

OSW by 2040.²

To that end, by this Board Order (“Order” or “Board Order”), the Board herein approves the Leading Light Wind 2,400 MW project (“LLW Project” or “Project”)³ proposed by Invenergy Wind Offshore LLC (“Invenergy”) as a Qualified Offshore Wind Project (“QOWP”) to receive OSW Renewable Energy Certificates (“ORECs”), as defined in OWEDA.⁴ Although not addressed in this Order, today the Board also separately approves by another Order, a second project submitted in response to the Third Solicitation (the “Other Awarded Project”), resulting in a total award under the Third Solicitation of 3,742 MW.

Today’s action moves New Jersey closer to achieving Governor Phil Murphy’s goal of reaching 100 percent clean energy by 2035. Today’s action also reinforces New Jersey’s leadership in the fight against the impacts of climate change and reinforces the necessary role of OSW in this critical fight. Climate change is an imminent threat to New Jersey’s economy, and the health, safety, and welfare of New Jersey’s residents.⁵ The effects of climate change are felt throughout New Jersey via the threat of flooding, the number of and severity of storms, and the environmental effects from the increase in average yearly temperatures.⁶ Simultaneously, fossil-fuel emissions have negatively impacted New Jersey’s air quality, threatening residents’ respiratory health and quality of life.⁷ Energy systems and climate change are inextricably linked.

Today’s action in this docket awards New Jersey’s largest OSW project to date, realizing significant economies of scale. It is also the first utility-scale OSW project awarded to an American company. The LLW Project will be located greater than 40 miles from the Project’s nearest point to New Jersey’s coast. At this distance, due to the curvature of the Earth only a portion of the tips of the nearest turbines will present above the horizon, making the project imperceptible from the

² OWEDA, N.J.S.A. 48:3-87.1 to -87.2, L. 2010, c. 57, eff. Aug. 19, 2010; amended by 2019 c. 440, §2, effective Jan. 21, 2020; 2021, c.178, §1, effective July 22, 2021.

³ The nameplate capacity of the awarded project may be different than the awarded capacity.

⁴ Invenergy submitted a 2,400 MW project with and without an energy storage component. The LLW Project awarded herein is the 2,400 MW project without the energy storage component and with cost sharing as submitted as part of Invenergy’s best and final offer (“BAFO”), an item requested from all Applicants on October 27, 2023. For additional information about Invenergy’s BAFO, see “Information Relied Upon in Evaluation of Applications” herein.

⁵ See generally, New Jersey Department of Environmental Protection (“DEP”), 2020 New Jersey Scientific Report on Climate Change (June 30, 2020), <https://dep.nj.gov/wp-content/uploads/climatechange/nj-scientific-report-2020.pdf>; DEP, Climate Change Impacts on Human Health & Communities: Addendum to the 2020 New Jersey Scientific Report on Climate Change (September 2022) (hereafter, “2022 Climate Change Impacts on Human Health Addendum”), <https://dep.nj.gov/wp-content/uploads/climatechange/nj-scientific-report-human-health-addendum.pdf>.

⁶ See generally, 2020 New Jersey Scientific Report on Climate Change; see generally 2022 Climate Change Impacts on Human Health Addendum.

⁷ See Vohra et al., Global Mortality from Outdoor Fine Particle Pollution Generated by Fossil Fuel Combustion: Results from GEOS-Chem, (April 2021), <https://www.sciencedirect.com/science/article/abs/pii/S0013935121000487>.

shoreline during the vast majority of viewing conditions.⁸ The LLW Project will result in the generation of over 9,325,000 megawatt hours (“MWh”) of clean electricity each year over the term of the OREC payments.⁹ This is enough electricity to power 1.15 million homes each year.¹⁰ In addition, the LLW Project will reduce carbon emissions by 4.1 million tons each year over the full life of the project.¹¹

As detailed further in this Order, today’s action will yield significant economic benefits for New Jersey, building upon the Board’s actions in previous OSW solicitations. The Board’s approval of the LLW Project brings a commitment from Invenergy for 3,928 guaranteed full-time equivalent (“FTE”) direct job-years through the first ten years of operation,¹² and an estimated 11,329 total (direct, indirect, and induced) job-years¹³ to New Jersey over the anticipated project life. This decision also brings a commitment from Invenergy for \$1.7 billion of direct expenditures within the state through the first ten years of operation,¹⁴ and an estimated \$3.7 billion total (direct, indirect, and induced) expenditures within the state over the anticipated project life.¹⁵ Consequences for Invenergy not meeting its commitments are described later in this Order.

By the Board’s decision today, New Jersey makes a strong case that key parts of the OSW supply chain have been and will continue to be located here in New Jersey, for both current and future OSW projects developed inside and outside of the state. The LLW Project, together with the Other Awarded Project (the “Two Projects”), is expected to provide sufficient volume of orders to establish a wind turbine generator tower manufacturing facility at the New Jersey Wind Port (“NJWP”),¹⁶ and will contribute to the increase in production capacity at the monopile

⁸ Leading Light Wind, Third Solicitation Application (“LLW Third Solicitation Application”), Attachment 10.1 Appendix A (“Visibility Study”) at 13.

⁹ There will be less generation during the first year and last year of the OREC term when only one phase of the Project is in its own 20-year OREC term. See Attachment A to this Order for the OREC payment schedule.

¹⁰ According to the Energy Information Administration (EIA), 2022 data for NJ residential power consumption. See EIA, “Frequently Asked Questions (FAQs) – How Much Electricity Does an American Home Use?” <https://www.eia.gov/tools/faqs/faq.php?id=97&t=3>.

¹¹ Levitan & Associates, Inc., Evaluation Report New Jersey Offshore Wind Solicitation #3 (January 10, 2024) (the “LAI Report”), at 139, Table 61, “Average Annual Avoided Emissions.”

¹² Invenergy BAFO Application Form for 2,400 MW project option with a 3,742 MW Total Award and shared funding of EEW Phase 3B (“Invenergy BAFO Application Form”), Economic Impacts-Project Worksheet. N.J.A.C. 14:8-6.5(a)(11)(xiii) defines an “FTE-Year” as 1,820 work hours.

¹³ LLW Third Solicitation Application, Application Narrative (“LLW Application Narrative”) at 222, Table 8-19, “Direct, indirect, and induced economic effects (nominal dollar and FTE-Years) for 2,400 MW project alternative.”

¹⁴ Invenergy BAFO Application Form, Economic Impacts-Project Worksheet.

¹⁵ LLW Application Narrative at 219, Table 8-10, “Total direct in-state expenditures (nominal) and job creation for 2,400 MW project alternative;” Id. at 222, Table 8-19, “Direct, indirect, and induced economic effects (nominal dollars and FTE-Years) for 2,400 MW project alternative”.

¹⁶ For more information about the New Jersey Wind Port, see New Jersey Wind Port,

manufacturing facility at New Jersey's Port of Paulsboro.¹⁷ These employment and economic benefits will accrue across the state and help offset ratepayer impacts from the cost of the Two Projects.

The Board remains cognizant of its duty to protect New Jersey's natural resources and significant cultural and tourism economies while simultaneously working toward achieving the state's OSW and clean energy goals. New Jersey enjoys a geographic location and ocean wind profile well-suited to the development of a robust OSW program. However, the work of harnessing OSW must be done through responsibly developed and sited wind farms. The Board remains committed to ensuring that natural resources, including fish, marine mammals, birds, and other wildlife, are protected throughout the development, operation and decommissioning of current and future wind projects. The environmental and fisheries protection requirements contained in the Solicitation Guidance Document for this Third Solicitation ("Third Solicitation SGD" or "Third OSW Solicitation Guidance Document") are the strongest that have been imposed to date on any New Jersey OSW project.¹⁸ The awards today will also provide additional resources to support the collection and sharing of valuable data to inform future development and protect the natural resources that comprise a critical part of New Jersey's rich tapestry of biological diversity.

The Board also remains cognizant of the direct financial impacts that OSW projects have on New Jersey ratepayers, and therefore explicitly weighed such ratepayer impacts in gauging the value of the benefits attributable to OSW in this Third Solicitation. The evaluation of the Third Solicitation projects weighted price and ratepayer impact at 70% of the full evaluation, and the Board's decision today reflects that heavy emphasis on minimizing the cost to New Jersey ratepayers.

Through initiatives to be implemented by the LLW Project, New Jersey can advance visionary policy and innovative programs while continuing to improve the quality of energy service in the state. We must do this while ensuring that energy is affordable and accessible for all residents of the state. Stepping boldly into a new industry through today's action, New Jersey, once again, leads the way in protecting the environment while growing the state's economy for the benefit of current and future residents of this great state.

I. BACKGROUND AND PROCEDURAL HISTORY

On August 19, 2010, OWEDA was signed into law, amending and supplementing the Electric

<https://nj.gov/windport/index.shtml>.

¹⁷ See Ramboll US Corporation, New Jersey Offshore Wind Strategic Plan (September 2020) ("Strategic Plan" or "2020 OSW Strategic Plan") for a description of the various components of an OSW project, https://www.nj.gov/bpu/pdf/Final_NJ_OWSP_9-9-20.pdf.

¹⁸ For a definition of "Solicitation Guidance Document," see Section II. herein ("Previous Solicitations – OSW Generation"). See also BPU, New Jersey Offshore Wind Third Solicitation – Solicitation Guidance Document – Application Submission for Proposed Offshore Wind Facilities (March 8, 2023) ("Third OSW Solicitation Guidance Document" or "Third Solicitation SGD"), <https://www.nj.gov/bpu/pdf/boardorders/2023/20230306/8D%20ORDER%20OSW%20Third%20Solicitation.pdf>.

Discount and Energy Competition Act, N.J.S.A. 48:3-49 et seq.¹⁹ OWEDA established, among other things, OSW as a Class I renewable energy resource under the Renewable Portfolio Standards (“RPS”), and directed the Board to establish an OREC program requiring a percentage of the state’s electric load to be supplied by OSW from QOWPs.²⁰ A QOWP is defined as, “...a wind turbine electric generation facility in the Atlantic Ocean and connected to the electric transmission system in this state, and includes the associated transmission-related interconnection facilities and equipment, and approved by the Board pursuant to [N.J.S.A. 48:3-87.1].”²¹

OWEDA defines an OREC as representing the environmental attributes of one megawatt hour (“MWh”) of electric generation from an OSW project.²² For each MWh delivered to the transmission grid, an OSW project will be credited with one OREC.

OWEDA also establishes the application requirements for OSW projects to be considered eligible to receive ORECs. These requirements are referenced in the Board-approved Third Solicitation SGD issued with each OSW generation solicitation that provides guidance to developers regarding the format, calculations, and assumptions to be used in preparing an OSW project application to receive ORECs (“Application”). OWEDA provides key factors the Board should consider when evaluating an Application in addition to the OREC price, including the economic impacts of projects, environmental benefits including greenhouse gas (“GHG”) reductions and mitigation of environmental impacts, ratepayer impacts, economic guarantees, and factors contributing to the likelihood of success of the project.²³

Ultimately, OWEDA mandates that all QOWPs deliver a net economic and environmental benefit to the state. A cost-benefit analysis of proposed projects must demonstrate that this threshold is met based upon both economic and environmental benefits.²⁴

OWEDA also makes clear that no OREC shall be paid until electricity is produced by the QOWP, and when such payment is made, it shall be based on the actual electric output of the project that is delivered into the state’s transmission system.²⁵

Following the passage of OWEDA, the Board adopted rules that provide an Application process

¹⁹ See OWEDA.

²⁰ N.J.A.C. 14:8-1 et seq. See also N.J.A.C. 14:8-2.5(b)(3) (listing electricity derived from wind energy as a Class I renewable energy for purposes of qualifying an energy generator to receive renewable energy credits).

²¹ N.J.S.A. 48:3-51.

²² Ibid.; See also N.J.A.C. 14:8-6.1.

²³ N.J.S.A. 48:3-87(a) and -87(d); N.J.S.A. 48:3-87.1(b).

²⁴ N.J.S.A. 48:3-87.1(b)(1)(b).

²⁵ N.J.S.A. 48:3-87.1(c)(1).

and evaluation framework for OSW facilities.²⁶ The rules include: 1) establishing OSW as a Class I renewable energy resource under the RPS; 2) Application requirements; 3) the ability for the Board to designate the Application windows; 4) the ability for the Board to impose appropriate conditions upon any OREC award; and 5) ratepayer protections. The rules also detail how the Board will review any Application and ultimately approve, conditionally approve, or deny an Application.

Within his first few weeks in office, on January 31, 2018, Governor Murphy signed EO 8 making New Jersey's leadership in OSW a centerpiece of the Governor's environmental and energy agenda.²⁷ EO 8 reinvigorated the implementation of OWEDA, set a bold vision for a clean energy economy, and supported a large-scale OSW market and in-state supply chain that would utilize a trained New Jersey workforce for construction, installation, interconnection, and operations and maintenance of OSW projects.²⁸ EO 8 set a goal of 3,500 MW of OSW capacity by 2030, and directed the Board, and other implementing State Agencies, to "take all necessary action" to fully implement OWEDA.²⁹ EO 8 recognized that "portions of the OSW supply chain being located in New Jersey, including manufacturing, assembly and construction of the component parts of the OSW turbines, will contribute to a stronger New Jersey economy."³⁰

EO 8 specifically directed the Board to begin the rulemaking process to establish the OREC program ("OREC Funding Mechanism") to provide the necessary regulations to determine how suppliers will meet their RPS obligations, and how OSW developers will receive payments for their projects.³¹ EO 8 also directed the Board to proceed with a solicitation of 1,100 MW of OSW as a first step in meeting the 3,500 MW goal.

In response, on February 28, 2018, the Board issued an Order directing Board Staff to take specific actions to implement EO 8, including preparing an initial 1,100 MW solicitation, and initiating a rulemaking proceeding for the OREC Funding Mechanism.³²

After a notice and comment period, the Board adopted new rules and amendments to N.J.A.C. 14:8-6.6 regarding the OREC Funding Mechanism. The OREC Funding Mechanism set forth the method and process by which ratepayers will fund a QOWP in accordance with all applicable laws, rules, Executive Orders, and Board Orders, and provided the method by which the revenue earned from a QOWP will be refunded and delivered to ratepayers. Each Basic Generation Service Supplier ("BGS") and Third Party Supplier ("TPS" and together with BGS, the "Suppliers") that sells electricity to retail customers in New Jersey must ensure that the electricity includes at

²⁶ N.J.A.C. 14:8-6.1 et seq.

²⁷ EO 8.

²⁸ Id. at 1-2.

²⁹ Id. at 1.

³⁰ Id. at 9.

³¹ Id. at 6.

³² In the Matter of the Implementation of Executive Order No.8 - Offshore Wind and the OREC Funding Mechanism, BPU Docket No. QO18020151, Order dated February 28, 2018.

least the minimum percentage of OSW energy required for that Energy Year, as set by the Board, following the approval of a QOWP.³³ The OREC Funding Mechanism describes the method by which Suppliers will meet this obligation, and how funds from the sale of ORECs will flow to the QOWP.

The OREC Funding Mechanism also mandates that the OREC price reflects the total capital and operating costs for a QOWP, offset by any state tax, federal tax or production credits, and any other subsidies or grants, as approved by the Board.³⁴ The OREC Funding Mechanism further provides that once the Board approves a QOWP, it shall be funded through an OREC as set forth in the OREC Funding Mechanism, and in accordance with the following principles:³⁵

1. A Board Order that approves a QOWP shall be binding and enforceable on all parties referenced therein;
2. The total annual OREC allowance for a QOWP, once approved by the Board, shall not be subject to reduction or modification during the term of its awarding OREC Board Order unless otherwise agreed to by both parties, the Board and the applicable QOWP developer;
3. A developer of a QOWP shall be eligible to receive the project's approved OREC rates and payments for 20 years, subject to the terms and conditions contained in the awarding OREC Board Order;
4. QOWPs shall only be entitled to OREC revenues for MWh actually generated and delivered over the 20-year term delineated in the Board Order, and shall have no recourse against the Board, the suppliers, the Electric Distribution Companies ("EDCs"), the OREC Administrator, or the ratepayers for any additional payments;
5. ORECs from a QOWP shall have a qualification life of three (3) years, including the year it was generated and the following two (2) years, thus, allowing ORECs generated in a particular year to be banked for future use before it expires; and
6. All revenues generated by a QOWP shall be returned to ratepayers.

On May 23, 2018, Governor Murphy signed the Clean Energy Act ("CEA") into law (P. L. 2018 c. 17). Among other things, the CEA amended N.J.S.A. 48:3-87 to increase OWEDA's initial 1,100 MW requirement to "at least" 3,500 MW from OSW projects.³⁶

³³ N.J.A.C. 14:8-6.2. An "Energy Year" means the 12-month period that runs from June 1st through May 31st of the following year, numbered according to the calendar year in which it ends. For instance, Energy Year 2024 runs from June 1, 2023 through May 31, 2024. See N.J.A.C. 14:8-6.1.

