ANBARIC

Scaling Renewable Energy

New Jersey Offshore Wind Transmission Proposal

New Jersey Board of Public Utilities and PJM

Response to Clarifying Questions Set 1
Boardwalk Power Portfolio

New Jersey State Agreement Approach

Docket No. QO20100630

Response Date: June 10th, 2022

1 Ratepayer Cost Impact

1.1 Question:

Please discuss any options you have considered to make some, or part, of the project eligible for the current federal investment tax credit that is accessible to qualified offshore wind generation projects. Have you considered options for accessing beneficial tax treatment through a sale/lease back or other financial structuring options? If so, please provide specific details on your analysis, how you intend to pursue the tax credits, and any other matters that Board Staff should consider.

Response:

Anbaric has considered and evaluated options for beneficial tax treatment through the existing federal investment tax credit. In addition, Anbaric has considered accessing other beneficial tax treatments via sale/lease-back. Anbaric will continue to evaluate structures and options that allow the projects, and hence the ratepayers to benefit from these and other tax structures. It remains uncertain whether the projects will be eligible. As a general matter, transmission assets do not qualify for the investment tax credit under current law. When owned and operated together with generation assets, it is uncertain whether offshore wind infrastructure, such as export cables and onshore interconnection assets, will be eligible for the investment tax credit. The Treasury Regulations that define wind energy property note that both transfer equipment and power conditioning equipment constitute ITC eligible property, while transmission equipment does not. The IRS has issued guidance on these regulations only once, in the context of an onshore wind farm with a single step-up transformer, and in that guidance demarcated the high side of the step-up transformer as the cut-off point. In contrast, offshore wind facilities often must account for commercial and technical considerations when selecting the stepped-up voltage for the export cable. Because that voltage is often again stepped up (or potentially down) to transmission voltage at an onshore substation, many have found persuasive the argument that the export cable and onshore interconnection assets constitute power conditioning or transfer equipment, and not transmission equipment. The IRS has not specifically ruled on this question, and a number of offshore wind developers have specifically asked this question without getting a clear answer. Thus, it is unclear, even under the financial structures suggested here, whether the ITC would be applicable to the Boardwalk Power Portfolio or any other transmission project, whether built under the SAA approach or by the generators themselves.

There is also the possibility that the BBB legislation (or similar legislation) may enact an investment tax credit for transmission assets. The latest proposal would have created an ITC for transmission assets (whether owned independently or together with generation assets) that transmit at a voltage of at least 275 kV and have a capacity of at least 500 MW, as the Boardwalk Power Portfolio would (or assets that conduct all of their current over a superconducting material).

Until and if transmission ITC legislation is passed, the best path for ITC qualification of export cables and similar assets, though still uncertain would be to combine their ownership and operation with generation assets. As you note, transmission assets owned separately from generation assets can be combined together through a sale-leaseback structure, where the owner of generating assets purchases the transmission assets and then leases it back to the transmission operator or possibly

owned in partnership between the owners of the generation and transmission equipment, respectively. We have not seen much progress on these structures to date in the market, and which structure to choose and how to best implement it would depend on the economic objectives of the parties and the regulatory regimes applicable to these assets. Anbaric is ready and willing to engage in these discussions with generators selected by the BPU for transmission across the Boardwalk Power Portfolio of projects.

1.2 Question:

Do you commit to "pass through" to New Jersey ratepayers the economic benefit you receive from any current and/or future federal tax credits or incentives that may be (or may become) available to your project? If so, please provide specific details on how. If you are electing to keep the economic benefit of any tax attributes, please so specify and address any impact on your bid.

Response:

Anbaric commits to pass through to New Jersey ratepayers the economic benefit Anbaric receives from any current and/or future federal tax credits or incentives that may be (or may become) available to the project. If the tax benefits take the form of an up-front or one-time payment or cost reduction similar to the ITC, the regulatory rate base would be reduced in kind, thus lowering the Total Revenue Requirement and benefitting New Jersey ratepayers. If the tax benefit reduces the Boardwalk Power Portfolio's corporate tax rate, the cost-of-service model would account for the lower tax rate accordingly, thereby lowering the Total Revenue Requirement and benefitting New Jersey ratepayers.

1.3 Question:

Do you intend to review and discuss your proposed rate and FPA Section 205 filings with the NJ BPU prior to submitting those proposals with either PJM or FERC? In connection with the foregoing, are you willing to provide the NJ BPU an opportunity to give feedback prior to your making any FERC filing on this matter?

Response:

Anbaric intends to be transparent with NJ BPU regarding its proposed Federal Power Act Section 205 filings prior to submission to FERC for review and approval. The filing will be consistent with the content of the Anbaric bids, including all cost containment measures and related commitments. Anbaric is happy to work cooperatively with the NJ BPU to share drafts of the proposed filing and take feedback regarding the proposed content of those filings. The State Agreement approach affords the structure for the State of New Jersey to solicit transmission and reap the benefits that result from competition including transparency, innovative design, and consumer cost savings through rate structures that simply do not exist in non-competitive, fully regulated projects where incumbents and regulators hold adverse interests. A result of a competitive, state-run solicitation is that the state gets the benefit of selecting the transmission design, cost package, and rate structure that the state deems in the best interest of consumers.

1.4 Question:

Do you intend to provide the NJ BPU the opportunity to monitor compliance with the selected cost containment and schedule guarantees that would be incorporated in a Designated Entity Agreement ("DEA") with PJM? With respect to the DEA, do you intend to provide the NJ BPU an opportunity to present concerns or ask clarifying questions related to your proposed Schedule E terms before they are presented to PJM?

Response:

Anbaric envisions the NJ BPU as a full participant in all negotiations around the DEA and thus would have an integral role in clarifying not just the terms of Schedule E, but all provisions of the agreement.

Further, we fully anticipate that both PJM and the NJ BPU would monitor compliance with the Boardwalk Power Portfolio's cost containment and schedule guarantees as they are incorporated in the Designated Entity Agreement.

Specifically, the FERC Order accepting the SAA Agreement between PJM and NJ BPU states:

"Pursuant to the SAA Agreement, PJM states that, if NJ BPU notifies PJM that the NJ BPU has decided to select and sponsor an SAA Project, PJM would follow its RTEP process under Operating Agreement, Schedule 6, sections 1.5.8 and 1.5.9 to determine the designated entity to construct, own, and operate the SAA Project [1]. PJM explains that it would track the construction progress of the SAA Project consistent with the development schedule and construction milestones detailed in a designated entity agreement. PJM also states that it would provide construction progress reports to the NJ BPU on a quarterly basis."

In addition to this oversight by PJM, Anbaric will prepare for its lenders monthly cost reports and change order logs that track cost movement and will share these with PJM and the BPU.

[1] Id. at 18 (citing Proposed SAA Agreement §§ 4.1, 4.2).

1.5 Question:

Please indicate whether you have had, or anticipate having, any discussions with the Department of Energy Loan Programs Office (LPO) regarding obtaining support from the LPO for your proposed project(s). If so, please provide an overview of the discussions you have had with the LPO, whether you have filed an initial application with the DOE, or whether you intend to do so.

Response:

Anbaric has had multiple discussions with the DOE Loan Programs Office over the past year to understand the benefits that the LPO can bring to new technologies and innovative projects. A key feature of the LPO program is to provide loans and loan guarantees for projects that may be difficult or expensive to finance. As Anbaric discusses below in connection with other opportunities for federal funding, if selected, we would intend to explore multiple federal programs that can reduce the cost of our projects and thereby reduce ratepayer costs. We would, of course, include the Board of

Public Utilities in our decision-making process about whether to seek federal funds and what source of funding would be most advantageous to the particular project(s) under development.

Anbaric stands ready to proceed without federal funding to complete its projects submitted into the SAA procurement on attractive financial terms. Our investor, the Ontario Teachers' Pension Plan, with more than Canadian $200 billion of assets under management, has abundant capital and can meet the development and permanent financing needs for each of Anbaric's submissions into this procurement. Ontario Teachers' commitments to a highly competitive capped ROE of 8.5% and a 45% equity cap demonstrate its seriousness to providing a low-cost project to New Jersey ratepayers without the need for additional federal funding. That said, as explained further below, should federal funding sources provide a material benefit to the project and New Jersey ratepayers, Anbaric will explore those opportunities.

1.6 Question:

Please discuss any efforts to access non-tax federal support for your project, including, but not limited to, funding from the Department of Energy's Transmission Facilitation Program, other Infrastructure Investment and Jobs Act funding, or other sources of potential support. Would you anticipate filing such a request or would you expect New Jersey to seek any available support?

Response:

The recently passed Infrastructure Investment and Jobs Act, also referred to as the Bipartisan Infrastructure Law (BIL), includes a number of programs administered by the U.S. Department of Energy (DOE) that may provide sources of non-tax federal funding that could support the Boardwalk Power Link projects directly or indirectly. As described by the Biden Administration, the BIL is the largest investment in clean energy infrastructure in American history, with approximately $21.3 billion of federal funding focused on delivering clean power. As discussed below, depending on the DOE program, it may be that Anbaric would be the eligible recipient for funding, it may be that the State of New Jersey (the state itself or the BPU) would be the eligible recipient for funding, for which Anbaric could be a subrecipient or contractor, or it may be some combination of both Anbaric and the state and/or the BPU.

Included in the BIL is the Transmission Facilitation Program (TFP), under which DOE shall facilitate the construction of electric power transmission lines and related facilities using $1.5 billion in funding provided under the BIL.[1] The TFP offers the following three forms of financial support to assist with the construction of new, replacement, and upgraded high-capacity transmission lines – capacity contracts, loans, and public-private partnerships. As mentioned in the Clarifying Questions, one of the types of available financial support under the TFP authorizes DOE to purchase the right to use transmission capacity of up to 50 percent of the total proposed transmission capacity of the transmission line from an eligible project for a term of up to 40 years. DOE anticipates that it will issue its first solicitation in 2022 for eligible projects that could be in commercial operation by December 31, 2027, to be followed by a second solicitation in early 2023. Anbaric, as the developer of the Boardwalk Power Link projects, could seek support under the TFP after the Anbaric project was selected. To demonstrate that the project meets the eligibility requirements under the planned TFP solicitations, Anbaric would likely need to coordinate with the BPU and would need input from

the BPU in responding to a TFP solicitation. DOE only just recently issued a Request For Information regarding its planned first solicitation under the TFP, seeking information regarding the application process, criteria for qualification, and selection of eligible projects to participate in the first solicitation, and DOE also anticipates issuing an additional Notice of Intent and Request for Information in the first quarter of 2023 regarding its planned second solicitation under the TFP.

In addition to the TFP, there other DOE programs in the BIL that may provide sources of potential funding support. One such program provides grants for Preventing Outages and Enhancing the Resilience of the Electric Grid Grants (POERE Grants).[2] The POERE Grants are for supplemental hardening activities to reduce risks of power lines causing wildfires, and the likelihood and consequence of impacts to the electric grid due to extreme weather, wildfires, and natural disasters. This program is split between $2.5 billion in matching grants for industry and $2.5 billion in formula grants for states and American Indian tribes. Given this split, both the state and Anbaric could seek POERE Grants. DOE has indicated that it will commence the POERE Grant application process some time in the third quarter of 2022.

The BIL also includes funding for the existing Deployment of Technologies to Enhance Grid Flexibility (the Smart Grid program), which will provide funding to utilities to, among other things, implement advanced transmission technologies, including dynamic line rating, flow control devices, advanced conductors, and network topology optimization, to increase the operational transfer capacity of transmission networks.[3] At this stage, it is not clear if Anbaric, as the developer of the Boardwalk Power Link projects , could qualify as an eligible utility under the Smart Grid program or if only an already existing utility would qualify. DOE anticipates that it will begin accepting applications for grant funding under the Smart Grid program by the end of 2022.

Another relevant source of potential funding support provided in the BIL is the Program Upgrading Our Electric Grid and Ensuring Reliability and Resiliency (Reliability and Resilience Program).[4] The Reliability and Resilience Program will provide federal financial assistance to demonstrate innovative approaches to transmission, storage, and distribution infrastructure to harden and enhance resilience and reliability; and to demonstrate new approaches to enhance regional grid resilience. The grants would be sought by the state and/or the BPU. Funds from the Reliability and Resilience Program could potentially be used to offset the BPU's costs of implementing the SAA (such as the costs of reviewing proposals or engaging in stakeholder meetings). The DOE anticipates that it will begin accepting applications for grant funding under this program some time in the third quarter of 2022. A separate, pre-existing program, the State Energy Program (SEP), also received additional appropriations under the BIL and, similar to the Reliability and Resiliency Program, funds from the SEP could potentially be used by the state for SAA-related costs.[5]

[1] BIL Section 40106.
[2] BIL Section 40101.
[3] BIL Section 40107.
[4] *See* BIL Section 40103.
[5] BIL Section 40109.

1.7 Question:

Do you commit to "flow through" to New Jersey ratepayers any economic benefits that may be received from DOE or other federal funding sources? If so, please provide specific details on the manner in which this would be accomplished. If you are electing to keep the economic benefit of any federal support, please so specify and address any impact on your bid.

