

**Leading Light  
Wind**

# **New Jersey's 3<sup>rd</sup> Offshore Wind Solicitation – Clarification Question Responses**

**Responses to September 19, 2023 clarification questions**



Prepared By

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Origination

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### **Confidential Bid Proposal and Proprietary Information**

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## Introduction

Dear Mr. Ferris and NJBPU Staff,

This document contains Leading Light Wind's (LLW) written responses to the BPU's September 19, 2023 list of clarification questions related to our bid into New Jersey's 3<sup>rd</sup> offshore wind solicitation.

LLW believes that the initial set of responses herein fully cover the clarification questions. However, should additional information be needed related to these topics or any others, please advise and we will respond promptly. Thank you for your consideration of the LLW proposal.

Best Regards,  
The Leading Light Wind Project Team

## Responses to NJBPU September 19, 2023 questions

### NJBPU Question 1

**Section 1.2: Please clarify whether Invenergy Renewables LLC, shown as one of the ultimate parents of Invenergy Wind Offshore LLC in Figure 1-1, will have a direct role in project development.**

#### Question 1 Response

We can confirm that Invenergy Renewables LLC will have a direct role in project development, serving as the lead developer of the LLW project.

### NJBPU Question 2

**Section 1.5: Please identify which Invenergy entity was the lead developer for each of the projects listed in Table 1-2.**

#### Question 2 Response

Invenergy Renewables LLC served as the lead developer for each of the projects listed in Table 1-2. Invenergy Renewables LLC's development role for each of these projects was defined via project-specific Development Services Agreements, which specify the development obligations that Invenergy has (or had) to the project.

### NJBPU Question 3

**Section 1.7: Regarding the statement: "Due to the stage of the company, energyRe does not have audited financial statements for 2021."**

**a. Please provide further clarification regarding the unavailability of audited financial statements for energyRe LLC for 2021.**

**b. Are unaudited financial statements for energyRe LLC available for 2021?**

**c. If so, please provide the unaudited financial statements for 2021 and a signed and notarized statement from the energyRe LLC CEO or CFO that "the unaudited 2021 financial statements present fairly, in all material respects, the financial position of energyRe LLC and the results of operations for the year in accordance with generally accepted accounting principles in the US" or an equivalent statement.**

#### Question 3 Response

An unaudited financial statement for energyRe LLC for 2021 and a notarized statement from the energyRe LLC Chief Financial Officer (CFO) confirming its validity and results of operations for the year accepted accounting principles have been included as Attachment A and Attachment B

### NJBPU Question 4

**Section 1.7: Please provide additional details regarding energyRe's financial resources, its parent companies, and capabilities.**

#### Question 4 Response

[REDACTED]

[REDACTED]

The principals have a successful track record of investing and raising capital for large-scale development and infrastructure projects, as well as an extensive network of debt and equity relationships that includes many of the world's largest banks, insurance companies, pension funds, sovereign wealth funds, and other financial institutions.

[REDACTED]. A core strength of energyRe is its ability to creatively and efficiently finance projects to maximize value for all stakeholders. [REDACTED]

### NJBPU Question 5

#### **Attachment 1.1: Regarding Invenergy Renewables' net income:**

- a. Please provide an explanation for Invenergy Renewables' negative 2021 net income.**
- b. Please provide an explanation for Invenergy Renewables' negative 2022 net income.**
- c. Please confirm Invenergy Renewables' funding ability in light of negative 2021 and 2022 net income.**
- d. What is Invenergy Renewables' 2023 net income as of June 30, 2023?**
- e. Please provide the latest available audited and unaudited quarterly financial statements for Invenergy Renewables.**

### Question 5 Response

- [REDACTED]
- [REDACTED]
- [REDACTED]



[REDACTED]

- Please see Attachment C.
- Please see Attachment D.

### NJBPU Question 6

**Attachment 1.2:** *The title of the attachment is “energyRe Clean Path Holdings LLC and Consolidated energyRe LLC Audited 2022 Financial Statements,” but the attachment contains unaudited financial statements.*

- a. Please explain why unaudited financial statements were provided.*
- b. Please provide audited financial statements for energyRe Holdings for 2022.*
- c. If only the unaudited financial statements are available, please provide a signed and notarized statement from the energyRe LLC CEO or CFO that “the unaudited 2022 financial statements present fairly, in all material respects, the financial position of energyRe LLC and the results of operations for the year in accordance with generally accepted accounting principles in the US” or an equivalent statement.*

### Question 6 Response

Newly provided 2022 audited financial statements for energyRe are provided as Attachment E.

### NJBPU Question 7

**Attachment 1.2:** *Regarding energyRe’s net income:*

- a. Please provide an explanation for energyRe’s negative 2022 net income.*
- b. Please confirm energyRe’s funding ability in light of negative 2022 net income.*
- c. What is energyRe’s 2023 net income as of June 30, 2023?*
- d. Please provide the latest available audited and unaudited quarterly financial statements for energyRe.*

### Question 7 Response

- a. energyRe is a development entity. [REDACTED]
- b. [REDACTED]

The principals have a successful track record of investing and raising capital for large-scale development and infrastructure projects, [REDACTED]

- [REDACTED]
- [REDACTED]
- c. [REDACTED]
- d. Please refer to Attachment I for the provided quarterly financial statements.

### NJBPU Question 8

**Section 2.1: Page 11 states, “All project infrastructure will be clearly lighted and marked as required by the USCG and will include an AIS marking schema.”**

**a. Please explain what is meant by “AIS marking schema.”**

**b. Does Invenergy Wind Offshore intend to install AIS on all or a subset of turbines? If yes, please describe how AIS will be deployed, and on which turbines specifically they will be installed, and the rationale for installation on these turbines but not other turbines in the array. If no, explain why AIS will not be used.**

### Question 8 Response

- a. Automatic Identification System (AIS) marking schema is a mapped design of how each turbine in the layout will be marked with AIS. [REDACTED]

- b. [REDACTED]
- [REDACTED] Marking and lighting design will be developed [REDACTED].

Per the latest USCG guidance:

“Each Significant Peripheral Structure, and Intermediate Peripheral Structure adjacent to a fairway or used to identify a designated vessel transit route through the farm or closely adjacent farms, shall be identified by a properly encoded AIS message 21. The structures may be marked with either physical or synthetic AIS message 21 as circumstances warrant; the broadcasts shall be made at sufficient power to provide a relatively uniform coverage recommended to extend at least 8 nautical miles beyond the periphery of the wind farm to allow sufficient time for ship operators to detect and make any necessary course or speed alterations that all marked.”

Attachment F shows a preliminary design of the marking and lighting system for Project Option 3.

### NJBPU Question 9

**Section 2.2: Page 56 states that Invenergy Wind Offshore owns 100% of OCS-A 0542 lease area for an initial term of 39 years, divided into a preliminary term (one year), a site assessment term (five years), and an operations term (33 years). Why is decommissioning not part of this 39-year term?**

### Question 9 Response

The Bureau of Ocean Energy Management (BOEM) lease for OCS-A 0542 (provided as part of the Attachments to Section 2) [REDACTED] However, Section 13 of the lease specifies that, [REDACTED]



## NJBPU Question 11

### Section 2.4:

a.

