

October 16, 2012

**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**  
**July 18, 2012 Event Report**

Dear Ms. Massaro:

In accordance with Order No. 15360 (August 19, 1997) in Docket 2509 and paragraph 4(b) of the Settlement approved by the Commission in that docket, I have enclosed one original and ten (10) copies of National Grid's<sup>1</sup> summary report on the planning and restoration activities associated with the July 18, 2012 lightning storm (the "July Storm" or "storm") that occurred on July 18, 2012, 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 Commission 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 the July Storm will be submitted to the Commission once the total costs have been accumulated by the Company.

Thank you for your attention to this transmittal. If you have any questions, please feel free to contact me at (401) 784-7288.

Very truly yours,



Jennifer Brooks Hutchinson

Enclosures

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 ("the Company").

Certificate of Service

I hereby certify that a copy of the cover letter and/or any materials accompanying this certificate were electronically transmitted and sent via U.S. Mail to the individuals listed below. Copies of this filing were hand delivered to the RI Public Utilities Commission.



October 16, 2012

**Docket No. 2509 – National Grid – Storm Fund  
Service List as of 9/11/12**

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National Grid

The Narragansett Electric Company

**Report on  
July 18, 2012 Event,  
Damage Assessment, and  
Service Restoration Efforts**

October 16, 2012

Docket No. 2509

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

Submitted by:

**nationalgrid**

## **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 July 18, 2012 lightning storm (the “July Storm” or “storm”), which affected Rhode Island and the rest of New England. The July Storm brought heavy rain, lightning, and wind, and caused power interruptions to approximately 34,000 of the Company’s customers. Overall, 74 percent (i.e. twenty-eight) of the Company’s 38 communities in Rhode Island experienced outages. In East Providence, over 50 percent of customers lost power, and in Central Falls, almost 50 percent of customers lost power (See Figure 2 for Town Listing).

The Company began preparing for the July Storm on Wednesday, July 18, when it held its first divisional storm anticipation call. The Company had a total of six storm calls during the two-day event and restoration phase. The Company followed its Emergency Response Plan (“ERP”) and mobilized employees and contractors for the restoration 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 additional resources to help with restoration. However, as the weather for the Rhode Island area became more definitive, the Company determined that only internal crews (distribution line and substation), a very small number of distribution line contractors, and some on-property contractor tree crews were necessary to do restoration work. The Company restored power to 70 percent of its affected Rhode Island customers by approximately 10:30 p.m. on Wednesday, July 18, and it restored power to 90 percent of its affected Rhode Island customers by approximately 2:00 a.m. on Thursday, July 19. The Company restored power to its final affected customer by approximately 8:00 p.m. on Thursday, July 19.

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

### **I. INCIDENT ANTICIPATION**

#### **A. Determination of Incident Classification**

National Grid activated its Regional Emergency Operations Center (“EOC”), located in Worcester, MA, for the storm. The EOC provided support for the Company’s New England region, including Rhode Island. The System Incident Commander was appointed, 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.

The Regional Incident Commander communicated the incident classification level to the Company's leadership and to those organizations that were anticipated to be engaged in restoration, or support activities through the system and operations storm conference calls. The Regional Incident Commander appointed a Branch Director located in Providence to oversee restoration efforts in Rhode Island.

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

On Wednesday July 18, at 11:00 a.m., prior to activation of the ICS, operations management personnel held an operational call to discuss the weather forecast and planning efforts for the possibility of a storm event. As a result of that call, the Company determined that storm rooms would be opened in Providence, Rhode Island, as well as Worcester, Brockton, and North Andover, Massachusetts on July 18 at approximately 2:00 p.m.

In accordance with the ERP and System ICS, National Grid activated the New England Regional Incident Commander and Branch Directors, including the Rhode Island Branch Director, on Wednesday, July 18 at approximately 5:00 p.m. Thereafter, a number of positions were activated by the System and Regional Incident Commanders, at their discretion, and in consideration of the level of response likely required for the event. Throughout the day on Wednesday, July 18, and throughout the restoration effort, additional ICS positions were activated as operating conditions changed.