Response:

Yes, Anbaric commits to pass the economic benefits received from DOE or other federal funding sources through to New Jersey ratepayers. If the benefits take the form of an up-front or one-time payment or cost reduction via lower construction funding costs, the regulatory rate base would be reduced in kind, thus lowering the Total Revenue Requirement and benefitting New Jersey ratepayers. If the benefit reduces the Boardwalk Power Portfolio's operating expenses or cost of funding/debt over time, the cost-of-service model would account for the lower expenses accordingly, thus lowering the Total Revenue Requirement and benefitting New Jersey ratepayers.

Anbaric has structured its bids to not only have a ground-breaking ROE structure, but also to reduce that ROE for cost or timing overruns and have an incentive to beat its bid costs. Any cost savings will be flowed through to consumers because Anbaric has not attempted to deviate from the consumer upside of regulated cost of service rates and has structured its bids to incentivize the full extent of cost savings to consumers possible.

As discussed more fully in response to Question 1.6, some sources of federal funding are open only to states, in which case, allocation of the benefits would be up to New Jersey.

1.8 Question:

Please discuss any potential impacts on your project and bid if federal support were made available through DOE's Transmission Facilitation Program in the form of a purchase of transmission capacity, which would then be made available for resale by DOE at a future time.

Could the project be structured as a sale of transmission capacity, where such capacity sales would be backed by a ratepayer-backed purchase of all available capacity? What would be the pros and cons of such an approach?

Response:

Through the TFP, DOE may contract for the right to use transmission capacity of up to 50 percent of the total proposed transmission capacity of an eligible transmission line for up to 40 years. The goal of DOE's participation through acquiring capacity "is to help provide certainty to developers, operators, and marketers that customer revenue will be sufficient to justify the construction of a transmission line that meets current and future needs." One condition to facilitation of an eligible project is that "the project is unlikely to be constructed in a timely manner or with as much transmission capacity in the absence of facilitation provided from the TFP."[1] DOE may transfer contractual rights to transmission capacity to a third party upon payment by the third party.[2] DOE

may also relinquish contractual rights back to the developer of the project, upon payment to DOE for those rights by the developer.[3] If DOE has not terminated or transferred the capacity before the eligible project enters service, DOE is required to market the transmission capacity of the project to which it holds rights under a capacity contract. DOE is also required to seek to ensure that any power marketing contract maximizes the financial return to the Federal Government. In addition to capacity contracts, which are discussed in more detail below, the TFP also authorizes DOE to make loans to eligible entities for the costs of carrying out an eligible project.[4] DOE anticipates that the TFP loan process will be similar to the process for evaluating DOE loans and loan guarantees offered by the Loan Programs Office (LPO) or federal Power Marketing Administrations. The TFP also authorizes DOE to undertake public-private partnerships under which DOE will participate with an eligible entity in designing, developing, constructing, operating, maintaining, or owning an eligible project.

Absent any federal support for the project through DOE's TFP (or any other DOE program), the project could be structured as a sale of transmission capacity, where such capacity sales would be backed by a ratepayer-backed purchase of all available capacity. Ratepayer-backed purchase of all available capacity could have significant cost impacts for New Jersey ratepayers, particularly if the state were to seek to construct and place in operation transmission facilities with sufficient excess capacity that would accommodate future offshore wind generation solicitations. Alternatively, under the capacity contract alternative in the TFP, Anbaric, as the developer of the transmission project could, in coordination with the state, seek to have DOE enter into a capacity contract for a portion of the capacity on the transmission line that would take into account the expected capacity needs of future offshore wind development. With DOE contracting for transmission capacity on the transmission line, Anbaric and the state would be in a position to right-size the line to meet both near-term offshore wind development (new facilities that are expected to come online shortly after the transmission project is completed) and long-term offshore wind development that may not be coming online until well-after the transmission line is operational. Under such an approach, the additional cost associated with building a larger line could be borne initially by DOE rather than New Jersey ratepayers. As new offshore wind facilities came online, DOE would transfer contractual rights to its transmission capacity to a third party and/or market its transmission capacity under a capacity contract. As included in its bid submission, Anbaric has proposed Boardwalk Power Link pathways that could connect the state's current goal for offshore wind capacity and beyond. By approving these projects in advance of the offshore wind generation, NJBPU can potentially make use of the TFP funding.

Anbaric also notes that the other two components of the TFP – loans from DOE to eligible entities for the costs of carrying out an eligible project and/or public-private partnerships – may also provide a path for the project to be right-sized for the state's near-term and long-term offshore wind goals. In fact, one of these alternatives with respect to temporary excess capacity on the transmission facilities may be easier to implement and more palatable from a DOE perspective, because under these approaches, DOE would not be required to market the excess transmission capacity to which it holds rights under a capacity contract during the interim period while additional offshore wind generation is developed. (Given the purpose and location of these transmission facilities, DOE may

not be able to successfully market such excess transmission capacity without additional offshore wind generation.) Whichever of the three types of support to facilitate construction of eligible projects included in the TFP, Anbaric urges the state to seize this opportunity for New Jersey, in coordination with the federal government and Anbaric, to take action now that will facilitate the rapid transition to a low-carbon future.

[1] BIL Section 40106(j)(8) (*emphasis added*).

[2] BIL Section 40106(f)(5)(B).

[3] BIL Section 40106(f)(5)(C)-(D).

[4] BIL Section 40106(g).

2 Project Design

2.1 Question:

Has your offshore platform been designed with sufficient space and equipment for future interconnection with other offshore platforms as a part of an offshore transmission network?

Response:

Yes, the platforms are designed to have the facilities to connect up to two additional future HVDC circuits to other offshore platforms or POIs. This is enabled by including a DC switchyard with two spare disconnector bays and all associated space required for DC cable routing on the platform, spare J-tubes and the necessary secondary and auxiliary equipment. In addition, the control & protection system will include the necessary multi-terminal control capabilities. As such, the future HVDC connections will be 'plug & play'. Realizing the facilities for future interconnection on the DC side compared to the AC side, is the most optimal solution in terms of performance and the amount of required equipment offshore. In addition, to emphasize, the cost proposal provided in the project submittals are inclusive of the above equipment.

2.2 Question:

Provide more detail on risks associated with 400 kV HVDC cables.

Response:

- Have you secured partners for fabrication and delivery of necessary 400 kV HVDC cables and components?

  Anbaric has liaised with a number of well-known manufacturers of HVDC cables and equipment by means of a Request for Information (RFI) process to assess the suppliers' ability and capacity to deliver the necessary technologies and amounts thereof. On the

basis of this process, Anbaric has technically pre-qualified and gone forward with two preferred vendors for cables and converter systems and progressed into detailed discussions on technologies, basic designs, planning, local content and costs. Any further discussions, especially when securing firm production slots will commence immediately upon award of the offshore transmission solicitation.

Anbaric has entered into a comprehensive agreement with AECOM, a leading global engineering, project and construction management firm specific to work on the Boardwalk Portfolio projects. In advance of a potential award, AECOM will assist Anbaric in preparatory work, including vendor prequalification, drafting of tenders, and related items that can be issued/executed immediately upon award.

- Describe any procurement or delivery agreements that are in place for delivery of any 400 kV HVDC cables and components.

  Currently no procurement and delivery agreements are in place for HVDC cables and components. However, Anbaric has close relationships with equipment suppliers and partnered with Ferreira Construction who have a proven track record in the construction of underground cable installations and AC substations.

- Describe any risks that exist that could delay fabrication or procurement of any 400 kV HVDC cables or components. Describe how you intend and plans to mitigate those risks.

  Before 400 kV HVDC equipment can be procured, several steps have to be completed which can introduce risk of delay. These steps can be classed in project award, completing design, obtaining site control, completing permitting, and executing the procurement itself.

  In order to reduce the risk of delays due to project award, Anbaric recommends the BPU and PJM to take all possible steps to avoid any delays in announcing the result of the offshore transmission solicitation.

  Anbaric has progressed the design of the proposals to a sufficiently advanced stage, that the detailed design steps necessary for the procurement of components can start immediately upon contract award. To ensure sufficient resources to carry out the necessary engineering tasks, Anbaric has engaged with reputable engineering and construction management consultants to ensure availability of expertise and personnel.

  With regards to site control, Anbaric has obtained site control of the onshore converter and landfall sites and cable for the proposals for circuits connecting to Deans 500 kV substation, reducing the risk of delays due to the search, identification, and acquisition of suitable sites. For the other POIs, Anbaric has a clear plan towards obtaining site control in place which will be commenced immediately upon project award.

Probably the biggest cause of project delay which may also impact the procurement, is permitting. Anbaric has mitigated this risk for the proposals connecting to Deans 500 kV substation by having completed the full permitting for the onshore cable route and converter stations. For the other routes, permitting plans based on the experience gained in permitting the Deans routes are in place, and will be executed immediately upon project award.

Procurement itself is subject to the qualification and selection of capable vendors with proven track record and available production capacity, the creation of all necessary procurement documentation and the evaluation of all bids. Anbaric has already undertaken a selection of vendors, and based on prior experience with executing HVDC projects can move forward quickly in the procurement process. In order to mitigate supply chain risks, whilst minimizing interface risks, Anbaric has developed a procurement plan for all major subsystems and T&I project phases.

- Describe the global service record of 400 kV HVDC components; has this technology been used elsewhere? If so, where? Describe any difficulties that were encountered in previous uses of this technology.

  Several ±400 kV HVDC systems have been in use worldwide since 1979. Until 2010, these systems used line commutated converters (LCC) and overhead lines (OHL) and/or mass-impregnated (MI) paper insulated cables. Modern ±400 kV HVDC systems installed after 2010, use voltage sourced converters (VSC) which also enables the use of cross-linked polyethylene (XLPE) insulated cables. As the technology developed over time, the power rating has grown from 500 MW per circuit to 1.1 GW, and with 1.2 GW in the pipeline. The first applications were built to exchange power between different countries by means of submarine cable, but recently the ±400 kV voltage rating is also used to connect offshore loads and wind power generation, clearly demonstrating the applicability of this voltage class to multiple different offshore transmission purposes.

  Several projects around the world utilizing ±400 kV HVDC systems are listed below:

  - **CU HVDC project**: 1 GW, LCC, OHL, bipole, US, generator lead line, USA, 1979
  - **Fenno-Skan 1&2**: 500 MW, LCC, MI cable, bipole, Finland-Sweden, 1989
  - **Kontek link**: 600 MW, LCC, MI cable, asymmetric monopole, Denmark-Germany, 1995
  - **Basslink:** 500 MW, LCC, MI cable, asymmetrical monopole, Australia-Tasmania, 2005
  - **StoreBælt:** 600 MW, LCC, MI cable, asymmetrical monopole, Denmark-Sweden, 2010
  - **NEMO link:** 1 GW, VSC, XLPE cable, Belgium to UK, symmetric monopole, Belgium-UK, 2019
  - **Rudong**: 1.1 GW, VSC, XLPE cable, symmetric monopole, offshore wind export, China, 2021
  - **ULTRANET**, 2 GW, VSC (full-bridge), OHL, bipole, multi-terminal, Germany, In construction
  - **Project Lightning**: 1.2 GW, VSC, XLPE cable, bipole, power from shore, UAE, 2025

The ±400 kV systems have been built using different technologies, but there is a clear trend towards using modular multi-level VSC converters and cables with extruded polymer insulation. No particular problems to the use of ±400 kV as a voltage rating have been reported. MMC-VSC converters and XLPE HVDC cables are both relatively new and rapidly developing technologies, and teething troubles have occurred in early projects, but are now considered to be overcome, and HVDC links based on these technologies are considered robust and mature. As ±525 kV XLPE cables and ±800 kV MMC-VSC converter systems have been fully qualified and are being produced, ±400 kV is no longer seen as a technical challenge, but can be considered a safe choice.

- Describe the mitigation measures you are taking to protect J-tubes against the risks of sinking and becoming deburied.

  The J-tubes themselves will be mechanically fixed to the jacket support structure of the offshore platforms and will thus be prevented from sinking. It is possible that cables which exit the J-tubes at a so-called bell-mouth may become exposed due to the scour effect around the cable and J-tube. To prevent this from occurring, scour protection systems (SPS) will be installed around the J-tube exit and cable touch down point to the location where the cable is installed with regular means (e.g., jet trencher). Typically, such SPS consist of rocks and/or concrete mattresses. The exact choice of SPS and the moment of installation are considered part of the detailed design and will be determined after project award.

- Describe the mitigation measures you are taking to protect against poor cable installation as well as internal cable installation faults, so that these faults are identified and corrected prior to the cable being energized.