³⁴ N.J.A.C. 14:8-6.5(a)(12)(vii).

³⁵ N.J.A.C. 14:8-6.6(a).

³⁶ N.J.S.A. 48:3-87(d)(4).

On November 19, 2019, Governor Murphy signed EO 92, increasing the state's OSW energy goal from 3,500 MW by 2030 to 7,500 MW by 2035.³⁷ Governor Murphy found that expanding the OSW goal will ensure that New Jersey can "meet the state's goals of 50 percent renewable energy by 2030 and 100 percent clean energy by 2050, in addition to creating a significant number of good-paying jobs."³⁸

On January 27, 2020, Governor Murphy released the 2019 Energy Master Plan ("2019 EMP").³⁹ The 2019 EMP stressed the critical need for action to address the grave threat of climate change, providing a roadmap to achieve 100 percent clean energy by 2050, and an 80 percent reduction of GHG emissions from 2006 levels, as provided in the Global Warming Response Act (L. 2007, c.112, N.J.S.A. 26:2C-37 to 44).⁴⁰

The 2019 EMP sets forth several key goals and directives related to OSW development:

1. Develop a consistent and transparent solicitation schedule through 2035 that supports a steady, long-term project pipeline;
2. Coordinate with New Jersey's electric grid operator, PJM Interconnection, L.L.C. ("PJM") to ensure that transmission planning and interconnection rules accommodate New Jersey's OSW resources, and determine how much of New Jersey's energy demand should be met with OSW through 2050;
3. Develop OSW jobs for a supply chain that can service the Mid-Atlantic OSW market;
4. Develop job training programs to support the OSW industry and supply chain development; and
5. Develop port infrastructure and participate in inter-regional collaboration to support the OSW industry.

There are three types of port facilities necessary for the OSW industry: (i) manufacturing, (ii) staging and marshalling, and (iii) operations and maintenance. The 2019 EMP notes that, while all three types are important, special attention should be given early on to manufacturing to ensure New Jersey becomes an anchor of the supply chain.

EO 8 also directed the President of the BPU, with the assistance of the Commissioner of the New Jersey Department of Environmental Protection ("DEP"), to develop an Offshore Wind Strategic Plan ("Strategic Plan"). In creating the Strategic Plan, the President and the Commissioner were

³⁷ EO 92, at 1.

³⁸ Id. at 3. Notably, Executive Order No. 315 ("EO 315") changed this target to 100% clean energy by 2035. Exec. Order No. 315 (Feb. 15, 2023), 55 N.J.R. 509(a) (March 20, 2023).

³⁹ BPU, 2019 New Jersey Energy Master Plan: Pathway to 2050, https://nj.gov/bpu/pdf/publicnotice/NJBPU_EMP.pdf.

⁴⁰ EO 315.

directed to engage key stakeholders and solicit input from the public. The Strategic Plan was released in July 2020 for public comment and was approved by the Board in September 2020. The Strategic Plan provides a blueprint for the state to achieve Governor Murphy's then goal of 7,500 MW of OSW by 2035 with specific focus on critical components of offshore wind development, including achieving scale to reduce costs, fostering job growth, supporting the development of OSW supply-chain businesses in New Jersey, developing an OSW workforce development, and ensuring that natural resources are protected throughout the development and operational stages of offshore wind energy development and production.⁴¹

On September 21, 2022, Governor Murphy signed EO 307, directing the BPU, the DEP, the New Jersey Economic Development Authority ("NJEDA"), and all other New Jersey state agencies with responsibilities arising under OWEDA to take all necessary actions to implement OWEDA in order to promote and realize a further increased goal of 11,000 MW of OSW by the year 2040.⁴²

As discussed above, the Strategic Plan provides a blueprint for the state to achieve Governor Murphy's then goal of 7,500 MW of OSW by 2035. Since the release of the Strategic Plan in 2020, in addition to EO 307 increasing NJ's OSW procurement goal to 11,000 MW, the Board awarded a suite of transmission projects through the State Agreement Approach, and major port and supply chain development activities are underway at the New Jersey Wind Port and the Port of Paulsboro. Recognizing the rapidly changing offshore wind energy landscape in New Jersey and along the eastern seaboard, in July 2023 the Board approved a contract with a consultant to assist Staff in developing a second OSW strategic plan ("Second Strategic Plan") to guide New Jersey in achieving its offshore wind energy objectives in future solicitations. Development of the Second Strategic Plan is underway and will include significant stakeholder engagement and input.

II. PREVIOUS SOLICITATIONS

OSW Generation Solicitations

Prior to the Third Solicitation, the Board issued two solicitations for OSW projects to be constructed in areas leased from the Federal Bureau of Ocean Energy Management ("BOEM") in federal waters off the coast of New Jersey. Both solicitations relied on an SGD that provided a consolidated place for all Application requirements, guidance on the preparation of the Application, standards and assumptions to be used in preparing an Application, schedule, and key dates.⁴³

On September 18, 2018, the Board approved an SGD for 1,100 MW of OSW, opened a solicitation window, and invited all interested parties to submit OSW Applications by December 28, 2018

⁴¹ 2020 OSW Strategic Plan.

⁴² EO 307.

⁴³ By way of reference, "Applicant" refers to the proposing entity; "Application" refers to the documents submitted by an Applicant; "Project" refers to a distinct project size and associated infrastructure combination; and "Bid" refers to the project-specific price.

("First Solicitation").⁴⁴

At the close of the First Solicitation Application window on December 28, 2018, the Board received Applications from three OSW developers: Ocean Wind LLC ("Ocean Wind"); Atlantic Shores Offshore Wind Project 1, LLC; and Equinor Wind US, LLC.⁴⁵

After thorough review, on June 21, 2019, the Board found that the Ocean Wind 1,100 MW project was the most beneficial to New Jersey and was designated as a QOWP eligible to receive ORECs.⁴⁶

On September 9, 2020, the Board approved an SGD for 1,200 MW to 2,400 MW of OSW, opened a solicitation window, and invited all interested parties to submit OSW Applications by December 10, 2020 ("Second Solicitation").⁴⁷

At the close of the Second Solicitation Application window on December 10, 2020, the Board received Applications from two OSW developers: Atlantic Shores Offshore Wind Project 1, LLC ("ASOW 1") and Ocean Wind II, LLC ("Ocean Wind 2").

After thorough review, on June 30, 2021, the Board found that the Ocean Wind 2 1,148 MW project and the ASOW 1 1,509.6 MW project were the most beneficial to New Jersey and were designated as QOWPs eligible to receive ORECs.⁴⁸

In evaluating Applications for the First Solicitation and the Second Solicitation, Board Staff diligently obtained input from DEP, the New Jersey Division of Rate Counsel ("Rate Counsel") and the Board's independent consultant, Levitan & Associates, Inc. ("Levitan" or "LAI").

OSW Transmission Solicitations

⁴⁴ In the Matter of the Opening of Offshore Wind Renewable Energy Certificate (OREC) Application Window for 1,100 Megawatts of Offshore Wind Capacity in Furtherance of Executive Order No. 8, BPU Docket No. QO18080851, Order dated September 18, 2018.

⁴⁵ Id.

⁴⁶ In the Matter of the Board of Public Utilities Offshore Wind Solicitation for 1,100 MW – Evaluation of the Offshore Wind Applications, BPU Docket No. QO18121289, Order dated June 21, 2019.

⁴⁷ In the Matter of the Opening of Offshore Wind Renewable Energy Certificate (OREC) Application Window for 1,200 to 2,400 Megawatts of Offshore Wind Capacity in Furtherance of Executive Order No. 8 and Executive Order No. 92, BPU Docket No. QO20080555, Order dated September 9, 2020.

⁴⁸ In the Matter of the Opening of Offshore Wind Renewable Energy Certificate (OREC) Application Window for 1,200 to 2,400 Megawatts of Offshore Wind Capacity in Furtherance of Executive Order No. 8 and Executive Order No. 92, BPU Docket No. QO20080555 and In the Matter of the Board of Public Utilities Offshore Wind Solicitation 2 for 1,200 to 2,400 MW – Ocean Wind II, LLC, BPU Docket No. QO21050825, Order dated June 30, 2021; In the Matter of the Opening of Offshore Wind Renewable Energy Certificate (OREC) Application Window for 1,200 to 2,400 Megawatts of Offshore Wind Capacity in Furtherance of Executive Order No. 8 and Executive Order No. 92, BPU Docket No. QO20080555 and In the Matter of the Board of Public Utilities Offshore Wind Solicitation 2 for 1,200 to 2,400 MW – Atlantic Shores Offshore Wind Project 1, LLC, BPU Docket No. QO21050824, Order dated June 30, 2021.

The Board has long recognized that limits on the existing transmission system, as well as the challenges associated with expanding or replacing transmission facilities, represent a major source of cost uncertainty and potential risk of delays in meeting the state's OSW goals.

In 2019, the New Jersey Legislature enshrined the concept of an "open access offshore wind transmission facility" into state law as meaning "an open access transmission facility, located either in the Atlantic Ocean or offshore, used to facilitate the collection of offshore wind energy for its delivery to the electric transmission system in this state."⁴⁹ Further, the Legislature provided the Board the authority to "conduct one or more competitive solicitations for open access offshore wind transmission facilities designed to facilitate the collection of offshore wind energy from QOWPs or its delivery to the electric transmission system in this state."⁵⁰

The 2019 EMP explained how "planned transmission to accommodate the state's offshore wind goals provides the opportunity to decrease ratepayer costs and optimize the delivery of offshore wind generation into the state's transmission system."⁵¹ The 2019 EMP further stated that "[c]oordinating transmission from multiple projects may lead to considerable ratepayer savings, better environmental outcomes, better grid stability, and may significantly reduce permitting risk."⁵² The 2019 EMP directed that the Board "should endeavor to collaborate with PJM to ensure that transmission planning and interconnection rules accommodate [offshore wind] resources."⁵³

PJM's transmission planning process is known as the Regional Transmission Expansion Plan ("RTEP"). The RTEP planning process runs in multiple "windows" each year, and can result in the construction of new transmission facilities that improve economic efficiency or system operations, meet reliability needs, and/or, upon request by a state, meet state-mandated public policy requirements.⁵⁴

PJM developed an alternative route for states to plan transmission expansion around public policy needs, called the State Agreement Approach ("SAA"), and incorporated the SAA into its Operating Agreement.⁵⁵ In proposing the SAA, PJM explained that the SAA "provides a vehicle for states to propose: (i) a state public policy project to PJM for inclusion in the RTEP, the costs of which

⁴⁹ N.J.S.A. 48:3-51.

⁵⁰ N.J.S.A. 48:3-87.1.

⁵¹ 2019 EMP at 117.

⁵² Id.

⁵³ Id.

⁵⁴ Additional background on the RTEP process is available from PJM. See PJM, RTEP: Planning for Long-Term Transmission Needs, <https://www.pjm.com/~media/about-pjm/newsroom/fact-sheets/rtep-fact-sheet.ashx#:~:text=PJM%20planners%20continuously%20analyze%20the,help%20ensure%20the%20system%20meets>.

⁵⁵ Amended and Restated Operating Agreement of PJM Interconnection, L.L.C. (June 2, 1997) ("PJM Operating Agreement"), <https://agreements.pjm.com/oa/4541>.

shall be recovered from the customers in the states proposing the project."⁵⁶

Board Staff worked with PJM to include the then OSW goal of 7,500 MW by 2035 as a public policy requirement in an RTEP window utilizing the SAA. The NJ SAA RTEP window opened in April 2021. Pre-qualified transmission developers submitted competitive transmission proposals to PJM by the close of the window on September 17, 2021. After careful review of all proposals received, the Board awarded a series of projects to construct the onshore transmission facilities necessary to successfully deliver 7,500 MW of OSW to New Jersey customers ("SAA Facilities").⁵⁷

As part of the SAA Facilities, the Board gave special attention to the duct banks and associated cable access vaults that would be installed in a single construction effort for use by subsequent QOWPs ("Prebuild Infrastructure" or "PBI").⁵⁸ The PBI will be constructed from offshore of the landing point identified in the NJ SAA RTEP solicitation, the Sea Girt National Guard Training Center ("Sea Girt NGTC"), to the awarded Point of Interconnection ("POI") to the PJM high-voltage electric grid, the Larrabee Collector Station ("LCS"). The PBI will minimize environmental and community impacts by utilizing a single shore crossing and a single, or limited, onshore corridor(s) to the POI.

Board Staff determined that the PBI would be solicited as part of the Third Solicitation. On August 4, 2023, together with the project Applications discussed in detail below, PBI proposals were received from all developer applicants who submitted project applications in the Third Solicitation ("Third Solicitation Applicants" or "Applicants").

On October 25, 2023, the Board rejected all PBI proposals submitted in the Third Solicitation, finding that the rejection was in the best interest of the public and ratepayers, and directed Board Staff to develop a separate PBI solicitation.⁵⁹

On November 17, 2023, the Board approved a PBI Solicitation Guidance Document ("PBI SGD") and opened a solicitation window for a PBI solicitation ("Prebuild Solicitation" or "PBI Solicitation")

⁵⁶ Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities, PJM Compliance Filing, Docket No. ER13-198, 38-39 (October 25, 2012).

⁵⁷ See In the Matter of Declaring Transmission to Support Offshore Wind A Public Policy of the State of New Jersey, BPU Docket No. QO20100630, Order dated October 26, 2022 ("October 26, 2022 Order") 70-73; Id. at "Appendix A: Selected Projects."

⁵⁸ A "duct bank" is a concrete structure between cable vaults that house the necessary number of physically-separate conduits (empty pipes) in which transmission cables can be installed (pulled through, from one point to another). "Cable access vault" or "cable vaults" are physically-separate, underground vaults (accessible through manhole covers), located at certain distances along the onshore cable route of the PBI, to allow each qualified offshore wind project to install and maintain its own transmission cables without impacting other qualified projects' transmission cables. See Third OSW Solicitation Guidance Document, at iii.

⁵⁹ In the Matter of the Opening of New Jersey's Third Solicitation for Offshore Wind Renewable Energy Certificates (OREC), BPU Docket No. QO22080481, Order dated October 25, 2023 ("October 25, 2023 Order").

that will close on April 3, 2024.⁶⁰ The Prebuild Solicitation is open to all entities pre-qualified by PJM through PJM's pre-qualification planning process as eligible to be a Designated Entity prior to responding to the Prebuild Solicitation.⁶¹ The project resulting from this Board-run Prebuild Solicitation will qualify as a Public Policy Project under PJM's SAA process, for inclusion in the RTEP under the SAA-specific provisions of Schedule 6 of the PJM Operating Agreement.⁶² It is anticipated that the Board will make an award resulting from this Prebuild Solicitation in Q3 of 2024.

As discussed further below, all Applicants to the Third Solicitation are required to utilize the SAA Facilities, including the PBI.

III. THIRD SOLICITATION

On March 6, 2023, the Board approved and issued the Third Solicitation SGD.⁶³ Applications for the Third Solicitation projects were to be submitted by June 23, 2023. On June 7, 2023, the Board extended the application due date to August 4, 2023.⁶⁴

On August 4, 2023, applications were received from the following four OSW developers for OSW generation projects:

Atlantic Shores Offshore Wind Project 2, LLC
Attentive Energy LLC
Community Offshore Wind ("COSW") NJ 1, LLC
Invenergy Wind Offshore LLC

On December 15, 2023, COSW notified Board Staff that they were withdrawing their Application from consideration in the Third Solicitation.

Eligibility for Award

To be eligible to win an award for the sale of ORECs, an Applicant must:⁶⁵

- Submit an Application found to be administratively complete;

⁶⁰ In the Matter of the Opening of a Solicitation for a Transmission Infrastructure Project to Support New Jersey's Offshore Wind Public Policy, BPU Docket No. QO23100719, Order dated November 17, 2023 ("November 17, 2023 Order").

⁶¹ A "Designated Entity" is a PJM pre-qualified transmission developer who PJM has selected as the designated entity to construct and own and/or finance a transmission project included in the PJM Regional Transmission Expansion Plan ("RTEP"). Id. at 1.

⁶² PJM Operating Agreement, Schedule 6.

⁶³ Third Solicitation SGD.

⁶⁴ In the Matter of the Opening of New Jersey's Third Solicitation for Offshore Wind Renewable Energy Certificates (OREC), BPU Docket No. QO22080481, Order dated June 7, 2023 ("June 7, 2023 Order").

⁶⁵ N.J.S.A. 48:3-87.1(b); N.J.A.C. 14:8-6.5.

