STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD

In re The Narragansett Electric Company	:	
d/b/a National Grid	:	Docket No. SB-2008-02
(Rhode Island Reliability Project)	:	

Testimony of

Susan Moberg, P.W.S

on behalf of

The Narragansett Electric Company
d/b/a National Grid

June 29, 2009

PREFILED TESTIMONY OF SUSAN MOBERG, PWS

Q. Please state your name and business address.

A. Susan Moberg, Vanasse Hangen Brustlin, Inc. (VHB), 10 Dorrance Street, Suite 400, Providence, Rhode Island.

Q. By whom are you employed and in what position?

A. I am employed by VHB as a Senior Project Manager and Manager of the Environmental Sciences Department in the Providence office.

Q. What are your responsibilities as Senior Project Manager and Manager of Environmental Sciences?

A. I am responsible for the management of various environmental investigation and permitting projects within the VHB Providence market area.

Q. Please describe your education, training and experience.

A. I received a Bachelor of Science Degree in Soil and Water Resource Science from the University of Rhode Island. I am a certified Professional Wetland Scientist with the Society of Wetland Scientists, a Professional Soil Scientist with the Society of Soil Scientists of Southern New England, a Rhode Island Department of Environmental Management Licensed Soil Evaluator and a Coastal Resources Management Council-certified Invasives Manager. I have sixteen years of experience performing environmental evaluation, investigation and permitting for various public and private sector projects. A copy of my vitae is attached as Attachment SM-1.

Q. Have you previously testified before the Energy Facility Siting Board?

A. Yes. I testified before the EFSB in the Southern Rhode Island Transmission Project, the E-183 transmission line relocation case and in the H-17 and G-185N transmission line reconductoring projects.

Q. Are you familiar with National Grid's Rhode Island Reliability Project (the "Project")?

A. Yes, I prepared the Environmental Report ("ER") submitted by National Grid for the Project and have also supervised the preparation of the Rhode Island Department of Environmental Management ("DEM") Freshwater Wetlands permit application and the Army Corps of Engineers ("ACOE") permit application for the Project.

Q. Are you familiar with the environmental conditions of the site of the Project?

A. Yes, I have studied the area which consists of the existing transmission line right-of-way (ROW) between the West Farnum Substation and the Kent County Substation and the substations (collectively the "Project Site.") I have driven the area on a number of occasions and visited specific locations. I also am very familiar with the study area based on many years of professional work in northern Rhode Island. I supervised the field data collection, wetland delineation, and monitoring activities performed by VHB for the Project.

Q. Please summarize the environmental conditions of this area.

A. The environmental conditions of the Project Site are described in Chapter 6 of the ER and can be summarized as follows:

Geology - The Study Area is located within the Seaboard Lowland section of the New England physiographic province. The Study Area consists of two areas of

contrasting topography and bedrock associated with the Narragansett Bay Group, West Bay: a hilly upland region underlain by igneous and metamorphic rocks, and a flat or gently rolling lowland region underlain by down folded sedimentary rocks. The depth of bedrock varies throughout the extent of the Study Area. Numerous rock outcrops are present throughout the ROW, with the exception of the Cranston section, which is relatively flat.

Soils - There are 29 named soil series that were mapped by the Natural Resources Conservation Service within the Project Site. The majority of these soils are moderately to excessively well drained. Eight of the soil series present within the Project Site are poorly to very poorly drained. There are eleven soil series present within the Project Site which are considered susceptible to erosion due to their texture and/or slope position. The Study Area also crosses 24 prime farmland soil map units.

Water Resources - The Project Site passes through three major watershed areas: Pawtuxet River, Woonasquatucket River, and Narragansett Bay. The Hunt-Annaquatucket/Pettaquamscutt Aquifer is a federally designated sole source aquifer within the Project Site.

There are several areas of 100 year frequency flood plain within the Project Site. These floodplains are associated with rivers, streams and larger wetland areas including Hardig Brook, the Pawtuxet River, the Pocasset River, Stillwater Pond, an unnamed swamp in Smithfield, Cedar Swamp in North Smithfield, Furnace

Hill Brook, Cherry Brook, Pocasset Pond, Reaper Brook, the Woonasquatucket River, and Stillwater Reservoir.

According to DEM's 2006 303(d) List of Impaired Waters, there nine waterbodies within the Project Study Area that are not meeting the DEM Designated Use Classification due to various water quality impairments.

