

May 9, 2016

**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 5, 2016 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 5, 2016 Winter storm (Storm Lexi 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 Storm Lexi 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

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, 2016

Date

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

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National Grid

The Narragansett Electric Company

**Report on  
February 5, 2016 Event,  
Damage Assessment and  
Service Restoration Efforts**

May 9, 2016

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 5, 2016 STORM 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 5, 2016 Winter storm (Storm Lexi) that impacted the mid-Atlantic and Northeast regions. The Company began monitoring the weather forecast several days in advance of the storm. The National Weather Service issued a winter weather advisory from Delaware to New Jersey and a winter storm warning for most of New England. Storm Lexi, packing heavy, wet snow, gave New England its first real taste of winter, toppling trees and knocking out power to more than 62,200 customers in Rhode Island. The storm was New England's biggest snowstorm so far this season, coming two weeks after a massive blizzard engulfed much of the Eastern Seaboard.

For pre-planning purposes, the Company declared the storm to be a Level 4 emergency event (i.e., up to three percent of customers impacted, up to 750 lines of Trouble, and a 24-hour restoration effort). The Company opened the New England Emergency Operations Center in Worcester, Massachusetts, a storm room in Providence, and a staging area at the Community College of Rhode Island in Warwick. 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 contacted other utilities to request additional resources. The Company ultimately had more than 227 line crews, 95 tree and cut and clear crews, and 81 wires-down crews working in Rhode Island to restore service to customers.

The powerful intensity and impact of the storm caused significant damage to the Company's electric infrastructure. The power outages impacted approximately 62,200 (approximately 45,000 at peak) of the Company's customers. Overall, approximately 13 percent of the Company's customers in Rhode Island experienced outages. Using its own crews and contractor resources, the Company restored power to 70 percent of its Rhode Island customers by approximately 8:00a.m., on Sunday, February 7, 2016. Over 90 percent of the Company's customers had their power restored by approximately 6:30 p.m. on Sunday, February 7, 2016. The final customer was restored at approximately 11:45 p.m., on Sunday, February 7, 2016.

The Company is grateful for the support of customers, employees, state and local officials, and public safety officials, who experienced the effects of this storm 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 5:00 p.m., Friday, February 5, 2016. A branch EOC was established and opened in Providence at approximately 4:30 a.m. that morning. As noted below, a New England 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 system and operation storm conference calls, the New England Incident Commander communicated the incident classification to Company leadership and organizations that the Company expected to engage in restoration or support activities. The Regional System 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 accordance with the ERP and ICS, National Grid activated the System Incident Commander and the New England Regional Incident Commander on Thursday morning, February 4, 2016. 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 day on Friday, February 5, 2016 and 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 Storm Lexi, the Company began securing crews on Thursday morning, February 4, 2016 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. In total, the Company ultimately had more than 227 line crews, 95 tree and cut and clear crews, and 81 wires down crews working in Rhode Island to restore service to customers throughout the event. Additionally, the Company had two Transmission crews on standby ready to respond to any potential damage to transmission lines.

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

#### **A. Forecast**

On Thursday, February 4, 2016, the weather forecast called for rain showers changing to snow after midnight. A wet consistency snow was expected to occur across the region between 2:00 a.m. - 3:00 p.m. on Friday, February 5, 2016. The National Weather Service was forecasting up to a foot of snow in northern and western parts of Rhode Island.