*b. Invenergy Wind Offshore indicates that the elimination of [REDACTED] will have major project benefits as described in Table 2-8. If the final selection is [REDACTED] how will the project development plan change?*

### Question 11 Response

a. As discussed in Section 2.5 of the proposal, LLW considers multiple factors when determining a sourcing strategy, including [REDACTED]. These impacts are discussed further in part (b) of this question. [REDACTED]

b. We do not anticipate any material changes to the project development plan if the final selected foundation type is [REDACTED]. We will avoid development phase impacts by including [REDACTED] option in our design and permitting envelope until final procurement decisions are made. [REDACTED]

[REDACTED] If such a facility were to exist, several factors would have to be evaluated to assess the impact to the project, including [REDACTED]. The results of such an evaluation would ultimately determine how the project plan is impacted.

[REDACTED] Regardless of the final location, [REDACTED] in New Jersey in order to maximize local content.

There would also be impacts to the Transportation and Installation (T&I) campaign. [REDACTED]

## NJBPU Question 12

Section 2.4: The Application indicates that Invenergy Wind Offshore will continue to consider [REDACTED]

a. Please provide a full identification of the issues that, if uncovered by the comprehensive geotechnical campaign, [REDACTED]

b. In what year does Invenergy anticipate that “final foundation design will be completed following a comprehensive geophysical and geotechnical characterization of the site”?

### Question 12 Response

a. [REDACTED]

b. LLW anticipates that final foundation design will be completed in [REDACTED]

## NJBPU Question 13

Section 2.5: Regarding the OFCS installation methods, [REDACTED]

[REDACTED] what would the impact on the Project schedule be?

### Question 13 Response

[REDACTED] will not substantially impact the net time project schedule.

[REDACTED]. With any offshore installation, [REDACTED], planning and appropriate design are paramount. [REDACTED] solution be required, [REDACTED], which would allow for a sufficiently long period of time to appropriately plan for a safe and efficient installation.

## NJBPU Question 14

Section 2.6: Regarding Invenergy Wind Offshore’s plan to use [REDACTED] for Marshaling:

a. What factors affect Invenergy Wind Offshore’s ability to secure [REDACTED] lease for the Marshaling port?

b. Is Invenergy Wind Offshore presently aware of any logistical constraints at [REDACTED] that would hinder or otherwise preclude its ability to secure the lease for marshaling activities? If yes, what are they and what mitigation measures might be implemented to preserve Invenergy Wind Offshore’s prospects for success?

c. What leasehold cost assumptions has Invenergy Wind Offshore made in regard to securing [REDACTED] lease for marshaling activities? In that regard, what timing assumptions has Invenergy Wind Offshore made in order to support its proposed COD?

### Question 14 Response

- a. [REDACTED]
- b. [REDACTED] Any deviations from this process may hinder our ability to secure the lease. Additionally, if multiple projects are awarded that all assume they will have access to the same marshalling parcels at the same time, some sort of mitigation will be necessary. Mitigation measures could include shifting project schedules or using alternate marshalling locations. Further assessment will be required once the award group is known.
- c. [REDACTED]

### NJBPU Question 15

**Section 2.7: Regarding the development and operation plan for storage:**

- a. **Does Invenergy Wind Offshore plan to submit a separate PJM interconnection request for the storage facility?**
- b. **Is there any project-on-project risk between the offshore wind project and the storage facility, or are the two components independent in terms of timing?**
- c. **If there is project-on-project risk, please explain the risk and how it will be mitigated.**
- d. **Does Invenergy Wind Offshore explore the option of decreasing the depth of discharge in order to mitigate the annual degradation of the battery?**
- e. **Invenergy Wind Offshore indicates that the battery will be charged during periods of excess renewable energy (avoid curtailment) and discharge during periods of low renewable availability, high demand. Has Invenergy Wind Offshore considered other potential deployments of battery assets to maximize revenue, such as frequency regulation, voltage support, transmission congestion relief, back start, etc.?**
- f. **At which stages does the estimation of direct emissions for the storage battery in Table 2-24 take place?**
- g. **Please explain the method used to calculate avoided emissions for the storage battery. Are the avoided emissions the same for battery deployments and non-battery deployments? If they differ, could you elaborate on the reasons for this disparity?**

### Question 15 Response

- a. [REDACTED]
- b. [REDACTED]

[REDACTED]

c. Please see response to Question 15b.

d. [REDACTED]

f. The direct emissions estimate for the storage system in Table 2-24 includes the construction phase of the storage facility.

g. As specified in Section 2.7, avoided emissions for the storage project were [REDACTED]

[REDACTED]

### NJBPU Question 16

Section 3.5: Table 3-11 provides a summary of losses.

- a. Please highlight any impacts on the resource assessment resulting from wake effects.
- b. What are Invenergy Wind Offshore's net energy production/energy output estimates for the first row of turbines with respect to wind in the freestream?
- c. What are Invenergy Wind Offshore's estimates for the second row of turbines?
- d. What justification can Invenergy Wind Offshore provide for the severity of power production decrease between the first and second turbine rows.
- e. What adjustments in nautical spacing between WTGs has Invenergy Wind Offshore incorporated in its technical configuration to account for wake effects?
- f. Please describe how the layout and energy production estimates would change if [REDACTED] is implemented.

### Question 16 Response

- a. Per the DNV energy analysis:
  - **Internal wake and blockage effects** – DNV has recently undertaken a validation of its offshore wake modeling methodology using operational data from a number of offshore wind farms in the North Sea. [REDACTED]

- [Redacted]

b-d. To answer this questions b through d, it assumed that:

- “Net energy production” is defined as [Redacted]
- “Energy output estimates” are a defined as [Redacted]
- “First row of turbines” is defined as the row in the most upwind and unwaked orientation of the turbines
- “Second row of turbines” is defined as the row of turbines adjacent to the first row of turbine in the downstream primary wind direction.

It should also be noted that:

- [Redacted]
- [Redacted]

[Redacted]

d. The severity of power production decrease between the first and second turbine rows is [Redacted]

e. [Redacted]

[Redacted]

