STATE OF RHODE ISLAND **ENERGY FACILITY SITING BOARD**

IN RE: REVOLUTION WIND, LLC

> APPLICATION TO CONSTRUCT SB-2021-01

A MAJOR ENERGY FACILITY

DECISION AND ORDER

I. **INTRODUCTION**

On December 30, 2020, Revolution Wind, LLC1 (Revolution Wind or Applicant) filed with the Energy Facility Siting Board (EFSB or Board) an application to construct and operate the facilities associated with the Revolution Wind Project (Facilities or Project), an offshore wind farm which is projected to deliver approximately 704 megawatts (MW) of renewable energy to Rhode Island and Connecticut.² The proposed Facilities will bring the power generated by the offshore wind farm to shore, connecting to the onshore electric transmission system in Rhode Island. Although the wind farm will consist of wind turbines and an offshore substation located on the outer continental shelf in federal waters, which are outside of the jurisdiction of the Board, the Facilities necessary to connect the wind farm to the onshore electric transmission system are within the jurisdiction of the Board. The proposed Facilities constitute transmission lines greater than 69 kV and thus qualify as a major energy facility, defined by R.I. Gen. Laws § 42-98-4.

¹ Revolution Wind, LLC, a 50/50 joint venture partnership between Ørsted North America Inc. and Eversource Investment LLC, is a Delaware Limited Liability Company with its principal place of business in Providence, Rhode Island. Revolution Wind, LLC was registered to do business in Rhode Island on January 28, 2021.

² The application and all documents filed are available at available at the PUC offices located at 89 Jefferson Boulevard, Warwick, Rhode Island or at http://www.ripuc.org/efsb/index.html, organized by docket number.

II. THE FACILITY

Revolution Wind applied for a license to construct and operate the following Facilities: 1) two 23-mile submarine export cables, 2) two new underground 1-mile 275 kV onshore transmission cables, 3) an onshore substation, and 4) two new underground 519-foot long, 115 kV high voltage transmission lines. In addition to these newly constructed Facilities, Revolution Wind proposed to: 1) expand the 115 kV side of the Davisville Substation owned and operated by the Narragansett Electric Company (TNEC), and 2) reconfigure 1,340 feet of overhead, 115 kV high voltage transmission lines.³

The total land area covered by the aforesaid Facilities is approximately 751.4 acres, which includes both onshore and offshore land area. The 23 miles of export cables will make landfall at Quonset Point in North Kingstown, Rhode Island where they will be jointed with onshore transmission cables before traversing approximately one mile underground to the onshore substation. The onshore substation will connect to an interconnection facility with two 115 kV underground transmission cables, which will then connect to TNEC's adjacent Davisville Substation with two 115 kV overhead transmission circuits. The Applicant anticipates commencing construction in fall of 2022 and having the Project in-service during winter 2023.⁴

III. TRAVEL OF THE CASE

The application was docketed on January 22, 2021. Subsequently and pursuant to Rule 1.10 of the EFSB Rules of Practice and Procedure (Rules), 445-RICR-00-00-1, both the Town of North Kingstown (Town) and TNEC filed Motions to Intervene. The Applicant did not object to either motion. The Board conducted a preliminary hearing on March 22, 2021. At an Open Meeting on April 9, 2021, the Board determined the issues to be considered in evaluating the application and

³ Revolution Wind Application, Ex. 1 at 1-2 (Dec. 30, 2020).

⁴ *Id.* at 4-6.

designated those agencies of state government and political subdivisions of the state to render Advisory Opinions. It designated the following state, quasi-public, and municipal agencies, boards, and commissions to render Advisory Opinions on the issues it determined were within their expertise: 1) the Public Utilities Commission (PUC); 2) the Statewide Planning Program (Statewide Planning); and 3) the Department of Health (DOH); 4) the Historical Preservation & Heritage Commission (HPHC); 5) the North Kingstown Department of Public Works (NK Public Works); 6) the Department of Environmental Management (DEM); 7) Quonset Development Corporation (QDC); 8) The North Kingstown Planning Commission (NK Planning); and 9) the State Building Code Commission. All of the agencies submitted Advisory Opinions responding to the specific Board directives by August 26, 2021.⁵

After the Advisory Opinions were received and on September 17, 2021, Revolution Wind submitted pre-filed testimony of its experts in support of the application. As required by R.I. Gen. Laws § 42-98-9.1(b), the Board conducted a public comment hearing on September 22, 2021 in the Town, at which time members of the public were given the opportunity to comment on Revolution Wind's proposed project. During the public comment hearing, some residents along Camp Avenue raised concerns about the fact that the transmission cable was proposed to pass through an area where there are residential homes. It was suggested that there might be an alternative route that would avoid the residential area. The following day, the Board issued a data request to Revolution Wind inquiring if it had considered using an access road to the Davisville Substation to avoid impacting the residents on Camp Avenue. In response to the data request, Revolution Wind indicated that it had considered the access road but had eliminated it because of "numerous issues regarding property rights, utility congestion and environmental concerns...."

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⁵ See Section IV.

⁶ See EFSB 1-2(c)&(d).

On October 12, 2021, the Board held the first of four evidentiary hearings. Among other matters, the Board made inquiries into the specifics of why the access road had been eliminated as an alternative. Throughout, the Board issued a number of record requests many regarding an alternative route that would avoid the residents on Camp Avenue. Concerned that the initial explanation relating to the access road was not sufficiently addressing why that alternative was not viable, the Board issued more data requests.

Additional hearings were held on November 1, November 2, 2021, and May 13, 2022. At the November 1 and November 2 hearings, the Board heard from many of the agencies that filed Advisory Opinions submitted from those agencies. The PUC, Statewide Planning, and the State Building Code Commission did not provide testimony; however, there was no objection to allowing full consideration of the Advisory Opinions by the Board. During the time between the November and May hearings, the parties collaborated to determine if there was a solution that would avoid routing the transmission line down Camp Avenue and in front of the residents' homes, and thus resolve the issues presented during the public comment hearing.

