



State of New Jersey

OFFICE OF THE COMMISSIONER

P.O. Box 420 Mail Code 402 Trenton, New Jersey 08625-0420


Telephone: (609) 633-1122

PHILIP D. MURPHY
Governor

SHAWN M. LATOURETTE
Commissioner

SHEILA Y. OLIVER
Lt. Governor

TO: Andrea Hart, Senior Program Manager, Division of Clean Energy, NJBPU

FROM: Megan Brunatti, Deputy Chief of Staff, NJDEP 

DATE: October 7, 2022

RE: State Agreement Approach – OSW Transmission- NJDEP Environmental Review

Background:

On April 14, 2021, PJM on behalf of the New Jersey Board of Public Utilities (“BPU or Board”) opened a 120-day solicitation window for qualified developers to submit potential transmission solutions that would help deliver offshore wind energy to the existing power grid. Developers were asked to propose one or more of the following types of projects:

- Option 1- Upgrades to the existing grid to facilitate the offshore wind energy injections
- Option 1b- Extension of the onshore transmission grid closer to offshore wind locations
- Option 2- Optimal landfall approaches to reduce environmental impacts, and any necessary offshore substations
- Option 3- Interconnections between offshore substations, sometimes called a transmission “backbone”.

PJM identified Cardiff Substation in Egg Harbor Township, Atlantic County; Larrabee Substation in Howell Township, Monmouth County; Smithburg Substation in Freehold Township, Monmouth County; and Deans Substation in South Brunswick Township, Middlesex County as suggested interconnection points, however transmission developers could include any interconnection point in their proposals. PJM received approximately 80 different proposals from a total of 13 developers.

As part of the application process, developers were required to submit an Environmental Protection Plan, a Fisheries Protection Plan, and a Permitting Plan. DEP reviewed these pertinent application materials and assisted BPU in evaluating each proposal related to potential environmental impacts and permit feasibility based on a number of environmental considerations, including but not limited to wetlands, streams and waterbodies, threatened & endangered species, fisheries, cultural and historic resources, and Green Acres encumbered and State-owned lands. Each proposal was assessed an overall risk level ranging from low to high. Note the risk levels are based on the information provided in the application, and because it is early in project development and therefore in many cases details were lacking, the overall risk level may not necessarily reflect the actual viability of a project

DEP Review

A planned approach to offshore wind transmission has the potential for significant environmental benefits as compared to separate transmission for each windfarm project. DEP encourages the Board to award projects that result in overall minimization of the number of cables coming on shore in New Jersey, while also providing a reliable solution that meets PJM requirements and the State of New Jersey's energy transmission needs. DEP further recommends that projects be sited within existing roads, corridors, and rights of way to the greatest extent possible; avoid beach crossings, back bays and sensitive coastal areas to the greatest extent possible; and reduce new impacts to Green Acres encumbered parkland and State-owned lands to the greatest extent possible. In addition, DEP recommends special consideration be given to applications that avoid impacts to natural resources, minimize impacts where avoidance is not possible, and propose appropriate mitigation measures for impacts when necessary.

By reducing the number of cable corridors traversing state waters and lands, the environmental impacts of offshore wind development in New Jersey will be reduced. A single corridor to bring cables to shore would be most beneficial, as long as the corridor location is well planned. The cable route option considerations for current offshore wind projects have required extensive review and input from DEP. While a single corridor approach will still require further coordination with DEP, the amount of time and effort spent in the pre-permitting and permit review phases of project development will be reduced. Through a planned transmission approach, and particularly a single corridor, the overall reduction in environmental impacts, permitting, and time, applied to multiple future projects has significant benefits from DEP's perspective.

This memo addresses certain projects that were subject to more extensive review by DEP. Other proposals may not have been reviewed as extensively by DEP if they were not identified for further environmental consideration by BPU.

Option 1a projects:

In reviewing Option 1a proposals, DEP and BPU assessed the proposals with a "moderate" or "moderate to high" risk level. The majority of these proposals are sited within already existing transmission corridors. Although there may be new impacts to environmental resources, the proposals would be able to be permitted provided that the impacts can be avoided, minimized, or mitigated where avoidance is not possible. The proposals often lacked fulsome design details and site plans which are needed to accurately quantify the impacts to environmental resources and the permits required.

When evaluating the Green Acres impacts of projects sited in existing transmission corridors, DEP and BPU considered properties that were located within or directly adjacent to, the existing transmission corridor. Green Acres properties located directly adjacent to existing rights of way may be affected during construction related activities, or if there is a need to expand the right of way, but there was not enough detail at this time to determine the extent of those impacts. Most of the proposals reviewed have the potential to effect five or more Green Acres properties, which is in part, how the risk levels were assessed. Therefore, additional information such as site plans, construction details, and rights of way agreements are needed to further evaluate and refine the potential impacts and risk assessments, including to Green Acres encumbered properties, on a case-by-case basis.

Option 1b/2 projects

Option 1b/2 proposals typically pose greater impacts to natural resources and regulated areas. Although some proposals attempted to stay within existing rights-of-way, new impacts are anticipated as these projects are intended to bring existing infrastructure closer to the offshore lease areas and landfall locations.

DEP reviewed several 1b/2 proposals that make landfall at the Sea Girt Army National Guard center and connect to the Larrabee substation in Howell, Monmouth County, which have both onshore and offshore impacts.