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

Given the potential magnitude of the July Storm, 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. At peak, the Company had 122 internal distribution line and 35 substation personnel working in Rhode Island. Transmission line crews were also available for the entire New England region, and ultimately, 10 internal transmission line workers and 42 contractor transmission line personnel were deployed in Rhode Island during the storm. The Company also had a total of 154 distribution line contractor personnel pre-positioned in Rhode Island. The Company also deployed 74 on-property contractor tree personnel in Rhode Island. However, during the event, the Company determined that it only needed to use its own Rhode Island distribution line and substation crews, a small number of the distribution line contractor crews, and some on-property contractor tree crews to restore service to customers in Rhode Island.

## II. THE STORM AND ITS IMPACT

On Tuesday, July 17, weather forecasts for Rhode Island included the possibility of thunderstorms moving through the area, including the possibility of some strong storms with high winds. In mid-afternoon on Wednesday, July 18, a cold front moved into the region and continued across the area through early evening. This cold front caused a cluster of thunderstorms to develop and move through the area, and the most damaging weather occurred between 3:00 p.m. and 7:30 p.m.

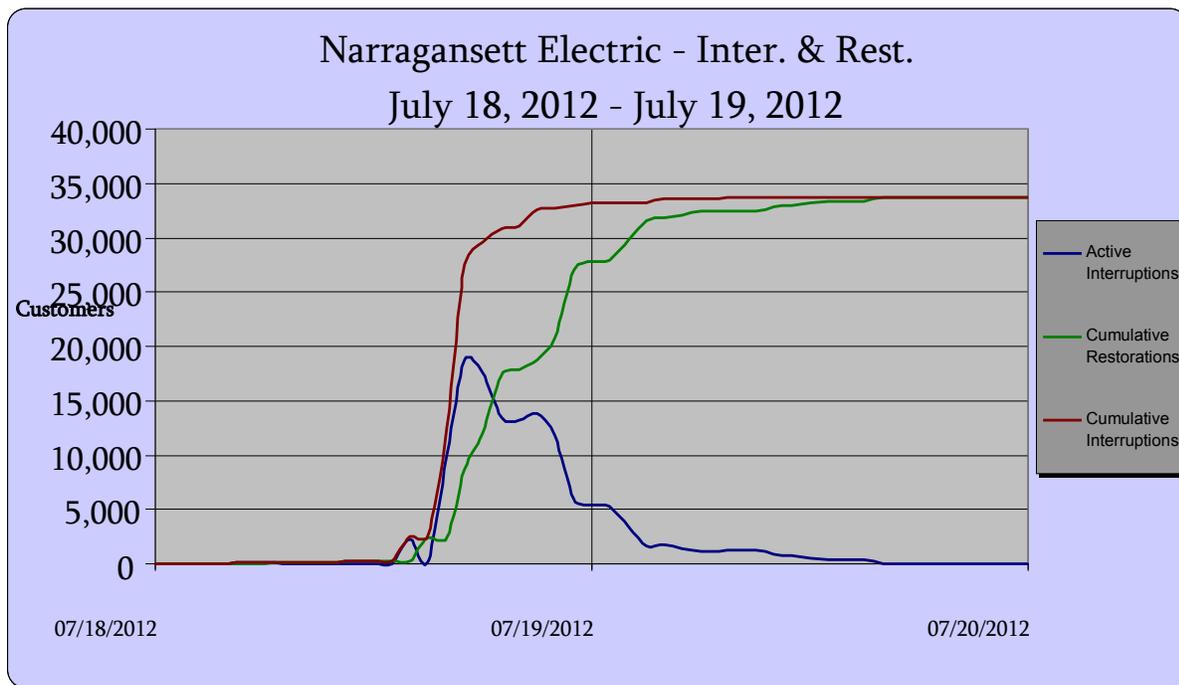
For Rhode Island, the highest total reported precipitation was approximately 0.75 inches of rain, which was recorded in Providence. There were also reports of two-inch hail in Providence early in the evening. Maximum sustained winds of 27 mph were recorded in Providence at approximately 4:00 p.m., and maximum wind gusts of 47 mph were recorded in Narragansett at approximately 4:30 p.m.