  The quality of the export cable design, qualification, production, transport, installation, and commissioning is paramount in achieving satisfactory availability of the proposed transmission links. In order to avoid cable faults due to internal reasons, the design and production of the cable and accessories will be subject to stringent quality requirements. Only cable vendors with a proven track record and using a certified quality system will be qualified for tendering. The cables and accessories will be designed, qualified, and tested according to the latest applicable IEC and CIGRE (TB852) standards. Quality checks consisting of material, electrical, and mechanical tests will be performed in regular intervals and at all major development steps with pre-defined pass-fail criteria. Any non-conformities will be handled in a systematic manner in liaison with the BOEM appointed CVA. An example of the electrical tests are partial discharge measurements which are performed on every production length after extrusion and after factory splicing, which can detect defects in the insulation and their location, to ensure that they do not end up in the delivery length. Other tests/measurements focus for example on the material quality, dimensions of produced product, quality of lay-up and quality of splices/connections in any of the cable sub-components.

Similarly, in order to avoid cable faults due to installation issues, the cable will be monitored during and checked after each major transport & installation step. During installation, the mechanical forces, position, and direction will be recorded and the touch down point of the cable on the seabed will be continuously monitored by video. Prior to energization, the cables will be tested using high voltage according to the applicable standards. DC voltage tests will be carried out, and if possible also AC tests. The cable bundle will include an optical fiber cable which will be monitored using optical time domain reflectometry (OTDR) during the cable laying and burial process to detect interruptions and deformations to the cable bundle which could indicate damage due to for example coiling or impact by the burial equipment. The exact tests and measurements to be performed to guarantee high quality depend on the exact cable system design, which will be fixed after project award.

2.3 Question:

Please describe due diligence performed in selecting optimal landfall location for each option 2 project.

Response:

In general, landfall locations were evaluated to optimize the following considerations:

- Shortest route length to converter station / substation
- Minimize amount of property jurisdictions along route
- Preference for state/county rights of way over local jurisdictions
- Minimize “off-pavement” installations and trenchless crossings
- Minimize impact upon sensitive habitats and known contaminated conditions
- Availability of adequate space for cable landing construction staging
- Anticipated likelihood of securing non-condemnation agreement to occupy land properties/rights of way
- Avoidance of Green Acres regulated properties

With regard to Options 2.6/2.7 (Bay Head/Point Pleasant), Anbaric recognized that a landing in northern Ocean County would present the best opportunity to optimize the above-referenced criteria. In particular, the route would provide relatively straight-line access to the Larrabee Substation while minimizing right of way jurisdictions to two or less municipalities, Ocean County and State-controlled entities. In both cases (2.6 & 2.7), the beach crossings would occur across private properties unencumbered by Green Acres. In the case of a Point Pleasant Beach landing, the cables would transition directly from private property to a County Road. The County Road would accommodate the cable along the entire route, to within approximately one mile of the substation using arterial road systems. Alternative routes were explored, with a particular emphasis upon landings in southern Monmouth County. While these routes have been traditionally utilized for transatlantic fiber optic

cable landings (e.g., Sea Girt Army Camp, Manasquan, Avon-by-the-Sea and Bradley Beach), those projects terminated their cable in close proximity to the landing location (i.e., Sea Girt and Wall Township). Routing cables from those landing points to the Larrabee substation is a much more complex endeavor. Specifically, a northern route would require use of rights of way under the control of multiple local jurisdictions (including roads that are residentially developed in nature), the introduction of a rail crossing, traversing through much more sensitive habitats, and around or through Allaire State Park. These northern routes would also introduce several additional miles of cable length to make the connection. For these reasons, a southern route as proposed by Anbaric is a superior alternative.

Option 2.11 and 2.12, which traverse New Jersey state waters through Raritan Bay and the Arthur Kill represents an "all-riparian" route that connects directly to the Option's principal proposed converter station property and is located within ½ mile of the Sewaren Substation. Alternative feasible landing options were considered. In particular, a landing along the Raritan Bay shoreline of Perth Amboy was considered. The route would have a substantial portion through the crowded urban environment of Perth Amboy and would require multiple rail crossings. While feasible, the proposed landing is superior from a constructability and maintenance perspective.

For options which would deliver power to the Dean's substation traverses New Jersey state waters through the Raritan Bay and lands at a former marina property in Keyport. This landing location, and the associated upland route to the Dean's substation, are the result of legacy efforts by Anbaric to provide facilitate local power transmission and have been repurposed for this solicitation. The advanced state of the Dean's transmission route includes a purchase option for the cable landing property and advanced discussions with the municipality to redevelop the property as an extension of the existing adjoining waterfront park after cable installation is complete. The proposed landing property is presently vacant and without sensitive habitats.

The advanced state of the landing entitlements and Anbaric's right to purchase the property preceded the current solicitation and represented a compelling case for the landing location selection. While other opportunities to land the cable exist along the southern shoreline of Raritan Bay, the selected property is unique in that is not contemplated for redevelopment, is without sensitive environmental communities, and has been vetted by the local government for the proposed use.

2.4 Question:

Explain any difficulties considered by Anbaric in selection of landfall at Bay Head/Point Pleasant beach (Options 2.6, 2.7).

Response:

As noted in response item 2.3 (above) the proposed landings associated with Options 2.6 and 2.7 facilitate the realization of the optimum route for reaching the Larrabee substation. As with all landings, the recreational beaches present a particular challenge from both a construction timing, public perception, and local government perspective. Both proposed landing locations (Bay Head and Point Pleasant Beach) would cross the beaches and dunes on private property that is unencumbered by Green Acres and would require that agreements be reached with those entities

without the power of condemnation. The Bay Head landing (Option 2.6) would have the added complexity of occupation of a short section of municipal right of way (2 blocks) before reaching a County Road. The Point Pleasant Beach option would transition from private property directly to a County Road without occupation of a municipal right of way.

The Bay Head landing area lies within a Corps of Engineers Federal Shore Protection Project that is subject to an easement in favor of the NJDEP. This condition is not unique to the Bay Head landing and will be encountered on other proposed power landings throughout the State of New Jersey. Anbaric understands that the Corps and/or NJDEP will require that the HDD profile extend offshore to a distance that is beyond the "depth of closure" of the active beach profiles and that it also extends to depths that are sufficiently deep to avoid potential daylighting of the cables in the case of future erosion and sea level rise impacts. Anbaric has anticipated these conditions in its route selection and will comply with Corps/NJDEP design requirements as necessary. The Point Pleasant Beach landing site is not part of the Federal Shore Protection Project but has similar challenges. In particular, the landing area is occupied by pile-supported structures and a steel sheetpile seawall, which will be avoided and/or cleared by sufficient depth as required.

In summary, the Bay Head and Point Pleasant Beach landing sites have challenges that are typical in comparison to other potential landing sites, but also have their own unique challenges. Anbaric has considered the net influence of those challenges, along with the benefits of landing in those locations, and determined that they represent an optimal landing location for the Larrabee Substation. Anbaric is prepared to work with the private landowners and municipalities to reach mutually beneficial agreements that will promote effective transmission of offshore wind power.

2.5 Question:

Please describe whether offshore platform locations are flexible. If the locations are flexible, please identify whether there are any restrictions on the locations in which Anbaric would be able to site its facility, whether the offshore platform locations will allow lease holders in all available lease areas to participate in future offshore wind solicitations, and the costs of moving the offshore substations from the currently proposed locations. Please elaborate on any additional impacts moving the offshore substations would have on your proposal, including costs.

Response:

Yes, the platform locations are flexible and can be placed anywhere alongside the lease areas or even inside the lease areas, in agreement with the lease area owner, to a location which maximizes benefit for the New Jersey taxpayer and reduces implementation risk. The locations provided in the proposals should be considered to be preliminary 'placeholder' locations, which are also used as the basis for the economic analysis.

The platform location is restricted by any exclusion zones imposed by federal and state authorities such as USACE, Coast Guard, etc. Furthermore, Anbaric prefers to place platforms in locations where in visual and environmental impact can be minimized.

The proposed platform locations were selected to enable the lease holder of the immediately selected lease area to participate in offshore wind solicitations. The transmission solution proposed

by Anbaric is flexible and can in principle be used to enable any lease holder from any lease area to participate in offshore wind solicitations, by adjusting the platform location, and the export cable route, accordingly.

Moving the offshore substations has an impact on the following aspects:

- Water depth
    - Jacket height
- Seabed soil type
    - Type and dimensions of piles
- Currents (minor if not negligible change)
    - Jacket design
- Wave heights (minor if not negligible change)
    - Jacket height
- Platform visibility from shore
- Cable route
    - Cable length (major impact)
        - Cable cost
        - Losses
        - Availability
    - Seabed soil type
        - Ampacity
        - Installation type
    - Crossing of other infrastructure

Changing the platform location will predominantly impact the jacket design and the cable length, which have direct impacts on the required CAPEX. Furthermore, changing the cable length will also have an impact on the operational performance of the cable, most notably the losses and availability. The degree to which CAPEX and OPEX are affected depends on the extent to which a different platform location changes jacket height and cable length and can thus only be determined when the final locations are selected, but the impact is mostly proportional.

2.6 Question:

If the location of the offshore converter stations is flexible, please explain your proposed approach to identifying the location of the offshore platforms with OSW generation developers that would result in lowest cost to New Jersey ratepayers and reduce project-on-project risk for delivering the offshore wind generation.

Response:

The platform locations in proposal have been selected with the aim to minimize array cable length whilst assuming that the platform could not be placed inside the lease area. To optimize the value to New Jersey ratepayers, the platform locations should be selected to minimize the total length of wind farm array cable, maximize the utilization of the lease area for placement of offshore wind turbines, whilst minimizing the length of the export cable and ensuring access for platform interlink cables. This almost certainly results in a location inside the lease area. Because of this, and because the wind farm layout must be known, the only way to achieve these objectives is to choose the platform location in liaison with the lease area holder.

In order to reduce project-on-project risk, the construction planning of the offshore transmission link must be aligned with that of the offshore wind farm, such that both systems are fully completed and commissioned at the required commercial operation date. This is especially relevant for the installation and testing of the array cables at the offshore substation. Ideally the export link is completed and operational before the first wind farm string of turbines is completed, so that the first turbines can already start delivering power whilst the remainder of the wind farm is constructed. Conversely, the export link can only be fully commissioned when the full wind farm is completed, and full load tests can be performed. To achieve these objectives, which are both in the interest of the lease area holder as well as the New Jersey rate payer, Anbaric proposes to engage with the lease area holder as soon as possible.

2.7 Question:

For options 2.6, 2.7, are the additional requirements to make the offshore platforms multi- terminal already included? If not, describe additional design features and costs that would be required to allow this functionality.

Response:

Yes, these options are based on the design standard outlined in the reports and will thus be identical in functionality and general arrangement as all other options (except for option 2.9 which uses 320 kV instead of 400 kV). The platforms will include the primary equipment (two additional HVDC GIS disconnector bays), secondary equipment (instrumentation, aux supply, bay controllers), space provisions (space for platform cable routing, J-tubes, seabed space) for two additional HVDC cable connections, and the control & protection systems of the onshore and offshore converter stations will be equipped with the necessary multi-terminal control & protection functions.

3 Siting/Permitting

3.1 Question:

Identify progress made in securing necessary land, easements, ROW grants, etc. for your project(s) since submittal.

Response:

Deans

Subsequent to submission, Anbaric entered into option agreements to purchase additional parcels adjacent to our existing property holdings adjacent bringing our total acreage at this site to 27 acres optimally located adjacent to the Deans substation. Refer to the image below for details.

It also should be noted that early on Anbaric filed an Interconnection Request for a 1,200 MW HVDC Merchant Transmission line with Firm Injection Rights into the PSEG Deans 500kV substation. The Merchant Transmission Request, Queue Position AE1-037, Feasibility study was completed in May 2019. Network Impacts for AE1-037 were evaluated as a 1200.0 MW of firm injection at the Deans 500kV substation in the PSEG area. AE1-037 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project AE1-037 was studied with a commercial probability of 53%.

Potential network impacts were as follows:

Summer Peak Analysis – 2022 Generator Deliverability (Single or N-1 contingencies for the Capacity portion only of the interconnection) None.

Multiple Facility Contingency (Double Circuit Tower Line, Fault with a Stuck Breaker, and Bus Fault contingencies for the full energy output) None.

Contribution to Previously Identified Overloads (This project contributes to the following contingency overloads, i.e. "Network Impacts", identified for earlier generation or transmission interconnection projects in the PJM Queue) None.

Short Circuit (Summary of impacted circuit breakers) None.

Network Impacts, initially caused by the addition of this project generation) None.

Contribution to Previously Identified System Reinforcements (Overloads initially caused by prior Queue positions with additional contribution to overloading by this project. This project may have a % allocation cost responsibility which will be calculated and reported for the Impact Study) None.

The AE1-037 project will be responsible for the following estimated costs:

- Description Total Cost Attachment Facilities $ 0
- Direct Connection Network Upgrades $ 0
- Non-Direct Connection Network Upgrades $ 20,409,332

Total Costs $ 20,409,332

The favorable study results were the basis for Anbaric's 831 and 841 submissions, Deans to Hudson South 1 & 2, and reinforce the Deans POI as a low-cost location well suited to complete and low-risk permitting.

