STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD

In re The Narragansett Electric Company (Southern Rhode Island Transmission Project)	: : :	Docket No. SB-2005-01

DECISION AND ORDER

I. INTRODUCTION

On November 18, 2005, The Narragansett Electric Company d/b/a National Grid, a Rhode Island corporation and franchised public utility ("National Grid" or the "Company"), filed with the Energy Facility Siting Board ("EFSB" or the "Board") an application for a license to construct and alter major energy facilities. National Grid 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 an existing substation (collectively the "Project.") The application was docketed on December 14, 2005. After public notice, the Board held a preliminary hearing on February 2, 2006 and issued its preliminary decision and order on March 3, 2006. In re The Narragansett Electric Company (Southern Rhode Island Transmission Project, Docket No. SB-2005-01, Preliminary Decision and Order (Order No. 57, March 3, 2006) [hereinafter "Preliminary Order."]

The purpose of the preliminary hearing was to determine the issues to be considered by the Board in evaluating the application and to designate state and local agencies to act at the direction of the Board for the purpose of rendering advisory opinions on such issues. In the Preliminary Order, the Board designated nineteen state and local agencies to review the Project and provide advisory opinions by September 5, 2006. Preliminary Order, pp. 13-20.

Following proceedings before the designated agencies, the Board convened local public hearings pursuant to §42-98-9.1(b) in East Greenwich (September 13, 2006), South Kingstown (September 14, 2006), Warwick (September 19, 2006), Exeter (September 21, 2006), Charlestown (September 26, 2006) and North Kingstown (September 27, 2006). Final hearings commenced on October 18, continued on November 20 and November 29 and concluded on January 12, 2007. [1]

The following counsel entered appearances during the final hearings:

For National Grid:	Peter V. Lacouture, Esq. Nixon Peabody LLP Paige Graening, Esq. National Grid
For Attorney General Patrick C. Lynch:	William K. Lueker, Esq. Special Assistant Attorney General Office of Rhode Island Attorney General Patrick C. Lynch
For the Division:	Leo Wold, Esq. Special Assistant Attorney General Office of Rhode Island Attorney General Patrick C. Lynch
For the Town of North Kingstown:	W. Mark Russo, Esq. Christopher Mulhearn, Esq. Ferrucci Russo P.C.
For the Town of South Kingstown:	Nancy E. Letendre, Esq. Ursillo Teitz & Ritch, Ltd.
For the Board:	Steven Frias, Esq. Executive Counsel

[1] Under §49-98-11(a) of the Act, the Board is required to conclude the final hearings within 60 days after the commencement. On January 12, 2007, the parties consented to an extension of this deadline. Tr. 1/12/07, p. 8.

II. THE ENERGY FACILITY SITING ACT

The Energy Facility Siting Act (R.I. Gen. Laws §42-98-1 et seq.) [the "Act"] consolidates in the Board, with two exceptions,[2] state and local governmental regulatory authority for the siting, construction or alteration of major energy facilities, including transmission lines of 69 kV or over as set forth in § 42-98-7. Thus, the Board is the "licensing and permitting authority for all licenses, permits, assents or variances which, under any statute of the state or ordinance of any political subdivision of the state, would be required for siting, construction or alteration of a major energy facility in the state." § 42-98-7(a)(1). A Board decision in favor of an application to site a major energy facility in Rhode Island "shall constitute a granting of all permits, licenses, variances or assents which under any law, rule, regulation, or ordinance of the state or of a political subdivision thereof would, absent [the Act], be required for the proposed facility." R.I.Gen.Laws § 47-98-11(c).

Although the Board does consider and act upon each of such permits, licenses, variances and assents, the Board does so in a comprehensive manner which is distinct in nature from the review that would be performed by the several agencies absent the Act. Whereas each such agency reviews its respective permitting, licensing, variance or assent issues according to its own particular mandates and concerns, the Board evaluates all of such issues in a single and comprehensive decision that considers "the need for [the] facilities in relation to the overall impact of the facilities upon public health and safety, the environment and the economy of the state." R.I.Gen.Laws § 42-98-1(a). Thus, the role of the Board is substantially distinct from, and

[2] Certain licenses and permits issued by the Department of Environmental Management ("DEM") and the Coastal Resources Management Council ("CRMC") are exempt from Board authority. R.I. Gen. Laws § 42-98-7(a)(3).

more expansive than, a mere aggregation of the various agency processes that would occur absent the Act.

While the Act makes the Board the final licensing authority, an applicant for a Board license must still apply to all state and local governmental bodies for permits and licenses that would, absent the Act, be required. Instead of issuing a permit or license, however, the state or local agency must act at the direction of the Board and issue an advisory opinion to the Board regarding such permit or license. The Board has authority to designate "those agencies of state government and political subdivisions of the state which shall act at the direction of the board for the purpose of rendering advisory opinions on these issues. . . ." R.I.Gen.Laws § 42-98-9(a). Each such agency must follow "the procedures established by statute, ordinance, and/or regulation provided for determining the permit, license, assent, or variance . . . [and] shall forward its findings from the proceeding, together with the record supporting the findings and a recommendation for final action, to the siting board." R.I.Gen.Laws § 42-98-7(a)(2).

A state or local governmental body which renders an advisory opinion to the Board as a designated agency may also intervene as a matter of right and participate in Board hearings. EFSB Rules of Practice and Procedure ("EFSB Rule") 1.10(a)(1). In addition to those advisory opinions specifically authorized under R.I. Gen. Laws § 42-98-9 from agencies that, in the absence of the Act, would have permit, license, assent or variance authority, the Board may require further advice from state and local agencies in order to assist the Board in assessing the overall impact of a facility. In particular, §§ 42-98-9(d) and (e) provide for advisory opinions from the Public Utilities Commission ("PUC" or "Commission") and the statewide planning

program.[3] Due to the comprehensive nature of the ultimate issue facing the Board, the Board often requires expertise beyond the scope of those issues raised in the particular permit and license reviews at the agency level.

III. THE PROJECT

National Grid proposes to construct and alter 115 kV transmission lines which, under § 42-98-3(d) of the Energy Facility Siting Act, constitute major energy facilities. In the past, we have interpreted the definition of "major energy facility" in a case involving a power plant "to include not only actual generating facilities but also ancillary facilities integral and dedicated to the energy generating process." In re The Narragansett Electric Company and New England Power Company (Manchester Street Station Repowering Project), Docket No. SB-89-1, Final Report and Order, p. 14 (Order No. 12, December 17, 1990) ["Manchester Street Station Order."]

In this case the proposed Tower Hill Substation and the upgrade to the existing West Kingston Substation constitute "ancillary facilities integral and dedicated" to the transmission of electricity at 115 kV. As a result, the entire project is subject to the Board's jurisdiction under § 42-98-4. The components of the Project are summarized below and are described in more detail in Section 4 of Volume 1 of National Grid's Environmental Report [4] for the Project.

[3] R.I.Gen.Laws §42-98-9(d) refers to the division of planning and the governor's office of energy assistance which are now the statewide planning program and the state energy office, respectively. The latter names will be used in this Order.

[4] Volumes 1 and 2 of the Environmental Report were admitted as Exhibits National Grid-2 and 3, respectively [collectively the "ER."]

1. Reconductor 5.3 miles of the existing L-190 115 kV transmission line.

National Grid proposes to reconductor [5] the 5.3 miles of the existing L-190 115kV transmission line (the "L-190 Line") between the Kent County Substation and the Old Baptist Road Tap Point, in Warwick, East Greenwich and North Kingstown. National Grid will also replace some existing pole structures as part of reconductoring. Two miles of this line consist of single-circuit, primarily wood pole, structures. The existing single-circuit wood structures will be replaced as part of the reconductoring to provide the required strength and clearances for the new, larger conductors. The rest of the L-190 line (3.3 miles) consists of double-circuit steel structures which are adequate to support the new conductors and therefore will not be replaced. ER, Vol. 1, §4.3.1; Vol. 2, Figure 4-1.

2. Construct a new 12.3 mile extension of the L-190 115 kV transmission line.

National Grid proposes to build a 12.3 mile extension of the L-190 Line from its existing southern terminus at the Old Baptist Road Tap Point in East Greenwich to the existing West Kingston Substation in South Kingstown. The new line will be located in the towns of East Greenwich, North Kingstown, Exeter and South Kingstown.

This new line will be constructed within the existing right-of-way ("ROW"), west of and adjacent to the existing lines on the ROW, primarily with single-shaft steel pole davit arm structures. ER, Vol. 2, Figure 4-5. A total of approximately 148 structures will be required for this new line extension. Depending on the width and cleared area of the ROW, it will be necessary to clear between 34 and 65 feet, leaving an uncleared area ranging from 55 to 127 feet wide at the west edge of the ROW. ER, Vol. 1, §4.3.2; Vol. 2, Figures 4-2, 4-3 and 4-4.

