

**COMMONWEALTH OF MASSACHUSETTS
ENERGY FACILITIES SITING BOARD**

_____))
Petition of Commonwealth Wind, LLC Pursuant)
to G.L. c. 164, § 69J for Approval to Construct,)
Operate, and Maintain Transmission Facilities)
in Massachusetts for the Delivery of Energy) EFSB 22-06
from an Offshore Wind Energy Facility Located)
in Federal Waters to an NSTAR Electric (d/b/a)
Eversource Energy) Substation Located in the)
Town of Barnstable, Massachusetts.)
_____)

**PETITION OF COMMONWEALTH WIND, LLC
PURSUANT TO G.L. c. 164, § 69J**

I. INTRODUCTION

Commonwealth Wind, LLC (“Commonwealth Wind”) requests that the Energy Facilities Siting Board (the “Siting Board”), pursuant to G.L. c. 164, § 69J (“Section 69J”), approve this Petition to construct, operate, and maintain: (1) a new, approximately 29.7-mile, 275-kilovolt (“kV”) combined offshore/onshore underground electric transmission line from the boundary with federal waters south of Muskeget Channel to a new substation to be located off Oak Street north of MassDOT State Highway Route 6 in the Town of Barnstable (the “Substation”), (2) the Substation, and (3) a new, approximately 0.4- or 0.5-mile, 345-kV, underground, onshore transmission line between the Substation and NSTAR Electric Company’s existing West Barnstable Substation in the Town of Barnstable (“Barnstable”).¹ Together, these components

¹ At this time, NSTAR Electric Company (“Eversource”) is not a co-petitioner with Commonwealth Wind in this proceeding. To interconnect at Eversource’s West Barnstable Substation, construction will be necessary at that substation. Commonwealth Wind expects that construction would be undertaken by Eversource and will support Eversource in those efforts. Commonwealth Wind does not expect to construct, own, operate, or maintain any transmission facilities at the West Barnstable Substation. For completeness, Commonwealth Wind includes information relating to work at West Barnstable Substation in this petition.

constitute the “New England Wind 2 Connector” (also referred to as the “NE Wind 2 Connector” or the “Project”). The New England Wind 2 Connector is the Massachusetts-jurisdictional elements of the “Commonwealth Wind Project”—a more than 1,200 megawatt (“MW”) wind energy generation facility Commonwealth Wind is developing that includes wind turbine generators (“WTGs”) in federal waters within the southern portion of Bureau of Ocean Energy Management (“BOEM”) Lease Area OCS-A 0534 (the “Lease Area”). The New England Wind 2 Connector, as more fully described below and in the “New England Wind 2 Connector – Analysis to Support Petition Before the Energy Facilities Siting Board” (Attachment A, the “Analysis”), is necessary to interconnect the Commonwealth Wind Project to the New England electric grid and will minimize environmental impacts and costs in accordance with Section 69J. In support of this Petition, Commonwealth Wind states as follows:

1. Commonwealth Wind is a Delaware limited liability company registered in the Commonwealth of Massachusetts. Its principal place of business is 2701 Northwest Vaughn Street, Suite 300, Portland, Oregon 97210.
2. Commonwealth Wind is an “applicant” under Section 69J, seeking to construct a “facility,” as defined by G.L. c. 164, § 69G, which must obtain Siting Board approval.
3. Under G.L. c. 164, § 69G, jurisdictional “facilit[ies]” include a “new electric transmission line having a design rating of 69 kilovolts or more and which is one mile or more in length on a new transmission corridor,” a “new electric transmission line having a design rating of 115 kilovolts or more which is 10 miles or more in length on an

existing transmission corridor,” and “an ancillary structure which is an integral part of the operation of any part of a transmission line which is a facility.”

4. The New England Wind 2 Connector is a “facility” as defined by the statute, because it consists of an approximately 29.7-mile combined offshore/onshore underground electric transmission line from federal waters to the Substation, which will be a 275 kV line—*i.e.*, greater than 69 kV—that is over a mile long in a new transmission corridor. *See* G.L. c. 164, § 69G. The Substation and the line between the Substation and the West Barnstable Substation are also “facilities” per the statutory definition, because they are “integral part[s] of the operation” of the New England Wind 2 Connector. *See id.*

II. PROJECT DESCRIPTION

5. As described in Analysis Section 1.1, the purpose of the New England Wind 2 Connector is to connect the Commonwealth Wind Project to the New England bulk power grid to deliver over 1,200 MW of offshore wind energy generation from the federally designated Wind Energy Area on the Outer Continental Shelf outside of Massachusetts to meet demand in New England for cost-effective renewable energy.