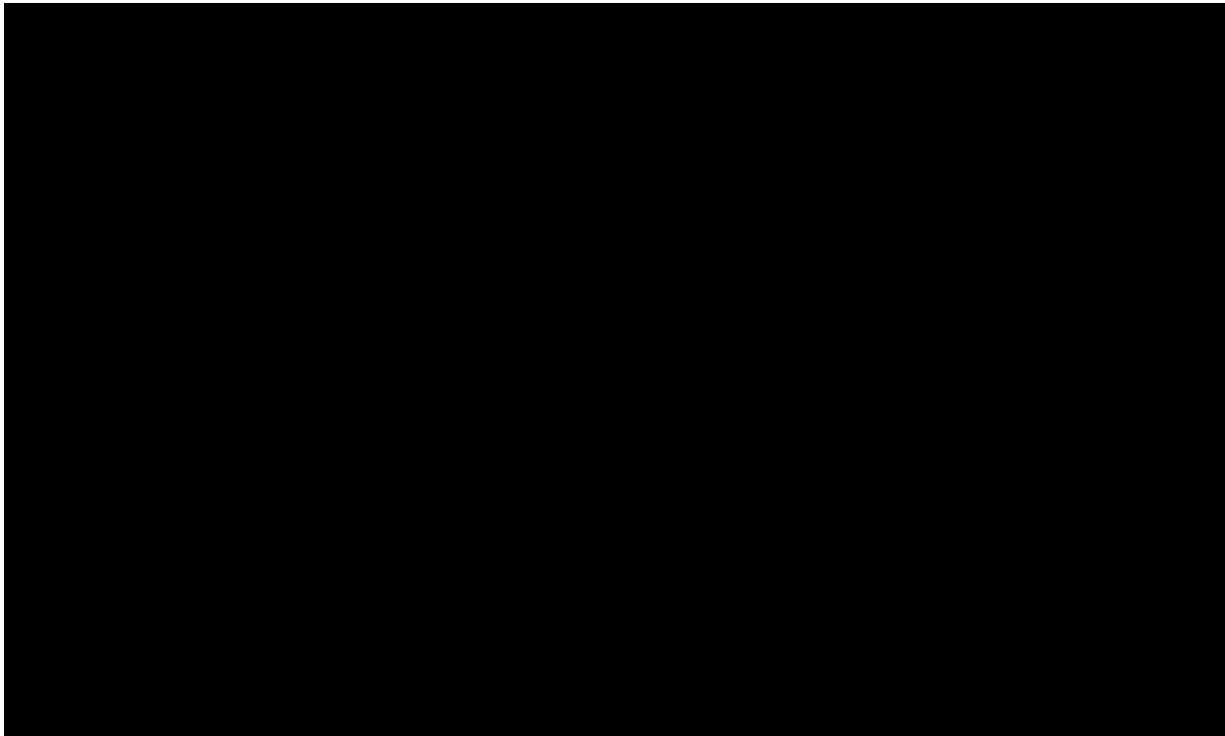


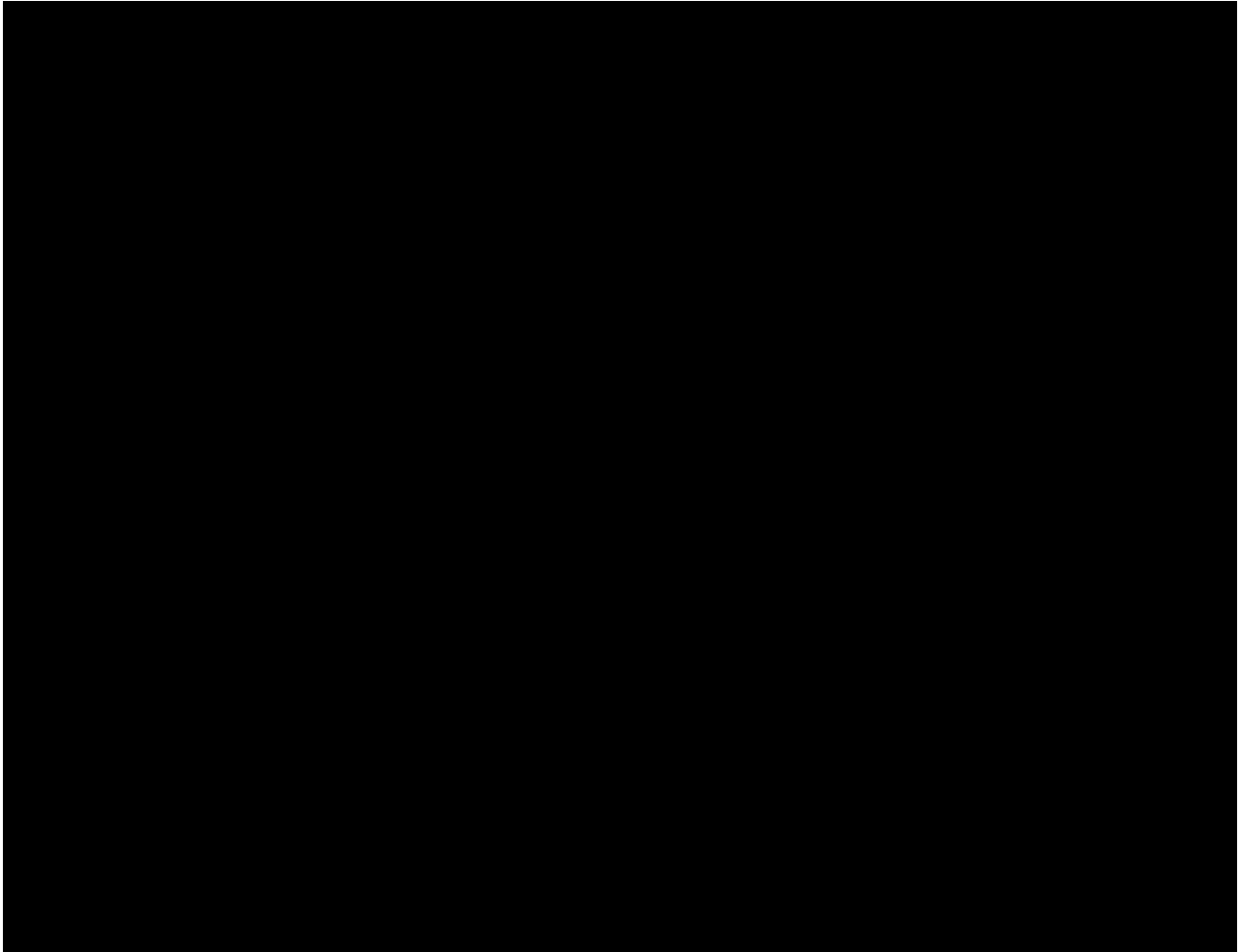
[REDACTED]

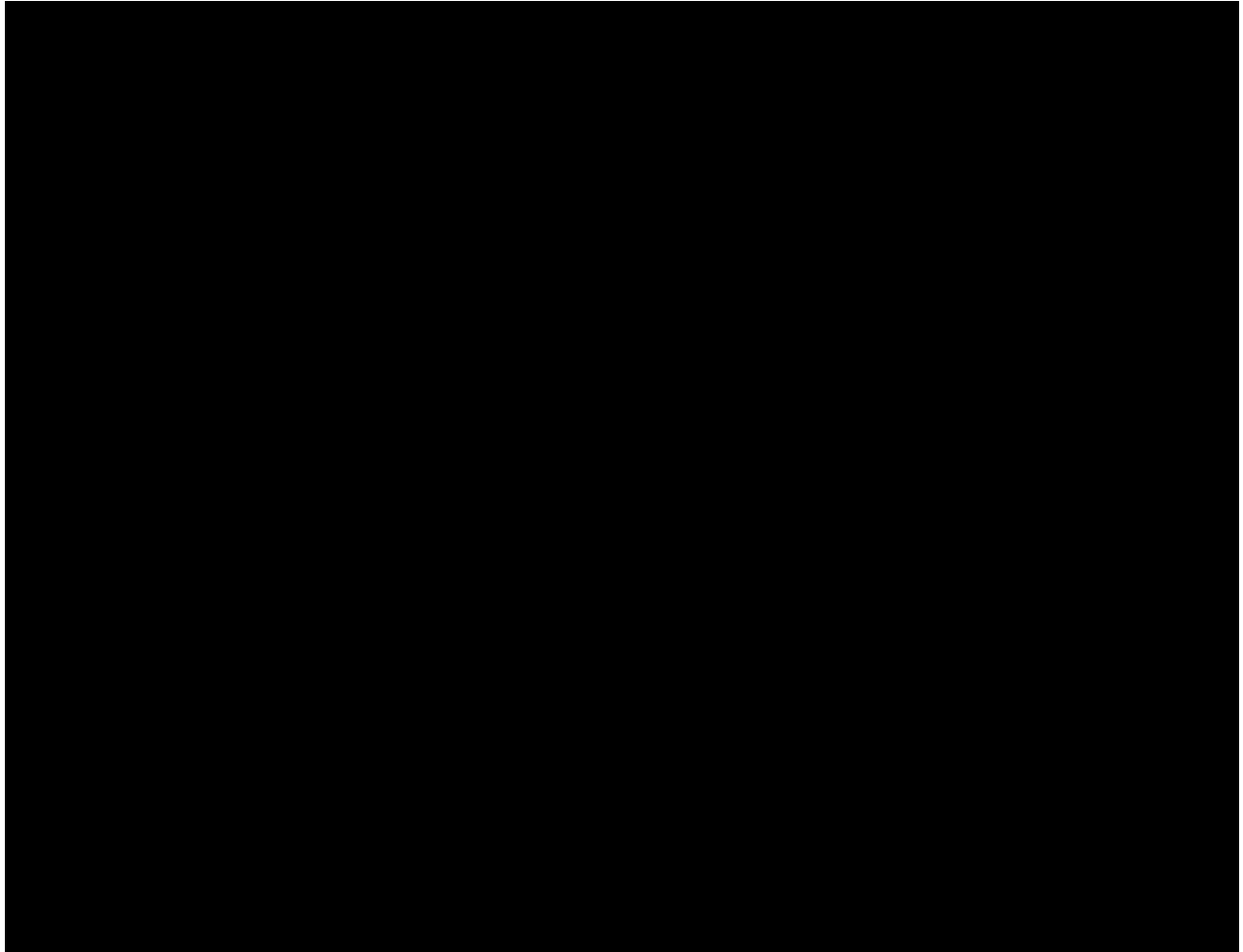
[REDACTED]

