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Comments of Mayflower Wind Energy LLC in response to
The New England States Regional Transmission Initiative – Request for Information
October 28, 2022

Mayflower Wind, a joint venture between Shell New Energies and Ocean Winds North America, is developing an offshore lease area—located over 30 miles south of Martha's Vineyard and 20 miles south of Nantucket is pleased to respond to this RFI. Mayflower is active in the delivery of its 1200MW Mayflower SouthCoast project to Massachusetts and development of our remaining leasehold capacity into New England markets. Mayflower offers our responses from the viewpoint of an active offshore wind (OSW) developer.

Mayflower is optimistic about the future of larger capacity Points of Interconnect (POI), transmission planning and an offshore grid bringing the benefits of better technology and promise of low-cost offshore wind energy. The ability to deliver directly to load centers, increase grid resilience while limiting impacts is key to renewable energy integration. Mayflower is an early advocate of HVDC technology, the efficient use of valuable POI's and focus on minimizing environmental impacts with small HVDC cable bundles. We appreciate the initiative and purpose of this RFI and pleased to have this and future opportunities to participate. We have focused our responses on areas we add value and pleased that our sponsors and groups such as ACP and ReNew are offering their views.

It is now accepted that without considerable changes, the finite capabilities of existing high voltage lines, regional energy transfer and number of near shore large POI's will limit OSW's ability to deliver large scale renewable energy to the region. In addition, our regulatory standards and tariff structures must adapt to the legislative and regional needs of our new energy paths. Planning, tariff/rule changes, regulatory review and regional coordination is needed. These tasks to institute new structures and a transmission vision must be conducted while doing no harm to current actions.

1 Considerations

The comments below are focused on current regional activities, but are offered to highlight the issues and possible changes that can be implemented to support continued development of the regional transmission system as the larger longer term solution is developed.

- The interconnection process as currently structured is lengthy and does not provide the clarity required to connect Projects to the grid in an expedient or cost effective manner. The study process is unpredictable and even as a project progresses through the process ambiguity remains with respect to available headroom and interconnection costs.
- The uncertainty that results from the current process results in speculative queue filing, contributing to the study burden which results in a longer and more speculative process, accordingly queue positions remain highly competitive and often do not represent active or developable projects.
- System Upgrade costs are the responsibility of the developer and remain as uncapped estimates, with limited obligation for the relevant transmission operator to meet cost or schedule timelines. The upgrades typically require significant prepayment mechanisms with no commensurate guarantee for the TO to deliver.
- Given the scale of OSW projects, they routinely result in impacts throughout the larger system. These impacts are difficult for third parties to estimate and routinely "trigger" upgrades that are systematic in nature, with the upgrade cost attributed to the interconnection customer. This process results in a shift of cost to the interconnection customer and routinely prevents interconnection of new generation. Many of the systematic upgrades should instead systematically pursued as a means to strengthen the grid from either a reliability perspective, or to proactively structure the grid to support the addition of new resources.
- There exists up to 10GW's of uncommitted offshore wind lease area potential generation within the RI and Mass wind energy area. This generation would be well suited to connect to the ISO-NE system if grid connection becomes available. These projects have the ability to provide the OSW generation required to meet the New England states renewable energy and green house gas reduction targets I the near to medium term. Connection of these projects which are currently advancing through the development and permitting process should be prioritized, while a longer term solution to allow the injection of lager quantities of OSW generation are developed.
- BOEM's proposed 2024 Gulf of Maine auctions could add between 5 to 10GW of OSW generation. This added OSW generation is unlikely to able to connect to the ISO-NE system unless major upgrades to the onshore transmission network are planned and implemented.
- The leadership/coordination entity to identify and implement the broad actions required to advance the proactive development of the transmission system is not defined. The definition development and empowerment of such an entity with the ability to reach across multiple stakeholders, state and regulatory entities will likely be a key element to implement the required system upgrades.

In addition to and in support of the above comments, Mayflower supports the continued development and implementation of the FERC Transmission System NOPR. The NOPR which proposes that the ISO's be provided the authority to more proactively manage the interconnection queue through the implementation of a defined "First Ready, First Served" approach is a key intermediate step to support the interconnection of new generation. The First Ready, First served principle would supersede the current "First In, First Served and would help to provide clarity and certainty to generators working to secure interconnection. The First Ready First Served approach would provide more certainty for projects that are actively advancing a through the development process with demonstrated efforts on activities such as permitting, securing access and land rights and energy contracts.

Mayflower supports the states leadership on these issues as evidenced by this RFI. The ability to drive these many initiatives forward will require a detailed analysis that will take time to develop and implement. Given the challenges that the region has had with moving the development and implementation of the solutions required to modernize the transmission system new approaches to planning, funding and execution of upgrades will be required. There are examples of larger regional electrification efforts in the region and nations history that may provide insight into mechanisms that enable the implementation of required to upgrade the regions transmission system.

Responses per the RFI topics:

DOE opportunities;

Mayflower supports the comments submitted by ReNew that identify a variety of DOE program opportunities. Continued education on how these may be best used among the stakeholders will be required to induce private and public activity. Private development activities will need to balance expediency of the effort with the requirements of public funding while considering how best to align policies, regulations to induce development.

Minimizing ratepayer impacts;

Continue and accelerate changes to modernize tariff and regulatory structures to increase efficiency and predictability of project execution. Reducing the risk profile and development timeline reduces cost. It is difficult to capture economies of scale with the current serial approach to upgrading and developing the transmission system and accordingly a more regional approach will be required.

In order for the region to achieve its state mandated renewable energy and green house gas reduction goals, a means to fund these more proactive upgrades to the transmission system will be required.

Advantages and disadvantages of utilizing different types of transmission solutions;

This topic has been reviewed to a large extent for NJ's SAA and NY's recent RFP's, as well as through a variety of other studies. HVDC systems will continue to be adopted and grow in size, especially as OSW project continue to increase in size

Further engagement in the industry, regulatory groups will be required to provide clarity on the direction the region should take.

Should an HVDC offshore project that eliminates the need for major land- based upgrades be prioritized over another HVDC offshore project that does not eliminate such upgrades;

The answer is yes, but the scenario is expected to be rare. HVDC has many benefits, but delivery to the onshore load still requires the development of a robust onshore grid to transmit the power to the end user.

Identify any regional or interregional benefits or challenges presented by the possibility of using HVDC lines to assist in transmission system restoration following a load shedding or other emergency event and particularly from using the black start capabilities of HVDC lines in the event of a blackout:

HVDC systems have inherent black start capabilities, that can be coupled with wind turbines systems to provide black start capabilities. Similar to other markets, compensation would be required to offset the cost of developing this capability.

Comment on the region's ability to use offshore HVDC transmission lines to facilitate interregional transmission in the future;

It is expected that appropriately sited offshore HVDC systems would result in lower costs to ratepayers. In general, offshore lines are less costly to construct on a per mile basis and would potentially reduce the number of impacted area stakeholders.

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