- Submit an OREC Purchase Price offer that meets all requirements of OWEDA and N.J.A.C. 14:8-1, et seq.;
- Have a reasonable ratepayer impact;
- Demonstrate that the Project is viable and is likely to begin commercial operation as proposed;
- Submit an Application that is consistent with the New Jersey Energy Master Plan, adopted pursuant to section 12 of P.L. 1977, c. 146 (C.52:27F-14), in effect at the time the Board is considering the Application;
- Demonstrate positive economic and environmental net benefits to the state through a benefit-cost analysis;
- Demonstrate that the financing mechanism is based upon the actual electrical output of the project, fairly balances the risks and rewards of the project between ratepayers and shareholders, and ensures that any costs of non-performance, in either the construction or operational phase of the project, shall be borne by shareholders of the Applicant; and
- Demonstrate financial integrity and sufficient access to capital to allow for a reasonable expectation of completion of construction of the project.

Evaluation Criteria

The Board must evaluate Applications against multiple factors set forth in OWEDA and the rules at N.J.A.C 14:8-6 et seq. These factors were distilled into six evaluation criteria defined in the SGD, and are based on the overarching goals of New Jersey's OSW policy.⁶⁶

- Contributing to a stronger New Jersey economy by anchoring an offshore wind supply chain in the state;
- Combating global climate change to protect New Jersey and also to protect New Jersey's natural resources;
- Providing added reliability for the transmission network and transmission rate relief for ratepayers; and
- Achieving all of this at the lowest reasonable cost and risk to New Jersey ratepayers.

The six evaluation criteria, as identified in the Third Solicitation SGD, are:⁶⁷

⁶⁶ June 7, 2023 Order at 31.

⁶⁷ Id. at 30.

- OREC Purchase Price – This includes meeting the requirement for a fixed pay-for-performance price, as well as plans for maximizing revenue from the sales of energy, capacity, and ancillary services, which are credited back to ratepayers.
- Ratepayer impact – This includes the average increase in residential, commercial and industrial customer bills, including consideration of the timing of any rate impacts.
- Economic impact – This includes, among other metrics, the number of jobs created, increase in wages, taxes, receipts, in-state expenditures, and state gross domestic product for each MW of capacity constructed, including development of the New Jersey offshore wind supply chain and utilization of port and existing supply chain facilities.
- The strength of guarantees for economic impact – This includes all measures proposed to assure that claimed in-state expenditures and jobs commitments will materialize, as well as the consequences for shortfalls.
- Environmental and fisheries impact – This includes the net reductions of pollutants for each MWh generated, and the feasibility and strength of the Applicant’s plan to avoid, minimize, or mitigate onshore and offshore impacts created by construction and operation of an OSW project. This evaluation criterion also includes consideration of project design elements that will facilitate future expansion of OSW delivery capability and avoid, minimize, or mitigate future incremental environmental and fisheries impacts.
- Likelihood of successful commercial operation – This includes developer and key employee experience, feasibility of Project timelines, permitting plans, equipment and labor supply plans, feasibility of port facilities and marshalling plans, and the current progress displayed in achieving these plans.

Ranking and weighting of the above criteria in the Third Solicitation reflected the overarching goals of New Jersey’s OSW policy. To that end, the following weighting was applied in the evaluation of the Third Solicitation Applications.⁶⁸

Criterion	Weight
OREC Purchase Price and Ratepayer Impacts	70%
Non-Price Considerations <ul style="list-style-type: none"> • Economic Impacts and Strength of Guarantees for Economic Impacts • Environmental and Fisheries Impacts 	30%

The likelihood of successful commercial operation, including, but not limited to, feasibility of project timelines, permitting plans, equipment and labor supply plans, offshore transmission network (“OTN”)-ready designs, and experience of the developer and the project team was used as a gating criteria to determine whether a Project is eligible to become a QOWP.

⁶⁸ The OREC Purchase Price and Ratepayer Impacts criteria, and the Economic Impacts and Strength of Guarantees for Economic Impacts criteria were combined for the purpose of the ranking and weighting of the six criteria.

Under N.J.S.A. 48:3-87.1(b)(2)(b), the Board must also consider any other elements it deems appropriate in conjunction with the Application. The Board finds the following additional elements appropriate for consideration:

- Diversification of the risk of successful project completion;
- Providing economic benefits to more communities around different ports and manufacturing facilities, thereby strengthening New Jersey's likelihood of success as a regional manufacturing center supporting the nascent offshore wind industry along the Atlantic seaboard, including:
 - A mix of local industries, technologies, and labor force categories
 - A mix of ports infrastructure development and uses
 - Multiple locations of port, manufacturing, and operational activities;
- Diversification in all tiers of the supply chain, including diversification in the type and location of material and equipment suppliers, and support services;
- Incorporation of alternative construction methods and/or technology selection, including
 - Foundation type
 - Wind Turbine Generator ("WTG") model performance
 - Spatially distinct BOEM lease areas; and
- Heightening the prospect of more robust competition in subsequent procurement rounds through diversity in selected Applicants.

Evaluation of Applications

Applications were evaluated first by determining administrative completeness in accordance with N.J.A.C. 14:8-6.4. An administrative completeness review of each Application was conducted, and deficiencies were found in all Applications ("Administrative Completeness Review Findings"). Applicants were notified of the deficiencies on August 25, 2023, and were given the opportunity to cure the deficiencies. All Applicants were notified that their deficiencies were cured on September 11, 2023, and all Applications were deemed to be administratively complete on that date.

In accordance with 48:3-87.1(c)(4)(d) the Board may approve, conditionally approve, or deny an Application within 180 days of receipt of an administratively complete Application.

After the determination of administrative completeness, a detailed evaluation of each Application was conducted.

Coordination with Other State Agencies

Board Staff and LAI worked closely throughout the evaluation process with other New Jersey state agencies, as described below:

New Jersey Department of Environmental Protection

Board Staff engaged with DEP throughout the Third Solicitation window. DEP assisted Board Staff in developing the environmental and fisheries protection sections of the Third Solicitation SGD. Applicants were directed to meet with DEP prior to submitting their Applications; the DEP Office of Permitting and Project Navigation participated in the Bidders Technical Conference; and DEP contact information and permitting guidance documents were included on the Solicitation Website at NJOffshorewind.com to facilitate coordination with DEP. DEP further assisted in the evaluation of each Applicant's permitting plan, environmental protection plan, fisheries protection plan, data management plan, infrastructure monitoring plan and interconnection plan in order to ensure consistency with the Solicitation requirements and relevant environmental regulations. DEP provided its findings in a memo to Board Staff on January 3, 2024, which was reviewed and considered by Board Staff. In general, DEP found that LLW adequately addressed all of the requirements of the Third OSW Solicitation Guidance Document. DEP expressed an interest in considerable additional development of the Project's Environmental and Fisheries Protection Plans. DEP viewed favorably the robustness of the LLW Project's Infrastructure Monitoring Plan.⁶⁹

New Jersey Division of the Rate Counsel

Board Staff engaged Rate Counsel to solicit feedback on the potential ratepayer impacts associated with OREC award(s) consistent with OWEDA and the governing rules at N.J.A.C 14:8-6 et seq. Applicants were also directed to meet with Rate Counsel prior to submitting their Applications. Rate Counsel provided its findings in a memo to Board Staff on January 3, 2024, which was reviewed and considered by Board Staff. The Rate Counsel Memorandum assessed the LLW Project bids and found that they provide the most-attractive price per MWh among the options submitted by all Applicants. Further, the Rate Counsel Memorandum found that combining the 2,400 MW LLW Project and the 1,342 MW Other Awarded Project provided the lowest cost option of potential portfolios around 3,700 MW. However, the Rate Counsel Memorandum expressed concern about the total potential ratepayer impact of the projects, particularly when coupled with other clean energy initiatives.⁷⁰

New Jersey Economic Development Authority

Board Staff engaged with the NJEDA throughout the Third Solicitation Window. NJEDA assisted Board Staff in developing the economic benefits sections of the Third Solicitation SGD, as well as assisted Board Staff in the evaluation of each Applicant's economic development plans, supply chain development and ports utilization plan, and stakeholder engagement plan. NJEDA provided its findings in a memo to Board Staff on January 5, 2024, which was reviewed and considered by Board Staff. NJEDA urged Board Staff to prioritize projects that utilize the NJWP for marshalling and manufacturing, with a preference for the development of Tier 1 full-scale manufacturing

⁶⁹ Memorandum from DEP to Board Staff, NJDEP Review of 2023 OREC Applications, (January 3, 2024), at 7-8.

⁷⁰ Memorandum from Rate Counsel to Board Staff, Ratepayer Impact Analysis – Offshore Wind (“OSW”) Third Solicitation BPU Docket No QO2208481, (January 3, 2024) at 4-5.

facilities that result in significant in state job creation. NJEDA also expressed a preference for an award that results in a tower facility proposal that is self-sufficient within the Third Solicitation.⁷¹

Information Relied Upon in Evaluation of Applications⁷²

Board Staff relied upon the following information to form its own opinions and recommendations to the Board regarding this matter:⁷³

- The Applications submitted at the close of the Third Solicitation window on August 4, 2023;
- Information submitted to cure deficiencies identified in Administrative Completeness Review Findings. Applicants were notified of the deficiencies on August 25, 2023, and were given the opportunity to cure the deficiencies. All Applicants were notified on September 11, 2023 that their deficiencies were cured. Applicants were notified that their responses would become part of the record and that the Board would rely on them in its further review of their Application;
- Answers to clarifying questions (“CQs”) posed by Board Staff and LAI sent to all Applicants on September 1, 2023 (“CQs, Set 1”). CQ responses were received by September 11, 2023 as requested. Applicants were notified that their responses would become part of the record and that the Board would rely on them in its further review of their Application;
- Answers to a second round of CQs posed by Board Staff and LAI sent to all Applicants on September 19, 2023 (“CQs, Set 2”). CQ responses were received by September 26, 2023, as requested. Applicant were notified that their responses would become part of the record, and that the Board would rely on them in its further review of their Application;
- Answers to a third round of CQs posed by Board Staff and LAI sent to all Applicants on October 6, 2023 (“CQs, Set 3”). CQ responses were received by October 16, 2023, as requested. Applicants were notified that their responses would become part of the record, and that the Board would rely on them in its further review of their Application;
- Answers to a fourth round of CQs posed by Board Staff and LAI sent to all Applicants on October 31, 2023 (“CQs, Set 4”). CQ responses were received by November 7, 2023, as

⁷¹ Memorandum from NJEDA to Board Staff, Third Offshore Wind Solicitation (NJ3) - Economic Impact Evaluation, (January 5, 2024) at 2-3.

⁷² Publicly available versions of the Application, responses to clarifying questions (“CQ Responses”), interview transcript, Invenenergy’s BAFO, as well as the Rate Counsel Memorandum, NJEDA Memorandum, DEP Memorandum, and LAI Report, each of which are defined hereafter in “Information Relied Upon in Evaluation of Applications,” will be available through the Public Document Search Tool located at <https://publicaccess.bpu.state.nj.us/> BPU Docket No. QO22080481 on or after January 24, 2024.

⁷³ This Order, Invenenergy’s Application, all CQ Responses, the interview, the supplemental information and Invenenergy’s BAFO collectively form the obligations and duties between the Board and Invenenergy for the LLW Project. Invenenergy is bound by all statements and representations made in their submittals, whether or not specifically discussed in this Order.

requested. Applicants were notified that their responses would become part of the record, and that the Board would rely on them in its further review of their Application;

- Answers to a fifth round of CQs posed by Board Staff and LAI sent to two Applicants, one on November 27, 2023, with CQ responses received by December 4, 2023, as requested (“CQs, Set 5”); and one on December 1, 2023 (CQs, Set 6”), with CQ responses received by December 8, 2023 as requested. The Applicants were notified that their CQ responses would become part of the record, and that the Board would rely on them in its further review of their Application;
- Statements made on the record by each Applicant at interviews held on November 8, 2023 and November 9, 2023 (each, an “Applicant Interview”). Applicants were interviewed by Board Staff, LAI, and representatives of DEP to review their Application and ask questions prepared by LAI in consultation with Board Staff and DEP. The Applicant Interviews were documented by a court reporter. Each Applicant was notified that its responses would become part of the record, and that the Board would rely on them in its further review of their Application;
- Information that the Applicant considered supplemental to its responses during the Applicant Interview, which was requested at the Applicant’s Interview (“Supplemental Information”). Supplemental Information was submitted on November 15, 2023 and November 16, 2023 as requested. Each Applicant was notified that its Supplemental Information would become part of the record, and the Board would rely on it in its further review of the Application;
- A best and final offer (“BAFO”) that was requested from all Applicants on October 27, 2023. The BAFOs were received by December 15, 2023 as requested. Each BAFO consisted of a narrative description of the BAFO (“BAFO Narrative”) and a BAFO application form (“BAFO Application Form”) for each project option. Applicants were notified that their BAFO would become part of the record, and the Board would rely on it in its further review of their Application;
- The memorandum from DEP to Board Staff, NJDEP Review of 2023 OREC Applications, dated January 3, 2024, on environmental impacts (“DEP Memorandum”);
- The memorandum from Rate Counsel to Board Staff, Ratepayer Impact Analysis – Offshore Wind (“OSW”) Third Solicitation BPU Docket No QO2208481, dated January 3, 2024, on ratepayer impacts (“Rate Counsel Memorandum”);
- The memorandum from NJEDA to Board Staff, Third Offshore Wind Solicitation (NJ3) - Economic Impact Evaluation, dated January 5, 2024, on economic benefits; and
- The LAI Report, submitted to Board Staff, dated January 10, 2024. The LAI Report contained LAI’s independent quantitative and qualitative analyses of all the information listed above.

Portfolio Analysis

In addition to the evaluation of individual projects, Board Staff and LAI conducted a portfolio analysis to test the potential price, economic benefits and costs, attributable to the selection of projects from more than one Applicant. A portfolio solution with multiple awardees has the potential to position New Jersey favorably to achieve greater manufacturing capability to support both New Jersey's and neighboring states' offshore wind procurement goals, while conferring valuable employment and economic benefits. By the Board's action today, the Board determines that a portfolio solution that includes the Two Projects totaling 3,742 MW furthers New Jersey's OSW goals and is in the best interest of the state and its residents.

Measures taken today will likely solidify the Tier 1 supply chain in New Jersey, and the size of this portfolio award will offer the most certainty in that regard.⁷⁴ Building a local supply chain will create jobs, investment opportunities, education programs, and revenue generation, and should serve to lower the cost of future OSW projects by allowing for components to be sourced from New Jersey rather than transported from Europe or Asia to New Jersey. Both of the Two Projects awarded today commit to purchasing wind turbine generator towers from a tower manufacturing facility to be developed at the NJWP, and together, they provide sufficient volume for a tower manufacturer to commit to construct the manufacturing facility. Both of the Two Projects awarded today also commit to purchase monopile foundations from the EEW foundation manufacturing facility at the Port of Paulsboro ("EEW Foundation Manufacturing Facility") manufacturing facility at the Port of Paulsboro, and they commit to provide capital for the facility to expand its production capacity and to increase the size of the monopile foundations that the facility can produce.

II. DISCUSSION

The Third OSW Solicitation Guidance Document requires consideration of the following six evaluation criteria: 1) Likelihood of successful commercial operation; 2) OREC purchase price; 3) Ratepayer impacts; 4) Environmental impacts; 5) Economic impacts; and 6) Strength of guarantees for economic impacts. The Board has considered the Invenergy Application and the entirety of the Invenergy record developed during the evaluation process, with respect to these criteria.

Likelihood of Successful Commercial Operation

The likelihood of successful commercial operation, including, but not limited to, the evaluation of developer and personnel experience, feasibility of LLW Project timelines, permitting plans, equipment and labor supply plans, and OTN-ready designs was used to determine whether the LLW Project was eligible to become a QOWP.

Ownership Structure, Financial Strength and Financing Plan

The LLW Project is owned by New York Bight Offshore Holdings, LLC, which is comprised of six total co-developers and financial investors. The LLW Project will be developed and partially-

⁷⁴ LAI Report at 166.

owned by Forward Power Offshore LLC, which is a 50/50 joint venture of two American-led companies: lead developer Invenenergy Renewables LLC (“Invenenergy Renewables” or “Invenenergy”), and co-developer energyRe LLC (“energyRe”).⁷⁵ The LLW Project is also backed by four financial investors, three American firms: FirstLight PSP; Atlas Renewables Holdings L.P., (which is indirectly controlled by Blackstone, Inc.), and Ullico Infrastructure Fund; and one Canadian firm, Caisse de dépôt et placement du Québec (“CDPQ”).⁷⁶ These investors are asset management firms that possess the experience and financial capital needed to ensure construction of the LLW Project. The development phase of the LLW Project will be 100% funded by sponsor equity, while construction will be financed using a combination of project finance debt, tax investors, and sponsor equity.⁷⁷

Project Design

The LLW Project’s base case proposes to use a Wind Turbine Generator (“WTG”) from an established manufacturer, which is expected to be type-certified years in advance of the Project’s 2031 and 2032 Commercial Operations Dates (“COD”). The WTG will be supported by monopiles produced at the EEW Foundation Manufacturing Facility. The proposed cabling for the LLW Project utilizes industry standard technology that sufficiently fulfills requirements set forth in the Third Solicitation SGD.

