Robinson+Cole

GEORGE W. WATSON III

One Financial Plaza, Suite 1430
Providence, RI 02903-2485
Direct (401) 709-3351
Fax (401) 709-3399
gwatson@rc.com

April 11, 2017

Todd Bianco, Coordinator
Energy Facility Siting Board
89 Jefferson Boulevard
Warwick, RI 02888

Re: The Narragansett Electric Company d/b/a National Grid
Aquidneck Island Reliability Project
Docket No. SB-2016-01

Dear Mr. Bianco:

I am enclosing for filing on behalf of The Narragansett Electric Company d/b/a National Grid an original and six (6) copies of its responses to the Energy Facility Siting Board's Record Request of March 28, 2017. I am sending electronic copies to the Service List and will provide a hard copy to anyone that requests it.

Sincerely,

George W. Watson III

Enclosure

Copy to: Patricia S. Lucarelli, Esq.
Docket SB-2016-01 Service List *(via e-mail)*

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD

IN RE:	**THE NARRAGANSETT ELECTRIC COMPANY**	**:**	
	d/b/a NATIONAL GRID – AQUIDNECK ISLAND	**:**	
	RELIABILITY PROJECT IN PORTSMOUTH	**:**	**SB-2016-01**
	AND MIDDLETOWN, RHODE ISLAND	**:**	

THE NARRAGANSETT ELECTRIC COMPANY d/b/a NATIONAL GRID'S RESPONSE TO THE ENERGY FACILITY SITING BOARD'S RECORD REQUESTS OF MARCH 28, 2017

EFSB RECORD REQUEST NO. 1:

Please describe the source of the sounds from the existing Jepson Substation.

RESPONSE NO. 1:

Currently there are two sounds emanating from the existing substation. First, there is a low level humming sound from the transformers. This is the normal sound associated with substation transformers. Second, there is also a crackling sound at this particular substation. This sound is a result of a damaged insulator in the 69 kV ring bus which is causing corona discharge to occur. The corona discharge noise is typically louder during wet weather. Repair would involve extensive outage planning as the 69 kV ring bus would have to be de-energized. The corona discharge sound will go away when the existing substation is taken out of service.

The expected transformer sound levels of the new transformers on the proposed site are described in Daniel McIntyre's Prefiled Testimony on page 18 line 20 to page 19 line 7. According to the most recent sound study using the lower noise transformers that will be ordered for this substation, the sound increase over ambient sound would be barely perceptible to the human ear. This analysis assumes the transformers are operating at full load with fans on which only occurs during certain limited peak electricity demand conditions.

Response prepared by or under the supervision of
Kalpana Dulipsingh and Daniel McIntyre

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD

IN RE:	**THE NARRAGANSETT ELECTRIC COMPANY**	**:**	
	d/b/a NATIONAL GRID – AQUIDNECK ISLAND	**:**	
	RELIABILITY PROJECT IN PORTSMOUTH	**:**	**SB-2016-01**
	AND MIDDLETOWN, RHODE ISLAND	**:**	

THE NARRAGANSETT ELECTRIC COMPANY d/b/a
NATIONAL GRID'S RESPONSE TO
THE ENERGY FACILITY SITING BOARD'S
RECORD REQUESTS OF MARCH 28, 2017

EFSB RECORD REQUEST NO. 2:

How many trees will be cleared at the new site?

RESPONSE NO. 2:

As noted in Susan Moberg's Prefiled Rebuttal Testimony at page 3, lines 7-14, approximately 1.5 acres of young trees and shrubs will be cleared for the construction of the new Jepson Substation.

Response prepared by or under the supervision of
Susan Moberg

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD

IN RE:	**THE NARRAGANSETT ELECTRIC COMPANY**	**:**	
	d/b/a NATIONAL GRID – AQUIDNECK ISLAND	**:**	
	RELIABILITY PROJECT IN PORTSMOUTH	**:**	**SB-2016-01**
	AND MIDDLETOWN, RHODE ISLAND	**:**	

THE NARRAGANSETT ELECTRIC COMPANY d/b/a
NATIONAL GRID'S RESPONSE TO
THE ENERGY FACILITY SITING BOARD'S
RECORD REQUESTS OF MARCH 28, 2017

EFSB RECORD REQUEST NO. 3:

What is the purpose of the pink flags to the northwest of the proposed substation construction area?

RESPONSE NO. 3:

The pink flags are paired with blue flags and they mark the limits of the wetlands. These limits are shown on Attachment SM-2 that was filed with Susan Moberg's Prefiled Rebuttal Testimony.

