

December 28, 2020

**VIA ELECTRONIC MAIL**

Luly E. Massaro, Division Clerk  
Rhode Island Division of Public Utilities and Carriers  
89 Jefferson Boulevard  
Warwick, RI 02888

**RE: Docket D-11-94 - Review of Preparedness and Restoration Efforts by the State's Electric Utility Companies Related to Tropical Storm Irene September 29-30, 2020 Wind Storm Summary Report**

Dear Ms. Massaro:

In accordance with Order No. 20814 (November 20, 2012) in Docket D-11-94, I have enclosed an electronic version<sup>1</sup> of National Grid's<sup>2</sup> summary report on the planning and restoration activities associated with the September 29-30, 2020 storm event. Order No. 20814 directs National Grid to file a final written report with the Division within 90 days following major storm events. The Company is providing Appendices C, D, and E to the storm summary report in Excel format.

The September 29-30, 2020 storm event likely will qualify for inclusion in the Company's Storm Contingency Fund. Accordingly, the Company is filing this storm summary report simultaneously with the Rhode Island Public Utilities Commission in Docket No. 2509.

Thank you for your attention to this transmittal. If you have any questions, please contact me at 508-330-8602.

Very truly yours,



Celia B. O'Brien

Enclosures

cc: Linda George, Division  
John Bell, Division  
Greg Booth, Division  
John Spirito, Esq.  
Christy Hetherington, Esq.  
Leo Wold, Esq.

---

<sup>1</sup> Per practice during the COVID-19 emergency period, the Company is providing a PDF version of the storm report referenced above. The Company will provide the Division with one hard copy and, if needed, additional hard copies of this report at a later date.

<sup>2</sup> The Narragansett Electric Company d/b/a National Grid ("National Grid" or the "Company").

National Grid

The Narragansett Electric Company

**Report on  
September 29-30, 2020 Event,  
Damage Assessment and  
Service Restoration**

December 28, 2020

Docket No. 2509

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

Submitted by:

**nationalgrid**

## Table of Contents

<b>I.</b>	<b>EXECUTIVE SUMMARY .....</b>	<b>1</b>
<b>II.</b>	<b>INCIDENT ANTICIPATION.....</b>	<b>2</b>
	<b>A. Determination of Incident Classification .....</b>	<b>2</b>
	<b>B. Activation of Incident Command System (ICS).....</b>	<b>3</b>
<b>III.</b>	<b>THE STORM AND ITS IMPACT .....</b>	<b>4</b>
	<b>A. Forecast .....</b>	<b>4</b>
	<b>B. Impact .....</b>	<b>4</b>
<b>IV.</b>	<b>RESTORATION.....</b>	<b>8</b>
	<b>A. Timing and Priority of Service .....</b>	<b>8</b>
	<b>B. Restoration Coordination.....</b>	<b>8</b>
	<b>C. Personnel Resources .....</b>	<b>9</b>
<b>V.</b>	<b>COMMUNICATIONS DURING AND AFTER THE EVENT.....</b>	<b>10</b>
	<b>A. Communication Regarding Estimated Times of Restoration .....</b>	<b>10</b>
	<b>B. Intra-Company.....</b>	<b>10</b>
	<b>C. Public Officials .....</b>	<b>10</b>
	<b>D. Customers .....</b>	<b>11</b>
	<b>E. Media.....</b>	<b>13</b>
<b>VI.</b>	<b>TECHNOLOGY ISSUES.....</b>	<b>13</b>
<b>VII.</b>	<b>CONCLUSION .....</b>	<b>13</b>

**REPORT ON BEHALF OF  
THE NARRAGANSETT ELECTRIC COMPANY d/b/a NATIONAL GRID  
ON THE SEPTEMBER 29-30, 2020 STORM DAMAGE ASSESSMENT AND SERVICE  
RESTORATION EFFORTS**

