed and floating offshore wind development projects.

Vietnam Leases

Equinor opened a representative office in Hanoi in May 2022 and is actively pursuing floating and bottom fixed offshore wind projects together with its partner PetroVietnam. The Memorandum of Understanding (“MoU”) between the parties were signed in 2021 and further strengthened in November 2023. The partnership supports Equinor’s strategy as a global offshore wind major to build scale in core areas and growth options in attractive transition markets.

Australian Leases

Equinor opened an office in Sydney in September 2023 and is actively pursuing offshore wind opportunities off the coast of New South Wales, Western Australia and Tasmania.

- **Hunter Region** – Equinor and Oceanex are pursuing to develop a 2000 MW floating offshore wind project off the coast of Hunter in New South Wales. The partners applied for Feasibility License (seabed access) in November 2023. Commercial operation date is expected to be in 2033.
- **Illawarra region** – Equinor and Oceanex are pursuing to develop a 2000 MW floating offshore wind project outside the coast of Illawarra in New South Wales. The partners will apply for Feasibility License in 2023 with expected commercial operation date in 2034.
- **Tasmania** – Equinor and Australian company Nexsphere formed the partnership Bass Offshore Wind Energy project ("BOWE"), seeking to develop a bottom fixed offshore wind farm off the coast of north-east Tasmania. The consortium will apply for Feasibility License in 2024 with expected commercial operation date in 2035.

6. Disclose any pending (currently or in the past three years) Health/Safety Enforcement Notice, litigation or disputes related to projects planned, developed, owned or managed by Proposer or parent companies or JV partners, or related to any energy product sale agreement.

See Attachment 6.L.

7. Describe any material litigation, disputes, claims or complaints, or events of default or other failure to satisfy contract obligations, or failure to deliver products, involving Proposer or a parent company, and relating to the purchase or sale of energy, capacity or RECs or other electricity products.

[redacted]

6.2. Permitting Plan

All required federal, regional, state, and local permits and approvals must be identified, and the status of each permit or approval must be provided. Proposers should provide context to the status of each permit, such as known barriers or issues which may materially affect the Project's permitting approval timelines.

Proposers are required to demonstrate a plan for environmental assessment and permit acquisition for the Offshore Wind Generation Facility. Proposers should provide the following information:

1. A comprehensive list of all the permits, licenses, and environmental assessments and/or environmental impact statements required to construct and operate the Project. Along with this list, identify the governmental agencies that are responsible for issuing approval of all the permits, licenses, and environmental assessments and/or environmental impact statements. If a Proposer has secured any permit or has applied for a permit, please indicate this in the response.

2. The anticipated timeline for seeking and receiving the required permits, licenses, and environmental assessments and/or environmental impact statements. Include a Project approval assessment which describes, in narrative form, each segment of the process, the required permit or approval, the status

of the request or application and the basis for projection of success by the milestone date. All requirements should be included on the Project Schedule as described in Section 6.2.5.1.

Empire Wind's permitting activities, at the time of this submission, have been substantially completed, having been initiated in 2018 shortly after being awarded the development rights for lease area OCS-A-0512. In general, the Construction and Operations Plan ("COP") (federal) and Article VII application (New York) are the two primary environmental and siting approvals that have the longest durations and require the most detailed impact assessments. As detailed further below, each of these are substantially complete and the final approvals and issuance of all necessary permits are expected within the first four months of 2024. Empire Wind also has applied for other material federal, state, and local permits necessary to support construction of the Project. The maturity of EW1's permitting process is the result of years of effort to advance the Project and a comprehensive and integrated approach to Project development, including robust engagement with stakeholders. A summary of the major permits and the status of each is provided as Figure 6.3 below. The advanced stage of the permitting strategy provides a high level of confidence that the Project will be successfully constructed if selected through this solicitation.

Figure 6.3: Status of Major Federal and State Permits and Authorizations

Permit / Authorization	Jurisdiction	Status
Construction and Operations Plan	BOEM	Target COP Approval: February 21, 2024
Site Assessment Plan	BOEM	Complete
Section 106 Memorandum of Agreement	BOEM	Complete
National Environmental Policy Act (NEPA) review: NOI / EIS / FEIS / ROD	BOEM	All NEPA milestones Complete
Marine Mammal Protection Act	NOAA/NMFS	Proposed Rule Making Complete: April 12, 2023 Target Final ITA: February 22, 2024
Outer Continental Air Permit	EPA	Draft Permit Complete: December 1, 2023 Target Final Permit: April 22, 2024
Endangered Species Act Consultation	NOAA/NMFS	Complete
Magnuson-Stevens Fishery Conservation Act	NOAA/NMFS	Complete
Section 10 Rivers and Harbors Act of 1899 and Section 404 Clean Water Act	USACE	Public Notice EW1 (Complete): November 3, 2022 Public Notice SBMT (Complete): November 3, 2022 Final Permits Target: March 20, 2024
Endangered Species Act Consultation	DOI-FWS	Complete
Article VII Certificate of Environmental Compatibility and Public Need	NY Department of Public Services	Complete
Article VII Environnemental Management & Construction Plan ("EM&CP")	NY Department of Public Services	EM&CP Part 1 (Submitted): Approval target April 2024 EM&CP Part 2 (Submitted): Approval target June 2024 EM&CP Part 3 (Submission Target March 2024): Approval target August 2024
Section 401 Water Quality Certificate	NY Department of Public Services	Complete

The following discussion provides a summary in narrative form of the information required for each applicable regulatory approval and the status of obtaining these approvals. These applications and approvals have been supported by comprehensive environmental and technical assessments that have been predominantly completed. Additional details are provided in the permitting matrix provided for EW1 in Attachment 6.A. Details on the timeline and associated milestones for these Plans have also been incorporated into the project schedule discussed in Section 5.1.1.

Given the complexity of a proposed offshore wind farm and the number of technical details that must be managed, Empire Wind has established a well-developed process for keeping track of commitments and environmental requirements either offered up by Empire Wind or required through permitting and consultation. Empire Wind maintains a Commitments Register that includes information about the origin of the commitments and/or environmental requirements (when they were made and who they were made to), what aspect of the facility the requirements apply to (*e.g.*, installation of the submarine cable, pre-construction notification, etc.), and estimated start/end of that commitment to ensure a successful project.

Empire Wind believes in early and frequent engagement with the regulatory agencies. Public involvement in both the federal and state regulatory process is important and has and will continue to be managed proactively. Stakeholders include but are not limited to: Congressional delegations; federal, state, and local regulatory agencies; citizen groups; environmental/nongovernmental groups; coastal states; Tribal Nations; fishermen's organizations; recreation and tourism interests; marine trades; commercial interests; and the general public or other groups with broad interest in EW1. Details on outreach to these entities and others are further described in the relevant sections, including: Fisheries Mitigation Plan (Section 8.1), Environmental Mitigation Plan (Section 8.2), and Stakeholder Engagement Plan (Section 8.3)). A summary of Agency engagement can be found in Appendix B of the COP.

The federal stakeholders include: BOEM, National Oceanic and Atmospheric Administration ("NOAA"), NOAA-National Marine Fisheries Service ("NMFS"), the US Environmental Protection Agency ("USEPA"), US Army Corp of Engineers ("USACE"), BSEE, Federal Aviation Administration ("FAA"), US Fish and Wildlife Service ("USFWS"), US Coast Guard ("USCG"), Department of Defense ("DoD"), and the Federal Permitting Improvement Steering Council ("FPISC").

The New York State stakeholders include: the New York State Department of State ("NYSDOS"), New York State Department of Environmental Conservation ("NYSDEC"), New York State Office of Parks, Recreation and Historic Preservation ("NYSOPRHP"), New York State Department of Public Service ("NYDPS"), New York State Office of General Services ("NYSOGS"), New York State Department of Agriculture and Markets ("NYSAGM"), New York State Department of Transportation ("NYSDOT"), and NYSERDA, including ongoing participation in New York State's Environmental Work Group ("E-TWG") and Fisheries Technical Working Group ("F-TWG"). In addition, Empire Wind has engaged with the NY Harbor Operations Steering Committee, and the Maritime Technical Working Group ("M-TWG").

Additional details describing when and how state agencies are involved are provided below and summarized in the permitting matrix provided as Attachment 6.A.

6.2.1. Federal Permits

U.S. Dept. of Interior, Bureau of Ocean Energy Mgmt.

The federal permitting process has been coordinated by BOEM and includes a review of environmental impacts under NEPA.[1] Under NEPA, federal agencies evaluate the potential impacts of any proposed major federal action with the potential to significantly affect the quality of the human environment, including alternatives to the proposed action. BOEM serves as the lead federal agency for NEPA review and compliance with respect to EW1, and conducted its review of the environmental impacts in the Final Environmental Impact Statement ("FEIS"). The FEIS contains BOEM's preferred alternatives. BOEM's approval of EW1, including the selection of the alternative to be constructed, is detailed in the Record of Decision ("ROD") and covers the construction and operation of EW1.

BOEM's jurisdictional obligations are defined under the Outer Continental Shelf Lands Act ("OCSLA") as implemented through regulations governing Renewable Energy and Alternate Uses of Existing Facilities on the Outer Continental Shelf (30 C.F.R. pt. 585). Under OCSLA, as amended by the Energy Policy Act of 2005, the Secretary of the Interior is authorized to issue leases for wind and other alternative energy development on the outer continental shelf ("OCS"). The OCS is defined as all submerged lands and seabeds within U.S. navigable waters, seaward and outside of the state jurisdiction of 3 nm.[2] Under delegated authority from the Department of the Interior, BOEM issued Lease OCS-A-0512 to Equinor Wind, which, in turn, was assigned to Empire Wind. This lease is the primary mechanism by which BOEM regulates the use of the submerged lands for EW1 per 30 C.F.R. pt. 585.

Detailed information about proposed activities and schedule requirements for the BOEM process are defined in the Lease and FEIS and in applicable regulatory guidelines. A summary of these requirements and timelines is provided in Figure 6.4.

[1] 42 U.S.C. § 4321 *et seq*.

[2] *See* 43 U.S.C. § 1301.

Figure 6.4: BOEM Requirements and Lease Stipulations

Filing/Milestone	Description	Date
Site Assessment Plan ("SAP") Survey Plan	A description of methods and timing of surveys necessary to meet the information requirements of 30 C.F.R. § 585.610-611, including shallow hazards, geological, biological, geotechnical, and archaeological surveys. Plan submitted to BOEM for review and comment.	At least 30 calendar days prior to the date of the pre-survey meeting At least 90 days prior to start of marine surveys
Pre-Survey Meeting for the SAP surveys	Hold a pre-survey meeting with BOEM at which a qualified marine archaeologist must be present to discuss the SAP Survey Plan.	At least 60 days prior to start of SAP surveys
SAP	Plan due at the end of the Preliminary Term (*i.e.*, 12 months after the Effective Date) describing the activities to collect wind resource and metocean measurements using buoys or fixed-platform meteorological towers.	Prior to the end of the Preliminary Term
Semi-Annual Progress Report	A semi-annual progress report throughout the duration of the site assessment term providing a brief narrative of the overall progress since the last progress report.	Every 6 months after SAP approval
Construction and Operation Survey Plan	A plan describing the methods and timing of surveys necessary to meet the information requirements of a COP (§ 585.626 and 627). These surveys include shallow hazards, geological, biological, geotechnical, and archaeological.	At least 30 calendar days prior to pre-survey meeting At least 90 days prior to start of marine surveys
Pre-Survey Meeting for the COP surveys	Hold a Pre-Survey Meeting with BOEM at which a Qualified Marine Archaeologist must be present, to discuss the COP Survey Plan.	At least 60 days prior to start of COP surveys
COP	A plan describing the activities for constructing and operating an offshore wind project that includes the requirements of § 585.601, 626, and 627.	6 months prior to the end of the 5-year Site Assessment Term
Facility Design Report ("FDR")	A report that provides specific details of the design of any facilities, including cables and pipelines that are outlined in the approved SAP and/or COP, which demonstrates that the design conforms to the responsibilities listed in §585.105(a).	May be submitted with COP or following COP approval.

Fabrication and Installation Report ("FIR")	A report that describes how the facilities will be fabricated and installed in accordance with the design criteria identified in the FDR; the approved SAP and/or COP, and generally accepted industry standards and practices.	May be submitted with COP or following COP approval.

In accordance with BOEM's requirements, on June 18, 2018, Empire Wind submitted its SAP to BOEM setting out its plan for the installation of metocean facilities within the lease area. On November 21, 2018, after appropriate consultations with relevant federal, state and tribal entities, local governments, and potentially affected stakeholders, BOEM approved the SAP, clearing the way for the subsequent installation of the metocean facilities in the lease area.

On September 17, 2020, Empire Wind submitted its SAP Decommissioning Plan to BOEM, in accordance with 30 CFR 585.902(b) to support the planned decommissioning of SAP facilities planned for approximately December 2, 2020.

Empire Wind submitted a COP to BOEM on January 10, 2020, revisions and supplements were provided as necessary, with the final plan dated July 21, 2023. On June 24, 2021, BOEM published a Notice of Intent to Prepare an Environmental Impact Statement for the Empire Wind project offshore New York. On November 18, 2022, BOEM announced the availability of the Draft Environmental Impact Statement ("Draft EIS") for the proposed Empire Wind Project. On September 11, 2023, BOEM announced the availability of the FEIS for the proposed Empire Wind project offshore New York, and the Environmental Analysis for the SBMT project. The ROD was published on November 21, 2023 and COP approval is expected on February 21, 2024.

The full buildout of the lease area, as described in the Project Design Envelope includes EW1 and EW2. All offshore survey data collected is sufficient to support the technical solution for EW1. The Project Design Envelope is outlined in the COP and incorporated into the FEIS in Appendix E. The Environmental Analysis for SBMT is included in Volume 6 of the FEIS. The FEIS outlines the preferred alternatives that are finalized in the ROD.

Following COP approval, Empire Wind will submit a FDR and FIR for BOEM approval prior to construction. In accordance with 30 C.F.R. § 585.705, Empire Wind has been required to enlist a Certified Verification Agent ("CVA") to review and certify the FDR and FIR to ensure that the facilities are designed, fabricated, and installed in conformance with accepted engineering practices and the FDR and FIR. Empire Wind has nominated the CVA, DNV GL, which was approved by BOEM on June 29, 2020.

During its technical review, BOEM has engaged in formal consultation with the cooperating federal agencies (*e.g.*, USACE, USFWS, NOAA NMFS, EPA, etc.) under various regulations discussed below. Additionally, state agencies, particularly those delegated authority, have been engaged in review of the COP and other permit applications, in coordination with the federal NEPA review. Empire Wind submitted its Fixing America's Surface Transportation Act ("FAST-41") Initiation Notice, in accordance with 42 U.S.C. Section 4370(m) on April 2, 2020 to the FAST-41 Council. The Department of Interior

subsequently responded, confirming the lease area projects' (including EW1) eligibility for inclusion on the FAST-41 Permitting Dashboard. Being a FAST-41 covered project ensures that the lead agency establishes a "comprehensive, integrated Federal permitting timetable that is publicly posted on the Permitting Dashboard and which contains all Federal environmental reviews and authorizations needed to begin construction of the project. FAST-41 requires that agencies collaboratively establish and maintain these permitting timetables and consult with the project sponsor on any proposed permitting timetable changes. Permitting timetables may only be modified in compliance with FAST-41's consultation and public disclosure requirements to ensure accountability."

National Oceanic and Atmospheric Administration and the U.S. Fish and Wildlife Service

Environmental resource protection agencies, including the National Oceanic and Atmospheric Administration, National Marine Fisheries Service ("NOAA Fisheries") and USFWS, Northeast Region (Region 5), reviewed project impacts to protected resources and evaluated the need for mitigation through prescribed best management practices. These agencies have reviewed environmental documents and commented through inter-agency consultations. NOAA Fisheries and USFWS reviewed impacts to marine, coastal, and terrestrial threatened and endangered species and designated critical habitats protected by the federal Endangered Species Act ("ESA"). Section 7 of the ESA requires that federal agencies consult with NOAA Fisheries and USFWS to ensure actions that they authorize are not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of critical habitat.

Impacts to non-ESA listed species and habitats were also evaluated under several other wildlife protection laws, including the Migratory Bird Treaty Act of 1918 ("MBTA"), the Bald and Golden Eagle Protection Act ("BGEPA"), the Marine Mammal Protection Act of 1972 ("MMPA"), and the Magnuson-Stevens Fishery Conservation and Management Act ("MSFCMA").

All marine mammal species are protected under the MMPA (50 CFR § 216) as amended in 1994. Pursuant to section 101(a)(5) of the MMPA, an Incidental Take Authorization ("ITA") is required for activities resulting in the incidental take of marine mammals. Incidental take may be authorized under the MMPA if it is determined that the taking would: (a) be of a small number; (b) have no more than a negligible impact on marine mammal species and stocks; and (c) not have an unmitigable adverse impact on the availability of the species or stock for subsistence uses. MMPA Incidental Take Authorizations can be provided in the form of an Incidental Harassment Authorization ("IHA") or a Letter of Authorization ("LOA"), depending on the nature and duration of the activity.

The Magnuson-Stevens Fishery Conservation and Management Act, reauthorized in 2005, set forth the essential fish habitat ("EFH") provisions to identify and protect important habitats of federally-managed marine and anadromous fish species. Federal agencies that fund, permit, or undertake activities that may adversely affect EFH are required to consult with NOAA Fisheries regarding the potential effects of their actions on EFH. Additionally, in accordance with 50 C.F.R § 600.920(e)(1), BOEM and NOAA Fisheries will assess impacts to EFH.

Section 7 of the ESA mandates all Federal agencies to determine how to use their existing authorities to further the purposes of the Act to aid in recovering listed species, and to address existing and potential conservation issues.

Section 7(a)(2) states that each Federal agency shall, in consultation with the Secretary, ensure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. In fulfilling these requirements, each agency is to use the best scientific and commercial data available. This section of the Act sets out the consultation process, which is further implemented by regulation (50 C.F.R. pt. 402).

NOAA Fisheries issued its ESA section 7 Biological Opinion September 8, 2023. Consultation between BOEM and NOAA under the Magnuson-Stevens Fishery Conservation and Management Act concluded on July 28, 2023.

