

May 15, 2015

**VIA HAND DELIVERY & ELECTRONIC MAIL**

Luly E. Massaro, Commission Clerk  
Rhode Island Public Utilities Commission  
89 Jefferson Boulevard  
Warwick, RI 02888

**RE: Docket 2509 – Storm Contingency Fund  
February 14, 2015 Storm Summary Report**

Dear Ms. Massaro:

In accordance with Rhode Island Public Utilities Commission (PUC) Order No. 15360 (August 19, 1997) and paragraph 4(a) of the Joint Proposal and Settlement in Lieu of Comments Submitted by The Narragansett Electric Company<sup>1</sup> and the Division of Public Utilities and Carriers (the Settlement) approved by the PUC in Docket 2509, I have enclosed ten (10) copies of National Grid's summary report on the planning and restoration activities associated with the February 14, 2015 Storm Neptune (Winter Storm Neptune or the storm), which will likely qualify for inclusion in the Company's Storm Contingency Fund. Paragraph 4(b) of the Settlement requires the Company to file with the PUC within 90 days after the storm a report providing a description of the storm along with a summary of the extent of the damage to the Company's system, including the number of outages and length of the outages.

A supplemental report detailing the incremental restoration costs caused by Winter Storm Neptune will be submitted to the PUC once the total costs have been accumulated by the Company, and final accounting of storm costs has been completed.

Thank you for your attention to this transmittal. If you have any questions regarding this filing, please contact me at (781) 907-2153.

Very truly yours,



Celia B. O'Brien

Enclosure

cc: Docket 2509 Service List  
Leo Wold, Esq.  
Steve Scialabba, Division

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<sup>1</sup> The Narragansett Electric Company d/b/a National Grid (referred to herein as National Grid or the Company).

Certificate of Service

I hereby certify that a copy of the cover letter and any materials accompanying this certificate was electronically transmitted to the individuals listed below.

Paper copies of this filing are being hand delivered to the Rhode Island Public Utilities Commission and to the Rhode Island Division of Public Utilities and Carriers.



\_\_\_\_\_  
Joanne M. Scanlon

May 15, 2015  
Date

**Docket No. 2509 – National Grid – Storm Fund  
Service List as of 5/15/15**

<b>Name/Address</b>	<b>E-mail</b>	<b>Phone</b>
Celia B. O'Brien, Esq. National Grid 280 Melrose St. Providence, RI 02907	<a href="mailto:Jennifer.hutchinson@nationalgrid.com">Jennifer.hutchinson@nationalgrid.com</a> ;	401-784-7288
	<a href="mailto:Thomas.teehan@nationalgrid.com">Thomas.teehan@nationalgrid.com</a> ;	
	<a href="mailto:Celia.obrien@nationalgrid.com">Celia.obrien@nationalgrid.com</a> ;	
	<a href="mailto:Joanne.scanlon@nationalgrid.com">Joanne.scanlon@nationalgrid.com</a> ;	
	<a href="mailto:Raquel.webster@nationalgrid.com">Raquel.webster@nationalgrid.com</a> ;	
Leo Wold, Esq. Dept. of Attorney General 150 South Main St. Providence, RI 02903	<a href="mailto:LWold@riag.ri.gov">LWold@riag.ri.gov</a> ;	401-222-2424
	<a href="mailto:Steve.scialabba@dpuc.ri.gov">Steve.scialabba@dpuc.ri.gov</a> ;	
	<a href="mailto:James.lanni@dpuc.ri.gov">James.lanni@dpuc.ri.gov</a> ;	
	<a href="mailto:Al.contente@dpuc.ri.gov">Al.contente@dpuc.ri.gov</a> ;	
	<a href="mailto:Thomas.kogut@dpuc.ri.gov">Thomas.kogut@dpuc.ri.gov</a> ;	
	<a href="mailto:Dmacrae@riag.ri.gov">Dmacrae@riag.ri.gov</a> ;	
Greg Booth PowerServices, Inc 1616 E. Millbrook Road, Suite 210 Raleigh, NC 27609	<a href="mailto:Gbooth@powerservices.com">Gbooth@powerservices.com</a> ;	919-256-5900
<b>File an original &amp; 9 copies w/:</b> Luly E. Massaro, Commission Clerk Public Utilities Commission 89 Jefferson Blvd. Warwick, RI 02888	<a href="mailto:Luly.massaro@puc.ri.gov">Luly.massaro@puc.ri.gov</a> ;	401-780-2107
	<a href="mailto:Todd.bianco@puc.ri.gov">Todd.bianco@puc.ri.gov</a> ;	
	<a href="mailto:Alan.nault@puc.ri.gov">Alan.nault@puc.ri.gov</a> ;	
	<a href="mailto:Amy.dalessandro@puc.ri.gov">Amy.dalessandro@puc.ri.gov</a> ;	