Sewaren

Anbaric continues to have discussions with multiple property owners regarding viable parcels which are suitable for the converter station construction and in near proximity to the Sewaren substation. We intend to have parcel selection finalized by the end of the summer.

Larrabee

Anbaric is in active conversations with the town regarding preferred parcels, as well as with counsel for the preferred parcel immediately adjacent to the Larrabee substation. We anticipate an update on this parcel by the end of June.

As the near total majority of Anbaric's proposed routes are in county and municipal rights of way, Anbaric has continued meetings with relevant municipalities and counties regarding project details. In addition, Anbaric remains in consultation with NJDOT regarding state highway involvement and an easement needed in Hazlet.

3.2 Question:

Please describe how your proposed solutions will minimize environmental impacts and permitting requirements through the use of common corridors that can accommodate more than one transmission cable, including an estimate of the miles in which facilities/infrastructure will be co-located within a common corridor and miles in which facilities/infrastructure will be located in separate corridors.

Response:

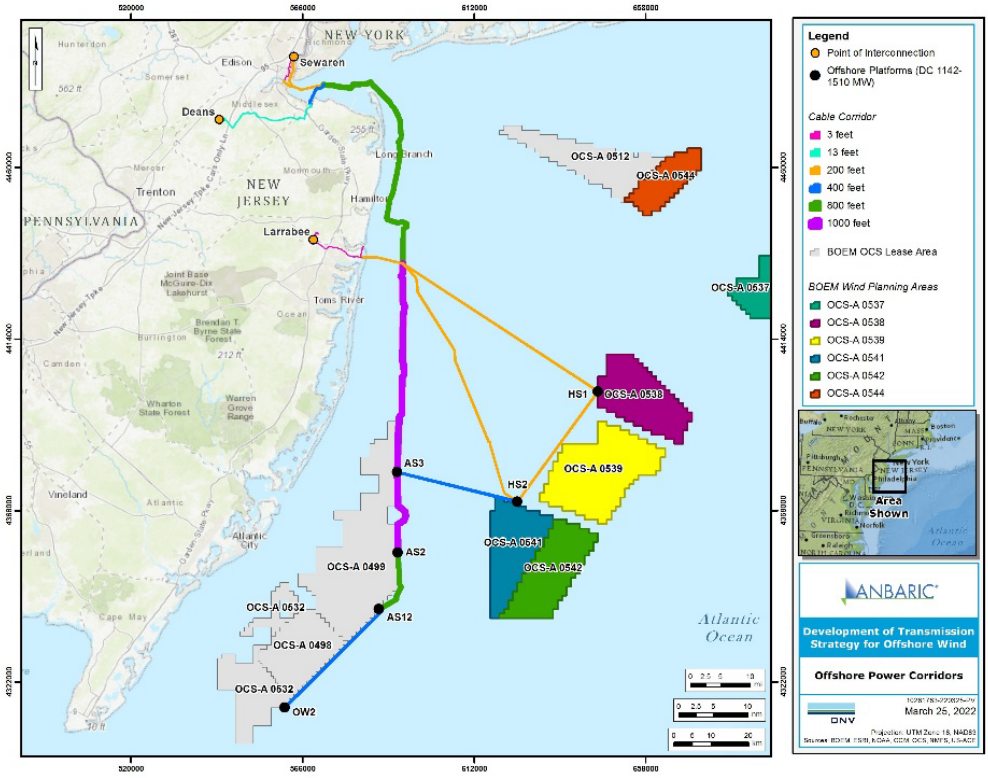
The use of HVDC technology minimizes the environmental impact and permitting requirements due to its significantly higher capacity per cable circuit compared to AC, thus requiring far fewer cables, and a significantly narrower right-of-way. This space saving property enabled all single circuit land transmission routes to be designed to utilize municipal roads as common corridors. Utilizing paved roadways minimizes environmental impacts as they are considered brownfield common corridors. As such, environmental permitting is more easily facilitated as compared with greenfield common corridors.

The submissions where two circuits are required, will be co-located in municipal roadways. To comply with guidelines to avoid NERC Category P7 events (i.e., common structure contingency events modified for underground installations), the circuits will be required to be separated by a minimum distance of 10 feet.

The only exception to utilizing such common corridors will be where the minimum separation is not physically possible due to a lack of available right of way. The only submissions where this would occur are if proposals 841 and 831 (Deans to Hudson South 1 and 2) are selected together requiring two circuits for a total of 2,800 MW. Under that scenario, both circuits would be located in a common corridor in the municipal road with the required minimum separation distance for 20.68 miles out of the total route of 21 miles. The portion of the transmission distance that could not be physically co-located in a common corridor, would be in Keyport as the circuits approach the land to marine transition at the coastline. The total distance requiring separate corridors is 0.32 miles. Approximately 98.5% of the two transmission circuits would utilize a common corridor.

The Boardwalk power portfolio has been designed to utilize common corridors offshore wherever possible to minimize impact to the environment and other marine space users. This is illustrated in the figure below, in which the different colors of corridors indicate different corridor widths to

accommodate different numbers of circuits. These numbers of circuits have been determined based on the maximum number that could be present if a complete Boardwalk Power Solution was awarded.



3.3 Question:

In the case where facilities/infrastructure are using common corridors, please explain the methods for reducing environmental impacts, including what equipment will be used in common corridors, when each facility will be installed, and how they will be installed, and how the common corridors will mitigate, minimize, or avoid future construction efforts.

Response:

Anbaric will utilize common corridors where feasible (i.e., Proposals 841 and 831 [Deans to Hudson South 1 and 2] which proposes both circuits to be located in the municipal road common corridor with the required minimum separation and distances on the common structure to avoid NERC common structure contingency events for 20.68 miles out of the total route of 21 miles). Common corridors have the inherent advantage of reducing the aggregate construction footprint, compared to independent installations, and can substantially reduce environmental impacts when carefully planned and sited. To minimize environmental impacts, routing of the HVDC ductbank will be maintained within paved public ROWs to the maximum extent practicable, with sufficient geometry to

accommodate two HVDC circuits. HVDC technologies reduces the number of conductors required, reducing the trench width and depth. The two circuits will be installed independently, limiting traffic disruption. The HVDC system will be installed as a cut and cover ductbank except in environmentally sensitive areas, where trenchless excavation technologies will be utilized. Project staging and temporary construction areas will also be sited outside of environmentally sensitive areas. In all cases, project design and construction activities will make use of best management practices (e.g., soil erosion and sediment control, matting, materials management, etc.) to limit the potential for off-site impacts.

Anbaric's proposals design all common corridors in a manner that ensures future maintenance and/or service of each element of the infrastructure can occur with minimal or no interruption to other elements of the system(s) and will promote minimization of future construction efforts.

3.4 Question:

Please identify all discussions that you have had with BOEM regarding the siting and permitting of your proposed project, including but not limited to (a) whether a right-of-way (ROW) grant or right of use authorization (RUA) will be required, (b) whether BOEM will conduct or be required to conduct a competitive solicitation prior to the issuance of a ROW grant or RUA, (c) BOEM's information needs and expected timeline for the issuance of any competitive solicitation, ROW grant, and/or RUA (including information needed and the expected timeline for conducting any required review under NEPA), and (d) the expected timeline for you to submit, and BOEM to review and approve, a general activities plan (GAP) for your proposal.

Response:

In April 2018 Anbaric filed a Right of Way and Right of Use Easement Grant (ROW/RUE) application with BOEM for an offshore wind transmission system, the NY/NJ OceanGrid™. Since the filing of the application, Anbaric has had periodic meetings with BOEM, and has kept the agency apprised of the routing proposed to the NJBPU in this SAA solicitation.

Any third-party transmission provider wishing to utilize the federal lands of the outer continental shelf (OCS) will have to file with BOEM for a ROW/RUE grant, and to our knowledge Anbaric is the only entity to have an active application with BOEM for transmission projects to deliver offshore wind from the OCS to New Jersey. Upon award by the NJBPU, Anbaric will amend its application to account for the selected ROWs.

Under the regulations detailed in 30 C.F.R. § 585.300, BOEM would then issue a request for competitive interest. While it is possible that BOEM would find competitive interest and thus issue a competitive solicitation for the ROW, Anbaric believes it will not be necessary for BOEM to conduct a competitive auction for issuing the requested ROW/RUE grants because (1) ROW/RUE grants are not exclusive and multiple grants or easements may be issued within the same lease block or aliquot; and (2) BOEM recognized during the development of its regulations governing ROW/RUE grants that, due to the nature of offshore transmission systems and the narrow areal requirements involved, even if there were another proposed transmission system that could seek to run through

some of the same lease blocks or aliquots within a grant area, the proposals would not be mutually exclusive and therefore the need for an auction is not expected. Similarly, the requested ROW/RUE grants for a planned offshore transmission system to connect multiple WEAs with interconnection points in New Jersey do not compete or otherwise interfere with any WEA lessee's right to request project easements outside of its WEA for transmission-related infrastructure necessary for the full enjoyment of its lease.

The next step after BOEM's competitive interest review and (potentially) grant of ROW/RUEs is review and approval of a GAP. Under BOEM's process, the GAP is the key project approval document for the transmission system, analogous to (but less involved than) a COP for a wind power generation facility submitted pursuant to a renewable energy lease. The process for approval of a GAP involves: (1) BOEM's technical review of the GAP, (2) BOEM's analysis under NEPA of the proposed project and activities described in the GAP, and (3) compliance with other relevant federal laws.

(1) Submission of GAP and Technical Review. Under BOEM's regulations, a GAP describes "proposed construction, activities, and conceptual decommissioning plans for all planned facilities" for development under a ROW/RUE grant. 30 C.F.R § 585.640(a).

- A GAP must be submitted to BOEM within **12 months** of a grant issuance. 30 C.F.R § 585.640(b).
- A GAP must include the following types of information:
  - Results of geophysical and geological surveys, hazard surveys, archaeological surveys and baseline biological studies and information. 30 C.F.R. § 585.645(a).
  - Project information, including location, general structural and project design, deployment activities, solid and liquid wastes, decommissioning and site clearance information, air quality information, all required federal state and local authorizations, list of agencies and persons communicated with regarding proposed activities, and financial assurance information. 30 C.F.R. § 585.645(b).
  - Construction and operation concept, deployment activities, operating procedures and systems, construction schedule and certified verification agent information. 30 C.F.R. § 585.645(c).
  - Detailed information to assist BOEM in complying with NEPA and relevant resource laws. 30 C.F.R. § 585.646.

(2) NEPA. In addition to its technical reviews, "BOEM will prepare appropriate NEPA analysis" related to the GAP. 30 C.F.R. § 585.648(b).

- BOEM also will coordinate with "relevant State and Federal and affected Indian Tribes. 30 C.F.R. § 585.648(c).
- A GAP submitted for an area "in which BOEM has not reviewed GAP activities under NEPA" must describe "resources, conditions and activities", including:
  - Hazard information, water quality (turbidity and suspended solids from construction), biological resources, threatened or endangered species, sensitive biological resources or habitats, archaeological resources, coastal and marine uses, and Coastal Zone Management Act (CZMA) consistency

certifications. 30 C.F.R. § 585.647(a).

Timing: Upon award, Anbaric intends to immediately amend its ROW/RUE Grant application with BOEM. We believe BOEM could then issue a Determination of No Competitive Interest within 6 months, and within another 6 months could issue the ROW/RUE grant. Following this, Anbaric would have 12 months to prepare the GAP, and would expect NEPA approval within 12 months.

[1] https://www.boem.gov/NY-NJ-Programmatic-Agreement-Executed/.

3.5 Question:

Please identify all discussions you have had with current and recently awarded lease holders with respect to your proposal, any concerns that you have identified as a result of those discussions, and any concerns that have been raised by those lease holders.

Response:

Anbaric has not had conversations with any leaseholders to date regarding the proposed projects. However, in the project design, Anbaric has been mindful of public stated and/or industry recognized concerns of generators.

As an example, for proposal development, Anbaric has carefully considered the locations of the offshore substation platforms (OSPs) and any submarine transmission cable to be just outside the boundary of the wind energy areas since Anbaric understands that these offshore transmission infrastructures cannot be placed within the WEAs without prior consent from the lease holders.

Based on the design considerations, it is expected that the offshore WTGs will be connected to the offshore converter station by means of array cables in groups with the number of turbines limited by the rating of the array cable. It is expected that the OWF developers will bring the wind farm array cables directly to the offshore substation. To minimize array cable length, the Offshore Converter Station (OfCS) should preferably be placed within or at least as close to the OWF as practically possible. It was assumed that the offshore transmission infrastructure such as OSPs and submarine transmission cables cannot be located in or pass through OFW lease areas, without prior consent of the developer who are awarded site control of the lease area in the Bureau of Ocean Energy Management (BOEM) auctions. Hence, for the purpose of this proposal development and all related calculations/estimations, the offshore substation is assumed to be situated just outside the border of the WEAs in a location which to the extent possible is central to the WEA.

