

**BEFORE THE
PUBLIC SERVICE COMMISSION
STATE OF NEW YORK**

**Application of Empire Offshore Wind LLC for a
Certificate of Environmental Compatibility and
Public Need for the Construction of
Approximately 17.5 Miles of Transmission Lines
from the Boundary of New York State Waters to
a Point of Interconnection in Brooklyn, Kings
County, New York**

Case No.: 21-T-XXXX

Empire Offshore Wind LLC

Empire Wind 1 Project

MATTER OF APPLICATION

APPLICATION

Pursuant to Article VII of the New York Public Service Law (PSL) and Subpart 85-2 of the Commission's Procedural Rules, 16 NYCRR Subpart 85-2 (2019), Empire Offshore Wind LLC (Empire, or the Applicant) hereby petitions the New York State Public Service Commission (Commission) for a Certificate of Environmental Compatibility and Public Need (the Certificate) authorizing the Applicant to construct, operate and maintain the New York portion of the transmission facilities required to interconnect Applicant's proposed 816 MW Empire Wind 1 Offshore Wind Generating Facility, to be located within the Bureau of Ocean Energy Management (BOEM) designated Renewable Energy Lease Area OCS-A 0512, to a Point of Interconnection with the New York State Transmission System (the POI), to be located at the Gowanus Substation owned and operated by the Consolidated Edison Company of New York, Inc. (Con Edison) in Brooklyn, Kings County, New York.

In accordance with Sections 3.3, 85-2.2, 85-2.4 and 85-2.8 of the Commission's Procedural Rules, the Applicant hereby submits its Application and exhibits, along with the information required by Section 122 of the Public Service Law (PSL) and Parts 86 and 88 of the Commission's Rules of Procedure, the testimony comprising the Applicant's direct case in support of its Application, and a motion for waiver of certain filing requirements. Further in compliance with PSL Sections 122(2) and 122(5), Applicant also submits an affidavit of service of this Application, a copy of the newspaper notice (with an affidavit of publication of such notices to be provided promptly upon receipt), a copy of the landowner notice, and a check in the amount of \$100,000 for intervenor funding.

REQUEST FOR EXPEDITED ACTION

On July 18, 2019, Governor Andrew Cuomo signed into law the Climate Leadership and Community Protection Act (CLCPA), “the most aggressive climate change legislation in the nation.”¹ A key part of this new legislation was the requirement that the Commission establish a program under which New York’s jurisdictional load serving entities would secure sufficient renewable energy to serve at least 70 percent of their loads by 2030 and 100 percent of their loads by 2040.² As part of this aggressive clean energy mandate, the Commission was also directed to ensure that New York’s load serving entities procure at least 9,000 megawatts (MW) of electricity from offshore wind resources by 2035.³

These ambitious clean energy mandates require expedited action by the Commission on this Article VII Application, as the facilities proposed herein are required to connect Empire’s approximately 800 MW offshore wind facility to the New York State Transmission System and thereby supply renewable electricity from the offshore wind facility to consumers in New York State, as required by Empire’s contract with the New York State Energy Research and Development Authority (NYSERDA). Prompt action on this Application will also further the public interest in a number of other important ways, as the Commission explained in its July 12, 2018 Order Establishing Offshore Wind Standard and Framework for Phase 1 Procurement in Case 18-E-0071:

[O]ffshore wind is projected to provide numerous benefits in addition to playing a significant role in contributing toward achieving the [Clean Energy Standard] targets and reducing greenhouse gas emissions. Because of its proximity and direct access to load centers, offshore wind would provide substantial reliability

¹ [Governor Cuomo Executes the Nation's Largest Offshore Wind Agreement and Signs Historic Climate Leadership and Community Protection Act \(ny.gov\)](#)

² N.Y. Pub. Serv. L. § 66-p(2).

³ N.Y. Pub. Serv. L § 66-p(5).

and diversity benefits to the electric system. Offshore wind also has the potential to create thousands of jobs for New Yorkers, both in construction of the facilities and in the operations and maintenance of the completed projects. It may also produce significant public health benefits by displacing fossil-fired generation in the downstate area.⁴

Expedited action on this Article VII Application is required to achieve all of these important objectives and to protect New York's leadership position in the burgeoning offshore wind industry.