**I. EXECUTIVE SUMMARY**

The Narragansett Electric Company d/b/a National Grid (the “Company”) presents the following report on the planning and restoration activities associated with the September 29-30, 2020 Wind Storm (“September 29-30, 2020 Storm” or the “Storm”), which impacted Rhode Island and other states in the northeast. For pre-planning purposes, the Company classified the Storm as a National Grid Type 5 emergency event for Rhode Island, meaning that the Company estimated that restoration activities generally would be accomplished within a four-hour period and the event typically would result in up to two percent of customers interrupted. The Company revised the event type for the Storm to a National Grid Type 4 emergency event for Rhode Island, meaning that the Company estimated that restoration activities generally would be accomplished within a 24-hour period, and the event typically would result in up to seven percent of customers interrupted. The Storm was projected to bring wide-spread rain and embedded thunderstorms with gusty winds, which potentially could cause significant damage to the Company’s electric infrastructure. Ultimately, the Storm brought heavy rainfall across New York and much of Massachusetts and thunderstorms with stronger wind gusts than initially expected across much of Massachusetts and all of Rhode Island. Rhode Island generally received between one-quarter and three-quarters of an inch of rain. Maximum wind gusts were in the 45 to 55 mph range. The Storm interrupted power to 37,530 (approximately 24,458 at peak) of the Company’s customers. Overall, seven and one-half percent of the Company’s customers in Rhode Island experienced outages, with 36 of the 38 communities served in Rhode Island impacted.

The Company began preparing for the Storm on Tuesday, September 29, as the severity of the weather forecast increased to include predictions of rain with embedded thunderstorms and hazardous wind gusts. For the remainder of that day, the Company continued to review the weather forecasts and prepare for the possibility that the Storm would impact the Company’s electric distribution system in New England. As part of its response to the Storm, the Company opened Branch Storm Rooms in Providence and North Kingstown at approximately 7:30 a.m. on Wednesday morning, September 30. The Company also opened its wires-down room later that same day. With the rapid escalation of the weather intensity and resulting damage to the Company’s electric distribution system, the State Incident Commander communicated directly with key staff to coordinate response and restoration efforts, and no Restoration Stage Briefing Calls were conducted. The Company followed its Emergency Response Plan 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 utilized its contractors of choice from inside the Company’s service territory to help with restoration. Using its own crews, contractors of choice, and external contractor resources, the Company restored power to 100 percent of its customers impacted in approximately 42 hours from the time of the first

customer impacted and in approximately 36.5 hours from the time of peak impact. Power was restored to the final customer impacted by the Storm on October 1, at approximately 9:00 p.m.

The Company is grateful for the support of customers, employees, state and local officials, and public safety officials, who experienced the effects of the September 29-30, 2020 Storm and were an integral part of the Company’s restoration efforts.

**II. INCIDENT ANTICIPATION**

**A. Determination of Incident Classification**

As set forth in the Company’s Emergency Response Plan, factors considered in initially establishing or revising the expected incident classification level included the following:

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

The New England Incident Commander is primarily responsible for establishing the projected and actual incident classification level for the Storm. See Table 1 below for the September 29-30, 2020 Incident Classification Actions.

**Table 1. Incident Classification Actions**

<u>Action Performed</u>	<u>Date and Time</u>
New England Incident Commander Named	September 29, 2020; approx. 6:30 a.m.
Initial Event Classification Type - 5	September 29, 2020; approx. 6:30 a.m.
Revised Event Classification Type - 4	September 30, 2020; approx. 8:30 a.m.

**B. Activation of Incident Command System**

The Company utilizes the Incident Command System (“ICS”), a component of the National Incident Management System, which is a comprehensive national approach to incident management applicable at all levels of the Company’s Emergency Response Organization (“ERO”) and addresses the operation of Company Emergency Operation Centers (“EOCs”). The ERO required to implement the emergency procedures is activated employing a flexible and standardized management structure. Upon declaration of an emergency, the required EOCs are staffed accordingly. As mentioned earlier, with the rapid escalation of the weather intensity and resulting damage to the Company’s electric distribution system, the State Incident Commander communicated directly with key staff to coordinate response and restoration efforts, and no Restoration Stage Briefing Calls were conducted. See Table 2 below for the September 29-30, 2020 Storm ICS Actions.

**Table 2. ICS Actions**

<u>Actions Performed</u>	<u>Date and Time</u>
Branch Storm Room opened in Providence	September 30, 2020; 7:30 a.m.
Branch Storm Room opened in North Kingstown	September 30, 2020; 7:30 a.m.
Branch Wires Down Room opened in Providence	September 30, 2020; 7:30 a.m.

Because there were no briefing calls conducted, Appendix A, which typically contains copies of briefing minutes, will not be provided with this report.

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

Based on the September 28 and 29 weather forecasts, pre-event preparation was limited to plans for the Company’s own internal crews and contractors of choice to respond to the forecast event. As the Storm impacted its service territory, the Company utilized its contractors of choice to support restoration efforts for all of New England, consistent with its Emergency Response Plan. The Company also secured other outside contractors later, consistent with its revised Event Type Classification.