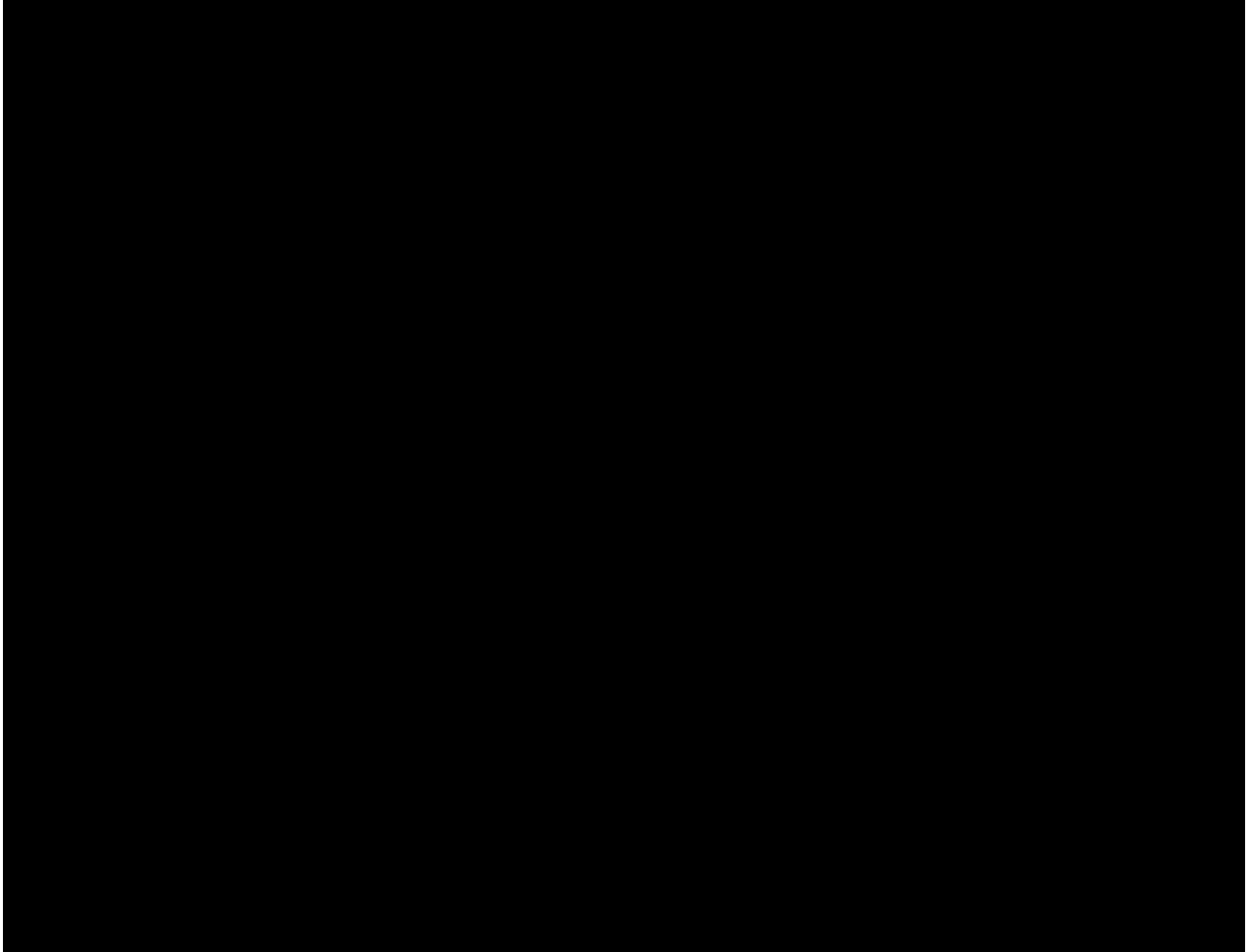
[REDACTED]

- f. Layouts and energy production for [REDACTED] are shown below. The [REDACTED] option would use fewer turbine locations than the [REDACTED] option for all project alternatives and would yield higher energy production in the comparable project cases.









### **NJBPU Question 17**

**Section 3.6: Please provide a planned maintenance outage schedule for the turbines and other equipment.**

#### **Question 17 Response**

A 20-year view of scheduled and corrective maintenance for the project can be found in Attachment 15.1. The subsections below offer greater detail into the individual components and their anticipated downtime.

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted text block]

[Redacted text block]

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### NJBPU Question 19

**Section 5.2: Please provide all available current credit ratings for the sponsors, Invenergy Renewables and energyRe, and specify if those ratings are issuer, senior long-term unsecured, or other.**

#### Question 19 Response

[REDACTED]

### NJBPU Question 20

**Section 5.2: Has either sponsor been on a watch list or received a notice of potential changes within the last twelve months or that is currently outstanding from any major credit rating agency? If so, please provide.**

#### Question 20 Response

[REDACTED]

### NJBPU Question 21

**Section 5.2: Please confirm that Invenergy Renewables arranged the financing for the projects listed in Table 5-1.**

#### Question 21 Response

Invenergy Renewables arranged the financings for AEP North Central Energy Facilities, Lackawanna Energy Center, Energia del Pacifico, Samson Solar, and Grand Ridge. Related Companies (of which energyRe is an affiliate), arranged financings for the Duetsche Bank Center, Hudson Yards, and The Grand LA.

### NJBPU Question 22

**Section 5.2: Regarding the sponsors and investment consortium:**

- a. Please clarify roles and responsibilities of sponsors (Invenergy Renewables & energyRe) and investors (Blackstone, CDPQ, FirstLight, & Ullico).**
- b. Please confirm investor equity funding commitments and conditions.**
- c. Please confirm equity funding will be adequate if one or more investors back out.**

#### Question 22 Response

- a. **Invenergy Renewables** – Managing member and lead project developer for LLW.  
**energyRe** – Managing member and co-developer of the LLW project.

Blackstone, CDPQ, Firstlight & Ullico – Project financial investors.

