COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC UTILITIES

Petition of Mayflower Wind Energy LLC

Pursuant to G.L. c. 164 § 72 for Authority to

Construct and Operate New Transmission Facilities

(Construct and Operate New Transmission Facilities)

for the Delivery of Energy from an Offshore Wind)
Energy Generation Resource Located in Federal)
Waters to the Regional Transmission System in the)

Town of Falmouth, Massachusetts.

D.P.U. 21-143

PETITION OF MAYFLOWER WIND ENERGY LLC FOR AUTHORITY TO CONSTRUCT AND OPERATE NEW TRANSMISSION FACILITIES TO CONNECT ITS CLEAN ENERGY RESOURCE PURSUANT TO G.L. c. 164, § 72

I. INTRODUCTION

Mayflower Wind Energy LLC ("Mayflower Wind") hereby petitions the Department of Public Utilities (the "Department") for authority pursuant to G.L. c. 164, § 72 ("Section 72"), to construct and operate certain combined offshore and onshore transmission facilities located in Massachusetts, for the purpose of connecting Mayflower Wind's offshore wind energy generation resource located in federal waters (the "Clean Energy Resource") to the regional transmission grid, thereby enabling delivery of up to 1,200 megawatts ("MW") of clean energy from the Clean Energy Resource to Massachusetts and New England (the "Section 72 Petition"). These Mayflower Wind offshore and onshore transmission connector facilities located in Massachusetts are described further below and are collectively referred to herein as the "Project." Pursuant to Section 72, Mayflower Wind hereby requests a determination from the Department that Mayflower Wind's proposal to construct and operate the Project is necessary, serves the public convenience and is consistent with the public interest.

¹ Mayflower Wind intends to develop the Clean Energy Resource up to the full capacity of the lease area, currently anticipated to be approximately 2,400 MW.

Concurrently with this Section 72 Petition, Mayflower Wind is also filing: (a) a petition with the Energy Facilities Siting Board (the "Siting Board") requesting approval for the construction of the Project pursuant to G.L. c. 164 § 69J (the "Section 69J Petition") (Docket No. EFSB 21-03); (b) a petition to the Department pursuant to G.L. c. 40A, § 3 requesting specific and comprehensive zoning exemptions from the operation of the *Zoning Bylaw of the Town of Falmouth* (the "Zoning Petition") (D.P.U. 21-142); and (c) motions with the Department and the Siting Board requesting that the Department refer this Section 72 Petition and the Zoning Petition to the Siting Board and that the Siting Board consolidate the Section 69J Petition, the Section 72 Petition, and the Zoning Petition for its review. *See* G.L. c. 25, § 4; G.L. c. 164, § 69H(2).

Attachment A to the Section 69J Petition is a two-volume "Analysis to Support Petition Before the Energy Facilities Siting Board - Mayflower Wind" (the "Analysis"). The Analysis describes the Project in detail and provides the factual support and the basis for concluding that the Project meets the standards applied by the Department and the Siting Board under G.L. c. 164 §§ 69J and 72 and G.L. c. 40A, § 3. Mayflower Wind hereby incorporates by reference herein the Section 69J Petition and its supporting Analysis, and its Zoning Petition, including all exhibits and attachments.

In further support of this Section 72 Petition and consistent with the requirements of Section 72, a description of the Project and an estimate of cost differences among routing alternatives are included in the Analysis and the Department's Section 72 Checklist is provided as Exhibit A to this Petition. A draft hearing notice (in a MS Word format) was provided with the Section 69J Petition filed in EFSB Docket No. 21-03. The draft hearing notice addresses the Section 69J Petition, this Section 72 Petition and the Zoning Petition. USGS locus maps and

diagrams of the proposed transmission line routes are provided in Figures 1-2, 1-3, 4-1, and 4-4 of the Analysis. A list of all permits required for the Project can be found in Table 6-1 of the Analysis. Mayflower Wind submitted an Environmental Notification Form ("ENF") for the Project to the Executive Office of Environmental Affairs ("EEA") pursuant to the Massachusetts Environmental Policy Act ("MEPA") on November 17, 2021. Mayflower provided a copy of the ENF to the Department as Exhibit C to the Zoning Petition. Mayflower Wind will update the record with a copy of the Certificate of the Secretary of the EEA on the ENF when such Certificate is received. The Draft Environmental Impact Report has not yet been filed for the Project under MEPA and, accordingly, no related Certificates or draft MEPA Section 61 findings are yet available.