Based on the follow-up responses to the Board's inquiries, it became apparent that there was an alternative along the access road which avoided the residences along Camp Avenue and that this alternative route should be explored. Most significant was the fact that Revolution Wind's initial review mistakenly assumed that there were underground distribution facilities along the access road that would have caused thermal heating issues had the transmission facilities been routed down that road. In fact, there were no underground electric facilities in the access road or the connecting road to Circuit Drive.⁷ Thus, the central obstacle to using that alternative was not present. Accordingly, the Board requested that Revolution Wind "provide a complete preliminary

⁷ TNEC Response to EFSB 2-1 and EFSB 2-2; Revolution Wind Response to EFSB 1-2; Hr'g Tr. at 56-59 (Oct. 12, 2021).

redesign of the onshore transmission cable route assuming use of the access road to the Davisville substation sufficient to permit a comparison to the design of the onshore transmission cable route that traverses Camp Avenue." In response, Revolution Wind identified two potential alternatives, Option A and Option B, both of which were dependent upon reaching an agreement with TNEC regarding issues and concerns relating to property access. Of the two alternatives presented, Revolution Wind indicated that the preferable one was Option B. At a hearing on May 13, 2022, Revolution Wind and TNEC agreed that the Option B access road alternative was viable and would be the chosen route of the onshore underground cable.

IV. ADVISORY OPINIONS

A. The Public Utilities Commission

The Public Utilities Commission was asked to render an Advisory Opinion, taking into account its prior approval of the Power Purchase Agreement (PPA) in Docket No. 4929, as to the need for the proposed Facilities and whether the proposed Facilities are expected to transmit energy from the offshore generating source of the Revolution Wind Project to the mainland at the lowest reasonable cost to the consumer consistent with the objective of ensuring that the construction and operation of the proposed Facilities will be accomplished in compliance with all of the requirements of the laws, rules, and regulations. After conducting its own proceedings, the PUC found that the proposed Facilities are needed to connect Revolution Wind's wind farm to the electric system should it receive federal approval to construct the wind farm.¹¹ The PUC noted that the Division of Public Utilities and Carriers' (Division) position in its proceeding was that the

⁸ Revolution Wind Response to EFSB Record Request 15 (Nov.2, 2021).

⁹ *Id*.

¹⁰ *Id.* With the exception of some minor technical issues to resolve with TNEC and an agreement with TNEC for the access road portion of the route, Revolution Wind had executed easement option agreements with the five other property owners between February 8, 2022 and April 7, 2022. Those properties are 75 Circuit Drive, 101 Circuit Drive, 135 Circuit Drive, Lot 32, and 646 Camp Avenue.

¹¹ PUC Advisory Opinion at 3 (Aug. 26, 2021).

PUC's prior approval of the PPA was the equivalent of a determination that the wind farm is needed, and thus it follows that the cable is needed to transmit energy from the wind farm to the electric grid.¹² The Rhode Island Office of Energy Resources (OER) also stated its position in the PUC's proceedings that Revolution Wind's facilities are needed to deliver zero-emission electricity and associated market products produced by the wind farm to the electric grid.¹³

Regarding the cost issue, the PUC Advisory Opinion, Revolution Wind, the Division, and OER all represented that they were unaware of any costs beyond those associated with the PPA previously approved by the PUC.¹⁴ TNEC represented that any costs it incurs for maintenance and repairs of its facilities located adjacent to the Davisville Substation will be reimbursed to it by Revolution Wind.¹⁵

The PUC concluded that the proposed Facilities are needed should Revolution Wind's federal permit be approved and that the Facilities are expected to transmit energy from the offshore wind farm to the electric grid at the lowest reasonable cost to the consumer. The PUC emphasized though, that there exists a likelihood that there could be cost impacts to customers, because actual charges may be more or less than Revolution Wind pays to TNEC for O&M based on a Direct Assignment Facilities Charge where recovery of costs is based on formulaic charges as opposed to actual cost. The PUC emphasized to actual co

B. The Statewide Planning Program

The Statewide Planning Program was asked to render an Advisory Opinion as to the socioeconomic impact of the proposed Facilities, their consistency with the State Guide Plan, and, in

¹² *Id*. at 4.

¹³ *Id*.

¹⁴ *Id.* at 4-6.

¹⁵ *Id*. at 5.

¹⁶ *Id*. at 8.

¹⁷ *Id*.

coordination with OER, their consistency with the State Energy Plan and whether the Facilities will conform to the requirements of the Resilient Rhode Island Act, R.I. Gen Laws §§ 42-6.2-1 et seq. 18 Statewide Planning collaborated with OER on its Advisory Opinion, which was accepted by the State Planning Council on August 20, 2021. 19 Regarding consistency with the State Guide Plan, Statewide Planning noted that consistency is based on the overall intent of the Plan and does not require consistency with each goal.²⁰ In evaluating *Energy 2035*, Statewide Planning concluded that Revolution Wind's wind farm and associated facilities will increase local resource adequacy and resiliency through energy supply diversification by enabling the interconnection of new carbon-free energy, will support energy, economic, and environmental benefits to Rhode Island and the region, and will enable further electric sector decarbonization.²¹ In addition to Energy 2035, Statewide Planning found the Project consistent with a number of the other State Guide Plan elements, in that it would promote economic growth and support commerce, will not have a negative impact on the environment, and will not significantly impact traffic or navigational safety.²² Statewide Planning found that the Project's goals were consistent with the goals of the Act on Climate, R.I. Gen. Laws § 42-6.2-1 et seq.²³

Statewide Planning also conducted a socio-economic impact assessment and found that increased spending and employment resulting from the construction and operation of the Project will have a positive effect on businesses, energy reliability benefits will accrue to individuals and businesses, there will be no unfair impacts to federally protected populations, there is no

¹⁸ Subsequent to the issuance of the Preliminary Order and the designation of Statewide Planning to provide an Advisory Opinion, the General Assembly amended the Resilient Rhode Island Act to the now Act on Climate.

¹⁹ Statewide Planning Advisory Opinion at 2-3 (Aug. 26, 2021).

²⁰ *Id.* at 4.

²¹ *Id.* at 10.

²² *Id.* at 10-21.