The storm impacted a total of approximately 34,000 customers in the Company's service territory and approximately 23,400 customers at its peak, which occurred on Wednesday, July 18 at approximately 4:15 p.m. Seventy percent of all outages were restored by Wednesday, July 18 at approximately 10:30 p.m., and 90 percent of all customers were restored by Thursday, July 19 at approximately 2:00 a.m. The Company restored power to its final customer by approximately 8:00 p.m. on Thursday, July 19.

By approximately 5:15 p.m. on Thursday, July 19, all of Rhode Island was transitioned back to normal operations and all local storm rooms were closed.

Figure 1 below shows the customers interrupted and restored by hour from Wednesday, July 18 through Thursday, July 19.

Figure 1



The Company experienced interruptions in 28 of the 38 communities it serves in Rhode Island. There were two transmission line lockouts, three additional transmission line operations (trip/reclose), and one sub-transmission lockout. The July Storm also affected 168 distribution feeders and there were a total of sixteen distribution feeder lockouts. There was minimal damage to poles and other assets.

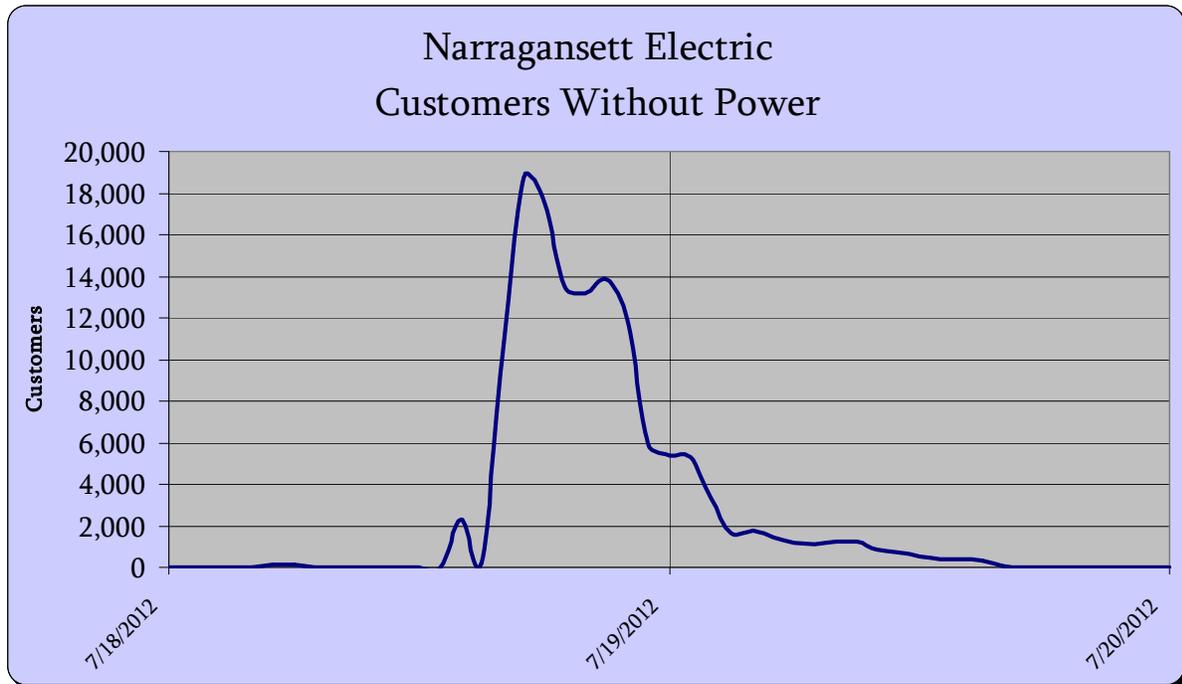
All towns that had interruptions are shown in Figure 2 below.