Empire Wind submitted an application to NOAA on December 7, 2021, under the MMPA for an ITA. NOAA determined the application complete on August 11, 2022. NOAA published the proposed ITA rulemaking in the Federal Register on April 12, 2023. The Final ITA is expected on in Q1 of 2024.

The SBMT project received a Letter of Concurrence under the MMPA (confirming NOAA's determination that an ITA is not warranted) on May 25, 2023. The USFWS issued its ESA section 7 Biological Opinion on June 22, 2023 based on review of BOEM's authorization for Empire Wind to construct the EW1 and EW2 projects and the projects' effects, in the form of wind turbine collision mortality, on the federally-listed red knot (*Calidris canutus rufa*; threatened) and its proposed critical habitat, and the federally-listed piping plover (*Charadrius melodus*; threatened) pursuant to the Endangered Species Act (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.).

U.S. Coast Guard

USCG is a cooperating agency and supported the preparation of the FEIS, pursuant to pursuant to 40 CFR § 1501.8. The alternatives and mitigations identified in the FEIS incorporate the USCG considerations. The USCG will issue a Captain of the Port ("COTP") approving, approving with modifications, or denying the Navigation Safety Risk Assessment provided in the COP.

The USCG will also issue a Private Aids to Navigation ("PATON") approval for navigational lighting on structures above the waterline (*e.g.*, floating LiDAR buoys, WTGs, and offshore substation platforms). A PATON will be issued approximately 30 days prior to construction. Approximately two weeks prior to the initiation of construction activities, the USCG will publish a Local Notice to Mariners ("Notice"), which will remain in effect throughout the construction period.

U.S. Environmental Protection Agency

The EPA established requirements to control air pollution from OCS sources in order to attain and maintain Federal and State ambient air quality standards ("AAQS") and to comply with the provisions of part C of title I of the Clean Air Act ("CAA") in 40 C.F.R. pt. 55. The EPA Region 2 reviewed EW1 for

potential air emissions associated with construction, commissioning, and operation and maintenance of emission sources within the lease area and within a 25 nautical mile boundary around the lease area. Emission sources are mostly from vessel engines, but also include engines on the OSS, emissions leaks from switchgears, and other miscellaneous sources.

To protect human health, the EPA establishes National Ambient Air Quality Standards ("NAAQS") pursuant to the CAA that apply to outdoor air throughout the country. For each NAAQS pollutant and averaging period, the EPA may designate a specified geographic area as being in attainment of the standard, as being in nonattainment of the standard, or as being a maintenance area (*i.e.*, an area that was previously in nonattainment but has since been redesignated as attaining the standard due to ongoing improvements in local air quality).

The EPA is required to establish requirements to control air pollution from OCS sources located within 25 miles of states' seaward boundaries that are the same as onshore air control requirements. To comply with this statutory mandate, the EPA must incorporate applicable onshore rules into part 55 as they exist onshore. The requirements shall be the same as would be applicable if the sources were located in the corresponding onshore area ("COA"). New York state is designated as the COA for EW1. Empire Wind submitted a Notice of Intent to EPA Region 2 on March 14, 2022. EPA Region 2 published an "Outer Continental Shelf Air Regulations Update to Include New York State Requirements" in the Federal Register Notice on May 20, 2022, which incorporated by reference relevant New York air pollution control rules into 40 C.F.R. pt. 55.

Empire Wind submitted an initial OCS Air Permit application to EPA Region 2 on August 10, 2022 and provided supplemental material through March 20, 2023. The EPA determined the application to be complete on April 20, 2022. The draft permit was published on December 1, 2023 and a public hearing was held on January 3, 2024. The issuance of the final decision and permit approval is expected to occur on or before April 22, 2024.

Under Section 402 of the Clean Water Act ("CWA"), the EPA will issue a National Pollutant Discharge Elimination System ("NPDES") permit for the discharge of any pollutant into navigable waters outside of the New York State jurisdictional boundary. EPA has delegated authority to NYSDEC for any State Pollutant Discharge Elimination System ("SPDES") permits that are required within state jurisdiction. Two separate SPDES permit applications have been submitted to the NYSDEC on behalf of both Empire Wind and SBMT Asset, LLC. [redacted]

U.S. Army Corps of Engineers

An Individual Permit from the USACE will be required for dredging and installation activities in waters of the U.S for EW1 and also for activities associated with SBMT. For dredging and excavation, Section 404 of the CWA (33 U.S.C. § 1344) prohibits the discharge of dredged or fill material into navigable waters of the United States without a permit from the USACE. Navigable waters are "subject to the ebb and flow of the tide and/or presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce" (33 C.F.R. § 329.4). Section 401 of the CWA requires applicants to obtain a certification or waiver from the NYSDEC for any activity that may result in a

discharge of a pollutant into waters of the United States, including any dredged or fill materials; however, in NYS Article VII proceedings the Section 401 Water Quality Certificate is issued by NYSDPS. EW1 received its Water Quality Certificate on October 4, 2023.

Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. § 401 *et seq.*) requires a permit from the USACE for construction of any structure, such as wind turbine generators and/or a submarine transmission cable, in or over any navigable waters of the United States. USACE also regulates dredging activities pursuant to Section 10 of the Rivers and Harbors Act. The USACE is a cooperating agency under NEPA to satisfy the NEPA requirements for the Individual Permit. The FEIS will support the Section 10/404 permit decision. USACE also regulates occupancy for any project that would be located within a federally sponsored project (*e.g.*, navigational channels, anchorages, beach replenishment areas), regardless of whether the sponsorship is partial or whole under Section 408 of the CWA. A Section 408 permit is not required for EW1 or for SBMT.

Empire Wind is located entirely within the jurisdictional area of the New York District. As such, the Section 10/404 authorizations will be issued by USACE-NY. EW1 submitted a complete application to the USACE-NY on October 3, 2022 and received its complete Pre-Construction Notification (PCN)/Application Received on November 3, 2022. The USACE-NY subsequently published public notice for both the SBMT application and the Empire Wind 1 application on November 4, 2022. All permits are expected on March 20, 2024 with an earlier target for the final SBMT permit.

Empire Wind conducted site investigations in federal waters (*e.g.*, geotechnical, geophysical borings) to support the design of the export cable and the wind farm and is currently conducting a Munitions and Explosives of Concern survey. These EW1 activities met the requirements of a Nationwide Permit #6 (NWP#) for Survey Activities (New York District).[3] Activities associated with facilities under the SAP qualified for a Nationwide Permit #5. The buoy deployment activities described in the SAP were completed under USACE Nationwide Permit ("NWP") #5 and Empire Wind provided self-certification to the USACE New York District stating its intent to use NWP #5 for the activities and demonstrating project compliance with the NWP conditions, NWP #5 confirmed by USACE on March 15, 2018. Additional preconstruction surveys were covered under the NWP #6 permit. The 2021 Winter Geotech Survey JPA – received January 7, 2021, NAN-2020-01298-EWS and the 2023 Sediment Sampling JPA - received April 11, 2023, NAN-2023-002820-EMI.

It is anticipated that survey activities during construction will be covered under the COP approval and associated permits.

[3] Any activities located in state waters will require the state water quality certificate and coastal zone consistency determination. This is predicated on proposed activities meeting NY-regional specific conditions. Empire Wind is consulting with both NYSDEC and NYSOGS for work proposed within the 3 nm jurisdictional boundary and preparing the required documentation in support of this work.

Other Federal Agencies

The mitigation measures for the North American Aerospace Defense Command's ("NORAD") operation of the Riverhead, NY, Air Route Surveillance Radar-4 (ARSR-4) included in the FEIS and ROD are as follows:

- Empire Wind will notify NORAD 30-60 days prior to Project completion and again when the Project is complete and operational for Radar Adverse Impact Management scheduling;
- Empire Wind will contribute funds in the amount of $80,000 per impacted radar towards Radar Adverse Impact Management; and
- Empire Wind will implement curtailment for National Security or Defense Purposes as described in the leasing agreement.

The Bureau of Safety and Environmental Enforcement ("BSEE") is responsible for certain safety and environmental oversight, compliance, and enforcement regulations. BSEE is responsible for evaluating EW1 design, fabrication, and installation, and Safety Management System ("SMS") plans, including Emergency Response Procedures ("ERP") and Oil Spill Response Plans ("OSRP"). The agency enforces operational safety and environmental protection through inspections, incident reporting, and investigation, and enforces compliance with applicable regulations, leases, and approved plans. BSEE also oversees decommissioning activities. Empire Wind has begun consultations with BSEE and will submit the FDR/FIR to BSEE in early 2024.

The FAA has jurisdiction within 12 nm (22 km) from shore for construction over 200 ft (61 m) above ground level. If any turbines are within the 12 nm (22 km) jurisdictional boundary, a Determination of No Hazard is required. The FAA will issue a Determination of No Hazard to Air Navigation if an aeronautical study concludes that the proposed construction would not have a substantial aeronautical impact to air navigation. Empire Wind has filed a Determination of No Hazard with the FAA for EW1's export cable route and the windfarm. Empire Wind received a Determination of No Hazard from the FAA on December 12, 2023 for the export cable route.

Section 106 Consultations

Additionally, the National Historic Preservation Act of 1966 ("NHPA") requires that BOEM consult with the State Historic Preservation Office and the Tribal Historic Preservation Office of any Native American Tribes that may be affected by EW1. Section 106 of the NHPA requires federal agencies to account for the effects of a proposed action on properties eligible for inclusion in the National Register of Historic Places ("NRHP") and, if applicable, develop plans to avoid, minimize, or mitigate adverse effects to the historic properties. "Properties" are defined as "cultural resources," which include prehistoric and

historic sites, buildings, and structures that are listed on or eligible for listing in the NRHP. BOEM has prepared an EIS in compliance with NEPA and Section 106 of the NHPA as amended. As noted above, the Empire Wind ROD was issued on November 21, 2023. After five consulting party meetings and comment periods, the Memorandum of Agreement ("MOA") was signed on November 20, 2023 by BOEM, the Advisory Council on Historic Properties ("ACHP") and the State Historic Preservation Offices ("SHPO") of both New York and New Jersey.

6.2.2. State Permits

New York State Public Service Commission and Department of Public Service

The primary state environmental review and approval for EW1 is defined by Article VII of the Public Service Law. This process culminates in the issuance of a Certificate of Environmental Compatibility and Public Need ("ECPN"), which is required for the siting of major utility infrastructure[4] in the state of New York. The Article VII application addresses the proposed transmission system connecting the offshore wind farm to the interconnecting substation including any associated infrastructure upgrades that may be required for deliverability at the interconnection point. Applications for major electric transmission lines, like the one proposed by Empire Wind, are governed by 16 NYCRR Part 86 and 88.

The Public Service Commission ("PSC") regulates investor-owned electric, natural gas, steam, telecommunications, and water utilities in New York State and issues the ECPN. The PSC decides any application filed under Article VII, the certification review process for major electric and gas transmission facilities. The Department of Public Service ("DPS"), who serve as staff to the PSC, is the State agency that carries out the PSC's legal mandates. Namely, one of DPS's responsibilities is to participate in all Article VII proceedings to represent the public interest.

The EW1 Article VII application was filed on June 30, 2021 and deemed complete on January 24, 2022. Following settlement negotiations, the settlement parties, including NYSDPS, NYSDEC, NYSDOS, NYSAGM, the City of New York, and the Long Island Commercial Fishing Association signed onto a Joint Proposal, which was filed on August 15, 2023. Empire Wind received its Article VII ECPN on December 14, 2023.

Following issuance of the Article VII Certificate, Empire Wind is now preparing the various additional documents to verify its compliance with the certificate conditions, including the EM&CP. This document must be formally filed with and approved by the PSC before construction can proceed. The EM&CP will detail the precise location of the proposed facilities and the special precautions that will be taken during construction to ensure environmental compatibility. It is important to note that the Article VII authorization does not include property rights. As such, the EM&CP cannot be issued until all property right are obtained, including the NYSDOT Accommodation Permit. Empire Wind filed Part 1 of its EM&CP on November 20, 2023, and intends to file Part 2 and Part 3 of its EM&CP in January

[4] Major electric transmission facilities are lines with a design capacity of 100 kV or more extending for at least 10 miles, or 125 kV and over, extending a distance of one mile or more.

2024 and March 2024, respectively. Empire Wind anticipates receiving PSC approval of its Part 1 EM&CP in March 2024, Part 2 in May 2024, and Part 3 in September 2024. Part 1 of the EM&CP mainly covers below grade site prep work onshore as well as some bulkhead work. Part 2 covers all in-water work, including the submarine cable and in-water bulkhead work, and Part 3 covers above-grade onshore substation construction.

An additional requirement for the Article VII application is the System Reliability Impact Study ("SRIS"), prepared by NYISO as a result of the interconnection requests filed by Empire Wind. The SRIS was completed and included with the Article VII application. The SRIS is provided as Attachment 7.A.

In addition, in Article VII cases, NYSDPS issues the CWA Section 401 Water Quality Certificate and regulates the exercise of Municipal Consents under Section 68 of the Public Service Law.

A request for a 401 Water Quality Certification was filed with the PSC on October 3, 2022. NYSDPS issued EW1's Water Quality Certificate on October 3, 2023. A Section 68 Petition was filed with the PSC on July 28, 2023. It is expected that the Petition will be on the Commission agenda for approval during Q1 2024, once EW1 has obtained all municipal consents from New York City.

New York State Department of Environmental Conservation

NYSDEC participated in the Article VII settlement negotiations and is a signatory to the Joint Proposal, as noted above. NYSDEC's participation included subject matter experts in wetlands, wildlife, contaminated soils, fisheries, etc. Empire Wind is also consulting with NYSDEC to review and approve Atlantic and shortnose sturgeon avoidance, minimization, and monitoring and mitigation, if necessary, for the Project, in coordination with the NYSDPS.

NYSDEC also has the delegated authority to implement Section 402 of the CWA and thus enforces the SPDES and will issue permit(s) for the installation of the transmission cable to shore and for construction dewatering. Stormwater Pollution Prevention Plans ("SWPPP") have been filed with the New York City Department of Environmental Protection ("NYCDEP").

NYSDEC administers the New York State Brownfield Cleanup Program ("BCP"). The Project has voluntarily entered into the BCP and will remediate impacted materials on the SMBT property in areas associated with EW1 and SBMT Projects. Remediation will be conducted under the Interim Remedial Measure Work Plan ("IRM") and Remedial Action Work Plan ("RAWP") both of which have been developed by Tetra Tech and submitted for approval by NYSDEC. Documentation of remedial actions will be submitted to the NYSDEC upon completion. Once the final documentation has been submitted and approved, the BCP Case will receive a Certificate of Completion ("COC").[5]

[5] The South Brooklyn Marine Terminal BCP remediation has been assigned case number C224360 by NYSDEC.

New York State Department of State

NYSDOS participated in the Article VII settlement negotiations and are a signatory party to the Joint Proposal. In addition, NYSDOS is responsible for administering the New York State Coastal Management Program ("NYS CMP"). Consistency review is the tool which enables the NYSDOS to manage coastal uses and resources while facilitating cooperation and coordination with involved state, federal and local agencies. The "consistency" of a proposed activity with the NYS CMP is determined through a set of coastal policies and procedures designed to enable appropriate economic development while advancing the protection and preservation of ecological, cultural, historic, recreational, and esthetic values. NYSDOS was an active party in the Article VII process, participated in confidential settlement negotiations, and was a signatory to the Joint Proposal that was filed with the PSC in connection with the issuance of the Empire Wind 1 Article VII Certificate.

The Coastal Zone Management Act ("CZMA") requires that the responsible state agency provide a determination that construction and operation of the proposed project is consistent with the state's coastal protection policies within the applicable jurisdiction. The NYSDOS concluded the Empire Wind COP and EW1 Subpart D federal consistency reviews and determination on October 16, 2023 and concluded its determination for SBMT on September 14, 2023.

Survey activities supporting the design of EW were authorized by the NWP #6. EW has, sought consistency determinations for each geotechnical boring campaign within New York State waters prior to implementation and completed under NWP#6.

New York State Office of General Services

NYSOGS holds title to the seabed within 3 nm of the coastline "in trust" for the people of the State of New York. Structures located in, on, or above submerged state-owned lands are regulated under the Public Lands Law and may require authorization from the State. Empire Wind will be required to obtain a submerged lands lease from the NYSOGS for the export cables to shore and submitted an application for a Cable Easement and Interim Construction Permit on December 23, 2022 with a revised application filed on August 8, 2023. NYSOGS issuance of the Interim Construction Permit is expected in Q1 2024 allowing for the start of activities.

New York State Department of Transportation

NYSDOT has an agreement with the Federal Highway Administration ("FHWA") regarding how utilities are accommodated on controlled access highways (Accommodation Plan for Longitudinal Use of Freeway Right-of-Way By Utilities); however, only communication utilities are permitted. Therefore, any request for a non-highway use of a controlled access highway (i.e., for construction and operation of a project) is considered an exception to the Accommodation Plan and would require approval by the FHWA. Unlike the other approvals described in this plan, the FHWA approval is issued to NYSDOT and not Empire Wind. EW1 is not located within State highways, parkways, or expressways rights of way, therefore, no FHWA approval is required.

New York State Office of Parks and Historic Preservation

NYSOPRHP provides advice and guidance to municipalities, the Governor, and the Legislature on the municipal alienation process. Parkland alienation applies to every municipal park in the State of New York. For those municipal parks that have also received Federal funds, such as through the Land and Water Conservation Fund, both alienation and conversion procedures apply.

If a portion of a beach, open space, or bike path, that is designated municipal parkland is needed for a cable easement, even if temporary, such a conveyance would require the authorization of a parkland alienation bill from the New York State Legislature and approval by the Governor. EW1 cable routing does not cross municipal parkland, therefore, no authorization is needed.

NYSOPRHP consulted throughout the Section 106 process and was a signatory to the MOA in November 2023 as described in Section 6.2.1.

New Jersey Department of Environmental Protection

The New Jersey Department of Environmental Protection ("NJDEP") Division of Land Resource Protection ("Division") is responsible for issuing a Section 307 of the Federal CZMA (16 U.S.C. 1456) determination. The NJDEP concurred with Empire Wind's consistency certification that the project is consistent with the enforceable policies of the New Jersey Coastal Zone Management Program, N.J.A.C. 7:7-1.1 et seq., on September 15, 2023.