²³ *Id.* at 21-24.

expectation that housing supply and demand will change, and visual impacts will be minimal and can be mitigated.²⁴

The Advisory Opinion's findings were conditioned on Revolution Wind receiving all federal and state permits. Statewide Planning concluded that the Project is consistent with the State Guide Plan goals and that it will have a positive socio-economic impact on the State.²⁵

C. The Department of Health

The Department of Health was asked to render an Advisory Opinion on any public health concerns and potential impacts on the quality of drinking water associated with the proposed Facilities. In a June 25, 2021 letter to the Board, DOH represented that it did not anticipate any adverse health effects from the proposed Facilities.²⁶ It noted that the measures proposed by Revolution Wind associated with potential exposure to electromagnetic fields (EMF) appear sufficient and that there will not be any biological effects from the EMFs produced by the Project.²⁷ It also expressed that it did not anticipate any impact to drinking water quality, since the Facilities were not being constructed in a wellhead protection area.²⁸

D. The Historical Preservation & Heritage Commission

The Historical Preservation & Heritage Commission was asked to render an Advisory Opinion as to whether the Project would be subject to its jurisdiction and if so whether it would conform with HPHC requirements such that an approval or exception should be granted. Although not complete in its review, HPHC had no objection to the Board granting an approval or exception to

²⁴ *Id.* at 26-36.

²⁵ *Id.* at 37-38.

²⁶ DOH Advisory Opinion at 1 (Jun. 25, 2021).

²⁷ Id.

²⁸ *Id*.

the Project as it concluded that the Project would have no adverse effect on and would conform with above-ground historical resources and the Quonset Point Naval Air Station.²⁹

E. The North Kingstown Department of Public Works

The North Kingstown Department of Public Works was asked to provide an Advisory Opinion as to whether any Town permits were required for street openings and as to the potential impacts upon traffic and road conditions that may occur during construction and operation of the proposed Facilities. In a letter submitted on July 19, 2021, the NK Public Works staff indicated that Camp Avenue would be impacted and that an excavation permit would be required.³⁰ The letter noted that impacts would be temporary and mitigated by police details and signage.³¹

F. The Department of Environmental Management

The Department of Environmental Management provided an Advisory Opinion on the environmental impacts and whether the proposed Facilities would cause unacceptable environmental harm. The Advisory Opinion identified four DEM licenses that were exempt from Board jurisdiction: 1) a wetlands permit; 2) a water quality certification; 3) a RIPDES permit; and 4) a dredge permit.³² The Advisory Opinion recommended that in order to minimize impacts, Revolution Wind should avoid sensitive communities, have time of year restrictions for construction in state waters, survey shellfish resources in the cable corridor to determine if relocation of the cable is necessary, conduct further studies on the effects of EMF on fish and wildlife, require all lighting to be dark-sky compliant and only on when necessary, and limit boating traffic during construction.³³ DEM concluded that whether the proposed Facilities will

²⁹ HPHC Advisory Opinion at 2 (Aug. 20, 2021).

³⁰ NK Public Works Advisory Opinion at 1 (Jul. 19, 2021).

³¹ Id.

³² DEM Advisory Opinion at 3-4 (Aug. 26, 2021).

³³ *Id.* at 7-14.

cause unacceptable harm to the environment will depend on the analysis and decision of each permit and that failure to get approval on a particular permit would constitute unacceptable environmental harm.³⁴ It opined that based on the information provided to date, it appears that Revolution Wind will be able to meet the regulatory burden for each permit.³⁵

G. Quonset Development Corporation & Town of North Kingstown Joint Opinion

Since a large portion of the Project will be located within the Quonset Business Park, the Board asked the QDC to render an Advisory Opinion as to (i) whether it would require any permits from Revolution Wind for construction occurring on its property, (ii) whether the Facilities would meet the requirements of QDC's zoning ordinances and, if not, whether a variance should be granted, (iii) whether a special use permit should be granted to exempt to the Facilities from construction hour restrictions, (iv) whether a variance to the Town Noise Ordinance should be granted if construction would not be compliant with the Noise Ordinance, (v) whether the work is subject to an Erosion and Sediment Control Ordinance and if Revolution Wind's Erosion and Sediment Control Plan was satisfactory, and (vi) whether the proposed Facilities are consistent with QDC's comprehensive plan and will not adversely alter the character of land within the Business Park.

QDC and the Town filed the Advisory Opinion jointly.³⁶ The joint opinion explained the jurisdiction and review process pointing out that QDC has jurisdiction over all of the Project except of the portion that will be located within Camp Avenue.³⁷ QDC's Master Plan provides the long-term vision for the Business Park and the Development Package provides the process requirements and performance standards for physical development.³⁸ The QDC Board of Directors approved

³⁴ *Id.* at 15-18.

³⁵ *Id.* at 18.

³⁶ QDC/Town Joint Advisory Opinion at 2 (Aug. 23, 2021).

³⁷ *Id*.

³⁸ *Id.* at 4.

the Onshore Substation and Underground Transmission Cables and found the Project to be appropriate in the locations proposed by Revolution Wind.³⁹ The Board confirmed that the proposed land use is consistent with the Master Plan, the construction and operation will not adversely alter the character of the lands within the Business Park, and that there will be minimal impacts on traffic, road conditions, and noise on the surrounding community during construction.⁴⁰

A Technical Review Committee found that no variances are necessary, that no special permits were required, and that the Project is consistent with the noise standard and DEM's Erosion and Sediment Control Handbook.⁴¹ QDC provided that Revolution Wind should be required to submit Traffic Control Plans to both QDC and the Town. QDC requested that in addition to a traffic control plan, Revolution Wind be required to submit to QDC final engineering and soil erosion and sediment control plans for the underground cables for final review and approval.⁴²

H. The North Kingstown Planning Commission

The North Kingstown Planning Commission was asked to render an Advisory Opinion as to whether any major variance is required and will be granted for the proposed Facilities and whether Revolution Wind would be able to comply with the Town's Noise Ordinance during construction and operation. In an August 20, 2021 letter to the Board, NK Planning noted that most land use considerations will supersede the Town municipal zoning ordinances and are subject to QDC land regulations.⁴³ It agreed with QDC that no variances are required at the present time.⁴⁴ It asked that more detail be provided regarding a noise mitigation and monitoring plan.⁴⁵

³⁹ *Id.* at 8-9.

⁴⁰ *Id.* at 9.

⁴¹ *Id.* at 10.

⁴² *Id.* at 12.

⁴³ NK Planning Advisory Opinion at 1 (Aug. 20, 2021).

⁴⁴ *Id*. at 1.

⁴⁵ *Id.* at 2.