National Grid

The Narragansett Electric Company

**Report on  
February 14, 2015 Event,  
Damage Assessment and  
Service Restoration Efforts**

May 15, 2015

Docket No. 2509

**Submitted to:**  
Rhode Island Public Utilities Commission

Submitted by:  
**nationalgrid**

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**REPORT ON BEHALF OF  
THE NARRAGANSETT ELECTRIC COMPANY d/b/a NATIONAL GRID  
ON THE FEBRUARY 14, 2015 STORM PREPAREDNESS, DAMAGE ASSESSMENT,  
AND SERVICE RESTORATION EFFORTS**

**I. EXECUTIVE SUMMARY**

The Narragansett Electric Company d/b/a National Grid (National Grid or the Company) presents the following report on the planning and restoration activities associated with the February 14, 2015 Winter Storm Neptune (Winter Storm Neptune or the storm), which began in the Midwest United States and traveled across the country to impact the New England region. For pre-planning purposes, the storm was initially classified to be a Level 4 emergency event (i.e., up to three percent of customers impacted, 750 lines of outage and a one-day restoration effort). On February 14, based on the forecast, the storm was reclassified to be a Level 3 emergency event (i.e., up to nine percent of customers impacted, < 1000 lines of outage and a three-day restoration effort). The storm was projected to bring hazard winds, and snow that could potentially cause significant damage to the Company's electric infrastructure. While Winter Storm Neptune brought significant damage to the Midwest and to other parts of New England, the impact and power outages were significantly less than anticipated in Rhode Island, impacting approximately 3,650 (approximately 2,900 at peak) of the Company's customers. Overall, less than one percent of the Company's customers in Rhode Island experienced outages.

The Company began preparing for the storm on Wednesday morning, February 11, 2015, with its first pre-event Operations storm call. The Company followed its Emergency Response Plan (ERP) and mobilized employees and contractors for the restoration using a damage forecast based on its experience in previous storms. As part of its preparation efforts, the Company also contacted contractors from outside the Company's service territory to secure resources to help with restoration and also contacted other utilities to request additional resources. Using its own crews and contractor resources, the Company restored power to 70 percent of its Rhode Island customers by approximately 10:30 p.m. on Sunday, February 15. The final customer was restored within 30 minutes after that time on the same evening.

The Company is grateful for the support of customers, employees, state and local officials, and public safety officials, who experienced the effects of Winter Storm Neptune and were an integral part of the Company's restoration efforts.

**II. INCIDENT ANTICIPATION**

**A. Determination of Incident Classification**

The Regional Emergency Operations Center (EOC) was located in Worcester, Massachusetts, and opened at approximately 7:00 a.m., February 15, 2015. A branch EOC was established and opened in Providence, Rhode Island at 6:00 a.m. the same day. As noted below,

a New England Regional Incident Commander was named, and was primarily responsible for establishing the projected and actual Incident Classification level for the storm.