Transmission

The LLW Project will interconnect with the electric transmission grid in New Jersey by utilizing SAA Capability⁷⁸ at the Larrabee Collector Station POI, through the Atlantic 1,200 MW circuit (“LCS Atlantic Circuit”) and the Larrabee 1,200 MW circuit (“LCS Larrabee Circuit”). The LLW Project will use the Prebuild Infrastructure resulting from the BPU’s current PBI Solicitation.⁷⁹ The LLW Project will utilize PJM’s new queue reform system in their transmission planning efforts, which allows the LLW Project to submit a more complete application for a queue position in PJM’s Cycle #1.⁸⁰ The application phase for PJM’s Cycle #1 is currently open.

⁷⁵ LLW Application Narrative at 11.

⁷⁶ Ibid.

⁷⁷ Id. at 165.

⁷⁸ State Agreement Approach Capability (“SAA Capability”), as set out in the FERC-approved PJM Rate Schedule 49 § 1.2, all transmission capability created by approved SAA solutions as studied by PJM, including the capability to integrate resources injecting energy up to their maximum facility output, capability which may become capacity interconnection rights (“CIRs”) through the PJM interconnection process, and any other capability as consistent with studies performed by PJM for the SAA.

⁷⁹ November 17, 2023 Order.

⁸⁰ Refer to PJM Manual 14H, <https://www.pjm.com/-/media/documents/manuals/m14h.ashx>, for a description of the PJM queue reform, which is designed to more efficiently and timely process new service requests by transitioning from a serial “first-come, first-served” queue approach to a “first-ready, first-served” Cycle approach.

The LLW Project has proposed an OTN-ready design, consistent with the Third Solicitation SGD requirements, which will allow for the potential future connection of multiple OSW platforms.

Ports, Infrastructure, Development, Logistics, and Supply Chain

The LLW Project plans to use the NJWP for marshalling and will participate in NJEDA's lease Request for Proposal ("RFP") process. The LLW Project has indicated it has been encouraging supply chain partners to localize their manufacturing facilities at the NJWP, as it is one of the few East Coast facilities with the capacity to co-locate both marshalling activities and Tier 1 manufacturing.⁸¹ As part of the LLW Project's plan to grow New Jersey's OSW supply chain, Invenergy will support expansion of the EEW Foundation Manufacturing Facility. Invenergy will also support development of a tower manufacturing facility at the NJWP.

Developer and Personnel Experience

The LLW Project is being developed by two parent companies, Invenergy Renewables and energyRe. Invenergy Renewables is an Illinois based company that "has developed more than 30 GW of power projects across the Americas, Europe and Asia," including over 18 GW of onshore wind.⁸² Invenergy Renewables was the lead developer for 19 projects in PJM, totaling 3,442 MW of generating capacity.⁸³ Invenergy Renewables also has significant transmission development experience, including 10 transmission facilities inside and outside of PJM.⁸⁴ energyRe is a New York based company with 10.5 GW of renewable generation across onshore wind, solar, storage, and OSW projects under development, including the 175-mile, 1,300 MW Clean Path New York HVDC transmission project.⁸⁵ This development pipeline represents investments of approximately \$11 billion.⁸⁶ The LLW Project brings a senior management team equipped with a wide range of unique knowledge and experience in OSW, large-scale power generation development, engineering, procurement, external affairs and energy markets.⁸⁷

Project Schedule and Stakeholder Engagement

Invenergy has developed several schedule-driven risk management strategies that minimize risk of delay, and they have already taken steps in the various state and federal permitting processes required for the LLW Project. This approach of identifying critical path permitting and schedule risks is necessary for delivering the LLW Project on its phased COD. Of equal importance is Invenergy's approach to stakeholder engagement. Invenergy recognizes the importance of early

⁸¹ A Tier 1 manufacturing facility is a facility that contracts with an Applicant for a major contract package or component, such as turbines, blades, towers, foundations, etc.

⁸² LLW Application Narrative at 29.

⁸³ Id. at 33; Invenergy's response to Invenergy CQs, Set 2, Question #2.

⁸⁴ LLW Application Narrative at 29.

⁸⁵ Id. at 31.

⁸⁶ Id.

⁸⁷ Id. at 18.

engagement with local and state stakeholders. They have taken steps to publish a Fisheries Communication Plan⁸⁸ and have identified recreational and commercial fishermen to engage and share a dialogue from an early stage, to ensure they can both act as the best possible partner to the state, and give a voice to those in closest proximity to the LLW Project.

New Jersey Risk Mitigation Mechanisms

The Board acknowledges the challenges faced by OSW projects awarded prior to 2023, but remains undeterred in its pursuit of OSW as a component of the state's clean energy goals, and in pursuit of the significant economic benefits and good-paying, family-sustaining jobs that OSW generates. The Board took the following steps in the design of the Third Solicitation to mitigate challenges that OSW projects may face in the future.

Inflation Adjustment

The submitted OREC pricing for the LLW Project will be adjusted for inflation based on the change in certain labor and commodity indices between the date that Invenergy's Application to the Third Solicitation was submitted and the date of BOEM approval of the project Construction and Operations Plan ("COP").

The change in OREC Purchase Price due to the inflation adjustment will be limited to a 15% increase or a 15% decrease to the OREC Purchase Price, even if a larger adjustment is indicated by the change in index values.⁸⁹

The inflation adjustment will minimize the risk of the impact of inflation on the financial health of the LLW Project. Details of the inflation adjustment can be found in Attachment B to this Order.

Performance Guarantees

The LLW Project is required to make a compliance filing with the Board and to provide performance security that will bind Invenergy, and its parent companies, successors or assigns, to meeting their financial commitments to the funding of Phase 3 of the EEW Foundation Manufacturing Facility, and to the completion of the LLW Project. The security required for the Tier 1 supply chain investment in the EEW Foundation Manufacturing Facility is 100% of the total funding commitment proposed and approved by the Board in this Order. For completion of the LLW Project, the security is in the amount of \$50,000 per MW awarded by the Board, which totals \$120,000,000. Details regarding these performance commitments are provided in Attachment B to this Order.

The Board believes that the design components of the LLW Project, the strength of Invenergy and its financial backers, the experience of Invenergy and the experience of the LLW Project's key personnel, the transmission system de-risking by utilizing the SAA Facilities and the PBI, inflation adjustment, and performance guarantees provide sufficient evidence that the LLW

⁸⁸ Leading Light Wind, Fisheries Communication Plan, https://leadinglightwind.com/assets/img/20231114-LLW_FCP_Final.pdf.

⁸⁹ Third Solicitation SGD at 5-6.

Project will reach commercial operation.

OREC Purchase Price, Ratepayer Impacts, and Cost-Benefit Analysis

The LLW Project was one of six projects submitted by Invenergy.⁹⁰ LAI conducted price analyses to inform the Board about how the LLW Project compared to the other project options submitted by Invenergy, as well as the projects submitted by all other Applicants. LAI also determined the incremental, net, and total costs to be borne by New Jersey ratepayers for the projects proposed by all Applicants. Cost and price analysis were conducted using the following values:

1. *First Year OREC Price*: The All-In OREC Purchase Price in nominal \$/OREC that will be applicable during the First Energy Year of the 20-year OREC term.⁹¹ An Energy Year is the 12-month period from June 1 through May 31 and is to be numbered according to the calendar year in which it ends.⁹²
2. *Levelized OREC Purchase Price (“LOPP”)*: The present value of OREC Purchase Price payments over the 20-year OREC term divided by the present value of the quantity of ORECs purchased over the 20-year OREC term.⁹³
3. *Levelized Net OREC Cost (“LNOC”)*: The unitized (dollars per MWh) net OREC cost is the OREC Purchase Price minus the revenue credits for energy and capacity and the avoided cost of Tier 1 Renewable Energy Certificates (“RECs”), levelized in nominal dollars over the 20-year OREC term.
4. *Present Value of Net OREC (“PVNOC”)*: The total net OREC cost over the 20-year OREC term is the OREC Purchase Price multiplied by the quantity of ORECs minus the total energy and capacity revenue credits and avoid cost of Tier 1 RECs, on a present value basis.

The LLW Project offers a first year OREC price of \$112.50/MWh,⁹⁴ a LOPP of \$139.53/MWh,⁹⁵ and a PVNOC of \$3.9 billion.⁹⁶ Invenergy included a 2.5 percent annual escalator in its OREC

⁹⁰ Projects of 1,200 MW, 1,342 MW and 2,400 MW, each with and without an energy storage component.

⁹¹ Nominal dollars are unadjusted for inflation. They represent the actual or predicted amount for a transaction in a particular year, whereas “real” or “constant” dollars represent the amount adjusted for actual or predicted inflation to a reference year.

⁹² N.J.A.C. 14:8-6.1.

⁹³ Levelized values represent a string of values as a single value, which if it occurred in each period of a specific term would be financially equivalent on a present value basis to the original string.

⁹⁴ Invenergy BAFO Application Form, OREC Pricing Schedule worksheet.

⁹⁵ LAI Report at 67-68, Table 15, “OREC Purchase Price Summary.”

⁹⁶ *Id.* at 75-77, Table 18, “Present Value of Net OREC Cost.”

Purchase Price schedule. The LNOC is \$70.05.⁹⁷ The LNOC adjusts the LOPP by including estimates for the revenue credits to be returned to ratepayers.

Ratepayer impacts account for revenue generated by the Project and returned to ratepayers. Ratepayer bill impact estimates are based on the PVNOC divided by the present value of the MWh load that would absorb those costs. LAI utilized Energy Information Administration (“EIA”) data covering the 2022 calendar year to estimate monthly usages.⁹⁸ The LLW Project revenue plan identifies a strategy for producing all revenues over the 20-year OREC term, and Invenergy is required to make a good faith effort to maximize all project revenues.⁹⁹ Revenues include but are not limited to revenue from the sale of energy, capacity, renewable energy certificates (RECs) above annual allowance, ancillary services (AS), and any other product sales.¹⁰⁰ Per OWEDA and N.J.A.C. 14:8-6 et seq., all revenue other than ORECs must be credited to New Jersey ratepayers. The Board acknowledges that Invenergy may sell its products directly through the PJM wholesale energy, capacity, and ancillary markets as well as bilateral sales, either directly by Invenergy or by its outsourcing to an unregulated marketing affiliate to effectuate bilateral sales.

Based upon the estimated PVNOC, the average monthly bill ratepayer impacts for the LLW Project as estimated by LAI are: \$3.71 for residential customers; \$31.86 for commercial customers; and \$278.42 for industrial customers (expressed in 2023 dollars).¹⁰¹ These monthly bill impacts will not begin until the LLW Project’s OSW facilities are operational, which is anticipated in 2031 (“Phase 1”) and 2032 (“Phase 2”) for the two LLW Project phases, respectively.

The cost-benefit analysis (“CBA”) represents a consolidation of the quantitative economic components of the evaluation, including OREC Purchase Price, ratepayer impact offsets (i.e., revenue returned to ratepayers), in-state economic development effects, and environmental impacts. Invenergy submitted a CBA as part of its Application as required by N.J.A.C. 14:8-6.5(a)(11). LAI conducted an independent CBA to ensure that all Projects were compared on a consistent basis. Content provided by the Applicants helped inform LAI’s independent CBA. LAI’s

⁹⁷ Id. at 67-68, Table 15, “OREC Purchase Price Summary.”

⁹⁸ Id. at 41 to 46, “Ports, Infrastructure Development, Logistics, and Supply Chain.” From a ratepayer perspective, a smaller project will result in lower total costs and hence a smaller rate impact. However, a larger project that benefits from economies of scale will generally have a lower LNOC, that is, a larger project will generally have a lower cost per MWh produced.

⁹⁹ LLW Application Narrative at 174-183, “Project revenue plan and strategy.”

¹⁰⁰ Under N.J.A.C. 14:8-6.1, the term “All Project Revenues” includes “all revenues generated by a qualified offshore wind facility, during the 20-year term of the Board Order, resulting from the sale of energy, capacity, or any ancillary service in PJM, or any other revenue that is generated by a qualified offshore wind facility.”

¹⁰¹ LAI Report at 82-83, Table 20, “Retail Rate Impacts.”

CBA resulted in a value of 2.39¹⁰² for the LLW Project, which meets the eligibility requirements of positive economic and environmental net benefits to the state.¹⁰³

Environmental Impacts

All of the projects proposed in the Third Solicitation will help New Jersey reduce GHG emissions and other pollutants from the electric sector by displacing fossil fuel-fired generation. Avoided emissions for awarded projects, on a per MWh basis, are very similar.¹⁰⁴ The LLW Project will result in an average of 4.1 million short tons of avoided GHG emissions annually. Direct emissions (carbon dioxide, sulfur dioxide, nitrogen oxides, and particulate emissions) resulting from development, construction, operation, and decommissioning activities associated with the LLW Project are anticipated to be a total of 2.1 million short tons. Based upon the most recent data available from the U.S. Energy Information Administration these net annual avoided emissions represent approximately 21% of New Jersey's current GHG emissions from the electricity sector.¹⁰⁵

Invenergy developed an environmental protection plan to address environmental impacts during project development, construction, operations, and decommissioning. The LLW Project's environmental protection plan provides a detailed table of the mitigation and best management practices the project will implement with respect to each environmental resource type to minimize or eliminate potential impacts to protected species and sensitive environments.¹⁰⁶ Invenergy has developed a set of priorities to guide decision making and promote strategic investment in environmental research and initiatives including exploring technological advancements, improving understanding of regional/population level dynamics, exploring solutions to improve resource management, and promoting offshore development that is compatible with existing ocean uses/users.¹⁰⁷ To advance these priorities, Invenergy has committed funding to a Strategic Environmental Initiatives Fund (\$7.5 million) and has engaged several universities and research institutions about potential scientific research projects in support of its environmental and fisheries protection efforts.¹⁰⁸ Invenergy has met regularly with DEP to discuss their plans for environmental protection, is an active member of regional research collaboratives focused on assessing the impacts of OSW on natural resources, and has engaged key partners with relevant expertise to explore novel impact mitigation techniques.¹⁰⁹ Invenergy is also obligated to provide a Research and Monitoring Fee to the State of New Jersey in the amount of \$24,000,000 for

¹⁰² Id. at 143-145, Table 63, "Expected Cost-Benefit Analysis Comparison."

¹⁰³ Id. at 135-145, "Cost-Benefit Analysis."

¹⁰⁴ Id. at 139, Table 61, "Average Annual Avoided Emissions."

¹⁰⁵ U.S. Energy Information Administration: New Jersey Electricity Profile 2022 (last updated November 2, 2022).

¹⁰⁶ LLW Application Narrative at Attachment 10.1, "Environmental Protection Plan," at 28-29.

¹⁰⁷ Id. at 255.

¹⁰⁸ Id. at 256.

¹⁰⁹ Ibid.

research initiatives and the regional monitoring of the environment, wildlife, and fisheries dedicated to assessing the impacts from OSW development on the natural resources of New Jersey. The LLW Project is located approximately 40 miles from shore at its closest point and thus on perfect visibility days will be barely visible from the shoreline.¹¹⁰

Invenergy's fisheries protection plan pledges a commitment to prosperous co-existence with the commercial and recreational fishing communities and the implementation of a suite of core principles that include transparency and accountability, an open and consistent communication strategy, respect for fishing community concerns, science informed decision-making, and incorporating the diverse experiences of fisheries stakeholders into their planning process.¹¹¹ Invenergy has hired a fisheries liaison officer and is in the process of expanding their fisheries communications team to add a Marine Affairs Manager and commercial and recreational fisheries representatives.¹¹² The LLW Project has adopted the BOEM mitigation hierarchy as their "systematic approach" pledging to identify and select routes, locations and operational timeframes that avoid interference with fishing grounds, fish habitat and fish behaviors.¹¹³ The LLW Project supports the Special Initiative for Offshore Wind Fisheries Mitigation Project to establish a fisheries mitigation fund with a third-party administrator and has participated in this effort through the American Clean Power Fisheries Subcommittee.¹¹⁴ The LLW Project lease area¹¹⁵ has the lowest recreational fishing activity and the second lowest commercial fishing activity of all Third Solicitation Applicants.¹¹⁶ The LLW Project will establish a Fisheries Accelerator Fund (\$2 million) that seeks to leverage knowledge from the fisheries community by supporting innovative proposals that have the "potential to improve the efficiency, sustainability and/or economic viability of the fishing industry".¹¹⁷ The LLW Project expresses a strong commitment to avoiding, minimizing, and mitigating environmental and fisheries impacts.