6. The Commonwealth Wind Project and the New England Wind 2 Connector were proposed in response to a third round of competitive solicitations by the Massachusetts Electric Distribution Companies (“EDCs”) to procure offshore wind energy pursuant to Section 83C of An Act Relative to Green Communities, St. 2008 c. 169, as amended by St. 2016, c. 188, § 12; St. 2021, c. 8; St. 2021, c. 24; and St. 2022, c.

179, §§ 61, 62 (“Section 83C”). On December 17, 2021, the EDCs selected Commonwealth Wind’s offshore wind project as a winning bidder.²

7. The New England Wind 2 Connector represents a major step toward meeting the region’s growing demand for cost-effective clean energy. The Project will serve the public interest by delivering over 1,200 MW of power generated from offshore wind to the New England electric grid, thus making substantial contributions to meeting Massachusetts’ renewable energy and climate change goals, including those set by the 2008 Global Warming Solutions Act, as amended (“GWSA”), and the 2021 Act Creating a Next-Generation Roadmap for Massachusetts Climate Policy (the “Climate Roadmap Act”), which call for significant reductions in greenhouse gas (“GHG”) emissions and for the Massachusetts Secretary of Energy and Environmental Affairs to adopt a statewide 2050 GHG emissions limit that achieves at least net zero emissions.³

8. The Commonwealth Wind Project will be built in Commonwealth Wind’s Lease Area, which is one of the lease areas BOEM has awarded lessees to develop wind facilities offshore from Massachusetts and Rhode Island. The federal government delineated the Lease Area as part of a decade-long process led by the federal government with strong state participation of developing offshore areas for wind generation projects.

² The Massachusetts EDCs must solicit proposals for offshore wind energy generation under Section 83C. Section 83C, as recently amended, sets a mandatory target of 5,600 MW of offshore wind energy that the Massachusetts EDCs must solicit. *See* St. 2022, c. 179, § 61(b). The EDCs selected the Commonwealth Wind Project (approximately 1,200 MW) in the third offshore wind solicitation. They selected the Vineyard Wind Project (approximately 800 MW) and the Mayflower Wind Project (approximately 800 MW) in the previous two solicitations.

³ *See* Global Warming Solutions Act, St. 2008, c. 298; An Act Creating a Next-Generation Roadmap for Massachusetts Climate Policy, St. 2021, c. 8; *see also* Mass. Exec. Office of Energy and Env’tl. Affairs, Massachusetts 2050 Decarbonization Roadmap (Dec. 2020), *available at* <https://www.mass.gov/doc/mass-decarbonization-roadmap-lower-resolution/download>; An Act Driving Clean Energy and Offshore Wind, St. 2022, c. 179 (among other things, including provisions to support the development of offshore wind generation).

9. The Lease Area (OSC-A 0534) is located entirely within federal waters and previously consisted of a portion of another lease area designated OCS-A 0501. In January 2021, BOEM separated Lease Area OCS-A 0501 into two lease areas: OCS-A 0501, where the Vineyard Wind Project is being developed, and OCS-A 0534, where both the Park City Wind Project and the Commonwealth Wind Project (together, “New England Wind”) are being developed. The Commonwealth Wind Project will occupy the southern portion of the Lease Area.⁴

10. The WTGs for the Commonwealth Wind Project will be located immediately south/southwest of the area being developed for the Park City Wind Project, which is the southern portion of an area the Company refers to as the Southern Wind Development Area (“SWDA”). The SWDA encompasses all of the Lease Area and the southwestern portion of Lease Area OCS-A 0501. At its nearest point, the SWDA is just over 19 miles from the southwest corner of Martha’s Vineyard, approximately 23 miles from Nantucket, and approximately 41 miles south of the Cape Cod mainland. The SWDA is located entirely in federal waters.