The New Jersey State Historic Preservation Office consulted throughout the Section 106 Process and was a signatory to the MOA in November 2023 as described in Section 6.2.1.

6.2.3. Local Permits

The Article VII Certificate of the PSC preempts the procedural requirements of local ordinances in accordance with PSL § 130. The PSC has the authority to grant waivers from local ordinance requirements that are determined to be unreasonable or prohibitive to construction and operation of a transmission project determined to be in the public interest of New York residents. In the Article VII process, Empire Wind obtained waivers for provisions of four New York City ordinances that were unreasonably restrictive in view of technology, costs, and consumer needs.

In addition, Empire Wind agreed, as detailed in Exhibit 7 of the Article VII application, to adhere to the procedural provisions of several New York City regulations. As a result, Empire Wind will obtain certain local approvals from New York City agencies as detailed below.

- New York City Department of Transportation
    - Street opening/excavation permit
    - Permit for construction or alteration of vaults
    - Permit for obstructing street with construction materials/equipment
    - Permit for overweight or oversize vehicles
- New York City Department of Environmental Protection

- Permits for activities relating to the use and supply of water (e.g. meter installation permit, permit for re-routing a water service connection)
- Permits for backflow preventer
- Variance for drilling and excavation within 200 feet horizontal distance of a water tunnel shaft
- SWPP permits

EW1 must receive a Revocable Consent from the New York City Department of Transportation ("NYCDOT") to install Project facilities in NYC-owned property outside of SBMT. This includes underwater lands in the proximity of the SBMT pierhead lines for installation of the Project's export cables and for interconnection cables between SBMT and the Point of Interconnection at the Gowanus Substation located in NYC owned streets. A petition for a Revocable Consent was filed with NYCDOT in October 2022. Approval of this petition is expected in Q1 2024.

The SBMT Port upgrades require additional local permits from NYC including Department of Buildings (DOB), Department of Environmental Protection (DEP), and Small Business Services (SBS). DOB and DEP permits will be filed close to the start of construction. Applications for SBS Waterfront Construction Work Permit – Bulkheads and SBS Waterfront Construction Work Permit – Dredging have been filed with the NYCSBS. Permit issuance is anticipated for Q1 2024.

6.2.4. Construction Permit Close-out and Operations Turnover

When the construction phase of EW1 ends, it may be necessary to complete certain obligations or commitments associated with permits obtained for construction. In addition, some permits will also be valid during the operation phase of the project, such as the EPA OCS Air permit. Empire Wind will continue to maintain the Commitments Register referenced in Section 6.2, such that all requirements are closed out or handed over properly.

Similarly, in preparation for operations, Empire Wind will be turning EW1 over to the dedicated Operations Team. Leading up to the turnover, Empire Wind will prepare an "Operations Compliance Matrix," which will identify all operations permits, required monitoring/recordkeeping, regulatory submittals (if applicable), and timeframes. This information is necessary such that the dedicated Environmental Compliance Manager for operations becomes familiar with and is able to establish a compliance program for implementation throughout the operations phase.

As part of the development of Standard Operating Procedures ("SOPs") for the facility, Empire Wind will consider relevant regulatory requirements associated with environmental compliance that need to be incorporated. For example, under the OSRP, spill response equipment will need to be inspected and maintained monthly and records of such inspections must be maintained for two years. Operations Team members will be trained on these at an established, applicable interval (e.g., annual or other) to ensure continued environmental compliance.

6.2.5. Decommissioning

In a similar manner to the operations turnover, certain things will be required to maintain compliance during decommissioning activities. Under 30 C.F.R. pt. 585 and commercial Renewable Energy Lease OCS-A 0512, Empire Wind is required to remove or decommission all installations and clear the seabed of all obstructions created by EW1. All foundations would need to be removed 15 feet (4.6 meters) below the mudline (30 C.F.R. § 285.910(a)). Absent permission from BOEM, Empire Wind would have to achieve complete decommissioning within 2 years of termination of the lease and either reuse, recycle, or responsibly dispose of all materials removed. Empire Wind has submitted a conceptual decommissioning plan as part of the COP, and the final decommissioning application will outline Empire Wind's process for managing waste and recycling EW1 components (COP Volume 1, Section 3.6; Empire 2023). Although EW1 has an anticipated operational life of 35 years, it is possible that some installations and components may remain fit for continued service after this time. Empire Wind would have to apply for and be granted an extension if it wanted to operate EW1 for more than the 25-year operations term stated in its lease.

In addition, as part of the Article VII Certificate, EW1 is required to prepare Decommissioning Plans (separate plans have been prepared for each EM&CP submission) for approval by DPS Staff. Consistent with the Article II Certificate and lease agreements, decommissioning will include the following:

- All below grade structures in state waters (e.g. foundations, conduit) will be removed, regardless of depth. Following removal, the site will be returned to pre-installation conditions.
- Prior to the start of underground structure removal, crushed rock surfacing removal, or other earthwork, an approved erosion control plan will be developed by the demolition contractor. Best Management Practices applicable at the time that decommissioning activities occur will be implemented by the contractor for control of stormwater runoff. The costs included in this Decommissioning Plan are expected to be sufficient for a demolition contractor to develop suitable plans for the control of surface water drainage and water accumulation and, where appropriate, for backfilling, soil stabilization, compacting, and grading prior to commencing demolition activities.
- Unless otherwise agreed upon with the NYCDOT, all underground equipment from onshore HVAC transmission line facilities will be removed, regardless of depth. All structures (i.e., below-grade piping, conduit/duct-bank, vaults, and other EW1 facilities), and foundations will be removed, regardless of depth. Upon removal of all vaults, vault openings, manholes, and manhole covers, the spaces will be backfilled as specified in Title 34, § 2-11 of the Rules of the City of New York. The roadway will then be restored as specified in § 2-11.
- To the extent practicable, disturbed areas will be returned to pre-existing conditions and the site will be graded to match the original contours. Land disturbed by construction and operation of the onshore components of EW1 will be returned to its predevelopment use at the end of the project.
- At the time of the preparation of this Proposal, Empire Wind assumes the EW1 offshore facilities will either be fully or partially removed from the seabed, or decommissioned in place. Cable and seabed conditions and impacts to the environment over time, along with other factors, will be reviewed during the life of EW1 and at the time of decommissioning to determine the submarine

export cable decommissioning approach. In the years prior to the start of decommissioning, surveys and inspection activities may be carried out, such that the findings may be used to inform the preferred approach for decommissioning and detailed decommissioning design studies.

- If decommissioning includes removal and disturbance of sediments, Empire Wind will conduct water quality monitoring, and visual observations of turbidity caused by decommissioning activities to ensure there is no substantial contrast to natural conditions in compliance with 6 NYCRR § 703.2. Prior to commencing decommissioning activities that include removal and sediment disturbance, Empire Wind will submit a water quality monitoring plan to DPS Staff and NYSDEC for activities that may require monitoring.
- If Empire Wind determines that removal of any portion of the submarine export cables within New York State is appropriate, the removal process will be similar to the cable installation process, but in reverse order. The same type of vessels and equipment used to install the cable and cable protection will be used to remove the cable and cable protection.
- Empire Wind will also survey and use best efforts to remove installed cable protection measures that are within 2 ft of the seabed surface.
- The portion of the submarine export cables where they make landfall at the bulkhead along the shoreline at SBMT will either be removed or cut and decommissioned in place. A decision on which decommissioning method used will be made at the time of decommissioning, based on factors such as the condition of the bulkhead at the time of decommissioning, agreements with the applicable landowner, and future site uses.
- If the complete removal of the submarine export cables in New York State is not possible or not selected as the preferred decommissioning method, the cables may be decommissioned and abandoned in place subject to BOEM approval. In such a case, per Certificate Condition Z1, Empire Wind will use best efforts to remove installed cable protection measures that are within 2 ft of the seabed.

The Decommission Plan(s) also include financial security commitments such as a letter of credit or a performance bond with surety for decommissioning and restoration, as required in the Article VII Certificate.

3. Proposers must provide the SAP and COP, if completed. If the SAP and/or COP are not completed, provide the status of development of these plans and a proposed plan and timeline for completion.

See Section 6.2.1 for a description of the status of the Empire Wind SAP and COP. BOEM maintains publicly accessible versions of the SAP and COP. The confidential versions of the SAP and COP are also provided as Attachments 6.B and 6.C, respectively.

6.3. Financing Plan

Proposers must submit a financing plan that demonstrates a firm financing commitment for the Project that supports project execution.

[redacted]

[redacted]

The Financing Plan must include:

1. A short description of projects that the Proposer has financed or is in the process of financing.

[redacted]

2. A description of the Financing Plan for the Project including construction and term financing including:

a. Project financiers (or those being considered to finance) and the related financing mechanism or mechanisms that will be used (i.e., convertible debenture, tax or contingent equity, other) including repayment schedules and conversion features

[redacted]

[redacted]

b. Project's existing financial structure and projected financial structure

[redacted]

[redacted]

c. Expected sources of debt and equity financing and uses, including details of how the construction phase of the project will be financed and any agreements, both pre and post Commercial Operation Date, entered into with respect to equity ownership in the proposed Project and any other financing arrangement

[redacted]

d. How any such agreements would differ under different pricing options for the Submission (e.g., Fixed OREC vs. Index OREC, Inflation Adjusted, or Interconnection Cost Sharing)

[redacted]

[redacted]

[redacted]

e. Estimated construction costs and consideration for contingencies or cost overruns.

[redacted]

[redacted]

3. Evidence that Proposer has the financial resources and financial strength to complete and operate the Project as planned.

As described in detail above, the financial soundness of Empire Wind and its ability to finance the development of the Project is backed by a financially robust sponsor with a track record of successfully deploying significant sums of capital to complete complex projects, as well as broad support from lenders. [redacted]

[redacted]

Equinor

Equinor ASA is an international energy company, headquartered in Norway, that has operations in over 30 countries and more than 22,000 employees worldwide. Equinor ASA is the largest operator on the Norwegian continental shelf, and a license holder in numerous oil and gas fields worldwide. Equinor is listed on the New York and Oslo stock exchanges with market capitalization of $97 billion as of January 2024.

In Equinor's energy transition plan published on March 22, 2022, it set out a detailed set of medium-term ambitions, including allocating more than half of its annual gross capital expenditure to renewables and low carbon solutions and having a total of 12 – 16 GW of installed net renewable capacity, in each case by 2030. Equinor's total investment in renewables is expected to total USD 23 billion in the period 2021 – 2026. These ambitions contribute to Equinor's longer term ambition of becoming a net zero company in 2050 (including emissions from the use of sold products). The development of Empire Wind is an extension of Equinor's broader commitment to support the energy transition through significant investments in renewable and low-emissions energy sources.

Equinor credit rating target is within the single "A" category on a stand-alone basis. This rating ensures access to relevant capital markets at favorable terms and conditions. The Group's borrowing needs are usually covered through the issuance of short-, medium- and long-term securities, including utilization of a US Commercial Paper Programme (programme limit USD 5.0 billion) and issuances under a Shelf Registration Statement filed with the SEC in the US and a Euro Medium-Term Note (EMTN) Programme (programme limit EUR 20 billion) listed on the London Stock Exchange. In addition, Equinor has a multicurrency revolving credit facility of $6 billion, including a $3 billion swing line (same day value) option. Given its current liquidity reserves, including the committed revolving credit facility of $6 billion and its access to global capital markets, Equinor will have sufficient funds available to meet its liquidity and working capital requirements.

Equinor ASA and its affiliates are committed to complementing its existing energy portfolio with an expanding fleet of renewable energy and other low-carbon solutions. Equinor ASA currently expects more than 50% of its gross capex spend will be directed towards renewable and low-carbon energy solutions by 2030. Equinor ASA has already demonstrated a major financial commitment to the development, construction, and operation of offshore wind resources with the development of its existing offshore wind fleet.

4. The planned insurance program, including how climate-related physical risks are factored into the insurance deductible and if added resilience measures or design and construction features taken to

strengthen the ability of the Project to handle climate shocks or stresses may act to lower insurance premiums or deductibles.

[redacted]

[redacted]

[redacted]

5. The method the Proposer will use to estimate inflation using an index or indices that are relevant to the Project's construction and operations costs.

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

6. The role of the Federal Production Tax Credit or Investment Tax Credit (or other incentives) on the financing of the Project, including presumed qualification year and percentage and estimated eligible capital expenditures. Provide an explanation for the assumed ability or inability to qualify for the Federal Production Tax Credit or Investment Tax Credit. The Proposal may not be contingent on receipt of the Production Tax Credit or Investment Tax Credit. Refer to Section 2.1.5 and to Section 5.07 of the Agreement for the Bid Price adjustment related to receipt of Project Qualifying Federal Support.

[redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]

[redacted]

[redacted]

7. Complete copies of the most recent audited financial statement and annual report for each Proposer for each of the past three years; including parent companies of Proposer (if audited statements are not available, reviewed or compiled statements are to be provided). Also, provide the credit ratings from Standard & Poor's and Moody's (the senior unsecured long-term debt rating or, if not available, the corporate rating) of Proposer and any parent companies and development partners.

[redacted]

Equinor

Copies of the financial statements of Equinor ASA for the past three years are provided as Attachment 6.H.

The current credit ratings of Equinor ASA and Equinor US Holdings with Moody's and Standard and Poor's are set forth below in Figure 6.8.[7]

Figure 6.8: Equinor Credit Ratings

	Equinor ASA		Equinor US Holdings
	Moody's	Standard & Poor's	Standard & Poor's
Long-term rating	Aa2	AA-	A
Short-term rating	P-1	A-1+	A-1
Outlook	Stable	Stable	Stable

8. The Proposer's ability (and/or the ability of its credit support provider) to provide the required security, including its plan for doing so.

Equinor's strong financial ratings and assets will ensure that Empire Wind has ready access to letters of credit, parental guarantees, and other forms of security necessary to meet its contractual obligations. Equinor has access to letters of credit or bank guarantees through bilateral agreements with several reputable international banks and regularly provides parental guarantees as necessary to support the ongoing activities of its subsidiaries. Empire Wind anticipates that any security necessary to satisfy credit obligations under agreements awarded in this solicitation would be supported by a parental guaranty.

9. A description of any current or recent credit issues / credit rating downgrade events regarding Proposer or parent companies raised by rating agencies, banks, or accounting firms. Provide information regarding any exposure of the Proposer and/or parent companies including joint ventures to adverse events related to investments and other activities in Russia. Discuss corporate withdrawals from investments in Russia, the impact of write-offs, write-downs and/or related impairment charges and government sanctions arising from the conflict in Ukraine affecting the Proposer, parent companies and/or joint venture participants, including limited liability corporations.

In response to the conflict initiated in February 2022, Equinor took decisive action to withdraw from the Russian market and exit all assets in the country. This resulted in an impairment recognized in relation to the Russian assets of $ 1.083 billion. All exit activities were concluded within 2022, and Equinor has not planned for any new investments in the country as part of its future strategy.

On February 27, 2022, bp announced its exit from its 19.75% shareholding in Rosneft, as well as the resignation of its two board members from the Rosneft board of directors.

[7] Currently, Equinor US is only rated by Standard & Poor's.

During the first quarter of 2022, the loss of significant influence and an impairment assessment led to a net pre-tax charge of $24 billion, classified as an adjusting item. A further $1.5 billion pre-tax charge was related to bp's decision to exit its other businesses with Rosneft in Russia. bp's financial frame and distribution guidance has remained unchanged. bp has not received any dividends or other revenues nor reported any profits from Russia since its decision – and does not expect to.

[redacted]

10. Details of any events of default or other credit/financial issues associated with all energy projects (other than those under contract with NYSERDA) in which the Proposer (and other equity partners), its parent companies, and directors, officers, and senior managers of those entities, participated over the past three years.

[redacted]

11. The allowances or mechanisms in place to address high risk contingencies and cost overruns in the Project budget, including how the how will address the risk of increases to project cost. For example, refer to the Project's commitment to utilize financial hedging instruments and/or pass through commodity price risk to suppliers.

[redacted]

6.4. Equipment, Development, and Logistics Plan

The Equipment, Development, and Logistics Plan will highlight the proposed technology inclusive of procurement strategy for the Primary Components, key marine terminals, and vessels to support the construction, operations, and maintenance phases of the Project, and include a holistic risk assessment to all Project phases.

The Equipment, Development, and Logistics Plan must first outline the specific technology or equipment planned for the Project, including the track record of the technology and equipment and other information as necessary to demonstrate that the selected Primary Component equipment and technology is viable.

Provide a preliminary engineering plan which includes at least the following enumerated information. If specific information is not known, identify manufacturers, vendors, and equipment that will be considered.

1. Type of turbine and sub-station foundation, Offer Capacity, and radial export cable transmission technology.

2. Primary Components to be used, including the manufacturer or proposed manufacturer and location of manufacturing for each.

3. Status of acquisition of the Primary Components, including any contracts for the Primary Components that Proposer has secured or plans to secure and the status of any pertinent commercial arrangements.

4. Other equipment or service vendors identified/considered

5. Design and performance history of the selected Primary Components and equipment

6. Design considerations that help to support responsible disposal and or recycling of Primary Components after the end of their useful life and equipment plans that generally aim to consider the precepts of the circular economy.

Since being granted rights to develop the lease area, Empire Wind has diligently evaluated potential design and supply options. Empire Wind has and will continue to be committed to the promotion of the offshore wind supply chain development within New York facilitating the development of the State as hub of the offshore wind industry and allows the state to efficiently and cost-effectively meet its CLCPA goals. As described further in Sections 8.3, 8.4, and 10, the development of EW1 offers significant economic benefits to New York, while promoting the efficient and cost-effective development of EW1.

Since securing the lease area in 2017, Empire Wind has analyzed and evaluated a variety of state-of-the-art offshore wind components and technologies to develop a robust technical solution that utilizes innovative approaches to ensure that the chosen solution is compatible with the lease area and delivers the best value to New York ratepayers. As a result of these efforts, Empire Wind has awarded contracts to Original Equipment Manufacturers ("OEM") and other key contractors necessary to support the construction of EW1 and has secured access to the manufacturing capacity and logistics support necessary to ensure that all major components are delivered on a schedule consistent with the existing EW1 timeline. This progress, including the selected contractor and location, is summarized in Figure 6.10, below.

