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BY EMAIL SUBMISSION TO Marian.Swain@mass.gov

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RE: Massachusetts 83C Round 4 Offshore Wind Solicitation Request for Public Comment

To the RFP Drafting Parties,

PPL TransLink and WindGrid appreciate the opportunity to provide comments to the RFP under 83C Round 4. PPL TransLink and WindGrid share the New England States' vision for a clean, affordable, and reliable 21st century regional electric grid. Our vision is best outlined in our response to the New England States' Regional Transmission Request for Information. Specifically, PPL TransLink and WindGrid share a vision for a Joint State Innovation Partnership for Offshore Wind as described in the submittal of a concept paper in January pursuant to Topic Area 3 of the Grid Resilience and Innovation Partnership under BIL 40103(b). These further comments focus on the potential coordination and relationships between this RFP and the Joint State Innovation Partnership for Offshore Wind. We appreciate the MA DOER's proactive approach in taking into account transmission considerations upfront, prior to issuing the RFP.

4. Transmission:

a. How should the 83C Round 4 requirements regarding transmission and interconnection of proposed projects be designed to maximize efficient use of the onshore transmission system?

b. Please comment on potential ways to integrate 83C Round 4 with ongoing regional transmission initiatives, including the Joint State Innovation Partnership for Offshore Wind.

PPL TransLink and WindGrid support integrating the 83C Round 4 (83C) with the Joint State Innovation Partnership for Offshore Wind (JSIP) and similar initiatives. The key areas of beneficial coordination of 83C and JSIP are the transmission and interconnection requirements. In sum, the drafting parties should strive to make requirements around transmission and interconnection flexible, yet not overly complex.

One mechanism to provide flexibility and efficiency is to build in optionality into the Power Purchase Agreements allowing bidders to change their Points of Interconnection (POI) and interconnection facilities inputs if their project ends up connecting to a transmission facility built and funded as part of the JSIP or a similar initiative. This would enable the 83C RFP to proceed with the indicated POIs but would leave open the possibility of changing the POI to a new location based on the JSIP RFI results if deemed prudent and cost effective. The benefit would

be to build optionality into the process to hopefully result in a more cost-efficient, planned, and less environmentally impactful transmission system that can accommodate New England's offshore wind goals.

Another mechanism to coordinate 83C and JSIP or other initiatives would be to request bidders include two bid prices: (1) generation facilities only, including wind turbines and associated generator lead lines and (2) generation facilities and all interconnection facilities and transmission system upgrades. With two bid prices, the states would have greater flexibility to carve out the facilities that could be displaced by state funded facilities identified through the JSIP.

c. Please comment on the advantages and challenges of the "Meshed Ready" transmission requirement in the 2022 NYSERDA offshore wind RFP (ORECRFP22-1) and what factors would need to be considered for such an approach to be applicable in a Section 83C solicitation.

- PPL TransLink and WindGrid are generally supportive of meshing, the benefits of which were outlined in our joint response to the Regional Transmission Initiative RFI (link in intro paragraph of these comments). These benefits are also highlighted in the states' JSIP concept paper submitted to the DOE.
- From our perspective the meshing proposal given by NYSERDA (meshing of offshore converters on AC side) is not the optimal solution and brings some significant challenges:
- Additional equipment on each of the offshore platforms is needed: one 230/66 kV transformer, additional 230 kV bays, additional reactive compensation units, additional 66 kV bays;
- This additional equipment will require the size of the platforms to be increased, which will lead to higher weights, higher costs and complexity;
- There are power limitations. Meshing with only one AC cable, the power to be exchanged is limited to approximately 400 MW, and thus use of the offshore grid as a backbone will be limited;
- Operational costs of generated power will be higher, since according to NYSERDA Appendix G 5.2.5, the meshing link is connected, leading to higher transformer losses on both sides

DC technology would make meshing more attractive since:

- Offshore platforms need only two additional DC bays with very small impact on the design and costs of the offshore platforms; and
- DC cables can interlink much higher power per cable system than AC ~1000 MW. This results in fewer cables, less impact on the environment, and a lower cost on a per MW basis compared to AC meshing.

In Europe, the merits of AC vs DC meshing have been thoroughly vetted among different bodies and institutions, with the result that DC meshing was concluded to be superior and best practice. As a result, today all European meshed concepts are DC. Some examples include:

- TenneT 2 GW HVDC offshore connections – offshore platforms are to be designed DC meshed ready.
- BSH (Bundesamt für Seefahrt und Hydrologie – equivalent to BOEM in US) (Site_Development_Plan_2020.pdf (bsh.de)
- NSWPH Validation Technical Requirements | North Sea Wind Power Hub
- Active Power Control of Wind Hub | North Sea Wind Power Hub