Factors considered in initially establishing or revising the expected incident classification level included:

- Expected number of customers without service;
- Expected duration of the restoration event;
- Recommendations of the Planning Section Chief, Transmission and Distribution Control Centers, and other key staff;
- Current operational situation (number of outages, resources, supplies, etc.);
- Current weather conditions;
- Damage appraisals;
- Forecasted weather conditions;
- Restoration priorities;
- Forecasted resource requirements; and
- Forecasted scheduling and the pace of restoration work crews.

Through the operation storm conference calls, the New England Regional Incident Commander communicated the incident classification to Company leadership and organizations that the Company expected to engage in restoration or support activities. The New England Regional Incident Commander was located in Worcester, Massachusetts. A Branch Director who was in charge of Rhode Island restoration was located in Providence, Rhode Island.

#### **B. Activation of Incident Command System (ICS)**

In the days leading up to the storm, prior to activation of the ICS, several operational calls were held among operations management personnel to discuss the planning efforts for the possibility of a severe winter storm forecasted to bring hazard wind conditions to New England. As a result of these calls, the Company decided to open a storm room in Providence at approximately 6:00 a.m. on Sunday, February 15, to support Rhode Island restoration.

In accordance with the ERP and ICS, National Grid activated the New England Regional Incident Commander on Wednesday morning, February 11, 2015. The New England Regional Incident Commander then activated the Rhode Island Branch Director and several other Branch Directors in Massachusetts. Thereafter, all the Incident Commanders activated a number of positions at their discretion, considering the level of response likely required for the event. Throughout the restoration effort, the Company activated additional ICS positions as operating conditions warranted.

#### **C. Determination of Crew Needs and Pre-Staging**

Given the potential magnitude of the storm and severity of hazard winds, the Company secured crews, in advance, from its alliance vendors and other outside contractors to support restoration efforts for all of New England as part of its regional preparation for the storm consistent with its ERP. The Company had a contingent of internal Rhode Island distribution

line crews working overnight on Saturday, February 14 and into the morning of Sunday, February 15. Approximately 53 internal distribution line crews, as well as 11 internal substation crews, were available for restoration on Sunday, February 15. Additionally, by mid-morning on Saturday, February 14, the Company secured a total of 43 contractor distribution line crews and 44 contractor tree crews ready to respond to the hardest hit areas in the state. Transmission line crews were available for the entire New England region, with one contractor transmission line crew dedicated to, and deployed in, Rhode Island during the storm.

### **III. THE STORM AND ITS IMPACT**

#### **A. Forecast**

On Friday, February 13, the weather forecast called for a potent system to develop off the New England coast Saturday and into Sunday. This system was expected to bring hazard level snow and dangerous wind to the region, especially across eastern areas. The strongest winds, predicted to peak at 70-80 mph, were forecasted to occur during the day on Sunday. Temperatures were also forecasted to drop well-below normal on Sunday night into Monday. Another system was forecasted with the potential to bring snow late Tuesday into Wednesday. That system continued to show signs of near hazard level snow and winds, which could potentially cause significant damage and extensive power outages.