I. The State Building Code Commission

The State Building Code Commission was asked to provide an Advisory Opinion as to whether any variances were necessary for the Facilities' building permit approvals. It provided that the site plans meet the requirements of the Rhode Island State Building Codes and Standards and that no variance would be necessary to obtain building permit approvals.⁴⁶

V. DECISION

A. The Project Is Needed And Cost Justified

At the October 12, 2021 hearing, Revolution Wind offered the pre-filed testimony and presented an overview panel of six witnesses to address the need and cost issues. ⁴⁷ The witnesses noted that the Revolution Wind Project was developed to increase the renewable energy load serving Rhode Island and Connecticut in response to those states' expressed needs. ⁴⁸ Referring to the PUC Advisory Opinion, the panel provided that the proposed Facilities meet the need requirement of the statute because they will "(1)...provide substantial amounts of energy to meet the expected demand of customers in Rhode Island and Connecticut, and (2)...provide clean energy from renewable resources that is necessary for Rhode Island and Connecticut to meet their renewable energy goals." ⁴⁹ The panel also discussed the PUC's finding that the proposed Facilities were cost-justified repeating what the PUC had set forth in its Advisory Opinion and reiterating that Revolution Wind will reimburse TNEC for any costs associated with the maintenance and repairs of the interconnection facilities and the transmission connection from the interconnection

⁴⁶ State Building Code Commission Advisory Opinion at 1 (Aug. 12, 2021).

⁴⁷ The Panel of witnesses consisted of Kenneth Bowes, Kellen Ingalls, Mark Roll, Demetrios Sakellaris, Kristen Trudell, and Jason Ross. *See* RevWind Ex. 3.

⁴⁸ RevWind Ex. 3, Pre-filed Test. of Overview Panel at 19-20 (Sept. 17, 2021).

⁴⁹ *Id.* at 20.

facilities to the Davisville Substation.⁵⁰ Additionally, all decommissioning costs will be the responsibility of Revolution Wind.⁵¹

As discussed above, the PUC conducted a comprehensive and thorough investigation of and proceedings on the need for the Facilities. The PUC found that the proposed Facilities are needed to connect the wind farm to the electric grid should there be federal approval for the wind farm.⁵² The PUC noted that the Division's position in its proceeding was that the PUC's prior approval of the PPA in Docket No. 4929 was the equivalent of a determination that the wind farm is needed, and thus it follows that the cable is needed to transmit energy from the wind farm to the electric grid.⁵³

The PUC Advisory Opinion also addressed the cost issue noting that the ongoing O&M costs are the responsibility of Revolution Wind and are based on a formula rate but cautioned that actual costs could exceed the formula rate used by TNEC.⁵⁴ Upon further inquiry, the Board received assurances from both Revolution Wind and TNEC that if actual O&M costs exceed the formula rate, the excess costs would not be charged to ratepayers.⁵⁵ There was no dispute during the PUC hearings or during the hearings before the Board that the proposed Facilities are both needed and will transmit energy at the lowest reasonable cost to the Rhode Island's ratepayers. The Board accepts the PUC's Advisory Opinion and finds that the proposed Facilities are needed should Revolution Wind's federal permit be approved and that the Facilities are expected to transmit energy from the offshore wind farm to the electric grid at the lowest reasonable cost to the consumer.⁵⁶

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⁵⁰ *Id.* at 20-22.

⁵¹ *Id.* at 22.

⁵² PUC Advisory Opinion at 3 (Aug. 26, 2021).

⁵³ *Id.* at 4.

⁵⁴ *Id.* at 4-8; Docket No. 4929.

⁵⁵ Hr'g Tr. at 101-105 (Oct. 12, 2021); TNEC Response to Record Request 1-1 (Oct. 26, 2021).

⁵⁶ PUC Advisory Opinion at 8.

Revolution Wind's Siting Report also identified the regional benefits which the project brings to the regional system upon which Rhode Island relies. It notes that the state and New England "face significant short and long-term energy system challenges that may undermine the reliable operation of the bulk electric system."57 This regional benefit and its reliability impact for Rhode Island should not be underestimated, particularly for the winter when natural gas systems are constrained from heating load. The Board takes administrative notice of the warnings that have been given by ISO New England, who is responsible for managing the bulk power system.⁵⁸ The ISO has identified significant winter fuel security risks facing New England due to its dependency upon natural gas and liquified natural gas (LNG) during peak winter periods. As the ISO has stated, "Offshore wind . . . will help with our winter issues, but these projects remain years away from completion and face challenges in their development."⁵⁹ Regardless of the fact that Rhode Island is purchasing only 400 MW of the 704 MW being supplied by this offshore generation project, the operation of this renewable resource and deliveries of its entire output over the transmission cables that traverse through Rhode Island will bring important reliability benefits for all consumers in New England who rely on the integrated regional system, including Rhode Islanders. Offshore wind will become a crucial resource not only because of its non-carbon emitting attributes, but because of its ability to provide power during extreme cold winter periods when other renewable resources are not available and traditional fossil-fuel generation resources become constrained.

⁵⁷ Revolution Wind Application, Ex. 1 Sec. 3.1.3 at 28.

⁵⁸ See, e.g., ISO New England's 2021-22 Winter Outlook, found at: https://www.iso-ne.com/static-assets/documents/2021/12/20211206 winteroutlook2122 pressconference.pdf .

B. The Project Will Not Result In Unacceptable Environment Harm

Revolution Wind presented a panel of environmental experts to discuss the environmental impact that the proposed Facilities would have on the surrounding area. Like the overview panel, the environmental panel provided pre-filed and oral testimony. The panel testified that any impacts to water quality would be temporary and limited in extent and would be addressed during permitting with DEM. The pre-filed testimony of the panel discussed the offshore facilities impacts to fishery resources, fish and sea mammal habitat, waterbirds, and horseshoe crabs and noted that the cable is sited to avoid or minimize impacts to those activities and communities. Time of year restrictions were also coordinated with DEM and NOAA, and Revolution Wind must obtain a CRMC Category B Assent which will require mitigation of impacts to fisheries user groups.