In conformance with Section 85-2.8 of the Commission's Procedural Rules, the Applicant further states as follows:

I. DESCRIPTION OF THE PROPOSED PROJECT

The Applicant is seeking a Certificate of Environmental Compatibility and Public Need for the New York portion of the Empire Wind 1 Project (Project). The Project is anticipated to be constructed almost entirely underground or under the waters of New York State and includes the following components:

- Two three-core 230-kV high-voltage alternating-current (HVAC) submarine export cables located within an approximately 15.1-nm (27.9-km)-long, submarine export cable corridor from the boundary of New York State waters 3 nm (5.6 km) offshore to the cable landfall in Brooklyn, New York;
- A 0.2-mi (0.3-km)-long onshore cable route and substation including:
 - Two three-core 230-kV HVAC EW 1 onshore export cables buried underground from the cable landfall either directly to the cable terminations or to a vault within the onshore substation;
 - An onshore substation located at the South Brooklyn Marine Terminal (SBMT), which will increase the voltage to 345 kV for the onshore interconnection cables; and

⁴ Case 18-E-0071, *In the Matter of Offshore Wind Energy*, Order Establishing Offshore Wind Standard and Framework for Phase 1 Procurement, slip op. at 3 (Issued and Effective July 12, 2018).

- Two 345-kV cable circuits, each with three single-core HVAC onshore interconnection cables, buried underground from the onshore substation to the POI.

II. THE LOCATION OF THE PROPOSED RIGHT OF WAY

The Project's route will extend from a point on the three-nautical-mile boundary of the waters of New York State to a landfall at South Brooklyn Marine Terminal (SBMT) in Brooklyn, Kings County, New York. At SBMT, the Project will include a 230/345 kV transformer to be located on the lands of SBMT and approximately 0.2 miles of underground cable routing terminating at Con Edison's Gowanus Substation, all of which facilities will be located in Brooklyn, Kings County, New York. Detailed maps, drawings and explanations showing the proposed, primary route for the Project and alternate configurations considered by the Applicant are set forth in Exhibits 2 and 5 to the Application.

III. SUMMARY OF ENVIRONMENTAL STUDIES AND ENVIRONMENTAL IMPACT

The Project will be designed, constructed and operated in a manner that avoids or minimizes impacts to environmental resources and the general public to the maximum extent practicable. The Applicant, through its consultants, has conducted field investigations, environmental impact studies, literature reviews and agency consultations (where appropriate) to identify and assess existing environmental conditions within the Project's Study Areas. A detailed description of these studies and the potential environmental impacts of the Project is set forth in the resource-specific sections of Exhibit 4 to the Application, including:

- Marine Physical and Chemical Conditions;
- Topography, Geology, Soils and Groundwater;
- Wetlands and Waterbodies;

- Terrestrial Vegetation and Wildlife;
- Fisheries and Benthic Resources;
- Important Habitats and Protected Species;
- Cultural and Historic Resources;
- Visual and Aesthetic Resources;
- Land Use;
- Noise;
- Electric and Magnetic Fields; and
- Air Quality.

Study and technical reports, agency correspondence and environmental assessments for the Project are provided in the following appendices:

- Agency Outreach and Correspondence (Appendix A);
- Sediment Transport Analysis (Appendix B);
- Coastal Zone Management Consistency Statement (Appendix C)
- Benthic Resource Characterization Reports (Appendix E)
- Electric- and Magnetic-Field Assessment (Appendix F)
- Phase I Terrestrial Archaeological Survey (Appendix G)
- Analysis of Visual Effects on Historic Properties (Appendix H)
- Visual Impact Assessment (Appendix I)
- In-Air Acoustic Assessment (Appendix J)

In sum, these studies show that the environmental impacts of the construction and operation of the Project will be generally minor to negligible and limited in both scope and duration and will occur primarily during the construction phase. Because the Applicant has

designed the Project to be constructed and operated almost entirely underground or under water and has proposed a number of mitigation measures, construction and operation of the proposed Project would not have any significant adverse impacts on environmental resources or on business or the general public in Brooklyn, Kings County, New York. A summary of the anticipated potential impacts of the Project on each of the identified resources is presented below. Where applicable, mitigation strategies that will be employed to minimize any potential environmental impacts that cannot be avoided are also described.

