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CAPE COD COMMISSION

Cape Cod Commission Staff Report
Development of Regional Impact (DRI) Review

Date:	July 17, 2023
Project:	Cable 91 Replacement Project (CCC File No. 22025)
Project Applicant:	NSTAR Electric Company d/b/a Eversource Energy 247 Station Drive Westwood, MA 02090
Project Location:	395 Mill Road, Falmouth 02540
Subcommittee:	Committee on Planning and Regulation

Project Description and Context

Eversource Energy ("Applicant") proposes the Project to replace an existing direct lay, submarine electricity distribution cable, which runs across Vineyard Sound from Falmouth to Tisbury with a new buried distribution cable.

The Project is proposed to replace the existing Cable 91, which has experienced eight faults since it was installed in 1986, with the most recent fault occurring in July 2021. The cable fault in July 2021 required multiple portable diesel generators to support the distribution system until the 91 Cable fault was repaired. Due to the existing Cable 91 being a direct lay cable on the seafloor, it has been vulnerable to shifting with the currents and exposed to sediment abrasion which weakens the protective layers. Thus, this cable is expected to continue to fault in the future if not replaced. This Project, combined with the Martha's Vineyard Reliability Project (CCC File No. 22009) are needed to reliably meet current demands and future load growth as Martha's Vineyard transitions to a more electric centric energy supply.

The replacement Project consists of: a 4.44-mile +/- submarine cable, 2.62 miles +/- of which is to be in Barnstable County. At the Falmouth landfall site, the submarine cable will terminate in a new transition manhole to be installed in the gravel parking lot on Mill Road.

An approximately 190-foot underground duct extension from the transition manhole will connect to a new duct and manhole system in Mill Road (reviewed as a portion of the Martha's Vineyard Reliability Project.

A combination of Horizontal Directional Drill ("HDD") and hydroplow will be used to install the offshore cable, with the hydroplow construction technique used for the majority of the offshore route length, and HDD used at the landing sites to avoid impact to intertidal resources. This is similar to the methods that were used for the Martha's Vineyard Reliability Project.

DRI Jurisdiction

The Project requires mandatory DRI review pursuant to Section 2(d)(i) of the Commission's Chapter A: Enabling Regulations Governing Review of Developments of Regional Impact ("Enabling Regulations"), revised November 2021, because the Project required the preparation of an Environmental Impact Report ("EIR") pursuant to the Massachusetts Environmental Policy Act, M.G.L. c. 30, §§ 61-62I ("MEPA").

Procedural History

- The Project triggered review under MEPA because it would result in alteration of ½ or more acres of any other wetlands (Land Under Ocean ["LUO"]) and proposes dredging of 10,000 or more cubic yards of material. The Project required preparation of an EIR pursuant to 301 CMR 11.06(7)(b) because it is located within a Designated Geographic Area around an Environmental Justice ("EJ") population.
- The Project received the Secretary's certificate on its Single Environmental Impact Report ("SEIR") stating that the project properly and fully complies with MEPA on May 17, 2023.
- A staff hearing officer opened the DRI hearing period procedurally on June 30, 2023. The Applicant submitted a DRI application for the Project to the Commission on May 30, 2023.

DRI Review Standards

- Section 7(c)(viii) of the Commission's Enabling Regulations contains the standards to be met for DRI approval, which include, as applicable, consistency with the Act, the Cape Cod Regional Policy Plan ("RPP"), municipal development bylaws, District of Critical Planning Concern ("DCPC") implementing regulations and Commission-certified Local Comprehensive Plans ("LCP"). The Commission must also find that the probable benefit from the Project is greater than its probable detriment.
- DRI review of the Project is subject to the 2018 Regional Policy Plan ("RPP"), as amended in March 2021, which is the version of the RPP in effect at the time of the Commission's

first substantive public hearing on the Project. The Commission determines the Project's consistency with the Act and RPP by determining whether the Project is consistent with the Goals and Objectives in Section 6 of the 2018 RPP, as particular goals and objectives are deemed applicable and material to the Project.

Cape Cod Regional Policy Plan

Applicable and Material RPP Goals

Commission staff reviewed the details of the DRI Application Materials and suggest that the following RPP Goals are applicable, material, and regionally significant and are thus subject to RPP consistency review: Ocean Resources, Wetlands Resources, Capital Facilities and Infrastructure, and Energy. Commission staff make the following recommendations relative to the Project's consistency with these RPP Goals and relevant Objectives and Technical Bulletin guidance.

Ocean Resources

The Ocean Resources Goal is to *protect, preserve, or restore the quality and natural values and functions of ocean resources*.

The following Objectives are applicable and material to the Project:

- **OR1** – locate development away from sensitive resource areas and habitats
- **OR2** – preserve and protect ocean habitat and the species it supports
- **OR3** – protect significant human use area and vistas

All development projects in the Ocean must meet Ocean Resources Objectives OR1, OR2, and OR3. These Objectives and associated methods prioritize the protection of the ocean-based resources and uses that are present in the Project area. The cable installation is proposed in the following ocean resource areas: Priority Habitats for State-Protected Rare Species (PH 2158); Estimated Habitats for Rare Wildlife (EH 1366); hard/complex seafloor; and eelgrass.

Objective OR1

Although the Project is proposed in ocean resource areas, the Applicant has made adjustments that serve to avoid or mitigate impacts to ocean resources. Methods to meet Objective OR1 include siting development away from mapped prohibited areas and mapped exclusionary areas under the Cape Cod Ocean Management Plan ("CCOMP") and siting development away from rare species habitat. Consistent with OR1, the offshore cables are not located within designated prohibited areas for ocean species or exclusionary areas as identified in the CCOMP. The offshore portion of the Project does extend through area mapped for Least Tern, Common Tern, and Roseate Tern, which is also a federal listed species. However, consistent with OR1, comments from Massachusetts Natural Heritage

and Endangered Species Program (NHESP) were submitted by the Applicant and demonstrate that impacts to rare species or their habitat can be avoided with time-of-year (TOY) restrictions.

Objective OR2

The Project route, construction techniques, and the temporary nature of installation will minimize potential impacts to ocean habitat and species while still furthering a substantial public purpose. Methods to meet Objective OR2 applicable to this Project include protecting rare species, eelgrass, and benthic habitat; mitigating construction noise; and demonstrating public purpose. The Applicant has submitted the required documentation for each of these methods, discussed in greater detail below. Consistent with OR2, the Applicant has also submitted a Cumulative Impact Assessment for the Project, which staff suggest further supports the Applicant's position that the incremental addition of this Project will not unduly degrade ocean resources or conflict with human uses and noise from vessel traffic associated with the Project is likely to be similar to background vessel traffic noise.

As discussed above, because this Project is located in rare species habitat, the Applicant has submitted a Joint Wetlands Protection Act ("WPA") and Massachusetts Endangered Species Act ("MESA") Notice of Intent to NHESP. Comments from NHESP indicate the state listed species present in the area are shore birds. Work over open water will not disturb nesting, and the limited size of the work area as compared to the expanse of feeding habitat is de minimus. Work at the landfall site in Falmouth, proximate to beach and dune, will observe TOY restrictions to avoid nesting time of year. NHESP has determined that the Project.[1] [2]

Although benthic habitat in the direct path of the hydroplow will be disturbed during cable installation, recolonization and recovery of these habitats is expected based on results from similar projects in the region and given the similarity of nearby habitat and species. In addition, micro-siting implemented during the pre-pass phase of construction will be used to attempt to avoid impassable complex substrates, such as those containing large boulders or dense gravel pavement. Horizontal Directional Drilling ("HDD") at the landfall site will avoid work on the beach or dune and is also proposed to avoid eelgrass off the Falmouth coastline. The DRI Application also indicates that the HDD exit hole locations will avoid eelgrass.

[1] *See* DEP Wetlands File No.: 025-4857 (Falmouth) & NHESP File No. 23-0071 (June 2, 2023)

[2] To the extent Objective WPH3 (protect and preserve rare species habitat, vernal pools, 350-foot buffers to vernal pools) of the Wildlife and Plant Habitat Goal is applicable, material, and regionally significant, staff suggest the NHESP comments and measures to avoid impacts to rare species also satisfy the required method for WPH3.

The Applicant also provided support for their position that the Project furthers substantial public purposes, consistent with OR2. The main public benefit of the Project is an increase in the reliability of electrical service in the Applicant's service area.

Objective OR3

The Project route was chosen because it has the lowest overall impacts to seafloor than any of the other alternatives and because it is the shortest and most direct route between the landfall locations. To be consistent with OR3, Projects should be sited to minimize impacts to ocean-based recreation and commercial uses, and to avoid archeological resources. Consistent with OR3, the Project construction window will be coordinated to take place between Labor Day and Memorial Day to minimize impacts to high-use activity areas. While construction and installation activities may temporarily affect navigation and/or fishing activities in the vicinity of cable installation vessels, these impacts are expected to be limited and will be determined in coordination with the U.S. Coast Guard. A marine archeological resources assessment was conducted within Vineyard Sound and was submitted to the Massachusetts Historical Commission ("MHC") and Massachusetts Board of Underwater Archaeological Resources. No effects to know marine archaeological resources are anticipated.

Staff suggests the Project is consistent with the applicable and material Ocean Resources Goal and Objectives of the RPP, provided proposed Best Management Practices and mitigation measures are implemented. The Applicant has made route, design, and construction choices that should serve to minimize impacts to ocean resources. Through offshore cable route selection, cable installation methods, TOY restrictions, and the use of HDD for the offshore-onshore transition, the Project locates development away from sensitive ocean resource areas and habitats and preserves and protects ocean habitat and the species it supports, consistent with OR1 and OR2. The temporary nature of offshore export cable installation impacts and the limited permanent footprint due to any cable protection serves to protect offshore human use areas, consistent with OR3.

Wetlands Resources

The Wetlands Resources Goal of the RPP is to protect, preserve, or restore the quality and natural values and functions of inland and coastal wetlands and their buffers.

The following Objective is applicable and material to the Project:

- **WET1** – protect wetlands and their buffers from vegetation and grade changes

The RPP allows for utility installation in wetlands and their buffers where the Applicant can show that there is a public benefit, there is no feasible alternative to alteration, and the impacts from the alteration are minimized and mitigated. Staff suggest the Project is consistent with Objective WET1 because the Project is the water-dependent installation of

utility lines, there will be no permanent impacts to wetland resource areas within the land-based portion of the Project, and temporary impacts within the limited wetland resource areas present will be minimized with construction Best Management Practices and restored to existing conditions after construction.

Staff suggests the Project will facilitate public benefits including improved electricity reliability. As a water-dependent project providing a connection between Falmouth and Martha's Vineyard, there is no feasible alternative to the cable location within Land Under the Ocean and the affected areas of Coastal Dune and Land Subject to Coastal Storm Flowage. The Applicant has taken steps, including those noted herein, to select a route, design installation and construction, and accommodate TOY restrictions to protect wetland resources, such that impacts from the installation will be minimized and mitigated. Work in the buffer zones to coastal beach and coastal dune is located within public Right-of-Way (ROW) and will not affect vegetation or grades. The buried cable will not change grades in the ROWs.

The other Wetlands Resources Objectives are not applicable or material to the Project as the Project will not result in any changes in hydrology or increased stormwater discharges to wetlands and does not involve restoration of degraded wetland resource areas.

Capital Facilities & Infrastructure

The Capital Facilities & Infrastructure Goal of the RPP is to guide the development of capital facilities and infrastructure necessary to meet the region's needs while protecting regional resources.

The following Objectives are applicable and material to the Project:

- **CAP1**—ensure capital facilities and infrastructure promote long-term sustainability and resiliency
- **CAP2**—coordinate the siting of capital facilities and infrastructure to enhance the efficient provision of services and facilities that respond to the needs of the region

Objective CAP1

The Project ensures long term sustainability of its electricity distribution cable as it will be designed to withstand wind and flooding hazards. To be consistent with Objective CAP1, projects should locate infrastructure away from flood-prone or high hazard areas. The Project is consistent with this objective as it locates infrastructure underground where it will not be subject to wind, ice, tree falls or other above ground hazards. Although the onshore portion of the Project is proposed in Land Subject to Coastal Storm Flowage, the Project area will be restored to pre-construction grades, resulting in no change to the horizontal or vertical extent of flooding. For the offshore portion of the Project, the Project

will replace a direct lay cable with a buried cable, making it more resilient and less prone to faults.

Objective CAP2

While portions of the project must inherently be in flood prone areas, cables and splices are designed to be sealed from water intrusion. When properly installed according to industry standards, underground cable systems are not affected by flooding and weather events. Directional drilling will avoid any impacts to the natural beneficial functions of coastal resources.

Consistent with Objective CAP2, the Applicant coordinates this Project with other cable installations. The Project does not impact any existing land uses and utilizes infrastructure from the Martha's Vineyard Reliability Project (CCC File No. 22009) to connect the proposed cable to the substation in Falmouth. This reuse of existing developed land eliminates the need to further impact natural areas and any impacts to visual resources.

Energy

The Energy Goal of the of the RPP is to *provide an adequate, reliable, and diverse supply of energy to serve the communities and economies of Cape Cod.*

The following Objective is applicable and material to the Project:

- **EN2**—increase resiliency of energy generation and delivery

The Project will further the reliability of the electric supply and increase the resiliency of existing infrastructure such that it will meet current and future electricity needs. The Project will serve as a replacement for the Applicant's "Cable 91" which was installed in 1986 by laying the cable directly on the ocean floor. The existing cable, which has experienced eight faults, is not a reliable source of electricity. Currently, diesel generators are used when electricity supply cannot keep up with demand, or when there is a fault. Replacement is needed to reliably supply the peak demand for electricity during the summer months and to avoid the use of diesel generators.

Other DRI Standards of Review

Consistency with applicable Municipal Development Bylaws

Under the Memorandum of Understanding (MOU) with the Town of Falmouth, the Applicant will seek all requisite approvals for the Project from the Town. The Town has agreed to coordinate with Eversource to facilitate a timely review of the required Eversource grant of location petitions, street opening permits, and all other Town approvals that may be required for the Project. This MOU is the same MOU that was used for the Martha's Vineyard Reliability Project (CCC File No. 22009) and provides for

mitigation of construction impacts including: traffic control, noise, dust, and limits on the time of year, and time of day, that construction is permitted.

DCPC Implementing Regulations

The offshore cable is located in an area that was designated as Cape Ocean Management Planning District of Critical Planning Concern ("DCPC"). There are no implementing regulations associated with the DCPC that apply to the Project.

Consistency with CCC-certified Falmouth LCP

The Project broadly supports sustaining economic viability and infrastructure while maintaining the resilience of the natural resources consistent with Falmouth's Commission-certified Local Comprehensive Plan.

Supportive of the Town's goals for Economic Sustainability Policy to provide the necessary infrastructure to meet the needs of the local and regional economy, the Project supports economic sustainability by increasing reliability of energy delivery infrastructure. The Applicant has established an MOU with the Town of Falmouth to provide these benefits. Further, consistent with the Town's LCP, the new underground and submarine electric distribution cable will improve reliability with increased grid-based electric service to meet current and future electricity demands and improve the ability to integrate dispersed renewable energy in support of the Town's Energy Policy to support the use of renewable energy sources.

Relative to the Town's Policies for Land Use and Historic Character, the Project proposes to utilize existing infrastructure to install the underground cable. This reuse of existing developed land eliminates the need to impact natural areas and any impacts to visual resources.

Probable Project Benefits versus Probable Project Detriments

In addition to consistency with other DRI review and approval standards, the Subcommittee should identify and weigh the probable benefits of the Project relative to the probable detriments, from a regional perspective.

Staff suggest that the following may be considered as probable benefits of the Project:

- Meet current and future electricity load expectations to improve the reliability of grid-based power;
- Allow for the retirement of the diesel generators on Martha's Vineyard;
- Allow for the future elimination of fossil fuel use on the island as the Eversource grid incorporates a greater amount of renewable electricity.

Staff suggest that the following may be considered as probable detriments of the Project:

- Temporary elevation of turbidity associated with offshore cable installation.

Recommended Conditions

General Conditions

- The Applicant shall continue to pursue and meet its obligations under the MOU with the Town.
- The Applicant shall obtain all required federal, state, and local permits, licenses, and approvals. The Project's consistency with required Municipal Development Bylaws shall be ratified and confirmed by the Applicant obtaining the required municipal development permits.
- The Applicant shall provide or otherwise ensure that the Commission is copied on all state and local permits, licenses, and approvals.
- The Applicant shall continue to work with applicable state and federal agencies to finalize and implement TOY restrictions and BMPs to avoid, minimize, and/or mitigate impacts to ocean resources, species, and habitats, and ocean-dependent human uses.