- b. [REDACTED]
- c. [REDACTED]

### NJBPU Question 23

**Section 7.2:** “Leading Light Wind will also monitor the market for opportunities to enter into low risk and/or above market hedges.” Does Invenergy Wind Offshore’s Revenue Management Program include efforts to maximize revenue by taking advantage of any potential opportunities to achieve higher prices by selling energy by auction or similar vehicle?

### Question 23 Response

[REDACTED]

### NJBPU Question 24

**Section 7.2:** “Energy sales are anticipated to be a combination of real-time and day-ahead energy sales at the project (or projects) pricing node (pnode). The project will benefit from the attention and experience of Invenergy’s robust Commercial Execution team in striking an ongoing balance between potential pricing premium and the credit and shortfall risks of selling material quantities in the day-ahead market. This team evaluates and participates in real-time and day-ahead scheduling, capacity marketing, REC trading, gas trading, and congestion hedging on a daily basis.” Please clarify how Invenergy Wind Offshore would decide how much energy to sell into the day ahead market (DAM) vs. the real-time market (RTM).

- a. Does Invenergy Wind Offshore believe that there are benefits ascribable to full or partial participation in the DAM?
- b. What factors, including price and risk management considerations, would affect Invenergy Wind Offshore’s decision to participate in the DAM? Would participation in the DAM have a seasonal component? Would Invenergy Wind Offshore participate in the DAM by submitting offers or, would participation be limited to self-scheduling? What are PJM’s requirements for self-scheduling in the DAM?
- c. Will Invenergy Wind Offshore make energy sales in PJM’s real-time market by submitting offers or self-scheduling? Please explain how self-scheduling in the RTM would be administered by Invenergy Wind Offshore? What are PJM’s requirements for self scheduling in the RTM?

### Question 24 Response

- a. [REDACTED]



b.

[REDACTED]

[REDACTED]

[REDACTED]

c.

[REDACTED]

## NJBPU Question 25

**Section 7.2: “Leading Light Wind will also monitor the market for opportunities to enter into low risk and/or above market hedges.”**

**a. Would the hedging program include a set of minimum and maximum hedge percentage levels as compared to time to energy delivery?**

**i. If yes, how would the minimum and maximum hedging percentage levels be set?**

**ii. Is there a representative hedge percentage level set forth in any ROC procedure that applies to a trading program governing trading and risk management activities in New Jersey? If yes, please provide a brief summary.**

**iii. Which entity will be the likely hedge counterparty?**

**iv. What types of caps and floors are expected to be set?**

**v. Please describe the expected duration of the swaps.**

**b. Would Invenergy Wind Offshore’s hedging program include a methodology for creating a set of price triggers, based upon a distribution of historic forward contract prices, with the intent being to hedge larger volumes of energy at higher prices?**

**i. If yes, please describe how both the quantity and price risk would be hedged.**

*ii. What benefits would New Jersey ratepayers realize as a result of more aggressive efforts by Invenergy Wind Offshore to hedge both price and quantity risk relative to reliance on DAM or RT market participation?*

*iii. Please describe the method Invenergy Wind Offshore would use to create a set of price levels that would trigger increased hedge volumes.*

*c. How would quantity risk (i.e., the risk arising from uncertainty regarding hourly output attributable to variations in wind speed and other factors) be managed under a hedging program?*

*i. How would the program hedge the risk of an unexpected outage during a period of high real-time prices?*

*ii. What determinantal outcomes could result from efforts to mitigate quantity risk?*

### Question 25 Response

LLW would like to emphasize that:

- [Redacted]

In response to the questions:

[Redacted]



b. Under Invenergy Wind Offshore’s proposal, who would calculate the hedging costs?

**Question 28 Response**

- a. [Redacted]
- b. [Redacted]

**NJBPU Question 29**

Section 7.2: “If, in a given year, an awarded project generates in excess of the project’s annual OREC allowance, Invenergy Wind Offshore will prioritize banking the excess ORECs for usage in the following two years. If we are unable to utilize these ORECs, in line with the Solicitation Guidance Document, Leading Light Wind proposes to retain [Redacted]”

- a. If Invenergy Wind Offshore’s output exceeds its annual OREC allowance, will it sell the excess renewable energy credits (“RECs”)?
- b. If yes, please provide additional information regarding how Invenergy Wind Offshore would realize value through supplemental REC sales, including identification of any potential counterparties through organized markets.

**Question 29 Response**

[Redacted]

**NJBPU Question 30**

Section 7.2: “With careful consideration of potential risks, Leading Light Wind hopes to offer any qualifying project capacity into the PJM capacity market (known as the Reliability Pricing Model).”

- a. If the project clears the BRA (or another auction within RPM), who would pay nonperformance payments, ratepayers or Invenergy Wind Offshore?
- b. Who would receive Bonus Performance Credit?

**Question 30 Response**

[Redacted]

[REDACTED]

### NJBPU Question 31

**Section 7.2: “As the PJM capacity market continues to change and evolve, our experienced team will carefully evaluate the revenue opportunities available in the market, seeking at all times to maximize risk-adjusted capacity revenue for the project for the benefit of New Jersey ratepayers.”**

**a. Does Invenergy Wind Offshore contemplate any contractual arrangements that may mitigate capacity performance risk?**

#### Question 31 Response

[REDACTED]

### NJBPU Question 32

**Section 7.2: How does Invenergy Wind Offshore propose that risk would be shared between ratepayers and Invenergy Wind Offshore under a contractual arrangement?**

#### Question 32 Response

[REDACTED]

### NJBPU Question 33

**Section 7.3: Page 179 states “... Hitachi Energy’s Reference Case utilizes their PROMOD model to deliver a 40-year forecast of electricity and fuel prices...” and also notes that “ICF’s market view is also primarily informed by the PROMOD model, with firm specific customizations to the model for key inputs.”**

**a. Please explain why Invenergy Wind Offshore used two separate PROMOD forecasts from different vendors.**

**b. How did Invenergy Wind Offshore combine or otherwise consolidate these forecasts in formulating the revenue plan?**

**c. Was ICF’s PROMOD analysis used to modify any of the revenue projections provided in the application forms? If yes, how?**

**d. Was Hitachi Energy’s Spring 2023 forecast used to forecast energy, capacity, and REC prices over the forecast period? If yes, how was Hitachi Energy’s Spring 2023 forecast reconciled with price information from other vendors?**

### Question 33 Response

- a. [Redacted]
- b. [Redacted]
- c. See response to Question 33b.
- d. [Redacted]

### NJBPU Question 34

**Section 7.3: Invenergy Wind Offshore notes Hitachi’s use of PROMOD to forecast all-hours energy prices. Figure 7-1 shows “... two energy pricing streams covering the 2032 through 2062 time period, which is inclusive of the full 30-year project life for each of our project alternatives. The first is Hitachi Energy’s Spring 2023 all-hours energy price for the PJM Mid-Atlantic Region. The second is the Hitachi Energy price curve, modified based on our expected generation profile(s) to create a realized energy price for our project.”**

- a. Please summarize the highlights of Hitachi’s forecast methodology for capacity and REC prices. What modeling tools did Hitachi rely on to forecast capacity and REC prices?**
- b. Please identify relevant input assumptions for the market revenue forecasts, including, but not limited to electric demand, natural gas commodity pricing, emission allowance pricing, and technology cost projections underlying energy, capacity, and REC prices. What assumptions were made in regard to the offshore wind project buildout over the relevant forecast period.**

### Question 34 Response

- a. [Redacted]

[REDACTED]