Vegetation - The Project Site contains a variety of terrestrial and aquatic habitat types including: oak/pine forest, old field, upland scrub-shrub and managed lawn, forested wetland, shrub sapling swamp, shallow marsh and wet meadow communities.

Wetlands - One hundred thirty five state regulated wetlands have been identified and delineated within the Project Site. The wetland boundaries were mapped by VHB and have been used in the planning and design of the facility. Wetland types present include swamp, emergent plant community, pond, stream, river, marsh, shrub/forested wetland, floodplain, area subject to storm flowage, and special aquatic site. A Freshwater Wetlands Permit application will be filed with the DEM for the Project.

Wildlife - The Project Site presently provides positive wildlife habitat as it serves as both a wildlife corridor and edge between the developed areas in the communities and the roadway facilities. Due to its managed vegetative cover, the ROW provides a unique shrub and old field cover type favored by many species of birds, which is diminishing within the region due to development pressures. A

variety of terrestrial and avian wildlife are found within the Project Site. Coordination with the RI Natural Heritage Program has identified two Rare, Threatened or Endangered species within the Project Site. Coordination with the DEM will occur as part of the Freshwater Wetlands Permit application review process. Coordination with the US Fish and Wildlife Service has not identified any Rare, Threatened or Endangered species within the Project Site.

Q. Have you examined the potential impacts of the Project?

A. Yes, I have examined the environmental impacts associated with the construction and operation of the Project. The impact analysis was performed in the following steps:

- Environmental data was compiled for a variety of natural and social resources within a Study Area which consists of a 5,000 foot wide corridor centered on the existing ROW, and the Substations. The data was developed based upon detailed field examinations, utilization of published studies, and the incorporation of environmental constraint mapping.
- Following the assessment of the baseline conditions that focused on the identification of areas of potential constraint and sensitivity, we worked with National Grid engineers to design the Project so as to minimize the environmental impact. This was accomplished by field review of the proposed Project assessing the methods and techniques for construction. VHB biologists together with National Grid engineers worked in a collaborative effort to site proposed structures to minimize impacts on wetlands, water resources and community

features. In order to avoid land disturbance, construction access for the Project will utilize existing access roads, or temporary access routes. A variety of structure types were evaluated, and the preferred structure type was selected based on the small area of disturbance required to install that type, among other considerations.

Q. Please summarize the types of environmental impacts you have reviewed.

A. Environmental impacts that can be anticipated from the Project are described in Chapter 8 of the ER and can be summarized as follows:

Vegetation - Construction of the Project will require the management of vegetation in proximity to the new and reconductored lines and at the substation sites. Vegetation management will consist of the removal of vegetation at proposed new structure locations. In addition, approximately 6.5 acres of vegetation in Warwick and 0.5 acres of vegetation in North Smithfield will be cleared for the new line. Existing, low growing vegetation will be preserved where possible.

Soil Erosion - In order to control the potential soil disturbance associated with the construction of the Project, a detailed Best Management Practice ("BMP") Plan has been prepared for the Project. The plan has been prepared in accordance with State regulations governing erosion and sediment control. In order to assure compliance with the plan, National Grid will hire an Environmental Inspector to ensure that the BMPs are followed.

Wildlife – Generally, the project may result in the displacement of wildlife due to disturbance associated with construction and the operation of construction equipment on the ROW. Larger, more mobile species, such as eastern white tailed deer or red fox, will leave the construction area. Smaller and less mobile animals such as small mammals, reptiles, and amphibians may be killed during vegetation clearing and the transmission line construction. It is anticipated that existing wildlife utilization patterns will resume and population sizes recover during the operational phase of the project.

Breeding birds utilize the cleared transmission ROW and adjacent habitats for nesting, cover, and feeding. Construction of the Project will mostly occur in existing cleared ROW and will not result in large changes to existing vegetation cover types that might result in long term impacts to existing avian populations. Construction will occur over several years. Construction activities on individual transmission line towers and foundations occur in discreet areas and may involve some localized negative effects on avian breeding success for areas proximate to the structure sites. Activities will not occur across the entire ROW simultaneously and at any given time during the construction period most of the transmission line ROW will remain undisturbed and continue to provide nesting habitat.