Off the coast of Sea Girt, there are three artificial reefs which are in close proximity to one another: the Axel Carson Reef, the Manasquan Inlet Reef, and the Sea Girt artificial reef. The location of these reefs offshore makes this area challenging to install cables. Transmission cables are not permitted within the boundaries of the artificial reefs as these are protected areas that the DEP is continuously enhancing. Further, although DEP understands that a minimal buffer around artificial reefs may be acceptable for fish habitat, a larger buffer may be needed to allow for expansion of the artificial reefs. Deployed reef material may drift and settle outside the reef boundaries unintentionally, and if material lands on a cable, that portion of the cable would no longer be accessible, if needed, for repairs. DEP's Artificial Reef Program is robust and ongoing, as artificial reefs are enhanced or expanded regularly. DEP would encourage that development near a reef include a buffer large enough to ensure any nearby cables would not be inadvertently covered by deployed material.

Several proposals identify the Sea Girt Army National Guard center as a cable landing location. The Sea Girt Army National Guard center is owned and operated by the New Jersey Department of Military and Veterans Affairs (DMAVA). It is recommended that the DMAVA be further consulted for the use of State-owned lands at this site.

Additionally, the onshore cable routes proposed from Sea Girt to Howell include several environmental and regulatory considerations, such as impacts to State-owned lands, Green Acres encumbered parkland, and a Wildlife Management Area. Developers have proposed to Green Acres encumbered parkland and would require a Green Acres diversion for each municipality impacted. Routing in this area may also impact the Manasquan River Wildlife Management area as well as Allaire State Park which are both State-owned properties and would require Commissioner level approval, as well as State House Commission approval with an associated public process. In addition, there are various T&E species and wetlands around the Manasquan River that would be significantly impacted by a cable installation. The DEP recommends that major roadways such as the Garden State Parkway be seriously considered as an alternative route option to get from the Sea Girt landfall to the Larrabee Substation.

Further, there were several proposals that DEP reviewed with significantly longer offshore cable routes that travel from the offshore lease areas, along the NJ coast, into the Raritan Bay and onshore to the Deans substation in New Brunswick, NJ. These proposed cable routes travel approximately 50 miles further offshore than routes that propose landfall in Monmouth County or further south. The DEP has concerns with the length of these offshore cable routes and the potential to effect benthic and shellfish habitat offshore and within the Raritan Bay. The DEP's Marine Resource Administration prefers shorter offshore cable routes and would recommend co-location of cables when possible. In addition, the construction of cable routes in the Raritan Bay may impact vessel traffic and consultation with other agencies, with more refined plans, is necessary.

Additionally, one option 1b/2 proposal DEP reviewed in detail utilizes the Oceanview substation in Neptune, NJ and may have significant impacts to wetlands, T&E species, and the 100-year floodplain. The Oceanview substation is located directly adjacent to mapped forested wetlands which make the construction of a new converter station in this area very difficult. Also, the proposal identifies approximately 10 acres of tree clearing in environmentally sensitive habitat. In addition to DEP permitting challenges, the construction of a new converter station within the 100-year flood plain should be considered a risk which may be threatened by the effects of climate change in the near future.

DEP also reviewed a proposal utilizing the former Werner Generator Station in South Amboy which includes a new transmission line located within an existing Conrail right of way, connecting to the Half Acre converter station property in Monroe Township. This proposal leaves the responsibility of the offshore routing to the offshore wind developer. Therefore, there may be impacts to sensitive areas such as wetlands, T&E habitat, cultural resources, and Green Acres properties along the existing right of way onshore, as well as tree clearing necessary at the Half Acre property, but there is no detail to review at this time. Although the increased impacts associated with the longer offshore cable routes are not reflected in the transmission developer's application, those impacts should still be considered, as they would apply to the project to some extent, depending on the project-specific detail.

Lastly, there is a proposal that includes the construction of a converter station on State-owned lands associated with Pigeon Swamp State Park. The lease of State-owned lands may be granted only after all reasonable, feasible, and available non-parkland alternatives have been evaluated. A compelling public need and significant public benefit from the project needs to be demonstrated by the applicant. A request for the use of DEP property requires the approval of the Commissioner and the State House Commission, with an associated public process. Although the DEP provides recommendations to the State House Commission, final approval is ultimately outside of the DEP's jurisdiction and not certain. Because of the complexity and lengthy timeframes associated with this process, the DEP recommends that alternative sites be considered for the construction of the proposed converter station. Although alternatives were proposed by the developer in response to CQs, there was not enough detail for DEP to evaluate the sites constraints and the substation construction at the sites.

As a result of the environmental evaluations, DEP concludes that all projects as proposed have impacts to environmental resources. Due to a lack design of detail and complete site plans, in many cases, the extent of impacts to regulated resources cannot be determined at this time. Also, as noted above, the risk levels assessed are based on the information provided in the application, and because it is early in project development and therefore in many cases details were lacking, the overall risk level may not necessarily reflect the actual viability of a project. Finally, DEP's review and any assessment provided herein does not guarantee that the chosen projects are permissible as currently presented, and DEP recognizes that the proposals that are chosen through this SAA process will likely be further refined in consultation with DEP in order to minimize impacts to environmental resources to the greatest extent possible. Overall, as noted, DEP recommends that BPU choose one or more transmission solutions that avoid and/or minimize impacts to resources to the greatest extent practicable.

Thank you for the opportunity to participate in the review of the State Agreement Approach proposals. DEP looks forward to continued work with BPU on the transmission solution process as well as the overall development of offshore wind in New Jersey.