Regarding the onshore facilities, the panel noted that impacts to the vegetative community are under CRMC's jurisdiction and that clearing of areas where the sickle-leaved golden aster exists will be avoided. It described the impacts as minimal and temporary and not rising to the level of unacceptable environmental harm. The only impacts to geology and soils will be during the construction phase of the Project, and with the implementation of a soil erosion and sediment control plan and best management practices, Revolution Wind does not anticipate any adverse

⁶⁰ The environmental panel consisted of Mark Roll, Mark Gardella, Laura Morse, Susan Moberg, M. Wing Goodale, and Drew Carey.

⁶¹ RevWind Ex. 4, Pre-filed Test. of Environmental Panel (Sept. 17, 2021); Hr'g Tr. at 160-99 (Oct. 12, 2021).

⁶² RevWind Ex. 4, Pre-filed Test. of Environmental Panel at 10-11.

⁶³ *Id.* at 12-21.

⁶⁴ Id. at 12, 14.

⁶⁵ RevWind Ex. 4, Pre-filed Testimony of Environmental Panel at 24-25; Hr'g Tr. at 173-74 (Oct. 12, 2021).

⁶⁶ RevWind Ex. 4, Pre-filed Testimony of Environmental Panel at 22-29.

impacts related to soils.⁶⁷ The panel also noted that QDC's lighting regulations will require it to comply with night sky standards and provided additional information regarding lighting.⁶⁸

Revolution Wind presented a panel to address questions on cultural resources and the efforts to interface with a number of interested parties on a federal level and to avoid areas with those resources.⁶⁹ It conducted a survey of both the offshore cable route and the area where the onshore facilities would be located.⁷⁰ For areas that have been identified as being archaeological sites, Revolution Wind will coordinate with federal and state agencies as well as Native American Tribes to avoid or minimize impact to these areas.⁷¹

Both pre-filed and oral testimony was presented by Revolution Wind on the EMF issue.⁷² Its expert witnesses, Dr. Bailey and Dr. Palmquist, modeled the magnetic-field and induced electric-field levels of the submarine export cable during operation, measured magnetic field levels along the onshore route, and modeled the magnetic field from the proposed overhead transmission lines.⁷³ The study concluded that the magnetic fields associated with the proposed Facilities are about "100-times lower than the lowest exposure guideline recommended by the World Health Organization and...adverse health effects and biological effaces of EMF exposure are not anticipated."⁷⁴ During the hearing, Dr. Bailey provided additional testimony describing magnetic

⁶⁷ Id. at 23-24.

⁶⁸ RevWind Ex. 4, Pre-filed Test. of Environmental Panel at 27; Hr'g Tr. at 176-180 (Oct. 12, 2021). Record Request 10.

⁶⁹ Hr'g Tr. at 185-99 (Oct. 12, 2021). The cultural resources panel consisted of Mark Roll, Daniel Forrest, and Mark Gardella.

⁷⁰ RevWind Ex. 6, Pre-filed Test. of Cultural Resources Panel at 4-11 (Sept. 17, 2021).

⁷¹ *Id.* at 8-11.

⁷² The EMF Panel consisted of Kenneth Bowes, Demetrios Sakellaris, Dr. William H. Bailey, and Dr. Katherine Palmouist.

⁷³ RevWind Ex. 5, Pre-filed Testimony of EMF Panel at 5-6 (Sept. 17, 2021).

⁷⁴ *Id.* at 17-18.

fields and range of exposure and how exposure is measured.⁷⁵ He explained how the science has developed over time.⁷⁶

Finally, a visual resources panel provided testimony regarding the impacts of the Project on the surrounding area.⁷⁷ To determine visual impacts, a study area of approximately 30.5 square miles was assessed.⁷⁸ The panel noted that it identified a total of 95 resources it assessed, compared the onshore cable to a roadworks project, and suggested that the impacts would be of short duration.⁷⁹ Providing that only 5 of the 95 visual resources identified would have potential visibility after construction was complete, the level of visibility was determined to be minimal.⁸⁰ During construction, there will be short-term impacts resulting from lighting and traffic associated with the construction.⁸¹ The panel concluded that impacts to visual resources will be sufficiently distant and have minimal at most visual effect.⁸²

DEM and DOH both provided Advisory Opinions regarding the environmental impacts of the proposed Facilities as set forth above. DOH found that the proposed Facilities will not have an adverse impact on drinking water quality, and there will not be any biological effects from the EMF's produced by the Project.⁸³ Michael Byrns appeared before the Board to authenticate the DOH Advisory Opinion.⁸⁴

The DEM Advisory Opinion discussed the impacts of the construction, operation, and maintenance of the proposed Facilities on the vegetative community and fish and wildlife. DEM

⁷⁵ Hr'g Tr. at 136-41 (Oct. 12, 2021).

⁷⁶ *Id.* at 142-50.

⁷⁷ The Visual Resources Panel consisted of Kenneth Bowes and Gordon Perkins.

⁷⁸ RevWind Ex. 7, Pre-filed Test. of Visual Resources Panel at 5 (Sept. 21, 2021).

⁷⁹ Hr'g Tr. at 206-8 (Oct 12, 2021).

⁸⁰ *Id.* at 208-9.

⁸¹ RevWind Ex. 7, Pre-filed Test. Visual Resources Panel at 9-10.

⁸² *Id.* at 11.

⁸³ DOH Advisory Opinion (Jun. 25, 2021).

⁸⁴ Hr'g Tr. at 11 (Nov. 1, 2021).

recommended avoiding sensitive communities and having time of year restrictions for construction in state waters among other things to minimize impacts.⁸⁵ It noted that while difficult to quantify impacts to marine species, these impacts will be addressed during DEM's Dredge Permit and Water Quality Certification processes.⁸⁶ It also recommended minimizing boating traffic to the extent possible during construction and reducing the impact of lighting.⁸⁷

The DEM Advisory Opinion was authenticated by Charles Horbert. Although wetland alterations caused by the proposed Facilities would be within CRMC jurisdiction, Mr. Horbert explained some types of wetlands and alterations for the Board. He explained that even though wetlands fall within the jurisdiction of CRMC, Revolution Wind is required to obtain a water quality certification from DEM. Jason McNamee also appeared on behalf of DEM. Mr. McNamee responded to a question about the need to reduce the impacts of artificial light noting the importance to certain species of birds and bats. Although not specifically concluding the proposed Facilities will not cause unacceptable harm to the environment, the DEM Advisory Opinion provided that approval of all permit applications will presume that there will be no unacceptable harm to the environment.