**Figure 2**

<b>Town</b>	<b>Customer Interrupted</b>	<b>Customer Served</b>	<b>Percent of Customers Interrupted</b>
EAST PROVIDENCE	11,786	21,968	54%
WARWICK	4,391	40,649	11%
CUMBERLAND	3,489	14,930	23%
CENTRAL FALLS	3,345	7,129	47%
CRANSTON	3,223	35,347	9%
LINCOLN	2,687	9,867	27%
COVENTRY	2,061	15,261	14%
SMITHFIELD	1,867	8,664	22%
GLOCESTER	1,132	4,511	25%
EAST GREENWICH	977	6,002	16%
SCITUATE	894	4,623	19%
NORTH PROVIDENCE	545	15,903	3%
JOHNSTON	479	13,238	4%
PAWTUCKET	364	32,596	1%
BURRILLVILLE	336	2,584	13%
NORTH SMITHFIELD	323	5,698	6%
WEST GREENWICH	322	2,681	12%
FOSTER	277	2,023	14%
BRISTOL	264	10,277	3%
WEST WARWICK	178	14,858	1%
PROVIDENCE	174	69,401	0%
EXETER	140	2,934	5%
TIVERTON	113	8,137	1%
NORTH KINGSTOWN	48	13,056	0%
WOONSOCKET	13	18,473	0%
BARRINGTON	9	6,816	0%
PORTSMOUTH	1	9,043	0%
LITTLE COMPTON	1	2,560	0%

Figure 3 below shows a timeline of the number of customers without power from Wednesday, July 18 through Thursday, July 19.

**Figure 3**



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

### **III. 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 on 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 on Wednesday, July 18 starting at approximately 2:00 p.m. through the end of the storm. A Police & Fire Coordinator was activated in the Storm Room to handle the call back activities and the communication of crew-estimated time of arrival for the Priority calls.

In preparation for the storm, the Company mobilized the Providence wires-down room on Wednesday, July 18 at approximately 5:00 p.m., staffing that room with approximately twenty-nine personnel (including wires-down appraisers and cut/clear personnel). The employees assigned to staff the wires-down room were scheduled to work shifts that provided 24-hour coverage for the duration of the event. A wires-down coordinator, who was responsible for the overall operation of the wires-down function for the area, was assigned to the wires-down room. Due to lack of any significant wires-down activity, the number of personnel was slightly reduced at 9:00 p.m. Finally, the wires-down storm room was de-mobilized and transitioned back to the Providence Storm Room at approximately 12:30 a.m. on Thursday, July 19, after all open wires-down calls were closed.

### **C. Personnel Resources**

The Company's resources during and after the July Storm are provided in Attachment A. At the peak of restoration, 466 field resources were available to restore service to customers, including 270 external personnel and 196 internal personnel. This peak number of resources includes Company Transmission Line, Distribution Line and Substation personnel, Contractor Distribution Line, and Tree personnel. While the Company secured and pre-positioned many types of resources, it should be noted that only internal personnel (distribution line and substation), along with a fraction of contracted distribution line personnel who were prepared and standing by to respond to outages, and some on-property contractor tree crews were ultimately used in the restoration efforts in Rhode Island.

### **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 the arrival of the July Storm, 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 the notices 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 July 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.

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

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

The Company posted ETRs on its website during the July Storm, using the Outage Central webpage which provided real-time ETR updates periodically.

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

## **B. Intra-Company**

Divisional storm calls were held three times a day beginning on Wednesday, July 18 at 11:00 a.m. through the end of restoration; a total of 6 divisional storm calls were held. The final system-level call was held on Thursday, July 19 at 2:00 p.m. Communications were issued each day to field crews with both restoration and safety information.

## **C. Public Officials**

### **1. Governor's Office**

In preparation for the July Storm, on Wednesday, July 18, the Company's Vice President of Government Affairs initiated communications with the Governor's Chief of Staff, Rhode Island Legislators, and local offices for the Congressional Delegation. The Company informed the Governor's office of the Company's planning and preparation.

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

On Wednesday, July 18, the Company's Director of Regulatory Affairs initiated communications with the Division regarding storm preparation.

A National Grid representative was in contact with RIEMA from Wednesday, July 18 through Thursday morning, July 19. System outage updates reported to RIEMA were made available to personnel at the Division, representatives of the Governor, the WebEOC users at the municipal EOCs, and the adjutant General at the Rhode Island National Guard. RIEMA never officially opened an operations center for the July Storm, but remained in a monitoring mode throughout the storm.

### **3. Municipalities**

The Company communicated with municipal officials about potential outages on Wednesday, July 18. Customer and Community Management sent email blasts to city and town mayors, managers and administrators, public works directors, and police and fire departments. Customer and Community Managers also followed up directly with cities and towns that were experiencing a significant number of outages to inform them of the number of customers without power and continued to provide email updates.