Wetlands – The Project has been designed to minimize both temporary and permanent disturbance of wetlands. A total of 178 transmission structures have been sited within state regulated wetlands. Total permanent impact to state-

regulated wetlands resulting from these structures is 8,953 square feet. These totals are based on the assumption that each transmission structure requires a steel reinforced concrete foundation. Additional wetland impacts are proposed in Smithfield for constructing a stone ford stream crossing, and improvements to a driveway at the West Farnum Substation will result in an additional 6,228 square feet of wetland alteration. Temporary disturbance associated with access to or staging areas for equipment at proposed structure locations for the entire Project is estimated to be 32.2 acres. This temporary disturbance was kept to a minimum by a thorough investigation of temporary access routes, and the use of existing access routes wherever present. Management of vegetation within wetlands will result in the conversion of approximately 0.79 acres of forested wetland to shrub wetland. Based upon VHB's review of many recent studies regarding wildlife utilization of wetlands, it appears that the shrub wetland cover type has diminished within the New England region, and that maintained shrub cover types have a positive impact on wildlife species density and diversity.

Water Resources - The Project will not have any adverse impact on surface or ground water resources. Several of the proposed structures will be located within flooded backwater areas associated with the major streams or rivers. Temporary impacts to waterbodies will be avoided or minimized through the use of existing roads that provide construction access around waterbodies, or through the use of appropriate construction practices that limit disturbance. These access routes and

BMPs are detailed on the erosion control plan. The substations contain transformers that utilize a mineral oil dielectric fluid for insulation and cooling. National Grid implements appropriate spill containment measures at all substations, and maintains Spill Prevention Control and Countermeasures Plans for each substation consistent with Federal regulations as described in §8.4.2 of the ER.

Noise - The Project contains two distinct components: transmission lines and substations. Under normal operating conditions, a transmission line is not a significant noise generator. Fans and equipment associated with the substations do generate noise. National Grid undertook an investigation to characterize and assess the existing noise levels at the Kent County Substation site. Modeling of future noise levels under the build condition determined that the Kent County Substation will comply with the requirements of the Warwick Noise Ordinance.

Visual – The visual impact of the Project was assessed by EDR and is addressed in the EDR reports which were filed with the EFSB application, in Section 8.10 of the ER, and in EDR's prefiled testimony.

Cultural Resources – Initial investigations to determine the presence of archaeological and historical resources have been undertaken by The Public Archaeology Laboratory, Inc. and are addressed in Mr. Beron's testimony.

Socioeconomic - The Project will not cause any adverse impacts to any of the communities within study area. The Project will provide a more reliable source of

power that will support local economic efforts. It is important to note that the Project will not cause any permanent disruption to any areas outside the existing Project Site.

Q. Have you prepared an erosion and sediment control plan in compliance with local ordinances?

A. Yes, we have prepared an erosion and sediment control plan as part of our DEM Formal Wetlands Application. The plan complies with the requirements of the municipal ordinances, and applications will be filed with each of the municipalities in early July 2009.

Q. Please summarize the requirements of the ordinances.

A. The ordinances require the control of soil erosion through the use of accepted BMP measures as described in the Rhode Island Soil Erosion and Sediment Control Handbook.

Q. In your opinion does the Project, including the erosion and sediment control measures which National Grid has proposed, comply with the erosion and sediment control ordinances?

A. Yes, it does. The plan details proposed access routes which were selected in order to minimize disturbance to natural resources, the appropriate use of BMPs to effectively minimize sediment generation and transport, and appropriate stabilization measures for disturbed areas once construction is complete. An Environmental Inspector will assure compliance with the proposed plans.

Q. Have you reviewed the comments of the Warwick Planning Board regarding consistency

of the Project with the Warwick Comprehensive Plan?

A. Yes. The Warwick Planning Board's Advisory Opinion characterized the Project as inconsistent with the City's Comprehensive Plan relative to the Project's incompatibility with adjacent land uses. The City Planner observed that there is no vegetated buffer along the transmission line ROW and that the Project would cause visual impacts for abutters. The Advisory Opinion did not address the many ways that the Project supports the goals of the Comprehensive Plan in terms of providing reliable electricity service to residents and existing businesses, as well as providing robust electrical service as an attractant for new businesses looking for potential development sites.

Q. Finally, Ms. Moberg, based upon your knowledge of the Project Site and the Project as proposed by National Grid, do you have an opinion as to whether the Project will cause unacceptable harm to the environment?

A. Yes, I do. In my opinion, the Project as proposed by National Grid will not cause unacceptable harm to the environment. National Grid 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 proposed location of the line in an existing utility ROW.

Q. Does this conclude your testimony?

A. Yes, it does.

ATTACHMENT

SM-1 Curriculum Vitae