

**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD**

THE NARRAGANSETT ELECTRIC	:	
COMPANY d/b/a NATIONAL GRID	:	
NOTICE OF INTENT APPLICATION	:	DOCKET NO. SB-2017-02
PROVIDENCE RIVER 115 kV CABLE	:	
RELOCATION PROJECT,	:	
PROVIDENCE, RHODE ISLAND	:	

DECISION AND ORDER

On December 18, 2017, the Narragansett Electric Company d/b/a National Grid (National Grid or Company) filed a Notice of Intent Application with the Energy Facility Siting Board (EFSB or Board) pursuant to Rule 1.6(f) of the Board’s Rules of Practice and Procedure (Rules).¹ The application proposes to relocate a portion of the existing Q-143 and R-144 115 kV underground electric transmission lines (lines) located in Providence, Rhode Island. The lines were installed in 1939 and 1943, respectively, and connect the Franklin Square Substation and the Admiral Street Cable Terminal in Providence. Consisting of three single-phase self-contained fluid-filled cables, the lines share 2.3 miles of common duct bank and manhole system as well as 700 feet of submarine cables installed under the Providence River.² This project will relocate 1,650 feet of the lines extending approximately 1,930 feet. National Grid has made the project a

¹ Rule 1.6(f) provides for an abbreviated review of an application for the construction of power lines of more than 1,000 feet, but less than 6,000 feet, or the modification or relocation of existing power lines. After the application is filed and a public hearing held in one or more of the cities or towns affected by the project, the Board must make a determination within sixty days of the filing as to whether the project “may result in a significant impact on the environment or the public health, safety and welfare.” If the Board finds no significant impact, the project does not constitute a major alteration. The applicant will, accordingly, be licensed to proceed without further review.

² The application provides a detailed description of the work to be performed as well as an extensive analysis of the impacts upon the natural and social environments and electromagnetic field levels. At the public hearing, the Board admitted as full exhibits the application and the Environmental Report, National Grid Exhibits 1 and 2, respectively. The Board also admitted a slide presentation as Exhibit 3 and a fact sheet as Exhibit 4. The application and attachments, as well as the other exhibits, are available at the Public Utilities Commission located at 89 Jefferson Boulevard, Warwick, Rhode Island or on-line at http://www.ripuc.org/efsb/2017_SB_2.html.

priority because the R-144 line is currently out of service due to a recent submarine cable failure. Because there are no remaining spare submarine cables available to repair or replace the R-144 line, the line's failure puts at risk reliability for portions of the City of Providence. Additionally, the submarine portion of the Q-143 line experienced a failure in 2016 and remains vulnerable to additional failure. The gradual deterioration of both the cable and hydraulic system have caused cable failures in both lines.

In its application, National Grid further described the existing lines. When installed in 1939 and 1946, the lines included eight submarine cables, six active and two spares. Previous failures required the Company to use both spare cables. Accordingly, the company was unable to correct the April 2017 failure of the R-144 line. Moreover, although originally buried approximately six to ten feet under the riverbed, due to accumulated sedimentation over time, the cables are now approximately 25 feet below the riverbed.

The proposed project will include: 1) installation of approximately 1,410 feet of new duct bank; 2) installation of approximately 520 feet of a conduit system under the Point Street Bridge to carry the lines over the Providence River; and 3) installation of two manholes on the east side of the Point Street Bridge, approximately 1,930 feet of new cable and conductors in the new duct bank, and three new outdoor terminations and surge arresters per line. The project will also include modification of two existing manholes and replacement of the termination structures within the Franklin Square Substation. National Grid identified three measurable benefits of the project: 1) restoring and improving the reliability of the Company's transmission system serving its Providence customers; 2) reducing exposure to long-term submarine cable outages; and 3) installing new cables that typically require less maintenance than the original ones.