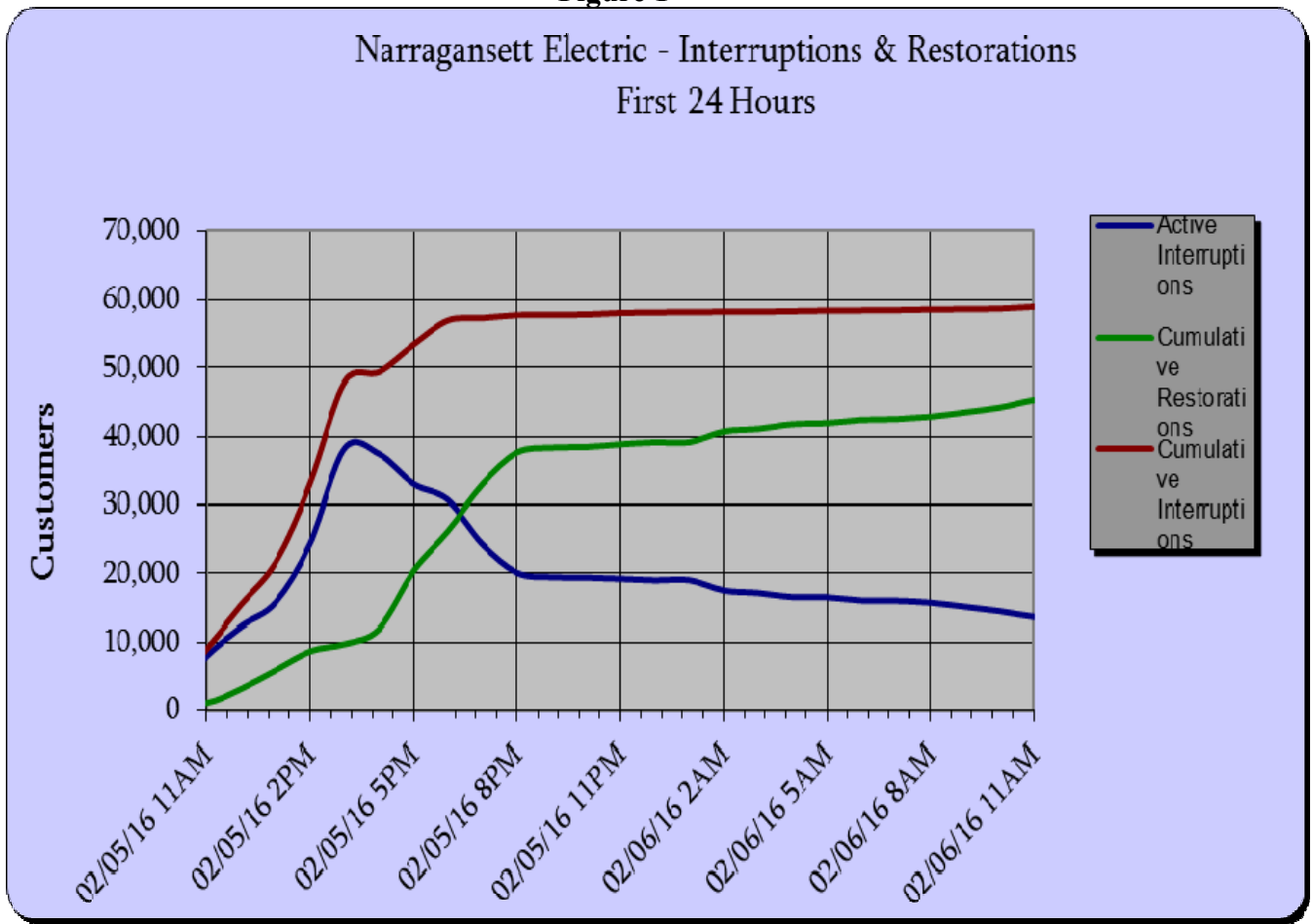
The highest risk of snow was forecasted in Rhode Island and Southeastern Massachusetts. The heaviest amounts were forecasted to occur during the morning hours of Friday, February 5, with predicted snow accumulations of 6-9 inches. During the event, winds were forecasted to have gusts of 25-35 mph later Friday into Friday night and then diminish in intensity. Mainly, dry and hazard-free conditions were expected Saturday through Sunday night with a risk of snow showers possible on Monday, February 8.

#### **B. Impact**

A severe winter storm impacted Rhode Island, Friday, February 5, 2016, knocking out power to approximately 62,200 customers in the Company's service territory and approximately 45,000 customers at its peak, which occurred on Friday, February 5 at approximately 3:00 p.m. Seventy percent of all outages were restored by approximately 8:00 a.m. on Sunday, February 7. Over 90 % percent of the Company's customers had their power restored by approximately 6:30 p.m. on Sunday, February 7, 2016. The final customer was restored at approximately 11:45 p.m. on Sunday, February 7, 2016.

Figure 1 below shows the number of customers interrupted and restored, during the first 24 hours of the storm.

Figure 1



The Company experienced interruptions in 36 of the 38 communities it serves in Rhode Island. The storm caused significant damage to transmission and sub-transmission lines as well as distribution feeders.

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



**Figure 2**

<b>Municipality</b>	<b>Customers Interrupted<sup>1</sup></b>	<b>Customers Served</b>	<b>Percent of Customers Interrupted</b>
GLOCESTER	5,260	4,512	100%
WEST GREENWICH	2,245	2,577	87%
CRANSTON	135	31,493	74%
SCITUATE	3,260	4,498	72%
EXETER	1,868	2,979	63%
LITTLE COMPTON	1,454	2,578	57%
COVENTRY	9,710	13,640	56%
BARRINGTON	450	6,835	45%
WEST WARWICK	5,558	13,596	41%
NORTH SMITHFIELD	2,330	5,642	41%
HOPKINTON	1,516	3,876	39%
LINCOLN	3,399	10,051	34%
FOSTER	630	2,011	31%
TIVERTON	1,900	8,199	23%
RICHMOND	761	3,360	23%
EAST GREENWICH	1,152	6,052	19%
SMITHFIELD	1,119	8,696	13%
BRISTOL	821	10,319	13%
EAST PROVIDENCE	2,676	21,917	12%
NARRAGANSETT	858	10,528	8%
CUMBERLAND	1,143	15,082	8%
SOUTH KINGSTOWN	955	14,560	7%
CHARLESTOWN	321	5,647	6%
JOHNSTON	787	13,511	6%
NORTH KINGSTOWN	425	13,217	3%
WARWICK	1,382	40,139	3%
PROVIDENCE	1,246	70,522	2%
BURRILLVILLE	3,368	2,596	1%
NEWPORT	180	14,915	1%
PORTSMOUTH	9	9,111	0%
PAWTUCKET	16	32,849	0%
WESTERLY	42	14,268	0%
WARREN	2	5,739	0%
WOONSOCKET	81	18,670	0%
NORTH PROVIDENCE	20	16,030	0%
MIDDLETOWN	2	8,004	0%