Figure 6.9: Status Summary of Principal EW1 Contracts

Scope	Activities	Contract Signed	Contractor	Manufacturer Location
Subsea Rock Installation	Scour Protection Cable Protection	July 2022	Great Lakes Dredge & Dock Company LLC Van Oord Offshore LLC Consortium	Sub-contract signed with Carver Sand & Gravel for the procurement of Armor rock production: Coeymans quarry, NY Filter layer rock production: Bayside, NB Canada
Monopiles and Transition Pieces	Detailed Engineering	January 2022	COWI Consulting Inc.	Offices in Europe, Asia and US
	Monopile Fabrication	December 2022	SiF	Netherlands
	Transition Piece Fabrication	July 2023	SiF / Smulders	Belgium/Netherlands
Wind Turbine Generator	[redacted]	[redacted]	[redacted]	[redacted]
	[redacted]	[redacted]	[redacted]	[redacted]
	[redacted]	[redacted]	[redacted]	[redacted]
	WTG Installation Vessel	March 2022	Phoenix II A/S (a Maersk Supply Service subsidiary)	Singapore Tugs and barges that will interface with the Wind Turbine Installation Vessel ("WTIV") will be fabricated in the US and owned/operated by Kriby a subcontractor to Maersk
Interarray Cables	Interarray Cable EPC	September 2019	Prysmian PowerLink S.r.l	Germany
	Transportation and Installation	January 2023	DEME Offshore US LLC	N/A
Offshore Substation	Offshore Substation EPC	May 2023	Seatrium (Sembcorp Marine Offshore Platforms Pte. Ltd.)	Topside: Singapore Jacket: Indonesia
Transportation and Installation	Marine \Transport and Installation of foundations, and offshore substation	September 2022	Heerema Marine Contractors Nederland B.V.	N/A
Export Cable	Submarine Export Cable EPCI	October 2022	Nexans Norway AS	South Carolina Norway

Onshore Substation	Electrical System Design and Onshore Substation EPC	March 2022	GE Grid Solutions LLC Bond Civil & Utility Construction Inc.	USA, Canada, Turkey, France
South Brooklyn Marine Terminal	Port Upgrade Owners Engineer	Febuary 2022	Jacobs Civil Consulting, Inc	New York
	Construction Manager	January 2023	Skanska	New York
Certification Verification Agent	Independent third-party who verifies technical specifications and drawings	December 2019	DNV	N/A
Marine Warranty Surveyor	Assesses risks associated with the relevant onshore and offshore marine construction operations.	March 2023	DNV	N/A
Service Operation Vessel	Supports construction, commissioning, and operation of wind farm	April 2022	New York Wind LLC (and Edison Chouest Offshore affiliated company)	LaShip Shipyard Houma, LA

As further detailed in Section 6.4.2, Empire Wind carried out extensive due diligence prior to selecting these contractors to ensure that each company has the capacity, experience, and financial ability to effectively deliver the relevant components and services on the required timeline and consistent with the permitting strategy for the project, as detailed in Section 6.2. Furthermore, Empire Wind has contracted with independent Certification Verification Agents ("CVAs") to ensure that the design of project elements meet the necessary standards. Finally, Empire Wind's approach to responsible disposal or recycling of project components is detailed in Section 4.4.

An overview of each main project element, as well as its associated procurement, logistics, staging, and deployment, is provided in the following sections.

6.4.1. Empire Wind Equipment

Wind Turbine Generators

Following an extensive review process, Empire Wind selected the Vestas V236 15 MW turbine for EW1. [redacted] The turbine rotor and nacelle are mounted on top of a tubular steel tower with a swept area of 43,742 m^2 and a minimum air gap of 22m from the lower blade tip and sea surface at Highest Astronomical Tide ("HAT"). [redacted]

[redacted]

[redacted]

EW1 has entered into a charter party agreement with Maersk who will provide the WTIV as discussed further in Section 6.4.5. The installation plan and detailed design includes the use of a jack-up vessel that provides the stable platform to lift the wind turbine components (tower, nacelle and blades) into place and a barge that will shuttle the components from the laydown area at SBMT. The shuttle barges will be Jones Act compliant and sub-contracted by Maersk. [redacted] The vessel is predicted to be

30% more efficient than conventional offshore wind turbine installation strategies. Figure 6.12 Provides a rending of the WTIV.

Figure 6.11: Rendering of WTIV

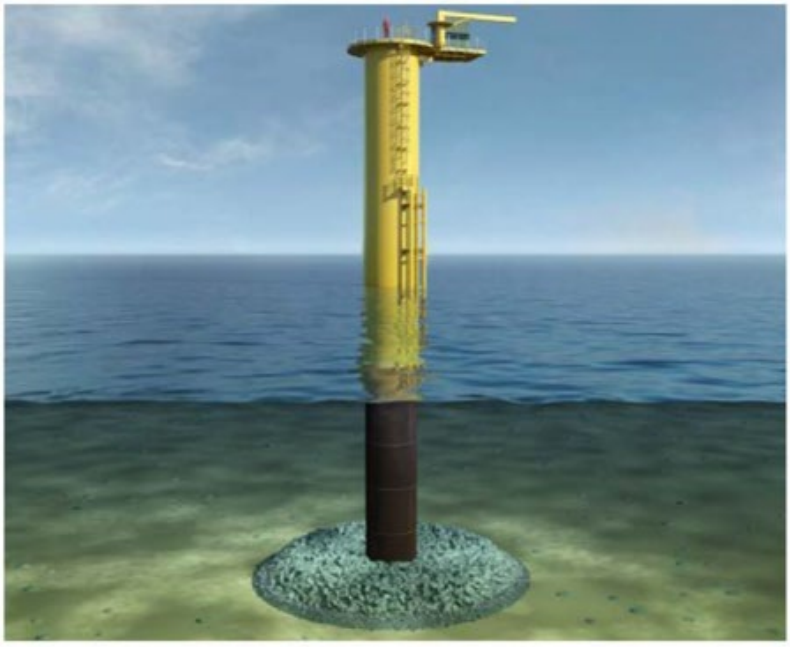
WTG Foundations

EW1 has contracted with SiF to fabricate monopiles as the WTG foundations of choice for the project. Monopiles are composed of a steel tubular (cylindrical and conical) section hammered into the ground and a steel transition piece ("TP") connected to the top of the monopile. Empire Wind has contracted with a partnership between SiF and Smulders to manufacture the TP, which provides the interface between the monopile foundation and the wind turbine tower. The monopiles and TPs will be fabricated by SiF and SiF/Smulders in the Netherlands and Belgium/Netherlands, respectively.

Empire Wind has completed extensive geophysical and geotechnical investigations at each of the monopile locations to develop a deep understanding of the seabed properties and the development of a comprehensive ground model. As noted in Section 6.2, Empire Wind started geophysical and geotechnical investigations in 2018 and 2019 respectively as a reconnaissance level to support the Site Assessment Plan. Additional specific and granular surveys were conducted to help develop the complex ground model used to inform the design of the wind farm, including each foundation, which has been provided to BOEM as part of the project Marine Site Investigation Report filings. Based on these investigations, Empire Wind contracted with COWI consulting to conduct detailed engineering of bespoke foundations designed for each foundation location within the Project. COWI, SiF, and Smulders are all highly experienced companies that have been working in the offshore wind sector for many years and provide a wealth of expertise and knowledge to the project. The design basis for the

foundation is complete and signed off by the independent CVA, as further described in Attachment 6.J Section 11.1.17. Figure 6.13 provides a rendering of a deployed MP and TP.

Figure 6.12: Typical Monopile Foundation with Transition Piece



Empire Wind and its affiliates have ample experience with the use of monopile foundations for offshore energy projects. Monopiles have been used for decades in the oil and gas industry for topsides, and were deployed for the first time on an offshore wind project in 1991. Equinor's existing offshore wind farms have successfully employed monopile foundations, including Sheringham Shoal, Dudgeon, and Arkona. Figure 6.14 below depicts a monopile used in the Arkona project.

Figure 6.13: Arkona Monopile

Empire Wind has entered into a charter party agreement with Heerema Marine Contracting for transportation of the WTG foundations from Rotterdam to their installation locations within the Lease Area. The transportation scope includes monopiles, transition pieces, and anode cages using heavy lift vessels. Once at the Lease Area, Heerema is responsible for installation of the foundations using the semi-submersible crane vessel the SSCV Thialf. Equinor previously used Heerema to support lifting operation on the Norwegian Continental Shelf on the Johan Sverdrup Phase 2 development.

Offshore Substation

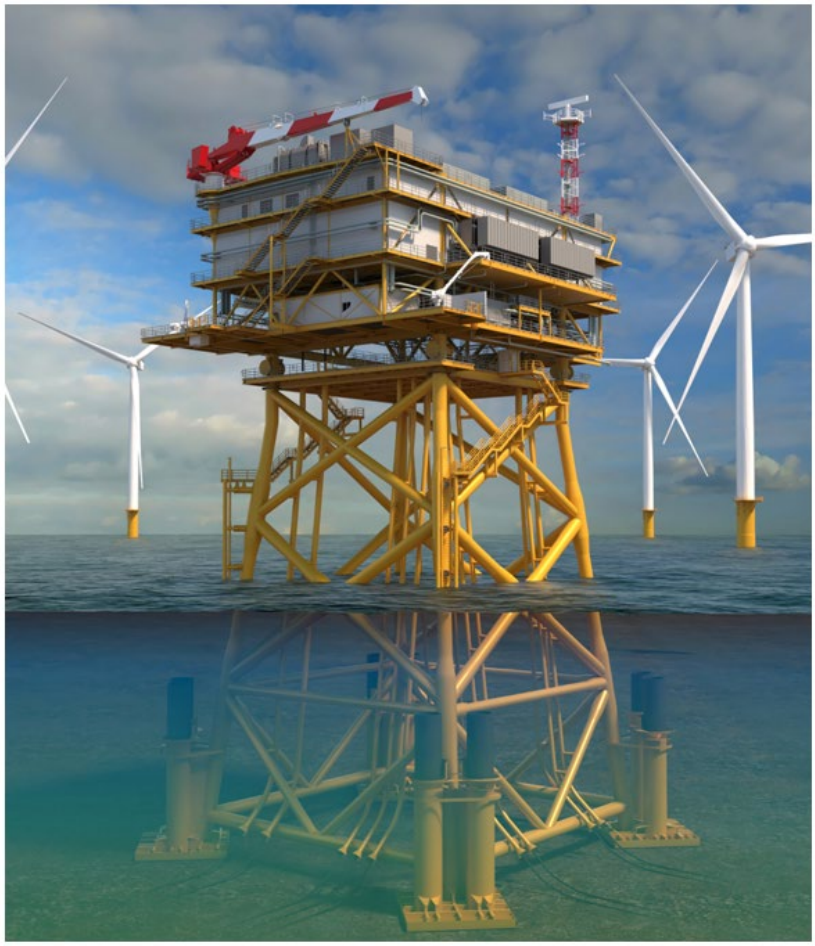
Empire Wind plans to utilize a single offshore substation located within the lease are near to the connected WTGs. The purpose of the offshore substation is to collect the inter-array cables and step-up the voltage before exporting the power through the submarine export cables to the onshore substation. The design goal of EW1's offshore substation is to maximize system availability and reliability while accommodating a safe, efficient, and O&M friendly design.

The offshore substations will include the required utilities and services to accommodate the high voltage transmission assets, as well as required personnel and asset protection systems to ensure safe and reliable operations. The topside design will align with the O&M approach described above as an unmanned installation with boat-landing access for CTV and gangway access with the SOV.

The main structure, composed of the topside and jacket, will account for the relevant design conditions, including ensuring sufficient topside air-gap to facilitate expected sea level rise. The layout design also will enhance the resiliency of the topside against adverse weather and environmental conditions by minimizing the equipment located outdoors and exposed to extreme heat, cold, and wind.

The EW1 offshore substation concept has been developed by Empire Wind and its affiliates in coordination with HVAC suppliers through studies with Iv - Offshore & Energy, and draws upon the design of the substation for the Dudgeon project and Dogger Bank project. The detailed engineering, procurement, and construction contract for the EW1 offshore substation topside and jacket has been awarded to Seatrium, with Ramboll as engineering contractor. [redacted] A rendering of the current EW1 offshore substation is shown in Figure 6.15 below.

Figure 6.14: Rendering of EW1 Offshore Substation



Heerema Marine Contracting is contracted to transport the topside and jacket foundation to the Lease Area and, in addition to the WTG installation, install the jacket foundation, including piling, and lift the topside in place for hook-up.

The layout of the substation will consider pull-in and hook-up of inter-array and export cables. Fourteen J-tubes will guide the cables from the horizontal orientation at the seabed to a vertical orientation at a cable deck above the water level for cable hang-off. The J-tubes will provide protection against sea and wind forces and also aid pulling of the cables from the seabed up to the cable deck.

The offshore substation will normally be unmanned, however, the design will incorporate space for emergency sheltering situations and the fabrication, installation, and maintenance of the substation will be completed in a manner consistent with the highest standards of health and safety. In addition, the topside will include auxiliary equipment and uninterruptible power supplies, power quality measuring units, supervisory control and data acquisition ("SCADA") systems, data acquisition equipment, telecommunication systems, numerous monitoring systems, together with facilities, safety, and rescue equipment for personnel.

The Project has contracted Seatrium to fabricate the top-side and jacket who are a global supplier of fixed platforms to the offshore energy sector and have built multiple substations for the offshore wind industry to date.

Offshore Substation Foundation

The topside will be mounted on a four-legged jacket substructure secured to the seafloor with piles. The design and fabrication of this type of jacket is well established in the industry and supported by robust supply chains and design standards. After monopiles, jackets are the most commonly used type of foundations in offshore wind projects. The jacket's unsurpassed strength to weight ratio and its high level of structural redundancy provide a safe, economic and proven choice to support offshore substations. Piled jacket foundations are industry standard and used in many offshore wind projects throughout the US and Europe. Empire Wind's affiliates have used piling to secure jackets in oil and gas projects in the North Sea and Brazil.

The main structure, composed of the topside and jacket, will account for the relevant design conditions, including ensuring sufficient topside air-gap to facilitate expected sea level rise. Furthermore, the layout design will enhance the resiliency of the topside against adverse weather and environmental conditions by minimizing the equipment located outdoors and exposed to extreme heat, cold, and wind.

As noted above, Seatrium has been awarded to the contract to fabricate the offshore substation jacket foundation that facilitates the interface between this and the top-side. Seatrium has extensive experience with developing jacket structures for the oil and gas sector in addition to fabricating them for the offshore wind sector.

Inter-Array Cables

Consistent with industry standards, EW1 will employ a 66 kV infield cable network employing wet design cables with water barrier (formerly known as semi-dry) compliant with the latest advances in industry practice and technology.

Empire Wind and its affiliates have a robust solution, benchmarked against the latest industry standards for selection of 66 kV inter-array cables with three power cores and one fiber-optic cable. Empire Wind has evaluated string connection arrangements to reduce inter-array cable costs and cable losses. As reported by the Carbon Trust the shift to higher voltages began in 2010, when the Offshore Wind Accelerator program (in collaboration with nine leading offshore wind developers of which Equinor was one) drove the change from 33kV to 66kV. This allowed utilization of larger turbine (>8MW) to be installed and was considered a key factor in offshore wind's global success.

[redacted] This ensures the latest designs provide a cost-effective and reliable solution qualified to the latest industry standards.

Empire Wind has selected Prysmian PowerLink S.r.l for the fabrication of the interarray cables and DEME Offshore US LLC for installation. Prysmian have worked on more than 15 offshore wind farms with many more in development, including the Vineyard Wind 1 Project and Coastal Virginia Offshore Wind Farm.

Export Cables

To optimize the interconnection of the EW1, Empire Wind commissioned a series of studies to evaluate potential interconnection points and cable routes. Specifically, Empire Wind commissioned a transmission study, performed by Mott MacDonald, which identified the Gowanus Substation as an optimal point for interconnection. Empire Wind also commissioned an offshore cable routing assessment, performed by TetraTech.

Specifically, Empire Wind plans to construct two 230 kV offshore export cables to transmit power from the offshore substation to the landfall point that will make landfall at South Brooklyn Marine Terminal connect directly to the Gowanus Substation via the project onshore substation. Currently, the total export cable route is estimated to extend approximately 47 miles.

The current conceptual design utilizes two three-core solid dielectric cables for export of wind generation to the mainland. Each cable will include three copper conductors enclosed in XLPE insulation. The cables will incorporate a lead alloy sheet together with water blocking sheathing and water swellable tape to prevent water ingress into the cables. The three insulated conductor cables will be separated by extruded polyethylene/polymeric-shaped fillers and wrapped in galvanized steel wires armoured and enclosed in a tough outer sheath consisting of polypropylene yarns. The offshore export cables shall have integrated optical fibers for communication and temperature measurements. Figure 6.16 depicts the conceptual design of the export cable.

[redacted]

These XLPE cables have been shown to operate reliably under a wide range of conditions and the conceptual design of the export cables is common throughout the oil, gas, and offshore wind industries. For instance, Equinor currently employs 420 kV XLPE submarine cables to deliver electricity to the Ormen Lange offshore gas field in Norway.

Nexans has been contracted to complete the engineering, procurement, construction and installation of the export cables from the offshore substation to the onshore substation at Gowanus, via landfall at SBMT. Nexans is a leading provider of cable solution with experience working in some capacity on 50% of the European offshore wind farms.

Subsea Rock Protection

The inter-array cables and the export cable will be protected by rock in areas with insufficient target burial depth. Empire Wind has contracted with Great Lakes Dredge & Dock Company LLC ("GLDDC") and Van Oord Offshore to produce, transport and install rock protection around the WTG foundations, OSS jacket, and along the inter-array and export cables as necessary. Van Oord has been a leading player in the offshore wind market since 2002, working extensively in the European market, and has partnered with GLDDC to support the Empire Wind project. GLDDC is a leading US maritime contractor and recently started construction of a US-fabricated subsea rock installation vessel ("SRI") that will be chartered for the Empire Wind project.