16293866-v5

Response prepared by or under the supervision of
Susan Moberg

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD

IN RE:	**THE NARRAGANSETT ELECTRIC COMPANY**	**:**	
	d/b/a NATIONAL GRID – AQUIDNECK ISLAND	**:**	
	RELIABILITY PROJECT IN PORTSMOUTH	**:**	**SB-2016-01**
	AND MIDDLETOWN, RHODE ISLAND	**:**	

THE NARRAGANSETT ELECTRIC COMPANY d/b/a NATIONAL GRID'S RESPONSE TO THE ENERGY FACILITY SITING BOARD'S RECORD REQUESTS OF MARCH 28, 2017

EFSB RECORD REQUEST NO. 4:

What is the distance relative to home(s) and the nearest transformer at the existing Jepson Substation? Please provide the proposed distance of the homes and the nearest transformers of the proposed new Substation.

RESPONSE NO. 4:

The table below provides the approximate distances between homes and existing/proposed transformers.

Existing Jepson Substation	
Address	Distance
504 Jepson Lane, Middletown, RI	250 feet
Proposed Jepson Substation	
Address	Distance
504 Jepson Lane, Middletown, RI	255 feet
511 Jepson Lane, Middletown, RI	200 feet
519 Jepson Lane, Middletown, RI	180 feet
437 Jepson Lane, Portsmouth, RI	300 feet

For comparison purposes we have also provided the approximate distances between homes and proposed transformers if the new substation were constructed on the existing site.

Response prepared by or under the supervision of
Daniel McIntyre

Address	New Substation on Proposed Site	New Substation on Existing Site
504 Jepson Lane, Middletown, RI	255 feet	75 feet
511 Jepson Lane, Middletown, RI	200 feet	160 feet
519 Jepson Lane, Middletown, RI	175 feet	320 feet
437 Jepson Lane, Portsmouth, RI	300 feet	480 feet

Response prepared by or under the supervision of
Kalpana Dulipsingh and Daniel McIntyre

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD

IN RE:	**THE NARRAGANSETT ELECTRIC COMPANY**	**:**	
	d/b/a NATIONAL GRID – AQUIDNECK ISLAND	**:**	
	RELIABILITY PROJECT IN PORTSMOUTH	**:**	**SB-2016-01**
	AND MIDDLETOWN, RHODE ISLAND	**:**	

THE NARRAGANSETT ELECTRIC COMPANY d/b/a
NATIONAL GRID'S RESPONSE TO
THE ENERGY FACILITY SITING BOARD'S
RECORD REQUESTS OF MARCH 28, 2017

EFSB RECORD REQUEST NO. 5:

What are the plans for the existing buildings and structures on the existing Jepson Substation property?

RESPONSE NO. 5:

Once the new substation is in service, the existing substation equipment and structures will be removed. The area will be restored as a vegetated transmission right of way. National Grid is also planning to remove the storage building located near Jepson Lane. Attachment DM-7 of Daniel McIntyre's Prefiled Rebuttal Testimony is a rendering of the property post construction.

Response prepared by or under the supervision of
Daniel McIntyre

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD

IN RE:	**THE NARRAGANSETT ELECTRIC COMPANY**	**:**	
	d/b/a NATIONAL GRID – AQUIDNECK ISLAND	**:**	
	RELIABILITY PROJECT IN PORTSMOUTH	**:**	**SB-2016-01**
	AND MIDDLETOWN, RHODE ISLAND	**:**	

THE NARRAGANSETT ELECTRIC COMPANY d/b/a NATIONAL GRID'S RESPONSE TO THE ENERGY FACILITY SITING BOARD'S RECORD REQUESTS OF MARCH 28, 2017

EFSB RECORD REQUEST NO. 6:

What is the setback of the substation fence from the road for the existing substation, proposed substation, and the alternative of building the new substation on the existing substation site?

RESPONSE NO. 6:

The fence for the existing Jepson Substation, as measured along the substation driveway, is setback approximately 285 feet from the property line and approximately 290 feet from the road pavement.

The setbacks of the proposed substation fence from Jepson Lane will be approximately 30 feet from the property line and approximately 35 feet from the road pavement. As part of its mitigation, National Grid will plant landscaping in its 30 foot setback area. The landscaping plan was submitted as Attachment DM-6 to Daniel McIntyre's Prefiled Rebuttal Testimony.

If the new substation were constructed on the existing site, the fence would be set back 5 feet from the property line and approximately 10 feet from the road pavement.