Marine Physical and Chemical Conditions

As detailed in Section 4.2 of Exhibit 4, no significant impacts to tides, currents, bathymetry, or water temperature are anticipated from Project-related construction, operations or maintenance activities. Project construction activities will result in short-term, minor disturbance of seabed sediment, minor to negligible physical changes from cable protection on the seafloor, and minor to negligible bathymetry changes from pre-sweeping and dredging activities.

Topography, Geology, Soils and Groundwater

For the reasons explained in greater detail in Section 4.3 of Exhibit 4 of the Application, Project construction is not expected to result in significant alterations to topography, geology, soil or groundwater, and is not expected to significantly change stormwater runoff patterns or volumes. Site specific erosion and sediment control measures will be provided as part of the Environmental Management & Construction Plan (EM&CP). As such, the Project is not expected to impact surface water or groundwater quality during onshore soil disturbing activities.

Wetlands and Waterbodies

As described in Section 4.4 of Exhibit 4 of the Application, because the onshore portion of the Project is located within a highly developed area that lacks sensitive wetland and waterbody habitats, impacts to these resources as a result of the Project's onshore construction and operation will be short-term and minor to negligible. Construction of the onshore Project infrastructure will be located outside of freshwater and tidal wetlands, waterbodies, and adjacent areas, and therefore will not result in direct impacts to these resources. To minimize impacts to offsite water resources, the Applicant will implement a soil erosion and sediment control plan for the cable landfall, onshore substation and onshore cable installation that satisfies the requirements detailed in the New York State Standards and Specifications for Erosion and Sediment Control (Blue Book), and a Stormwater Pollution Prevention Plan (SWPPP) will be provided as part of the Applicant's EM&CP.

Terrestrial Vegetation and Wildlife

As detailed in Section 4.5 of Exhibit 4 of the Application, because the onshore portion of the Project is located within a highly developed area that predominantly lacks vegetation, potential impacts to terrestrial vegetation and wildlife resources as a result of the Project's onshore construction and operation are anticipated to be negligible.

Fisheries and Benthic Resources

As detailed in Section 4.2 of Exhibit 4 and Exhibit E, the Applicant has sited the Project to avoid sensitive benthic habitats to the extent practicable. Short-term minor direct disturbance, changes in water quality, entrainment, disturbance of softbottom habitat, and project-related noise and vibrations may temporarily affect fisheries and benthic resources during construction activities. Long-term changes potentially affecting fisheries and benthic resources include the introduction of

artificial habitat resulting from cable protection measures, electric and magnetic fields from the submarine export cables, and risk of bottom disturbance upon secondary interaction of fishing gear and vessel anchors with the cables during operations.

Given the Applicant's commitment to cable burial, impacts of energized cables on fish and invertebrates would be negligible. Electric and magnetic fields generated by the buried export cables would be detectable by some benthic fish and invertebrates but would not adversely impact individuals or populations. The Project's impact on benthic and pelagic habitat would be either neutral or beneficial to most fish and invertebrates. The new infrastructure would neither harm nor benefit demersal species that prefer open sandy bottoms, such as surf clam and flounder, because sandy bottom is not a limiting feature in the Project Area; therefore, impacts are expected to be minor. To decrease the risk of gear snagging where target burial depth cannot be achieved, the Applicant has committed to limit the use of concrete mattresses, except where required for certain asset crossing locations. Cable protection, when applied, will be designed to minimize the potential for gear snags, as feasible. Additional mitigation to avoid and reduce impacts (e.g., route planning, burial depth surveys, feedback based on fisheries input will minimize the impacts of the export cable on fishing).

Important Habitats and Protected Species

As detailed in Section 4.7 of Exhibit 4, due to the placement of the onshore portion of the Project within a highly developed area, potential impacts to protected species and important habitat associated with onshore Project construction are anticipated to be negligible. Based on the absence of habitat, seabeach amaranth, piping plover, roseate tern, and red knot are unlikely to be present at the onshore Project Area. Sea turtle nesting habitat is also absent at the onshore Project Area.