11. Because the Commonwealth Wind Project includes components located in federal waters, it is being developed and permitted at the federal level, as well as the state, regional, and local levels. The federal permitting process began in July 2020 with the filing of the phased Construction and Operations Plan (“COP”) for New England Wind (both the Park City Wind and Commonwealth Wind Projects) with BOEM as the

⁴ The “Vineyard Wind Project” refers to the offshore wind energy facility described in the Siting Board’s Final Decision in EFSB 17-05/D.P.U. 18-18/18-19 (May 10, 2019). The Park City Wind Project refers to the offshore wind energy facility described in Park City Wind LLC’s petition for approval of the Massachusetts jurisdictional transmission facilities that will interconnect the Park City Wind Project to the New England electric grid. *See* EFSB 20-01/D.P.U. 20-56/20-57.

lead federal agency responsible for completing the National Environmental Policy Act (“NEPA”) process. On June 30, 2021, BOEM published a Notice of Intent (“NOI”) to prepare an Environmental Impact Statement (“EIS”). Two COP updates were filed with BOEM in Fall 2021 and Spring 2022. Commonwealth Wind has engaged with BOEM regarding the COP and has had multiple discussions with the federal agencies BOEM is coordinating and consulting with during the NEPA process.

12. As described in more detail in Sections 3.0, 4.0, and 5.0 of the Analysis, Commonwealth Wind extensively assessed project alternatives and routing options for the transmission resources needed to bring energy from the Commonwealth Wind Project to the New England electric grid.

13. Commonwealth Wind proposes to construct, operate, and maintain the New England Wind 2 Connector, including (a) transmission lines, which would be installed in state waters (including state waters within the Towns of Barnstable, Edgartown, Mashpee, and Nantucket) and onshore in Barnstable, and (b) the Substation in Barnstable.

14. Three new 275-kV three-core alternating current (“AC”) cables will bring the output from the Commonwealth Wind Project WTGs from the SWDA to the landfall site in Barnstable within an identified Offshore Export Cable Corridor (“OECC”). The OECC is a widened version of the corridor the Siting Board approved for the Vineyard Wind Connector in EFSB 17-05/D.P.U. 18-18/18-19, and is the same corridor that was proposed for the New England Wind 1 Connector in EFSB 20-01/D.P.U. 20-56/20-57, with two principal differences: (1) the corridor diverges to the west in Barnstable waters to provide access to the Dowses Beach Landfall Site; and (2) in addition to the preferred

route through Muskeget Channel, Commonwealth Wind has also identified a Western Muskeget Channel routing option that could be used for installing one or two of the offshore export cables if doing so is determined to be warranted upon further engineering analysis.

15. The maximum length of the OECC in state and federal waters combined is up to 47.2 miles.⁵ Of this, the maximum total length of the OECC within state waters is approximately 21.9 miles. The offshore export cables will travel north from the SWDA, cross into state waters between Martha's Vineyard and Nantucket, pass through a pocket of federal waters in Nantucket Sound, reenter state waters, and make landfall on the Cape Cod mainland at the Dowses Beach Landfall Site.

16. At the landfall site, horizontal directional drilling ("HDD") will be used to complete the offshore-to-onshore transition. The physical connection between the offshore and onshore export cables will be made in underground concrete transition vaults that will be installed within a paved parking lot at the landfall site. There, each three-core offshore export cable system will transition to three separate single-core, 275 kV cables that will run from the landfall site to the Substation within a buried concrete duct bank.

17. The Preferred Transmission Route from the landfall site to the Substation is approximately 6.7 miles long, all within Barnstable. The route is located entirely within public roadway layouts or the parking lot area at Dowses Beach. The Noticed Alternative Transmission Route from the landfall site to the Substation is approximately

⁵ An additional length of offshore export cable within the portion of Lease Area OCS-A 0534 that will be utilized for the Commonwealth Wind Project (up to approximately 26 miles [approximately 42 km] per cable, though likely less) will be needed to reach the electrical service platform(s).

6.6 miles long, and is also located entirely within public roadway layouts or the parking lot area at Dowses Beach, all within Barnstable.