In support of this Petition, Mayflower Wind states as follows:

- 1. Mayflower Wind is a Delaware limited liability company registered in the Commonwealth of Massachusetts. Its principal place of business is at 101 Federal Street, Boston, Massachusetts 02110. Mayflower Wind is entitled to petition the Department for authority to construct and use a line for the transmission of electricity under Section 72.
- 2. Mayflower Wind is represented, for the purposes of this petition, by Eric K. Runge, Esq., and Stephen Bright, Esq., Day Pitney LLP, One Federal Street, 29th Floor, Boston MA 02110.
- 3. The Project consists of: (i) up to three (3) offshore export power cables rated at between 200 and 345 kilovolts ("kV") (nominal voltage) and up to one (1) communications cable in state waters; (ii) underground transition vaults (a.k.a. transition joint bays, "TJBs") where the offshore export cables will connect to the onshore export cables; (iii) up to three (3) underground onshore export power circuits (with three cables per circuit) rated at between 200 and 345 kV

(nominal voltage) that will transmit energy to a new Mayflower Wind-developed onshore substation (the "Mayflower Wind Substation"), plus associated communications and grounding cables; (iv) the 345 kV Mayflower Wind Substation located in Falmouth; and (v) 345 kV interconnection facilities that will interconnect the Mayflower Wind Substation with the transmission facilities of NSTAR Electric Company d/b/a Eversource Energy ("Eversource") and the regional transmission system in Falmouth. The transmission connector facilities that make up the Project will connect a portion (up to 1,200 MW) of the capacity of Mayflower Wind's Clean Energy Resource with the regional transmission grid administered by ISO New England Inc. ("ISO-NE").

- 4. The Clean Energy Resource is a large-scale (up to approximately 2,400 MW) wind energy project being developed within federal waters on the Outer Continental Shelf offshore of Massachusetts approximately 26 nautical miles (48 km) south of the island of Martha's Vineyard and 20 nautical miles (37 km) south of Nantucket. The Clean Energy Resource is being developed in a 127,388-acre federal lease area (OCS-A 0521) that has been designated by the Bureau of Ocean Energy Management ("BOEM") as a Wind Energy Area and to which Mayflower holds rights as awarded through an auction conducted by BOEM. The Clean Energy Resource includes all wind turbine generators, offshore substation platforms, interarray cables, and offshore export cable corridors in federal waters.
- 5. The Project will interconnect with the regional grid at a point of interconnection ("POI") in Falmouth at or near the Falmouth Tap substation owned and operated by Eversource. The offshore portion of the Project will be installed in state waters, including in Nantucket Sound and in Muskeget Channel, and make landfall in Falmouth. The onshore portion of the Project will be located entirely in Falmouth.

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- 6. The purpose of the Project is to deliver clean, renewable energy from up to 1,200 MW of capacity from the Clean Energy Resource to the regional electric grid, and thereby carry out state policies and legislative mandates and realize the recognized public benefits associated with offshore wind generation while minimizing environmental and other impacts and contributing to a reliable energy supply. Mayflower Wind is developing the Project in accordance with the need for clean energy and offshore wind established under the Commonwealth's public policies and legislative mandates. Section 2 of the Analysis provides information regarding the need for the Project.
- 7. The Project satisfies the Department's standards under Section 72 because it is needed to interconnect the Clean Energy Resource to the New England electric grid and will serve the public interest by delivering energy from the Clean Energy Resource to Massachusetts customers and to the region, as called for by the *Green Communities Act*, St. 2008, c. 169, § 83C, as amended by the *Act to Promote Energy Diversity*, St. 2016, c. 188 ("Section 83C").² The Project and the associated Clean Energy Resource meet the requirements of Section 83C by providing electricity, capacity, reliability, resource diversity and other benefits associated with developing and interconnecting offshore wind generation to the New England electric grid. Moreover, development of the Project and the associated Clean Energy Resource support other Massachusetts policies and legislative mandates, including the substantial reductions of greenhouse gas emissions called for by the *Global Warming Solutions Act*, St. 2008, c. 298 and