The Board accepts the Advisory Opinions of DOH and DEM and finds Revolution Wind has sufficiently mitigated the impacts that will result from the construction, operation, and maintenance of the proposed Facilities such that there will not be an unacceptable harm to the environment. The expert testimony regarding EMF exposure as well as the DOH Advisory Opinion provided that there will be no biological effects on the surrounding community, human,

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⁸⁵ DEM Advisory Opinion at 7-10 (Aug. 26, 2021).

⁸⁶ *Id.* at 13.

⁸⁷ Id. at 13-14.

⁸⁸ Id. at 17-25.

⁸⁹ Id. at 26-27. See DEM Advisory Opinion at 6.

⁹⁰ Hr'g Tr. at 9-10 (Nov. 2, 2021).

⁹¹ DEM Advisory Opinion at 15-18.

fish, and animal, that will result from the cable or the overhead transmission lines. Although the evidence assumed the onshore cable route would be along Camp Avenue, the agreement of the parties to move the location of the underground cable from Camp Avenue to the Access Road moves the cable even further away from the residents on Camp Avenue. The Board is satisfied that there will be no biological effects from EMF exposure from the proposed Facilities.

The Board is assured by the DEM Advisory Opinion and supporting testimony, as well as the evidence provided by Revolution Wind, that the impacts to the vegetative and wildlife communities will be sufficiently mitigated so not to cause unacceptable harm to the environment. The Board is satisfied that the requirement that Revolution Wind obtain a Dredge Permit and Water Quality Certification from DEM will further ensure that the impacts caused by the proposed Facilities will be minimized to the extent possible. Conditioned on Revolution Wind obtaining the necessary permits and certifications from DEM and CRMC, the Board finds that the proposed Facilities will not cause unacceptable harm to the environment.

C. The Project Will Enhance The Socio-Economic Fabric Of The State

The QDC Advisory Opinion stated that it was submitted as a joint opinion with the Town and that neither body objected to the issuance of permits or approvals for the proposed Facilities. After conducting a thorough analysis of the Project, QDC and the Town found that Revolution Wind's plans were consistent with QDC's performance standards and that no special permits were necessary. During the hearing, Chelsea Siefert testified on behalf of QDC and explained the two step process used to lease property within the business park. Although NK Planning had expressed concern about noise, particularly along Camp Avenue, QDC noted that Revolution Wind will be able to comply with noise standards during construction and operation,

⁹² QDC/Town Joint Advisory Opinion at 9, 10, 11 (Aug. 23, 2021).

⁹³ Hr'g Tr. at 33-34 (Nov. 1 2021).

and noise was not anticipated to adversely impact businesses within the Park. Since the original route was altered to exclude travel along Camp Avenue, the Town's concern should be eliminated. QDC concluded that the proposed land use was consistent with its Master Plan which provides the long-term vision for Park development. QDC and the Town expressed that they had no objection to the approval of the onshore transmission cables but requested that the Board require Revolution Wind to submit final engineering, soil erosion and sediment control plans and traffic control plans for the underground cables for final review and approval. Ms. Siefert explained that once a construction operations plan was submitted, QDC's technical review committee, on which the Town has a representative, would review to ensure the least amount of disruption to the surrounding community.

Although Statewide Planning did not provide oral testimony during the evidentiary hearings, it provided a lengthy and very detailed Advisory Opinion. It collaborated with OER as directed by the Board in the Preliminary Order noting that since OER was the main author and implementer of *Energy 2035*, it led the analysis of whether the Project is consistent with the State's Energy Plan. Statewide Planning issued a number of data requests to supplement the information provided in the application. After a draft Advisory Opinion was completed it was circulated among members of the State Planning Council for review and comment and approved on August 20, 2021.

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⁹⁴ NK Planning Advisory Opinion at 1-2 (Aug. 20, 2021) (During the hearing a representative of the Planning Commission testified about the uniqueness of the situation noting that the impacts from this type of construction were the same as impacts from utility construction in the roadways which they do not normally regulate. Hr'g Tr. at 55 (Nov. 1, 2021); QDC/Town Joint Advisory Opinion at 9, 11, 12.

⁹⁵ ODC/Town Joint Advisory Opinion at 11.

⁹⁶ *Id.* at 12.

⁹⁷ Hr'g Tr. at 37-39.

⁹⁸ Statewide Planning Advisory Opinion at 2 (Aug. 26, 2021).

⁹⁹ Id.

¹⁰⁰ Id. at 3. In order to comply with ex parte rules, Board Member Brady was not provided with a copy of the draft.

Statewide Planning engaged the Office of Revenue Analysis within the Department of Revenue and also reviewed the Rhode Island Commerce Corporation's and OER's Advisory Opinions in Docket No. 4929 in determining the economic impact of the Project. It found that analysis supported the conclusion that the construction and operation of the Project will result in a significant amount of investment in the State and have a positive effect on business through increased spending and employment. The Project is expected to support numerous jobs and increase both state and municipal revenues. The Statewide Planning Advisory Opinion also concluded that the socio-economic benefits of energy reliability will accrue to individuals and businesses. Finally, Statewide Planning concluded that any visual impacts would be limited to those residents directly adjacent to the on-shore facilities noting that those most impacted would be the Camp Avenue residents. Since the route was altered subsequent to the filing of the Advisory Opinion, these residents should no longer be affected.

The Board accepts the Advisory Opinions of QDC and the Town, Statewide Planning, and NK Planning. It finds that the impacts associated with construction and operation will be temporary in nature and that Revolution Wind has made accommodations to minimize impacts. Further the Board finds that the Project will create economic benefits in the form of increased employment opportunities, increased state and municipal revenues, and ultimately lower energy costs for Rhode Island ratepayers.

¹⁰¹ Statewide Planning Advisory Opinion at 26.

¹⁰² *Id.* at 27.

¹⁰³ *Id.* at 27-33.

¹⁰⁴ *Id.* at 33.

¹⁰⁵ *Id*. at 36.

