

Exhibit A



July 22, 2009

Chairman of the Town of Johnston Zoning Board
Chairman of the Town of Johnston Planning Board
100 Irons Avenue
Johnston, Rhode Island 02919

**RE: The Narragansett Electric Company d/b/a
National Grid Rhode Island Reliability Project
SB-2008-002**

Dear Chairmen:

I have been retained by the Town of Johnston, Rhode Island ("Town") by and through Ferrucci Russo P.C. to provide a study of the local environmental effects of Narragansett Electric Company d/b/a National Grid's ("National Grid") proposed Rhode Island Reliability Project (the "Project") to the Town's Designated Agencies pursuant to the State of Rhode Island Energy Facility Siting Act. Said effects of the Project on the Town include potential health, safety and welfare effects.

I am a registered professional engineer in the States of North Carolina, South Carolina, Virginia, Georgia, West Virginia and Maryland with over 20 years of experience managing and designing projects for electrical transmissions lines, substations and underground and overhead distribution projects. Please review my resume attached hereto as Exhibit A for further details of my experience.

I was engaged to provide an opinion, assuming that the project involved placing 115 kV lines approximately 28' to 35' from the edge of the right of way. In preparing my findings, I reviewed:

- National Grid's Zoning Board Application dated November 7, 2008
- The Environmental Report –Volume I for the Project
- Exhibits D, L, K and M introduced by National Grid before these Boards
- The report compiled by Power Engineers dated June 10, 2009

My review of the Project was limited by the fact that there is no existing plan or profile drawing detailing exact pole locations and conductor clearances. Accordingly, I have focused my review on National Grid's contention that it is safe to build any structure up until the edge of the right of way. I do not believe that this statement is completely accurate.

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The following is a list of safety restrictions along the edge of the right of way that should be imposed as a result of the Project:

1. Consideration must be given for free standing accessory structures that are in close proximity to the right of way. These can include flag poles, radio antennas, signs or any other structure that reaches a height where it could contact the power line in the event of structure failure. These types of structures tend to fail in snowstorms, ice storms, severe thunderstorms hurricanes or other extreme weather conditions which are common in the Johnston area.

Obviously, any object that could potentially come into contact with the power line is of great concern as a contact event could lead to the loss of electrical service or worse, property damage and human injury. Of further concern would be any metal accessory structure contacting the transmission line as this would result in an increased risk of electrocution.

2. Another primary concern is vertical elements on top of structures that are constructed along the right of way. These include towers, chimneys, satellite dish antennas, free standing television antennas, as well as any other roof mounted vertical elements. These vertical elements pose similar risks as the structures detailed in paragraph 1. Accordingly, the use of these devices on structures on the right of way should be carefully regulated.
3. In connection with recommendations 1 and 2, I asked that Counsel review the Town zoning dimensional specifications to determine the practical impact of these recommendations as it relates to the Town. See Correspondence of Counsel attached hereto as exhibit B.
4. Metal buildings and/or structures along the edge of the right of way can be of concern. Since metal is conductive it can have an effect around high voltage lines. There are two major issues related to this. One is the potential difference that can occur which causes a significant static buildup around any metal building which will discharge under certain conditions. Generally, these static discharges are not dangerous but under certain conditions can be. The best way to prevent dangerous discharges is to require that the line and building be properly grounded.

The second concern is lightning protection. It is recommend that any metal building located around the line (or for that matter any building) have lightning protection on it such as a rod that is grounded directly into the earth via a copper ground rod.

I would recommend that National Grid provide the Town with appropriate grounding specifications for metal buildings, and that National Grid be available to review said specifications or grounding methods at no cost to the Town or the property owners.

5. Swimming pools are another area of concern. Any time open bodies of water are located in the vicinity of power lines there is the potential for problems. In this instance if a pool is to be placed adjacent to the right of way, there must be regulation requiring the proper grounding be maintained, and further periodic inspections must be performed to ensure that the grounding mechanisms maintains their integrity.

Again, I would recommend that National Grid provide the Town with appropriate grounding specifications for swimming pools, and that National Grid be available to review said specifications or grounding methods at no cost to the Town or the property owners.

6. Construction along the edge of the right of way can also cause serious problems. Most construction requires the use of heavy machinery and materials that could potentially impact the transmission lines or transmission line structures. Accordingly, there must be regulations restricting the types of machinery that can be used and construction that can take place along the edge of the right of way.