Protected marine species, including marine mammals, sea turtles, and sturgeon, may be present at or near the offshore Project Area. Disturbance caused by construction of the submarine export cables is expected to have minor to negligible effects on these species. The Applicant proposes to implement measures to avoid, minimize, and mitigate impacts to protected species during construction and operation of the Project, including: the development and enforcement of an Oil Spill Response Plan; providing appropriate Project-related personnel onboard Project vessels with relevant training in wildlife sighting, recording and reporting procedures, vessel-strike avoidance and minimum separation distances, and awareness training to emphasize individual responsibility for protected wildlife awareness and protection, as necessary; and vessel lighting that minimizes illumination of the sea surface where feasible and in compliance with regulatory requirements. The Applicant has also proposed restricting seabed-disturbing activities for submarine export cable installation to the period from July 1st to September 30th to avoid the sensitive time-of-year for winter flounder and Atlantic Sturgeon.

Cultural and Historic Resources

Section 4.8 of Exhibit 4 of the Application indicates that there are no archaeological sites or sites of undetermined status under the National Register of Historic Places (NRHP) that occur within the Project's onshore archaeological area of potential effects (APE). The likelihood of unanticipated discoveries is low because the area occurs entirely on artificially filled land constructed into Gowanus Bay in the late nineteenth and early twentieth centuries. During construction, the impacts to marine cultural resources have the potential to include disturbance to known and/or unknown submerged marine archaeological resources. Based on the results of the survey activities and marine archaeological analysis completed to date, potential sources of marine archaeological resources have been identified within the submarine export cable corridor.

However, a Qualified Marine Archeologist will evaluate the submarine export cable corridor prior to final cable routing to support avoidance of any known resources. There is one NRHP-listed individual property, one NRHP-listed historic district, and one NRHP-eligible district within the visual APE for historic properties. Adverse effects to these historic properties are not anticipated.

Visual and Aesthetic Resources

As described in greater detail in Section 4.9 of Exhibit 4 of the Application, long-term visual effects during operation of the onshore substation will result from the visibility of the aboveground components associated with the onshore substation buildings, outside electrical equipment, static masts, and perimeter security fence. During construction, short-term, minor impacts will be associated with offshore and onshore construction activities. During operations, the onshore substation will introduce tall, rectangular forms and vertical and geometric structures into the landscape setting, which already is highly developed with similar forms and structures. The burial of the onshore cables will mitigate many of the potential visual effects of the Project that would otherwise occur. The onshore substation site is located within the jurisdiction of the New York City's Waterfront Revitalization Program; therefore, a pre-engineered building system with prescribed architectural elements incorporated into the design will be used to ensure the Project meets the Waterfront Revitalization Program policies, and lighting at the onshore substation will be designed to reduce light pollution where feasible (e.g., downward lighting, motion-detecting sensors).

Land Use

As described in greater detail in Section 4.10 of Exhibit 4 of the Application, the Project will not conflict with current or planned land uses within the Project Area and will have at most a

minimal impact on any future planned uses. Construction of the Project will result in minor, short-term impacts, including a short-term increase in construction vehicle traffic and activity, as well as the short-term implementation of safety zones. The Applicant proposes to avoid, minimize, and mitigate impacts through the addition of security measures to monitor and properly mark active construction sites; the development of a Traffic Management Plan; and implementation of the Project's Public Involvement Plan (see Appendix D), including regular updates to the local community through social media, public notices, the Project website, and/or other appropriate communications tools.

Noise

Section 4.11 of Exhibit 4 and Appendix J of the Application describe the noise impacts resulting from construction and operation of the Project. Construction will primarily result in short-term, minor increases in in-air noise levels associated with support vessels and construction of the onshore substation and installation of the onshore cables. Construction equipment will be well-maintained and vehicles using internal combustion engines equipped with mufflers will be routinely checked to ensure they are in good working order; quieter backup alarms will be used for vehicles, as feasible; noisy construction equipment will be located as far as possible from noise sensitive areas; and a noise complaint hotline will be made available to help actively address all noise related issues.