D. The Project Is Consistent With The Act On Climate

The Application was filed with the Board on December 30, 2020. Subsequently, on April 10, 2021, the Act on Climate, which amended the Resilient Rhode Island Act of 2014, was signed into law. The Act on Climate established enforceable economy-wide targets for greenhouse gas emissions reductions. The law also imposed new obligations on all state agencies, stating:

Addressing the impacts of climate change shall be deemed to be within the powers, duties, and *obligations* of all state departments, agencies, commissions, councils, and instrumentalities, including quasi-public agencies, and each shall exercise among its purposes in the exercise of its existing authority, the purposes set forth in this chapter pertaining to climate change mitigation, adaptation, and resilience in so far as climate change affects its mission, duties, responsibilities, projects, or programs. ¹⁰⁸ (emphasis added).

Thus, even though the Act on Climate was passed subsequent to the filing of the application, the Board is obligated to address the impacts on climate change of the proposed Facilities and has previously held such.¹⁰⁹

In responding to the Board's directive to examine whether the proposed Facilities' will conform to the requirements and provisions of the Resilient Rhode Island Act, R.I. Gen. Laws §§ 42-6.2-1 *et seq.*, Statewide Planning noted that since the issuance of the designation, the Act on Climate was signed into law imposing more stringent mandatory greenhouse gas emissions reductions targets. It stated that the proposed Facilities are necessary to transmit the carbon-free power from the wind farm to the New England grid. It further noted that in approving the PPA in Docket No. 4929, the PUC found it consistent with the State's greenhouse gas reduction

¹⁰⁶ The Governor's press release regarding the signing is dated April 14, 2021. CLF Brief at 11 (Nov. 12, 2021). However, other reports indicate the bill was signed on April 10, the date Petitioner cites in its brief. Petitioner Mem. of Law at 14 (Nov. 12, 2021).

¹⁰⁷ R.I. Gen. Laws §§ 42-6.2-2(a)(2)(i) and 42-6.2-9.

¹⁰⁸ R.I. Gen. Laws § 42-6.2-8 (emphasis added). The term "obligations" was newly inserted in the legislation.

¹⁰⁹ Docket No. SB-2021-03, Order No. 153 (May 31, 2022).

¹¹⁰ Statewide Planning Advisory Opinion at 21.

¹¹¹ *Id*.

targets. The Advisory Opinion stated that based on a review of data sources, the Project is expected to significantly reduce regional electric sector carbon emissions. It concluded that the Project is consistent with the Act on Climate.

As a renewable energy Project, it is self-evident that the proposed Facilities will contribute to reducing greenhouse gas emissions. In Order No. 23609, the PUC approved a PPA between The Narragansett Electric Company, dba National Grid (TNEC) and DWW Rev 1, LLC whereby TNEC would purchase 100% of the energy and environmental attributes associated with the 400 MW offshore wind facility. 115 Although noting that the estimated reductions in greenhouse gas emissions were not a consistent number, the PUC found that "each model and methodology used produced directionally consistent conclusions that the Project will result in a reduction to regional greenhouse gas emissions" and that "the PPA was consistent with the region's greenhouse gas reduction targets." The Board finds the PUC's reasoning in Order No. 23609 to be sound and well supported by the evidence before it. Thus, it follows that if the PUC concluded the power being generated and purchased from the wind farm would advance the goal to reduce greenhouse gas emissions, the proposed Facilities connecting the wind farm to the electric grid will further that goal. The Board accepts the PUC's and Statewide Planning's Advisory Opinions as previously stated and finds that approval of the proposed Facilities will help to advance the policy objectives of the Act on Climate.

¹¹² *Id.* at 22.

¹¹³ *Id*.

¹¹⁴ Id. at 24.

¹¹⁵ Docket No. 4929 (Jun. 7, 2019).

¹¹⁶ *Id.* at 12-13.

VI. CONCLUSION

The Board has conducted an exhaustive review of Revolution Wind's proposal with the able assistance of the numerous designated state and local agencies. The Board was provided with comprehensive testimony from Revolution Wind witnesses on all aspects of the Project, as well as comments from members of the general public. Also notable is the fact that there was no opposition to the Project, other than the concerns initially expressed at the public comment hearing relating to the last leg of the transmission route along Camp Avenue. The Board commends both Revolution Wind and TNEC for their successful efforts to reroute the originally proposed route to avoid the residential area along Camp Avenue. Such good neighbor actions not only reflect good corporate citizenship but helps to engender public confidence in the integrity and fairness of the licensing process.

Based on the Board's review of the record and its findings of fact, discussed above, the Board reached the following conclusions:

<u>First</u>, as to the issues of need, cost justification, and consideration of alternatives for the Project:

There was no disagreement about the need for the Project to connect the offshore wind farm to the electric grid. As the PUC described in its advisory opinion, the Project was developed in response to needs of Rhode Island and Connecticut to increase the renewable energy load serving each state and connecting the onshore the transmission system in Rhode Island. It also meets a crucial winter reliability need for the region. The Board finds that the interconnection facilities are necessary to transfer the energy from the wind farm to the existing onshore facilities associated with the Project, and the onshore components are necessary to transfer the power to the regional electric grid.

The Board finds that the Project is cost-justified and can be expected to transmit energy at the lowest reasonable cost to the consumer consistent with the objection of ensuring that the construction and operation of the lines will be accomplished in compliance with all applicable requirements.

<u>Second</u>, as to waivers from applicable state and local laws, rules, and regulations:

The Board finds that the Project will comply with laws that would otherwise be applicable absent the Act.

<u>Third</u>, with respect to the impact of the Project on the environment:

Based on the testimony of the witnesses and the other evidence, the Board finds that the Project will not cause unacceptable harm to the environment.

<u>Fourth</u>, as to the impact of the Project on the socioeconomic fabric of the State and its consistency with the State Guide Plan:

Based on the Advisory Opinions of the Statewide Panning Program, QDC, and the Town and the other evidence and testimony before the Board, the Board finds that the Project will enhance the socioeconomic fabric of the State and is consistent with the State Guide Plan.

<u>Fifth</u>, with respect to the Board's obligations mandated by the Act on Climate:

The Board finds that the power being generated and purchased from the wind farm will advance the goal to reduce greenhouse gas emissions and that the proposed Facilities connecting the wind farm to the electric grid will further that goal.