18. The Substation is necessary to step up the power from the Export Cable to 345 kV to interconnect at the West Barnstable Substation. The Substation is located at an approximately 15.2-acre site consisting of three privately owned, undeveloped wooded parcels north of Route 6 off Oak Street in Barnstable. The site is approximately 0.5 miles west of the existing West Barnstable Substation. The site is bordered by undeveloped land to the west. To the north, the site includes a 40-ft wide “panhandle” that extends from the north of the property into the existing Eversource ROW 342, and is bordered by two protected parcels that are part of the Spruce Pond Conservation Area owned by the Town of Barnstable and managed by the Conservation Commission. To the east, the site is bordered by a residential parcel developed with one single family home. The site’s southern border is the Route 6 layout managed by Massachusetts Department of Transportation (“MassDOT”).

19. Commonwealth Wind proposes a gas-insulated substation (“GIS”) design for the Substation. The Substation will house three 275/345-kV “step-up” transformers, gas-insulated switchgear, a control room within a building, and other necessary equipment, likely including: shunt reactors, STATCOMs, and harmonic filters along with associated bus work and support structures, overhead and underground wiring and conduits, protective systems, electrical service equipment, grounding protection, and lightning protection masts. Substation equipment and enclosures are expected to be 40 feet or less in height. The lightning protection masts will be approximately 80 feet in height, though the height and number of masts is subject to further design refinement.

20. The Substation will incorporate a containment system consistent with anticipated commitments to Barnstable, as set forth in Sections 1.3.4.1 and 5.5.4.1 of the Analysis. The Substation design will incorporate full-volume (110%) containment systems for major Substation equipment using dielectric fluid (*i.e.*, the main transformers, iron core shunt reactors, and equipment associated with STATCOMS containing dielectric fluid). The Company is also committing to increase the 110% containment for the equipment identified above to account for an extreme rain event, that is, the simultaneous Probable Maximum Precipitation (“PMP”) event in a 24-hour period, which will be determined for the Substation site in consultation with the Town of Barnstable.

21. From the Substation, nine single-core 345-kV onshore export cables will run to West Barnstable Substation within a buried duct bank. The Company has identified three possible Grid Interconnection Routes in the Analysis and is completing final engineering reviews to identify which is preferred. Each of the three routing options is between 0.4 and 0.5 miles in length.

22. As described in the Analysis at Section 1.3.5, some modifications to the interconnection point at West Barnstable Substation will be necessary to interconnect the New England Wind 2 Connector. Commonwealth Wind expects that any work within the West Barnstable Substation would be designed and performed by Eversource.

23. This Section 69J Petition and the attached Analysis, which is incorporated herein, provide the factual basis for Commonwealth Wind’s conclusion that the New England Wind 2 Connector is necessary, is superior to alternatives, appropriately balances issues of cost and environmental impacts, is consistent with Commonwealth policies, and meets the standard of review applicable to proposals under Section 69J.

III. STANDARD OF REVIEW

24. In accordance with Section 69J, before approving a petition to construct a proposed facility, the Siting Board requires an applicant to show that its proposal meets five requirements:

- (1) that additional energy resources are needed . . .;
- (2) that, on balance, the proposed project is superior to alternative approaches in terms of reliability, cost, and environmental impact, and in its ability to address the identified need . . .;
- (3) that the applicant has considered a reasonable range of practical facility siting alternatives and that the proposed facilities are sited in locations that minimize costs and environmental impacts . . .;
- (4) that environmental impacts of the project are minimized and the project achieves an appropriate balance among conflicting environmental concerns as well as among environmental impacts, cost, and reliability. . .;
- and (5) that plans for construction of the proposed facilities are consistent with the current health, environmental protection and resource use and development policies of the Commonwealth

Vineyard Wind LLC, EFSB 17-05/D.P.U. 18-18/18-19, at 10-11 (2019) (“*Vineyard Wind*”); *NSTAR Electric Co.*, EFSB 14-2/D.P.U. 14-73/14-74, at 6-7 (2017) (“*Walpole-Holbrook*”). In assessing requirements (3) and (4), the Siting Board looks to whether an applicant has used a “reasonable set of criteria for identifying and evaluating alternative routes in a manner that ensures that it has not overlooked or eliminated any routes that, on balance, are clearly superior” and whether the proposed route is superior to a noticed alternative with respect to balancing environmental impact, cost, and reliability.