The application described the underground route and how the project will be conducted in a series of phases. The area is described by National Grid as an urban environment, including paved roadways, sidewalks, and the Point Street Bridge, and open green space along the Providence River. Appropriate environmental controls, including soil erosion, sediment, and storm water controls, will be installed. A barge will be used to install the conduit on the underside of the Point Street Bridge.

The Company will retain an environmental monitor to oversee all construction activities to ensure compliance with all permit requirements. Additionally, after the work is complete, National Grid will restore all disturbed areas. Construction will be between 7:00 a.m. and 7:00 p.m. Monday through Friday and 7:00 a.m. and 5:00 p.m. on Saturday. National Grid will coordinate with the City of Providence to manage traffic during construction. It estimates the cost of the project to be approximately \$16.3 million. National Grid anticipates beginning construction in the summer of 2018 and completing it in the summer of 2019. It conducted public outreach to the Rhode Island Department of Transportation, Providence officials, and major employers in the immediate vicinity of the construction area.

National Grid considered four alternatives. The first, the no-action alternative, was dismissed on three grounds. It did not address the need to restore the R-144 line to service, would leave the Q-143 line vulnerable to failure, and would further compromise reliability in certain parts of Providence. The Submarine Cable Alternative was rejected for four reasons. First, it was approximately one and a half times more expensive than the Point Street Bridge alternative. Second, repair would require dredging, splicing on a barge, and reburial. Third, estimated completion time was significantly longer than that for the Point Street Bridge alternative. And fourth, the Company would have to obtain environmental licenses, permits, and

approval. Finally, the horizontal Directional Drilling alternative was rejected as presenting a higher risk than the Point Street Bridge option.

The Point Street Bridge alternative was the one chosen. National Grid selected the Point Street Bridge Alternative because it was the least expensive, presented the fewest environmental impacts, had the shortest schedule, and would be the easiest to access, inspect, operate, and maintain.

The project area is highly developed. The soils consist of urban fill materials. The little vegetation that exists is primarily grass with some shrubs and trees. There are no known wellhead protection areas. The project will cross the Providence River, use of which is limited because of poor water quality and not being considered a viable drinking water resource. The project will not require an emissions evaluation.

Describing the social environmental effects, National Grid indicated that the entire on-land cable route is either along an existing roadway or within a right-of-way owned by the Narragansett Electric Company. Two historic properties, the Davol Rubber Company and the South Street Station, and one archaeological resource lie within 1,000 feet of the project. Because of the cable sheaths, the project will contain no above-ground electric fields. The magnetic fields are well below guidelines for public health exposure.

National Grid contended that the project will have no more than negligible impact on climate, weather, wildlife, or geology. Construction will occur in a manner that minimizes the potential for adverse environmental impact. Soil impacts will be mitigated through soil erosion control methods. Surface water resource impacts will be minimized through best management practices. National Grid maintains that the recreational and commercial activities along the

Providence River will not be impacted. Because the area is urban it does not contain any significant vegetation.

Dust and vehicle emissions and impact on land use and recreation will be temporary. The overall visual impact will not be substantially altered by the installation of new equipment or the upgrades to existing equipment. The Company will take precautions to reduce dust and odor.

At the public hearing on February 6, 2018, the Company presented three witnesses to describe the project and its effects as set forth in the Application and the Environmental Report and to respond to inquiries by the Board: George Maximovich, the project manager for National Grid; Erin Whoriskey Cahill, a lead environmental scientist with National Grid; and David Campilli, an underground transmission engineer with National Grid.

Mr. Maximovich testified that the two underground transmission lines were installed in 1939 and 1946 and run between the Franklin Square Substation and Admiral Street for approximately 2.3 miles.³ He stated that the proposed project extends from the Franklin Square Substation to the Dollar Street manhole.⁴ He said that a submarine cable failure in 2017 left the R-144 line out of service.⁵ He explained there is a need for the project because the Q-143 line has also experienced failures.⁶ Currently, he stated, there are distribution lines on the underside of the south side of the Point Street Bridge.⁷ When asked, he provided that the new conduits will only be visible to someone situated under the bridge.⁸ Mr. Maximovich described the construction sequence and identified the additional permits National Grid will have to obtain.⁹ He testified that

³ Hr'g Tr. at 4.