² The Project likewise meets the policy directives of the *An Act Creating A Next-Generation Roadmap For Massachusetts Climate Policy*, St. 2021, c. 8 (2021 Climate Act); *The Global Warming Solutions Act* (c. 298 of the Acts of 2008); and *The Restructuring Act* (c. 164 of the Acts of 1997). The Project is also consistent with directives of the recently-proposed *Act to Power Massachusetts's Clean Energy Economy*, H. 4204 (2021), which seeks to further promote the development of the offshore wind industry.

An Act Creating A Next-Generation Roadmap For Massachusetts Climate Policy, St. 2021, c. 8, all while minimizing environmental and other impacts.³

8. The Project will serve the public interest by delivering clean energy, enhancing reliability and resource diversity, by significantly reducing regional greenhouse gas emissions and by providing multiple other benefits associated with developing and interconnecting offshore wind generation to the New England electric grid. In particular, the Project will support and advance the policies of Massachusetts, and other New England states, including those advanced by the Commonwealth's *Global Warming Solutions Act*, and *An Act Creating A Next-Generation Roadmap For Massachusetts Climate Policy*, which require significant reductions in greenhouse gas emissions and the further procurement of clean energy from offshore wind generation.

II. STANDARD OF REVIEW

9. G.L. c. 164, § 72, requires, in relevant part, that a generation company

[m]ay petition the department for authority to construct and use or to continue to use as constructed or with altered construction a line for the transmission of electricity for distribution in some definite area or for supplying electricity to itself or to another electric company or to a municipal lighting plant for distribution and sale, or to a railroad, street railway or electric railroad, for the purpose of operating it, and shall represent that such line will or does serve the public convenience and is consistent with the public interest. The company shall forward at the time of filing such petition a copy thereof to each city and town within such area. The company shall file with such petition a general description of such transmission line and a map or plan showing the towns through which the line will or does pass and its general location. The company shall also furnish an estimate showing in reasonable detail the cost of the line and such additional maps and information as the department requires. The [D]epartment, after notice and a public hearing in one or more of the towns affected, may determine that said line is necessary for the purpose alleged, and will serve the public convenience and is consistent with the public interest.

³ The *Global Warming Solutions Act* established aggressive greenhouse gas ("GHG") emissions reductions targets, mandating the Commonwealth reduce GHG emissions by 10 to 25% from 1990 levels by 2020 and by at least 80% from 1990 levels by 2050. the *An Act Creating A Next-Generation Roadmap For Massachusetts Climate Policy* built on these targets and set an emissions goal of "at least net zero statewide" GHG emissions by 2050.

- 10. The Department, in making a determination under G.L. c. 164, § 72, considers all aspects of the public interest. <u>Boston Edison Company v. Town of Sudbury</u>, 356 Mass. 406, 419 (1969); <u>see Vineyard Wind LLC</u>, EFSB 17-05/D.P.U. 18-18/18-19, at 157 (May 10, 2019) ("<u>Vineyard Wind 1</u>").
- 11. All factors affecting any aspect of the public interest and public convenience must be weighed fairly by the Department in a determination under Section 72. Town of Sudbury v. Department of Pub. Utils., 343 Mass. 428, 430 (1962); NSTAR Electric Company d/b/a/Eversource Energy, D.P.U. 19-46, at 4-5 (2020); New England Power Company d/b/a National Grid, D.P.U. 19-16, at 6 (2020) ("Golden Rock").
- 12. In evaluating petitions filed under G.L. c. 164, § 72, the Department examines (1) the need for, or public benefits of, the present or proposed use; (2) the present or proposed use and any alternatives identified; and (3) the environmental impacts or any other impacts of the present or proposed use. Golden Rock at 6; NSTAR Electric Company d/b/a Eversource Energy, D.P.U. 18-21, at 58 (2019); Vineyard Wind 1 at 157; Boston Edison Company, D.T.E. 99-57, at 3-4 (1999).
- 13. The Department then balances the interests of the general public against the local interests and determines whether the line is necessary for the purpose stated, whether it will serve the public convenience, and if it is consistent with the public interest. Save the Bay, Inc. v. Department of Public Utilities, 266 Mass. 667, 680 (1975); Town of Truro v. Department of Public Utilities, 365 Mass. 407 (1974); Golden Rock at 6; Vineyard Wind 1 at 157; NSTAR Electric Co., D.P.U. 19-46, at 7 (2020).
- 14. In assessing the public interest, the Department undertakes "a broad and balanced consideration of all aspects of the general public interest and welfare and not merely [an]