Response prepared by or under the supervision of
Daniel McIntyre

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD

IN RE:	**THE NARRAGANSETT ELECTRIC COMPANY**	**:**	
	d/b/a NATIONAL GRID – AQUIDNECK ISLAND	**:**	
	RELIABILITY PROJECT IN PORTSMOUTH	**:**	**SB-2016-01**
	AND MIDDLETOWN, RHODE ISLAND	**:**	

THE NARRAGANSETT ELECTRIC COMPANY d/b/a NATIONAL GRID'S RESPONSE TO THE ENERGY FACILITY SITING BOARD'S RECORD REQUESTS OF MARCH 28, 2017

EFSB RECORD REQUEST NO. 7:

What is the existing height for the angle structures at Elaine Avenue?

RESPONSE NO. 7:

There are two 3-pole angle structures at Elaine Avenue – one for each line. Each structure consists of two poles that are approximately 43 feet above ground level and one pole that is approximately 52 feet above ground level. Both structures are numbered 113 and their position is shown on ER Figure 2-2 Plan 9 of 17.

Response prepared by or under the supervision of
Gerald Pepi and Pauline Bassil

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD

IN RE:	**THE NARRAGANSETT ELECTRIC COMPANY**	**:**	
	d/b/a NATIONAL GRID – AQUIDNECK ISLAND	**:**	
	RELIABILITY PROJECT IN PORTSMOUTH	**:**	**SB-2016-01**
	AND MIDDLETOWN, RHODE ISLAND	**:**	

THE NARRAGANSETT ELECTRIC COMPANY d/b/a
NATIONAL GRID'S RESPONSE TO
THE ENERGY FACILITY SITING BOARD'S
RECORD REQUESTS OF MARCH 28, 2017

EFSB RECORD REQUEST NO. 8:

What is the proposed spacing between the wires of the upgraded lines?

RESPONSE NO. 8:

The wires (phases) on each structure will be 12 feet apart. A cross section of the proposed new structures is provided as ER Figure 4-1 and 4-2. Figure 4-1 shows the replacement of existing single circuit H-frame structures. Figure 4-2 shows the replacement of existing double circuit 3 pole structures.

Response prepared by or under the supervision of
Gerald Pepi and Pauline Bassil

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD

IN RE:	**THE NARRAGANSETT ELECTRIC COMPANY**	**:**	
	d/b/a NATIONAL GRID – AQUIDNECK ISLAND	**:**	
	RELIABILITY PROJECT IN PORTSMOUTH	**:**	**SB-2016-01**
	AND MIDDLETOWN, RHODE ISLAND	**:**	

THE NARRAGANSETT ELECTRIC COMPANY d/b/a NATIONAL GRID'S RESPONSE TO THE ENERGY FACILITY SITING BOARD'S RECORD REQUESTS OF MARCH 28, 2017

EFSB RECORD REQUEST NO. 9:

What is the construction sequence for the replacement of the H frame structures at the Elaine Avenue site?

RESPONSE NO. 9:

The construction sequence for this structure replacement is the same for all of the replacement structures. The sequence is described in Section 4.2 of the Environmental Report and in Endrit Fiku's Prefiled Testimony on page 8, lines 1-20.

Construction will proceed as follows:

> The first activities to take place will be vegetation mowing/clearing within the right-of-way ("ROW") as necessary, and the installation of appropriate erosion and sedimentation control devices. These activities are detailed in Sections 4.2.1 and 4.2.2 of the ER. The next step in the construction sequence is to perform access road and work pad construction and maintenance, including the construction of temporary swamp mat access roads where required. Improving the access along the ROW, which is described in Section 4.2.3 of the ER, will allow construction personnel and equipment to reach work locations in a safe, efficient and environmentally sensitive manner. After access has been improved along the corridor, the next step is the installation of foundations and pole structures as described in Section 4.2.4 of the ER. Following the erection of transmission pole structures, insulators will be installed on the structures and the existing wires will be transferred to the new structures. The existing structures will then be removed and disposed of properly. ROW restoration efforts, including final grading and stabilization

Response prepared by or under the supervision of
Endrit Fiku

of disturbed areas, will be completed following the construction operations. Throughout the entire construction process, National Grid will retain the services of an environmental monitor whose primary responsibility will be to ensure compliance with federal, state, and local permit requirements and National Grid company policies.

Response prepared by or under the supervision of
Endrit Fiku

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD

IN RE:	**THE NARRAGANSETT ELECTRIC COMPANY**	**:**	
	d/b/a NATIONAL GRID – AQUIDNECK ISLAND	**:**	
	RELIABILITY PROJECT IN PORTSMOUTH	**:**	**SB-2016-01**
	AND MIDDLETOWN, RHODE ISLAND	**:**	

THE NARRAGANSETT ELECTRIC COMPANY d/b/a
NATIONAL GRID'S RESPONSE TO
THE ENERGY FACILITY SITING BOARD'S
RECORD REQUESTS OF MARCH 28, 2017

EFSB RECORD REQUEST NO. 10:

What is a "temporary outage"?