See Appendix B for a daily accounting of resource staffing levels from pre-event through complete restoration. Appendix B indicates the number, type, and location of planned resources (in accordance with the Emergency Response Plan designated Event Type), and the number, type, and location of actual resources secured. Appendix B also specifies whether the resources are internal, external contractors, or resources acquired through a mutual assistance agreement.

### III. THE STORM AND ITS IMPACT

#### A. Forecast

The Company monitors the weather forecast obtained from its weather provider, DTN, through detailed emails received three times daily. Throughout the day, the Company also monitors the forecast from various weather websites.

On Sunday, September 27, the weather forecasts predicted a rain and wind event for later that week, beginning on Tuesday, September 29, and continuing into Wednesday, September 30. A chance for rainfall was indicated as well as a chance for thunderstorms, with maximum wind gusts of 45 mph. Confidence in the forecast was medium as there was weather model disagreement on the timing and intensity of the storms. On Monday, September 28, the forecast was revised to indicate maximum wind gusts in the 40 mph range and maximum rainfall up to one inch, mainly across western Massachusetts. Confidence in the forecast remained at a medium level. Throughout the day, the forecast remained essentially the same. On Tuesday morning, September 29, the forecast severity increased, with maximum wind gusts now having a ten percent chance of reaching 45 to 50 mph within any embedded thunderstorms that would occur. By 6:00 a.m. on Wednesday, September 30, the event had already begun to impact the Company's service territory and the forecast was now indicating a 50 percent chance that sustained wind gusts would be 45 mph or greater, with maximum predicted wind gusts of 55 mph.

#### B. Impact

The September 29-30, 2020 Storm was a significant weather event that resulted in moderate damage to the Company's electrical system. The Storm brought some rain, thunderstorms, and widespread hazardous winds to the Company's service territory. Parts of Rhode Island experienced wind gusts in the 40 to 50 mph range, with some areas seeing even higher gusts. The City of Providence experienced a peak gust of 56 mph. The Towns of Jamestown, Glocester, and Coventry were affected most heavily with approximately 47 percent of their customers impacted by the event. See Table 3 below for the September 29-30, 2020 Storm impact.

**Table 3. Storm Impact**

Total Customers Impacted	37,530
Peak Customers Impacted	24,458
Date and Time of Peak	September 30, 2020; 8:38 a.m.
Date and Time Final Customer Was Restored	October 1, 2020; 9:12 p.m.
Number of Municipalities That Experienced Interruptions	36
Number of Distribution Feeders That Experienced Interruptions	95

Figure 1 below shows the number of customers interrupted and restored, by hour, for the period of September 30 - October 2, 2020.