Anbaric highly recommends necessary collaborations to allow the flexibility for Anbaric and the developer of the WEAs to come to a mutual agreement on a more optimal OSP placement within the WEA, upon award of both the New Jersey offshore wind and the State Agreement Approach (SAA) transmission solicitations. For two examples of such collaborative approach between Anbaric and the lease holders, please refer to the response to the Question 2.6 for additional details.

4 Project Schedule

4.1 Question:

Offshore wind developers have identified schedule risk as the primary concern for selecting offshore transmission facilities via the SAA. Please explain how your proposed schedule will ensure offshore wind generation facilities will be able to meet their construction schedule and projected in-service date for each solicitation, and the need for electricity back-feed 12 to 15 months prior to its in-service date.

Response:

Preliminary schedules for each of the proposed projects are provided in Project Schedule Section (Section 8) of the NJBPU Supplemental Data Collection Form as well as in Attachment 11 in the original submission. Anbaric considered critical/major activities while preparing the Project Schedule including the following tasks:

- Onshore and offshore licensing and permitting, ROW, and land acquisition
- Design and engineering
- Manufacturing and procurement
- Construction
- Commissioning and testing.

Anbaric based the Project Schedule on the market information available at the time of the proposal submission and RFI responses from various suppliers as well as experience from subject matter experts in project design, environmental permitting, and project management. The timeline presented in each of the Project Schedules is based on a representative sample Commercial Operation Date (COD) to show an example of a project timeline. Actual dates would change upon award once the solicitation schedule is finalized by NJBPU and PJM. Working backwards from this COD, Anbaric has developed the Project Schedule to ensure all necessary activities are completed in a timely fashion and is confident that the Company can meet an in-service date of 2027 as well. Anbaric has engaged a reputable construction management consultant to impose a robust project and risk management approach, as well as a well-balanced procurement strategy aimed at maximizing supply chain availability and minimizing risk of delay or interface risks. The procurement of the HVDC systems will include well balanced incentives and fines to guarantee on time delivery. In addition, prior to handover, the HVDC systems typically have a period of trial operation during which the full transmission capacity is available to the Offshore Wind Developer.

Further, Anbaric is fully committed to working with any Offshore Wind Developer or Lease Holders to ensure the offshore wind transmission projects are constructed in a timely manner to meet the Commercial Operation Date (COD) of the offshore wind generation projects including any technical requirements prior to the COD. This collaboration includes liaising on need for auxiliary power offshore, platform access for installing and testing the array cables, the wind farm completion

schedule and the ability to start generating wind power with the first completed turbines, prior to the COD, balanced against the cost of bringing speeding up the HVDC system completion.

Further, Anbaric would like to emphasize the additional benefits of the HVDC technology selected for the Boardwalk Power Option 2 proposals allowing the onshore converter stations to be utilized for ancillary grid services even before the offshore wind farms are connected to them.

4.2 Question:

In the absence of a firm schedule commitment, please describe steps taken to ensure schedule coordination with BPU and developer to ensure timely project delivery, OSW generation & energization.

Response:

For the preparation of the initial Project Schedule, Anbaric gathered current market information and RFI responses from various suppliers. These responses included schedule estimates on the manufacturing of cable, HVDC electrical equipment, and OSP components from industry leaders like Prysmian, Siemens, GE, and ABB. These vendors included preliminary schedules for design, construction, equipment installation, and commissioning based on their experience with similar projects both onshore and offshore. Additionally, Anbaric consulted an EPC contractor to estimate the timeline of the onshore POI expansion activities and the link from the converter station to the POI. Anbaric thoroughly reviewed these timelines and based the Project's activities to build a realistic Project schedule. Anbaric notes that a schedule this preliminary is solely based on the current market's supply chain availability and cannot predict future delays in schedule by contractors or manufacturers during the length of the project.

Further, Anbaric has performed a Risk Analysis at the time of the Project development to study the main risk factors and potential risk mitigations. The study considered risks and potential mitigation associated with the environmental and permitting, project design, procurement, construction, and commissioning aspects of the proposed projects.

If awarded, Anbaric will review and discuss the project schedules for each of the projects with the BPU and wind farm developers to ensure required timelines are satisfied for the interconnecting wind farm's grid integration.

4.3 Question:

If the Board were to increase the capacity procured during future offshore wind solicitations, how can your proposal accommodate that change? In your response, please describe the earliest in-service date possible for each phase of your proposed project(s), the limitations to achieving an earlier in-service, and the costs for accelerating the cost schedule.

Response:

The standard design can accommodate an increase in capacity per ± 400 kV circuit up to the maximum loss of infeed of 1500 MW without a change to the general arrangement or dimensions of the onshore and offshore converter stations. In order to increase the capacity, the cable rating and that of some the converter components have to be increased, which will lead to an increase in CAPEX. An increase in capacity does not affect the schedule of the engineering, procurement and construction of the transmission links.

On average the engineering, procurement and construction of an offshore HVDC link takes about 5 years after project award, not taking into account the time needed for permitting. Hence, considering that Anbaric's proposals contain a fully permitted onshore cable route, the earliest in-service date for any proposals for circuits connecting to Deans 500 kV is in late 2027, assuming the transmission solicitation is awarded in 2022, and assuming sufficient availability of manufacturing slots. For other projects that are not connecting to Deans, an additional 2 years is added to cover permitting and land acquisition and would result in an in-service date around late 2029. It is noted that these figures are realistic but indicative and that the final schedule can only be confirmed after project award and procurement is completed.

In case multiple Option 2 projects are awarded but also brought forward in time such that the construction and installation would run in parallel, this would result in additional requirements on fabrication capacity and installation vessel availability, which narrows the number of available vendors, yards and vessels. This is likely to have an upward impact on the cost. Prior to entering a formal procurement process, it is not possible to estimate the resulting increase in cost to do so as it is based on a competitive process. Furthermore, when projects are executed in parallel, the possibility of including project-on-project lesson's learnt reduces, possibly negating the cost and risk reductions enabled by using the standard design. It is hence recommended to at least stagger the start dates of the EPC process by some time e.g. a 6 month delay.

5 Project Benefits

5.1 Question:

Describe the base case used in comparison of market efficiency benefits. Is comparison to the "pre-osw scenario" the appropriate comparison? Why?

Response:

The base scenario (also referred to as the "pre-OSW scenario") referenced here includes the Solicitation 1 offshore wind resource (i.e., generation awarded as part of Solicitation 1). It also includes the associated transmission infrastructure as presented in the PJM Market Efficiency

models provided to the stakeholders by PJM. The same holds for all other pathways presented by Anbaric in the project analysis report.

Anbaric understands that the comparison with the pre-OSW scenario is an appropriate comparison, since Anbaric has included the estimated costs of the OSW assets in calculating the benefit cost ratios. While, some market efficiency benefits were included in the calculations, all the costs were included too.

The reasoning behind using costs and benefits of both generation and transmission in the calculations is to ensure that this approach provides an apples-to-apples comparison for all scenarios. It is independent from the assumptions used by various entities in terms of the in-service dates of the various OSW resources and their MW capacities. As such it overcomes the limitations posed by only using the "net OSW transmission costs" metric. The approach has been explained in more detail in "Attachment 2 – Analysis Report".

5.2 Question:

Please describe which portion of the $5m for local education/workforce development is guaranteed.

Response:

Anbaric considers the plan as presented is guaranteed. If following a successful award, an entity detailed as a beneficiary is not able to participate, Anbaric will work with the BPU to determine a suitable adjustment.

5.3 Question:

If these benefits are guaranteed, please restate the guarantee, or reference where the guarantee can be found within each application.

Response:

Please see the attached Community Impact Strategy Plan dated June 2021 which details the plan. This document was also included with our original bid submissions as a separate attachment.

5.4 Question:

Is this $5M in local education/workforce development per selected Anbaric project, or $5M total?

Response:

The $5M plan detailed in our bid submissions is in total. However, Anbaric has had a presence in New Jersey for years, and if successful in this solicitation looks forward to working with the BPU, the EDA, and other relevant entities to determine further ways that our projects can bring benefit to local communities and the state as a whole.

6 Cost Containment

6.1 Question:

Please specify how the Bid Construction Costs would be indexed and what index would be utilized, including the start date for such index, and the process that would be used to determine when "construction of the Project begins" (along with the expected date of that commencement). When does Anbaric expect that a full notice to proceed will be issued to its construction contractor?

Response:

As stated in Anbaric's "NJBPU Supplemental Data Form; Appendix A, Schedule E to the Designated Entity Agreement Between Anbaric and PJM (page 107)":

"Indexed Bid Construction Costs" means Bid Construction Costs adjusted for the dollar year in which construction of the Project begins. Such dollar year adjustment to be based on changes in the Handy-Whitman Index "Cost Trends of Electric Utility Construction: North Atlantic Region", "Total Transmission Plant" from July 1, 2021, until the date full notice to proceed is given by the Designated Entity to its construction contractor(s).

The start date of the Handy-Whitman Index is July 1, 2021. Construction of the project will be deemed to begin on the date that full notice to proceed (NTP) is given by the Designated Entity to its construction contractor(s), noting that each project is comprised of multiple components, and therefore will have multiple vendors and contracts and each may have a different NTP date (i.e., offshore platform, HVDC equipment, submarine cables, terrestrial cables, etc.). Depending on the specific projects selected by the NJBPU and the desired in-service dates, likely to be coordinated with the generation developers, we anticipate full notice to proceed could range from 2025 to 2029 for Option 2 projects, with Option 3 projects' NTPs depending on the schedules of, but after the NTPs of the relevant Option 2 projects.

6.2 Question:

Please identify "the life of the project" that will be used to determine the term of the proposed ROE cap.

Response:

The projects are designed to have at least a 40-year physical and economic life. Typically, primary transmission equipment such as cables, transformers, and switchgear have a physical design lifetime of around 40 years. This is the same for any of the primary equipment and structures in the proposed link, with the exception of the converter submodules and auxiliary systems which can have a shorter lifetime. However, this is known and accounted for in the design and the O&M strategy.

6.3 Question:

Please explain how Anbaric will determine that "capital conditions do not remain normal," such that the project entity cannot obtain financing at a 55/45 debt/equity structure, what factors Anbaric would consider in increasing its proposed equity cap, and how Anbaric would determine the specific equity percentage that is required to obtain financing.

Response:

Anbaric intends to structure the project's finances with 45% equity and 55% debt. Relative to traditional utility financial structures of 50/50 debt/equity Anbaric's equity cap of 45%, combined with a capped ROE of 8.5%, lowers the cost of capital for New Jersey's ratepayers. We, our investors, and our financial advisors believe there will be multiple sources of competitive financing available to the project. We believe the equity cap of 45% is achievable under a broad variety of economic and financial market conditions. If macroeconomic or other events result in a dislocation of capital markets, thereby making debt either unavailable or expensive, Anbaric may need to consider alternative debt/equity structures until markets return to more stable conditions. In this case, the specific capital structure deployed would depend on cost and availability of debt capital, and lenders requirements on coverage ratios and other credit metrics. Historically such dislocations have been temporary and Anbaric would expect to implement our target capital structure when markets normalize.

6.4 Question:

The proposed definition of "Excluded Costs" includes "(vi) cost increases due to fluctuations in commodity cost …." Please specify (i) what base assumptions are included in the current cost estimate, (ii) how the amount of any such increase would be determined and calculated, (iii) whether commodity costs include offshore-wind specific supply chain issues (and, if so, which ones), and (iv) whether any portion of any such increase would also be captured within the Index Bid Construction Costs.

Response:

While the Handy-Whitman index should capture an element of commodity costs, given the substantial contribution of commodity costs to the overall cost of offshore HVDC transmission systems, the Handy-Whitman index may not effectively represent the level of commodity costs, and exposures to such costs are beyond the control of any bidder. Anbaric's intent in defining the Indexed Bid Construction Cost as a function of the Handy-Whitman Index, with the commodity cost exclusions as presented in Schedule E, is for the commodity fluctuations to apply to cost components specifically attributable to commodity costs, and for the Handy-Whitman index to apply to cost components other than those specifically attributable to commodity costs.

Commodity costs will be benchmarked to publicly available data as they were valued on July 1, 2021, the same start date specified in Schedule E for the Handy-Whitman index. Any increase in commodity-driven costs would be determined based on the changes in the relevant commodity prices (steel, copper, lead, aluminum) since July 1, 2021, and the quantity of relevant materials

required. The quantities of relevant materials will only be known as the project's engineering and design is completed.

Neither commodity costs, nor Anbaric's identified "Excluded Costs" include offshore-wind specific supply chain issues.

6.5 Question:

Please identify the proposed "Targeted Project In-Service Date."

Response:

Anbaric can sequence and time its projects to meet the needs of the NJBPU and the offshore wind generators, as they're selected by the NJBPU in subsequent RFPs, hence we anticipate that the Targeted Project In-Service Date for each project will be agreed upon among Anbaric, the NJBPU, and possibly offshore wind generators, depending on preferences of the NJBPU.

6.6 Question:

Will the NJBPU be identified as a "third party beneficiary" under the project's construction contracts, such that the NJBPU has the right to pursue remedies for delays in construction (including the right to liquidated damages)?