Vineyard Wind at 19; *Walpole-Holbrook* at 32, 38-39.

25. As demonstrated throughout the Analysis, the New England Wind 2 Connector meets the Siting Board’s standards, satisfies the applicable requirements, and is consistent with Siting Board precedent. Certain sections of the Analysis relate directly to the Siting Board’s five requirements:

- Section 2.0 of the Analysis addresses the need for the New England Wind 2 Connector.
- Section 3.0 of the Analysis addresses project alternatives.
- Sections 4.0 and 5.0 of the Analysis address route selection and the comparison of the Preferred Route to alternatives.
- Section 6.0 of the Analysis addresses consistency with the policies of the Commonwealth.

a. **The Project is Needed.**

26. With respect to determining whether a proposed facility is needed,

The Siting Board requires an applicant seeking to construct [transmission facilities to interconnect a new or expanded generating facility] to show: (1) that the existing transmission system is inadequate to interconnect the new or expanded generator; and (2) that the new or expanded generator is likely to be available to contribute to the regional energy supply.

Vineyard Wind at 11.

If the new or expanded generator exists, or is under construction, the availability showing will be deemed to have been made. . . . If the generator is planned, and not subject to the Siting Board's jurisdiction, the showing may be made on a case-by-case basis based on indicators of project progress (e.g., progress in permitting or in obtaining project financing).

Id. at 12 (quoting *Cape Wind Assocs., LLC*, EFSB 02-2, at 16-17); *accord Russell*

Biomass, LLC, EFSB 07-4/D.P.U. 07-35/07-36, at 7.

27. The primary purpose of the New England Wind 2 Connector is to bring offshore wind generation from the federally designated Lease Area to the New England electric grid.

28. As described more fully in Section 2.0 of the Analysis, the existing transmission system has no power line to connect the Commonwealth Wind Project to the

electric grid in New England. The New England Wind 2 Connector will address that need by providing a reliable means to bring electricity from the Commonwealth Wind Project to the New England electric grid.

29. As described in Sections 1.0 and 2.0 of the Analysis, the generation component of the Commonwealth Wind Project is planned and not subject to the Siting Board's jurisdiction because it is located in federal waters. The Commonwealth Wind Project is consistent with and supported by state and federal policies and is being developed in response to those policies—in particular, BOEM's lease of the Lease Area and Massachusetts law, such as Section 83C. Section 83C and the statutes amending it that established the Commonwealth's offshore wind procurement target of 5,600 MW evince a legislative determination that facilities such as the Commonwealth Wind Project are needed, provide significant benefits, and must be constructed. *See also* An Act Driving Clean Energy and Offshore Wind, St. 2022, c. 179 (among other things, including provisions to support the development of offshore wind generation).

30. Section 2.0 of the Analysis sets out additional indicators of project progress showing that the generation component of the Commonwealth Wind Project is likely to be available to contribute to the regional energy supply. Those indicators include the high value of the wind resource in the Lease Area, the permitting milestones that have been or will be achieved in the near future for the Commonwealth Wind Project, the Company's effective and extensive public outreach regarding the Project, and the broad support by Massachusetts for the development of significant offshore wind generation resources.

31. Because existing transmission facilities are inadequate to interconnect the Commonwealth Wind Project, and significant indicators of project progress suggest that the Commonwealth Wind Project's generation facilities are likely to be available to contribute to the regional energy supply, the New England Wind 2 Connector is needed.

b. Commonwealth Wind Properly Considered Alternatives to the Project.

32. Section 69J requires that a petition include "a description of alternatives to the facility." G.L. c. 164, § 69J. Such alternatives "may include: (1) other methods of transmitting or storing energy; (2) other sources of electrical power; or (3) a reduction of requirements through load management." *Vineyard Wind* at 16.

33. "In implementing its statutory mandate, the Siting Board requires a petitioner to show that, on balance, its proposed project is superior to such alternative approaches in terms of cost, environmental impact, and ability to meet the identified need." *Id.* "In addition, the Siting Board requires a petitioner to consider reliability of supply as part of its showing that the proposed project is superior to alternative project approaches." *Id.*

34. To determine the approach that best balances reliability, cost, and environmental impact, and in accordance with Section 69J and Siting Board precedent, Commonwealth Wind analyzed various alternatives to address the identified need. Sections 3.0 and 4.0 of the Analysis describe Commonwealth Wind's detailed assessment of the following project alternatives: (1) a no-build alternative and non-transmission alternatives; (2) alternative cable technologies; (3) alternative interconnection locations and transmission routes, including the possibility of pursuing multiple interconnection points; and (4) a shared transmission approach, as opposed to a generator lead line.

35. Commonwealth Wind rejected the no-build alternative and non-transmission alternatives because they would fail to meet the identified need.

36. Regarding cable technologies, Commonwealth Wind considered several and determined that the high-voltage alternating current (“HVAC”) technology was superior to a high-voltage direct current (“HVDC”) technology based on, among other factors, reliability, cost, and flexibility. *See* Analysis, Section 3.0. The Company also determined that 275 kV cables were superior to higher or lower voltage cables because the 275 kV cables, while similar in size to 220 kV cables (which are the standard for European offshore wind projects), operate at a higher voltage/lower amperage for a given power rating, have lower power losses, and can have lower magnetic fields for a given power flow. *Id.* Cable voltage ratings below 275 kV would also increase the number of cables required for the Project and increase overall power losses. *Id.* Higher voltage cables, such as 345 kV, could in theory be used for the Project, but as of now, there are no tested offshore cables at this voltage rating, and a long type-testing process would be required before the Company could consider using these higher voltage cables. *Id.* Commonwealth Wind also considered alternatives to cross-linked polyethylene insulation (“XLPE”) for the Offshore Export Cable and the Onshore Export Cable, and determined that XLPE is the state-of-the-art technology for offshore transmission worldwide and is superior to alternatives because it is more reliable and more easily handled and constructed. *See id.*

37. Commonwealth Wind also determined that a single interconnection point, rather than multiple interconnection points, was preferable for the Project. In particular, the Company considered a Dual Interconnection Alternative that would have

interconnected approximately 400 MW in Acushnet and approximately 800 MW in West Barnstable. The Company determined that a single interconnection point at the West Barnstable Substation was preferable for several reasons. First, the Company confirmed, via an interconnection load flow analysis, that the Project could interconnect more than 1,200 MW at the West Barnstable Substation, provided certain upgrades to the West Barnstable Substation are implemented. *See* Analysis Section 3.1.3.2. Second, a single interconnection will avoid the need to develop additional onshore cabling, a second OECC, or an additional substation, and the associated impacts. *Id.* Third, the Company already holds queue position QP 806 and QP 1109 for interconnecting the entire Project at the West Barnstable Substation. *Id.* Fourth, the Company has secured options to purchase the parcels comprising the Substation site located approximately 0.5 miles west of the West Barnstable Substation. The Substation site's proximity to the West Barnstable Substation facilitates interconnecting the entire Project there. *Id.*

38. Finally, Commonwealth Wind considered a shared transmission alternative and determined that such an alternative was not feasible, and that a generator lead line approach is preferable for the Project. As explained in more detail in Section 3.1.3.3 of the Analysis, a shared transmission alternative is neither reasonably available nor technologically feasible for the Project at this time, and even if it were, it would not necessarily reduce impacts relative to a generator lead line for this Project.

39. Commonwealth Wind's analysis shows that the superior Project alternative is the use of 275 kV, HVAC, XPLE cables for the Offshore Export Cable, a single interconnection point at the West Barnstable Substation, and a generator lead line approach, as opposed to a shared transmission approach, for the Export Cables. Those

Project elements are superior to alternatives based on reliability, costs, environmental impacts, and ability to meet the identified need.

c. **Commonwealth Wind Properly Considered Alternative Routes and Locations.**

40. Section 69J “requires a petition to construct to include a description of alternatives to the facility, including ‘other site locations.’” *Vineyard Wind* at 19. The Siting Board “requires an applicant to demonstrate that it has considered a reasonable range of practical siting alternatives and that the proposed facilities are sited at locations that minimize costs and environmental impacts.” *Id.* The Siting Board applies a two-pronged test to implement this requirement.

