

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
PUBLIC UTILITIES COMMISSION

IN RE: ISSUANCE OF ADVISORY OPINION TO THE : DOCKET NO. 3732
ENERGY FACILITY SITING BOARD REGARDNG :
NARRAGANSETT ELECTRIC CO. D/B/A NATIONAL :
GRID'S APPLICATION TO CONSTRUCT AND :
ALTER MAJOR ENERGY FACILITIES :

**ADVISORY OPINION ISSUED TO THE ENERGY FACILITY SITING
BOARD PURSUANT R.I. GEN. LAWS § 42-98-9 (D)**

I. INTRODUCTION, JURISDICTION, AND ISSUES

On November 18, 2005, the Narragansett Electric Company d/b/a National Grid, a Rhode Island corporation and franchised public utility ("Narragansett" or the "Company"), filed with the Energy Facility Siting Board ("EFSB" or "Board") an application to construct and alter major energy facilities. Narragansett proposes to construct a new 115 kilovolt ("kV") transmission line and 115 kV tap lines, reconductor existing 115 kV transmission lines, construct a new 115–12.47 kV substation, and expand and modify existing substations (collectively the "Project.") The application was docketed with the Board on December 14, 2005 and, after public notice, a preliminary hearing was held on February 2, 2006.

On March 3, 2006, the Board issued its preliminary Order in which it designated, pursuant to R.I. Gen. Laws § 42-98-9, the Public Utilities Commission ("Commission" or "PUC") as an agency to act at the direction of the Board for the purpose of rendering an advisory opinion. More specifically, the Board directed the Commission to make a recommendation as follows:

ISSUE 1: Is the proposed Alteration necessary to meet the needs of the state and/or region for energy? R.I. Gen. Laws § 42-98-11(b)(1).

The PUC, with participation of the Division of Public Utilities and Carriers, the State Energy Office and the Statewide Planning Program, shall render a single advisory opinion as to the need for the Project, as required by § 42-98 9(d). Such opinion shall specifically consider the need for the Project based upon the projected cost of the Project, as also discussed in Issue 2A, below. The PUC shall also expressly consider the reliability of the transmission system in the area and region to be served in determining the need for the Project.

ISSUE 2A: Is the Project cost-justified?

The issue of whether the Project will allow the transmission of energy at the lowest reasonable cost to the consumer is one which shall be included within the advisory opinion of the PUC referenced above in Issue 1. The evaluation of the need for the Project will expressly include a determination of the reasonableness of the cost of the Project.

Such opinion of the PUC shall specifically analyze the cost impact of the Project and shall examine the economics of reasonable alternatives to the various components of the Project, including those proposed by Narragansett.

In response to the above EFSB mandate, the Commission conducted a duly noticed public hearing on July 17, 2006. A display advertisement was published in the *Providence Journal* on July 7, 2006 which provided local notice of the Company's application and the scheduled public hearing. No member of the public appeared for the hearing.

The following counsel entered appearances:

Narragansett:

Peter V. LaCouture, Esquire
Paige Graening, Esquire

Division of Public Utilities and
Carriers:

Leo Wold, Special Assistant
Attorney General

Department of the Attorney General:

William Lueker, Special Assistant
Attorney General

ISO-New England:

Eric J. Krathwohl, Esquire
Michael McElroy, Esquire

II. TESTIMONY AND MATERIAL FACTS

Narragansett presented three (3) witnesses as a panel to provide an overview of the Project and to address the need for the Project. These three (3) witnesses were David J. Beron (“Beron”), project manager for National Grid USA Service Company, Melissa Scott (“Scott”), National Grid USA Service Company, and Alan LaBarre (“LaBarre”), National Grid USA Service Company. See Transcript of hearing held before PUC on July 17, 2006, page 17. (hereinafter “Tr.”).