RESPONSE NO. 10:

An "outage" or "temporary outage" is the planned removal of a transmission line from service to allow work on or near that transmission line to be conducted safely. Transmission line outages are typically planned and scheduled so as to avoid any interruption of electric service to customers. In this particular case, the existing transmission system between the Dexter and Jepson substations consists of two 69 kV transmission lines. Only one of the two lines will be taken out of service at any given time during project construction, generally in seasonal off-peak periods, so as to allow the construction work without loss of service to customers.

Response prepared by or under the supervision of
Endrit Fiku

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD

IN RE:	**THE NARRAGANSETT ELECTRIC COMPANY**	**:**	
	d/b/a NATIONAL GRID – AQUIDNECK ISLAND	**:**	
	RELIABILITY PROJECT IN PORTSMOUTH	**:**	**SB-2016-01**
	AND MIDDLETOWN, RHODE ISLAND	**:**	

THE NARRAGANSETT ELECTRIC COMPANY d/b/a
NATIONAL GRID'S RESPONSE TO
THE ENERGY FACILITY SITING BOARD'S
RECORD REQUESTS OF MARCH 28, 2017

EFSB RECORD REQUEST NO. 11:

Will the structures and wires in the right of way near the Portsmouth DPW site be replaced?

RESPONSE NO. 11:

Yes. As shown on ER Figure 2-1, Plans 14 and 15, the 61/62 transmission line poles and wires will be replaced with new poles and wires. The new structures will be located in the same alignment as the existing lines and within 10 to 20 feet of the existing structures.

16293866-v5

Response prepared by or under the supervision of
Endrit Fiku

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD

IN RE:	**THE NARRAGANSETT ELECTRIC COMPANY**	**:**	
	d/b/a NATIONAL GRID – AQUIDNECK ISLAND	**:**	
	RELIABILITY PROJECT IN PORTSMOUTH	**:**	**SB-2016-01**
	AND MIDDLETOWN, RHODE ISLAND	**:**	

THE NARRAGANSETT ELECTRIC COMPANY d/b/a
NATIONAL GRID'S RESPONSE TO
THE ENERGY FACILITY SITING BOARD'S
RECORD REQUESTS OF MARCH 28, 2017

EFSB RECORD REQUEST NO. 12:

How long will the proposed steel structures last?

RESPONSE NO. 12:

With periodic inspection and maintenance, the life expectancy of weathering steel poles installed in this area is over 100 years.

Response prepared by or under the supervision of
Gerald Pepi and Pauline Bassil

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD

IN RE:	**THE NARRAGANSETT ELECTRIC COMPANY**	**:**	
	d/b/a NATIONAL GRID – AQUIDNECK ISLAND	**:**	
	RELIABILITY PROJECT IN PORTSMOUTH	**:**	**SB-2016-01**
	AND MIDDLETOWN, RHODE ISLAND	**:**	

THE NARRAGANSETT ELECTRIC COMPANY d/b/a NATIONAL GRID'S RESPONSE TO THE ENERGY FACILITY SITING BOARD'S RECORD REQUESTS OF MARCH 28, 2017

EFSB RECORD REQUEST NO. 13:

Will the sound at Dexter Substation change?

RESPONSE NO. 13:

Removal of the 115 kV to 69 kV transformers will reduce the noise at Dexter Substation.

Response prepared by or under the supervision of
Kalpana Dulipsingh and Daniel McIntyre

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ENERGY FACILITY SITING BOARD

IN RE:	**THE NARRAGANSETT ELECTRIC COMPANY**	**:**	
	d/b/a NATIONAL GRID – AQUIDNECK ISLAND	**:**	
	RELIABILITY PROJECT IN PORTSMOUTH	**:**	**SB-2016-01**
	AND MIDDLETOWN, RHODE ISLAND	**:**	

THE NARRAGANSETT ELECTRIC COMPANY d/b/a NATIONAL GRID'S RESPONSE TO THE ENERGY FACILITY SITING BOARD'S RECORD REQUESTS OF MARCH 28, 2017

EFSB RECORD REQUEST NO. 14:

What is the distance of the house closest to Dexter Substation?

RESPONSE NO. 14:

The two homes closest to the Dexter substation (187 and 191 Freeborn Street) are each approximately 490 feet from the substation fence line.

Response prepared by or under the supervision of
Daniel McIntyre