#### **D. Customers**

On Wednesday, July 18 at 1:30 p.m., the Company sent a broadcast message to all life support customers. Additionally, in an effort to provide support to all customers, including life support customers, call center representatives provided safety tips and encouraged customers to take necessary precautions. During this event, 18 life support customers in Rhode Island lost service. The Company reached out to these customers daily and followed up once the emergency concluded.

#### **E. Media**

The Company's Media Relations department responded to ten news media inquiries on July 18 and July 19 that were directly related to outages caused by the storm.

#### **V. CONCLUSION**

Although the July Storm was not as severe as anticipated, the Company was well prepared to handle a storm of the original magnitude that the weather forecast had indicated. The actual storm, although less severe than predicted, nonetheless caused interruptions to many Rhode Island customers. However, the Company successfully used its own distribution line and substation resources, along with a fraction of the contracted distribution line crews who were prepared and standing by to respond to outages, and some on-property contractor tree crews to restore service to its customers in the wake of the July Storm in a safe and expeditious manner.

The Company attempts to improve its restoration efforts after each emergency event that affects the Company's service territory and the July Storm was certainly no exception. The Company continues to develop lessons learned from all storm events, including the July Storm, in order to develop improvements that it can implement during future emergency events.

May 1, 2013

**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  
          July 18, 2012 Event Report – Attachment A**

Dear Ms. Massaro:

On October 16, 2012 National Grid<sup>1</sup> submitted a summary report on the planning and restoration activities associated with the July 18, 2012 lightning storm (the “July Storm Report”) in accordance with Order No. 15360 (August 19, 1997) in Docket 2509 and paragraph 4(b) of the Settlement approved by the Commission in that docket. The attachment, identified in the July Storm Report as Attachment A, was inadvertently not attached to the copies of the July Storm Report that the Company filed with the Commission.

The Company is enclosing ten (10) copies of Attachment A and respectfully requests that the Commission attach Attachment A to the transmittal that the Company submitted on October 16, 2012.

Thank you for your attention to this transmittal. If you have any questions, please feel free to contact me at (401) 784-7288.

Very truly yours,



Jennifer Brooks Hutchinson

Enclosures

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 (the “Company”).

## Attachment A

### July 18, 2012 Weather Event - Rhode Island Resources\*

Data	Peak Resources
Number of Company Line Personnel	122
Number of Company Tree Personnel	-
Number of Company Wire Down Personnel	29
Number of Company Damage Appraiser Personnel	-
Number of Company Substation Personnel	35
Number of Company Transmission Personnel	10
<b>Total Company</b>	<b>196</b>
Number of Contractor Line Personnel**	154
Number of Contractor Tree Personnel	74
Number of Contractor Wire Down Personnel	
Number of Contractor Damage Appraiser Personnel	-
Number of Contractor Substation Personnel	-
Number of Contractor Transmission Personnel	42
<b>Total Contractor</b>	<b>270</b>
Number of In-State Mutual Aid Line Personnel	-
Number of In-State Mutual Aid Tree Personnel	-
Number of In-State Mutual Aid Wire Down Personnel	-
Number of In-State Mutual Aid Damage Appraiser Personnel	-
Number of In-State Mutual Aid Substation Personnel	-
Number of In-State Mutual Aid Transmission Personnel	-
<b>Total In-State Mutual Aid</b>	<b>-</b>
Number of Out-of-State Mutual Aid Line Personnel	-
Number of Out-of-State Mutual Aid Tree Personnel	-
Number of Out-of-State Mutual Aid Wire Down Personnel	-
Number of Out-of-State Mutual Aid Damage Appraiser Personnel	-
Number of Out-of- State Mutual Aid Substation Personnel	-
Number of Out-of- State Mutual Aid Transmission Personnel	-
<b>Total Out-of-State Mutual Aid</b>	<b>-</b>
<b>Total # of Personnel Available</b>	<b>466</b>

\* All Numbers are reported as Full Time Equivalents (FTE)

\*\* Contractor line personnel are FTE who were positioned/staged in Lincoln and Providence, Rhode Island