Many of the above listed concerns are a result of National Grid's decision to utilize the National Electrical Safety Code which is a minimum standard for the citing of transmission lines. Instead, I would recommend a 50' distance from the centerline of the 115kV structure to the edge of the right of way as recommended by the Rural Utility Service¹ at RUS Bulletin 1724E-200 (2005 ed.). Further, many of the concerns that I have detailed above would be alleviated or greatly reduced with a 50' clearance distance.

In conclusion, I strongly urge that the EFSB not approve the Project without imposing a setback from the edge of the right of way of 20' for any new construction. The practical result of this setback can be obtained by reviewing the applicable zoning dimensional specifications which would potentially allow accessory structures, and vertical elements to come into contact with transmission lines if an additional setback is not required by the EFSB.

Very truly yours,



Edward G. McGavran III, P.E.
President/Owner
McGavran Engineering, PC

¹ The Rural Utility Service is an agency of the United States Department of Agriculture, and is one of the federal executive departments of the United States government charged with providing public utilities to rural areas in the United States.

Exhibit A

Edward G. (Ted) McGavran III, P.E.

Contact Information:

Business:

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Personal:

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Charlotte, North Carolina 28211
Phone: 704.442.9815
Mobile: 704.517.0704

Personal Information:

Date of Birth: December 3, 1959
Place of Birth: Charleston, West Virginia
Citizenship: United States of America
Sex: Male
Marital Status: Married (Wife, Melanie McGavran)
Children: One (Son, Edward McGavran)

Professional History:

April, 1991 to Present:

President & Owner

McGavran Engineering, P.C.

Consulting engineering practice started in 1991 to work with rural power systems in the Southeastern United States. Clients include municipally owned power systems, investor owned utilities, industrial power systems, electrical testing contractors, and other professional firms. Projects and tasks include, but are not limited to the following:

- Engineering and operations management reviews and operational plans for rural electric cooperatives
- System planning for long and short range plans including distribution and transmission system analysis, design, least cost planning, economic analysis, and alternative plans.
- Studied reliability as a critical component of electric system planning criteria. Rank order projects on an objective criteria based on resources available and long term financial models to determine outcomes.
- Manage and design projects for up to 115 kv transmission lines, substations, and underground and overhead distribution projects. In conjunction with the management of these projects have prepared detailed construction contracts for bidding, evaluate and award bids, oversee the construction process, closeout the contracts, and settle any issues regarding damages to property by the contractor as well as final acceptance certification and testing.

- Oversee system mapping projects and gather GPS data
- Write and submit Environmental Assessments for power system capital projects including transmission lines, substations, and distribution lines.
- Prepare Spill Prevention and Countermeasure Control Plans for electric substations and operational headquarters facilities. Also prepare and rehearse Emergency Action Plans in conjunction with SPCC regulations.
- Prepare coordination and sectionalizing studies for rural power systems. Studies include relay coordination analysis for transmission lines, substations, and distribution breakers, and down to the distribution line level. Perform system fault current studies for transmission, distribution, and industrial systems.
- Prepare system load flow studies for electric transmission and distribution systems. Analysis has included contingency planning and power factor impact on system voltage levels and losses.
- Work with FERC re-licensing of Catawba River Watershed by locating, surveying, and certifying distribution line crossings over the watershed. Have brought substandard crossings up to NESC and Corps of Engineers requirements based on survey and engineering analysis of the sag and tension of the electric line crossing as determined in the analysis.
- Design and perform feasibility studies for standby generator projects for industrial clients on rural and municipal electric systems including PURPA certifications.
- Select routes and sites for substation and transmission line projects. Work with right of way acquisition to attain The best routes and sites possible for these projects in an Imminent Domain environment.
- Provide expert witness testimony and litigation support in Civil cases including electrical contacts with electric power lines, industrial faults leading to damaged facilities and/or loss of product, and condition of electrical equipment.
- Perform system work order inspections for rural electric systems to certify that work has been done to the standards required by the Rural Utility Service.
- Perform pole attachment and joint use rate analysis, contract negotiation, attachment and NESC violation audits. Set up and manage compliance programs, joint trench projects, as well as run client joint use programs on an outsource basis. Clients include electric coops and municipal electric systems throughout the Carolinas.