Subsea rock installation is required to protect assets from oceanographic processes, prevent scouring, protect assets at cable crossings or where a target burial depth is not achievable. Typically, installation

is a two-step process where a filter layer is applied followed by a targeted armor layer of rock. The contractor has started to process rock to support the project from the Coeymans Quarry in New York along with rock quarried from Bayside, Canada.

Onshore Substation

Based on studies performed by Mott McDonald, the 345 kV Gowanus Substation in Brooklyn, New York has been determined the optimal interconnection point for the Empire Wind Project. In order to facilitate interconnection to the Gowanus Substation, a new onshore substation will be constructed in the vicinity of the existing substation. The power from the wind farm will be transported via the two export cables routed from the landfall location to the new substation.

The new substation will include switchgears and transformers for control of power flow and to match the interconnection voltage. Reactors, capacitors banks, and harmonic filters are included for reactive compensation of the export cable and offshore systems, power quality, and to meet the interconnection grid specifications. All equipment in the onshore substation is commonly used equipment for transmission systems and is currently available on the market. Figure 6.17 shows a conceptual rendering of the Empire Wind 1 substation.

Figure 6.16: Rendering of Onshore Substation at SBMT

GE Grid Solutions LLC and Bond Civil & Utility Construction Inc. have been contracted to engineer, procure, and construct the onshore substation. They have also established a new project office in Industry City with approx. 15-20 people commuting to the site daily.

Empire Wind plans to connect to the existing Gowanus Substation via 345 kV single core cables from the Empire Wind substation.

6.4.2. Equipment Solicitation and Supply Chain Management

7. In the event the Primary Components or Sub-component manufacturers have not yet been selected, identify in the equipment procurement strategy the factors under consideration for selecting the preferred equipment, including alignment with the considerations above, as well as the anticipated timing associated with the selection of the equipment manufacturer, including the timing for binding commercial agreement(s).

Empire Wind has a well-defined and mature procurement strategy for EW1. This approach has been developed based on decades of development, construction, and operations experience deploying dozens of large-scale energy infrastructure projects. In addition to the major project components that have been contracted for, as described above, Empire Wind is currently in the tendering process for the material additional contracts associated with EW1 including, but are not limited to:

- Crew Transfer Vessels to transfer people and cargo from shore to the wind farm and within the windfarm between installed facilities. [redacted]
- Accommodation Vessels/Flotel to support the commissioning of the offshore substation. [redacted]
- Construction Service Operation Vessel to support the construction, hook-up and commissioning of the wind turbines, offshore substation and associated activities. [redacted]
- Marine Coordination Services to support complex marine operations. The concept is maturing and EW1 will leverage existing frameworks and experience from building many highly complex offshore installations. [redacted] As noted in the Health and Safety Study prepared for the New York State Offshore Wind Master Plan marine co-ordination is important to ensure Health & Safety risks are managed appropriately and information is communicated to all relevant parties in an effective manner.

An overview of Empire Wind's approach to equipment procurement and supply chain management is provided below. This process was utilized for the selection of each of the major project components discussed above and is currently being utilized in the selection process for the remaining project elements.

Equipment solicitation and supply chain management are integrated into the planning, execution and operation of all projects developed by Empire Wind and its affiliates. Procurement activities and the development of an overall procurement strategy start at an early stage of each project. This strategy incorporates lessons from previous offshore wind projects while accounting for project-specific conditions and requirements as well as market analysis and screening.

Empire Wind's procurement process consists of the following main steps:

- Development of procurement strategy;
- Development of a bidders list;
- Contract drafting;
- Sourcing;
- Contract award; and
- Contract management.

Development of Procurement Strategy

The first step in the procurement process was to establish a defined procurement strategy in cooperation with the technical group within Empire Wind that will be installing and managing the procured product or equipment. This process also included a risk assessment for the specific contract package to ensure that any potential issues are known and addressed early on.

Based on this methodology, Empire Wind chose a multi-contracting strategy for EW1. The purpose of this strategy is to ensure that Empire Wind is able to harness the full capacity, competence, and experience within the wind power industry while facilitating least-cost procurement by encouraging competition among qualified companies. Empire Wind and its affiliates' experience from previous offshore wind projects demonstrates that a multi-contract strategy reduces a project's risk and costs. Further, it ensures that Empire Wind's project team has the ability to coordinate contracts in a manner that optimizes project development and ensures timely construction and development, leveraging the team's strong project execution experience from the oil, gas, and offshore wind industries. At the same time, a multi-contracting strategy is flexible enough to allow Empire Wind to combine contracts where there are synergies that can be captured to improve project execution and reduce costs.

Development of a Bidders List

Once a strategy is established, Empire Wind developed a bidder list. This process began with identifying qualified suppliers in consultation with NYSERDA's Offshore Wind Supply Chain Database. Each supplier was required to meet minimum requirements with regards to safety, quality, human rights and integrity, which was confirmed through a due diligence process.

In addition to these business requirements, suppliers were required to meet the project's technical requirements. Empire Wind used a supplier qualification system to vet and compare potential suppliers. In many cases, more potential suppliers will have passed the minimum requirements than those that were selected to be added to a bidders list. This prequalification process ensures that only qualified and capable suppliers are invited to tender a contract and is specifically tailored for each procurement.

Contract Drafting

The sourcing process started with defining the scope of work and delivery in detail. Once settled, the contract documents were drafted, including terms and conditions, specific compliance requirements,

compensation format, proposed delivery milestones, payment schedules, technical requirements, and administrative requirements. This process was completed by Equinor's procurement group in cooperation with other departments responsible for EW1. Equinor's procurement group tailors each contract to reflect the size, scope, and complexity of a project.

[redacted]

[redacted]

Sourcing

Based on the results of the qualification process described above, Empire Wind invited qualified suppliers to bid to supply the equipment or perform the work at issue. In order to guide the bid process, Empire Wind developed detailed instructions that defined the information to be included in the bid, provided guidance regarding how to submit the bid, detailed the applicable evaluation criteria, and included the draft contract developed by Empire Wind. After a predefined period, Empire Wind received the bids and started the contract evaluation and negotiation phase.

Objective and non-discriminatory evaluation criteria were defined for the specific procurement and agreed to prior to the bid opening to ensure a fair and fact-based selection process. The evaluation was performed by a cross functional team and covered the Health, Safety, and Environmental ("HSE"), technical, commercial, and schedule aspects of the bids. The evaluation process continued until Empire Wind identified which supplier best suits its business needs and the project's specific requirements.

[redacted]

Chief among these opportunities was a series of Supplier Forums conducted in 2022 and 2023 in the Capital Region, New York City, and Long Island. Equinor organized these Supplier Forums in concert with Tier One companies contracted for Empire Wind 1, including but not limited to Vestas, Marmen Welcon, Nexans, GE, Bond, Skanska, Edison Chouest, Great Lakes Dredge & Dock, and Miller Marine Services. Equinor and its suppliers used these forums to outline procurement needs, sourcing processes, and minimum qualifications required to enter the respective supply chains. Additionally,

these forums provided exhibition space, networking time, and matchmaking sessions between Tier One suppliers and local businesses to foster greater engagement between attendees. Each of these forums attracted between 100 – 200 registrants from businesses across New York and the surrounding region.

Equinor has also continued to engage in New York state supplier forums and offshore wind events, such as the NYSERDA/NJEDA Offshore Wind Supplier Forum held on January 11, 2023 in Brooklyn, NY, where representatives from Empire Wind presented about the project to the 500+ attendees and met with local businesses about potential supply chain opportunities.

Contract Award

The Renewables Procurement Officer ("RPO") holds the authority to legally commit Empire Wind to suppliers. All legal commitments are handled through the RPO in order to safeguard the principle of segregation of duties and ensure the appropriate involvement of both the requisitioning line and the procurement function.

As soon as the contract was signed by both parties, unsuccessful bidders were informed in writing. Debrief meetings were proposed to assist them in improving future bids.

Contract Management

After a contract is signed, a kick-off meeting with the supplier is held to ensure that the contract requirements and Empire Wind's expectations are well understood, and to agree on communication lines and routines during the contract period.

Empire Wind will appoint a Company Representative ("CR") who will act as the contract owner and the single point of contact for the supplier. The CR has a multi-disciplinary team of professionals and experts to help manage the contract and follow up with the supplier. The main focus during the contract management phase is to ensure that the supplier delivers and acts according to the commitments made in the contract with respect to quality, schedule, HSE, and cost. The supplier's performance will be monitored throughout the contract period based on Key Performance Indicators ("KPI") (*e.g.*, compliance and safety). Regular meetings with the supplier (*e.g.*, monthly progress meetings and weekly/biweekly technical meetings) will take place during the contract period. For larger contracts, a steering or sponsor committee is often established.

6.4.3. Major Tasks, Activities and Equipment

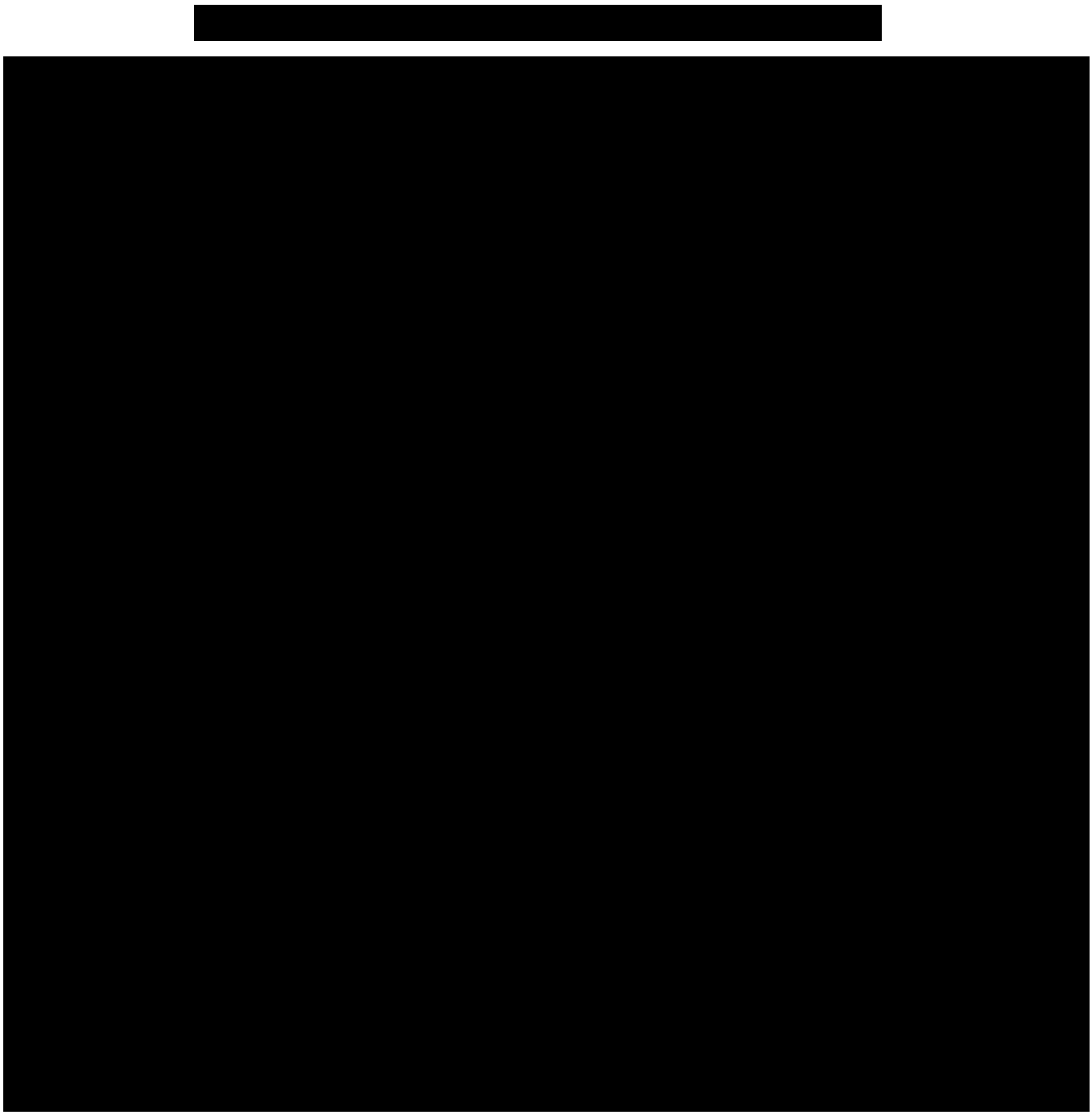
The Equipment, Development, and Logistics Plan must further explain the necessary arrangements and processes for outfitting, assembly, storage, and deployment of Primary Components. Please provide a section focused on construction and logistics that captures the following objectives:

1. List the major tasks or steps associated with deployment of the proposed Project and the necessary specialized equipment (e.g., vessels, cranes).

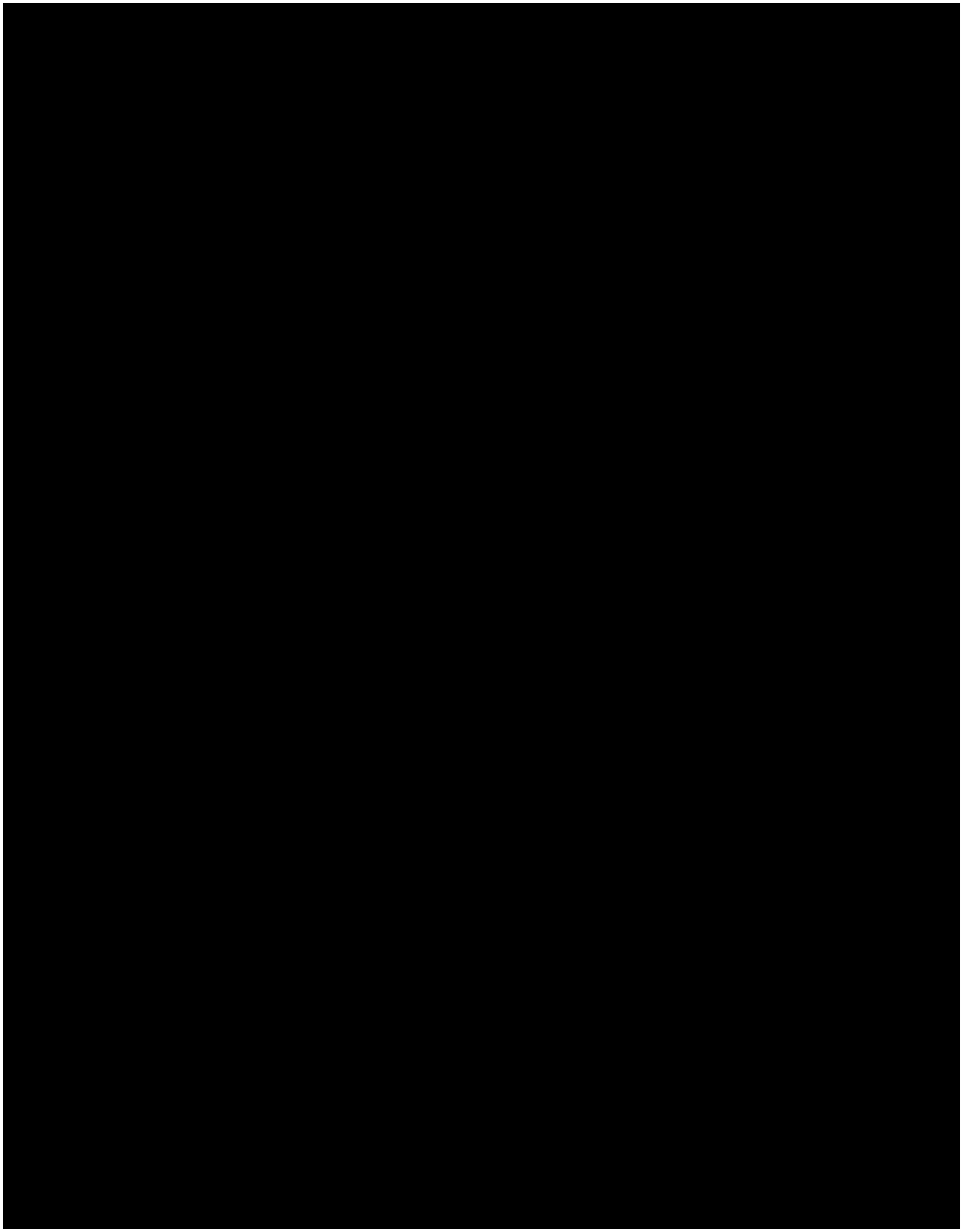
The construction and deployment plan for the Project is based on experience gained over the course of Equinor's decades of constructing and deploying large scale offshore energy projects around the

world. The construction and deployment plan for the Project has been calibrated to ensure timely completion of the Project given the characteristics of each lease area, the availability of necessary equipment and vessels, and offshore installation vessels.

Figure 6.18 below provides an overview of the major tasks associated with deployment of EW1 and the equipment necessary for each task.



[redacted]



[redacted]

2. List the party or parties responsible for each deployment activity and describe the role of each party. Describe the status of Proposer's contractual agreements with third-party equipment/service providers.

An overview of the division of roles and responsibilities respecting staging and deployment activities is provided in Section 6.4.5. Section 6.4.1 provides an overview of the service providers that Empire Wind and its affiliates have engaged in connection with the Project.

6.4.4. Marine Terminals

3. Identify the marine terminals and other waterfront facilities that will be used to stage, assemble, and deploy the Project for each stage of construction.

a. If available, evidence that Proposer or the equipment/service provider have right(s) to use a marine terminal and/or waterfront facility for construction of the Project (e.g., by virtue of ownership or land development rights obtained from the owner).

b. If not available, describe the status of acquisition of real property rights for necessary marine terminal and/or waterfront facilities, any options in place for the exercise of these rights and describe the plan for securing the necessary real property rights, including the proposed timeline. Include these plans and the timeline in the overall Project Schedule in Section 6.2.5.1.

c. Identify any joint use of existing or proposed real property rights for marine terminal or waterfront facilities.

The following sections provide an overview of the port facilities that Empire Wind currently plans to use to support the development and operation of EW1.

South Brooklyn Marine Terminal

Empire Wind plans to use SBMT located in Brooklyn, NY, for staging of WTG components and as a dedicated O&M base for the Project. Empire Wind's decision to use SBMT to support the construction of the Project will transform the port into a world class offshore wind terminal and contribute to the revitalization of the Disadvantaged Communities in the vicinity of the port. In order to make SBMT suitable for supporting staging and deployment activities, Empire Wind and its affiliates are planning material upgrades to the port, including dredging the front quay to a depth of at least 32 feet, and improving the weight bearing capacity of the loading, unloading, storage, and pre-assembly areas. In 2022, Empire Wind's affiliates executed a lease with SSBMT LP, the operator of the terminal, which will

facilitate the redevelopment of SBMT into a world-class offshore wind port capable of staging and assembling key components. Showing our commitment to New York the Project has actively been maturing the port concept, with input from key OEMs and Jacobs Civil Consulting, Inc., an experienced engineering consultant. Final plans and specifications have been drafted and Skanska has been contracted to manage execution of the project. [redacted] s noted in Section 4.2 the Project has secured a lease for the use of SBMT for the purposes of:

- A laydown Area to support wind turbine installation;
- A long-term operations and maintenance base; and
- Construction of an onshore substation and interconnection from landfall to the Gowanus Substation.

A rendering of SBMT can be found below in Figure 6.19 that shows turbine components at the laydown area, the operations facilities and onshore substation. Furthermore on December 11, 2023 the New York City Public Design Commission approved the Operations and Maintenance base architectural design, a major step in enabling construction to [redacted].

Figure 6.18: Rendering of SBMT

As noted in Figure 6.10, Jacobs and Skanska have been contracted to support the engineering and construction of SBMT, respectively. [redacted]

[redacted]

Port of Albany

Empire Wind and its affiliates have identified Beacon Island at the Port of Albany as a location that is well-suited to support the manufacturing and fabrication of large-scale offshore wind components. At the time of ORECRFP20-1, Empire Wind and its affiliates had identified the site for an offshore wind tower factory, in partnership with the Marmen Welcon Joint Venture and the Albany Port District Commission ("APDC"), developers of the project. While the economic disruption and runaway inflation associated with COVID-19 eventually undermined the viability of the tower factory business case,

[redacted]

6.4.5. Staging and Deployment of Major Components

4. Describe the proposed approach for staging and deployment of Primary Components to the Project site. Include a description and discussion of the laydown facility/facilities to be used for construction, assembly, staging, storage, and deployment.

With decades of experience developing offshore oil, gas, and wind facilities, Empire Wind and its affiliates have a proven track record of successfully staging and deploying large scale, offshore wind energy projects. This includes extensive experience coordinating port and maritime activities and employing industry best practices to seamlessly coordinate port and maritime operations to ensure the timely and cost-effective construction of offshore projects while minimizing disruption to maritime and fisheries resources, including the use of KPIs to evaluate a project's development and provide insights for future improvements. The construction plan for the Project incorporates the insights gained from affiliated offshore wind projects and best practices gained over decades of developing offshore projects.

Construction activities will be primarily divided into onshore and offshore components. The process of manufacturing, shipping, assembly, and in-field installation of major project components is discussed below. Detailed information regarding the project schedule is provided in Section 5. Furthermore, with major component contracts having already been procured the staging and development plans are being matured.

Wind Turbine Generators

The staging and deployment of the WTGs will consist of the following distinct tasks:

- Fabrication ([redacted])
- Transportation to staging port and staging ([redacted])
- Transportation to site from the staging port to the project site (contracted to Phoenix II (Maersk))
- Lift installation of WTGs (contracted to Vestas, using the jack up installation vessel operated by Phoenix II (Maersk))
- Commissioning ([redacted])

Fabrication

[redacted]

Transportation to Local Staging Port and Staging

Following fabrication, [redacted] will be responsible for transporting the components to SBMT with suitable Cargo Carrying Vessels. The size and weight of these turbines raise unique challenges that have been incorporated into the design of the SBMT upgrades and transportation options servicing the project. These considerations include soil bearing capacity, quayside draft, ground incline, power supply, available utilities, and access restrictions. The SBMT design basis accounts for the larger turbines associated with EW1. Additionally, the port facility will comply with International Ship and Port Security standards.

Upon arrival at SBMT, the WTG components will be unloaded from the transportation vessels. After off-loading, preservation measures will be in place at SBMT to maintain the WTG components until they are ready for load-out. Prior to load-out onto the transportation vessel for installation, Empire

Wind will conduct a “walk down” procedure to ensure the integrity of the components and compliance with specifications. Additionally, some initial component assembly and commissioning activities will occur at the quayside, in accordance with turbine manufacturer standard procedures, to reduce the commissioning time offshore.

Transportation to Site and Installation

Once pre-installation preparation and testing are complete, the wind turbines will be loaded on a transport barge for transportation to the project site. The schedule focuses on achieving a sufficient inventory of component at the staging port to ensure a high efficiency for the WTIV. [redacted] mpire Wind expects there to be some delays due to adverse weather, but the current project schedule, detailed in Section 5, has been tailored to account for these delays. As detailed in Section 6.4.1 Maersk is currently building a WTIV for use on EW1.

[redacted]

[redacted]

Commissioning

Following installation, the WTGs will be prepared for operation and energization. [redacted] Most WTG components will be commissioned onshore by the turbine manufacturer prior to deployment to

reduce commissioning time spent offshore. [redacted]

Monopile Foundations

The installation of monopiles will consist of the following steps:

- Foundation fabrication (contracted to SiF (monopile) and SiF/Smulders (TP))
- Foundation transport (contracted to Heerema)
- Seabed preparation (Contracted with GLDD and Van Ord)
- Foundation installation (contracted to Heerema)

Fabrication

The monopiles and TPs are being fabricated by SiF and SiF/Smulders in the Netherland and Belgium/Netherlands respectively. The fabrication process involves bending steel plates into circular forms and then welding the resulting seam to form a solid ring. This process is similar to that used for fabricating the WTG tower. Several of these rings are then welded together to form the length of the monopile or TP. Once complete, the monopile or TP is sealed and coated before installation of the internal apparatus and platforms. The monopile or TP is then prepared for transportation.

Transport

Monopiles and TPs will be transported by Heerema Marine Contracting and will be delivered directly to the wind development area. The transportation will include monopiles, transition pieces, and anode cages using heavy lift vessels.

Once at the wind development area, Heerema will install the foundations using the semi-submersible crane vessel the SSCV Thialf, shown in Figure 6.21 below.

Figure 6.20: Semi-Submersible Vessel The Thialf

Seabed Preparation

Prior to the start of monopile piling activity, the specific installation site will be surveyed (surveys are currently ongoing) and cleared of debris by an offshore construction vessel ("OCV"). Once cleared, a filter layer will be placed on the sea floor using a rock placement vessel with a fall pipe guided by an ROV or similar. Following the installation of the monopile and TP, the same method will be used to install an armor layer to prevent erosion in accordance with the design requirements.

The purpose of the filter layer is to protect the soil matrix surrounding the foundation structure against wave- and current-based erosion at the seafloor. The grading and thickness of the filter layers are designed to avoid washing out of soil or intermediate rock layers. The armor layer is composed of much larger graded rock pieces or sandbags and ensures a stable top layer and keeps the filter layer in place. Following the installation of the monopile and TP, the same method will be used to install an armor layer to prevent erosion in accordance with the design requirements.

Installation

Installation will be carried out in compliance with Jones Act regulations. The monopile and TP components will be lifted off the feeder vessels and held in place by the Thialf, as seen in Figure 6.22.

Figure 6.21: Thialf Installing a Transition Piece on Top of a Monopile

Once correctly positioned, the monopile is driven into the sea floor using a hydraulic hammer. To reduce the propagation of underwater noise the project will deploy noise mitigation by means of a Double Big Bubble Curtain ("DBBC") will be in full operation during all pile driving activities. The operation of the DBBC is depicted in Figure 6.23 below.

Figure 6.22: Double Big Bubble Curtain Operating Around Monopile Installation

[redacted] Pre-installation of the DBBC on the seabed and testing of the full system will commence in due time prior to piling activity. The DBBC distributes air bubbles around 100% of the piling perimeter for the full depth of the water column (form seabed to water surface). The deployment and recovery of the Air Hoses will be executed from an Installation Vessel where the Compressor spread is located. Sufficient contingency Air Compressors, spare parts and consumables will be a part of the overall contingency planning for the DBBC operation.

Export Cables

Fabrication and Installation of the submarine export cables has been contracted to Nexans and will consist of the following steps:

- Fabrication and Transportation (contracted to Nexans)
- Surveys and seabed prep work (contracted to Nexans)
- Pull-in through the onshore landfall conduits (contracted to Nexans)
- Laying and Burial (contracted to Nexans)
- Cable protection installation and as-built survey (contracted to Nexans)
- Connection to offshore and onshore substation (contracted to Nexans)

Fabrication and Transportation

Empire Wind has awarded the fabrication, transportation, and installation of the export cables to Nexans. The majority of the cables will be manufactured in Charleston, South Carolina US, with a small portion supplied from Europe. Once fabricated, the cables will be loaded directly onto the offshore CLV by Nexans and transported from the manufacturing facilities to the project site. Figure 6.24 depicts a CLV in operation. EW1 will utilize two HVAC export cables.

Figure 6.23: Typical CLV in Operation

For the portions of the cable route in shallow waters and confined spaces a Cable Lay Barge ("CLB") with improved maneuverability may be utilized. The cable will be laid using a barge with turntable and vertical injector. Figure 6.25 depicts a rendering of a CLB in operation.

Figure 6.24: Rendering of CLB

Surveys and Grapnel Run

Prior to any installation, a survey will be conducted to evaluate the seabed geology, assess the water depth, and identify any objects or conditions that would impact cable installation. Once the survey is

complete, a grapnel run will be performed which involves pulling a grapnel train over the planned cable route to clear debris and ensure the seabed is ready for cable installation.

Cable Laying and Burial

The cable route consists of nearshore, mid-shore and offshore sections. The cables will be installed along routes that have been planned based on geophysical and geotechnical surveys. [redacted]

Nexans will transport the cables by CLV or CLB from the manufacturing site to the installation site.

Skanska will install conduits to facilitate the export cable installation at the landfall by Nexans. The cable installation will start with pull-in from the CLB to the landfall. After pull-in, the cable will be installed from the CLB with simultaneous lay and burial with vertical injector or temporary cable lay on the seabed followed by post-lay burial. Further away from the shore, the cable end will be laid on the seabed. The cable laid by the CLB will be recovered by a CLV, jointed to cable on the CLV and the CLV will lay the cable to the offshore substation. An ROV will monitor the cable touchdown on the seabed and ensure that the cable is laid along the predefined route. The cable installation methods will minimize the environmental disturbance and ensure the integrity of crossing cables and pipelines.

Connection to Offshore Substation

Export and inter-array cable connection to the offshore substation will be executed in accordance with industry best practices. When the CLV reaches the offshore substation, a wire will be pulled from the offshore substation through the foundation j-tube to the CLV. The cable will be pulled into the offshore substation cable deck while the CLV is lifting the cable from the seabed with a pull-in bow to reduce the pull-in tension. After the cable has been pulled into the cable deck on the offshore substation, a permanent hang off will be installation at the top of the j-tube. The submarine cable will then be jointed to the pre-installed topside cables before energization and commissioning.

Offshore Substation

The staging and deployment of the offshore substation will consist of the following:

- Fabrication (contracted to Seatrium)
- Transportation to project site (contracted to Heerema)
- Installation / hook-up (contracted to Heerema)
- Commissioning (contracted to Seatrium in coordination with Empire Wind)

Fabrication

The offshore substation topside is being constructed in Singapore, and the jacket will be fabricated in Batam, Indonesia. The selected fabricators are experienced in complex interface management environments, fabrication facilities, and continuous material flow operations. Major equipment will be delivered to the fabrication yard from their respective manufacturing locations. Therefore,

communication between the equipment manufacturer and yard fabricator needs to be established beforehand to ensure proper handling and installation of the equipment.

Transportation

Heerema will perform the transportation and installation tasks for the jacket foundation and the offshore substation topside in accordance with industry best practices and compliance with the Jones Act regulations. The specific transportation approach will depend on the fabrication yard for the Project's offshore substation.

Installation

The transport marine spread with the offshore substation topside on deck will meet the HLV at the installation site. Prior to topside installation, the jacket will be prepared for topside installation. Once complete, the HLV will lift the topside and install onto the preinstalled jacket. Upon landing the topside onto the jacket, the steel interface between topside and jacket will be welded together. Figure 6.26 below depicts a rendering of HLV installation of the offshore substation.

Figure 6.25: Rendering of HLV Used for Offshore Substation Installation

Upon completion of topside installation, offshore substation commissioning will commence. [redacted]

Inter-Array Cables

The inter-array cable installation process is similar to the export cable installation process described above, including:

- Fabrication and transportation (contracted to Prysmian)

- Surveys and pre-grapnel run (contracted to DEME Offshore)
- Laying and Burial (contracted to DEME Offshore)
- Connection to offshore substation (contracted to DEME Offshore)

Empire Wind has selected Prysmian PowerLink S.r.l for the fabrication of the interarray cables and DEME Offshore US LLC for installing. Once fabricated, the cables will be loaded on the CLV in long lengths and cut at correct lengths during the cable installation process. The WTGs will be interconnected to the offshore substation through an inter-array network. The selected installation contractor will begin cable installation shortly after the first foundation is completed. Based on surveys characterizing the cable lay route, the cable path will be cleared using a pre-lay grapnel train run similar to the export cable installation process. At each foundation location, the pre-installed messenger lines will be connected to the array cable and used to guide the cable through the foundation J-tubes and up to the transition piece. Once at the transition piece, the cable will be temporarily secured at the hang-off points to allow the CLV to lay cable away from the foundation in the direction of the next connection point at the next foundation. Once the appropriate length has been reached, the cable is cut and attached to the messenger line system on the second foundation. The cable is then pulled into the second foundation and secured at the hang off point. Once both ends are properly installed, the section laying on the sea floor in between the two foundations will be buried with the aid of a trench and lay vessel. After that, the cables will be permanently integrated into the electrical components in the transition piece and prepared for commissioning.

Onshore Landfall and Cable Routing

Onshore landfall and cable routing will consist of the following steps:

- Surveys and ground investigations (contracted to Skanska)
- Cable landfall construction (contracted to Skanska)
- Onshore export cable installation (contracted to Nexans)

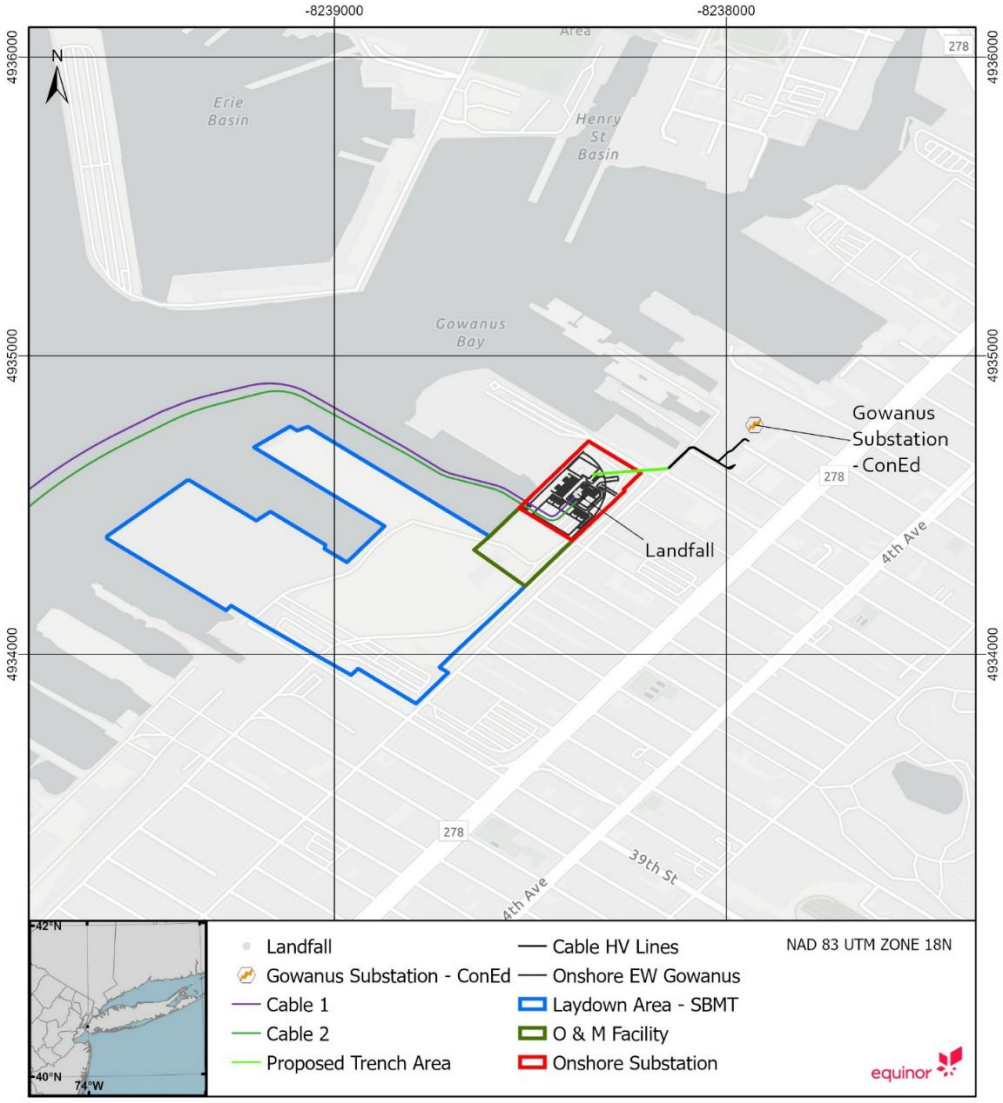
Surveys and Ground Investigations

Environmental surveys and ground investigations to support design and permitting are complete. Additional surveys will be conducted by Skanska in support of construction activities.