Modeling results indicate that the onshore substation will comply with the 7-decibel, A-scale incremental increase limit in the New York City Noise Control Code during operations. The onshore substation is also expected to comply with New York City octave band noise limits for the M3 district and at residential receptors.

Electric and Magnetic Fields

As detailed in Section 4.13 of Exhibit 4 and Appendix F of the Application, the magnetic field is not expected to exceed the Commission's standard of 200 milligauss (mG) at the edge of the right-of-way (ROW). The electric-field levels at the edge of the Project ROW will be below the electric-field limit of 1.6 kilovolts per meter (kV/m).

Air Quality

As detailed in Section 4.12 of Exhibit 4 of the Application, primary Project emission sources during construction include marine vessels, which will comply with applicable EPA, or equivalent, emission standards. During operations and maintenance, potential Project-related emissions will result from the operation of an emergency generator at the onshore substation and from greenhouse gas (GHG) emissions of sulfur hexafluoride (SF6) from gas-insulated switchgear installed at the onshore substation. Estimated air emissions from operations and maintenance activities will be very small and are not expected to have a significant impact on regional air quality over the operational life of the Project. The use of wind to generate electricity reduces the need for electricity generation from traditional fossil fuel powered plants that produce GHG emissions and will result in the displacement of generation from fossil fuel-fired power plants, which is anticipated to cause a long-term beneficial impact to air quality.

IV. NEED FOR THE FACILITY

The Project is required to connect the 816 MW Empire Wind Offshore Wind Generating Facility (the OSW Facility) to the New York State Transmission System, so that the Applicant can supply renewable electricity produced from that OSW Facility to consumers in New York State, as required by the Applicant's contract with NYSERDA. NYSERDA and the Applicant entered

into an Offshore Renewable Energy Certificate Purchase and Sale agreement on October 23, 2019 as part of NYSERDA's efforts to secure the 9,000 MW of offshore wind generating capacity by 2035 required by the CLCPA.

As the Commission explained in establishing a special program of renewable energy credits for offshore wind generating facilities selected by NYSERDA, projects like the EW 1 Project play a crucial role in achieving New York's ambitious clean energy objectives:

The reasons for adopting an Offshore Wind procurement requirement are compelling. Achieving the State's ambitious carbon reduction goals will require contributions from a variety of sources – no single technology or simple formula will suffice – and offshore wind will be an essential contributor. Offshore wind addresses the transmission and siting constraints that would otherwise inhibit the development of renewable power in the downstate area, and it has a higher capacity factor than other weather-variable renewable sources of generation. It is particularly well suited for the Atlantic coast, from siting and operations to system efficiency and potential output. Clean power delivered directly to the downstate capacity zones will also have the effect of displacing local fossil generation and reducing local air contaminants.⁵

As the Commission noted in its Order granting an Article VII certificate for construction of certain transmission facilities required to interconnect the Cricket Valley Energy Center to the New York State Bulk Power System, “[t]o operate, the Energy center must be connected to the bulk power system”⁶ Accordingly, the need for the Project is clear.

V. DESCRIPTION OF REASONABLE ALTERNATIVE ROUTES AND TECHNOLOGY

⁵ Case 18-E-0071, *In the Matter of Offshore Wind Energy*, Order Establishing Offshore Wind Standard and Framework for Phase 1 Procurement, slip op. at 15-16 (footnotes omitted) (Issued and Effective July 12, 2018).

⁶ Case 13-T-0585, *Application of Cricket Valley Energy Center, LLC, for a Certificate of Environmental Compatibility and Public Need Pursuant to Article VII of the Public Service Law For Approval of a New 345 kV Line From the Pleasant Valley Substation to the Cricket Valley Energy Center, LLC, and the Reconductoring of an Existing 345 kV Line, in the Town of Dover, Dutchess County*, Order Granting Certificate of Environmental Compatibility and Public Need, slip op. at 10 (Issued and Effective April 20, 2016).

Exhibit 3 of this Application provides a description and evaluation of alternatives, including a description of the comparative merits and detriments of each alternative and an explanation of why the proposed route is best suited for the Project. The Applicant evaluated alternatives for the submarine export cable route, onshore substation, cable landfall and onshore cable route. The Applicant evaluated five submarine cable route alternatives in New York State waters for the Project, one route alternative that enters New York State waters from New Jersey waters and four alternatives that consider different routes in the area of Gravesend Bay. The Applicant also assessed four onshore substation sites: the 65th Street Railyard site, the Sunset Park Pier, the Narrows Generating Station site and the EW 1 site at SBMT. In evaluating onshore cable routes, the Applicant considered potential landfall alternatives in Coney Island and along Gravesend Bay, as well as four cable landfall sites to the north (at the Verrazzano-Narrows Bridge, the 65th Street Railyard, the Narrows Generating Station, and SBMT), along with associated routes from these cable landfall sites to the POI.

VI. OTHER RELEVANT INFORMATION

Exhibit 1 to the Application provides the name, address and phone number of the Applicant; the principal officer name and address for the Applicant; and the names and addresses of those persons upon whom documents and correspondence are to be served. Exhibits 2, E-1 and E-2 to the Application provide a detailed description of the location of the facilities comprising the Project. Exhibit 6 to the Application sets out the economic effects of the construction and operation of the Project.

Exhibit 7 to the Application provides information on local laws, codes and ordinances (Local Laws) that are applicable, or potentially applicable, to the Project. As indicated in Exhibit 7, the Applicant requests that the Commission grant waivers of specified provisions of those Local

Laws that Applicant believes would be unreasonably restrictive if applied to the Project. Exhibit 8 to the Application describes other pending filings associated with the Application. Exhibit 9 to the Application provides estimated cost information regarding the proposed Project.

Exhibit E-4 to the Application presents the engineering justification for the Project. Exhibit E-5 to the Application explains why the Project is not expected to cause any material adverse impacts to television, radio or other communications systems. Exhibit E-6 to the Application evaluates the impacts of the Project on airports, railroads, roads, marine transportation, and pedestrian areas. This analysis demonstrates that the Project will be designed and constructed in a manner that will avoid interference with any of these transport modes except for impacts on roads and marine traffic during construction, which impacts will be temporary and minimized by appropriate safety measures. Appendix D contains the Applicant's most recent Public Involvement Plan ("PIP").

Key features of the PIP include identifying key stakeholders in the Project area; advancing the public's understanding of the Project; and encouraging and collecting input from, and disseminating information to, stakeholders and the communities surrounding the Project area. The PIP is intended to provide relevant information to the public and stakeholders, consider stakeholder input and to ensure consistent, frequent and transparent outreach and communications with stakeholders. Various communication methods will be used as part of the Applicant's PIP, including but not limited to: public information meetings, presentations, a website, direct mail, Project brochures or newsletters, and electronic mail.

To date, as part of its comprehensive PIP, the Applicant has:

- met with certain key stakeholders, including State agency staff (including that of NYSDPS, NYSDEC and NYSDOS) and local elected leaders, informing them of the proposed Project;
- held public open house sessions in fall of 2019 in Brooklyn, New York;
- published notice of the filing of the Article VII Application in newspapers of general circulation;
- sent letters to the landowners on which the Project would be located and adjacent landowners, notifying them of the Project;
- established a website at www.empirewind.com/article-vii, which will be updated regularly with Project information; and
- established a telephone number to receive calls regarding the Project. Various agency consultations completed through April 30, 2021 have also been described and provided in Appendix A to the Application.

VII. CONCLUSION

For the reasons set forth above, the Applicant respectfully requests that the Commission:

- i. grant the Applicant's request for expedited treatment of this Application; and
- ii. grant a waiver of those Commission rules and regulations specified in the Motion for Waivers from Application Requirements accompanying this Application; and
- iii. grant a waiver of those applicable Local Laws specified in Exhibit 7 pursuant to Section 126.1(g) of the Public Service Law and 16 N.Y.C.R.R. § 86-8; and

- iv. grant any other and further authorizations, consents, permissions, approvals, waivers and permits, as necessary, for the construction, operation and maintenance of the Project described herein; and
- v. issue an order granting a Certificate of Environmental Compatibility and Public Need authorizing the Applicant to construct, operate and maintain the Project as described in this Application and in the attached exhibits and appendices.

Dated: June 30, 2021
Albany, NY

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