Response:

Anbaric believes the NJBPU and New Jersey ratepayers will have access to remedies for construction delays, including liquidated damages, through several potential paths. Anbaric has already pledged in the "NJBPU Supplemental Data Form; Appendix A, Schedule E to the Designated Entity Agreement Between Anbaric and PJM (page 106)" to pass any Schedule LDs through to New Jersey's ratepayers:

"Liquidated Damages: The Designated Entity commits to use commercially reasonable efforts to negotiate delay liquidated damage provisions ("Schedule LDs") with the primary contractor(s) for the Project. To the extent the Project is delayed, and the Designated Entity collects Schedule LDs from its contractor(s), the Designated Entity commits to pass through the value of the Schedule LDs received by the Designated Entity."

Additionally, we believe there are options to structure the contracts to provide the NJBPU with direct access to these remedies and look forward to discussing these in greater detail with the NJBPU to achieve the desired objectives.

7 Environmental

7.1 Proposal 131

7.1.1 Question:

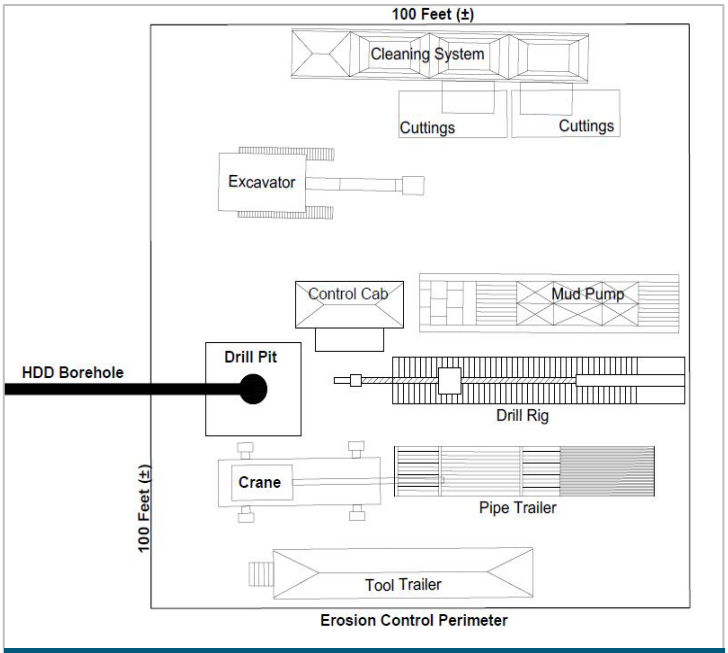
Cable Installation: Please provide more details regarding your proposed cable installation methods through the Arthur Kill and Raritan Bay.

Response:

The project proposes to use construction methods that minimize environmental impacts. Proposed construction methods for the HVDC Submarine Cable Route are described below. Construction activities will be scheduled to occur during daytime or nighttime hours as needed to minimize impacts to existing uses in the Project Area.

Landfall Transition

The transition of the HVDC Land Cable to the HVDC Submarine Cable will be accomplished using HDD to avoid interference with shoreline features, coastal resources, and nearshore activities. Use of HDD also minimizes or avoids direct impacts to nearshore marine habitat and shorelines. HDD is a trenchless installation method that involves drilling subterranean boreholes between pre-designated entry and exit points within which protective conduits and the transmission cable are installed. The HDD operations area at the landfall (Graphic 1) will facilitate the transition of the HVDC Land Cable to the HVDC Submarine Cable. A Temporary Gravity Cell structure will be placed on the seabed and its enclosed area will be mechanically dredged to provide sufficient depth to accept the land-side HDD bore hole and conduit. The HDD process will involve the use of inert drilling fluid (bentonite clay/water slurry) to transport drill cuttings to the surface (at the entry point on land), to aid in stabilization of the surrounding borehole soils, and to provide lubrication for the HDD drill. The drilling fluid is composed primarily of water and a small amount of bentonite clay. The bentonite clay is a naturally occurring mineral compound that is not environmentally harmful. HDD operations will include monitoring of potential fracture or overburden breakout of the down-hole water/bentonite slurry to minimize the potential of drilling fluid breakout offshore of the Landfall.

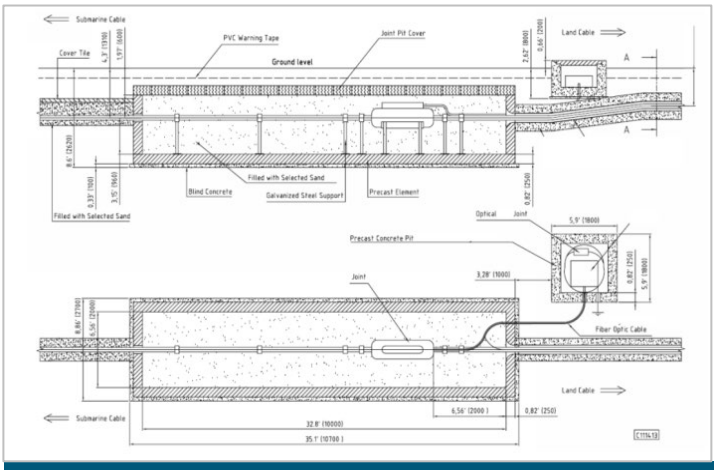


Graphic 1. Typical: HDD Operations at Landfall

The diameter of the bores and conduits installed by the HDD process at the Landfall will depend upon the type and location of known underground utilities and other subsurface structures/foundations in the vicinity. Initial evaluations indicate that two boreholes approximately 18-24 inches in diameter will be required for the cable's landfall transition to the underground Transition Vault on shore. After completing an HDD bore, a 10-inch high-density polyethylene (HDPE) (or similar material) conduit will be pulled through the boreholes. In one borehole, a smaller 2-inch conduit for the fiber optic cable will be pulled in together with a 10-inch conduit for the HVDC cable. Center-to-center separation between the HDDs will vary with depth depending on soil characteristics.

Transition Vault

The Transition Vault will be located within pits excavated on land for Sewaren landfall HDD operations and will be the point of transition between the HVDC Land Cable and the HVDC Submarine Cable. Graphic 2 shows the preliminary design for the Transition Vault. The final location of the Transition Vault will be dependent on the location of underground utilities and the subsurface geotechnical conditions encountered at the landfall site.



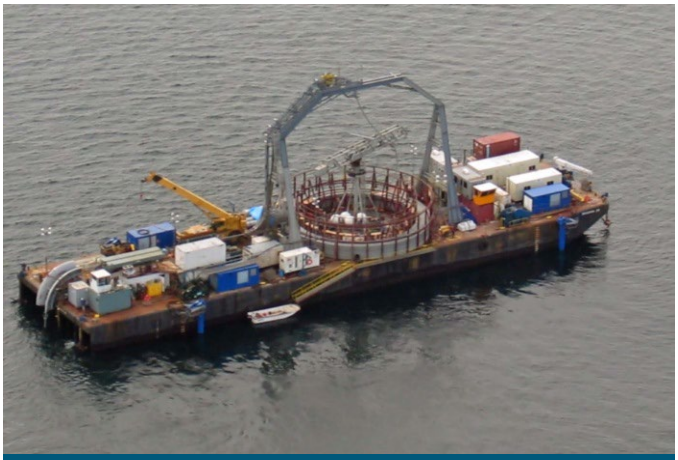
Graphic 2. Transition Vault

The Transition Vault will be designed, manufactured, installed, and tested in accordance with applicable codes and standards. The Transition Vault will be designed and constructed to optimize operation and minimize environmental impacts and will be completely buried except for manhole access points at the ground surface. The construction of the Transition Vault will conform to the National Electric Safety Code and applicable American National Standards Institute Standards for 345 kV electrical equipment. The Transition Vault will be enclosed within a security fence during construction. Post-construction access to the Transition Vault during system operation will be restricted by locking access manhole covers.

HVDC Submarine Cable

The installation of the Submarine Cable will include vessel traffic and anchoring, pre-lay route clearance, jet plow embedment, dredging and gravity cell installation, crossing existing utilities, and HDD activities.

Vessel Traffic & Anchoring



Graphic 3. Typical Submarine Cable Laying Barge

The Submarine Cable will be delivered from the cable factory in continuous lengths aboard a purpose-built vessel and installed with a cable-laying vessel, which may be different than the transport vessel. In shallow water, where the cable transportation and installation vessel cannot access the route, a cable-lay barge (Graphic 3) will be utilized. The cable-laying vessels will be equipped with dynamic positioning using GPS technology to guide installation along a predetermined track and to maintain position as needed during HVDC Submarine Cable embedment. The specific cable-laying vessel(s) to be used for the Project will be selected at a later date. Other support vessels may be required to assist with installation of the Cable. Vessels may temporarily anchor during Temporary Gravity Cell dredging and cable installation at the landfall.

Pre-Lay Route Clearance: Grapnel Run

Prior to installation of the Submarine Cable, a pre-lay grapnel run will be performed to clear the HVDC Submarine Cable Route of debris such as wires, ropes, nets, etc. that are on or in the seabed, which could disrupt the cable laying and burial process. A grapnel capable of penetrating 12-20 inches into the seabed will be towed along the planned route. At regular intervals, or when the towing tension increases, the grapnel and associated debris will be recovered (by the grapnel or by divers), and the debris will be stored on deck for subsequent disposal in accordance with applicable regulations. Impacts of route clearance activity on benthic resources and water quality will be localized and temporary.

Pre-Lay Route Clearance; Proving Run

Due to the potential of increased levels of buried man-made debris, it is prudent to perform proving runs along the alignments of the Submarine Cable just prior to installation; however, some regulatory agencies may not allow proving runs to occur. Proving runs are intended to prove the entire route to the full cable burial depth, and where necessary, clear obstacles before they adversely affect the installation of the Submarine Cables. The proving run is performed using the fully operational jet plow but without the cable loaded. By pulling the operating jet plow along the cable alignment, the installer will be able to confirm that the jet plow can effectively fluidize the sediments to the target burial depth and that there are no unexpected subsurface obstacles.

Proving runs also provide valuable information on the composition of the sediment and the subsurface conditions that will be encountered along the entire route during the installation. This data allows the installer to plan for needed adjustments to the jetting equipment operating pressures and understand how sediment conditions vary and affect the jetting operation. It also provides a means to resolve potential problems proactively, in advance of the cable installation, which significantly reduces the potential for delays or shallower than desired burial depths due to unexpected conditions during installation. These combine to reduce the risk of undue environmental and navigational impacts. In addition, discovery and clearance of obstructions that may exist prior to cable installation entails less risk and minimizes environmental impacts without the cable in the jetting equipment. Encountering major unexpected issues during cable installation

could require significant excavation using higher impact tools such as a mass flow excavator, which uses a single large-volume column of pumped water to disperse bottom sediments. If proving runs are not completed, the risk of resulting cable installation problems could lead to unnecessary environmental and navigational impacts, along with longer installation times.

During the proving runs, obstacles encountered by the jetting tool may either be avoided by rerouting the alignment within the approved cable corridor or be removed and disposed of in accordance with applicable regulations. Removal of larger objects may require the use of equipment such as a crane to lift the obstruction. This may require limited removal of sediment from above the obstruction using water lances, air lifts, clamshell dredge buckets, or a combination of these techniques.

Jet Plow Embedment

The HVDC Submarine Cable will be installed by a jet plow device that uses simultaneous lay and burial. The jet plow is typically a skid/pontoon-mounted device and has no propulsion system of its own (Graphic 4). Instead, it depends on the cable vessel for propulsion. The HVDC Submarine Cable will be deployed in a bundled configuration from the cable-laying vessel to the jet plow device and into the jetting blade.

Graphic 4. Typical Jet Plow used for Submarine Cable Burial

The jetting blade is fitted with hydraulic pressure nozzles, which direct pumped seawater downward and backwards, to fluidize the seabed sediments to create a "trench" approximately 18-24 inches wide such that the jet plow can advance in the direction of the cable-laying and embed the cable in the seabed. The cable-lay vessel is equipped with water pumps that withdraw water from just below the ocean's surface to provide high pressure seawater to the jet plow device via an umbilical. The hydraulic pressure nozzles create a direct downward and backward "swept flow" force inside the trench. This provides a downward and backward flow of re-suspended sediments within the trench, thereby "fluidizing" the *in situ* sediment column as it progresses along the predetermined Submarine Cable route such that the cable settles to the planned depth of burial under its own weight. The jet plow's hydrodynamic forces do not produce an upward movement of sediment into the water column since the objective of this method is to maximize gravitational replacement of suspended sediments within the trench to bury or "embed" the cable as the jet plow progresses along its route. This method of laying and burying cable simultaneously ensures the placement of the HVDC Submarine Cable at the target burial depth with minimal bottom disturbance and the settling of fluidized sediment in the trench.