Cable Landfall Construction

Empire Wind's submarine export cable route will make landfall at SBMT in Sunset Park in Brooklyn, New York, along the bulkhead directly to the west of the planned onshore substation (31st–33rd Street Bay Bulkhead). Two steel conduits will be installed from the transition joint bays to the updated bulkhead. A trench in the seabed in the seabed will be made for the submarine export cables outside the bulkhead. Figure 6.27 below depicts the landfall location and cable routes.

Figure 6.26: Cable Landfall and Onshore Cable Route



Onshore Export Cable Installation

Onshore export cables will be pulled from the transition joint bays to the onshore substation before jointing and termination work completes the connections. The onshore work area for cable landfall will be located within the workspace for the onshore substation at the SBMT.

Onshore Substation Facility

Empire Wind has selected GE Grid Solutions LLC and Bond Civil & Utility Construction Inc. for all onshore substation construction work. Construction of EW1's new onshore substation facility will consist of the following main steps:

- Surveys and ground investigations
- Construction activities

- Electrical equipment installation
- Commissioning and energization

The status of the NYISO interconnection process is detailed in Section 7.

Surveys and Ground Investigations

Environmental surveys and ground investigations have been performed prior to any construction activities at the onshore substation site. These investigations will include activities such as boreholes, cone penetration test, groundwater control, and environmental surveys (*e.g.*, wetland delineations, tree surveys, as applicable). This process will produce full geotechnical and environmental reports for the site.

Construction Activities

The new substation that Empire Wind plans to construct will likely require site preparation, including vegetation removal, a new access road, and site leveling. The onshore substation is expected to include the following:

- Substation building (electrical equipment HVAC room, battery room, control room, office)
- Outdoor equipment areas
- Permanent lighting, designed to minimize glare, and light spillage off-site
- Area for car parking and internal roads
- Security fencing and gates

Based on the ground investigation described above, piles will be driven to support the foundations to be installed on the site. Then, contractors will begin with the underground installations including drainage, sewer, and cable corridors followed by the foundations for the equipment and buildings. Once complete, construction will begin on the substation building for personnel and equipment. Finally, the site fencing, internal roads, and landscaping will be completed.

Electrical Equipment Installation

Once the substation site is ready, the main electrical high voltage ("HV") equipment will be installed on site.

The electrical HV equipment typically includes:

- Transformers
- Reactors
- Harmonic filters
- Switchgears

Due to the size and complexity of some of the equipment, specialized transport and installation personnel will be utilized. Utility systems, instruments, and automation systems will also be installed at this time followed by their associated instrument panels, batteries, and control equipment. The cables connecting the equipment will be installed through the preinstalled ducts and cable pull-

through. The onshore export cable will be connected to the switchgear/high voltage breaker after high voltage testing is complete.

Commissioning and Energization

Prior to energizing the onshore substation all utility systems, instruments, and automation systems must be fully tested and commissioned. Energization will be performed in sequence, starting with connecting the outgoing breaker in the existing substation to the new Empire substation. Once connected, the incoming breaker feeding the 345 kV switchgear in the new Empire substation will be closed, energizing the transformers and the outgoing 260 kV switchgear. Finally, the breaker feeding the export cable and the offshore substation will be closed, completing the energization process. This process will be performed after installation and completion of the export cables and the offshore substation, [redacted]

The offshore substation will be energized via the export cables, one at a time, from the onshore substation. Once the onshore portion of the export cables has been tested and jointed together with the offshore portion, the complete export cable is energized by connecting the outgoing 260 kV breaker in the new Empire substation. This entire process will be performed in coordination with the NYISO.

5. Indicate the number, type and size of vessels that will be used, their respective uses, and how vessels will be secured for the required construction period. Explain how Proposer's deployment strategy will conform to requirements of the Merchant Marine Act of 1920 (the Jones Act).

Due to the nascent development of offshore wind projects in the U.S., there are a limited number of Jones Act-compliant vessels that are also feasible for offshore wind construction. Therefore, in order to develop the project safely and in a cost efficient manner, some foreign vessels will need to be used.

Empire Wind and its affiliates have extensive experience in vetting vessels for use in their marine operations and have already taken material steps to secure the vessels necessary to support the development of the Empire Wind Project. Empire Wind and our contractors have charter party agreements in place for the principal vessels necessary to build out the project.

Empire Wind is committed to complying with all Jones Act regulations throughout all project development stages. For WTG installation, a Jones Act compliant feeder barge and tug will be used, which ensures that all merchandise loaded out and offloaded between two points in U.S. territorial waters are transported by Jones Act-compliant vessels. Therefore, main installation contractors with foreign flagged specialized marine construction vessels will only perform offshore installation operations. Local marine operations will use Jones Act-compliant tow-tugs and cargo barges to transport project cargo between U.S.-based staging port and the project site. Figure 6.28 below provides an overview of the contracted vessels, rows shaded in green have been contracted.

[redacted]

[redacted]

6.4.6. Operations and Maintenance Experience and Approach

The Equipment, Development, and Logistics Plan should then detail the operating parameters for the Project, including the anticipated maintenance schedule.

1. Provide partial and complete planned outage requirements in weeks or days for the Offshore Wind Generation Facility. Also, list the number of months required for the cycle to repeat (e.g., list time interval of minor and major overhauls, and the duration of overhauls).

2. Provide all the expected operating constraints and operational restrictions for the Project, the reason for the limitation, and characterize any applicable range of uncertainty.

Empire Wind is committed to ensuring that its project can safely and reliably deliver offshore wind to New York over the operational life of the project. The objective of ensuring safe and reliable operations of EW1 informs every aspect of project design, construction, and operations—from the selection of best-in-class technologies that have been shown to operate reliably under the harshest conditions to employing operation and maintenance approaches that have been refined over decades of offshore project experience. Motivated by an unwavering commitment to excellence, Empire Wind and its affiliates are committed to operating their projects in a manner that is safe, maximizes project availability, reduces costs, and is environmentally responsible.

The sections below provide more information about anticipated operation and maintenance activities at EW1. Given that a subsidiary of Equinor will be responsible for the operation and maintenance of the EW1 once it commences commercial operation, the discussion below focuses on Equinor's experience and approach to O&M, including how it is taking into account the objectives set out in the CLCPA in designing the O&M strategy for EW1.

Equinor's Operations and Maintenance Experience and Approach

The success of Equinor's approach to O&M is highlighted by its demonstrated track record of operating and maintaining offshore wind farms that maximize project availability and efficiency. Equinor is

currently responsible for operation and maintenance activities at its Sheringham Shoal, Dudgeon, Hywind Scotland, and Hywind Tampen projects. Furthermore, Equinor is currently implementing the operational model for the Dogger Bank Offshore Wind Project which achieved first generation in October of 2023.

In May 2023, Equinor undertook a reorganization of its Renewable Energy business unit to prepare to deliver on the company's ambitions and commitments towards achieving a low carbon future. The new organization structure was set up to position the company for rapid growth in renewable and low carbon projects, including offshore wind. The restructuring has resulted in increased capability and capacity to efficiently handle multiple large-scale offshore wind projects, along with a clear matrix to transfer knowledge and experience between global offshore wind projects. This reorganization will ensure that Equinor's experience and lessons learned in connection with the operation of its projects across the globe will be brought to bear in the operation and maintenance of EW1.

[redacted]

Equinor's "hands-on" approach to operation and maintenance provides Equinor with the insights necessary to ensure that the Project will be operated in a way the supports the objective of reducing emissions associated with project operation. Empire Wind plans on leveraging Equinor's experience to ensure that EW1 is operated in a manner that supports the goals embodied in New York's environmental and energy goals.

Operations and Maintenance Protocols

Monitoring and Staffing

Continuous monitoring is a foundational principle of Equinor's approach to O&M for Empire Wind and has been successfully employed at Equinor's existing offshore wind projects. For instance, Equinor currently operates a 24/7 control room responsible for monitoring the performance and operations of its existing offshore wind generation facilities. Equinor also has extensive experience operating 24/7 control rooms in connection with its offshore oil and gas facilities. Typically, an offshore wind farm control room includes SCADA, high voltage switching, marine communication and monitoring systems,

and other systems that ensure that Equinor is able to continuously monitor its projects and support its personnel and vessels.

Consistent with the approach taken at Equinor's other offshore projects, Empire Wind's O&M protocols will ensure 24/7 monitoring of the Project through a combination of onshore and offshore installations and a multi-disciplinary team of engineers, technicians, and experts well-versed in day-to-day O&M of offshore wind facilities. [redacted] This location provides transportation links for the delivery of materials and spare parts. Equinor plans to establish a 50,000 sq. ft. base that will house the back-office staff, warehouse, and control room.

The operations center will accommodate 24/7 operations and will be responsible for planning and coordinating O&M activities for EW1. Among other things, the control center will be responsible for:

- Coordinating maintenance activities, including determining start and end times and maintaining records of maintenance activities;
- Providing an initial response to emergency situations, contacting on-site personnel, and activating appropriate emergency plans and protocols;
- Monitoring site conditions, including identifying threats from lightning and ensuring that all work is performed in a manner that maintains the health and safety of onsite personnel;
- Tracking and coordinating all maritime activities related to O&M of the Project and tracking the movement of all employees and O&M vessels using an automatic identification system;
- Ensuring a quick response to alarms, faults, and other events involving the wind turbines and associated interconnection facilities;
- Remotely monitoring the wind turbines and other major project components;
- Performing remote switching of electrical components in accordance with Equinor protocols and safety rules;
- Coordinating outages with NYISO in accordance with applicable market rules; and
- Acting as the point of contact with NYISO.

In order to ensure immediate and timely access to the Project and reduce downtime, technicians and personnel will stay onboard an SOV that will be located at the Project site year-round. [redacted] The operations employees on the SOV will consist of a number of distinct teams responsible for different types of O&M:

- A troubleshooting team – responsible for resolving forced outages involving the wind turbine generators;
- A scheduled service team – responsible for the routine maintenance of the wind turbines;
- A balance of plant team – responsible for all maintenance not related to the wind turbine generators, such as substation, foundation, and transition piece maintenance; and

- Maintenance planning and warehousing team – responsible for the planning of maintenance and coordinating storage of all necessary tools and components.

EW1 will also have direct access to the same institutional knowledge and back-office engineering and technical support as other operational Equinor projects, allowing experience and knowledge transfer to be captured from European and other global offshore wind markets.

Emergency Preparedness

Empire Wind is committed to providing a safe and secure environment for everyone working on the Project. Equinor's approach to O&M is founded upon the goal of ensuring "zero harm," and Empire Wind and its affiliates continuously work to foster a culture of safety and security in everything the group does. The support personnel for the Project will be well-equipped to deal with any emergency situations that may arise during project operation and will employ emergency response procedures based on industry best practices and Equinor's experience with onshore and offshore energy projects around the world. Equinor, as service provider, will employ standard operating procedures that will be developed consistent with applicable regulations. These will include a Safety Management System and the Emergency Response Plan, which will detail emergency procedures for various emergency scenarios, including a communication plan to adequately inform federal authorities and at-risk users (*e.g.*, vessel operations in proximity to an emergency). These documents were initially drafted as part of the COP for the Project and are subject to review and approval via the NEPA process. Prior to preparing the Plan, an Emergency Preparedness Analysis will be prepared. As they are "living" documents, they will be reviewed and updated on a regular basis to reflect actual, applicable scenarios and response resources.

Using an SOV to house O&M personnel also will ensure that Equinor is able to respond in real-time to emergencies that arise at the Project site. Equinor expects that the SOV will be fully equipped with a medical facility, including trained medical personnel, and access to onshore doctors and medical support, as necessary. The on-site team also will have a dedicated team with a fast response craft that will be trained to address a range of emergency situations, including "man overboard" situations and other life-threatening emergencies. These employees will be trained on a regular basis to ensure that they are prepared to respond to emergencies should they arise.

Equinor has a robust emergency and crisis management team, developed over decades of offshore operations, that is well-versed in carrying out emergency operations, which will benefit Empire Wind

through Equinor's role as operator. This includes a Global Management Assistance Team ("GIMAT") consisting of personnel that are trained in effectively responding to emergency situations and can be deployed across the globe to assist Equinor project sites. The GIMAT's approach to emergency response builds upon the Incident Command System, a U.S.-developed approach to command, control, and coordination of emergency response. The GIMAT will be available to and can be called upon by the Project to provide additional resources when necessary to support emergency operations.

Maintenance Schedule and Duration

Planned Outages

Planned maintenance outages will be scheduled in a manner designed to both maximize the safety of maintenance operations and minimize the disruption to the output of the facility. In order to maximize the output of the facility, planned outages will be scheduled during periods in which potential production is at its lowest (typically summer season/low wind seasons) and will be coordinated with NYISO in accordance with its tariff to minimize the potential reliability impacts of outages.

The following subsections provide a brief overview of the frequency of maintenance required for key project components and Attachment 6.K provides an estimate of the maintenance schedule for EW1.

[redacted]

Inter-Array and Export Cables

Inspections of the inter-array network and export cables will be conducted in accordance with manufacturers' recommendations and permit requirements. A robust maintenance strategy will be developed to ensure the highest availability and protection for these critical assets once designs are finalized. These protocols will include a combination of surveys, testing, and condition monitoring. Typically, inspections can be conducted on the inter-array network and export cables without taking these facilities out of service.

Forced Outages

As a general matter, forced outages can occur at any time of the year in response to unexpected equipment failures, physical damage to the facility, requirements from appropriate authorities, and other factors creating a need for unplanned maintenance or repairs. As noted above, Equinor will be establishing a detailed operations and maintenance program on behalf of Empire Wind that will detail inspection procedures and frequencies based on manufacturers' recommendations, best practices, and industry experience. Equinor will continuously monitor the Project from a control room. This information will be used by Equinor to constantly analyze equipment performance and proactively identify and avoid equipment failures that could adversely affect the performance of the Project. To the extent that a failure occurs, the close proximity of maintenance personnel and spare parts on the SOV will ensure that equipment can be repaired and replaced as quickly as possible to minimize downtime. In the event that a forced outage occurs, Equinor will communicate the issue, as required, to the appropriate authorities (*e.g.,* NYISO).

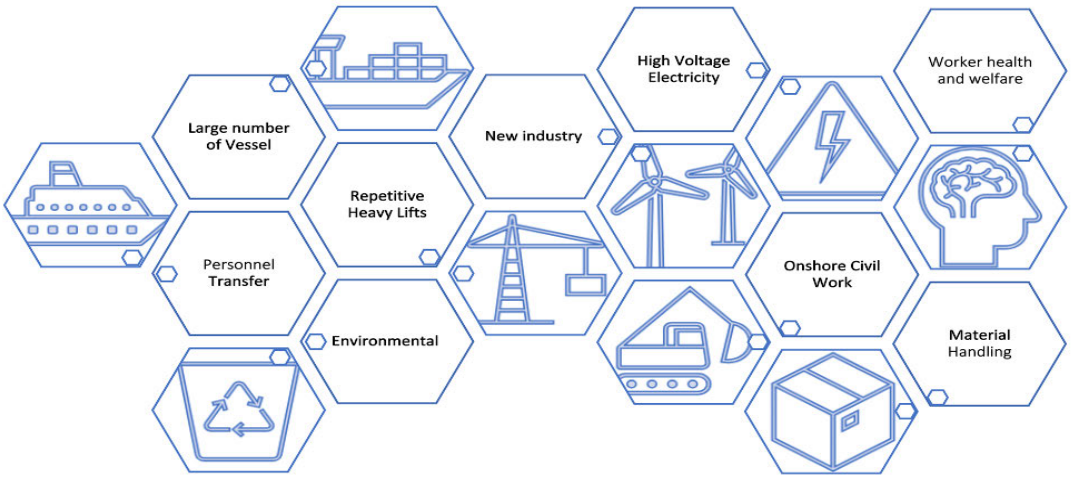
6.5. Quality, Health, and Safety

The Quality, Health and Safety section should outline the overall approach to ensuring quality health and safety for the project and include:

- *Demonstration of loss prevention through risk observation, near miss, and incident reporting and tracking systems.*

As a result of its history developing offshore oil, gas, and wind resources, Equinor has a comprehensive understanding of the quality, health, and safety risks associated with the construction, operation, and maintenance of complex offshore energy projects. Safely constructing an offshore wind project requires the coordinated and effective management of a range of sophisticated installation and construction activities involving large and sophisticated equipment in an unforgiving marine environment. Figure 6.29 highlights some of the risk factors relevant to the offshore wind industry.

Figure 6.28: Offshore Wind Industry Risk Factors



For this reason, quality, health, and safety is at the core of Equinor's business. Equinor and its subsidiaries are committed to the vision of "zero harm." This means continuously striving to eliminate accidents and ensure the safety of personnel, the public, project assets, and the environment. Empire Wind and its affiliates have developed a culture where quality, health, and safety are foundational requirements that guide how we conduct our day-to-day business. This culture is reflected in Equinor's "I am safety" initiative, which encourages all employees to strive to create a safe workplace for everyone by proactively identifying risks and speaking out. Equinor also is on the board of the Global Offshore Wind Health and Safety Organization, a global organization that is focused on addressing health and safety issues in the offshore wind industry through four main work programs: incident data reporting, good practice guidelines, safe by design, and learning from incidents.

Figure 6.29: I am Safety

Consistent with their commitment to continuous improvement, Empire Wind and its affiliates continuously monitor, report, and track incidents that impact health, safety, and quality. The commitment of Empire Wind and its affiliates to quality, health, and safety has led to a positive safety trend in which injuries and accidents are at all-time lows. For instance, as reflected in Equinor's Q3 2023 safety results report, the frequency of serious injuries has declined steadily over the past 13 years.[9]

Equinor's construction, operation, and maintenance of the Project will be subject to a comprehensive set of policies, procedures, and practices that ensure that Project activities are conducted in a manner consistent with the highest standards of quality, health, and safety and industry best practices. These policies proactively mitigate quality, health, and safety risks and ensure that near misses and incidents are reported, tracked, and remedied.

Among other things, Equinor has adopted a [redacted]

[9] See Equinor's third quarter 2023 safety results, available at: https://www.equinor.com/news/20231020-equinor-third-quarter-2023-safety-results.

Equinor also administers an assurance program that is focused on systematically identifying, assessing, and managing risks. The purpose of the program is to systematically identify, assess, and manage operations to ensure that existing policies are effective in safeguarding against quality, health, and safety risks. As part of this assurance program, Equinor employs self-assessments, verifications, and audits to assess whether risks are being effectively mitigated and to identify ways in which processes and operations can be improved.

Disclosure of, any Health/Safety Convictions and any Health/Safety Enforcement Notice(s) in the past 10 years.

Please see Attachment 6.L

Examples of the Project Team safety and security policies or best practices to be implemented through all project phases (e.g., ritual pre-job safety meetings, Stop the Job or Stop Work Authority policies, basic injury prevention, IT and Cyber Security measures, fatigue management, etc.) and the degree to which Major Suppliers and any contractor or supplier of the Project are expected to be trained in and adhere to Project Team best practices.

Equinor will leverage industry best practices, including those identified in NYSERDA's Health and Safety study, and lessons learned from its experience developing offshore wind, oil, and gas resources to ensure that quality, safety, health, and security are priorities in every stage of the Project. Additionally, contractors and suppliers will be required to abide by Equinor's minimum quality, health, and safety requirements to ensure that all those supporting the project operate in a manner that is consistent with the high expectations that Equinor sets for itself and its employees. Attachment M provides a representative list of the polices and practices that Equinor personnel, contractors, and suppliers are held to.

A high level hazard analysis and risk controls matrix identifying the severest hazards to Project quality and security and human health and safety, and the mitigative measures to be taken to reduce both the likelihood or severity those hazards.

Proposers are advised to review to the Health and Safety Study prepared for the New York State Offshore Wind Master Plan.

Equinor is familiar with the Health and Safety Study prepared for the New York State Offshore Wind Master Plan, the requirements given by 30 CFR 580.810 (SMS) and the occupational Safety and Health Standards ("OSHA") and New York City Department of Buildings ("NYC DOB") requirements on HSE plan and training. As part of the COP an early version of the Safety Management System (SMS) was prepared that included Wind Turbine Safety Rules, High Voltage Electrical Rules, an Emergency Preparedness Plan. The SMS will be further refined as the Project moves forward. The Project also will meet OSHA 29 CFR 1910 for operation and maintenance of an existing wind farm and 29 CFR 1926 for construction mandated training as relevant to offshore wind farms.

Experience from executing offshore wind developments in Europe is captured in the Equinor management systems and best practices. Furthermore, several of the key members of the Empire Wind project team have direct experience from these developments in Europe, including the Quality and Risk Manager and the Safety and Sustainability Manager and some of our Company Representatives for marine installation and foundation activities.

Hazard identification and risk assessment processes are part of the Equinor management system and are measures to work for safe and sustainable development. HSE risk assessment processes are reflected in design (example a "Safety Strategy", design load calculations), concept assessments and contractual processes.

Equinor has conducted several high-level hazard analyses to identify, evaluate, and manage significant hazards to the Empire Wind project. In the early phases of the project, hazard identification ("HAZID") workshops were held for the totality of the project to capture severe hazards and possible interphase and cross-disciplinary issues. As the project matures, detailed HAZIDs and hazard and operability analysis ("HAZOPs") are performed for the various areas and contracts. The recommendations and actions are tracked to ensure all outstanding issues are closed prior to start of the relevant work scopes. Prior to start an activity, readiness review processes are done both at Company and at Contractors. Such reviews include check if the risk is handled, if training is performed, familiarization of emergency preparedness etc. Figure 6.31 captures some of the most severe hazards to human health and safety, security and project quality.

Figure 6.30: Hazard Matrix

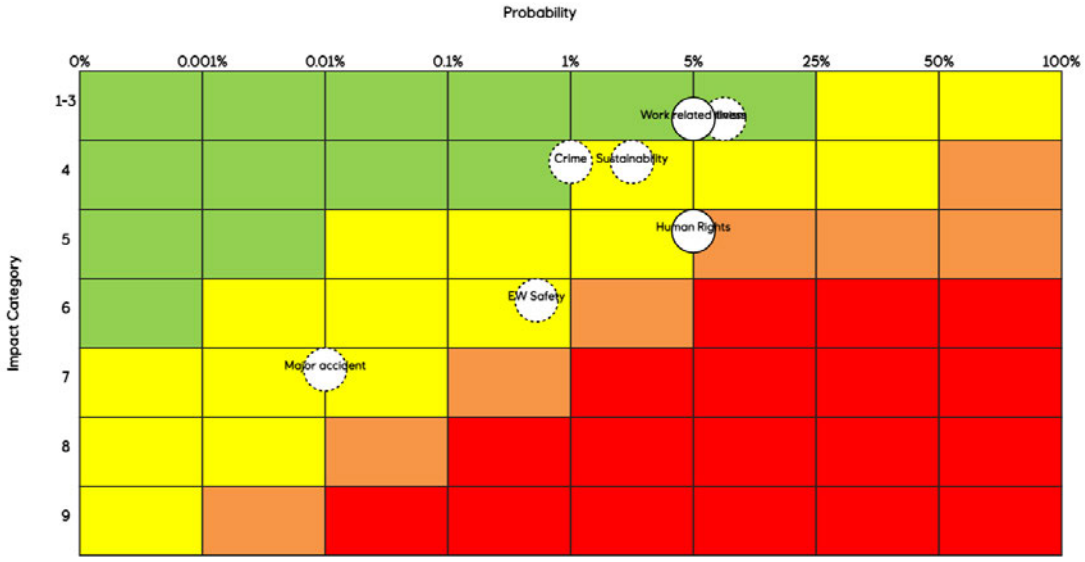
ID	Event	Hazard	Cause	Hazard Consequence	Existing/planned mitigation
1	Vessel collision and allision	Human health and safety	Failure to follow rules of the sea.	Injury, Fatalities Damage to vessels and project assets	Planning of activities Stakeholder communication including provision of EW1 will apply for a private aid to navigation (PATON) as set for under 33 CFR 33 Safety Vessels Marine Coordination
2	Lifting operations	Human health and safety	Falling objects, crushing etc. High degree of repetitive operations	Injuries, fatalities	Lift plan(s) Experienced contractors an training operators Permit to work system Safety officer on duty
3	High Voltage hazards	Human health and safety	Incident during connection to grid or energization	Injuries, fatalities	Permit to work Lockout/Tagout Program Electrical Safety Rules in compliance with OSHA
4	Penetration of jack-up legs "punch through"	Human health and safety	Insufficient geotechnical information, human error, etc.	Injuries, fatalities	Site Investigations Leg-penetration analysis
5	Person overboard	Human health and safety	Boat transfer of personnel	Injuries, fatalities.	Avoidance of boat-boat transfer where relevant, Design, procedures, crew transfer training, MOB rescue training, procedures Safe use of “Walk to work” gangways

ID	Event	Hazard	Cause	Hazard Consequence	Existing/planned mitigation
6	Adverse weather conditions	Human health and safety	Hurricane or adverse weather Lightning.	Injuries, fatalities	Design. Weather limitations. Forecast. Training. Emergency Preparedness
7	Unexploded ordnance ("UXO")	Human health and safety	Contact with unmitigated Unexploded ordnance	Injuries, fatalities	UXO surveys, identification, potential removal and mitigation plan
8	Quality deviations in major components	Quality	Inadequate performance by Contractor's Production and/or Quality Control departments	Schedule delays and component failure	Verification of contractor's QA/QC processes during contract negotiations. Inspections during fabrication, transport, and delivery per agreed plan based on component criticality.
9	Sabotage or security incident	Security	Physical disruption of supplies resulting social unrest, political action or acts of terrorism	Power Outage	National Institute of Standards and Technology (NIST) Cyber Security Framework Access control requirements EW security strategy established NERC CIP compliance ISPS compliance
10	Simultaneous Operations ("SIMOP")	Human health and safety	High activity level both onshore and offshore	Increased risk of accidents due to simultaneous operations	Permit to work and site management system Project co-ordination SIMOP procedures
11	Slips, Trips and Falls	Human health and safety	Loss of traction at the workplace	Injuries	Designs evaluated to minimize slip, trip and fall hazards. Provide appropriate personal protective equipment.

ID	Event	Hazard	Cause	Hazard Consequence	Existing/planned mitigation
					Periodic inspections walkways and structures. Provide training that enables employees to minimize and avoid worksites slips, trips and falls.
12	Crossing of utility lines	Human health and safety	Non-compliant with measures	Damage to third party lines, injuries, fatalities, environment	Location control, impact / energy control, procedures, training, Hazids, involvement with utility operators, emergency preparedness, risk awareness and information sharing from NTSB.
13	Oil spill	Health and Safety	Non-compliant with measures	Environment	Design measures Operational procedures and emergency preparedness Oil Spill Response Plan
14	Personal injury	Health and Safety	Potential large degree of change in work force and hence large need for training/alignment. Non-compliant with measures	Personal injury	HSE training HSE plan/procedures Experience transfer Incident reporting, investigations, and root cause elimination. Emergency preparedness training

To further mitigate HSE risks, people will be trained on Equinor's Incident Notification Plan and the Emergency Preparedness Plan ("EPP"). The planned EPP is based on Emergency Preparedness Analyses, Equinor requirements and regulatory requirements. Similarly, Equinor takes step to ensure that the emergency preparedness system of contractors aligns with Equinor requirements. Below is an example of high level HSE risk illustration managed through Equinor's corporate 'Management Information System' where we translate our Ambition to Action that translates our purpose, vision and strategy into strategic objectives, risks, key performance indicators, and actions describing what we want to deliver. Figure 6.32 provides an example of Equinor's Risk Management System Matrix.

Figure 6.31: Example of Equinor Risk Management System Matrix



The main hazards are also captured in our comprehensive project risk register, along with additional hazards relevant to the key project phases, where further detailed analysis is performed and evaluated along with relevant mitigating actions.

6.6. Project Risk Register

The Proposal must include a Project Risk Register that identifies a minimum of 30 significant risks to realizing the successful development and operation of the Project. This must include the provision of any significant infrastructure outside the remit of the Project on which the Project depends. For example, a new point of interconnection.

The project risk register should include identification and treatment of the risks associated with permitting, engineering, procuring equipment, construction, operations, maintenance, health, safety, security, or any other risks associated with the Project.

The Project risk register should be included in Microsoft Excel format structured as follows:

1. Each sheet should correspond to the key Project phases: Development, Construction and Installation, Operations and Maintenance, and Decommissioning.

2. For each sheet, the spreadsheet rows each correspond to one specific risk associated with permitting, engineering, procuring equipment for, constructing, servicing and operating the project.

3. For each sheet, the separate spreadsheet columns should:

a. Describe each risk in detail.

b. Provide an assessment of the likelihood of occurrence and impact on, or consequences for, the project schedule and/or cost of each potential risk, preferably in a combined risk score, describe the various scenarios under which the risk may occur and the likelihood of occurrence (low, medium, high)

c. Describe the severity of impact to project quality or personnel health and safety if the risk were to occur (low, medium, high) Proposers should consider the worst-case scenario. Each potential impact can be related to but not limited to the proposers, their collaborations, permitting, finance, technology, construction, operations, including project quality, security, health or safety risk, and energy yield.

d. Identify the risk treatment or risk mitigation measures to be applied. Measures taken to address the risk either reduce the likelihood of occurrence (avoid the risk) or reduce the severity of impact (through mitigation, insurance, and/or protection)

e. Describe how each proposed risk treatment will be implemented and enforced, including the status of implementation where applicable, and assess the effectiveness of proposed risk reduction strategies and re-score the perceived risk (low, medium, high).

As noted above, Equinor has a comprehensive approach to risk management that covers every project phase, including both risks to the successful completion of the Project and the day-to-day health and safety risks that can arise in connection with Project operations. A simplified risk register prepared in accordance with NYSERDA's requirements is being provided as Attachment 6.N.

Section 6

Project Development Plan

Attachment 6.A

Permitting Matrix

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Section 6

Project Development Plan

Attachment 6.B

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Attachment 6.C

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Project Development Plan

Attachment 6.D

Project Financing Experience

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Project Development Plan

Attachment 6.E

Letter of Support from Financial Advisor

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Section 6

Project Development Plan

Attachment 6.F

Term Sheet

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Section 6

Project Development Plan

Attachment 6.G

Equinor US Holdings Financial Statements

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Section 6

Project Development Plan

Attachment 6.H

Equinor Annual Reports

Equinor ASA's Annual Reports and Sustainability Reports for the last three years can be found at the links below. If NYSERDA would prefer hard copies, Equinor would be happy to provide them. Please do not hesitate to contact Equinor with any additional questions.

Annual Report	Sustainability Report
2022	(See pg. 27 of 2022 Annual Report)
2021	2021
2020	2020

Section 6

Project Development Plan

Attachment 6.I

V236 Type Certificate

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Project Development Plan

Attachment 6.J

Certification Status

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Project Development Plan

Attachment 6.K

EW1 Maintenance Schedule

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Project Development Plan

Attachment 6.L

Health & Safety Disclosures

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Section 6

Project Development Plan

Attachment 6.M

Safety and Security Policies

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Examples of the types of policies and practices that Equinor personnel, contractors, and suppliers are held to include:

- **I am Safety:** The Equinor Book defines a common framework for the way Equinor leads and manages its business. The objective of the "I am Safety" initiative is to build a stronger safety culture and contribute to a consistent way of doing things across the organization over time.
- **Life Saving Rules:** Implementation of the International Association of Oil and Gas Producers' Life-Saving Rules[1] across all operational sites.
- **Pre-shift and pre-task safety talks and moments:** Personnel will be required to participate in pre-shift or pre-task safety "moments" that are intended to ensure that safety is "front of mind," personnel are aware of risks, and steps are taken to ensure that activities and operations are conducted safely.
- **Emergency Response Plans:** Equinor maintains emergency response and management plans to minimize the impacts of emergencies when they occur consistent with applicable rules and regulations, including both general and asset-specific plans.
- **Hierarchy of Design:** Empire Wind has submitted its Hierarchy of Design Standards as part of its COP. Empire Wind also has engaged DNV to act as the BOEM-approved Certification Verification Agent for the Project.
- **Worker condition assessments:** The conditions of personnel will be monitored and observed on an ongoing basis to minimize potential risks and promote the health and safety of all personnel.
- **Competency management and training:** Employees and contractors supporting the Project will be required to undergo training to ensure that they can perform their duties safely, including training required by applicable rules and regulations.
- **Processes and mechanical design information:** Safety and environmental information for Equinor operated production facilities, including process design information and mechanical design information are stored and managed in Equinor's Technical Information Documentation system. This information includes simplified process flow diagrams, mechanical design information (e.g., piping and instrument diagrams), electrical area classifications, equipment arrangement drawings, description of alarm, shutdown, interlock systems, and description of control system.
- **Hazard Analysis:** To identify, evaluate, and manage hazards, Equinor conducts various formal hazards analyses on each of its facilities, including hazard identification analyses and equipment and system hazard and operability studies.

[1] *See* International Association of Oil & Gas Producers, Life-Saving Rules, available at: https://www.iogp.org/workstreams/safety/safety/life-savingrules/.

- **Safety Job Analysis and Permit to Work System:** All work that is not considered low risk or routine will require a Safety Job Analysis and a work permit. This process establishes accountability for the implementation of safe work practices and other necessary safeguards.
- **Management of Change:** Equinor uses a coordinated management system—referred to as Management of Change—to introduce changes to equipment, operating procedures, and personnel in a manner that is deliberate and reduces risks to quality, health, and safety. The procedure ensures that all relevant parts of the project can assess the potential impact of a change prior to its implementation and that all changes comply with applicable governance and documentation requirements.
- **Stop Work Authority:** Stop Work Authority formally establishes the authority and obligation of Equinor employees and contractors to suspend individual tasks or group operations when there are concerns regarding the control of safety or environmental risk.
- **Working on/or near water:** All edges must be protected with barriers (e.g., safety railings) to prevent falling into water. If this is not possible, alternative suitable and sufficient control measures must be implemented.
- **Marine Operations:** A Marine Operations Manual will be provided to all vessel masters and crews that sets out procedures for safe and effective marine operations.
- **Lift Plan:** A lift plan will be put in place for all lifting operations that are conducted at the Project site, with the details of the plan commensurate with the level of complexity and risk associated with the lifting operation.
- **Working at Height:** Fall protection measures will be implemented where personnel are exposed to a risk of falling more than 4 feet and to protect personnel from the risk of falling tools and equipment.
- **Confined Spaces:** A Confined Space Entry Permit, documented rescue plan, and safety job analysis will be completed prior to entering a confined space.
- **Energy Isolation:** Supervisor are required to ensure that equipment is properly isolated, and an energy isolation plan is created and documented and that the necessary competent/trained personnel are involved.
- **Electrical Safety:** Supervisors shall ensure that personnel who may be exposed to electrical hazards are trained to a level corresponding to their job function and activities, and that only a qualified person is allowed to operate or work on electrical equipment.
- **Health and Working Environment:** The health and working environment risks will be assessed through the Work Environment Health Risk Assessment process.
- **Security:** Appropriate measures will be taken to minimize against loss, theft, misuse of information, organized crime, cyberattacks, espionage, sabotage, and terrorist attacks.
- **Investigation of Incidents:** Incidents and accidents are registered and managed in Equinor's Synergi system. Synergi is used to retain the findings of investigations for future use, determine and document the preventative actions associated with findings and

ensure they are completed, store lessons learned for distribution to similar facilities and appropriate personnel within Equinor.

- **HSE Observation Reporting**: Equinor will provide guidance to employees and contractors to ensure that safety observations are reported to help avoid and prevent incidents, accidents, and injuries.
- **Reporting unsafe working conditions:** Equinor and its contractors encourage all employees to report any hazardous or unsafe working conditions at the worksite through the employee's line management or health and safety representative.
- **Security Mindset:** Equinor has adopted a "zero trust" security mindset across all data networks including plant, corporate, cloud, and vendor/partners.
- **Cyber Security Management:** Equinor has adopted a cybersecurity management system that complies with applicable industry standards, such as the National Institute of Standards and Technology (NIST) Cyber Security Framework.

Section 6

Project Development Plan

Attachment 6.N

EW1 Risk Register

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