Accordingly, it is hereby

(**154**) ORDERED:

1. The application of Revolution Wind for a license to construct and operate the facilities associated with the Revolution Wind Project, an offshore wind farm which is projected

to deliver approximately 704 megawatts (MW) of renewable energy to Rhode Island and Connecticut as described herein, is hereby granted, and the license so granted shall constitute a granting of all permits, licenses, variances, or assents subject to the jurisdiction of the Board, which under any law, rule, regulation or ordinance of the State or of a political subdivision thereof would, absent the Energy Facility Siting Act, be required for the construction of the Project; provided, however, that the license granted hereby shall be subject to and comply with all the conditions and requirements as described in this Order.

- 2. Upon the Bureau of Ocean Energy Management's (BOEM) issuance of the Record of Decision for the Project, Revolution Wind may engage in construction of any of the following on the condition that the Project has all other applicable permits, approvals and consultations for such work: the onshore transmission cable; interconnection facility; interconnection cables; overhead transmission line reconstruction; onshore substation; and the onshore and offshore horizontal directional drilling at and by the landfall at North Kingstown, Rhode Island. In the event that the Project does not receive BOEM approval of the Construction and Operations Plan and the Final Design Report and Fabrication and Installation Report no objection from BOEM, the Project shall remove all facilities constructed and restore the area to reasonably the same condition as it was prior to construction at the Projects' sole expense. 117
- 3. The Project's duct bank shall be located on the western edge of the paved area of the access road to the Davisville substation (Access Road). The Project's duct bank shall be located so that The Narragansett Electric Company (TNEC) also can install a duct bank within the

¹¹⁷ The permission to advance construction prior to receipt of all of the necessary authorizations from BOEM is unusual, but the Board recognizes the unusual urgency for having this offshore wind project becoming operational as soon as practicable to address the need to meet greenhouse gas reduction goals on an accelerated schedule and to address the regional need for winter reliability. The Board also has an exceptionally high degree of confidence that the BOEM final approvals will be granted.

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paved area of the Access Road. For the Project's and TNEC's duct banks to stay on the paved area of the Access Road, a separation of seven and one half feet (7.5) between the nearest edges of the two duct banks will be maintained in all locations where feasible. If, however, the minimum 7.5 feet is not feasible to stay on the paved area, then a minimum separation of five (5) feet is acceptable in those locations. Notwithstanding the foregoing, there is one approximately 10-footlong section of the Access Road to the north of the private portion of Camp Avenue where the separation may be reduced to four and one half feet (4.5) between the nearest edges of the two duct banks. This area is identified on the attached Exhibit A (note 2) as the "Reduced Separation Area". During the construction phase, Revolution Wind shall provide TNEC notice of the locations where the minimum duct bank separation of 7.5 feet could not be maintained followed by revised plans showing the location of the deviation. With the exception of the Reduced Separation Are, Revolution Wind shall not allow for a separation of less than 5 feet without advanced written approval from TNEC which shall not be unreasonable withheld or delayed.

- 4. Prior to construction, Revolution Wind shall provide to TNEC for its review and approval, which shall not be unreasonable withheld or delayed, final construction plans of the Option B duct bank route (full AutoCAD file) within the TNEC fee parcel and TNEC driveway and utility easement, shown within survey-located property and easement lines. Revolution Wind shall provide TNEC with as-built plans following completion of the construction (full AutoCAD file).
- 5. Approved final construction plans will be referenced in and made a part of a mutually agreeable Grant of Easement and Assent Agreement between TNEC and Revolution Wind for the portions of the Project duct bank within the TNEC fee parcel and TNEC driveway and utility easement. Revolution Wind shall provide TNEC with a survey plan of the easement

within the TNEC fee parcel with a metes and bounds description, and an appraisal, prepared by an MAI, identifying the fair market value for the temporary and permanent easement areas within the TNEC parcel, which consideration will be paid to TNEC in return for the conveyance of easement rights.

- 6. A TNEC civil inspector shall be on site during construction of the Project's duct bank within the TNEC driveway and utility easement and the TNEC fee parcel but the failure of a TNEC civil inspector to be on site shall not be the sole reason to force the Project to stop work. If deviations from TNEC's and Revolution Wind's agreed upon parameters for construction in the Access Road and TNEC fee parcel are necessary, such deviations shall be subject to review and approval by TNEC and, if acceptable, incorporated into an amendment to the Grant of Easement and Assent Agreement.
- 7. Revolution Wind shall provide TNEC with temporary and permanent alternative access routes to the TNEC substation, together with draft recordable documentation of the permanent alternative access route, for use during initial construction and future maintenance of the Project duct bank. Revolution Wind and TNEC will finalize and record any easements and/or agreements needed to document that TNEC will have the right to access its substation at any time in the event that Revolution Wind is impeding access over the Access Road, or at such other times as requested by TNEC and agreed to by Revolution Wind.
- 8. Revolution Wind shall submit a construction operations plan and shall also submit final engineering, soil erosion and sediment control, and traffic control plans for the underground cables to the extent that the details of those plans are not included in the construction operations plan to the Quonset Development Corporation for review and approval prior to the commencement of construction.

- 9. This license is contingent on the adoption of the route identified as Option B and use of the paved access road to the Davisville substation.
- 10. Revolution Wind shall keep all abutters and individuals whose property will be accessed in the course of the Project apprised of the Project schedule with as much advance notice as possible.

DATED AND EFFECTIVE AT PROVIDENCE, RHODE ISLAND ON JUNE 23, 2022, PURSUANT TO AN OPEN MEETING DECISION ON JUNE 23, 2022. WRITTEN ORDER ISSUED JULY 8, 2022.



ENERGY FACILITY SITING BOARD

Ronald T. Gerwatowski, Chairman

Rould + Gentlents

Meredith Brady (Jul 8, 2022 8:56 EDT)

Meredith E. Brady, Member

*Terrence Gray, Member

NOTICE OF RIGHT OF APPEAL PURSUANT TO R.I. GEN. LAWS SECTION 42-98-12, ANY PERSON AGGRIEVED BY A DECISION OF THE BOARD MAY, WITHIN TEN (10) DAYS OF THE ISSUANCE OF THIS ORDER PETITION THE SUPREME COURT FOR A WRIT OF CERTIORARI TO REVIEW THE LEGALITY AND REASONABLENESS OF THIS ORDER.

^{*}Board Member Gray did not participate in this proceeding.

Exhibit A:

