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June 15, 2018

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
SINGLE ENVIRONMENTAL IMPACT REPORT

PROJECT NAME : Old Boston Road Substation Project
PROJECT MUNICIPALITY : Tewksbury
PROJECT WATERSHED : Merrimack and Shawsheen
EEA NUMBER : 15782
PROJECT PROPONENT : New England Power Company/Massachusetts Electric
Company d/b/a National Grid
DATE NOTICED IN MONITOR : May 9, 2018

Pursuant to the Massachusetts Environmental Policy Act (MEPA; M.G. L. c. 30, ss. 61-62I) and Section 11.08 of the MEPA regulations (301 CMR 11.00), I have reviewed the Single Environmental Impact Report (Single EIR) and hereby determine that it **adequately and properly complies** with MEPA and its implementing regulations.

Project Description

As described in the Single EIR, the project consists of the construction of a 115/13.2 kilovolt (kV) substation off Old Boston Road in Tewksbury. The project includes construction of a new substation yard; upgrade, reconfiguration, and refurbishment of distribution lines; installation of an underground duct system; and replacement of structures. Specific components of the project include:

- Construction of the Old Boston Road #20 Substation;

- Installation of two transmission tap lines from the J162 and K137E transmission lines to the Old Boston Road #20 Substation;
- Installation of an underground duct bank and manhole system within Power Company Road, Old Boston Road, and Main Street;
- Reconfiguration and upgrade of distribution circuits along Old Boston Road, Main Street, Old Main Street, and Baker Street;
- Addition of neutral wire and partial structure refurbishment to portions of two distribution lines (314/14L2 and 317/14L3) which follow a cross country right-of-way (ROW) from the intersection of Old Boston Road/Power Company Road to North Street; and
- Retirement of the Tewksbury #14 Substation on Main Street and removal of the 14J1, 14J2, and 14J3 distribution feeders.

The project is proposed in response to reliability and capacity-based transmission needs identified by the Proponent. Forecasting studies determined that two transformers that supply the 314 and 317 distribution lines at the Tewksbury #22 Substation are expected to be overloaded in 2021; the 317 line would be overloaded in 2020; faults could occur on the 14L1, 14L2, and 14L3 distribution feeders in the event of a storm; and that the Tewksbury #14 Substation would require replacement of equipment. The project is proposed to resolve identified capacity issues and improve reliability. Specifically, the project will retire the Tewksbury #14 Substation and will relocate the existing and future electric load to the new substation. The proposed Old Boston Road #20 Substation will supply the distribution feeders currently fed from the Tewksbury #14 Substation, and will take a portion of the distribution load currently supplied by the Tewksbury #22 Substation. This will resolve the identified capacity issues associated with the distribution feeders serving area substations.

Project Area

The project area is located in the Wamesit neighborhood of Tewksbury and consists of several substations, cross country ROW, and railroad and roadway corridors. Specifically, it includes the Old Boston Road #20 Substation; the parcel containing the Tewksbury #22 Substation; the Tewksbury #14 Substation and associated distribution facilities; cross country ROW from the intersection of Power Company Road/Old Boston Road to the Tewksbury #14 Substation; inactive railroad corridor from the Tewksbury #14 Substation to North Street; roadway corridors along the proposed duct bank installation (portions of Power Company Road, Old Boston Road, and Main Street); and roadway corridors along proposed distribution reconfiguration (portions of Old Boston Road, Main Street, Old Main Street, and Baker Street). Main Street (Route 38) is under the jurisdiction of the Massachusetts Department of Transportation (MassDOT). Land uses in the project area include commercial, industrial, and residential uses.

The proposed Old Boston Road #20 Substation will be located at 257 Old Boston Road on a 36.5-acre parcel. The parcel is part of a larger site owned by the Proponent that contains two electric substation yards (including Tewksbury #22), several overhead transmission and distribution lines, and undeveloped forested land. The parcel is bounded by an active railroad to the north, Power Company Road to the east, and wetland resource areas to the north and south.

In addition, wetlands are located in the ROW within the roadway shoulder of Power Company Road between the proposed substation site and Old Boston Road, and within the largely undeveloped cross country ROW within which the 314 and 317 lines are located.

The Tewksbury #14 Substation is located at 910 Main Street on a parcel owned by the Proponent. The parcel consists of a 0.25-acre electric substation yard, a wetland area and Strong Water Brook, and a small driveway/parking area. It is bounded by Main Street to the south, the Tewksbury Police Station to the east, an inactive railroad corridor to the north, and a restaurant to the west.

According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM) (number 25017C0276F, effective July 6, 2016), portions of the project area near Tewksbury #14 Substation are located within a 100-year floodplain associated with Strong Water Brook with Base Flood Elevations (BFE) of 111 feet to 115.2 feet North American Vertical Datum of 1988 (NAVD88).

Environmental Impacts and Mitigation

Potential environmental impacts of the project are associated with the use of swamp mats during construction; installation, replacement, refurbishment, or removal of utility structures; construction of a duct bank and manhole system; and construction of foundation pads for new equipment within the substation. The project will alter approximately 10.58 acres of land, create approximately 1.05 acres of impervious area, and alter wetland resource areas including 85,950 square feet (sf) (1.97 acres) of Bordering Vegetated Wetland (BVW), 19,992 sf of Riverfront Area (RFA), and 9,103 sf of Bordering Land Subject to Flooding (BLSF).¹ The Single EIR indicated that the project will not reduce flood storage capacity.

Measures to avoid minimize and mitigate Damage to the Environment include BVW replication (1,200 sf) for 133 sf of unavoidable permanent impacts; in-situ restoration of temporary impacts to BVW, RFA, and BLSF; use of erosion control measures (ECMs); use of swamp mats; measures to control invasive plant species; and implementation of best management practices (BMPs) to reduce potential stormwater runoff impacts.

Jurisdiction and Permitting

The project is undergoing MEPA review and requires the preparation of an EIR pursuant to 301 CMR Section 11.03(3)(a)(1)(a) of the MEPA regulations because it requires State Agency Actions and will alter more than one acre of BVW. The project requires a Section 401 Water Quality Certification (WQC) from the Massachusetts Department of Environmental Protection (MassDEP) and a Highway Access Permit from MassDOT. The project is subject to the MEPA Greenhouse Gas (GHG) Emissions Policy (GHG Policy).

The Tewksbury Conservation Commission issued an Order of Conditions on April 5, 2018 which approved the project and was not appealed. The project also requires consultation

¹ The Certificate on the EENF transposed impacts to BLSF and Riverfront Area. They were correctly identified in the EENF document.

with the Massachusetts Historical Commission (MHC) in accordance with Section 106 of the National Historic Preservation Act (NHPA) of 1966, a Clean Water Act (CWA) Section 404 General Permit from the United States Army Corps of Engineers (ACOE), and a National Pollutant Discharge Elimination System Construction General Permit (NPDES CGP) from the United States Environmental Protection Agency (EPA).

Because the Proponent is not seeking Financial Assistance from the Commonwealth for the project, MEPA jurisdiction extends to those aspects of the project that are within the subject matter of required or potentially required State Agency Actions and that may cause Damage to the Environment as defined in the MEPA regulations. In this case, MEPA jurisdiction is limited to land alteration, wetlands, water quality, transportation, GHG emissions, and historical and archaeological resources.

Review of the Single EIR

The Single EIR described the project, identified existing conditions, and described potential environmental impacts and mitigation measures. The FEIR indicated that the project layout and design parameters remain unchanged from that presented in the Expanded Environmental Notification Form (EENF). Changes are limited to revisions to the swamp mat layout to reduce impacts to BVW and disturbance within the 100-ft buffer zone. It provided a brief description of applicable statutory and regulatory standards and requirements, and described how the project will meet those standards. The Single EIR provided a list of required local, state, and federal permits and provided an update on the status of each of these pending actions.

Comments from State Agencies did not identify any significant impacts that were not reviewed in the Single EIR or identify additional alternatives for further review.

Alternatives Analysis

In response to the Scope, the Single EIR included a discussion of non-transmission alternatives (NTAs). NTAs are generally defined as solutions to an identified need that either does not require the construction of traditional electric transmission infrastructure, or delays the timing of the transmission investment. The Single EIR indicated that adequate transmission capacity exists in the area to support the required distribution improvements and the project does not propose an upgrade of the transmission system in the area. The project is proposed to resolve load and asset conditions affecting the local distribution system. Sufficient transmission capacity exists to support the new substation.

Wetlands and Water Quality

The project will impact the following overlapping wetland resource areas: BVW (133 sf permanent/85,817 sf temporary), BLSF (14 sf permanent/9,089 sf temporary), and Riverfront Area (14 sf permanent/19,978 sf temporary). It will also impact the 100-ft buffer zone (44,121 sf permanent/195,020 sf temporary). The project qualifies as a limited project pursuant to 310 CMR 10.53(3)(d) for the construction, reconstruction, operation and maintenance of

underground and overhead public utilities such as electrical distribution or transmission lines. The Tewksbury Conservation Commission reviewed the project, determined that it is consistent with the Wetlands Protection Act (WPA) and the Wetlands Regulations (310 CMR 10.00) and issued an Order of Conditions (File No. 305-1049) on April 5, 2018.

Installation of two utility poles and a manhole within the duct bank system will permanently impact 133 sf of BVW. The Single EIR identified factors that dictated the placement of structures within the utility corridor; including the presence of a sewer main and maintaining the required distance between utility poles to provide sufficient tension of the distribution lines to maintain safe ground clearances. As described in the Single EIR, the project includes a 1,200 sf wetland replication area which will mitigate BVW loss at a 9:1 ratio of mitigation to permanent impacts. The Single EIR included a wetland replication report and plan that identified the location of the wetland replication area, described its design, and described the proposed wetland and invasive species monitoring program. It described the wetland mitigation program and indicated that it will meet ACOE, MassDEP, and local bylaw requirements and performance standards.

The majority of wetland impacts are temporary and will result from the placement of swamp mats to provide access for construction equipment and work areas. The use of swamp mats will avoid permanent impacts to wetlands resource areas due to direct contact with construction vehicles and equipment. The Single EIR indicated that all work will comply with the Proponent's Environmental Guidance document (EG-303NE), which was appended to the Single EIR. The guidance document described environmental procedures and best management practices (BMPs) to support work in compliance with applicable regulations and company policies and procedures. The Single EIR provided plans depicting the location of swamp mats and described how they will be effectively managed to reduce impacts to wetland resource areas. As directed by the Scope, the Proponent re-evaluated and revised the swamp mat layout which reduced temporary impacts to BVW and disturbance within the 100-ft buffer zone by 1,816 and 1,067 sf, respectively. Measures to mitigate temporary construction period impacts include: removing the swamp mats and restoring pre-construction contours, revegetation and stabilization of impacted areas, and implementation of invasive species control measures and post-restoration inspections. The Proponent should seek to minimize the length of time the mats are in place to reduce wetland impacts.

Greenhouse Gas Emissions

This project is subject to review under the May 2010 MEPA Greenhouse Gas Emission (GHG) Policy and Protocol ("the Policy") because it exceeds thresholds for a mandatory EIR. The GHG Policy specifically includes a *de minimis* exemption for projects that are expected to produce minimal GHG emissions. The Single EIR indicated that the circuit breakers at the Tewksbury #22 substation will require the use of Sulfur Hexafluoride (SF₆) gas, a potent GHG. According to the Single EIR, the potential for SF₆ emissions is minimal as the circuit breakers will be delivered fully pressurized and sealed for life. Given the nature of the project, I have concluded that this project falls under the *de minimis* exemption; therefore, the Proponent is not required to prepare a GHG analysis. The Single EIR included the following commitments to reduce SF₆ emissions: voluntary participation in the US EPA Emission Reduction Partnership for

Electric Power Systems, installation of circuit breakers designed to minimize SF₆ emissions, bi-monthly inspections, early SF₆ detection measures (including alarm system), and actively replacing equipment.

Climate Change Adaptation and Resiliency

The Single EIR included a discussion of the project's consistency with EEA's *Massachusetts Climate Change Adaptation Report* (2011), including strategies to address vulnerabilities for the energy distribution sector. The Single EIR indicated that the project will strengthen the reliability and resiliency of the electrical system, in part by locating facilities outside of the 100-year flood zone. Specifically, the project will retire the Tewksbury #14 Substation which is located adjacent to a stream and within the 100-year flood zone. The Old Boston Road #20 Substation will be located in an area that is not vulnerable to flooding. Additionally, the project will strengthen the reliability and resiliency of the electrical system and its ability to support potential increased demands for heating and cooling.

Cultural Resources

The project is subject to review by the MHC acting as the State Historic Preservation Officer (SHPO) pursuant to Section 106 of NHPA. As requested by the MHC, the Proponent completed an intensive (locational) archaeological survey of the project site in April 2018. Supplemental information provided by the Proponent clarified that the survey identified one historic home site and a number of features associated with an abandoned railroad corridor. The Proponent anticipates that adverse effects to these resources can be avoided through demarcation of access routes and implementation of additional protective measures.

Construction Period

Construction is anticipated to commence in summer 2018 with a completion date of summer 2020. Work will occur from 7:00 am to 7:00 pm Monday through Friday and from 7:00 am to 5:00 pm on Saturday. The Single EIR identified measures to prevent or minimize impacts during the construction period. It described erosion and sedimentation control measures consistent with the Proponent's Environmental Guidance document (*EG-303NE*). The Proponent will prepare a Stormwater Pollution Prevention Plan (SWPPP) as part of the EPA Stormwater Construction General Permit. Traffic mitigation measures include coordinating delivery of materials to off-peak traffic hours, implementation of work-zone traffic control plans, and use of police detail and appropriate signage.

The Proponent will use ultra-low sulfur diesel (ULSD) fuel in its own diesel-powered construction equipment and will require its contractors to do the same. The Proponent will also direct contractors to retrofit any diesel-powered non-road construction equipment rated 50 horsepower or above to be used for 30 or more days over the course of the project with U.S. EPA-verified (or equivalent) emission control devices (e.g., oxidation catalysts or other comparable technologies). The project will also comply with MGL c.90 §16A and MassDEP anti-idling regulations (310 CMR 7.11(1)(b)). The project must comply with MassDEP Solid Waste and Air Quality Control regulations, pursuant to M.G.L. Chapter 40, Section 54, during

construction. All construction activities should be undertaken in compliance with the conditions of all State and local permits.

Mitigation/Draft Section 61 Findings

The Single EIR contained a separate chapter on mitigation measures and draft Section 61 Findings. It described mitigation measures and contained clear commitments to mitigation. The draft Section 61 Findings will serve as the primary template for State Agency Permit conditions. As described in the Single EIR, mitigation measures will include the following:

Wetlands and Water Quality

- Designing the project to comply with MassDEP Stormwater Management Standards;
- Use of construction mats to minimize direct impacts to wetland resource areas;
- In-situ restoration of temporary impacts to wetland resource areas;
- Creation of a 1,200-sf BVW replication area at a greater than 1:1 ratio;
- Designing the project to provide no net loss of flood storage capacity;
- Use of sedimentation and erosion control measures around work areas; and
- Implementation of a post-construction wetland inspection and monitoring plan, including invasive species control efforts.

Traffic and Transportation

- Development and implementation of Traffic Management Plans in consultation with MassDOT District 4.

Greenhouse Gas Emissions and Air Quality

- Use of ULSD in construction equipment;
- Limitation of vehicle idling to no more than five minutes;
- Use of circuit breakers designed to minimize the leakage of SF₆ gas; and
- Participation in the US EPA's Emission Reduction Partnership for Electric Power Systems, bi-monthly equipment inspections, early SF₆ detection measures, and actively replacing equipment.

Cultural Resources

- Completion of an intensive archaeological survey; and
- Consultation with MHC and ACOE pursuant to Section 106 of the NHPA to avoid, minimize, and mitigate impacts to archaeological resources.

Construction Period

- Use of erosion and sedimentation control measures and preparation of a SWPPP consistent with the EPA NPDES Construction General Permit;
- Development of a Spill Contingency Plan to address any releases of oil and/or hazardous materials;
- In-situ restoration of all disturbed areas;
- Management and disposal of all construction and demolition debris in accordance with MassDEP Solid Waste and Air Quality Control regulations (310 CMR 16.00 and 310 CMR 19.00); and

- Location of refueling and equipment storage activities more than 100 feet from wetlands.

Conclusion

Based on a review of the Single EIR and comment letters and in consultation with State Agencies, I find that the Single EIR adequately and properly complies with MEPA and its implementing regulations. The project may proceed to permitting. State Agencies and the Proponent should forward copies of the final Section 61 Findings to the MEPA Office for publication in accordance with 301 CMR 11.12.



June 15, 2018

Date

Matthew A. Beaton

Comments received:

- 05/25/2018 Massachusetts Historical Commission (MHC)
- 06/08/2018 Massachusetts Department of Transportation (MassDOT)

MAB/PRC/prc