examination of the local and individual interests which might be affected." <u>Vineyard Wind 1</u> at 136; <u>New York Central Railroad v. Department of Pub. Utils.</u>, 347 Mass. 586, 592 (1964) (addressing consideration of the public interest under G.L. c. 40A); <u>NSTAR Elec. Co.</u>, EFSB 14-2/D.P.U. 14-73/14-74, at 92 (quoting same).

15. Further, "[w]ith respect to the particular site chosen by a petitioner, [considering the public convenience or welfare under G.L. c. 40A, § 3] does not require the petitioner to demonstrate that its primary site is the best possible alternative, nor does the statute require the Department to consider and reject every possible alternative . . ." <u>Vineyard Wind 1</u> at 137 n.136; <u>NSTAR Elec. Co.</u>, EFSB 14-2/D.P.U. 14-73/14-74, at 92 (citing <u>Martarano v. Dep't of Pub. Utils.</u>, 401 Mass. 257, 265 (1987); New York Central Railroad, 347 Mass. at 591).⁴

III. NEED FOR THE PROJECT

- 16. As stated above, Mayflower Wind incorporates its Section 69J Petition, including the Analysis and all exhibits and attachments, and its Zoning Petition, including all exhibits and attachments, herein by reference as part of this Section 72 Petition.⁵
- 17. Section 2 of the Analysis provides information regarding the need for the Project. As stated above, the purpose of the Project is to deliver clean, renewable energy from up to 1,200 MW of capacity from the Clean Energy Resource to the regional electric grid, and thereby carry out state policies and legislative mandates and realize the recognized public benefits associated

⁴ Department precedent provides that the public interest analysis required by G. L. c. 164, § 72 is analogous to the Department's analysis for the "reasonably necessary for the convenience or the welfare of the public" standard under G.L. c. 40A, § 3. <u>Boston Edison Co.</u>, EFSB 04-1/D.T.E. 04-5/D.T.E. 04-7, at 163 (2005); <u>Russell Biomass</u>, <u>LLC</u>, EFSB 07-4/D.P.U. 07-35/07-36, at 55-56.

⁵ In light of the motions filed herewith requesting that the Department refer this Section 72 Petition and the Zoning Petition to the Siting Board for consolidation with the Section 69J Petition, Mayflower Wind has not filed a copy of its Section 69J Petition herewith. Mayflower Wind requests that the Department, to the extent necessary, consider the Section 69J Petition, including the Analysis, which has been docketed as EFSB 21-03, as incorporated by reference herein pursuant to 220 C.M.R. § 1.10(3). Mayflower Wind will file additional copies of the Section 69J Petition upon request.

with offshore wind generation while minimizing environmental and other impacts and contributing to a reliable energy supply. The Project would address that need by providing a reliable and necessary transmission connector to deliver energy from the Clean Energy Resource to the New England electric grid. As also described in the Analysis, the generation component of the Clean Energy Resource is not subject to the Siting Board's jurisdiction. See Vineyard Wind 1 at 2; Russell Biomass, LLC, EFSB 07-4/DPU 07-35/07-36, at 7. The Clean Energy Resource's generation component is likely to be available to contribute to the regional energy supply for several reasons, as set out in more detail in Section 2 of the Analysis. Development of the Clean Energy Resource and the Project is consistent with, and directly advances, the Commonwealth's policies for climate change mitigation, clean energy procurement and development of the offshore wind energy industry, as outlined in Section 2.1 and Section 6 of the Analysis. Moreover, Mayflower Wind submitted a bid in response to the Section 83C II RFP and was selected as the winning bidder in October 2019. Mayflower Wind executed power purchase agreements ("PPAs") with the Massachusetts electric distribution companies ("EDCs") in December 2019 and the EDCs submitted those PPAs for approval with the Department in January 2020. By order dated November 5, 2020, the Department approved the PPAs.⁶