2005 to Present:

Board Member and Partner

Facility Planning and Siting, LLC

421 Penman Street, Suite 100

Charlotte, NC 28203

Phone: 704.926.3781

Fax: 704.926.3799

Email: Dwight@fps-grp.com

Board member and partner interest in Landscape Architecture firm that had been a business unit of Framatome AMP and Duke Engineering Services. Company performs detailed siting analysis for major electric transmission lines, substations, generation stations including fossil and nuclear plants, site design for substations, litigation support for utility right of way acquisition including conditional use permits, environmental permitting services, NPDES permits, as well as the same services for private commercial projects.

- Company was established as an independent business in February, 2006.
- Clients include Duke Energy and SCANA Corp. along with numerous electric cooperatives in the Carolinas. Major Generation projects included the Duke W.S. Lee Nuclear Plant and the Cliffside Coal fired power plant.

June 1984 to April 1991:

Electrical Engineer

Electrical Consulting Engineers, Inc.

2407 North Tryon Street

Charlotte, North Carolina 28206

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- Performed design calculations, spot structures, prepare bid documents and manage 115 KV and 69 KV Transmission Line Projects;
- Prepared two year work plans and system planning reports for rural Electric Cooperatives in North Carolina and Virginia;
- Performed sectionalizing and coordination studies for Cooperatives in North Carolina;
- Assisted with field relay tests and substation start-ups;
- Performed design, bid and closeout for 115, 44 & 69 - 12.5 kV substation projects;
- Prepared borrower's environmental reports; and
- Performed work order inspections.

**May 1982 to December 1983:
Power Supply Technician
North Carolina Electric Membership Corporation**

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Web: www.ncemcs.com

Worked as a power supply technician while I was an engineering student at NC State University and was heavily involved in the following projects:

- Analyzed RTU deployment for statewide load management and SCADA system. Used SAS statistical analysis to deploy RTUs throughout the State of North Carolina to minimize total deployment costs;
- Worked with staff to analyze NCEMC financial models for the Catawba Nuclear plant purchase from Duke Energy;
- Developed model to analyze lease-purchase decisions for leased delivery points for coops with leased deliveries on the Duke Energy system; and
- Worked to develop statewide transmission system asset base and map for all North Carolina Electric Cooperatives.

Educational Background:

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|--------------------|---|
| 1974 – 1978 | Northwest Cabarrus High School, Concord, North Carolina Graduated – 1978, College preparatory study track |
| 1978 – 1984 | North Carolina State University, Raleigh, North Carolina Graduated – 1984 Bachelor of Science in Electrical Engineering |

Professional Qualifications and Affiliations:

Registered Professional Engineer:

| | |
|-----------------|-----------|
| North Carolina: | PE#15443 |
| South Carolina: | PE#12784 |
| Virginia: | PE#022245 |
| Georgia: | PE#032052 |

Member, Institute of Electrical and Electronics Engineers

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Central Electric Power Cooperative
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Exhibit B

FERRUCCI RUSSO P.C.

COUNSELLORS AT LAW

W. Mark Russo
mrusso@frlawri.com

July 22, 2009

Chairman of the Town of Johnston Zoning Board
Chairman of the Town of Johnston Planning Board
100 Irons Avenue
Johnston, Rhode Island 02919

RE: The Narragansett Electric Company d/b/a National Grid Rhode Island Reliability Project, SB-2008-002

Dear Chairmen:

At the request of the Town's expert Mr. Ted McGavran, we reviewed the Town's zoning dimensional specifications to determine what impact his recommendations would have on future construction in the Town.

In accord with its application to your respective Boards, the Narragansett Electric Company d/b/a National Grid's ("National Grid") right of way, on which the Rhode Island Reliability Project (the "Project") will be built, passes through the following zoning districts in the Town: R-40, R-20, B-2, B-3 and I-L.

Based on our review of the Town's zoning dimension specifications we determined the following impacts as a result of implementing Mr. McGavran's recommendations:

B-3 Zone

The Project passes through numerous lots zoned B-3. The B-3 district is intended to encourage the development of large scale retail/commercial, office or light manufacturing projects within the Town. The maximum height allowances in the B-3 district are 50' for retail stores, 65' for theaters, 40' for accessory buildings and 90' for hotels or offices included parapets and roof mounted equipment.

If a building were to be constructed in the B-3 district along the edge of the right of way up to the maximum allowable height, there would be safety issues as detailed by Mr. McGavran. For instance, there would be issues related to: roof mounted vertical elements being placed at a height where they could come into contact with the transmission lines, the proper grounding of buildings and swimming pools, as well as issues related to construction machinery and construction materials impacting the transmissions lines and/or transmission line structures.