The jet plow device is equipped with horizontal and vertical positioning equipment that records the laying and burial conditions, position, and burial depth and communicates this information back to the cable-lay vessel/barge. The jetting blade will be deployed to a pre-determined depth (which controls the cable burial depth) by optimizing the pressure at the jet nozzles and the rate of advancement of the jet plow. As the jet plow encounters different sediment types and/or densities along the HVDC Submarine Cable Route, the water pressure at the jet plow nozzles will be

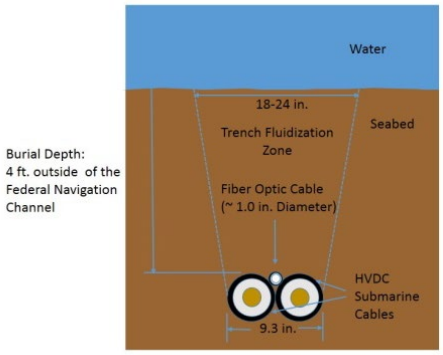
adjusted to achieve the required minimum burial depth. If the minimum burial depth is not met during jet plow embedment, diver-assisted water jet devices will be used to achieve the required depth. If the required burial depth cannot be met using these methods, alternate cable protection measures would be implemented (e.g., concrete mats).

The HVDC Submarine Cable will be buried to specific subsurface depths to avoid conflicts with general navigation in the waterway, to avoid potential mechanical damage to the cable from vessel transit or anchoring, and to minimize near-surface impacts to aquatic resources. Jet plow embedment is the most effective and least environmentally damaging method for installing underwater electric transmission cables, compared with conventional mechanical dredging and trenching. It also produces orders of magnitude less suspended sediment and turbidity than conventional trenching methods. This method of laying and burying underwater cables installs the cable system at the target burial depth with minimum bottom disturbance and with most of the fluidized sediment settling back into the jet plow trench once the cable is laid. Temporarily resuspended *in situ* sediments (approximately 75%) are largely contained within the vertical limits of the trench. Any re-suspended sediments that may leave the limits of the incised jet plow trench have been shown to settle out quickly, typically on the adjacent seabed within 100 to 500 ft. of the centerline of the route.

A typical cross-section of the HVDC Submarine Cable installation is provided in Graphic 5. The HVDC Submarine Cable will be buried using jet plow embedment technology to a target depth of approximately 4 feet below the present bottom (15 feet when crossing Federal Channels.

It is possible that the target burial depth may not be achieved at the field-installed joint locations or at utility crossings. To protect the cable in these areas, concrete mattresses will be placed on the seabed at each field-installed joint location. The mattresses typically have a shallow profile (less than one foot thick) and are expected to settle into the seabed after placement.

The HVDC Submarine Cable location and burial depth will be continuously recorded during installation for use in the preparation of as-built Project plans, which will be provided to agencies and organizations as required for inclusion on future navigation charts and in easement agreements.



Graphic 5. Submarine Cable System Burial Profile

7.1.2 Question:

DOT OMR: Have you had any preliminary discussions with the DOT's Office of Maritime Resources regarding cable installation through the State's intercoastal waterway? If yes, please describe.

Response:

Anbaric has consulted with the NJDOT Office of Maritime Resources (OMR) for consideration of the proposed installations. OMR advised that, where crossings of State channels are proposed, the Program would likely seek regulatory permit conditions that are consistent with those required by the US Army Corps of Engineers for federal channels (e.g., burial elevations at specified depths below authorized channel depths). In addition, OMR advised that additional conditions would be sought by the Program, including periodic cable monitoring, inspections and reporting requirements.

The concerns of OMR are consistent with those of the broader commercial navigation communities, which are focused upon preservation of both navigation and anchorage opportunities in the waterways. For all Raritan Bay installations, the Applicant intends to work closely with the New York Harbor Safety, Navigation, and Operations Committee, which is composed of commercial navigation stakeholders, together with USCG, USACE, CBP, PANYNJ, pilots, ship operators, tug/barge operators, NOAA, small passenger vessel operators, first responders, and others to ensure the continued safe and efficient operation of the waterways is not negatively impacted by the proposed installations.

7.1.3 Question:

Federal Agencies: Have you consulted with any federal agencies regarding permits and approvals for the portions of the project located in federal waters? If yes, please describe.

Response:

Yes, Anbaric has consulted with federal agencies regarding review, approval, and permits and includes the following agencies:

- United States Army Corps of Engineers, New York District
- United States Fish and Wildlife Service
- National Marine Fisheries Service

It should be noted, while a permit application has not yet been filed, the USACE has issued a project number (NAN-2019-01368).

7.1.4 Question:

SAV Habitat: Cables installed in the Raritan Bay will likely impact shellfish habitat. Please provide more information on cable burial depths and methods of installation.

Response:

The HVDC Submarine Cable will be buried using jet plow embedment technology to a target depth of approximately 4 feet below the present bottom (15 feet when crossing Federal Channels), subject to permit requirements regarding burial depth.

Jet plow embedment of the HVDC Submarine Cable and dredging within the Temporary Gravity Cell at the Landfall are expected to have minor impacts to marine resources along the Submarine Cable Route. The duration and extent of these activities and their effects are anticipated to be temporary and localized. The placement of protective materials at utility crossings and cable joints is expected to have a negligible to minor impact on marine benthic habitats due to the limited extent of the activity.

Construction

Construction of the proposed project is anticipated to result in temporary alteration of benthic habitat from disturbance of sediment, which is expected to temporarily and locally increase turbidity, mobilize sediments, and cause sediment deposition. Previous submarine cable projects have proven that benthic habitats, including shellfish, disturbed by cable installation activities quickly recover.

Alteration of Benthic Habitat

Temporary Gravity Cell Installation and Dredging at Landfall

Temporary Gravity Cell installation and removal may directly impact the benthic community at the Landfall location through anchoring of the construction vessels, installation of the steel walls into the sea floor, dredging of sediments within the Gravity Cell, and removal of the Gravity Cell structure. The Temporary Gravity Cell is expected to be approximately 25 feet long and 11 feet wide. Mortality, injury, or displacement of infaunal and epifaunal benthic organisms is expected in the area directly impacted by Temporary Gravity Cell installation and dredging; however, disturbance to the benthic community from Gravity Cell installation and dredging will be temporary. Once construction is complete and the area is backfilled, the benthic macroinvertebrate community is expected to quickly colonize the area and recover (Van Dolah et al. 1984, McCabe et al. 1998, Guerra-García et al. 2003, Schaffner 2010). Demersal fish are expected to be less impacted than macroinvertebrates and shellfish, because they have the ability to move out of the Project Area when they perceive noise, vibration, and other construction activity.

Because of the relatively small area affected within the Temporary Gravity Cell and expected rapid recolonization, impacts to marine communities are anticipated to be minor and temporary.

Placement of Protective Materials at Utility Crossings and Cable Joints

Depending on the surrounding sediment type, the rock, protective sleeve, and/or concrete mattresses, if they are required, will settle into the seabed under their own weight after they are installed. Sediment is expected to naturally accumulate and cover the protective materials over time. However, in areas dominated by sands or coarser sediments, the protective materials may remain exposed for a longer period of time or indefinitely, which would represent a permanent loss of sandy benthic habitat for demersal fish, shellfish, and other invertebrates. Due to the small areal coverage of the seabed by these structures (less than 0.01 acres per crossing) relative to similar surrounding undisturbed habitat, their presence will have a negligible to minor impact on marine resources in the area.

Jet Plow Embedment of the HVDC Submarine Cable

Installation of the HVDC Submarine Cable will be preceded by route clearance operations along the centerline of the Submarine Cable Route as previously described. Jet plow equipment will be used to install the HVDC Submarine Cable along the same route; therefore, the grapnel tow is not expected to significantly increase the area of direct disturbance beyond the area that will be affected by jet plow embedment. Direct disturbance to the seafloor from jet plow embedment of the HVDC Submarine Cable will be primarily limited to the width of the trench and the skids on either side. Therefore, direct impacts to marine benthic habitat from jet plow embedment of the Submarine Cable are expected to be localized and temporary.

Potential impacts of jet plow embedment are expected to be similar in nature to the impacts of the installation of the Temporary Gravity Cell. Species with pelagic eggs and larvae will be less affected by temporary benthic disturbance since they are not as closely associated with the bottom; however, those in the immediate area of construction could experience some injury or mortality. Demersal fish and highly mobile benthic life stages, including adult lobsters and crabs, may be able to avoid the immediate area of jet plow activities, while sessile species or life stages with limited mobility may experience higher rates of injury or mortality. Burrowing shellfish, like hard clam and surf clam, may be unable to burrow towards the surface of the fluidized sediment and may experience mortality. However, overall benthic community disturbance will be temporary, because the small area of direct impact compared to the large source area of nearby unimpacted habitat is expected to result in rapid recolonization following construction. Given these factors, the overall direct impact to marine resources from jet plow installation of the HVDC Submarine Cable will be minor and temporary.

Temporary and Localized Increases in Turbidity

Increased suspended sediment concentration and turbidity from the jet plow embedment will directly impact marine wildlife and indirectly impact marine benthic habitat in the Project Area. A numerical sediment dispersion model was developed to estimate the extent of the jet plow-induced sediment plume along the HVDC Submarine Cable Route. Suspended sediment concentrations are predicted to return to ambient conditions within 24 hours after the passage of the jet plow. Predictive modeling of suspended sediment concentrations and deposition will be performed to support the project's permitting efforts. Previous modeling efforts have predicted, and monitoring during installation has confirmed, that suspended sediment induced by jet plow embedment is temporary and localized.

Marine benthic habitats will not be significantly disturbed by suspended sediment associated with installation of the HVDC Submarine Cable. Benthic habitats in the Project Area are regularly exposed to temporary natural increases in suspended sediment concentration, and the area that would be affected by increased turbidity during project construction is small relative to the available benthic habitat in and around the Project Area. Most of the fish species in the area are also relatively tolerant of impacts associated with temporary and limited sediment suspension. Highly mobile species are expected to be able to avoid disturbed areas. Sessile organisms that are unable to relocate outside of depositional areas may experience reduced foraging efficiency or reduced primary productivity; however, impacts would be temporary with rapid recolonization expected based on monitoring performed after previous submarine cable installations.

Sediment Deposition

Deposition of sediments disturbed during the jet plow embedment will cause minimal direct impacts to benthic organisms and demersal fish and indirect impacts to marine benthic habitat in the Project Area. A numerical sediment dispersion model was developed to estimate the extent of deposition from the jet plow-induced sediment plume along for a portion of the HVDC Submarine

Cable Route. The model predicted that the highest rates of deposition, which are still relatively low, occur immediately adjacent to the location of jet plow activities and that deposition thicknesses are predicted to decrease rapidly with distance from the jet plow as it advances along the HVDC Submarine Cable Route.

Marine benthic habitats will not be significantly disturbed by sediment deposition associated with installation of the HVDC Submarine Cable. Due to their location downstream of major rivers or high-energy marine environments, benthic habitats in the Project Area are regularly exposed to temporary natural occurrences of deposition, and many species are well adapted or tolerant to burial or smothering. Many species, including certain burrowing polychaetes, bivalves, and amphipods, have some ability to burrow upward to the surface through relatively shallow layers of deposited sediments. Highly mobile species, including lobster and crabs, are expected to be able to avoid disturbed areas, or to easily remain above the surface of newly deposited sediments. Species that are unable to relocate or tolerate these impacts may experience mortality; however, given the limited spatial extent of these impacts, organisms and propagules from the surrounding undisturbed habitat are expected to recolonize the area quickly, resulting in negligible long-term impacts (Van Dolah et al. 1984, McCabe et al. 1998, Guerra-García et al. 2003, Schaffner 2010).

Sediment Quality

The temporary and localized suspension and deposition of sediment disturbed by jet plow installation of the Submarine Cable and dredging within the gravity cell will not introduce new material into the environment. Impacts will be comparable to those already occurring under natural conditions in this area of Arthur Kill, Raritan Bay and the Atlantic Ocean during sediment suspension and deposition events. During jet plow embedment of the Submarine Cables, sediment will be temporarily displaced from its existing location, but most of it (approximately 75 percent) will be redeposited within the trench. The limited volume of material that remains in suspension is predicted to settle out within 24 hours.

Therefore, potential impacts to sediment quality in the Arthur Kill, Raritan Bay, and the Atlantic Ocean resulting from jet plow embedment of the Submarine Cables are expected to be localized and minor. Post-installation sediment quality will be comparable to natural sediment quality conditions along the proposed route. No further degradation in environmental quality beyond what exists today is expected.

The marine benthic habitats of Raritan Bay are primarily occupied by macroinvertebrate taxa that have some tolerance to pollution, as the Hudson-Raritan Estuary is regularly exposed to urban runoff and transport of sediments from major rivers. Additionally, the dominant shellfish species in Raritan Bay (hard clam) is also expected to have intermediate tolerance to local sediment quality. The temporary duration of the mobilization of sediment is expected to result in negligible impacts to fish and other pelagic organisms.

The impact of disturbance of sediments on marine resources is expected to be minor, due to the temporary nature of the disturbance, localized extent of the impact, tolerance of most of the benthic species observed, and existing quality of sediments in the Project Area.