18. As described in Section 3 of the Analysis, Mayflower Wind identified and considered potential alternatives for addressing the identified need. In evaluating alternatives, Mayflower Wind considered issues relating to the reliability, complexity, cost, and the time required to implement them in order to address the identified need in an efficient, reliable, and long-lasting manner while balancing issues of cost and environmental impacts. Alternative

⁶ <u>See</u> D.P.U. 20-16, <u>Petition of NSTAR Electric Company d/b/a Eversource Energy;</u> D.P.U. 20-17, <u>Petition of Massachusetts Electric Company and Nantucket Electric Company, each d/b/a National Grid;</u> D.P.U. 20-18, <u>Petition of Fitchburg Gas and Electric Light Company d/b/a Unitil</u>, Final Order (November 5, 2020).

approaches considered by Mayflower Wind included: (1) a no-build alternative and other non-transmission alternatives; and (2) potential transmission system alternatives, including alternative cable technologies, alternative cable configurations and alternative interconnection points. Mayflower Wind's extensive route analysis resulted in the selection of a Preferred Route, a Noticed Alternative Route and several variants to these routes.

19. As described in Section 4 of the Analysis, Mayflower Wind conducted its route selection by means of comprehensive and thorough analysis of potential routes and evaluation of environmental impacts, reliability, and cost of various potential routes. Mayflower Wind's onshore route selection was largely determined by: (i) the ISO-NE interconnection cluster study process under the ISO-NE Tariff, which resulted in a POI in Falmouth, with limited options for landfall and substation sites; and (ii) technically feasible landfall site options in Falmouth given the need to avoid conflict with existing underground utility infrastructure and the desire to avoid adverse impacts to environmental justice populations consistent with the environmental justice provisions of the 2021 Climate Act. Mayflower Wind's route analysis resulted in the selection of a Preferred Route, and a Noticed Alternative, with variant(s) for each, which are described in Section 4 of the Analysis. The Preferred Route and the Noticed Alternative have geographically distinct: (i) landfall locations, (ii) routes to the respective substations, (iii) substation sites, and (iv) connections to the transmission system, with the Preferred Route connecting and ending at the point of change in ownership ("POCO"), and the Noticed Alternative connecting and ending at the POI. Given the circumstances of (i) an ISO-NE determined POI in Falmouth, (ii) limited feasible landfall locations in Falmouth, especially due to existing utility underground infrastructure and the need to avoid conflict with it, (iii) constricted space in the area, and (iv) Mayflower Wind's intent to minimize environmental impacts and adverse impacts to

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environmental justice populations, the geographically distinct routes, though somewhat proximate to one another, provide some measure of geographic diversity in accordance with the Siting Board's standards and precedent.

- 20. Section 5 of the Analysis provides a comparison of the Preferred Route and the Noticed Alternative. As described in Section 5 of the Analysis, Mayflower Wind conducted detailed review of the environmental impacts of the Project, identified the relevant impacts, and proposed measures to avoid, minimize or otherwise mitigate impacts associated with the Project's construction and operation. Section 5 of the Analysis provides detailed information about Mayflower Wind's minimization of the Project's impacts.
- 21. Section 6 of the Analysis further demonstrates how the Project is consistent with and advances the relevant applicable policies and legislative mandates of the Commonwealth and serves the public convenience and is consistent with the public interest.

WHEREFORE, Mayflower Wind respectfully requests that the Department, or the Siting Board, pursuant to G.L. c. 164, § 72, and after due notice and a public hearing, determine that the construction of the Project is necessary for the purposes stated and will serve the public convenience and be consistent with the public interest, and thus, authorize Mayflower Wind to construct and operate the Project, and take such other action as may be necessary and appropriate.

Respectfully Submitted,

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