### NJBPU Question 35

**Section 7.3: Page 181 discusses the capacity revenue forecast: “While Hitachi Energy’s capacity price forecast expects capacity prices to continue to rise over time, a smaller percentage of this is expected to be captured due to an expected decline in the ELCC factor for offshore wind.” FERC’s April 7, 2023 Order accepting PJM’s ELCC CIR Proposal approved tariff revisions that identified changes to ELCC modeling,<sup>1</sup> and revised ELCC Class Ratings were developed pursuant to those changes.**

- a. Have Invenergy Wind Offshore and Hitachi Energy considered these modeling changes in the accredited UCAP projections? If yes, please explain how PJM’s ELCC modeling has been incorporated in the forecast.**
- b. Why are the unforced capacity (“UCAP”) projections higher than the 21% PJM calculated for 2025/2026?**
- c. How would the accredited UCAP projections change in response to the inclusion of PJM’s ELCC modeling?**

### Question 35 Response

- a. The PJM capacity market and capacity accreditation procedures are currently in a state of near-constant uncertainty and flux. Even more recently than the April 7 Order, on Wednesday, September 27, the PJM Board of Managers issued a [letter](#) describing the capacity market changes that they are directing PJM to file at the Federal Energy Regulatory Commission (FERC), including a shift from an Average ELCC accreditation scheme to a Marginal ELCC accreditation scheme. [REDACTED]
- b. [REDACTED]
- c. [REDACTED]

### NJBPU Question 36

**Section 10.4: Please provide copies of any memoranda of understanding (“MOUs”) or other agreements that Invenergy has executed with these research institutions and other partners. If there are no formal agreements with these institutions and partners, please clarify the status of your engagement and funding commitments with each of these proposed institutions and partners.**

### Question 36 Response

A copy of a letter of intent (LOI) executed with [REDACTED] was included in the Attachments to Section 9. In addition, please refer to Attachment G for the status of engagement and funding commitments to date with proposed institutions and partners.

### NJBPU Question 37

**Attachment 10.1: Regarding the “with-project” and “without-project” scenarios evaluated in Hitachi Energy’s PROMOD IV regional power generation and transmission modeling system:**

- a. Was the “with-project” scenario used to estimate energy, capacity, and REC prices as provided In Section 7 of the proposal narrative and the application form?**
- b. Please confirm that under these baseline conditions, New Jersey’s 11 GW by 2040 offshore wind development target was not assumed to be met.**
- c. What are Invenergy Wind Offshore’s assumptions for GWh of offshore wind generation in 2040? Please provide the basis for these assumptions.**

### Question 37 Response

- a. [Redacted]
- b. [Redacted]
- c. [Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]





### Question 41 Response

The following details specific information related to avian and bats as outlined in Attachment 6 and presented in the bid narrative:

- [REDACTED]
  - [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

### NJBPU Question 42

**Section 11.5: The proposed turbine array will be a grid with spacing of [REDACTED] oriented in line with the lease boundaries.**

- a. To what extent were [REDACTED] involved in the design of the array?
- b. How is the proposed turbine array protective of [REDACTED]?

### Question 42 Response

- a. [REDACTED]
- b. [REDACTED]

### NJBPU Question 43

**Section 11.5: Does Invenergy Wind Offshore intend to establish exclusion zones around each turbine and the offshore substation? If so, will the radius around each turbine vary based on its location within the array? What is the radius around each turbine and how will the area be marked?**

### Question 43 Response

[Redacted]

### NJBPU Question 44

**Section 12.2: How many months before project COD does Invenergy Wind Offshore need the PBI to be completed? Please describe the steps and timelines related to cable installation and supplying backfeed to the project between PBI completion and project COD.**

### Question 44 Response

[Redacted]

### NJBPU Question 45

**Section 13.2: Regarding the subsea telecom and fiber optic cables in the nearshore environment surrounding the DMAVA landfall shown in Figure 13-1:**

- a. Please clarify if the cables are active or abandoned.**
- b. Please discuss how the installation of the turbine foundations, inter-array cables, and export cable will:**
  - i. Accommodate these existing cables and protect their integrity.**
  - ii. Avoid creating additional potential risk to commercial or recreational fishing.**
  - iii. Avoid adverse interactions with existing and potential future artificial reefs; please describe any engagement Invenergy Offshore Wind has had with DEP on this matter.**
- c. Please describe what Invenergy Offshore Wind considers as the optimal cable corridor width as well as the minimum acceptable cable corridor width.**

*d. What permits or consents are needed from the owners of the existing cables? How will Invenergy Wind Offshore obtain these and how will long will that take?*

*e. Are there risks to the project's cables associated with operation and maintenance of the other cables in the footprint?*

**Question 45 Response**

a. [Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]



(iii) The LLW Team has had regular engagement with the NJDEP [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

c. [REDACTED]

[REDACTED]

[REDACTED]

d. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

e. The ICPC guidelines were designed and written to account for all stages of a submarine cable's lifespan, from initial design to installation and then finally to decommissioning and possible recovery. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**NJBPU Question 46**

**Section 13.2: Reference is made to the following statement: "The actual space required for each component is much more than the above dimensions to allow for required clearances and ease of maintenance of the equipment." Please specify the total actual space that will be required to accommodate all the necessary equipment.**

### Question 46 Response

Please see the table below, which includes preliminary information on the component size and total space required to accommodate this equipment. This is similar to Table 13-2, except that dimensions are added for the equipment rooms which includes the required clearances and space for ease of maintenance. [REDACTED]

[REDACTED]

[REDACTED]

### NJBPU Question 47

*Section 13.3: Table 13-3 describes design parameters and studies.*

*a. Please verify that the PBI design being offered consists of the following circuit designs:*

*i.* [REDACTED]  
[REDACTED] *If this is not the case, provide a complete explanation of the design.*

*ii.* [REDACTED]  
[REDACTED] *please explain the assumptions underlying the PBI design and backfill technique for each circuit.*

*b. Please elaborate on the rationale for using the following values for maximum conductor temperature in the ampacity studies performed*

[REDACTED]

[REDACTED]

*c. Please provide the expected power delivery at the Larrabee Collector Station POI for each type of HVDC system design proposed* [REDACTED]

**Que** [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**NJBPU Question 48**

**Section 13.3: Invenergy Wind Offshore has proposed [REDACTED] [REDACTED]**

- a. Would construction progress [REDACTED] simultaneously?**
- b. If no, what staging assumptions has Invenergy Wind Offshore made in regard to the construction of the two routes in order to minimize disruptions in affected communities?**
- c. Have any studies been performed to analyze local impacts to traffic and communities for the envisioned construction plan?**
- d. If yes, please provide the studies or summaries of relevant highlights. If not, please explain why not.**
- e. What mitigation measures has Invenergy Wind Offshore contemplated to minimize disruptions in local communities if construction is to be staged?**

**Question 48 Response**

[REDACTED]



[REDACTED]

### NJBPU Question 49

**Section 13.3: The Northern Route of the Leading Light Wind proposal will intersect with existing transatlantic fiberoptic cables.**

- a. What assurances/guarantees will bidder provide that proposed installation will not interfere with existing cables/communications lines or otherwise negatively impact existing easement holders' operations?**
- b. What permitting requirements or other consent requirements relate to installing duct banks above or below the existing cables?**
- c. How can the duct banks be re-routed if crossing the existing cables becomes untenable?**

### Question 49 Response

[REDACTED]

### NJBPU Question 50

**Section 13.3: The [REDACTED] proposed is likely to run parallel to and/or intersect with Water and Sewer Lines on the grounds of the Sea Girt National Guard Training Center ("NGTC").**