The LLW Project Data Management and Availability Plan lays out a detailed framework for data standardization, sharing, and accessibility that is consistent with best practices. The plan includes a novel geographic information systems approach for data visualization, a pledge to coordinate

¹¹⁰ Id. at Appendix 10, "Visibility Study," at 18.

¹¹¹ Id. at 259-260.

¹¹² Id. at 285.

¹¹³ Id. at 277.

¹¹⁴ Id. at 278.

¹¹⁵ BOEM Lease Area OCS-A 0542.

¹¹⁶ NOAA 2008 and 2023 fisheries data available at,

<https://www.fisheries.noaa.gov/resource/data/socioeconomic-impacts-atlantic-offshore-wind-development>.

Mean Annual Commercial Revenue calculated from Tables 7.1, mean annual revenue for NOAA Fishery Footprints, 14-year analysis period, 2008-2021; Recreational Fishing, fish count over 14 Years comes from Tables 1.1 in Fisheries Footprints in Recreational Fishing (Total count across all species);_LAI Report at 119, Table 46, "Commercial Fishing Activity, 2008-2021"; Id. at 120, Table 47, "Recreational Fishing Activity, 2008-2021."

¹¹⁷ Id. at 291.

with regional and national entities that collect and manage data in the region, and a commitment to establish formal data sharing agreements with regional ocean observing systems to ensure data standardization and the beneficial use of data streams for real-time applications.¹¹⁸ The plan details the survey campaigns already conducted by the LLW Project as well as the anticipated schedule and data collection objectives for future surveys.¹¹⁹

The LLW Project Offshore Wind Infrastructure Monitoring Plan provides a thoughtful framework for how both onshore and offshore project infrastructure could be utilized in support of an overall monitoring plan to increase scientific understanding of natural resources and could provide benefits to the project, communities, industry, and other ocean users. It offers a detailed accounting of the physical, chemical, and biological parameters that could be monitored through use of each project infrastructure component.¹²⁰ The LLW Project's infrastructure monitoring plan emphasizes collaboration, articulating plans to leverage their ongoing engagement with regional science entities to ensure the project's infrastructure monitoring plan aligns with regional priorities, addresses knowledge gaps, and yields datasets that are consistent with other research and monitoring efforts in the region.¹²¹

Economic Impacts

The LLW Project offers many economic benefits to enable New Jersey to develop a competitive, sustainable domestic supply chain. The LLW Project commits to award at least 15% of total project expenditures to New Jersey local contractors and supplier companies.¹²² The LLW Project also commits to using the EEW Foundation Manufacturing Facility for production of its foundations, as well as committing to providing a capital contribution toward expansion of the facility's production capacity. The expansion will create nearly 300 new permanent jobs in New Jersey.¹²³ The LLW Project also includes commitments to marshal the project at the NJWP, and to purchase towers from a tower manufacturing facility to be developed at the NJWP. In addition, the LLW Project includes commitments to establish an Operations and Maintenance ("O&M") Facility at the Buckeye Port Reading Facility in Port Reading, New Jersey, and to source concrete platforms from the domestic market.¹²⁴

EEW Foundation Manufacturing Facility at the Port of Paulsboro

The EEW Foundation Manufacturing Facility at the Port of Paulsboro in Southern New Jersey is the first and largest facility for monopile production in the U.S. Phase 1 of the EEW Foundation

¹¹⁸ Id. at Attachment 10.2, "Data Management Plan," at 2.

¹¹⁹ Id. at Attachment 10.2, "Data Management Plan," at 5-9.

¹²⁰ Id. at Attachment 10.3, "Infrastructure Monitoring Plan Table," 10-3-1 and 10-3-2, at 4-7.

¹²¹ Id. at 253; Id. Attachment 10.3, "Infrastructure Monitoring Plan," at 20-21.

¹²² Id. at 189.

¹²³ Id. at xi.

¹²⁴ Id. at 194.

Manufacturing Facility is a monopile finishing facility that began operation in February, 2021. Phase 2 of the EEW Foundation Manufacturing Facility involves full manufacture of monopiles and is scheduled to be completed by January 1, 2026. Assuming that Phase 2 is completed by that date, Invenergy plans to use the EEW Foundation Manufacturing Facility for production of all the LLW Project monopile foundations. In addition, the LLW Project commits to provide \$105.25 million¹²⁵ in funding for a Phase 3 of the EEW Foundation Manufacturing Facility, which is the pro-rata share of the \$164.1 million needed for both components of the Phase 3 expansion at EEW's monopile factory.¹²⁶ The LLW Project's investment in the EEW Foundation Manufacturing Facility's Phase 3 expansion will increase the capacity of the facility to supply two offshore wind projects simultaneously while upgrading the capability of the facility to support next generation monopile sizes. Should Phase 2 not be completed, Invenergy commits to allowing the funding to be used for the Phase 2 completion.

New Jersey Wind Port

The NJWP is the nation's first greenfield wind port, designed, built, and operated exclusively for offshore wind marshaling and Tier 1 component manufacturing. The NJWP is located on the eastern shore of the Delaware River in Lower Alloways Creek, Salem County, New Jersey. The port is free of vertical restrictions and will comprise over 220 acres. The port is one of only a few planned East Coast facilities with the capacity to co-locate both marshaling activities and Tier 1 component manufacturing.

Invenergy plans to utilize the NJWP as the LLW Project's marshaling facility. Invenergy also plans to purchase its WTG towers from a tower manufacturing facility to be developed at the NJWP. The facility would leverage \$260 million in capital expenditures and create approximately 300 direct jobs that will be based at the facility.¹²⁷ It is estimated that the tower manufacturing facility will support 1,382 jobs (2,320 FTE years), increase labor income by \$125.6 million, and increase New Jersey's gross domestic product by \$322.9 million during its design, permitting, and construction phases.¹²⁸ In the first 10 years of operations, the facility is expected to add 4,210 FTE years' worth of workforce opportunities, increase labor income by \$360 million, and increase New Jersey's gross domestic product by \$1.2 billion. Invenergy estimates that a tower manufacturing facility at the NJWP would likely attract at least 20% of its workforce from overburdened communities ("OBCs"), based on their proximity to the site.¹²⁹

Invenergy has proposed to purchase external concrete working platforms, suspended internal platforms, and anode cages from Riggs Distler. Riggs Distler is a steel fabrication company

¹²⁵ This value represents the LLW Project's share of the total cost to complete Phase 3, including contingency, based on the percentage of the LLW Project's awarded capacity compared to the total capacity awarded today.

¹²⁶ *Id.* at 193; Invenergy response to CQ #3, Question 14.

¹²⁷ LLW Application Narrative at 291.

¹²⁸ *Ibid.*

¹²⁹ *Id.* at 191.

owned by the Centri Group and based in Cherry Hill, New Jersey. The company is a union-only contractor rapidly expanding from its core services of onshore utility projects into the offshore wind space. The components purchased from Riggs Distler are expected to be fabricated and assembled at the NJWP, should they secure a lease through the NJEDA RFP process. It is anticipated that 200 jobs in cold outfitting for concrete platforms and secondary steelwork will be supported by this project.¹³⁰

O&M Facility

Invenergy's preferred location for its O&M port is the Buckeye Port Reading Facility in Port Reading, New Jersey. This site will serve as a homeport for vessel operations, surveying, and emergency operations, as well as a control center for planning and coordination of O&M labor and vessel activities. It will also serve as an around-the-clock monitoring center and provide on-site administrative functions. The facility will be built using union labor and will cost approximately \$78.6 million.¹³¹ It is estimated that construction of the O&M port facilities will create up to 100 union-led construction jobs and inject up to \$34 million into the New Jersey economy.¹³² The Buckeye Port Reading facility is Invenergy's preferred site. Alternative locations are the International-Matex Tank Terminal in Bayonne, New Jersey, and the Repauno Port & Rail Terminal in Greenwich Township, New Jersey.¹³³

Rowan University Composites and Biomaterials Research Partnership

Invenergy commits to providing \$1.25 million to help advance the research of non-invasive methods for repairing composite materials at the Henry M. Rowan College of Engineering at Rowan University, through its Advanced Materials & Manufacturing Institute.¹³⁴ In addition to the testing and development of new biomaterials and new repair techniques, Invenergy proposes to support Rowan University's research on the recycling of composites used within offshore wind infrastructure.

New Jersey Wind Institute: Support for Offshore Wind Innovation Center

Invenergy commits \$1 million to support the establishment and operation of the Offshore Wind Innovation Center.¹³⁵ These funds can be used to offset the costs of facility outfitting, research-related expenditures, acquisition of necessary software or hardware, and other related costs associated with the development and operation of the Offshore Wind Innovation Center.

Offshore Wind Innovation Campus (in partnership with Newlab)

¹³⁰ Id. at 194.

¹³¹ Id. at 195.

¹³² Ibid.

¹³³ Ibid.

¹³⁴ Id. at 198.

¹³⁵ Id. at 197.

In addition to supporting the New Jersey Wind Institute, Invenergy proposes to establish an Offshore Wind Innovation Campus that will bring early-stage energy companies together with a curated set of industry partners. Located on the grounds of Invenergy’s eventual O&M port facility, the goal of this campus will be to incubate and commercialize a wide range of offshore wind and renewable energy technologies — including, for example, robotics, grid technologies, AI-based modeling, and powerful computing centers. Invenergy expects that the campus will not only cement New Jersey as the country’s leader for innovation in the offshore wind sector but will serve as an additional value-add to attract large-scale offshore wind manufacturers to the region. Invenergy commits \$1 million to the Offshore Wind Innovation Campus.¹³⁶

Applied Science Grant Program

Invenergy will establish the Applied Science Grant program to support research projects to advance high-impact research, development, and demonstration projects across the offshore wind supply chain. Invenergy proposes \$1 million in funding for this program.¹³⁷ The program will be available to researchers and their associated teams at New Jersey public universities.

Commitment to Small, Minority, Women, Veteran Business Enterprise (“SMWVBE”)

Invenergy commits to advertise business opportunities to New Jersey firms, including notices to New Jersey companies listed on the New Jersey Offshore Wind Supply Chain Registry¹³⁸ for all bids for supplier contracts over \$1 million. Invenergy has committed to advertise bidding opportunities of all size to New Jersey SMWVBEs for all bids for contracts using the New Jersey Selective Assistance Vendor Information (“NJ SAVI”) system. Invenergy has committed to award at least 15% of total project expenditures to New Jersey companies and utilize SMWVBE and Veteran Owned Businesses and Disabled Veteran Owned Businesses (“VOB/DVOB”) firms at rates up to 25% and 5% respectively, for identified specific scopes of work related to the development, construction, and operation of the projects where Invenergy believes focused efforts may be applied to achieve significant utilization SMWVBE and VOB/DVOB firms.¹³⁹ In addition, Invenergy has committed to \$112.7 million of expenditures with SMWVBEs and \$35.40 million of expenditures with VOBs.¹⁴⁰

Waves to Wind Program

Invenergy commits to \$2 million to establish the Waves to Wind (“W2W”) program, a catalytic training program focused on capacity-building and technical training to position existing small businesses in New Jersey for success in upcoming contracting opportunities in the state’s growing

¹³⁶ Id. at 196, Table 8-2, “Leading Light Wind investments in innovative research.”

¹³⁷ Ibid.

¹³⁸ https://www.njeda.gov/offshorewind/#supply_chain.

¹³⁹ Id. at 189.

¹⁴⁰ Id. at Invenergy BAFO Narrative at 6.

offshore wind sector.¹⁴¹

New Jersey Manufacturing Extension Partnership

The New Jersey Manufacturing Extension Partnership (“NJMEP”) is a statewide business association focused on supporting, growing, and advocating for businesses in the industrial and manufacturing sector. Invenergy will provide NJMEP \$500,000 to help identify minority- and women-owned enterprises (“MWBE”) in the manufacturing space located in underserved and overburdened New Jersey communities.¹⁴² These funds will also aid local supply chain mapping efforts to train veterans of the armed forces to prepare them for careers in the offshore wind sector.¹⁴³

Fisheries Accelerator Fund

Invenergy is committing \$2 million to a Fisheries Accelerator Fund to support and promote activities beneficial to the fisheries community.¹⁴⁴ This fund will encourage advancements in fisheries management, technology, sustainability practices, and the overall development of the fishing industry.

Paulsboro Community Economic Development

Invenergy has identified targeted initiatives that are needed to reduce unemployment and underinvestment in the Paulsboro area. To address Paulsboro’s needs, Invenergy will provide \$150,000 to fund the creation of the Paulsboro Economic Development Program.¹⁴⁵ The fund will focus on building, strengthening, and recruiting businesses to Paulsboro, creating a more attractive business environment, with the ultimate goal of growing jobs that are local to Paulsboro and accessible to Paulsboro residents.

Workforce Development Fund

Invenergy commits to \$405,500 of funding for the Newark School of Data Science and Information Technology, \$1.5 million for the Mid-Atlantic States Career & Education Center program to provide instruction to high school students about career opportunities in offshore wind, \$400,000 for offshore wind training programs at Rowan University, and \$950,000 of targeted funding to New Jersey educational institutions – New Jersey Institute of Technology, Hudson County Community College, and New Jersey Community College Consortium.¹⁴⁶

¹⁴¹ LLW Application Narrative at 244, Table 9-3, “List of partnerships and commitments to New Jersey.”

¹⁴² *Id.* at 204, Table 8-5, “Local supplier and small business partnerships.”

¹⁴³ *Id.* at page 211, Table 8-6, “Workforce partnerships and associated financial commitments.”

¹⁴⁴ *Id.* at 206.

¹⁴⁵ *Ibid.*

¹⁴⁶ LAI Report at 111, “Invenergy.”

Energy Equity Credit Program

Invenergy's Energy Equity Credit program is designed to reduce the energy cost burden in New Jersey, with particular focus on assisting households located in low-income environmental justice areas, and OBCs.¹⁴⁷ To compensate for the increase in utility bills due to the LLW Project, Invenergy proposes to provide total electric bill credits of \$94 million to energy-burdened households over the course of the 20-year OREC term.¹⁴⁸ The Energy Equity Credit Program would provide direct assistance to over 200,000 low-income, energy-burdened households in New Jersey by reducing their projected monthly electricity bill increase from the LLW Project by 50%.

*Other Initiatives.*¹⁴⁹

Invenergy also commits to the following initiatives:

- Investing \$5 million in an electric vehicle charging hub project that will provide significant benefits to Northern New Jersey environmental justice communities such as Newark's Ironbound District, as well as the city overall;
- Providing the Waterfront Alliance with \$500,000 to institute a Maritime Activation Plan competitive grant program that would provide funding and technical assistance for environmental justice communities to develop plans to promote access, resilience, and economic development, and fund small-scale capital and planning projects for maritime activation;
- Providing \$350,000 in funding for the Children's Environmental Literacy Foundation to provide professional development training for teachers in environmental science and sustainability curricula, to develop supplemental curricular resources for K-12 students relevant to climate, environmental justice, and offshore wind, and to cultivate workforce pathways in green careers for rising high school seniors;
- Providing \$150,000 to Gotham Whale for organizational support, data collection, and the education of young people in OBCs. Gotham Whale focuses on working with citizen scientists to record and study marine mammals in the New York Bight;
- Providing the Boys & Girls Clubs of Monmouth County \$250,000 to support its Science, Technology, Engineering and Mathematics ("STEM") programs for young people in the OBCs of Asbury Park, Red Bank, Neptune, and Long Branch;
- Providing Liberty Science Center with \$500,000 to fund the development of an exhibit related to offshore wind and marine science, as well as supporting school trips from OBCs; and
- Providing Neighborhoods for a Sustainable Future \$250,000 to enable the nonprofit to expand into North Jersey, where it will support resident-driven actions to advance energy efficiency and foster a clean energy transition by expanding the green workforce and increasing minority contracting.

¹⁴⁷ For a definition of "OBCs," see <https://dep.nj.gov/ej/communities/>.

¹⁴⁸ LLW Application Narrative at 217.

¹⁴⁹ Id. at 216-217.

- Providing \$1,000,000 to support members of Native American Tribes and Tribal Nations to respond and participate in ongoing environmental, supply chain, and workforce initiatives related to offshore wind in the Bight.
- Providing \$1,000,000 in funding for Offshore Wind Scholars Program to provide grants to students in need of financial assistance (with a focus on students from OBCs) to attend New Jersey colleges and universities, participate in clean energy conferences, support youth programming to reinforce civic engagement, and create access to future wealth building opportunities.

Guarantees for Economic Impacts

Invenergy commits to guarantee \$1.7 billion dollars direct spend in the development, construction, operation and decommissioning phases of the Project.¹⁵⁰ The estimated direct expenditures over the 30-year operational life, and the indirect and induced economic benefits across all phases, the LLW Project will inject \$3.7 billion into the New Jersey economy, as measured by its value-added or state gross domestic product (“GDP”) impact.¹⁵¹ In addition, Invenergy guarantees a total of 3,928 FTE-Years during the development, construction, operations and decommissioning phases of the LLW Project.¹⁵²

Invenergy provides unconditional guarantees for (a) minimum contracting targets, supply chain development, and workforce training expenditures with New Jersey SMWVBes, (b) hiring targets for state residents of OBCs, and (c) community benefits to OBCs. Invenergy commits to making these guarantees public. Expenditures in OBCs and SMWVBes are expected to total \$299.3 million.¹⁵³ These totals amount to 17.5% of the expected total guaranteed minimum in-state expenditures.¹⁵⁴

Invenergy commits to cure any shortfall in their guaranteed spending by making additional economic investments in the New Jersey offshore wind industry in an amount equal to the applicable shortfall. Should any shortfall remain, at least 90% of the remaining shortfall shall be applied to a reduction in the OREC price over the full or remaining OREC term.¹⁵⁵ The calculation of the OREC price reduction equivalent in value to 90% of the guaranteed expenditure shortfall, if applicable, will be set by Board order. The remaining 10% of any shortfall shall be committed to fund additional programmatic workforce development investments to further the supply chain and workforce development efforts in New Jersey.

¹⁵⁰ Id. at 220, Table 8-13, “Guaranteed minimum total direct in-state expenditures (nominal) and job creation for 2,400 MW project alternative.”

¹⁵¹ Id. at 222, Table 8-19, “Direct, indirect, and induced economic effects (nominal dollars and FTE-Years) for 2,400 MW project alternative.”

¹⁵² Id. at 220, Table 8-13, “Guaranteed minimum total direct in-state expenditures (nominal) and job creation for 2,400 MW project alternative.”

¹⁵³ Invenergy BAFO Narrative at 5.

¹⁵⁴ Ibid.

¹⁵⁵ LLW Application Narrative at 230.

For guaranteed jobs shortfalls, Invenergy will provide, in particular, \$2,500 for each FTE-Year commitment shortfall towards expanding workforce development training efforts.¹⁵⁶ The \$2,500 amount per trainee will cover typical baseline training costs for a job seeker looking to embark on a career in offshore wind.¹⁵⁷ An annual escalation rate of 2.5% will be applied to adjust the nominal \$2,500 value from 2024.¹⁵⁸

III. DECISION AND FINDINGS

The awards today consisting of the LLW Project, the 2.400 MW project without the energy storage component and with cost sharing as submitted as part of Invenergy's best and final offer, and the Other Awarded Project result in New Jersey's largest OSW solicitation award to date. The Board's decision is guided by several factors in this regard. First, the Board chooses these Two Projects due to their significant generation of clean energy to combat climate change. Second, these Two Projects together commit to provide the full amount of the funding necessary for the EEW Foundation Manufacturing Facility to expand its production capacity. Third, both of these Projects commit to marshalling at the NJWP and to purchase towers from a tower manufacturing facility to be developed at the NJWP, providing sufficient volume required by the identified tower manufacturer to develop the facility. Meeting these commitments will provide significant economic benefits in manufacturing and related supply chain developments through use of New Jersey ports and infrastructure, resulting in jobs and economic growth that will be enjoyed in New Jersey for decades to come. Finally, in this order, the Board is making the first utility-scale OSW award to an American OSW developer, representing a significant step forward for OSW in the United States.

The Board recognizes that the OSW industry is currently facing financial and supply chain challenges. However, the Board believes that this is not the time for inaction. The negative impacts of climate change are increasing, and cementing New Jersey as an OSW hub now will allow New Jersey to guard against supply chain elements being established in other states before New Jersey gains this foothold. The Projects awarded today will establish a robust, diverse supply chain that will result in significant benefit to New Jersey's economy, and that will create a significant number of well paying, green economy jobs.

The Board has given careful consideration to the ratepayer impact resulting from these two Project awards, and has considered the potential benefits and drawbacks of the size of the awards made today compared to a lesser award. One of the key factors in the cost of OSW today is that the global demand for OSW far exceeds the available supply, particularly in the areas of specialized electrical equipment needed for OSW projects and the availability of installation and support vessels. The Board does not see this supply chain imbalance easing in the near term, and the Projects awarded today have taken the current state of the supply chain into account in

¹⁵⁶ Id. Invenergy BAFO Narrative at 4.

¹⁵⁷ Id. Invenergy BAFO Narrative at 5.

¹⁵⁸ Ibid.

their OREC prices and proposed CODs. The Board relies in part on the analysis conducted by Board Staff and LAI that shows that the economic and jobs benefits to New Jersey that would be realized by the local supply chain these projects are expected to establish, as well as the avoided lost opportunity costs, exceeds the benefit of a smaller award today even if the cost of OSW falls in the near term.¹⁵⁹

After a careful and thorough review of the complete record in this matter, including the representations and warranties made by Invenenergy, the Board **HEREBY FINDS** that the LLW Project meets each of the following threshold conditions:

1. The filing is consistent with the New Jersey Energy Master Plan, adopted pursuant to section 12 of L.1977, c.146 (N.J.S.A. 52:27F-14), in effect as of the date of this Order;
2. The cost-benefit analysis demonstrates positive economic and environmental net benefits to the state;
3. The financing mechanism is based upon the actual electrical output of the LLW Project, fairly balances the risks and rewards of the LLW Project between ratepayers and shareholders, and ensures that any costs of non-performance, in either the construction or operational phase of the LLW Project, will be borne by shareholders of the Applicant; and
4. The Application for the LLW Project demonstrates financial integrity and sufficient access to capital to allow for a reasonable expectation of completion of construction of the LLW Project.

The Board **FURTHER FINDS** that the LLW Project meets or exceeds all of the standards for a QOWP as set forth in N.J.S.A. 48:3-87.1 et seq. and N.J.A.C. 14:8-6.5 et seq.

As such, upon consideration of the evaluation criteria provided in the Third OSW Solicitation Guidance Document and discussed in detail herein, the Board **HEREBY CONCLUDES** that the LLW Project is in the best interest of the State of New Jersey.

The Board **HEREBY FINDS** that the LLW Project satisfies the overarching goals of New Jersey's OSW policy in that it: 1) contributes to a stronger New Jersey economy by anchoring an OSW supply chain in New Jersey; 2) combats global climate change to protect New Jersey and its natural resources; 3) provides the most added reliability for the transmission network and transmission rate relief for ratepayers; and 4) achieves all of this at the lowest reasonable cost and risk to ratepayers.

As such, the Board **HEREBY APPROVES** the LLW Project as a QOWP, and **HEREBY APPROVES** the LLW Project Annual OREC Price Schedule shown in Attachment A to this Order, subject to the additional Terms and Conditions provided in Attachment B to this Order, and thus, **HEREBY ORDERS** that the LLW Project be deemed eligible to receive ORECs subject to the following:

¹⁵⁹ LAI Report at 167, "Portfolio Size Considerations."

1. The LLW Project Annual OREC Price Schedule, shown in Attachment A, and subject to the Terms and Conditions in Attachment B to this Order, provides the fixed OREC price per MWh that Invenergy may receive for ORECs in compliance with the rules at N.J.A.C.14:8-6 et seq. The LLW Project's annual OREC Allowance is 10,235 gigawatt hours ("GWh") per year.¹⁶⁰ The OREC price schedule is based upon a first year OREC Payment of \$ 112.50 per MWh (EY 2032), and a 2.5% annual rate of escalation which results in a fixed annual OREC price each year thereafter as shown in the Attachment A to this Order. The OREC price is subject to adjustment due to the inflation adjustment summarized earlier in this Order and described in detail in Attachment B to this Order.
2. The OREC payment schedule shall begin on the Phase 1 COD and continue for 240 consecutive months, covering Project Years 1 through 21, where years 1 and 21 may be partial Energy Years as shown in Attachment A to this Order, Annual OREC Pricing Schedule. Similarly, the OREC payment schedule for Phase 2 shall begin on the Phase 2 COD and continue for 240 consecutive months, covering Project Years 2 through 22, where years 2 and 22 may be partial Energy Years as shown in Attachment A to this Order, Annual OREC Pricing Schedule. Subject to any subsequent Board-approved modification to the schedule, Project Year 1 will correspond with Energy Year 2032 and the OREC payment schedule shall continue for a period of 21 years (252 total months) ending no later than Energy Year 2053, subject to all Terms & Conditions provided in Attachment B to this Order, and any and all regulatory requirements. The total LLW Project Annual OREC Allowance for the LLW Project shall not be subject to reduction or modification during the term of this Order unless otherwise agreed to by the Board and Invenergy.
3. The OREC Price as bid by Invenergy reflects total Project costs, in accordance with the requirements established under OWEDA and at N.J.A.C 14:8-6 et seq.
4. As a QOWP, Invenergy shall only be entitled to OREC payments for MWh actually delivered over the 20-year term beginning at the Phase 1 COD as delineated in this Order, and shall have no recourse against the Board, the suppliers, the EDCs, the OREC Administrator, or the ratepayers for any additional payments. Invenergy may not exceed the LLW Project Annual OREC Allowance of 10,235 GWh. As detailed in N.J.A.C. 14:8-6.6, any unmet OREC allowances in a given year may be carried forward for up to two years to provide a reasonable opportunity to meet the LLW Project's total expected production.
5. All revenues generated by the LLW Project, including but not limited to, all revenues from participation in regional wholesale markets, shall be collected, managed, and returned to ratepayers in compliance with OWEDA and the rules at N.J.A.C.14:8-6.6. As required under N.J.A.C. 14:8-6.6(e), Invenergy shall make all commercially reasonable efforts and exercise all due diligence to maximize revenues from the LLW Project. Invenergy shall also be responsible for the collection and transfer of all LLW Project revenues on behalf

¹⁶⁰ This amount shall be referred to as the "LLW Project Annual OREC Allowance."

of ratepayers, and shall be bound by all additional requirements under N.J.A.C. 14:8-6.6(f).

6. Invenergy's market revenue settlement procedure must maximize ratepayer interests while managing the risks associated with wholesale markets. In accordance with terms in Appendix B to this Order, Invenergy must submit a compliance filing to propose a risk-management strategy four years before the Phase I COD.

The Board **HEREBY DIRECTS** Board Staff to open a Docket in this matter specific to the LLW Project.

The Board **HEREBY ORDERS** that the LLW Project receive SAA Capability subject to the following:

1. The Board designates to the LLW Project the LCS Larrabee Circuit and LCS Atlantic Circuit.¹⁶¹ In accordance with the SAA Agreement,¹⁶² the Board can assign SAA Capability to an entity if it has a "New Service Queue" position.¹⁶³ To satisfy this requirement, the Board conditionally assigns SAA Capability to the LLW Project, and the LLW Project is directed to obtain, within six months of the effective date of this Order, a New Service Request at PJM that matches the designated LCS Larrabee Circuit SAA Capability of 1,200 MW energy and 360 MW capacity, and LCS Atlantic Circuit SAA Capability of 1,200 MW energy and 360 MW capacity, consistent with Appendix D of the SAA Agreement. The LLW Project shall inform Board Staff once the New Service Request is secured. The Board authorizes Board Staff to formally assign the SAA Capability to the LLW Project once the New Service Request is properly secured.
2. The Board observes that its rules require a QOWP to take all reasonable efforts to maximize revenues from the qualified project. N.J.A.C. 14:8-6.6(e). Based on changes to PJM's Effective Load Carrying Capability rules since the award of SAA 1.0, it may be prudent for New Jersey ratepayers for the LLW Project to request more CIRs than designated in the above paragraph.¹⁶⁴ Therefore, the Board directs Board Staff to investigate options that may provide additional value to ratepayers. If Board Staff finds

¹⁶¹ See October 26, 2022 Order".

¹⁶² Letter from PJM to The Honorable Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission re: Submission for Filing an Executed State Agreement Approach Agreement between PJM and BPU, Rate Schedule FERC No. 49, FERC Docket No. ER22-902-000 (January 27, 2022) ("SAA Agreement").

¹⁶³ The SAA Agreement uses language that is associated with an earlier PJM process. The Board and Board Staff will work with PJM to update the SAA Agreement to better match the current process. The conditional assignment of SAA Capability here best reflects the Board's attempts to comply with the SAA Agreement's requirements.

¹⁶⁴ See Federal Energy Regulatory Commission, "Order Accepting Tariff Revisions Subject to Condition," FERC Docket No. ER23-1067 (April 7, 2023), accepting revisions to PJM Open Access Transmission Tariff and Reliability Assurance Agreement related to the Effective Load Carrying Capability construct ("ER23-1067 Order").

that additional value is available to ratepayers, the Board directs Board Staff to pursue, in accordance with N.J.S.A. 48:3-87.1(c), any prudent modifications to this award.

3. The LLW Project will utilize both of the 1360 MW, 320 kV PBI transmission corridors.¹⁶⁵ The PBI route from landfall to the LCS will be determined by the outcome of the BPU's PBI Solicitation.

The Board **HEREBY DIRECTS** the LLW Project in planning and executing its offshore export cable route to coordinate with other awarded projects and take all reasonable measures to anticipate the future need of other offshore wind generators' export cables to successfully navigate the congested marine corridor east of the Sea Girt NGTC such that up to four export cables can reach the PBI infrastructure at the lowest risk and cost to ratepayers.

The Board **FURTHER ORDERS** that the Electric Distribution Companies ("EDCs") undergo the following actions pursuant to the terms of this Order:

1. Serve as payment agents, on behalf of all suppliers obligated under the Renewable Portfolio Standard rules, to facilitate the collection and transfer of monthly OREC payments from ratepayers to Invernergy in compliance with the rules at N.J.A.C. 14:8-6.6(c);
2. Implement a monthly OREC surcharge on ratepayers as required by N.J.A.C. 14:8-6.6(c) and as described further below;
3. File a tariff with the Board, no later than 180 days, unless an earlier date is set by Board Staff, prior to the Phase 1 COD of the LLW Project, to collect a non-bypassable OREC surcharge to be assessed as a distribution charge that will be sufficient to meet each supplier's OREC obligation. The EDCs shall implement the ratepayer surcharge based upon the Board-approved total LLW Project Annual OREC Allowance for the LLW Project, multiplied by the OREC price, and expressed as a per kilowatt hour (kWh) charge to be collected from all ratepayers on behalf of the suppliers. The EDCs shall begin collecting the OREC surcharge no later than four (4) months in advance of the COD of the LLW Project to ensure that adequate funds will be available to complete the initial OREC payment to Invernergy. The surcharge shall be implemented in compliance with N.J.A.C. 14:8-6.6(c);
4. Annually file with the Board for recoverable charges for the administrative fees incurred as payment agent and for the OREC Administrator fees;
5. Enter into a joint contract to retain an OREC Administrator to facilitate all transactions between ratepayers, suppliers, EDCs, and OSW developers, as appropriate. The OREC Administrator will be responsible for tracking and verifying all payments and obligations as described under N.J.A.C. 14:8-6.6. If a contract with an OREC Administrator is in effect at least one year prior to the earliest COD of the Two Projects awarded today, such contract (the "Initial Contract") shall be amended to include the LLW Project approved in

¹⁶⁵ PBI SGD at 3.

this Order. If a contract with an OREC Administrator is not in effect at least one year prior to the earliest COD of the Two Projects awarded today, the EDCs shall issue a request for proposals to competitively bid a contract with an OREC Administrator to ensure the most efficient and cost competitive price for ratepayers. The EDCs shall prepare an amendment to the Initial Contract, or a Request for Proposals, as applicable, and submit the document to the Board for approval. The OREC Administrator and the LLW Project, as a QOWP, will enter into an OREC Transaction Management Agreement, as such agreement defined under N.J.A.C. 14:8-6.1.¹⁶⁶ The OREC Administrator and the LLW Project, as a QOWP, also will enter into a Standard Participation Agreement, as such agreement is defined under N.J.A.C. 14:8-6.6(b)(5).¹⁶⁷ Based upon the participation of all parties, the OREC Administrator shall conduct a true-up twice per year to ensure compliance with the Renewable Portfolio Standards and as stipulated under N.J.A.C. 14:8-6.6.; and

6. Enter into, and comply with, the OREC Transaction Management Agreement, defined at N.J.A.C. 14:8-6.1 and the Standard Participation Agreement with Invenergy to be established by the OREC Administrator. The Standard Participation Agreement and any subsequent modifications shall be developed by the OREC Administrator and approved by the Board.

The Board **HEREBY DIRECTS** Board Staff to establish an OSW carve-out to the Class I Renewable Portfolio Standards based upon the approved LLW Project Annual OREC Allowance of 10,235 GWh within eighteen months of the date of this Order.

The Board **FURTHER ACKNOWLEDGES** Invenergy's proposal for the distribution of guaranteed economic benefits shortfall. The Board is keenly aware of the impact to ratepayers regarding the cost associated with the benefits of OSW. As such, the Board **HEREBY ORDERS** that any shortfall in guaranteed economic benefits be distributed as follows: 10% of the shortfall shall be as proposed by Invenergy and discussed above in the Guarantees for Economic Impacts section of this Order, and 90% of the shortfall shall be returned to ratepayers as a dollar-for-dollar reduction in the OREC price. The methodology for adjusting the OREC price shall be set by a future Board order. Additionally, the Board **HEREBY DIRECTS** Board Staff to initiate discussions with Invenergy regarding the methodology for adjusting the OREC price no later than one year from the date of this Order.

The Board **HEREBY ORDERS** that the LLW Project adhere to the additional specific terms and conditions provided in Attachment B to this Order.

With the approval of the LLW Project and the Other Awarded Project the OSW capacity for the

¹⁶⁶ Under N.J.A.C. 14:8-6.1, an "OREC Transaction Management Agreement" means a uniform agreement entered into between each qualified OSW project and the OREC administrator. This OREC Transaction Management Agreement shall serve as the detailed management plan or "operating manual" describing how the OREC administrator will oversee and report out on all OREC transactions and shall require Board approval before going into effect."


¹⁶⁷ Under N.J.A.C. 14:8-6.6(b)(5), among other things, a QOWP is "required to comply with the standard participation agreement with the OREC administrator."


Third Solicitation is fulfilled, and thus, all other responses submitted under the Third Solicitation are **HEREBY DENIED.**

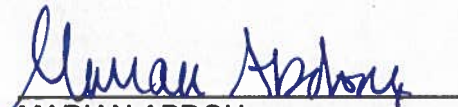
The effective date of this Order is January 24, 2024

DATED: January 24, 2024

BOARD OF PUBLIC UTILITIES
BY:


CHRISTINE GUHL-SADOVY
PRESIDENT


DR. ZENON CHRISTODOULOU
COMMISSIONER


MARIAN ABDOU
COMMISSIONER


MICHAEL BANGE
COMMISSIONER

ATTEST: 
SHERRILL GOLDEN
SECRETARY

I HEREBY CERTIFY that the within document is a true copy of the original in the files of the Board of Public Utilities.

IN THE MATTER OF THE OPENING OF NEW JERSEY'S THIRD SOLICITATION FOR
OFFSHORE WIND RENEWABLE ENERGY CERTIFICATES (OREC)

DOCKET NO. QO22080481

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ATTACHMENT A
ANNUAL OREC PRICING SCHEDULE

**Annual OREC Price Schedule and Planned Output Schedule
 LLW Project**

Awarded Capacity (MW)		Phase 1	Phase 2
		1200	1200
COD (month/year)		12/2031	12/2032
Energy Year, Ending May 31 of	All-in OREC Price (\$/OREC)	Output (months)	Output (months)
2032	\$112.50	5	0
2033	\$115.31	12	5
2034	\$118.20	12	12
2035	\$121.15	12	12
2036	\$124.18	12	12
2037	\$127.28	12	12
2038	\$130.47	12	12
2039	\$133.73	12	12
2040	\$137.07	12	12
2041	\$140.50	12	12
2042	\$144.01	12	12
2043	\$147.61	12	12
2044	\$151.30	12	12
2045	\$155.08	12	12
2046	\$158.96	12	12
2047	\$162.93	12	12
2048	\$167.01	12	12
2049	\$171.18	12	12
2050	\$175.46	12	12
2051	\$179.85	12	12
2052	\$184.34	7	12
2053	\$188.95	0	7

ATTACHMENT B

ADDITIONAL TERMS AND CONDITIONS

This Board Order approving the LLW Project is subject to all applicable federal, state and local laws and regulations, including, but not limited to, OWEDA, Executive Order No. 8, Executive Order No. 92, Executive Order No. 307, the Third OSW Solicitation Guidance Document, and the Board's implementing regulations at N.J.A.C. 14:8-6 et seq.

This Board Order approving the LLW Project is also subject to the following terms and conditions:

1. Ownership Considerations
 - a. The LLW Project's co-developers, Invenergy Renewables LLC and energyRe LLC, shall also be subject to this Order and to these Terms and Conditions.
 - b. In the event of any sale or other transfer to any other entity of a controlling interest in the Project or in the Project owners as described in the Invenergy Application, such sale or transfer shall require prior Board approval, pursuant to N.J.A.C. 14:8-6.5(a)(1)(v) and N.J.A.C. 14:8-6.5(a)(4)(iv).
2. Annual OREC Allowance
 - a. The total LLW Project Annual OREC Allowance of 10,235,149 MWh per year, as approved by the Board, shall not be subject to reduction or modification during the term of this Order unless otherwise agreed to by the Board and Invenergy.
 - b. Invenergy may not exceed the LLW Project Annual OREC Allowance of 10,235,149 MWh per year in any given year. Any unmet OREC allowances in a given year may be carried forward to the next year, as required by N.J.A.C. 14:8-6.6(b).
3. OREC Price
 - a. The OREC Price approved in this Order is subject to adjustment based on the following inflation adjustment mechanism.
 - i. The OREC pricing will be adjusted for inflation upon BOEM approval of the COP. The inflation adjustment will use the following mechanism, with the adjustment multiplier calculated to one decimal place:

$$OREC_{inf} = OREC_{base} \times \sum \frac{Index_{M,i}}{Index_{L,i}} \times F_i$$

where:

$OREC_{inf}$ is the First Energy Year OREC price after inflation adjustment at BOEM approval of the COP;

$OREC_{base}$ is the First Energy Year OREC price before inflation adjustment as bid;

$Index_{M,i}$ is the average index value for price component i over the six months

before and six months after BOEM approval of the COP;
 $Index_{i,i}$ is the average index value for price component i over the twelve months prior to the Application Submission Deadline; and
 F_i is the fraction of the OREC price associated with price component i such that $\sum F_i = 1$.

- ii. The change in $OREC_{base}$ due to the inflation adjustment will be limited to 15%, that is, it will be neither increased nor decreased more than 15%, even if a larger adjustment is indicated by the index values. The indices that will be included in the adjustment formula, and their F values, are shown in the table below:

Component	F Value	Index
Fixed	0.2	NA
Labor (unitless index)	0.3	BLS Employment Cost Trends Data Series CES2000000003 Average hourly earnings of all employees, construction, seasonally adjusted
Fabrication (unitless index)	0.3	BLS PPI Data Series PCU811310811310 PPI industry data for Commercial machinery repair and maintenance, not seasonally adjusted
Steel (unitless index)	0.1	BLS PPI Data Series PCU331110331110 PPI industry data for Iron and steel mills and ferroalloy manufacturing, not seasonally adjusted
Fuel (US\$ per barrel)	0.1	U.S. Energy Information Administration WTI-Cushing Oklahoma, daily price for the last trading day of the month

4. Performance Guarantees

- a. Within 180 days after the effective date of this Order, Invenergy shall make a compliance filing with the Board that binds Invenergy, and its parent companies, successors or assigns, to meeting the following commitments made by Invenergy and approved by the Board in this Order:
 - i. Providing \$105.25 million toward completion of Phase 3 of the EEW Foundation Manufacturing Facility. Invenergy may choose to redirect this funding toward a different identified phase of the EEW Facility, upon 180 days' notice to the Board and Rate Counsel. In the absence of an objection from the Board or Rate Counsel, the funding may be directed toward the identified phase of the EEW Facility.
 - ii. Achieving the full LLW Project COD of December 31, 2032, subject to Paragraph 6

below.

- b. The compliance filing shall include:
 - i. A schedule with specific dates for each of the Critical Milestones listed below. The compliance filing may propose alternate Critical Milestones if other Critical Milestones better align with the realization of Invenergy's commitments. Alternate Critical Milestones are subject to Board approval.
 - ii. A detailed description and copy of the proposed financial instrument(s) to be used to secure Invenergy's commitments ("Commitment Security").
- c. Critical Milestones for funding the EEW Foundation Manufacturing Facility are:
 - i. Critical Milestone 1: Providing at least \$25.31 million, representing the funding that is at least 25% of the total funding commitment as proposed by Invenergy and approved by the Board in this Order.
 - ii. Critical Milestone 2: Providing at least \$52.63 million representing the funding that is at least 50% of the total funding commitment as proposed by Invenergy and approved by the Board in this Order.
 - iii. Critical Milestone 3: Providing \$105.25 million that represents 100% of the total funding commitment as proposed Invenergy and approved by the Board in this Order.
- d. Critical Milestones for completion of the LLW Project are:
 - i. Critical Milestone 1: BOEM approval of the COP.
 - ii. Critical Milestone 2: Achievement of the phase 1 COD.
 - iii. Critical Milestone 3: Achievement of the phase 2 COD.
- e. The LLW Project shall provide Board Staff with written notice, copying Rate Counsel, when each Critical Milestone in each category listed above is achieved, within seven (7) days after that achievement, which notice shall include information and supporting documentation demonstrating with reasonable specificity that such Critical Milestone has been achieved. Board Staff shall have 45 days to review this written notice in order to verify the reasonableness of such representation(s) before providing its recommendation to the Board. The Board will issue a Board Order, within 120 days of Board Staff's review, allowing or disallowing the Commitment Security to be reduced as described below. Board Staff may request additional information from the LLW Project about its filing, including additional documentation, access to company personnel, or other information. The Board Staff review period is renewed upon receipt of the requested documentation or clarification from the LLW Project.
- f. Not less than three months prior to each Critical Milestone, Invenergy may petition the Board to extend any of the Critical Milestone dates related to the EEW Foundation Manufacturing Facility if, for good cause, the Critical Milestone cannot be achieved by the date specified in the compliance filing. Invenergy may request a one-time as-of-right

extension of a Critical Milestone related to the EEW Foundation Manufacturing Facility of up to three (3) months upon written notice to Board Staff. Extension of Critical Milestone dates beyond the three-month extension period are subject to Board approval.

- g. Extensions of the critical milestone related to the LLW Project COD shall be in accordance with paragraph 6 below.
- h. Financial Commitment
 - i. For Invenergy's commitment to complete the project by their proposed COD, Invenergy shall post Commitment Security in the amount of \$120,000,000, representing \$50,000 per MW awarded herein. Invenergy shall post 50% of this Commitment Security within one year of the effective date of this Order, with the balance posted within three years of the anniversary date of this Order.
 - ii. For Invenergy's commitment to provide funding for the EEW Foundation Manufacturing Facility at the Port of Paulsboro, Invenergy shall post an additional Commitment Security in the amount of \$105.25 million representing 100% of the total funding commitment as proposed by Invenergy and approved by the Board herein. Invenergy shall post 50% of this Commitment Security within 60 days prior to the date for Critical Milestone 1 as contained in the Compliance Filing approved by the Board, with the balance posted within 60 days prior to the date for Critical Milestone 2 as contained in the Compliance Filing approved by the Board.
- i. The Commitment Security may be in the form of:
 - i. One or more parent company guarantees, if the parent is investment grade (defined as having one or more credit rating of BBB or above from Standard and Poor's or Baa3 or above from Moody's, or comparable alternative rating agency);
 - ii. One or more letters of credit from an investment-grade third-party financial guarantor (defined as an institution with a rating of BBB or above from Standard and Poor's or Baa3 or above from Moody's); and/or
 - iii. Upon Petition to the Board, other financial instruments acceptable to the Board that provides a comparable level of security to ratepayers, including, but not limited to, corporate guarantees and performance bonds. The performance bond must be issued by a qualified surety that is authorized to do business in the state of New Jersey and listed on the most current edition of the U.S. Treasury Department's Circular 570.
 - iv. Invenergy may request that responsibility for the Commitment Security be split between its parent companies.
 - v. Within 90 days of the effective date of this Order, Board Staff shall develop standard parent company guarantee and letter of credit language and share that language with Invenergy, who will use the language to complete the company's compliance filing requirement under Section 4.b.ii. above.
- j. Invenergy shall provide Board Staff with the final, fully executed version of each

Commitment Security described in its compliance filing within seven (7) days of the date on which the Commitment Security is fully executed. Invenergy shall also provide Board Staff with copies of any amendment made to a Commitment Security, within seven (7) days of the date on which such amendment is fully executed. Invenergy shall regularly keep Board Staff informed of the anticipated date of execution of each such Commitment Security or amendment, as applicable.

k. Treatment of Commitment Security

- i. Commitment Security for each of the tier 1 commitments and the project completion commitment may be reduced, if approved by the Board as described above, by 20 percentage points for achieving Critical Milestone 1 and 20 percentage points for achieving Critical Milestone 2. Upon completion of the final Critical Milestone for that category, the Commitment Security shall be closed if all prior Critical Milestones in that category have been achieved.
- ii. Notwithstanding anything described above, the Commitment Security can otherwise only be terminated upon approval of the Board.
- iii. If Invenergy misses a Critical Milestone in any of the categories above, Invenergy shall forfeit an amount equal to the total Commitment Security posted for that category, multiplied by the percentage value assigned to each relevant Critical Milestone, as set forth above. For example, if Invenergy misses Critical Milestone 1 for funding the EEW Foundation Manufacturing Facility at the Port of Paulsboro, the amount forfeited shall be the total Commitment Security of the investment commitment, multiplied by 20 percentage points.
- iv. Any funds so forfeited will either be committed to development of offshore wind infrastructure in New Jersey, or returned to ratepayers, at the discretion of the Board.

5. Tax Benefits

- a. In return for the sale of ORECs, Invenergy is required to return to ratepayers the value of tax credits, subsidies, grants or other funding received that was not anticipated in the Application and therefore not reflected in Invenergy's OREC price, but has been realized through diligent pursuit of additional tax credits, subsidies, grants, or other funding that protects ratepayer interests. Invenergy was required to make efforts to maximize these tax credits, subsidies, grants, or other funding at the time of Application submittal. Invenergy is required to make efforts over the OREC term to maximize these tax credits, subsidies, grants, or other funding that provide a benefit to New Jersey ratepayers. Invenergy shall commit to informing Board Staff promptly, but no later than 30 days after receipt, of all such tax credits, subsidies, grants, and or other funding received, and shall further commit to informing Board Staff promptly of the value received from each when such information becomes available.
- b. In accordance with N.J.A.C. 14:8-6.5(a)(4), Invenergy shall commit that the cost difference in the event that changes in the project reduces or eliminates tax benefits, or tax benefits do not materialize for any reason including changes in tax laws, will be borne by Invenergy alone and not be made up by ratepayers, suppliers, or providers. By virtue of this

commitment, Invenergy acknowledges that it shall not have any expectation whatsoever of assistance from New Jersey in satisfying this cost difference.

- c. In accordance with N.J.A.C. 14:8-6.5(a)(5), Invenergy shall commit to pass along tax credits or other governmental benefits to ratepayers that are greater than projected promptly, but no later than 90 days after Invenergy receives such tax credits or other governmental benefits. This pass along of benefits will be effective without the need for any subsequent Board approval/confirmation, and will serve as a condition of the OREC approval, subject to the following:
 - i. Invenergy shall commit to informing Board Staff promptly but no later than 30 days after receipt, of all such tax credits or other governmental benefits to ratepayers that are greater than projected.
 - ii. Tax credits that are greater than what were projected that are the result of Invenergy's reasonable increased project cost basis can be retained by Invenergy and not returned to ratepayers. The term "increased project cost basis" as used above only refers to increases in project capex subsequent to the BAFO submitted by Invenergy. The term does not refer to increases on the portion of project capex eligible for the tax credit.
 - 1. Increases in project cost due to inflation will result in a modified OREC based on the Inflation Adjustment mechanism described in paragraph 3 above. Therefore, Credit Retained = Credit Rate * (Total Increased Cost – Increased Cost Covered by Inflation Adjustment).
 - iii. Invenergy is required to return net tax, subsidy, or grant benefits to ratepayers, subject to Board review and approval of the costs to obtain the benefits, in accordance with the provisions contained in this Section 5.

6. Project Schedule

- a. The LLW Project shall have a Phase 1 COD no later than December 31, 2031, and a Phase 2 COD no later than December 31, 2032.
- b. Schedule Delays
 - i. The Board acknowledges the uncertainties associated with various aspects of the LLW Project and the changing conditions in the marine environment. Invenergy may reserve the right for the COD to be delayed for up to, but no longer than, 6 months without having to obtain Board approval. Such delay will not have any effect on the overall OREC period or the total financial compensation to be received by Invenergy over the life of the OREC term, other than the fact that the OREC term will commence and end on the delayed basis (the "Permissible Delay"). Invenergy shall notify the Board as soon as it is aware of any delay of up to 6 months.