#### **B. Impact**

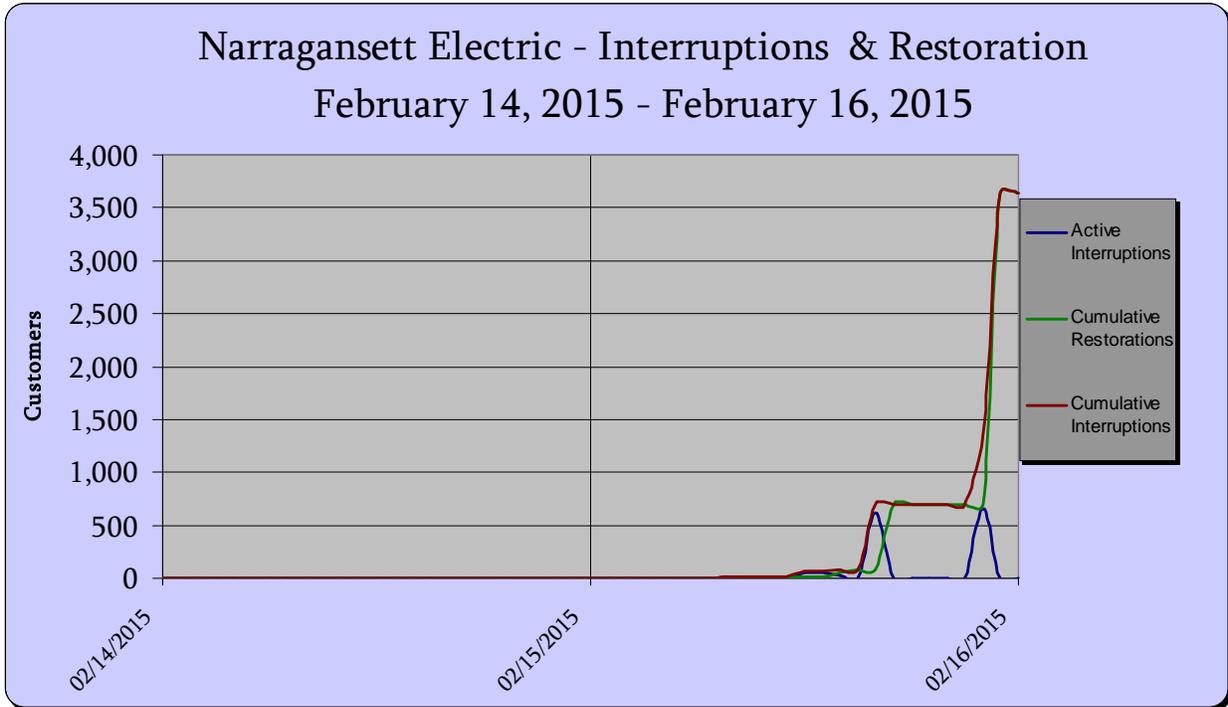
Winter Storm Neptune had the potential to be a severe weather event causing widespread damage. Very strong winds with frequent gusts of 55-65 mph and peak gusts of 70-80 mph were forecasted.

The storm brought a swath of snow from the Midwest to the Northeast on Valentine's Day weekend 2015. Along with the snow, strong and damaging winds also occurred. The heaviest snow and strongest wind gusts, once again, pummeled parts of coastal New England.

The storm impacted a total of approximately 3,630 customers in the Company's service territory and approximately 2,900 customers at its peak, which occurred on Sunday, February 15 at approximately 9:00 p.m. The Company restored power to all customers by approximately 10:30 p.m that same evening.

Figure 1 below shows the customers interrupted and restored, during the duration of the storm.

**Figure 1**



The Company experienced interruptions in eight of the 38 communities it serves in Rhode Island. The storm had no effect on any transmission or sub-transmission lines in Rhode Island. The storm affected a total of nine distribution feeders all located within the capital region.

All municipalities that experienced interruptions are shown in Figure 2 below.

**Figure 2**

Municipality	Customers Interrupted <sup>1</sup>	Customers Served	Percent of Customers Interrupted
NEWPORT	1570	15,018	10%
MIDDLETOWN	1017	8,024	13%
PAWTUCKET	605	33,187	2%
PORTSMOUTH	62	9,109	1%
NORTH SMITHFIELD	40	5,772	1%
CRANSTON	38	35,591	0%
JOHNSTON	5	13,382	0%
LINCOLN	1	10,027	0%

The following sections contain additional details and context regarding the Company’s storm restoration efforts.

<sup>1</sup> This value can include multiple outages experienced by the same customer.

## **IV. RESTORATION**

### **A. Timing and Priority of Service**

The Company implemented the system of prioritization for restoration found in the ERP, focusing first on public safety, and then with the overall goal of maximizing customer restoration when lines were energized. The Company gave priority and consideration to critical facilities and made efforts to restore service to its life support customers as quickly as conditions warranted, also as set forth in the ERP.