**Figure 1**

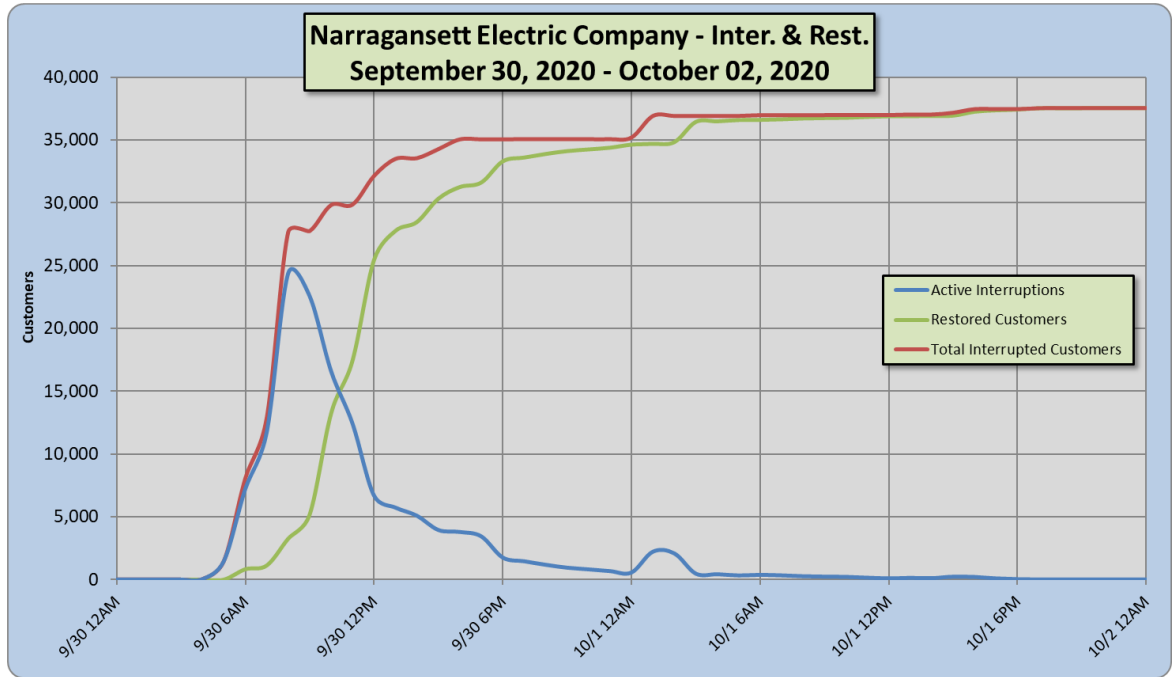


Figure 2 below shows all municipalities that experienced interruptions during the Storm.



**Figure 2**

<b>Town Name</b>	<b>Customers Served</b>	<b>Total Customers Interrupted</b>	<b>Percent of Total</b>
BARRINGTON	6,875	4,964	72.2%
BRISTOL	10,448	175	1.7%
BURRILLVILLE	2,630	192	7.3%
CHARLESTOWN	5,835	6	0.1%
COVENTRY	14,336	6,739	47.0%
CRANSTON	31,771	3,122	9.8%
CUMBERLAND	15,431	39	0.3%
EAST GREENWICH	6,170	895	14.5%
EAST PROVIDENCE	22,271	1,372	6.2%
EXETER	3,041	601	19.8%
FOSTER	2,040	789	38.7%
GLOCESTER	4,670	2,196	47.0%
HOPKINTON	3,945	117	3.0%
JAMESTOWN	3,331	1,590	47.7%
JOHNSTON	13,811	715	5.2%
LINCOLN	10,255	836	8.2%
LITTLE COMPTON	2,585	840	32.5%
MIDDLETOWN	8,348	2	0.0%
NARRAGANSETT	10,609	779	7.3%
NEWPORT	14,927	74	0.5%

Town Name	Customers Served	Total Customers Interrupted	Percent of Total
NORTH KINGSTOWN	13,705	2,331	17.0%
NORTH PROVIDENCE	16,161	19	0.1%
NORTH SMITHFIELD	5,833	189	3.2%
PAWTUCKET	34,010	2,187	6.4%
PORTSMOUTH	9,245	99	1.1%
PROVIDENCE	74,178	763	1.0%
RICHMOND	3,566	801	22.5%
SCITUATE	4,620	1,753	37.9%
SMITHFIELD	9,019	109	1.2%
SOUTH KINGSTOWN	14,835	487	3.3%
TIVERTON	8,268	21	0.3%
WARWICK	40,495	1,436	3.5%
WEST GREENWICH	2,736	382	14.0%
WEST WARWICK	14,180	2,588	18.3%
WESTERLY	14,521	70	0.5%
WOONSOCKET	18,955	13	0.1%

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

#### **IV. RESTORATION**

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

The Company implemented the system of prioritization for restoration found in its Emergency Response Plan, focusing first on public safety and then on customer restoration that maximized restoration when lines were energized. The Company gave priority and consideration to critical facilities and concentrated efforts to restore service to any life support customers the Company was aware of who were impacted by the Storm as quickly as conditions warranted.

See Appendix C for a timeline of the storm progression, including the hour and date that constitutes the start of restoration and the hour and date that constitutes complete restoration. Hourly chronological restoration assessment in this appendix includes number of customers out (in executable format) for the Company's Capital and Coastal regions, the total system, and each feeder affected.

See Appendix D for a summary of number of customer outages at peak and customer outage minutes, by cause, for the Company's Capital and Coastal regions.

See Appendix E for a specific list of all outages, in executable format, that includes detailed information for each outage. Also included in Appendix E is a listing of all outages caused by tree conditions as well as data regarding asset replacements for this event.

##### **B. Restoration Coordination**

The Company dispatched crews to respond to outages from the Branch Storm Rooms in Providence and North Kingstown as soon as they opened (see Table 2 above) through the end of the Storm. Consistent with the Emergency Response Plan, the Company activated Police and Fire Coordinators for the Storm. These employees reported to the Storm Room Leads and were responsible for communicating the estimated times of arrival on all police and fire calls, with a standby condition noted.

The Company also established a Staging Site to support restoration across the state, as shown in Table 4 below.

**Table 4. Staging Site**

<u>Staging Site Location</u>
Community College of Rhode Island, Warwick

Task Force teams were not activated for this event.