R-40, R-20, B-2, and I-L Zones

The Project passes through at numerous lots zoned R-40, R-20 and B-2. The maximum height for main structures and accessory structures in the R-40, R-20 and B-2 zone are 35' while the I-L has a maximum height limit of 40'.

The concerns in these zones relate to construction along the edge of the right of way were there is only an approximately 30' transmission line clearance. Concerns in these zones include: the failure of accessory structures along the edge of the right of way, the proper grounding of buildings along the edge of the right of way, the proper grounding of swimming pools along the edge of the right of way, impacts on the transmission lines from vertical elements, and any construction related impacts on the transmission lines and/or transmission line structures.

Vertical Elements in the B-2 and I-L Zones

Additionally, The B-2 and I-L districts allow vertical elements to be added to buildings that exceed the maximum building height limit for the district as long as the element is set back from any lot line one additional foot for each foot by which it exceeds that maximum height limit. If Mr. McGavran's recommendations are taken into account, this provision in the zoning ordinance will need to be addressed. It potentially provides for the construction of vertical elements which could easily come into contact with a transmission line as the set back rules do not appear to take into account a set back from the right of way.

It appears that National Grid did not take into account many of the above detailed safety issues, when it developed the Project, or when it made the contention that any structure could be built right up to the edge of the right of way.

Further, as illustrated above, it appears that, under the Town's zoning dimension specifications, construction would not be safe up until the edge of the right of way. Therefore, as recommended by Mr. McGavran, the EFSB should impose a 20' construction setback from the edge of the right of way.

Sincerely,



W. MARK RUSSO

Exhibit B

Exhibit B

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

In re:

The Narragansett Electric :
Company d/b/a National Grid : Docket No. SB-2008-002
Rhode Island Reliability Project :

**The Town of Johnston Zoning Board of Review/Town of Johnston Planning Board
Advisory Opinion Proposed Limiting Conditions**

1. National Grid shall reimburse the Town pursuant to R.I. Gen. Laws § 42-98-9.1 and EFSB Rules of Practice and Procedure 1.21.
2. The EFSB should consider imposing a setback from the edge of the right of way of 20' for any new construction. *See* Expert Findings of Ted McGavran, P.E. attached hereto as exhibit A.
3. National Grid shall designate an employee to be contacted by Town Residents with any questions/concerns regarding the project.
4. All necessary permits from Federal and State agencies shall be acquired prior to construction.
5. National Grid shall provide Town with copies of all applications for any permits associated with the project within five (5) days of application submittal.
6. Upon reasonable notice to National Grid, the Town's designated representatives shall have the right to inspect the project site for conformance with permits issued by regulating agencies.
7. National Grid shall work with RIDOT to come up with a traffic mitigation plan during construction of the Project. National Grid shall be required to notify and include the Town in approving the traffic mitigation plan. Furthermore, there will be Town input and public notice in advance of finalizing the plan, so that abutting neighbors can have meaningful input.
8. National Grid shall email/mail construction schedules on a two (2) week cycle during the duration of the project to Town and abutters.
9. National Grid shall provide a Spill Prevention Plan detailing how it will control any oil, lubricants and/or other contaminants which might escape from any equipment at the site during construction or after construction.
10. National Grid shall provide funding for the engagement of an independent environmental consultant to monitor construction impacts.
11. Noise during construction shall be mitigated.

12. National Grid shall provide for solid waste disposal at a regulated and licensed landfill for any debris resulting from the construction.
13. Any outdoor lighting, during construction or after construction, shall be hooded and directed so as not to shine directly upon the abutting property or public roads.
14. National Grid shall provide an employee who can be contacted by the Town with any information that the Town requires regarding the status and location of the ROW.
15. National Grid shall provide, prior to construction, copies of easements granting the ROW to National Grid in the Town as well as the plans referenced in said easements.
16. National Grid shall review the ROW abutters' electrical grounding plans for buildings and/or swimming pools and/or structures at no cost to the Town or the abutters.
17. National Grid shall identify all existing structures including structures in the ROW and all proposed structures that it owns in the Town along with the cost of each structure.
18. National Grid shall commit to paying the Town at least \$2.5 million in additional, annual personal property tax revenue as a result of the new construction on the Project.
19. National Grid shall agree to a personal property tax rate in the Town, employed pursuant to R.I. Gen. Laws §44-5-12.1, of at least the current rate of \$56.00 per \$1,000.00.
20. Per Building Official at September 1 2009 hearing; The Town should inspect and permit foundations for any structures.