### **B. Restoration Coordination**

Outages were dispatched out of the Providence storm room beginning on Sunday, February 15 at approximately 6:00 a.m. through the end of the storm. The Company activated police and fire coordinators for the event. These employees reported to the storm room leads and were responsible for communicating the estimated times for restoration on all police and fire calls, with a standby condition noted.

In preparation for the storm, the Company also mobilized the Providence wires-down room on February 15, 2015 at 6:00 a.m., with approximately 18 crews available (including wires-down appraisers and cut and clear crews) and seven office-based employees. The Company monitored activity throughout the day and, based on inactivity, de-mobilized the wires-down room at approximately 3:00 p.m. that afternoon. At that point, the Company handled any wires-down issues out of the local Providence storm room.

### **C. Personnel Resources**

When the forecast indicated that a storm event was possible, the Company began preparations to secure supplemental contractor crews who would be strategically placed throughout New England. The deployment plan allowed for the greatest degree of flexibility to move the resources to where they were needed, especially if the storm track or intensity changed. Pre-staging crews and equipment in key locations throughout the region enabled the Company to restore service to customers as quickly and safely as possible. The Company's peak resources working in Rhode Island during the storm event are provided in Attachment 1.

At peak, approximately 181 field crews<sup>2</sup> were used to restore power to customers, including approximately 88 external crews and 93 internal crews. This peak number of external and internal crews includes Transmission and Distribution Line, Vegetation Management, Wires Down, and Substation personnel.

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<sup>2</sup> Crews typically include two or three people, although there are some one-person crews in damage assessment, wires down (appraisers), and distribution line (troubleshooters). The transmission crews typically include 6-10 people.

#### **D. Safe Work Practices**

Safety is always at the forefront of Company operations, including and, especially during activities, associated with storm restoration. Both the System and Regional ICS structure designate a lead position for a Safety, Health, and Environment Officer. Safety messages are delivered on all calls to heighten awareness during pre-storm preparation.

As with any storm, prior to Winter Storm Neptune, National Grid assembled a safety team with area responsibilities, established the reporting hierarchy, and prepared and communicated organization charts. The safety team prepared safety notices and delivered them Company-wide to all employees through corporate communications. Safety personnel were deployed to assist in specific geographic areas and delivered on-site safety orientations to National Grid workers and contractors prior to the start of each day. During Winter Storm Neptune, safety personnel were regularly assigned to work sites to advise Company personnel and contractors of safety issues and practices. In addition, prior to the start of each new job, the work was reviewed by assigned crews, with a focus on safe working conditions for the specific job.

#### **V. COMMUNICATIONS DURING AND AFTER THE EVENT**

##### **A. Communication Regarding Estimated Times for Restoration (ETRs)**

The Company posted ETRs on its website during Winter Storm Neptune using Outage Central, which provided real time ETR updates approximately every 15 minutes.

As ETRs changed, the updated restoration information was entered into the system and reflected on Outage Central. Throughout the event, the ETRs for each outage were revised to show the most accurate restoration information.

##### **B. Intra-Company**

New England Operations pre-event calls were held at least once daily beginning on Wednesday, February 11, at approximately 9:00 a.m. until the storm occurred. New England Operations Restoration calls were held after the storm hit the region beginning on Sunday, February 15 at approximately 8:00 a.m. The final New England Operations Restoration call was held that same afternoon at approximately 3:00 p.m.

Communications were issued to field crews with both restoration and safety information.

## **C. Public Officials**

### 1. Governor's Office

The Company had communication with the Governor's office during Winter Storm Neptune. The Company also responded to a status update call from Senator Sheldon Whitehouse's office.

### 2. Rhode Island Public Utilities Commission (Commission), Division of Public Utilities and Carriers (Division) and Rhode Island Emergency Management Agency (RIEMA)

The Company's Jurisdictional President reached out to the Commission, and the Company's Director of Regulatory Affairs reached out to the Division regarding the Company's storm preparation. The Company's Emergency Management Agency liaisons were not requested to be activated by the RIEMA. National Grid participated in communications with Emergency Support personnel via the Web EOC, at RIEMA.