First, the applicant must establish that it developed and applied a reasonable set of criteria for identifying and evaluating alternative routes in a manner that ensures that it has not overlooked or eliminated any routes that, on balance, are clearly superior to the proposed route. Second, the applicant generally must establish that it identified at least two noticed sites or routes with some measure of geographic diversity.

Id.

41. As shown in Section 4.0 of the Analysis, Commonwealth Wind conducted a comprehensive route selection process to determine the best routes that contribute to a reliable energy supply at the lowest possible cost and that result in the least environmental impact. The route selection process, which resulted in the selection of a Preferred Transmission Route and a Noticed Alternative Transmission Route, both with a “Main Street Variation,” for the Onshore Export Cables running between the landfall site to the Substation and three potential Grid Interconnection Routes for the portion of the Onshore Export Cable running from the Substation to the West Barnstable Substation.

42. Also as shown in Section 4.0 of the Analysis, Commonwealth Wind assessed multiple landfall sites, potential sites to build the Substation, and potential

interconnection locations as part of its routing analysis, and determined that Dowses Beach was the superior landfall site, the combined 15.2-acre parcels west of Oak Street was the superior Substation site, and the West Barnstable Substation was the superior interconnection location.

d. The Environmental Impacts, Cost, and Reliability of the Project, Including Preferred and Noticed Alternative Routes, Have Been Appropriately Evaluated.

43. Under G.L. c. 164, Sections 69H and 69J,

the Siting Board requires a petitioner to show that its proposed facility is sited at a location that minimizes costs and environmental impacts while ensuring a reliable energy supply. To determine whether such a showing is made, the Siting Board requires a petitioner to demonstrate that the proposed route for the facility is superior to the alternative route on the basis of balancing environmental impact, cost, and reliability of supply.

Vineyard Wind at 35.

The Siting Board first determines whether the Petitioner has provided sufficient information regarding environmental impacts and potential mitigation measures to enable the Siting Board to make such a determination. The Siting Board then examines the environmental impacts of the proposed facilities along the Primary and Noticed Alternative Routes and determines: (1) whether environmental impacts would be minimized; and (2) whether an appropriate balance would be achieved among conflicting environmental impacts as well as among environmental impacts, cost, and reliability. Finally, the Siting Board compares the Primary Route and the Noticed Alternative Route to determine which is superior with respect to providing a reliable energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost.

Id.

44. Commonwealth Wind comprehensively analyzed the environmental impacts of the New England Wind 2 Connector and has appropriately minimized and mitigated identified impacts associated with Project construction and operation. The New England Wind 2 Connector will also achieve an appropriate balance between

conflicting environmental concerns and between environmental impacts, reliability, and cost. Section 5.0 of the Analysis analyzes environmental impacts, cost, and reliability for the Project.

e. **The Project Meets the Siting Board's Consistency Standards in Accordance with Precedent.**

45. Section 69J “requires the Siting Board to determine whether plans for construction of the applicant’s new facilities are consistent with current health, environmental protection, and resource use and development policies as adopted by the Commonwealth.” *Vineyard Wind* at 127.

46. The New England Wind 2 Connector is not only consistent with the Commonwealth’s current health, environmental protection, and resource use and development policies, it is critical to effectuating the Commonwealth’s goals, established in legislation and regulatory policies, for developing offshore wind resources and reducing the environmental impacts associated with global climate change. Section 6.0 of the Analysis demonstrates that the New England Wind 2 Connector is consistent with current health, environmental protection, and resource use and development policies of the Commonwealth.

WHEREFORE, Commonwealth Wind respectfully requests that, pursuant to G.L. c. 164, § 69J, the Siting Board conduct a public hearing on this Petition (and on any matters referred to the Siting Board from the Department) and take such action as necessary to: (1) grant the authority to construct the New England Wind 2 Connector as more particularly described in the Analysis; (2) find that such construction is required in order to provide a necessary energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost; and (3) find that the construction

of the New England Wind 2 Connector is consistent with current health, environmental protection, and resource use and development policies as adopted by the Commonwealth and with the policies stated in G.L. c. 164, § 69H.

Respectfully Submitted,

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