[5] Reconductoring is the replacement of the existing conductors or wires with larger conductors which can carry more power. ER, Vol. 1, §4.1. The voltage of the transmission line does not change.

3. Reconductor 4.3 miles of the existing 1870N 115 kV transmission line.

National Grid proposes to reconductor its 1870N 115 kV transmission line between the West Kingston Substation and the Kenyon Substation, in South Kingstown and Charlestown, respectively. This line was constructed of wood pole structures, primarily H-frame structures, approximately 40 years ago. As a result, National Grid will replace most of the existing structures to provide both the required strength and ground clearances for the new conductors. ER, Vol. 1, §4.3.3; Vol. 2, Figure 4-6.

4. Reconductor 3.9 miles of the existing 1870 115 kV transmission line.

The fourth component of the Project is the reconductoring of the existing 1870 115 kV transmission line between the Kenyon Substation and the Wood River Substation, in Charlestown. This line is constructed primarily of wood pole H-frame structures, and National Grid estimates that 45 of the 49 structures will be replaced as part of the Project. ER, Vol. 1, §4.3.4; Vol. 2, Figure 4-7.

5. Expansion and modifications at West Kingston Substation.

As part of the Project, the West Kingston Substation will become the new southern terminus of the L-190 transmission line. In order to accommodate this new line, National Grid proposes to upgrade and expand the existing substation. The site currently consists of two separate fenced areas which will be combined. New equipment including circuit breakers and disconnect switches will be installed in the upgraded substation. ER, Vol. 1, §4.3.5; Vol. 2, Figure 4-8.

6. New Tower Hill Substation and 115 kV Transmission Tap Lines.

National Grid proposes to construct a new 115-12.47 kV low profile metal clad substation on property owned by it west of Tower Hill Road in North Kingstown. The substation equipment will be contained within a fenced area of approximately 150 feet by 255 feet. The 12.47 kV distribution feeders will be installed underground along the substation driveway to Tower Hill Road.

The proposed substation will be connected to the existing 115 kV transmission line with two new 115 kV transmission tap lines, each approximately 0.5 miles in length. These lines will be constructed along an existing ROW which contains a 34.5 kV subtransmission line. National Grid proposes to construct each of the tap lines on single shaft steel pole davit arm structures and estimates that seven structures will be required to support each of the new tap lines. ER, Vol. 1, §4.3.6; Vol. 2, Figures 4-8 and 4-9.

IV. ADVISORY OPINIONS

The Board requested advisory opinions from nineteen state and local agencies and officials. Preliminary Order, p. 19. Fourteen agencies submitted advisory opinions which we admitted into evidence as Exhibits EFSB-1 through -14. Four building inspectors and the North Kingstown Department of Water Supply did not respond to our request for advisory opinions. With the exception of the North Kingstown Town Council (the "Town Council") and North Kingstown Zoning Board, the advisory opinions from state agencies and the other local agencies were generally positive. Two agencies, the Statewide Planning Council and the North Kingstown Planning Commission, offered a number of recommendations which were the subject

of extensive testimony during the final hearings and which we will address below. The substance of the advisory opinions will be discussed in the Board's discussion of the legal issues.

V. FINAL HEARING

The purpose of the final hearing is not to rehear evidence presented in hearings before designated agencies providing advisory opinions, but rather to provide the parties and the public the opportunity to address in a single forum, and from a consolidated, statewide perspective, the issues reviewed and the recommendations made by such agencies. The Board at this hearing may allow the presentation of new evidence by any party as to the issues considered by the agencies designated under § 42-98-9 and may limit the presentation of repetitive or cumulative evidence. The Act requires that the final hearing be concluded not more than sixty (60) days after its initiation, and that the Board issue its final decision within sixty (60) days after the conclusion of such final hearing. A final decision approving the application constitutes a granting of all required and jurisdictional permits, licenses, variances and assents, and such final decision may be issued on any condition the Board deems warranted by the record. R.I. Gen. Laws §§ 42-98-11(b) and (c).

VI. WITNESSES

National Grid offered prefiled and live testimony from 9 witnesses and the Town presented one. David J. Beron, P.E., Project Manager for the Project, addressed issues raised in the advisory opinions and commented on recommendations contained in the visual impact assessments ("VIA") prepared for National Grid by Environmental Design & Research, P.C. ("EDR.") Mr. Beron and the other witnesses also responded to questions that had been posed at

the EFSB's public hearings in the six municipalities during September, 2006. Exhibits National Grid-8 and 8A.

Daniel McIntyre, P.E., Principal Engineer in National Grid's substation engineering group, is responsible for the civil engineering design of the Tower Hill Substation. Mr. McIntyre presented an update as to design changes to the proposed Tower Hill Substation, commented on the recommendations of the Planning Commission, explained in detail the evaluation of alternative substation sites and responded to questions from the public hearings. Exhibits National Grid-9 and 9A.

Susan Moberg, P.W.S., Manager of the Environmental Sciences Department at Vanasse Hangen Brustlin's ("VHB") Providence office, explained the environmental conditions in the area of the Project and the anticipated impacts. In her supplemental prefiled testimony, Ms. Moberg commented on the DEM advisory opinion. Exhibits National Grid-10 and 10A. Alan T. LaBarre, P.E., Manager of Network Planning and Reliability for National Grid, reviewed the distribution planning study that had determined the need for the Tower Hill Substation, explained how the proposed substation would provide relief to the distribution system in North Kingstown and, after summarizing the planning process, explained why the Lafayette Upgrade option is an inferior electrical alternative to the proposed substation. Exhibit National Grid-12. David Campilii, P.E., a Consulting Engineer in National Grid's Underground Engineering and Operations Department, responded to a question about the cost of underground tap lines which was asked at the EFSB's public hearing in North Kingstown. Exhibit National Grid-13.

John Hecklau, Kellie Connelly and Gordon Perkins, from EDR, testified as to the visual impact of the Project. They summarized the visual impact assessments which they had prepared

for the Project (Exhibit National Grid-4) and responded to questions raised by the Rhode Island Historical Preservation and Heritage Commission ("RIHPHC") in its advisory opinion. Exhibits National Grid-11 and 11A.

National Grid's final witness was William H. Bailey, Ph.D., who had prepared the report on current scientific research on the health effects of electric and magnetic fields (Appendix C to the ER.) Dr. Bailey presented a report entitled "Assessment of Time-Weighted Average Magnetic Field Exposures: Southern Rhode Island 115kV Transmission Project" in response to comments in the advisory opinion from the Rhode Island Department of Heath. Exhibit National Grid-14; Tr. 11/29/06, pp. 25-34.

The only other party to offer a witness was the Town of North Kingstown who presented Jonathan Reiner, North Kingstown Director of Planning. In his testimony, Mr. Reiner provided an overview of land use planning in North Kingstown and Rhode Island. He suggested that the Lafayette upgrade and two alternative sites, "Tower Hill East – Site A" and Lot #8, were viable alternatives to the site proposed by National Grid for the Tower Hill Substation. Finally he repeated the recommendations which the North Kingstown Planning Commission had suggested in its advisory opinion. Exhibit North Kingstown-1.

VII. ISSUES BEFORE EFSB

An applicant for a license from the EFSB is required by §42-98-11(b) to demonstrate that:

(i) the facility is needed,

(ii) the proposed facility is cost justified and will [transmit] electricity at the lowest reasonable cost consistent with applicable statutes, and

(iii) the facility will not cause unacceptable harm to the environment and will enhance the socioeconomic fabric of the state.

The Board will review the evidence before it using the same framework that the Board used to analyze the issues in the Preliminary Order. Preliminary Order, pp. 9-13.

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).

In the Preliminary Order, the Board requested that the PUC render an advisory opinion as to the need for the Project[6].

The PUC conducted a hearing on July 17, 2006, at which it heard from five witnesses from National Grid, two representatives of ISO-New England ("ISO"), Frank Mezzanotte, Supervisor of Transmission Planning Studies, and Richard V. Kowalski, Manager of Transmission Planning, and Gregory Booth, a consultant to the Division of Public Utilities and Carriers ("DPUC") who had been retained by the DPUC to review the need for and cost of the Project. In re Issuance of Advisory Opinion to the Energy Facility Siting Board regarding Narragansett Electric Company d/b/a/ National Grid's Application to Construct and Alter Major Energy Facilities, Advisory Opinion to the EFSB, pp. 3-9 (PUC Order No. 18698, August 23, 2006), Exhibit EFSB-10 [hereinafter "PUC Advisory Opinion."] The PUC summarized Mr. Booth's testimony as follows:

> 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. Booth testified that his cost estimates were slightly

[6] The need for the Project had been addressed by National Grid in Section 3.0 of the ER and in Appendices A (Southwest Rhode Island Transmission Supply Study; National Grid USA Service Company Inc., October 2003) and B (South County East Area Supply and Distribution Study; Narragansett Electric Company, October 2004.)

higher than the Company's as he conducted his study at a later date than the Company. [Citation omitted.]

PUC Advisory Opinion, pp. 9-10.

In its findings of fact, the Commission characterized the record before it as "complete and persuasive" and determined that the Project "is necessary to meet the energy needs of Rhode Island." In its conclusions of law it found "there is a need to construct the Project which as discussed above consists of constructing new 115kV transmission lines and 115kV tap lines, reconductoring existing 115kV transmission lines, constructing a new 115kV – 12.47kV substation and expanding and modifying existing substations." PUC Advisory Opinion, pp. 13-14.

In the proceedings before the Board, the need for the Project was addressed only by counsel and in a few public comments. Generally, speakers agreed that the Project was needed.[7] Based on the PUC's unequivocal advisory opinion on the issue of need, the Board concludes that the Project is needed to meet the needs of the Southern Rhode Island area for energy.

ISSUE 2: Is the proposed Project cost-justified, and can it be expected to produce energy at the lowest reasonable cost to the consumer consistent with the objective of ensuring that the construction and operation of the proposed facility will be accomplished in compliance with all the requirements of the laws, rules, regulations, and ordinances, under which, absent this Chapter, a permit, license, variance, or assent will be required, or that consideration of the public health, safety, welfare, security and need for the proposed Project justifies a waiver of some requirements when compliance therewith cannot be assured? R.I.Gen.Laws § 42-98-11(b)(2).

As the Board noted in the Preliminary Order, this issue is broad and far-reaching focused more on generation than transmission. It can, however, be adapted to transmission lines and

[7] See, e.g. statement of counsel to the Town of North Kingstown (Tr. 10/18/06, pp. 10, 13) and the Attorney General (Id., pp. 15-16.) The attorney for CONTACT, a neighborhood group that did not intervene, made a similar statement. Id., p. 27.

ancillary facilities and will, for the Board's analysis, be broken down into subsidiary issues regarding cost-justification, compliance with law and waiver of certain requirements.

ISSUE 2A: Is the Project cost-justified?

The PUC addressed both the need for and the cost of the Project in its advisory opinion as directed by the Board. After reviewing the evidence on the cost of the Project and alternatives, the PUC found "the Project and its costs to be the most reasonable and cost justified approach to meet the growing load demand and reliability standards for the geographic area at issue." In its conclusions of law, the PUC found "that the estimated cost of effectuating the Project is reasonable and justified under the circumstances." PUC Advisory Opinion, pp. 13-14.

Based on the PUC's advisory opinion, the Board concluded that the Project, as proposed by National Grid, is cost-justified.

ISSUE 2B: Will the Project comply with laws applicable absent the Act? R.I. Gen. Laws § 42-98-11(b)(2).

The EFSB requested advisory opinions on this issue from eleven agencies and officials: the North Kingstown, Exeter and Charlestown Zoning Boards of Review, the Building Inspectors of Warwick, East Greenwich, North Kingstown, Exeter, South Kingstown and Charlestown, the RIHPHC and the Rhode Island Department of Transportation ("RIDOT").

The Charlestown Zoning Board of Review included in its advisory opinion approving the Project standard language to the effect that variances and special use permits expire six months after approval unless the applicant has commenced construction and thereafter completes it within a year of commencement. Exhibit EFSB-1. The Exeter Zoning Board of Review did not explicitly address time limits in its advisory opinion approving the Project, although, according to National Grid, Section 1.3-3.H of the Exeter Zoning Ordinance suggests a similar six-month

deadline with a twelve-month limit from the date of approval for substantial completion of the Project. These advisory opinions were issued in May and August of 2006, respectively, so it is unlikely that National Grid will be able to comply with these deadlines. National Grid has requested a waiver of these conditions.

National Grid applied to the North Kingstown Zoning Board of Review for a special use permit for the Tower Hill Substation and a special use permit and use variance for the new L-190 Line and tap lines in North Kingstown. Beron Supplemental, p. 2.[8] The Zoning Board of Review voted 4 to 1 against granting the requested relief, based in large part on the statements of abutting property owners before the Zoning Board as it stated in its advisory opinion: "in support of its decision the Zoning Board of Review cites the testimony of the abutting property owners who offered comment at the August 22, 2006 meeting . . ." Exhibit EFSB-9, p. 2. This evidence included the statement "that a number of abutters indicated an interest to move from the area should the Project be constructed." Id. A member of the Zoning Board explained his vote to deny the requested relief in the following terms:

> I think the only people that can really honestly judge the character of a neighborhood are the residents who live there. Anybody from the outside can't really tell anything, other than very superfluous characteristics of the neighborhood. Residents moving, putting their houses up for sale, or maybe having to put their houses up for sale and feelings changing about the neighborhood based on whatever is left of the neighborhood, those seem, to me, pretty intense ways of altering the character of a surrounding area.

Beron Supplemental, p. 3, citing Transcript of August 22, 2006 Zoning Board Hearing, pp. 51-52, Attachment DJB-2 to Mr. Beron's Supplemental Testimony.

[8] Prefiled testimony is cited by witness name and page number. Supplemental testimony is cited as above.

This is contrary to the Rhode Island Supreme Court's ruling that

> The lay judgments of neighboring property owners on the issue of the effect of the proposed use on neighborhood property values and traffic conditions had no probative force in respect of an application to the zoning board of review for a special exception. Smith v. Zoning Board of Review of Warwick, 103 R.I. 328, 334, 237 A2d 551, 54 (1968).

Toohey v. Kilday, 415 A.2d 732, 737 (R.I. 1980); see also Salve Regina College v. Zoning Board of Review, 594 A.2d 878, 881 (R.I. 1991) in which the Supreme Court rejected testimony from a neighboring property owner "who was altogether vehemently opposed to any further student habitation in his own neighborhood" but had been recognized by the Newport Zoning Board as an expert on traffic matters. Although National Grid had applied for a use variance for the new transmission lines in North Kingstown, the Zoning Board of Review identified factors related to the substation (e.g., "the proposed storage of large quantities of flammable fluid in the substation transformers") in rejecting the use variance. The North Kingstown Zoning Board of Review's advisory opinion appears not to have addressed the specific facts presented to it in support of the relief which the Company has requested, and instead incorrectly based its decision on the testimony of the abutting property owners.

The RIHPHC provided an advisory opinion which concluded that the Project will not have any "direct effect on above-ground properties listed or considered eligible for listing on the National Register of Historic Places." Exhibit EFSB-6. It stated that it was unable to assess potential impact on archeological resources until it received the Phase I archeological survey which was being prepared for the Project. Mr. Beron testified that the Public Archeological Laboratory, Inc. ("PAL") had been engaged to perform the survey and that the survey would be

filed with RIHPHC. National Grid has committed to continuing to work with RIHPHC to address any outstanding issues.

RIHPHC did question the indirect effects of the Project on two properties: the Six Principle Baptist Church on Old Baptist Road in North Kingstown and the Cottrell Farm on Waites Corner Road, South Kingstown. It stated that it would need "more detailed evidence such as photosimulations" to determine whether there was any impact. Id. In their prefiled testimony, the EDR witnesses presented and explained the line-of-sight drawing for and site photographs of the Six Principle Baptist Church which they had prepared. Joint testimony of EDR witnesses, Attachment EDR-4, Exhibit National Grid-11. They concluded that the Project

> will be well screened from the Six Principle Baptist Church by an approximately 500 foot wide buffer of existing forest vegetation. Any glimpse of the proposed structures through the trees would not significantly impact the visual/aesthetic character of the historic resource.

Exhibit National Grid-11, p. 15.

In supplemental testimony EDR presented a visual simulation of the view of the proposed transmission line from the Cottrell Farm (Attachments EDR-5 and -6 to Exhibit National Grid-11A.) EDR noted that the new poles would be visible from the farm but that

> There is not a significant visual impact due to the proposed line's distance from the house and proximity to the existing transmission line. At this distance, the conductors are almost invisible, and the poles are comparable with the existing wood pole structures in height and location. The new line does not suggest a change in land use due to the proximity of the existing transmission line corridor.

Exhibit National Grid-11A, p. 2.

EDR concluded that "the visual simulation indicates that the proposed transmission line poles will be visible from the Cottrell Farm, but the visual impact is very limited, as described above." Id.

Finally, although the RIDOT was asked for an advisory opinion on the applicability of utility permits and physical alteration permits to the Project, it only addressed the applicability of these permits to the use of one of the alternative substation sites identified in the ER. See RIDOT Advisory Opinion, Exhibit EFSB-13. National Grid has, in its brief, proposed to treat these permits as post-licensing permits under Rule 1.14 of the EFSB Rules.

Based on the above, the Board approved of the treatment of the RIDOT permits as post-licensing permits under the EFSB Rules. The Board expects National Grid to continue to work with RIHPHC on any outstanding issues. It is apparent that waivers from the requirements of certain zoning ordinances are required if the Project is to proceed. The Board will address this as Issue 2C.

ISSUE 2C: Would a waiver from certain laws be justified? R.I. Gen. Laws § 42-98-11(b)(2).

In the Preliminary Order the Board stated that if it decides that "the construction and operation of the Project could not be accomplished in compliance with the laws, rules, regulations, and ordinances under which, absent the Act, a permit, license, variance or assent would be required, [the Board] will decide whether the overall benefits of the Project justify a waiver from any such requirements subject to the Board's jurisdiction." Preliminary Order, p. 11.

As noted above National Grid requested a waiver of the time limits contained in the Charlestown Zoning Board of Review Advisory Opinion and in the Exeter Zoning Ordinance.

National Grid also requested that the Board examine the overall benefits of the Project to the State as discussed in Issue 1, above, and that the Board determines that the need for the facility justifies a waiver of the requirements of the North Kingstown Zoning Ordinance. The North Kingstown Planning Commission recommended a number of conditions to the Zoning Board and to the EFSB which will be addressed in Section VIII below.

The Board has specific, on-point precedent for granting National Grid's waiver requests. In our 1994 proceeding in the Kent County to Old Baptist Road 115kV Transmission Line proceeding, the East Greenwich Zoning Board had provided a negative advisory opinion. The Board noted in its decision that the East Greenwich Zoning Board had expressed

> concerns about adverse health effects from EMF exposure, negative impacts on property values and quality of life, potential danger from unauthorized access to the right-of-way, negative noise impact due to additional clearing, visual pollution, incompatibility relative to the existing residential community and school, and concerns regarding erosion and sedimentation.

In re The Narragansett Electric Company (Kent County to Old Baptist Road Transmission Line), Docket No. SB-93-1, Decision and Order, p. 24 (Order No. 25, September 23, 1994) ["KC-OBR Final Order."]

We ruled that given our finding as to need for the line, a waiver from the provisions of the East Greenwich zoning ordinance was justified. Id., pp. 24-25.

In the present case, the Board has determined that the Project is needed to provide energy to the Southern Rhode Island area. The time restrictions contained in the Charlestown Zoning Board's advisory opinion and in the Exeter Zoning Ordinance may be reasonable for a typical zoning case but are not reasonable as applied to a proposal of the magnitude of the Southern Rhode Island Transmission Project. Thus the Board will grant a waiver of the time limits.

In reviewing the North Kingstown Zoning Board's advisory opinion, it is apparent to us that, as in the East Greenwich case, the Zoning Board was responding to the public. The Zoning Board appears to have ignored the relief which National Grid requested for the transmission lines and focused its attention solely on the proposed substation. Based on the need for the Project as discussed above, the Board finds that a waiver of the requirements of the North Kingstown Zoning Ordinance is justified and should be granted.

ISSUE 3: Will the proposed Project cause unacceptable harm to the environment? R.I. Gen. Laws § 42-98-11(b)(3).

a. Introduction.

In the Preliminary Order the Board characterized this issue as the heart of the Board's analysis of the overall impact of the Project, which involves many specific and subsidiary environmental issues. In re The Narragansett Electric Company (Kent County to Old Baptist Road Transmission Line), Docket No. SB-93-1, Preliminary Decision and Order, p. 14 (Order No. 22, December 6, 1993) ["KC-OBR Preliminary Order."]

The Board interprets the phrase "harm to the environment" broadly, to include individual and cumulative environmental impacts including, but not limited to, impacts upon air quality, water quality, aquatic life, groundwater quality, wetlands, noise impacts, visual and cultural impacts, solid waste disposal impacts, and wastewater disposal caused by the construction and operation of the Project, including land and water transportation, traffic, and fuel and materials handling. Id. The Board will address all of these concerns within Issue 3.

As was the case for Issue 2A concerning cost justification, the Board will consider all reasonable alternatives to the various components of the Project, including those proposed by National Grid, in evaluating whether the Project would cause unacceptable harm to the

environment. R.I.Gen.Laws §§ 42-98-11(b)(3) and 42-98-8(a)(7). The Board has reviewed the rationale of National Grid in selecting the particular facility type and location. Although the Board has in the past held that "in contrast to a planning body, the Board would consider applications and approve or disapprove licenses for specific energy facilities" (Ocean State Power, EFSB 87-1, Final Order, p. 9), the Board's statutory duty to determine that the Project will not cause unacceptable harm to the environment includes analysis of the reasonable alternatives. See, AES Order, p. 19.

b. The Evidence.

National Grid provided an extensive analysis of the environmental impact of the Project in its ER, including a description of the natural and social environments (Section 6.0 and 7.0), an analysis of the impacts of the Project on these environments (Section 8.0) and a description of design, construction and post-construction mitigation measures (Section 9.0). National Grid's environmental expert, Susan Moberg of VHB, summarized the environmental conditions of the Project area and the potential environmental impacts that would result from the construction and operation of the Project. She noted in her testimony that the visual impact of the Project has been assessed by EDR and the impact on cultural resources has been addressed by PAL and in Mr. Beron's testimony. Moberg, pp. 2-8. Ms. Moberg testified that VHB has prepared an erosion and sediment control plan as part of the DEM wetlands application and in compliance with municipal ordinances. Id. pp. 8-9. Finally, Ms. Moberg expressed the opinion that the Project "will not cause unacceptable harm to the environment." She explained:

> Narragansett has proposed responsive mitigation measures to control short-term construction impacts. The Project will not cause long-term impacts to natural and human resources given the location of the line in an existing utility ROW. The tap lines will

> convert forested wetland to shrub wetland which is seen as a benefit. The use of the substation site has little or no potential to impact sensitive environmental receptors, and Narragansett has prepared an appropriate mitigation strategy and response protocol.

Moberg, p. 9.

i. Alternatives to the Proposed Tower Hill Substation.

The sole issue raised by the intervenor, Town of North Kingstown, was the impact of the proposed Tower Hill Substation and whether there was a reasonable alternative to the proposed site that would cause fewer impacts. National Grid examined eight alternative sites for the substation. [9] In addition, National Grid examined the no-build alternative to the substation and the alternative of converting and upgrading existing substation facilities. ER, Vol. 1, §§5.7.1 and 5.7.2.

The Company concluded that the no-build alternative "would result in near-term equipment overloads at two substations and on several overhead supply and distribution lines" and, as a result, was not an acceptable alternative. ER, p. 5-28. The alternative of conversion and upgrade of existing facilities (the Lafayette upgrade) was identified in the October 2004 Distribution Study. ER, Vol. 1, Appendix B. Mr. LaBarre addressed the Lafayette upgrade in his prefiled testimony where he characterized it as "an inferior electrical alternative to a substation in the vicinity of Tower Hill Road." LaBarre, p. 2. After an extensive review of the October 2004 Distribution Study, Mr. LaBarre explained that "during the summers of 2005 and 2006, actual area peak circuit loads generally exceeded the predictions made in the study." LaBarre, p. 7. At the summer peak in 2005, three circuits were loaded at or above peak

[9] The eight sites are the six listed in Table 5-6 of the ER: Tower Hill East, Oak Hill Road Town Well Site, Route 4 Town Well Site, RIDOT property, Indian Corner Road and Transmission Line Tap Point plus the Mike's Garage variation on Tower Hill East and the Lot #8 variation on the Route 4 Town Well Site.

capability and in the summer of 2006, six circuits reached this level. Mr. LaBarre testified that during the summer of 2006, one of these circuit overloads resulted in numerous outages to more than 3,000 customers in North Kingstown and Exeter. He noted that these outages would not have occurred if the Tower Hill Substation had been in service in the summer of 2006. Tr. 11/20/06, p. 144. Mr. LaBarre disagreed with Mr. Reiner's characterization of the Lafayette upgrade as a reasonable alternative to the Tower Hill Substation "that would have allowed for the use of existing infrastructure." LaBarre, p. 10; Reiner, pp. 6-7. Mr. LaBarre explained that the Lafayette upgrade would have required work at four existing substations and that "the nature of the work at Lafayette and Peacedale substations is more appropriately characterized as total substation rebuilds." LaBarre, p. 11.

The final alternative considered was the construction of a new substation at or in the vicinity of Tower Hill Road. This alternative was identified as the preferred plan in the October 2004 Distribution Study and described in §4.3.6 of the ER. In its review of alternatives in the ER, National Grid concluded that the alternative of constructing a new substation at Tower Hill Road "provides more capacity and greater flexibility to serve future loads that can be expected beyond the study period." It also noted that the recommended plan is less expensive than the alternative of converting and upgrading existing facilities. Id., pp. 5-29.

ii. Alternative Substation Sites.

National Grid's October 2004 Distribution Study identified the construction of a new substation in the vicinity of Tower Hill Road as the preferred plan to resolve the identified need for additional power. Alternative sites for the Tower Hill Substation were the subject of extensive analysis in the ER and in testimony before the Board. The Company examined six

alternative sites for the substation in the ER, including several that had been identified by the former North Kingstown Town Manager, and two additional sites during the EFSB process. Tr. 11/20/06, p. 11.

Of the eight sites, National Grid eliminated six from consideration for the reasons described below, which the Company considered to be fatal flaws:

- Route 4 Town Well Site – within Zone 1 Groundwater Protection Overlay District and parcel was subject to deed restriction prohibiting any development.
- Oak Hill Well Site – within Zone 1 Groundwater Protection Overlay District and directly upgradient of three town drinking water wells.
- Indian Corner Road – property zoned Open Space and new uses prohibited; within Zone 1 Groundwater Protection Overlay District.
- RIDOT property – land reserved by RIDOT for reconstruction of intersection of Route 4 and West Allenton Road.
- Tap Point Site – majority of site and potential access driveway is freshwater wetlands.
- Mike's Garage – use of site would require displacement of existing business.

See Matrix of Substation Site Alternatives, Attachment to Response to EFSB Record Requests No. 4 (Exhibit National Grid-15) and McIntyre Supplemental, pp. 16-17.

The two remaining alternatives that were analyzed were Lot #8 and Tower Hill East.

Lot #8.

Lot #8 is located on the west side of Route 4, adjacent to the existing ROW and to the Route 4 Town Well Site. ER, §5.7.3.6 and Fig. 5-5. Mr. McIntyre testified that at the time the ER was prepared, the Company believed that the constraints on the use of the Route 4 Town

Well Site were serious enough to eliminate the adjacent Lot #8 from further consideration. However, at the North Kingstown Town Council advisory opinion hearing on August 29, 2006, the Council requested that National Grid conduct additional evaluation of Lot #8 and the Tower Hill East alternatives, which National Grid did. McIntyre Supplemental, p. 10.

Mr. McIntyre reviewed a number of factors that, in his opinion, eliminated Lot #8 from consideration as a viable substation site. These factors include the following:

- Access from Route 4 – Because RIDOT will not permit another access road (curb cut) from Route 4, it would be necessary to share either a new or an existing driveway with the town water department. Acceleration and deceleration lanes along Route 4 would impact wetlands as would a new access driveway. The topography of Lot #8 is such that a driveway between the substation site and the town well site would have a 12% grade which, Mr. McIntyre testified, was greater than National Grid would permit for its trucks for safety reasons.

- Wetlands impacts and floodplain compensation – In addition to the wetlands impacts associated with the construction or improvement of the access from Route 4, the northeast corner of a substation on Lot #8 would be constructed on fill in an existing floodplain and National Grid would be required to provide compensation at the same contour on the property. Mr. McIntyre testified that VHB had determined that floodplain compensation is not possible on Lot #8.

- Well site issues – A substation on Lot #8 would be partially in the Zone 1 Groundwater Overlay District, approximately 600 feet from the existing town drinking water well.

- Distribution issues – The use of Lot #8 for a substation would require extensive underground construction of a distribution system from the site, south on Route 4 and east on West Allenton Road to the corner of West Allenton Road and Tower Hill Road.

Mr. McIntyre concluded:

> because of the serious access issues, the wetlands impacts, the necessity to compensate for floodplain filling, the proximity to the

> town well and the significant distribution issues, Lot #8 is not a feasible or practical alternative to the Tower Hill Substation site.

McIntyre Supplemental, pp. 9-12; Tr. 11/20/06, pp. 27-50; see also Moberg Supplemental, pp. 2-3.

Tower Hill East.

The final alternative site, Tower Hill East, is located east of Tower Hill Road and, according to Mr. McIntyre, is comparable to the preferred site in some respects. McIntyre Supplemental, p. 6. However, its location on the east side of Tower Hill Road would require the extension of the proposed tap lines from the preferred site across the entire thirteen acre property and across Tower Hill Road to the Tower Hill East site. (See plan attached to Exhibit National Grid-16; Tr. 11/20/06, pp. 56-57; Tr. 11/29/06, p. 64.) In addition, the extension of the tap lines to the east would, according to Mr. McIntyre, require clearing of an area of approximately 150 feet in width on both sides of Tower Hill Road to accommodate the tap lines. Because much of the preferred site is an open field, it would not be possible to screen the tap lines to Tower Hill East from the residents on Girard Lane. Mr. McIntyre testified that, because of the longer tap lines, additional earthwork, wetlands protection and tree clearing, the cost of the substation would increase by approximately $1.8 million over the preferred alternative. McIntyre Supplemental, pp. 5-6. He summarized the impacts of using the Tower Hill East site as follows:

> When we go to the Tower Hill East alternative we're basically expanding the project to get those tap lines to the east. So when we do that we do bring in more neighbors to the tap lines and these neighbors would be the two homes at the end of Girard Lane, the homes . . . on Tower Hill Road, and unlike behind the Pinecrest subdivision where we're proposing to keep a wooded buffer of at least 90 feet, due to the existing clearing in this area and the additional clearing we have to do for the tap lines, we can't leave up any buffer for the homes on Girard Lane or the homes on Tower Hill Road so they'll have a clear view of the tap lines . . . . So that's

> the real difference is the homes that we include in the expanded project that run from Tower Hill East would have no wooded buffer.

Tr. 11/29/06, pp. 72-73.

Modifications to Preferred Site.

In his supplemental prefiled testimony, Mr. McIntyre summarized the advantages of the proposed site:

> The proposed Tower Hill Substation site does not have wetlands impacts, has an easy access from a local road, is close to the existing electric distribution network and has the least earthwork, least tree clearing requirements and least cost. In addition the substation can be set well off the public way and can be effectively screened from abutters.

McIntyre Supplemental, pp. 13-14.

Mr. McIntyre also described some modifications that the Company was willing to make if it could reach a settlement with the neighbors and the Town. McIntyre Supplemental, pp. 14-15. Subsequently Mr. McIntyre testified that the Company was proposing to make several modifications without a settlement. Tr. 1/12/07, p. 16. These modifications include relocating the substation towards the west end of the site as shown on Exhibit National Grid-18, which, according to Mr. McIntyre, moves it eighty feet farther from the abutters on Girard Lane, and building a sixteen foot high wooden barrier wall on two sides of the substation in addition to the proposed landscaped berms. Mr. McIntyre explained that the Company had committed to no expansion of the substation beyond the fence as shown on the site plan. Mr. McIntyre had previously testified that the Company had gone from an open-air substation design to a metal-clad design which would enclose the distribution feeders in the buildings. McIntyre, p. 3; Attachments DM-1 and DM-2 to McIntyre Supplemental.

Mr. McIntyre explained the benefits of these modifications to the abutters: "relocating the substation towards the western edge of the site would move it away from the Girard Lane neighbors. The wooden barrier wall and landscaping would further reduce any visual impact and mitigate any noise impact from the substation." McIntyre Supplemental, p. 15.

At the January 12 hearing, Mr. McIntyre testified that as the result of a change in standard Company design, the switch gear components would be installed in factory fabricated buildings – one for each of the two transformers. Tr. 1/12/07, pp. 12-14.

Conclusion.

National Grid examined two alternatives (no build and the Lafayette upgrade) to constructing a new substation and, after rejecting them, conducted an extensive investigation of eight possible substation sites. Several of the alternative substation sites were suggested by the North Kingstown Town Manager (Tr. 1/12/07, p. 124) and these alternatives were addressed in the ER and in testimony of several witnesses. Most of the alternative sites were rejected because of fatal flaws while two (Lot #8 and Tower Hill East) required more investigation. The results of the examination of the sites by National Grid have led it to conclude that the preferred site remains the best site for the new substation. While the North Kingstown Town Planner had appeared to favor Lot #8 in his prefiled testimony in early October, by the time he testified on January 12, he did not express a preference for any site over the proposed Tower Hill Road site: "honestly I don't know what the most feasible site is." Tr. 1/12/07, p. 140.

The Board finds that National Grid has performed an examination of alternatives to the construction of a new substation on its proposed site on the west side of Tower Hill Road. The Board accepts National Grid's determinations that (i) the no-build alternative would cause

serious problems in serving its customers in Southern Rhode Island, and (ii) the Lafayette upgrade is an inferior electrical alternative. National Grid has been respondsive to suggestions from the Town and has examined other candidate sites identified by the Town. The Board agrees with the Company's rejection of the six sites identified above for "fatal flaws." The Lot #8 and Tower Hill East sites were the subject of extensive testimony before us and the Board finds, based on the testimony of Mr. McIntyre, that the preferred site, with the modifications described by Mr. McIntyre, is the best site for the substation. In fact, Mr. Reiner, on behalf of North Kingstown, did not express a preference for any site. Tr. 1/12/07, p.155. The modifications should mitigate the impact of the substation on abutting properties. The Board also finds, based on Ms. Moberg's testimony, that the Project will not cause unacceptable harm to the environment.

ISSUE 4: Will the proposed facility enhance the socio-economic fabric of the state? R.I.Gen.Laws § 42-98-11(b)(3).

The Board requested that the Statewide Planning Program and the State Planning Council conduct an investigation and render an opinion as to the impact of the construction and operation of the Project upon the socio-economic fabric of the State. R.I.Gen.Laws §§ 42-98-9(e) and 42-98-11(b)(3). The Board defined this issue as including economic and reliability benefits to the local population and economy, employment benefits, and tax benefits to the towns and the State.

The term "socio-economic" also includes land use and incorporates the study of alternatives, including alternative sites pursuant to R.I. Gen. Laws § 42-98-8(a)(7). As a result, we asked Designated Agencies to consider all reasonable alternatives to the various components of the Project, including those proposed by National Grid.

In its advisory opinion to the Board, Statewide Planning presented an exhaustive review and analysis of socioeconomic data for the six communities where the Project will be located. Statewide Planning made the following findings:

> Narragansett Electric's proposal appears on balance to be beneficial to the socioeconomic fabric of the State of Rhode Island, based on the following:
>
> 1. Energy
>
> . . . Upgrading and expanding the existing line is necessary, especially when businesses in the area are relying increasingly on computers and other sophisticated electronic equipment that should not be subjected to occasional power failures. The upgraded line, by providing a reliable power supply to the area, will support the state's effort to stimulate economic activity in Southern Rhode Island.

Statewide Planning Advisory Opinion, Exhibit EFSB-12, p. 2.31.

Statewide Planning also made findings on employment (negligible gains from the Project itself although "more significant [impacts] may result from the business community's increased attraction to the area as a result of the improved electric supply and distribution network") and revenues and costs ("although impacts on the local economy will probably be modest, the expansion of the line will generate revenue to the state, even under the most conservative estimates.") Id., pp. 2.31 and 2.32. Finally, Statewide Planning reviewed the social impacts of the Project and made the following findings, among others:

> Residences, as well as commercial establishments and industries, may significantly benefit from the increased reliability the expanded line will provide. Negative impact on property values adjoining the ROW from the visual impact of the expanded and upgraded power line are not anticipated but would be hard to quantify, especially in such a robust real estate market.

Id. p. 2.33.

Statewide Planning concluded:

> In sum, this Project should be beneficial to the state's economy by the business it should generate, modestly as it is being constructed, and perhaps significantly over the long term as it will enable Narragansett to continue to provide reliable electric services to homes, businesses and industry in the Southern Rhode Island area, keeping it an attractive Rhode Island location.

Id.

The North Kingstown Town Council also addressed the impact of the Project on the socioeconomic fabric of the state in its advisory opinion. Exhibit EFSB-8. The Town Council issued a negative advisory opinion concluding that

> National Grid has failed to satisfy its burden in demonstrating that the proposed Tower Hill Substation does not cause unacceptable socioeconomic harm and furthermore, National Grid has failed to satisfy its burden of setting forth and fully disclosing a study of reasonable alternatives to the proposed Tower Hill Substation as required by law.

North Kingstown Town Council Advisory Opinion, p. 2.

In its advisory opinion, the Town Council focused on the electrical alternative of the Lafayette upgrade which was subsequently addressed in detail in Mr. LaBarre's testimony before the Board (Exhibit National Grid-12), and on the alternative sites of Tower Hill East "Site A" and Lot #8.

Both the Town Council and Mr. Reiner criticized National Grid for not identifying Tower Hill East "Site A" in its application to the Board (Exhibit EFSB-8, pp. 4-5; Reiner, p. 8.) However Mr. McIntyre explained that this site is the Mike's Garage site which had been presented to the Town Council on July 25, 2005. McIntyre, p. 16. The Town Council's own minutes of that meeting (McIntyre, Attachment DM-6) contain a brief reference to Mr. Beron's

discussion of the alternative and do not suggest that any Council member objected to National Grid's desire to refrain from displacing an existing business. Mr. Reiner subsequently agreed that this site is Mike's Garage and acknowledged that the Town Council did not want to displace an existing business. Tr. 1/12/07, pp. 117, 118.

It is appears from the testimony of National Grid witnesses that National Grid worked with North Kingstown officials after issuance of the Town Council's advisory opinion to undertake additional evaluations of alternative sites for the substation. Mr. Reiner has conceded that National Grid and the Town have been unable to identify a site that is superior to the proposed Tower Hill site. Based on the testimony of Messrs. McIntyre and Reiner and the comprehensive analysis contained in Statewide Planning's advisory opinion, the Board finds, as did Statewide Planning, that the Project "appears on balance to be beneficial to the socioeconomic fabric of the State of Rhode Island."

ISSUE 5: Is the construction and operation of the Project consistent with the State Guide Plan? R.I. Gen. Laws § 42-98-9(e).

The Board also asked Statewide Planning to render an advisory opinion on the consistency of the Project with the State Guide Plan. Preliminary Order, p. 13. After a comprehensive review of seventeen elements of the State Guide Plan, Statewide Planning concluded that "the proposed Southern Rhode Island 115kV Transmission Project conforms to the relevant goals, policies and objectives of the State Guide Plan." Statewide Planning Advisory Opinion, Exhibit EFSB-12, p. 3.12.

Statewide Planning also included eight recommendations which it suggested would "assure the fullest consistency and support for various policies of the Guide Plan." Id., p. 3.13. These recommendations were addressed by Mr. Beron in his prefiled testimony. Exhibit

National Grid-8, pp. 10-12. National Grid agrees with the second and third recommendations relating to mitigation measures and states that it believes it has met the spirit of the sixth recommendation (advising the FAA of the new construction) and the seventh recommendation (disposing of wooden poles in an environmentally responsible fashion in accordance to application regulations). In his testimony, Mr. Beron noted that the first and fifth recommendations relate to demand side management and distributed generation ("DSM/DG") which are issues before the PUC.

The fourth recommendation suggested an investigation of allowing some recreational activities (hiking, mountain biking or motorized trail use) along suitable sections of the ROW. Mr. Beron testified that the Company has worked over many years with property owners and abutters "along many ROWs in Rhode Island and elsewhere to reduce the use of the ROW by unauthorized persons." Beron, p. 11. [10] This effort will continue along the Project ROW and National Grid has committed to installing gates and other barriers at entrances from public roads to restrict trespassing on the ROW. Id; ER §4.6. Mr. Beron also explained that along much of the ROW, National Grid owns only easement rights so any use of the ROW by third parties would require the consent of the owner of the underlying property.

In Statewide Planning's eighth recommendation, it suggested that "the Board should consider life-cycle costs and benefits in assessing the steel shaft, double circuit davit arm alternative." Statewide Planning Advisory Opinion, p. 3.14. Mr. Beron testified that this assessment had been made in Section 5.3.2 of the ER and "rejected for a number of reasons including visual and environmental impacts as well as costs." Beron, p. 12. The double circuit

[10] Dr. Sullivan noted the potential damage to ROWs and other vegetated areas by ATVs, motorcycles and four wheelers and urged the Company to restrict unauthorized access to the ROW. Tr. 1/12/07, p. 84.

alternative would increase the $6.2 million cost of the new L-190 115kV transmission line to $14.4 million, an increase of 137%. Id.; ER pp. 4-17 and 5-6.

The Board finds, based on the advisory opinion from Statewide Planning, that the construction and operation of the Project is consistent with the State Guide Plan. The Board agrees with National Grid that two of the recommendations (Recommendations 1 and 5) are within the province of the PUC and that National Grid has met the spirit of Recommendations 6 and 7. The Board also agrees that National Grid has provided the information sought in Recommendation 8 in its ER.

The Board will adopt Recommendations 2 and 3 but agree with National Grid that Recommendation 4 is beyond its legal authority in areas where it only has easements and, in any case, would be a major change in its current practice. Any such change should be preceded by discussions among all of the interested parties rather than as an ad hoc decision in an EFSB order on a transmission project.

VIII. RECOMMENDATIONS OF NORTH KINGSTOWN PLANNING COMMISSION.

In addition to the recommendations from Statewide Planning, the Planning Commission made a number of recommendations which were the subject of extensive testimony and debate before the Board. Although National Grid initially resisted many of the recommendations, its position has evolved to where it has accepted the concept, if not all of the details, of most of them. The Board will quote each recommendation and then provide our analysis. After considering the testimony of Messrs. Beron, McIntyre and Reiner, the Town's cross-examination

of Mr. McIntyre[11] and the submissions of National Grid (Exhibit National Grid-19 and the attachment to National Grid's February 5, 2007 Brief), the Board makes the following findings.

Recommendation No. 1 - Appraiser.

> *In accord with the development plan review sections of the Zoning Ordinance, the Planning Commission, at the expense of the applicant, may require a report of findings and recommendations from outside expertise. In this regard, it is a condition that the Town, at National Grid' s expense, engage an independent MAI appraiser to provide an opinion as to impact on fair market value as to the abutting residential lots (particularly abutting the proposed Tower Hill Substation and the areas where the transmission line goes through residential backyards), so that the Town and RIEFSB can consider further mitigation to safeguard against any potential losses in the fair market value.* [12]

According to Mr. McIntyre, National Grid hired a real estate appraiser in order to prepare testimony for the North Kingstown Zoning Board. Tr. 1/12/07, p. 73. National Grid argues and the Board agrees that there is no basis in the Siting Act or elsewhere for compensating abutters for any claimed loss in value resulting from development on abutting property. The Board declines to adopt this recommendation.

Recommendation No. 2 – Mitigation Plan.

> *National Grid testified to a mitigation budget to help ease the impact on abutting landowners who are burdened by transmission easements. As a condition, National Grid shall be required to confer with abutters within a certain amount time to formulate a mitigation plan, so that there is a formal procedure in which neighbors can recoup expenses for the fact that there will be construction proceeding in their backyards.*

National Grid has repeatedly stated its commitment to working with the abutters as part of its outreach program to provide mitigation for direct abutters to the Project. It was clear from Mr. McIntyre's testimony on January 12 that the Company prefers to negotiate these agreements

[11] The Town waived its right to cross-examine National Grid witnesses other than Mr. McIntyre. Tr. 1/12/07, p. 96.
[12] We note that the recommendations included in the Planning Commission's advisory opinion differ slightly from the recommendations as presented in Mr. Reiner's prefiled testimony. North Kingstown Exhibit-1. We will use the former in our analysis.

on a case-by-case basis since the mitigation is site-specific. Thus National Grid has objected to the suggestion in Recommendation No. 2 that it formulate "a mitigation plan" and also objects to the implication of the Recommendation that abutters incur "expenses" as a result of construction within the ROW. National Grid's ROW restoration work is described in §4.4.5 of the ER.

The Board finds that National Grid's commitment to continuing meeting with individual abutters to discuss mitigation efforts meets the spirit of Recommendation No. 2. The Board declines to impose any further obligations on National Grid.

Recommendation No. 3 – Construction Schedule.

National Grid is required to mail or e-mail abutting neighbors two-week, "look ahead" construction schedules during the entire duration of construction, so that abutting neighbors know exactly what is proceeding on a "real time," 2 week schedule.

National Grid has agreed with this Recommendation which the Board adopts.

Recommendation No. 4 – Environmental Monitor.

National Grid testified that there will be an "environmental monitor" engaged to make sure that environmental safeguards are being met and Best Management Practices are being employed. At the hearings, National Grid was questioned and National Grid was amenable to having the environmental monitor not only serve to oversee environmental issues, but act more as a "Independent Engineer". Accordingly, National Grid is required to involve the Town in selecting an Independent Engineer, so that said person or entity act as a true independent to oversee all environmental protection, mitigation factors, and be someone that abutting owners can contact if they have questions as to whether mitigating steps are being undertaken.

National Grid committed to retaining an environmental monitor in the ER (§ 4.4.7) and has repeated that commitment during these proceedings. See e.g., Beron, p. 6; Tr. 11/20/06, pp. 119-120, 135. As explained in the ER, "the primary responsibility of the monitor will be to enforce compliance with all federal, state and local permit requirements and National Grid

policies." In Recommendation No. 4, the Planning Commission seeks to expand the role of the environmental monitor and to involve the Town in the selection of this person. McIntyre subsequently testified that it would designate an employee as an ombudsman to serve as a contact person for abutting property owners and others during the construction of the Project. Tr.11/20/06, pp. 135-136; Tr. 1/12/07, pp. 17-18, 26. Furthermore, National Grid has already selected its environmental monitor. Thus, Town involvement in the selection process has been rendered moot. The Board finds that National Grid's proposal to address this recommendation is acceptable and declines to adopt Recommendation No. 4.

Recommendation No. 5 – Town Fire Marshal.

National Grid testified that the MODF utilized in the transformers is a flammable material that will be used and stored on site at the proposed Tower Hill Substation. Accordingly, those facilities have to be approved by the Town Fire Marshall with regard to fire and explosive hazards.

As Mr. McIntyre testified and noted in Exhibit National Grid-19, the transformers use MODF as a coolant and insulating fluid but the transformers are not storage tanks. As a result, the Company does not believe that the fire marshal has jurisdiction over the MODF in the transformers at the substation site. Tr. 1/12/07, pp. 20-21. National Grid noted that similar transformers are in use elsewhere in North Kingstown and through the state and region. The Town has offered no evidence to refute Mr. McIntyre's testimony so the Board does not adopt Recommendation No. 5.

Recommendation No. 6 – Groundwater Monitoring Wells.

National Grid agreed to install groundwater monitoring wells. In accordance with the Zoning Ordinance, the installation shall include a provision for Town access, including dedicated easements so that the Town can undertake their own sampling and testing. Furthermore, the cost of all monitoring and sampling analysis is to be born by National Grid in accordance with the Zoning Ordinance.

National Grid has committed to install three groundwater monitoring wells and has specified protocols for the installation and sampling of the groundwater wells. It has also agreed to provide a sample to the Town for analysis at the Town's request. Further, the company has agreed to allow the Town to conduct their own tests under the company's escort. Finally, the wells will not be removed or abandoned following the proposed sampling but will remain available for sampling at a later date, should that be necessary. The Board finds that National Grid has met the spirit of Recommendation No. 6 but will not require National Grid to grant an easement to the Town for groundwater sampling.

Recommendation No. 7 – Drinking Water Wells.

There may possibly be construction within the groundwater for the proposed Tower Hill Substation. This shall require independent analysis and approval of dewatering methods. Furthermore, this shall include testing of drinking water wells within the area to ensure that there is no adverse impact. The cost of monitoring and approving dewatering methods and well testing shall be borne by National Grid.

National Grid has committed to following the sampling protocol provided in response to Recommendation No. 6 and will, subject to the approval of the owners of the wells, test for the constituents identified in the protocol for drinking water wells. It will have the wells tested prior to commencement of construction of the Tower Hill Substation and within six (6) months after completion of construction. Results of the analysis shall be provided to the owner of the well and to the Town. National Grid has met the spirit of Recommendation No. 7.

Recommendation No. 8 – SPCC Plan.

There was a great deal of testimony with regard to the MODF in the transformers at the proposed Tower Hill Substation. National Grid is supposed to develop a spill prevention plan and contingency plan. National Grid testified that they have done this with regard to many other substations. National Grid shall be required

to provide such a plan for full comment and review by the Town of North Kingstown in advance of any final licensure. In addition, outside geohydrological expertise shall be consulted, at National Grid's expense, to determine if there are any other groundwater safeguards that should be employed, such as a catch basins with oil/water separators. Furthermore, in this regard, National Grid shall be responsible for training North Kingstown fire personnel and rescue personnel, so that they can act in accord with any contingency plans.

National Grid has agreed to provide a draft of the SPCC Plan to the Town for review and comment. By "review and comment," the Board does not intend to grant the Town a veto. However, the Board requires National Grid to consider any comments received from the Town within thirty (30) days of its receipt of National Grid's draft of the SPCC Plan. National Grid has also agreed to provide periodic supplemental training to North Kingstown Fire Department personnel. The Board finds that National Grid has met the spirit of Recommendation No. 8.

Recommendation No. 9 – Prohibition of MODF.

National Grid was asked about MODF in the regulators and breakers. National Grid testified under oath that the regulators and breakers will not contain MODF in the type of system being designed. National Grid's testimony is adopted as an absolute prohibition, because the regulators and breakers were originally designed to contain MODF and there was no containment other than crushed stone. Such a pervious containment design, as originally proposed in the application, for the MODF in the regulators and breakers is strictly prohibited in a Groundwater Overlay District by the Zoning Ordinance.

In Recommendation No. 9, the Planning Commission sought to prohibit the use of MODF in regulators and breakers while larger quantities are used in the transformers at the Tower Hill Substation. However, National Grid testified that MODF is used in transformers and electrical equipment in other substations and along the public streets in North Kingstown and elsewhere throughout the state and region. Therefore the Board finds that Recommendation No. 9 is not reasonable and declines to adopt it.

Recommendation No. 10 – Landscape Architect

National Grid, working with a certified landscape architect, shall plan for and landscape as much as possible the areas surrounding the proposed substation and all transmission line areas that abut residentially developed property. It is recommended that thorny plant species be utilized in the areas surrounding the substation to prevent access to this potentially "attractive nuisance." In addition, the fence surrounding the substation shall be a color that blends into the landscaped buffer.

National Grid has provided a revised landscaping plan for the area of the Tower Hill Substation and proposes to construct a sixteen (16) foot high wooden barrier wall on two (2) sides of the substation. It will also provide landscaped berms. The Board finds that National Grid has substantially conformed to Recommendation No. 10 and has met it in spirit.

Recommendation No. 11 – "De-vegetation."

There was a great deal of testimony about vegetation removal. The testimony was that approximately 38 acres were going to be de-vegetated due to transmission line expansion and the construction of the substation. National Grid's Application is more specific and states that 23 acres will be de-vegetated in environmentally sensitive areas. As a mitigation step National Grid is required to commission an independent study to determine whether this type of de-vegetation in environmentally sensitive areas will have a potentially adverse impact on the groundwater overlay areas, any critical habitat, and landscaped buffers. In turn, the study shall determine if there are options to de-vegetation and what is an appropriate re-vegetation plan that will maximize aquifer and re-charge protection. The implementation of this re-vegetation plan shall be a required condition of the approval.

The Board finds that "de-vegetation" is an overstatement of the type of clearing which National Grid proposes in order to construct the new transmission lines. In fact it will cut tall-growing woody species and allow low-growing shrub-type vegetation to remain and colonize the ROW. ER, §4.4.1; Beron, pp. 6-7. National Grid has agreed to provide to the Town a study or report related to the benefits to wildlife of creating and maintaining open areas that are free from

high-growing woody species as will be created for the additional cleared right-of-way.

National Grid stated that the report related to wildlife, habitat and rights-of-way which it has offered to the Town is a report that was prepared by a third party following the study of a right-of-way in Massachusetts. Based on Mr. Reiner's explanation of the groundwater impact report the Town is seeking (Tr. 1/12/07, p. 145), National Grid has directed VHB to prepare an analysis of the impacts on run off and drainage that may be anticipated following the removal of tall-growing, woody vegetation on a transmission line ROW. The Board finds that National Grid has met the spirit of Recommendation No. 11.

Recommendation No. 12 - Herbicides.

> *There were several questions by the Planning Commission regarding vegetation control. National Grid's Environmental Report at Section 4.5, states that herbicides are not to be used in environmentally sensitive areas. Therefore, the use of herbicides is prohibited in the Groundwater Overlay District or in the alternative, National Grid is required to commission an independent review of a protocol to limit herbicides that would include testing of wells for herbicides at appropriate intervals. This objective is a top priority of the Planning Commission. National Grid also testified that there would be no broadcast spraying of herbicides. The Planning Commission requested that mechanical cutting and vegetation control be used where possible, and be required in all groundwater protection areas. National Grid shall coordinate with the North Kingstown Water Department to review the right of way maintenance documents located within the Groundwater Overlay Districts.*

National Grid testified that its use of herbicides is strictly regulated by state and federal authorities and will comply with those regulations. National Grid will not use herbicides in well-head protection areas, buffer areas associated with surface waters or in areas of standing water. However, a general prohibition on the use of herbicides "in all groundwater protection areas" would be impractical because the majority of the Town of North Kingstown is a groundwater overlay district. Tr. 11/20/06, p.140. The Board declines to adopt Recommendation No. 12.

Recommendation No. 13 - Noise.

In regard to noise, National Grid testified that their modeling indicated a certain decibel increase at sensitive receptors over ambient conditions. National Grid agreed to have that modeling become a performance guaranty, such that if the Town were to find an exceedance of that performance milestone, then the National Grid, at its expense would take immediate steps to mitigate and ensure that the performance milestones are being met.

National Grid has agreed with Recommendation No. 13.

Recommendation No. 14 – Light and Glare.

In regard to light and glare, those issues were largely discussed in relation to a buffer plan proposed by National Grid in which abutting neighbors supposedly had some input. As a condition, National Grid shall engage a certified landscape architect to review the proposed buffering plans and the re-vegetation plan along the proposed transmission alignment to determine if the proposed plans are adequate or if they can be enhanced by the number of plants, the species of plant, etc.

The light and glare issues were discussed in relation to the proposed substation and, as indicated previously, National Grid has agreed to provide berms, landscaping and the wooden barrier wall and will also control the lights in the substation manually. The lights will be turned on only in rare circumstances when National Grid employees are working in the substation at night. National Grid is in the process of discussing mitigation measures with abutters to the transmission line. The Board finds that National Grid has met the spirit of Recommendation No. 14.

Recommendation No. 15 – Traffic Control Plan.

National Grid's Application indicates that there will be considerable construction traffic during the duration of the Project. National Grid states in its Application that it will work with Rhode Island Department of Transportation to come up with a traffic mitigation plan during that time. As a condition, National Grid is required to notify and include the Town in approving the traffic mitigation plan.

Furthermore, there will be Town input and public hearing in advance of finalizing the plan, so that abutting neighbors can have meaningful input.

National Grid has testified that it will provide a draft of its RIDOT Physical Alteration Permit application to the Town and will consider any comments from the Town. The Board finds that National Grid has met the spirit of Recommendation No. 15.

Recommendation No. 16 - Planning.

The Planning Commission also recommended that for future needs in the area, that National Grid should further research expanding the existing substations. Furthermore, National Grid should coordinate with the Town of North Kingstown to determine future growth areas in the Town in accordance with the North Kingstown Comprehensive Plan to better plan for the future electricity needs of the Town.

National Grid has reiterated its willingness to meet, at the request of the Town, to discuss future electrical needs of the Town. National Grid has also committed to providing a copy of the Master Construction Plan which it files annually with the EFSB to each of the cities and towns affected by projects listed in the Master Construction Plan. Tr. 1/12/07, p. 94. The Board finds that National Grid has met the spirit of Recommendation No. 16.

IX. OTHER MATTERS.

In its brief, North Kingstown requested that the Board enter an order (i) ordering National Grid "to advance the necessary funding to allow North Kingstown to engage a professional engineer with requisite electric distribution and transmission expertise," (ii) remanding the case to the advisory opinion process for further consideration by the North Kingstown Town Council and (iii) ordering National Grid "to reimburse North Kingstown for costs incurred to date." North Kingstown Brief, pp. 2-3, 17.

By approving the application of The Narragansett Electric Company d/b/a National Grid for a license to construct the Southern Rhode Island Transmission Project, the motions made by the Town in its brief were essentially denied and rendered moot. The Town's arguments were not persuasive.

In May 2006, the Town filed a motion seeking prepayment of the Town's expenses including $25,000 in legal fees and $5,000 each for geohydrological and professional engineering fees. National Grid objected to the prepayment of any fees or expenses and also objected to payment of the Town's legal fees. However, it did state that it was willing to reimburse the Town for geohydrological and professional engineering fees up to $5,000 each. The Town chose not to hire any experts in this docket. By order dated August 3, 2006, the Board denied the motion for payment of legal fees and for the prepayment of the other fees. In re The Narragansett Electric Company (Southern Rhode Island Transmission Project), Docket No. SB-2005-01, Decision and Order (North Kingstown Fees) (Order No. 58, August 3, 2006.) Thus the issues raised under (i) and (iii) above, have been decided in this case and the Town has offered no reason for us to reexamine our decision.

With respect to the request that the case be remanded to the Town Council for further proceedings, it should be apparent from the exhaustive discussion of alternatives in this order that National Grid, with input from the Town, has conducted an extensive review of alternatives to a new substation and alternative sites for the proposed substation. The Board does not believe that such a remand would accomplish anything other than to delay these proceedings and cause a violation of Section 42-98-11(c) which requires us to issue our final decision within sixty days of the conclusion of the final hearings. The Town had ample opportunity to litigate, present

evidence, and raise issues before the Board. The Town simply failed to present much of a case. It does not deserve a further bite at the apple.

X. CONCLUSION

The Board has conducted an exhaustive review of National Grid's proposal with the able assistance of the numerous designated state and local agencies. The Board heard extensive testimony from many witnesses who addressed all aspects of the Project.

Based on our review of the record and our findings of fact discussed above, we make the following conclusions of law:

- National Grid's Southern Rhode Island Transmission Project is necessary to meet the needs of the State, and particularly Southern Rhode Island, for electricity;
- 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 line will be accomplished in compliance with all applicable requirements, except as noted below;
- That considerations of the public health, safety, welfare, security and need for the Project justify a waiver of the time limits provided in the Charlestown Zoning Board's advisory opinion and in the Exeter Zoning Ordinance and of the requirements of the North Kingstown Zoning Ordinance;
- That the Project will not cause unacceptable harm to the environment; and
- That the Project will enhance the socio-economic fabric of the State.

Accordingly, it is hereby

(Order No 59) ORDERED:

(1) That the application of The Narragansett Electric Company d/b/a National Grid for a license to construct the Southern Rhode Island Transmission Project 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 and comply with all the conditions and requirements as described in this Order.

(2) The motions contained in the Brief of the Town of North Kingstown are denied.

DATED AND EFFECTIVE AT WARWICK, RHODE ISLAND ON MARCH 13, 2007 PURSUANT TO AN OPEN MEETING DECISION ON FEBRUARY 23, 2007.

ENERGY FACILITY SITING BOARD

Elia Germani, Esq.
Chairman

Kevin M. Flynn, Member

W. Michael Sullivan, Ph.D., Member

NOTICE OF RIGHT OF APPEAL PURSUANT TO R.I.G.L. 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 REASONABLESS OF THIS ORDER.