Beron testified that starting at the northern end of the Project, Narragansett proposes to reconductor the G185S transmission line which exits the Kent County substation from the south for about 5.3 miles to the Old Baptist Road tap point. He testified that when the Company reconductors a transmission line, it replaces the existing wire or power conductors with new, slightly larger conductors that are capable of transmitting more power. He testified that proceeding south from Old Baptist Road tap point for 12.5 miles to the West Kingston substation, the Company proposes to construct a new 115kV transmission line which the Company refers to as the L190 extension. He further testified that midway along the L190 extension, the Company proposes to construct a new substation on land owned by the Company and to construct a new half mile 115 kV tap line proceeding from the main corridor easterly to the new proposed substation. He further testified that the Company proposes to reconductor 4.3 miles of lines from West Kingston to the Kenyon substation and to reconductor approximately 3.2 miles of line from the Kenyon substation to the Wood River substation. See Tr. at 20-23. See also NEC Exhibit One (1), Table 2-1 and NEC Exhibit 3A (Beron’s prefiled testimony).

Beron further testified that the Company estimated the cost of the Project to be \$25.1 million. The total amount consists of approximately \$7 million for the construction of the new substation, \$6.2 million for the new L190 extension, and the remaining amount for the reconductoring and equipment modifications. The accuracy of the estimates are plus/minus 25%. See NEC Exhibit 3A (Beron's prefiled testimony). Beron testified that the Company expects the construction time for the Project to take nine (9) to twelve (12) months. He testified that the Company anticipates beginning construction in early Spring of 2007. Tr. at 24.

Scott testified that she conducted a transmission study and determined the need for transmission reinforcements. She testified that transmission planning studies are performed for an area "looking out to ten or more years." Tr. at 26. She testified that computer simulations are performed regarding the existing system and elements of the system are taken out and they "look at how the system performs with each element out." Tr. at 65. She testified that when an existing system does not meet reliability standards, alternative solutions are evaluated to meet the reliability standards and a solution is selected based on cost, technical performance, reliability, operability, and constructability. Tr. at 26-27, 65.

Scott testified that since her initial 2003 study, the entire G185S line from Old Baptist Road tap point to South Kingstown is now above its capability. See NEC Exhibit 1, Appendix A (the transmission study) and NEC Exhibit 3F (an updated map of the overload on the system). Scott further testified that the transmission study demonstrated a concern with reliability if "you lose" either the Connecticut end or the Warwick end of the 115 kV path beginning in Kent County substation in Warwick and going into Connecticut. She testified such a loss would result in substation voltages dropping to

unacceptable values so that lines could be damaged or sag which could cause the line to come out of service. She also testified that unacceptable low voltages cause customers' lights to dim, motor loads such as air conditioners or refrigerators to slow down or to stall and if the loads are very high that could cause a possible voltage collapse resulting in a blackout. She testified that Southern Rhode Island is one of the fastest growing areas in the Company's service territory which is causing significant load growth. She testified that the various line extensions and reconductoring were recommended to meet reliability standards for the system. She testified that the Project would meet the needs of Southern Rhode Island for ten (10) years "from today." Scott testified that demand side management and distributed generation were considered as alternative solutions but it was determined that neither would provide enough capacity. Tr. at 28-31, 56-58. See also NEC Exhibit 3B (Scott's prefiled testimony) and NEC Exhibit 1 (section 5 – alternatives to proposed action).

LaBarre testified regarding the distribution planning study process which studies the distribution system from substations to end-users and cover ten (10) years. He testified the Company conducted a distribution study for "South County east area." Tr. at 33. See NEC Exhibit 1, Appendix B (the distribution study). He testified that there is a concern with the number of circuits that are at capability or near capability and numerous circuits were identified that would in the reach capacity or near capacity. He testified that when the equipment is loaded close to capability, it hinders the Company's ability to rearrange the system when there is an isolated incident like a tree falling on a power line so that it is more difficult to isolate the problem and restore service to customers so that as a result outages typically will be longer. He testified that the study was completed in 2004 and that in 2005 the summer loads exceeded those loads predicted in the study. He

testified that as a result of this study, the Company recommended the construction of a new substation at Tower Hill which is an area where the load is growing the fastest. He also testified that if the substation is not built, it will be more difficult and costly to meet the increasing demand as the Company would have to try to extend lines from other sources. See Tr. at 31-38, 58. See also NEC's Exhibit 3C (LaBarre's prefiled testimony) and NEC Exhibit 1 (section 5 – alternatives to proposed action).

Narragansett offered a second panel of witnesses comprised of Beron, David M. Campilii ("Campilii"), National Grid Service Company, and Daniel M. McIntyre ("McIntyre"), a civil engineer in the substation engineering group for National Grid Service Company. Tr. at 72-73. The second panel addressed the various alternatives to the Project that were considered and the proposed new substation.

McIntyre testified regarding the substation design and the alternative sites that were considered by the Company. He testified that the proposed new substation will be located in the Town of North Kingstown off of Tower Hill Road on property owned by Narragansett. He testified that the Company proposes to connect the substation to the main transmission lines by constructing a tap line on property on an existing right-of-way owned by the Company. He testified that the feeder lines will come out of the substation by underground and rise up at the intersection of West Allenton and Tower Hill where they will connect to the existing overhead distribution line and can serve customers in all four (4) geographic regions. Tr. at 73-75.

McIntyre testified that the Company proposes to build a metal clad substation as it is more aesthetically pleasing. He testified that the proposed substation site is a level open field which is ideal for substation construction and that the site design complies with the National Electric Safety Code with respect to public safety and with the

Environmental Protection Agency spill control and counter measure regulations. He testified that the Company has developed an extensive landscaping plan to screen the site from abutters with earthen berms and plantings. Tr. at 75-76.

McIntyre also testified that the substation is being built on a thirteen (13) acre parcel of land but will only occupy one (1) acre toward the center of the parcel. He testified there are approximately five (5) abutters or homes nearby and will be screened by landscaping. Tr. at 88, 90-91. He testified that the fencing will be on a one (1) acre plot but the metal building itself is only “38 by 48” [The prefiled testimony refers to it as 40 feet by 50 feet. See NEC Exhibit 3D] so most of the fenced off parcel is open air. Tr. at 98. He testified that the substation could be built out if it is needed in the future to have two (2) transformers and eight (8) distribution lines but that it would be built with one (1) transformer and three (3) distribution lines. He testified that if it was built out in the future, there would be no need for additional site work. Tr. at 100.

McIntyre testified that the Company considered alternative sites identified by the Company as well as sites identified by the Town of North Kingstown during the Company’s outreach program. He testified that none of the alternative sites matched the site criteria which includes access to the supply, being near the load center (customers’ needs), sufficient shape and size in order to build a fenced in substation as well as impact on environment and abutters. Tr. at 77. See also NEC Exhibit 3D (McIntyre’s prefiled testimony) and NEC Exhibit 1 (section 5 – alternatives to proposed action).

Campilli testified to the alternatives sites considered for the new L190 overhead line from Old Baptist tapline to the West Kingston substation. He testified that the Company considered using the existing right-of-ways with an underground transmission cable but that the existing right-of-ways were often on wetlands or swamp lands which is

good for building overhead transmission lines but not underground lines. Therefore, the construction requirements and environmental impact “added up against an underground line.” Tr. at 79. He testified that the Company considered the Amtrak corridor but that with the already existing lines there, there wasn’t much room for new lines and that Amtrak would only allow access to build and to operate the lines between 12 a.m. and 4 a.m. which made the line almost unbuildable and unoperable as the Company would need to have round the clock access to operate lines once they were built. Tr. at 77-81.

Campilli also testified regarding the alternative of putting the lines underground alongside existing roadways. He testified that an overhead line can typically be repaired within 24-48 hours while an underground line typically takes 100-300 hours to repair which causes the system to be out for a longer period of time. He also testified that such an underground transmission system would cost approximately \$72 million instead of the \$6 million for “the equivalent overhead segment.” Tr. at 80-85. See also NEC Exhibit 3E (Campilli’s prefiled testimony) and NEC Exhibit 1 (section 5 – alternatives to proposed action).

ISO-New England (“ISO”) is responsible for managing and operating New England’s bulk electric system, operating the wholesale electricity market, and conducting centralized system planning. ISO presented a position statement in support of the transmission portion of the Project on the basis that it is necessary to address the shortcomings facing the Rhode Island system and as necessary for continued reliable service in Rhode Island. ISO did not take a position on the proposed new substation. ISO found that the transmission costs should be regionalized. See ISO-NE Exhibit 1 (ISO position statement).

At hearing, ISO presented a panel of two (2) witnesses consisting of Frank Mezzanotte (“Mezzanotte”), supervisor of transmission planning studies responsible for Southern New England at ISO, and Richard V. Kowalski (“Kowalski”), manager of transmission planning at ISO.

Kowalski testified that ISO’s review process was two (2) fold, approval and scope of the project and then approval of the amount of money that could be charged regionally. Kowalski testified that ISO reviews such issues as regional benefit of a project, good utility practice, and whether a project is consistent with current engineering design. He testified that once a project has gone through detailed design then cost allocation is considered. He testified that while ISO has to approve the final costs of the Project, given the current scenario it is likely that the costs will be regionalized except for the proposed new substation and proposed tap line to the new substation. Tr. 107-108, 116-117. See ISO-NE Exhibit One (1) (position statement).

Gregory Booth (“Booth”) testified on behalf of the Division of Public Utilities and Carriers (“DPUC”). Booth testified that he is president of Booth, PLLC, an engineering firm and president of PowerServices, Inc., a management services firm. See DPUC Exhibit 1. (Booth’s prefiled testimony). Booth testified that he was retained by the DPUC to review the proposed Project specifically on need and cost justification. Booth testified that he supports the need and cost estimates for the Tower Hill substation and associated facilities and that it fits within his study entitled the reliability assessment project filed March 31, 2006. See DPUC Exhibit Four (4). He further testified that absent the Tower Hill substation distribution reliability would fall very short in Southern Rhode Island so that the need for the substation is clear and it is the most cost effective alternative. He testified he also reviewed the overhead and underground line options and

his analysis is that the proposed Project will serve the need for reliability to serve existing and future loads and it is cost justified. Tr. at 119-124. Booth testified that his cost estimates were slightly higher than the Company's as he conducted his study at a later date than the Company. He testified that he estimated the overall Project would cost approximately \$27 million. Tr. at 132, 139-140.

At the end of the hearing, Narragansett recalled Beron. Beron testified that the Company conducted extensive community outreach by holding four (4) open houses in the various affected communities regarding the proposed Project, establishing a hotline, establishing a project website, and meeting with various town planning staff. He testified that the Company had public hearings in some communities which were advertised in the newspaper and the Company sent mailings to the communities about the hearings. He testified that the Company considered alternative sites for the proposed substation that were suggested by residents of North Kingstown. Tr. at 133-138. Beron further testified that he agreed with Booth's testimony about cost estimates as the cost of raw materials has escalated and labor costs would increase. Tr. at 138-139.

In closing, Narragansett's counsel argued that it had demonstrated the need for both the transmission and distribution components of the Project and that ISO and the DPUC both agreed with the proposed Project. Additionally, counsel argued that Booth supported the reasonableness of the Company's cost estimates for the Project. Tr. at 141-142.

In closing, counsel for the Attorney General's office supported the project on the basis that the cost estimates are reasonable and that there is a need for the Project. Tr. at 142-143.

In closing, ISO stated that ISO believes there is a real need for the proposals. Tr. at 143.

DPUC's counsel did not make a closing statement but relied on Booth's testimony and prefiled testimony. Tr. at 142.

III. DISCUSSION AND FINDINGS

An open meeting was held on August 3, 2006 at which time this matter was discussed. The Commission discussed that the Project can be divided into two parts: first, the upgrade of the transmission facilities and infrastructure between Kent County substation, Warwick, and the Wood River substation, Charlestown and second, the proposed new substation and Tower Hill and the connecting tap line.

The Commission discussed that the Company presented evidence that the existing transmission structure did not meet reliability standards with the consequence being that there could be voltage drops and excessive loading of the lines which could result in slow down of motor loads which could damage equipment and that excessive loading of lines could lead to line failure and power outages. The Commission discussed that the Company also presented evidence that it had considered other alternatives such as 1) the underground running of lines which was found to be too costly and damaging to the environment; 2) using the Amtrak corridor was found to be impracticable; and 3) the underground running of lines along existing roadway that was found to be impracticable and costly. The Commission also discussed that the DPUC and ISO found that the proposed transmission upgrades were necessary and needed. The Commission further discussed that the DPUC had slightly higher cost estimates for the transmission upgrades but the Company's estimates were within a plus/minus 25% range.