⁴ *Id.* at 4-5.

⁵ *Id.* at 4, 6.

⁶ *Id.* at 6.

⁷ *Id.* at 7.

⁸ *Id.* at 8.

⁹ *Id.* at 8-9.

construction is scheduled to begin in the summer of 2018 and be complete by the summer of 2019.¹⁰

In response to a question from Board Member Agrawal, Mr. Campilli identified some of the distinctions between the instant cable relocation project and the E-183 line project at issue in SB-2003-01. He noted that National Grid had considered a number of bridges in the vicinity for a possible under-bridge alignment configuration of the E-183 line. Because of structural inability to bear the weight of the cables or incompatible geometry and/or physical restrictions, none were deemed suitable.¹¹

The Point Street Bridge was one of those considered in SB-2003-01. It was rejected because, among other problems, the only usable areas of the bridge were already fully occupied by the existing Q-143 and R-144 lines. That same condition presents no concerns about attaching the new Q-143 and R-144 lines, however, because they will replace old lines and the old lines will be removed.¹²

Ms. Cahill has responsibility for all environmental aspects of the proposed project.¹³ She described the project area as having urban fill on both sides of the river.¹⁴ She stated that soils and groundwater will be impacted.¹⁵ She testified that the Providence River is an impacted waterway.¹⁶ She identified a number of soil erosion and sediment control mitigation methods, i.e., bales and waddles, to keep soil from infiltrating into the Providence River. She stated that a management plan would mitigate traffic impacts.¹⁷ Ms. Cahill noted that National Grid will apply

¹⁰ *Id.* at 10.

¹¹ *Id.* at 14-15.

¹² *Id.* at 15—16.

¹³ *Id.* at 17.

¹⁴ *Id.* at 18.

¹⁵ *Id.*

¹⁶ *Id.*

¹⁷ *Id.* at 19.

for the requisite state permits and that an environmental monitor will be on site to oversee soil disturbance activities and to ensure compliance with all permits.¹⁸ She contended that there will be no long term environmental impacts, only intermittent impacts on noise and traffic, and no visual or cultural resource impacts.¹⁹

After the Company's presentation ended, the Chairperson solicited public comment. None was offered.

Immediately upon conclusion of the public hearing, the Board conducted an Open Meeting which had been properly noticed. The Board found the relocation of the underground transmission lines to be a positive step in ensuring reliability to the area. The Board also found the project will have no significant impact to the environment or public health, safety, and welfare. The social and environmental impacts resulting from the construction will be temporary and minimal. Moreover, the Board is assured that National Grid will engage in appropriate mitigation measures to minimize any disturbances to vegetation and soil and to the social environment. By a unanimous vote, the Board voted to issue the license.

ACCORDINGLY, it is hereby

(133) ORDERED:

The Energy Facility Siting Board hereby grants to the Narragansett Electric Company d/b/a National Grid a license, under R.I. Gen. Laws § 42-98-11, to relocate a portion of the Q-143 and R-144 115 kV underground electrical transmission lines, as previously described, subject to the Narragansett Electric Company d/b/a National Grid's receipt of all other permits required for the project.


¹⁸ *Id.* at 19-20.

¹⁹ *Id.* at 20-21.


DATED AND EFFECTIVE AT PROVIDENCE, RHODE ISLAND ON FEBRUARY 6,
2018, PURSUANT TO AN OPEN MEETING DECISION. WRITTEN ORDER ISSUED
MARCH 27, 2018.

ENERGY FACILITY SITING BOARD





Margaret E. Curran, Chairperson



Janet Coit, Member



Parag Agrawal, Member