Because of the consecutive nature of the phases, a delay to Phase 1 may result in a corresponding delay to Phase 2. For example, an initial delay of 4 months to the Phase 1 COD may result in a 4-month delay to the Phase 2 COD, but it will only be considered a single 4-month delay and not an 8-month delay. In the event of any delay, the Board expects Invenergy to make all reasonable efforts to limit any corresponding, subsequent delays.

- ii. Any delay(s), for any reason, beyond the Permissible Delay would qualify as a material change to the binding OREC Pricing Schedule listed in Attachment A, and therefore be subject to Board approval. The Board retains the right to deny requests for changes to the OREC Pricing Schedule beyond the Permissible Delay.
 - iii. In the event of a delay beyond the Permissible Delay, Invenergy shall request Board approval prior to any delay that it anticipates will exceed the Permissible Delay. In the request, Invenergy shall include in sufficient detail an explanation for the delay, and Invenergy's actions to minimize the delay.
 - iv. Any delay expected to be greater than six months shall first exhaust the Permissible Delay. As further explanation, the Permissible Delay is not intended to be used at the discretion of Invenergy at any point during the Project schedule. The Permissible Delay shall only be used at the beginning of any total delay period.
 - v. If Invenergy petitions the Board for a greater than six-month delay, there will be no change to the OREC Pricing Schedule, other than the fact that it will commence on a delayed basis commensurate with the actual delay and be extended for a comparable period.
 - vi. If the Board does not approve the request for a greater than six-month delay or grants the request with conditions, or if there is a delay as to which Invenergy did not request approval from the Board, Invenergy shall receive the payments dictated by the OREC Pricing Schedule shown in Attachment A to this Order starting on the actual COD, and shall cease receiving payments six months beyond the end date of the OREC Pricing Schedule shown in Attachment A to this Order (i.e., Invenergy receives the benefits of the six-month delay, but not for any additional delays that are not approved by the Board).
 - vii. If the Project is delayed for any reason, the first year OREC price shall be the first year OREC price as bid. For example, the first year OREC price as bid is \$112.50/MWh for Energy Year 2032. If the Project is delayed so that the COD is in Energy Year 2033, the OREC paid in that first Energy Year shall be \$112.50/MWh, not the OREC price bid for Energy Year 2033.
 - viii. The OREC Price Schedule is to be interpreted as a level price for the project month(s) listed in the schedule irrespective of administrative Energy Year. Beginning with the first full month following COD, OREC values will be calculated as follows: each MWh, or fraction thereof, delivered to the POI in that month will be multiplied by the OREC Price for the project month shown in Attachment A to this Order.
 - ix. If the COD of any Phase is earlier than contemplated in this Order, there will be no change to the OREC Pricing Schedule, other than the fact that it will commence and end on an earlier basis.
7. Revenue Settlement Process
- a. Invenergy is required to take all reasonable efforts to maximize revenues associated with

the LLW Project, N.J.A.C. 14:8-6.6(e), because these revenues must be returned to ratepayers. N.J.A.C. 14:8-6.6(f)(1). Within this framework, an energy trading and hedging program may produce benefits for ratepayers, primarily by helping to reduce wholesale price volatility for Project resources. Invenergy may engage an Energy Manager to administer the risks associated with selling Project resources in the energy markets by entering into bilateral contracts or other commercial activities.

- b. Invenergy shall submit a compliance filing four years before the Phase I COD. The compliance filing shall propose a revenue management plan detailing the hedging activities that the Energy Manager may pursue. The compliance filing must also: (1) detail the proposed costs of administering the revenue management plan; (2) show to the Board's satisfaction that the activities will maximize ratepayer benefits and not adversely affect ratepayers; (3) propose a methodology, in concert with the OREC Administrator, to account for the net benefits and revenues that shall accrue to ratepayers due to the revenue management plan; and (4) detail any insurance Invenergy will obtain to protect against losses and minimize risk.
 - c. The costs of administering a Board-approved revenue management plan with hedging activities through an Energy Manager shall be borne by ratepayers. All benefits shall accrue to ratepayers and any losses, if incurred during approved and prudent hedging activities, shall be accounted for by Invenergy and the OREC Administrator, while determining the ratepayers' net benefits in project revenues.
8. Changes to Key Personnel
- a. Invenergy shall notify Board Staff of the departure of any key employee of the Project¹⁶⁸ within thirty (30) days of the departure. Invenergy shall submit the expertise and qualifications for any new key employee, and shall submit any changes to the organizational structure of key employee positions to Board Staff within thirty (30) days of hiring a new key employee or of implementing changes to the organizational structure of key employees. Notification by email to Board Staff and the Board Secretary is sufficient, requesting confirmation that the notification has been received. Board Staff retains the right to respond with questions or clarifications should it need.
 - b. Once satisfied that the Project's key employees and the organizational structure of key employee positions conform to the Board's rules, Board Staff will notify Invenergy.
 - c. In providing notification, Board Staff does not intend to limit or become deeply involved in Invenergy's hiring or personnel decisions, but rather to confirm that the Project's key employees conform to the Board's rules at N.J.A.C.14:8-6.5 (a)(1)(i) and (ii).
9. Environmental and Fisheries Protection and Data Management
- a. To ensure New Jersey's natural resources, including but not limited to, fin fish and shellfish, sea turtles, marine mammals, avian species, bats and benthic populations are protected throughout the life of the project from pre-construction through decommissioning

¹⁶⁸ LLW Application Narrative at 36.

and that any impacts are being actively monitored and mitigated as required by law, Invenergy shall:

- i. Work with Board Staff and the DEP to identify and implement best management practices (BMPs) for the avoidance, minimization and mitigation of adverse impacts on natural resources. Within 6 months of this Order, Invenergy shall prepare an initial report (“BMP Report”) describing how BMPs and other environmental and fisheries protection measure described in the Application have been or will be implemented by the Project. Invenergy will meet three (3) times annually with Board Staff and DEP to discuss the Project’s progress towards implementing or implementation of BMPs and other environmental and fisheries protection measures. Invenergy will be responsible for providing formal meeting minutes for these meetings. One of these meetings will be a joint meeting with all awarded projects, Board Staff, and DEP. Invenergy shall review and update its BMP Report at least annually by measuring the Project’s performance relative to the BMPs and environmental and fisheries protection provisions submitted in Invenergy’s Application or that have been identified subsequently. Invenergy shall incorporate appropriate established BMPs and those that emerge from the broader research and monitoring community into both its environmental and fisheries Adaptive Monitoring Plans and Adaptive Mitigation Plans (Sections 9.a. ii -v).
- ii. Develop an Adaptive Environmental Monitoring Plan in a manner consistent with the provisions described in Attachment 6 of the Third OSW Solicitation Guidance Document. Monitoring efforts should be designed to identify and assess adverse impacts of offshore wind energy development and operations on New Jersey’s natural resources and shall commence at least 2 years prior to construction and occur throughout the life of the Project at a frequency in accordance with best practices for the relevant variable or species and at a spatial scale to reasonably capture the range of conditions within the project area. The Adaptive Environmental Monitoring Plan shall: 1) identify the natural resources (not including fish, shellfish and fisheries) that are most likely to be impacted; 2) identify the potential impacts (if known) to those resources; 3) describe the research and monitoring efforts and methods required to assess the impacts of OSW on those resources; and 4) explain how the results of monitoring efforts will be shared and, as appropriate, used for decision making.
- iii. Develop an Adaptive Environmental Mitigation Plan in a manner consistent with the provisions described in Attachment 6 of the Third OSW Solicitation Guidance Document. The Environmental Mitigation Plan shall describe how the project will avoid, minimize, and offset impacts to New Jersey’s natural resources (not including fish, shellfish and fisheries). The plan shall: 1) articulate the goals of the effort; 2) explain how mitigation will be integrated into the overall project planning process; 3) identify and justify appropriate mitigation measures; 4) propose methods for evaluating the efficacy of mitigation efforts; and 5) explain (as appropriate) how results can inform future action.

- iv. Develop an Adaptive Fisheries Monitoring Plan in a manner consistent with the provisions described in Attachment 9 of the Third OSW Solicitation Guidance Document. Monitoring efforts should be designed to identify and assess adverse impacts of offshore wind energy development and operations on New Jersey's fish, shellfish, and commercial and recreational fisheries and shall commence at least two years prior to construction and occur throughout the life of the project at a frequency in accordance with best practices for the relevant species and at a spatial scale to reasonably capture the range of conditions within the project area. The Fisheries Monitoring Plan shall: 1) identify the fish and fisheries resources that are most likely to be impacted; 2) identify the potential impacts (if known) to those resources; 3) describe the research and monitoring efforts and methods required to assess the impacts of OSW on those resources; and 4) explain how the results of monitoring efforts will be shared and (as appropriate) be used for decision making.
 - v. Develop an Adaptive Fisheries Mitigation Plan in a manner consistent with the provisions described in Attachment 9 of the Third OSW Solicitation Guidance Document. The Fisheries Mitigation Plan shall describe how the project will avoid, minimize and offset impacts to fish and fisheries resources. The plan shall: 1) articulate the goals of the effort; 2) describe how stakeholders will be consulted and engaged through all stages of project development; 3) explain how mitigation will be integrated into the overall project planning process; 4) identify and justify appropriate mitigation measures; 5) propose methods for evaluating the efficacy of mitigation efforts; and 6) explain (as appropriate) how results can inform future action. The plan shall be informed by a review of the Fisheries Communication Plan required in the Application and include consideration of safety concerns and U.S. Coast Guard and industry recommended safety measures. Invenergy shall also work collaboratively with the National Oceanic and Atmospheric Administration ("NOAA") Fisheries and New Jersey Marine Resource Administration to mitigate adverse impacts from project related activities on fisheries surveys undertaken by these entities.
 - vi. Update the Infrastructure Monitoring Plan in a manner consistent with the provisions described in Attachment 8 of the Third OSW Solicitation Guidance Document and specify a timeline for implementation of the Plan.
 - vii. Update the Data Management and Availability Plan in a manner consistent with the provisions described in Attachment 7 of the Third OSW Solicitation Guidance Document. Invenergy shall develop a publicly available web-based resource that makes non-proprietary data collected in association with the Project accessible for download and/or directs the user to the public data repository where those data can be accessed.
- b. In collaboration with BPU and DEP, Invenergy shall establish milestones for the development, review, and issuance of the Plans described above in Sections 9.a.ii-v. Once developed, Invenergy shall share drafts of these plans with BPU, DEP, NOAA,

regional science entities and relevant stakeholders for review.

- c. Invenergy shall review and update annually the BMP Report described in Section 9.a.i, the Plans described above in Sections 9.a.ii-vii. Invenergy shall submit clean and redlined versions of these documents as attachments to the Annual Environmental and Fisheries Report required below in Section 11.a.
- d. Invenergy shall make the up-to-date versions of the Monitoring and Mitigation Plans described above in Sections 9.a.ii-v publicly available on their website.

10. Research and Monitoring Fee

- a. As required in the Third OSW Solicitation Guidance Document, Invenergy shall provide payment to the State of New Jersey for research initiatives and the regional monitoring of the environment, wildlife, and fisheries dedicated to assessing the impacts from OSW development on the natural resources of New Jersey in the amount of \$24,000,000 (“Research and Monitoring Fee”), which will be administered by the New Jersey Offshore Wind Research and Monitoring Initiative (“RMI”).¹⁶⁹ Payment shall be made on the following schedule: 50% of the Research and Monitoring Fee within 90 days of the date of this Order, and the remainder paid in equal annual installments on the anniversary of the date of this Order over a 2-year period. The funding will be administered by the DEP and BPU, with stakeholder input to aid in the identification and prioritization of regional research and monitoring needs.

11. Reporting Requirements and Monitoring

- a. The LLW Project shall report annually in writing to the Board and DEP on actions taken to ensure environmental protection, fisheries protection, and mitigation of environmental and fishing impacts (“Annual Environmental and Fisheries Report”). The reporting period shall cover a full year starting with the effective date of this Order. The Annual Environmental and Fisheries Report shall be submitted no later than 30 days after the anniversary of the effective date of this Order. This report shall provide a high-level summary of: 1) the status of the environmental protection measures included in the Application, 2) the incorporation of any new environmental and fisheries protection measures since the Application, 3) the development and/or implementation of the Adaptive Monitoring and Mitigation Plans, 4) the development and/or implementation of the Infrastructure Monitoring Plan; 5) the implementation of the Data Management Plan; 6) a description of any major scientific findings that have emerged from the Project’s research and monitoring efforts; and 7) the timelines for commitments to environmental impacts required below in Section 11.e. It shall also include all attachments described in Section 9. An appendix to the Annual Environmental and Fisheries Report shall provide the highlights of the Report in an accessibly written summary to be made publicly available annually on Invenergy’s Project website when the Report is submitted. Invenergy shall make periodic presentations on its Environmental and Fisheries Protection efforts to the Environmental Resources Offshore Wind Working Group and other groups as requested by BPU and/or DEP.

¹⁶⁹ New Jersey Offshore Wind Research and Monitoring Initiative. <https://dep.nj.gov/offshorewind/rmi/>

- b. The LLW Project shall report annually in writing to the Board and DEP beginning 1 year from the effective date of this Order on the policies and programs that may be adopted by the Board or DEP to help reduce future environmental or fisheries impacts or enhance the protection of natural resources. This report shall be included as a section of the Annual Environmental and Fisheries Report and detail any proposed future mitigation or protection measures that could be adopted, providing a description, proposed timeline, and expected outcomes of the recommended action.
 - c. The LLW Project shall report at least quarterly in writing to the Board beginning 3 months from the effective date of this Order, progress in the development of the tower manufacturing facility at the NJWP. The report shall include milestones achieved during the reporting period, milestones expected to be achieved during the next reporting period, any problems encountered and the resolution of those problems or LLW's plan for resolving those problems, any Project schedule impacts, and any other information that LLW believes to be material to the development of the tower manufacturing facility at the NJWP.
 - d. The LLW Project shall report quarterly in writing to the Board beginning 3 months from the effective date of this Order on the status of relevant state, local, and federal permitting. This report shall detail permitting timelines, status of any ongoing work with a government agency and identify any potential issues encountered by the Project. In accordance with N.J.A.C. 14:8-6.5(a)(10)(iii), Invenergy shall provide the Board with copies of each permit or approval within 14 days of receipt by Invenergy.
 - e. The LLW Project shall report annually in writing to the Board, beginning 30 days after the anniversary of the effective date of this Order, the status of all guarantees and commitments made in their application ("Annual Guarantees and Commitments Report"). This report will detail status reports of spend, Tier 1 facilities, payments to educational institutions and any other firm commitments made by the LLW Project. Additionally, within 180 days of the date of this Order, the LLW Project shall propose timelines for Board approval for each of the commitments described in the Economic Impacts and Environmental Impacts sections of this Order. Board-approved timelines shall be reflected in the LLW Project's first Annual Guarantees and Commitments Report. If the LLW Project fails to timely meet its funding commitments, the Board may establish proceedings to modify the OREC price in alignment with the 90/10 shortfall mechanism described in this Order.
 - f. The LLW Project shall report quarterly in writing to the Board beginning 3 months from the effective date of this Order on the status of Tier 1 Facilities, all guarantees and commitments made in their application, and funding toward the initiatives outlined in the Economic Impacts section of this Order. This report shall document all monies funded toward each initiative from the previous quarter, the most current total toward funding of each initiative, and include a schedule of anticipated dates of funding and amounts for future investments.
12. Sharing of Confidential Information by the BPU
- a. The Board and/or Board Staff shall, from time to time, provide to other New Jersey state

agencies information deemed by Invenergy to be confidential in order for those agencies to better understand the LLW Project, to track the Project's development, and for any other reason deemed appropriate by the Board or Board Staff. Board Staff will notify Invenergy prior to providing such information to such other state agencies for Invenergy's information only.

13. Documentation of Economic Benefits

- a. Invenergy shall retain an independent consultant subject to approval by Board Staff, who will evaluate the actual local content spend from the effective date of this Order through the final phase COD plus one year. Invenergy and the selected consultant shall develop a calculation methodology subject to approval by Board Staff. Invenergy shall submit an annual report of local content spend beginning 2 years from the effective date of this Order. Invenergy shall submit a report of the consultant's evaluation within 6 months of the final phase COD plus one year.
- b. Invenergy shall retain an independent consultant subject to approval by Board Staff, who will verify the direct jobs resulting from the LLW Project annually from the effective date of this Order through the end of the OREC period. Invenergy and the selected consultant shall develop a calculation methodology subject to approval by Board Staff. Invenergy shall submit an annual report of the consultant's evaluation beginning 2 years from the effective date of this Order. Invenergy shall submit a report of the consultant's evaluation within 6 months of the final phase COD plus one year.