The Commission also discussed that the Company presented evidence regarding the need for the proposed new substation due to the growing load demand and if the substation is not built that there will be a difficulty in servicing new customers which could result in power outages and longer repair times. The Commission discussed that the DPUC concurred with the need for the substation and found that it was the best alternative.

In terms of cost for the Project, the Commission discussed that the Company estimated the cost to be approximately \$16 million for the transmission upgrades and \$9 million for the substation and tap line. The Commission discussed that DPUC had a slightly higher estimate for the cost of the transmission upgrades but agreed with the cost analysis for the substation

The Commission discussed that there was evidence presented for the overall need for the substation and transmission upgrades and that the Project should meet the needs of Southern Rhode Island for the next ten (10) years. The Commission also discussed that the cost of the Project was reasonable.

The Commission also discussed that pursuant to ISO's evidence, the costs of the transmission upgrades would be regionalized so that the impact on individual Rhode Island ratepayers would be minimal especially as compared to an approximately \$25 million capital project within Rhode Island.

The Commission discussed the concern raised regarding the impact the proposed new substation may have on neighboring homes and expressed its concern that the Company ensure that it does all it can to minimize any impact to those abutters.

The Commission has carefully examined the record in this docket and has reached findings of facts on the issues of 1) cost; and 2) need.

First, on the issue of need for the Project, the Commission finds the record complete and persuasive. The Company's witnesses testified to the issues in detail, and the record shows that the Project is required for the continued maintenance of a firm and reliable electric supply to the geographic area in issue. The record further reflects that the Project represents a solution to the growing load demand. The DPUC witness fully agreed with this conclusion. ISO supported the need for the transmission upgrades and took no position on the proposed new substation.

Based on the forgoing, the Commission finds that the Project, as previously described, is necessary to meet the energy needs of Rhode Island.

The Commission next considered the issue of the Project's cost. Both the Company and the DPUC maintain that the proposed Project is the most logical economic choice for meeting the growing load demand and reliability standards for the geographic area at issue. The record includes a number of possible alternatives, along with their respective costs. The Commission considered each alternative, and finds the instant proposal to be the least costly.

Based on the forgoing, the Commission finds the Project and its costs to be the most reasonable and cost-justified approach to meeting the growing load demand and reliability standards for the geographic area at issue.

IV. CONCLUSIONS OF LAW AND ORDER

Accordingly, it is hereby

(18698) ORDERED:

1. That the Commission finds there is a need to construct the Project which as discussed above consists of constructing new 115 kV transmission lines and 115 kV

tap lines, reconductoring existing 115 kV transmission lines, constructing a new 115-12.47 kV substation, and expanding and modifying existing substations.

2. That the Commission finds that the estimated cost of effectuating the Project is reasonable and justified under the circumstances.

EFFECTIVE AT PROVIDENCE, RHODE ISLAND ON AUGUST 3, 2006
PURSUANT TO AN OPEN MEETING DECISION. WRITTEN ORDER ISSUED ON
AUGUST 23, 2006.

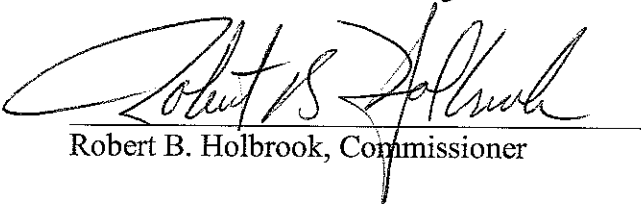
PUBLIC UTILITIES COMMISSION



Elia Germani, Chairman¹



Mary E. Bray, Commissioner



Robert B. Holbrook, Commissioner

¹ Pursuant to R.I. Gen. Laws § 43-98-5(A), the Chairman of the PUC is designated as a member and Chairman of the Board. Accordingly, Mr. Germani has recused himself from participation in Docket No. 3732.