### 3. Municipalities

The Company opened a municipal room on Sunday, February 15 at 7:00 a.m. in Providence. The room was opened to effectively manage and communicate with any potentially impacted communities in Rhode Island. The municipal room was co-located with the Company's Branch Operations response personnel. This arrangement afforded efficient access to key restoration personnel in researching and communicating the priorities of the municipalities.

National Grid's community liaisons were put on standby for this storm, with the Rhode Island Customer & Community team assuming their normal community responsibilities for this storm event.

Based on the limited outage activities the municipal room and community liaisons were deactivated on Sunday, February 15 at 6:00 p.m.

## **D. Customers**

The Company notified life support customers regarding possible outages through its Call Center. On Saturday, February 14 at approximately 2:00 p.m., an out-bound call was made to all life-support customers. The Call Center secured additional staffing to respond to incoming life-support calls for those affected by outages. A total of five life-support customers were affected by outages. The Company continued to conduct pro-active calls to its life support customers until all power was restored.

## **E. Media**

The Company distributed a storm-related news release on February 14. Both traditional and social media channels were engaged to distribute the release. Outage totals in Rhode Island for the period of February 13-16 were approximately 6,000 customers, with a single outage that lasted less than 90 minutes, accounting for half of that number. Peak outages during the storm were approximately 2,900. This limited media inquiries to a single call during the period.

## **VI. CONCLUSION**

The Company understands the impact that electrical outages have on its customers, and was fully prepared to respond, having secured all necessary crews and other outside contractors to aid in the restoration effort of Winter Storm Neptune. Through use of the Company's own distribution line resources, contractor distribution and transmission line crews, and contractor tree crews, the Company restored service to its customers in the wake of the storm in a safe, and expeditious manner.

# Attachment 1

## February 14th Storm

Resource Type	Peak Crews Working
Number of Company Line Crews (1)	53
Number of Company Tree Crews (2)	-
Number of Company Wire Down Crews (3)	19
Number of Company Damage Appraiser Crews (4)	10
Number of Company Substation Crews (5)	11
Number of Company Transmission Crews (6)	-
<b>Total Company</b>	<b>93</b>
Number of Contractor Line Crews (2)	43
Number of Contractor Tree Crews (2)	44
Number of Contractor Wire Down Crews (3)	-
Number of Contractor Damage Appraiser Crews (4)	-
Number of Contractor Substation Crews (5)	-
Number of Contractor Transmission Crews (6)	1
<b>Total Contractor</b>	<b>88</b>
Number of In-State Mutual Aid Line Crews (2)	-
Number of In-State Mutual Aid Tree Crews (2)	-
Number of In-State Mutual Aid Wire Down Crews (3)	-
Number of In-State Mutual Aid Damage Appraiser Crews (4)	-
Number of In-State Mutual Aid Substation Crews (5)	-
Number of In-State Mutual Aid Transmission Crews (6)	-
<b>Total In-State Mutual Aid</b>	<b>-</b>
Number of Out-of-State Mutual Aid Line Crews (2)	-
Number of Out-of-State Mutual Aid Tree Crews (2)	-
Number of Out-of-State Mutual Aid Wire Down Crews (3)	-
Number of Out-of-State Mutual Aid Damage Appraiser Crews (4)	-
Number of Out-of- State Mutual Aid Substation Crews (5)	-
Number of Out-of- State Mutual Aid Transmission Crews (6)	-
<b>Total Out-of-State Mutual Aid</b>	<b>-</b>
<b>Peak Number of Crews Working</b>	<b>181</b>

**Note: All resources are reported as crews**

- (1) Typically 2-person crews , but also include single troubleshooters
- (2) Typically 2-person crews , but may also include some 3-person crews
- (3) Wire Appraisers are 1-person crews, Cut and Clear are 2-person crews
- (4) Typically 2-person crews, but may also include some 1-person crews
- (5) Typically 2-person crews
- (6) Typically 6-10 person crews