Figure 3 below shows a timeline of the number of customers without power during the storm from Friday, February 5, 2016 through Sunday, February 7, 2016.

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



In response to the storm, the Company also mobilized the Providence wires-down room on Friday, February 5, 2016 at 7:00 a.m., with approximately 81 crews available (including wires-down appraisers and cut and clear crews) and seven office-based employees. The Company staffing on Friday evening was a total of 40 field employees (including wires-down appraisers and cut and clear crews) and six office-based employees. The Company continued with 24-hour coverage through Sunday evening, February 7, 2016 until 9:00 p.m. when, based on activity, the wires-down room was de-mobilized. At that point, any wires-down issues were handled out of the local Providence storm room.

### **C. Personnel Resources**

Given the potential magnitude of Storm Lexi, the Company began preparations on February 4, 2016 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 ultimately had more than 227 line crews, 95 tree and cut and clear crews, and 81 wires down crews working in Rhode Island to restore service to customers. Additionally, the Company had two Transmission crews on standby ready to respond to any potential damage to transmission lines.

### **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, for Storm Lexi, 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 the storm event, 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 (ETR)

The Company posted ETRs on its website during Storm Lexi 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

System-level and Operations-level storm calls were held at least once daily, beginning on Thursday, February 4, 2016 through the end of restoration. Both the final system-level and Operations-level calls were held on Sunday, February 7, 2016.

Communications were issued to field crews with both restoration and safety information. Communication updates on restoration efforts were also sent to all employees via Company email.

### C. Public Officials

#### 1. Governor's Office

The Company had communications with both the Governor's office and the Speaker of the House's office, and provided updates throughout the restoration efforts. The Company had continuing communication with the state senators and state representatives from the storm impacted areas.

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

The Commissioners and Division Staff members were at the Company's Melrose Street facility for a site visit on February 5, 2016, and received periodic updates in person regarding restoration activities. RIEMA was monitoring the event, and the Company participated in communications with Emergency Support personnel via the state's Web EOC site.

#### 3. Municipalities

The Company opened a municipal room on Friday, February 5, at approximately 6:00 a.m. in Providence. All cities and towns were informed of the opening via e-mail. The room was opened to effectively manage and communicate with the large number of 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.

The Company deployed National Grid community liaisons to work with the city or town's emergency, safety and public officials as a dedicated liaison. These community liaisons were full-time resources supporting specific communities, and enabled direct communications back into the Company's branch municipal rooms, public information coordinators and branch operations personnel.

#### **D. Customers**

At approximately 3:00 p.m. on Thursday, February 4, 2016, the Company conducted an outbound call to all life support customers advising them of the upcoming weather. Concurrently, the Company conducted a separate call to all critical facilities advising them of the same information. A total of 14 life-support customers in Rhode Island were affected by outages. The Company's Call Center in Northborough, Massachusetts secured additional staffing to respond to incoming life-support calls for those affected by outages and continued to conduct daily calls to these customers until all power was restored.

#### **E. Media**

The Company distributed three storm-related news releases on February 5, 2016 through February 7, 2016, which were distributed to all Rhode Island news media including local Patches. The Company also distributed the news releases via social media channels and through individual National Grid employee accounts.

Periodic field updates with restoration information were also distributed via social media channels during the restoration. During this time Media Relations received approximately 30 media contacts and conducted nine interviews with local media outlets.

### **VI. CONCLUSION**

Storm Lexi brought heavy, wet snow that blanketed much of Rhode Island and Massachusetts, bringing down trees, branches and power lines, which in turn, caused many customers to lose power. The Company had monitored the storm for several days prior to its arrival, taking the necessary steps to secure all available resources to aid in the restoration efforts. A last-minute change in the storm's track created more widespread and intense damage than originally predicted, causing significant damage in Rhode Island. The Company's crews worked around the clock to restore power to customers, as safely and quickly as possible.

The Company is proud of all the work that was accomplished during Storm Lexi, and is grateful for the support of customers, employees, state, and local officials, and public safety officials, who experienced the effects of this storm and were an integral part of the Company's restoration efforts.