- a. How will the Leading Light Wind proposed infrastructure relate to the existing below grade infrastructure?**

*b. Is it proposed to be above or below existing infrastructure?*

*c. What permitting requirements or other consent requirements relate to installing duct banks above or below the existing below grade infrastructure?*

**Question 50 Response**

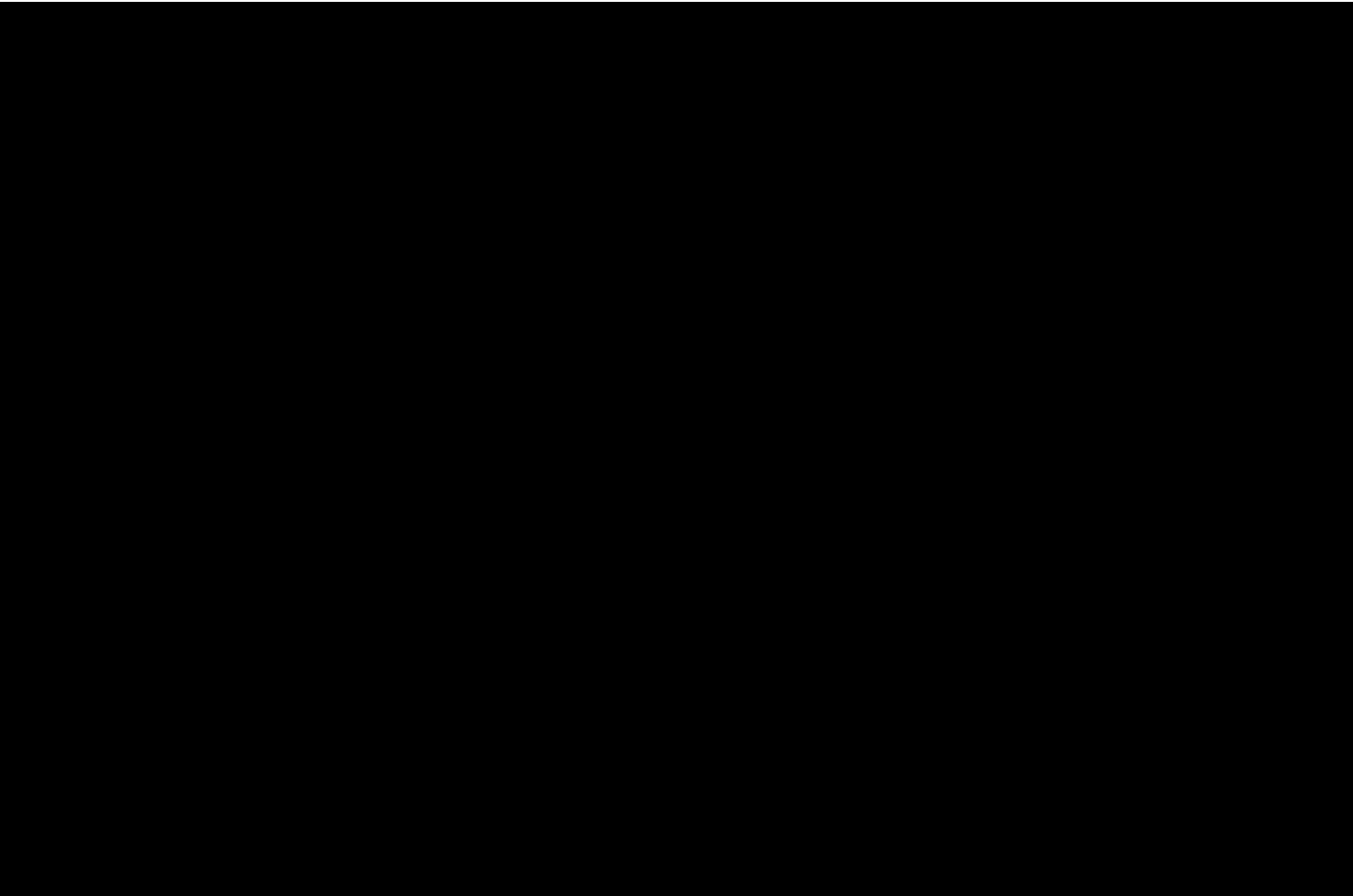
a. [Redacted]

**NJBPU Question 51**

*Section 13.3: Please provide a depiction of proposed permanent/long term easement area as well as a proposed temporary construction easement area in relationship to existing site conditions at the NGTC, if known, at current stage of project development?*

**Question 51 Response**

The proposed temporary construction easements and the proposed permanent easements are depicted on the map below. [Redacted]



## NJBPU Question 52

**Section 13.3: Regarding the landing point for the HDPE conduit:**

- a. What is the plan to manage, test and classify boring materials at the NGTC (soils, sand, stone, drilling fluid, etc.) generated during the construction phase?**
- b. Is there any plan to test soils for contaminants?**
- c. How will the boring materials be removed from the site?**
- d. How will the removal process differ for any contaminated boring materials?**

## Question 52 Response

[Redacted response text]

[REDACTED]

### NJBPU Question 53

**Section 13.3: What NGTC site access restrictions can be expected during the construction phase? How will they be mitigated to ensure NGTC operations are not disrupted?**

#### Question 53 Response

[REDACTED] We propose to conduct the boring activities during [REDACTED], reducing impact on NGTC operations that are more active during [REDACTED]. [REDACTED]

[REDACTED] However, with close collaboration and coordination with NJDMAVA, we can minimize disruption and avoid impacting NGTC activities during specific periods where training and other activities are taking place. During the site visit in April 2023, NGTC management emphasized close coordination and discussed established processes for accessing the site, which we intend to follow fully.

### NJBPU Question 54

**Section 13.3: What sensory impacts will be experienced by humans and animals during the [REDACTED] [REDACTED] For clarification, what sensory evidence of these activities will users of the NGTC, adjacent property owners and animal life potentially experience, i.e. vibrations, sounds from equipment running inland (decimal or relative sound comparison), sounds from equipment running offshore, increased traffic to or from construction site, etc. during the activity?**

#### Question 54 Response

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

### **NJBPU Question 55**

***Section 13.3: Are noise regulations currently in place in or near the NGTC? If so, would the HDD operations exceed the existing noise thresholds? If so, how does Invenergy Wind Offshore plan to overcome this obstacle?***

### **Question 55 Response**

Both the New Jersey noise code and Sea Girt Borough noise ordinance do not have specific noise limits established for temporary construction noise. Instead, per the Township's noise code, Section 3-1.3, construction equipment operation is regulated with operating time restrictions - "commercial operators are permitted to provide their services between 8:00 a.m. and 6:00 p.m. on weekdays or between 9:00 a.m. and 5:00 p.m. on Saturdays." [REDACTED]

[REDACTED]

### **NJBPU Question 56**

***Section 13.3: What impacts to NGTC firing range operations, if any, are expected to be encountered during the construction phase?***

### Question 56 Response

[REDACTED]

[REDACTED]

### NJBPU Question 57

**Section 13.3: How does Invernergy Wind Offshore plan to access the site during construction operations?**

#### Question 57 Response

For access to the NGTC construction areas, we plan to closely coordinate with NJDMAVA on when our contractors can be on site during construction. All personnel will have appropriate authorizations to enter the property and will follow procedures outlined by NJDMAVA.