Accidental Spills

As previously stated, appropriate procedures will be implemented in the case of a spill to limit the impacts to the marine resources in the Project Area. With proper training and implementation, the likelihood of a spill is small, and the impact to marine resources would be minor and localized.

While unlikely, an accidental spill of bentonite (drilling fluid) could occur during HDD operations. While the depth of the dredged area within the Temporary Gravity Cell and the U-shaped perimeter of the structure will contain movement of coagulated bentonite slurry that may be released during HDD operations, a potential indirect and temporary impact to the marine environment could occur if bentonite (drilling fluid) is released and not contained during construction. The HDD operations will include monitoring of potential fracture or overburden breakout of the down-hole water/bentonite slurry to minimize the potential of drilling fluid breakout.

In the event of an accidental drilling fluid release into water, the bentonite fluid density and composition of the drilling slurry will cause it to remain as a cohesive mass on the seabed. This cohesive mass can quickly and easily be removed by divers and diver-operated vacuum equipment. Impact to the marine environment from the release of drilling fluid would be minor and localized.

7.2 Proposal 831

7.2.1 Question:

Additional Information: Please provide Attachment 6 which includes existing DEP permits and submitted applications for review by DEP.

Response:

Attachment 6 which includes the DEP permits and submitted applications for review by DEP is provided in Appendix A of this document.

7.2.2 Question:

Wetlands: Have you completed a delineation of the regulated wetlands. What have you done or are planning to do to avoid, minimize, or mitigate impacts to wetlands and regulated areas?

Response:

Anbaric worked closely with stakeholders to design a route that has extremely minor impact on wetlands and jurisdictional wetlands within 50 feet of the edge of existing roadways along the approximately 21-mile upland cable route associated with Proposal 831 in Middlesex, and Monmouth Counties were delineated in accordance with the Federal Manual for Identifying and Delineating Jurisdictional Wetlands (USACE 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, Version 2.0 (Regional Supplement) (USACE 2012). Two Letters of Interpretation were requested from the NJ DEP and issued in December 2016 and September 2019. The NJDEP letter that was issued in December of 2016 will apply for Lot 12, and the letter issued in September of 2019 will apply for Lots 7 and 8 at the proposed Converter Station Site in South Brunswick.

Minimal alteration of terrestrial wetlands is anticipated along the entire upland linear route. Routing alternatives were examined and adopted to avoid or minimize direct or indirect impacts to wetland or water resource areas within the route corridor. Permanent alteration of only approximately 521 square feet of isolated freshwater wetland is required and was permitted for the construction of the land-based cable, Converter Station and Dean's Substation interconnection. A Division of Land

Use Regulation Permit (LURP) application was filed for the Project in 2017. A Freshwater Wetlands General Permit 6: Non-Tributary Wetlands, and the upland Waterfront Development Permit that were issued based on the LURP application.

The HVDC Land Cable will be buried under a previously authorized, currently serviceable paved roadway surface. Pursuant to N.J.A.C. 7:7A-2.3(b)2, this minor and temporary disturbance of the transition area is not a regulated activity and does not require NJDEP approval. There will be no permanent alteration in existing elevation or grades within flood hazard areas because of the Project. The Submarine Cable will be buried along its entire route; therefore, it will not permanently impact any flood hazard areas. The waterbodies and flood hazard areas that will be crossed using HDD include South River, Deep Run, Matawan Creek, Gravelly Brook, and Mohingson Creek. The remaining flood hazard areas at Lappatatong Creek Tributary and Lappatatong Creek will be crossed by trenching over the existing culvert entirely in the roadway.

All construction activities associated with installation of the HVDC Land Cable within flood hazard areas will be performed such that no measurable permanent alteration to existing grades will occur. All disturbed areas will be restored to pre-construction contours following construction. Since the cable will be buried, no flood storage volume will be displaced as part of the cable installation. Therefore, no impacts to the floodplain are expected from the construction of the Project. The HVDC and AC Land Cables have been designed to operate with little or no on-going maintenance. The use of the duct bank will allow for easier access and less disturbance to sensitive resources in the unlikely event that a cable repair is necessary following installation.

As previously noted, The Keyport-Deans route has been permitted under a General Permit which reflects the efforts Anbaric made to minimize wetlands impacts.

7.2.3 Question:

SAV Habitat: Cables installed in the Raritan Bay will likely impact shellfish habitat. Please provide more information on cable burial depths and methods of installation.

Response:

The HVDC Submarine Cable will be buried using jet plow embedment technology to a target depth of approximately 4 feet below the present bottom (15 feet when crossing Federal Channels), subject to permit requirements regarding burial depth. Jet plow embedment of the HVDC Submarine Cable and dredging within the Temporary Gravity Cell at the Landfall are expected to have minor impacts to marine resources along the Submarine Cable Route. The duration and extent of these activities and their effects are anticipated to be temporary and localized. The placement of protective materials at utility crossings and cable joints is expected to have a negligible to minor impact on marine benthic habitats due to the limited extent of the activity. For a more detail on the methods of installation please see Response 7.1.4.

7.2.4 Question:

Green Acres: Have you conducted title work or reviewed the right of way/easement language specific to each parcel impacted, in an effort to verify that the proposed project is permissible under the existing right of way/easements? If yes, please describe. This would apply to

new/additional/upgraded service lines, poles and towers or the clearing of trees in an expanded right of way.

Response:

The preferred HVDC Land Cable Route for the project was sited to avoid disturbance or removal of vegetation to the extent practical. As the route follows along existing public roadways, it may intersect three encumbered lands (Municipal Open Space near Mohingson Creek, Deep Run Preserve, and Freneau Woods Park/Lake Lefferts) if directional drilling activities must be conducted adjacent to the right-of-way to bury the cables under watercourses. See illustrations below.

However, it is expected that the trenching and HDD staging will remain within existing pavement or previously developed/disturbed areas. Adequate space for trenching and HDD staging operations exists without the need to clear or remove vegetation (trees or shrubs) during cable installation. Some temporary disturbance to grassed areas along the HVDC Land Cable Route may be necessary to accommodate the HDD staging areas.

The project upland route does not traverse or utilize any municipal, county, and nonprofit recreation or conservation land encumbered under the NJ Green Acres Program.

7.2.5 Question:

National Parks Service: Has the developer consulted with the National Parks Service regarding the proposed cable routes proximity to Sandy Hook National Recreation Area? If yes, please describe.

Response:

Anbaric's proposed submarine cable route, at its closest point is approximately 0.5 miles offshore from Sandy Hook Unit (Gateway National Recreation Area). While not within the NPS boundary which extends approximately 0.25 miles offshore, if awarded a project, Anbaric intends to commence dialogue with the Park Superintendent.

7.2.6 Question:

Federal Agencies: Have you consulted with any federal agencies regarding permits and approvals for the portions of the project located in federal waters? If yes, please describe.

Response:

Yes, the applicant has consulted with federal agencies regarding review, approval, and permits and includes the following agencies:

- United States Army Corps of Engineers, New York District
- United States Fish and Wildlife Service
- National Marine Fisheries Service

It should be noted, while a permit application has not yet been filed, the USACE has issued a project number (NAN-2019-01368).

7.3 Proposal 841

7.3.1 Question:

Additional Information: Please provide Attachment 6 which includes existing DEP permits and submitted applications for review by DEP.

Response:

Attachment 6 which includes the DEP permits and submitted applications for review by DEP is provided in Appendix A of this document.

7.3.2 Question:

Wetlands: Have you completed a delineation of the regulated wetlands? What have you done or are planning to do to avoid, minimize, or mitigate impacts to wetlands and regulated areas?

Response:

Same as for proposal 831. Please refer to the response to Question 7.2.2.

7.3.3 Question:

SAV Habitat: Cables installed in the Raritan Bay will likely impact shellfish habitat. Please provide more information on cable burial depths and methods of installation.

Response:

Same as for proposal 831. Please refer to the response to Question 7.2.3.

7.3.4 Question:

Green Acres: Have you conducted title work or reviewed the right of way/easement language specific to each parcel impacted, in an effort to verify that the proposed project is permissible under the existing right of way/easements? If yes, please describe. This would apply to new/additional/upgraded service lines, poles and towers or the clearing of trees in an expanded right of way.

Response:

Same as for proposal 831. Please refer to the response to Question 7.2.4.

7.3.5 Question:

National Parks Service: Has the developer consulted with the National Parks Service regarding the proposed cable routes proximity to Sandy Hook National Recreation Area? If yes, please describe.

Response:

Same as for proposal 831. Please refer to the response to Question 7.2.5.

7.3.6 Question:

Federal Agencies: Have you consulted with any federal agencies regarding permits and approvals for the portions of the project located in federal waters? If yes, please describe.

Response:

Same as for proposal 831. Please refer to the response to Question 7.2.6.

7.4 Proposal 921

7.4.1 Question:

Additional Information: Please provide Attachment 22 and 23 which includes the Larrabee expansion layout and onshore transmission route for review by DEP.

Response:

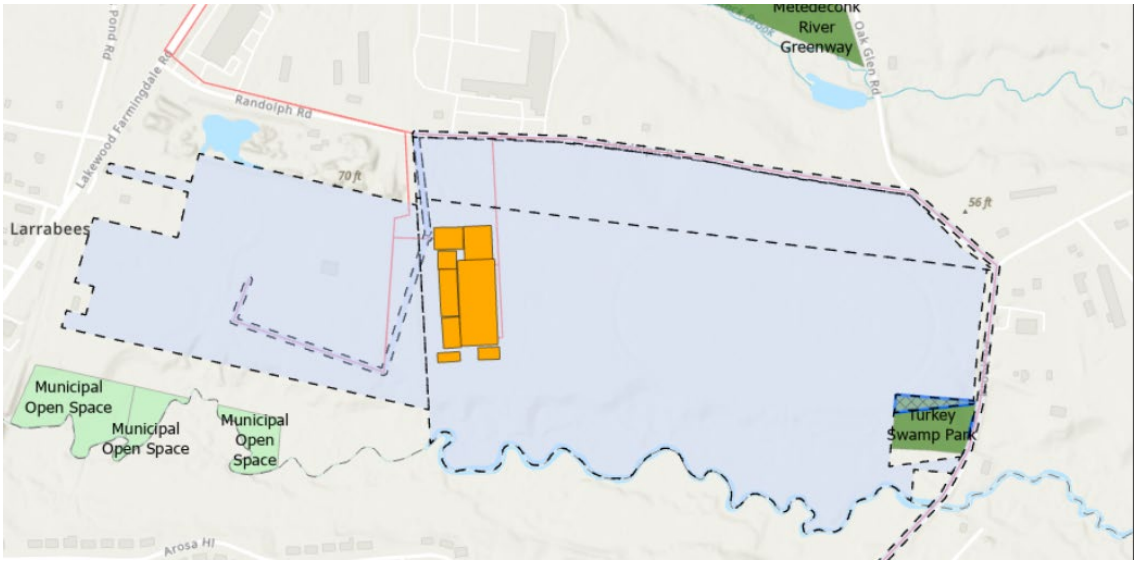
Please refer to Appendix B for Attachment 22 and Attachment 23 which include the Larrabee expansion layout and onshore transmission route for review by DEP.

7.4.2 Question:

Green Acres: Have you conducted title work or reviewed the right of way/easement language specific to each parcel impacted, in an effort to verify that the proposed project is permissible under the existing right of way/easements? If yes, please describe. This would apply to new/additional/upgraded service lines, poles and towers or the clearing of trees in an expanded right of way.

Response:

The eastern portion of the preferred converter station parcel intersects one encumbered land (Turkey Swamp Park). This appears to be an inconsistency with the parcel boundary, rather than real intersection. A formal land survey will be completed to delineate actual parcel boundaries prior to finalizing the lease agreement. Regardless, the project will not affect the encumbered land as project-related activities will occur only in the central portion of the parcel.



7.5 For all Option 3 proposals

7.5.1 Question:

Federal Agencies: Have you consulted with any federal agencies regarding permits and approvals for the portions of the projects located in federal waters? If yes, please describe.

Response:

Over the past four years Anbaric has had frequent communications with BOEM regarding our ROW/RUE Grant application. Following submission of our bids to the NJBPU, Anbaric met with BOEM to inform them of our updated proposed routes, including our Option 3 proposals. In June of 2021, Anbaric and DNV met virtually with the US Coast Guard to discuss the USCG's proposed fairways and transit lanes offshore of New Jersey, with the goal of avoiding, and where necessary minimizing potential crossings.

Additionally, the applicant has consulted with federal agencies regarding review, approval, and permits and includes the following agencies:

- United States Army Corps of Engineers, New York District
- United States Fish and Wildlife Service
- National Marine Fisheries Service

It should be noted, while a permit application has not yet been filed, the USACE has issued a project number (NAN-2019-01368).

Appendix A

Public - Appendix A - Part 1 - Attachment

Public - Appendix A - Part 2 - Attachment

Appendix B

Public-Appendix B - Attachment 22 – Op

Public-Appendix B Attachment 23 – Op