In addition, we will work closely with the townships to select the best roadways for transporting heavy equipment to staging areas along the cable routes. If any roads require upgrades to be able to support heavy machinery, we will be responsible for those upgrades specific to construction needs of the project. If any roads are damaged during the construction process, we will restore them to the same condition or better. We will also coordinate in advance with the affected townships to ensure that the impact on communities and community operations from the future [REDACTED] staging areas is minimal.

### NJBPU Question 58

**Section 13.3: The proposed Northern Route includes a substantial area of development, both in the areas where the cables will come on shore as well as the route the transmission conduits are proposed to traverse the NGTC.**

- a. **What is the expected performance period to complete construction?**
- b. **During what period of time, i.e., which months, is the construction intended to occur?**
- c. **How does this schedule align with NGTC operations and natural resource management plan for the site?**
- d. **If there are delays in the construction, how will timing for the overall project be impacted?**

#### Question 58 Response

a. [REDACTED]

b. [REDACTED] LLW is aware that seasonal restrictions can exist for the coastal region as well as for roads/inland. LLW will incorporate those restrictions into the construction plan as we get closer to construction to ensure no work is planned around restricted times, most likely the summer tourist season. We will also work with the NGTC if they have any restrictions due to the type of

training that will be taking place. With the length of time allotted for this work, activities and areas of work can be moved around to ensure alignment with all requirements.

- c. In the Figure “LLW Potential Easement of NGTC Property” provided in the response to Question 51, [REDACTED]

[REDACTED] During construction, we will work closely with NJDMAVA to ensure minimal disturbance to their activities.

The buildings and parade grounds and ballfields would remain unaffected by the proposed project footprint. As identified in the response to Question 58.b, the construction is planned for “[REDACTED]” As such, if needed, construction can be shifted temporally so as not to interfere with these operations.

An Inadvertent Return Contingency Plan would be developed for the site prior to [REDACTED]

- d. [REDACTED]

### NJBPU Question 59

**Section 13.3: Under the Northern Route proposal, there is an access road, beach parking area, wetlands, etc that will be affected. Under the Southern Route proposal areas affected on the NGTC include a parking area and a wetlands area. How does Invenenergy Wind Offshore plan to restore areas on the NGTC that will be affected during the construction phase?**

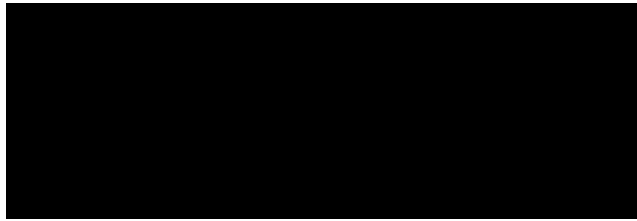
### Question 59 Response

For the [REDACTED]. Post-construction, the area will be graded, and the disturbed grassy areas will be reseeded. The impacted area will be restored to the previous condition or better. [REDACTED]. The [REDACTED] would be installed within the roadway, as shown in the following Figure and in the Appendix to Section 13.





factors, [REDACTED]  
[REDACTED]



[REDACTED]  
[REDACTED]  
[REDACTED] [REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]  
[REDACTED]  
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[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]

[REDACTED]

### NJBPU Question 64

*“Revenues” and “WTG Performance Data” worksheets: A product sum of the Forecast of Energy Prices (\$/MWh) in the Revenues sheet and the Expected Delivered Energy by Month and Calendar Year (MWh) in the WTG Performance Data sheet do not appear to match the Total Energy Revenue (\$) in the Revenues sheet. Please explain why these quantities do not match.*

### Question 64 Response

[REDACTED]

### NJBPU Question 65

*“Revenues” and “WTG Performance Data” worksheets: Similarly, please provide support, in the form of an additional workpaper, to show that monthly energy, capacity, and REC revenues total up to the Total Revenues (\$) by energy year as entered in the Revenues sheet.*

### Question 65 Response

We have uploaded an Excel spreadsheet (CONFIDENTIAL\_LLW Market Forecast and Revenue Calculations\_For NJBPU) to the Levitan & Associates ShareFile site that provides additional insight into how the pricing forecasts and project operational information was used to create the revenues in the Revenue sheet.

### NJBPU Question 66

*“Revenues” worksheet: Please explain why the Forecast of Energy Prices (\$/MWh) for the [REDACTED]*

### Question 66 Response

[REDACTED]

### NJBPU Question 67

***“Revenues” worksheet: All the forms show [REDACTED]. It appears that the values listed here represent the portion of nameplate capacity expected to clear based on the ELCC factor rather than the MW of UCAP cleared. Please confirm and provide an adjusted application form.***

#### Question 67 Response

We can confirm that the entry was representative of the ELCC factor, rather than the MW of UCAP cleared. We have uploaded updated versions of the Application Forms to the Levitan & Associates Sharefile site.

### NJBPU Question 68

***“Revenues” worksheet: The Class I REC Price projections for all energy years listed are escalated at a constant rate of 2% for most of the provided prices.***

***a. Does the price projection represent a floor based on voluntary REC market purchases, or administrative carrying costs?***

#### Question 68 Response

[REDACTED]

### NJBPU Question 69

***Bills-of-Goods-Project worksheet: The construction phase contains “Fisheries Compensation & RMI” and “Community Partnerships & Investments” line items. The operation phase contains “Community benefits” and “Fisheries compensation” line items.***

***a. Please clarify what is included in this line item for each phase. Are all items in Table 8-6 included in these line items?***

***b. For each phase, please identify which line items, if any, contain spending related to environmental and fisheries initiatives, workforce development initiatives, and other community benefit initiatives. For each line item identified, if it contains spending unrelated to these categories, please identify the amount of the line item that is associated with these categories.***

***c. Please provide revised forms that report spending and jobs associated with environmental and fisheries initiatives, workforce development initiatives, and other community benefit initiatives included in the guaranteed minimum direct in-state jobs creation and expenditures reported in row 70 of the Economic Impacts-Project worksheet as a single line item in the development, construction and decommissioning phases. Spending and jobs that are in these categories, but not included in the guarantees, should not be included in the Bills-of-Goods Project worksheet. No other line item should contain spending or jobs related to these categories. Note that spending on the Bills-of-Goods-Project worksheet is in real 2023 \$ while the guarantees on the Economic Impacts-Project worksheet are in nominal dollars.***

#### Question 69 Response

***a. Construction Phase:***

- o [REDACTED]***

[Redacted text block]

Operations Phase:

- [Redacted text]
- [Redacted text]

**b.** [Redacted text block]

**c.** [Redacted text block]



## **Attachment A**

# **Consolidated energyRe Clean Path Holdings LLC and energyRe LLC Unaudited 2021 Financial Statements**



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## **Attachment B**

**Signed and Notarized  
Statement from The  
energyRe LLC Chief  
Financial Officer**





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## **Attachment C**

# **Invenergy Renewables LLC and Subsidiaries Consolidated Unaudited Balance Sheet**



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## Attachment D

# Consolidated Invenenergy Renewables LLC and Subsidiaries 2022 Financial Statements



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## **Attachment E**

# **Consolidated energyRe Clean Path Holdings LLC and energyRe LLC and Subsidiaries 2022 Financial Statements**



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## **Attachment F**

# **Preliminary Design of the Marking and Lighting Site Arrangement Project Option**

**3**





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## **Attachment G**

# **Status of Engagement and Funding Commitments to Date**



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## **Attachment H**

# **Leading Light Wind Potential Easements on NGTC Property**



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## **Attachment I**

# **2023 Consolidated Quarterly Financial Statements for energyRe Clean Path Holdings LLC and energyRe LLC**



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