### **C. Personnel Resources**

The Company secured a total of 286 internal and external field crews<sup>1</sup> to restore power to customers in Rhode Island, consisting of approximately 126 external crews and 160 internal crews. The internal and external field crew numbers included transmission and distribution overhead line, forestry, substation, and underground personnel.

See Appendix B for a daily accounting of resource staffing levels from pre-storm through complete restoration.

The State Incident Commander for National Grid's Rhode Island and Massachusetts electric distribution operating companies was able to obtain sufficient external contractor crews, as well as some Forestry crews from the Company's sister utility in New York, to supplement restoration efforts in New England. No additional assistance was required from companies in the North Atlantic Mutual Assistance Group ("NAMAG") to support restoration for this event. Resources requested through mutual assistance are based on anticipated needs across National Grid's service territory in Rhode Island and Massachusetts; total resources received then are allocated across the service territory and may be reallocated as restoration progresses depending on resource needs. In addition, mutual assistance resources allocated to one area may free up local or external contractor crews to be allocated to other areas. For the September 29-30, 2020 Storm, no mutual assistance was requested.

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

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

As with any storm, for the September 29-30, 2020 Storm, the Company 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 to all Company employees through corporate communications. Safety personnel were deployed to assist in specific geographic areas and delivered on-site safety orientations to Company workers and contractors prior to the start of each day. During the Storm, safety personnel visited work sites to advise Company personnel and contractors of safety issues and best 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. These safety efforts helped the Company experience no injuries during the September 29-30, 2020 Storm.

---

<sup>1</sup> Crews typically include two or three people, although there may be some one-person crews in damage assessment, wires down, distribution line (troubleshooters), and substation personnel. Transmission crews typically include 6-10 resources.

## V. COMMUNICATIONS DURING AND AFTER THE EVENT

### A. Communication Regarding Estimated Times of Restoration

The Company posted Estimated Times of Restoration (“ETRs”) on its website during the September 29-30, 2020 Storm using Outage Central, which provided real time ETR updates approximately every 15 minutes.

As crews were assigned and reported ETR updates based on their actual findings in the field, the Company uploaded the updated ETRs into Outage Central. The Company continued to update ETRs throughout the restoration process as information became available to the Company.

### B. Intra-Company

The Company began preparing for the September 29-30, 2020 Storm on Tuesday, September 29, closely monitoring weather forecasts.

As mentioned earlier, with the rapid escalation of the weather intensity and resulting damage to the Company’s electric distribution system, the State Incident Commander communicated directly with key staff to coordinate response and restoration efforts, and no Restoration Stage Briefing Calls were conducted. Additionally, the Company issued communications to field crews with both restoration and safety information throughout the Storm.

### C. Public Officials

#### 1. Governor’s Office

During the Storm, the Company’s Jurisdictional President communicated regularly with the Governor’s office. Additionally, the Company’s Director of Government Relations communicated with Rhode Island’s legislative leadership leading up to and during the Storm.

#### 2. Rhode Island Public Utilities Commission (“PUC”), Division of Public Utilities and Carriers (“Division”), Office of Energy Resources (“OER”), and Rhode Island Emergency Management Agency (“RIEMA”)

The Company’s Manager of Regulatory Affairs contacted the PUC, the Division, the Governor’s office, and OER to provide updates throughout the September 29-30, 2020 Storm. See Table 5 below for a listing of updates along with a brief summary of the update provided.

**Table 5. Updates to the PUC, Division, Governor’s Office, and OER**

Date and Time of Update	Summary of Update Content
September 29, 2020; approx. 9:30 a.m.	Initial notification of possible event; weather forecast; the Company will continue to watch the forecast and adjust plans as needed
September 29, 2020; approx. 6:00 p.m.	Plans for incremental resources standing by overnight; planned Storm Room openings
September 30, 2020; approx. 9:00 a.m.	Actual weather update and forecast through the afternoon; Event Type update; customer outage update; towns most heavily impacted; resource update
September 30, 2020; approx. 2:45 p.m.	Restoration progress and customer outage update; towns most heavily impacted; resource update
October 1, 2020; approx. 8:00 a.m.	Restoration progress and customer outage update; demobilization plans; final update

During the event, the Company’s Jurisdictional President provided updates to RIEMA regarding the Company’s storm preparations and restoration efforts. The Company also utilized its RIEMA Liaisons to post outage number updates virtually on RIEMA’s WebEOC and answer questions throughout the event.

3. Municipalities

Based on the impact from this event, the Company did not open a Municipal Room. The Company utilized its Area Community Liaison Coordinators to work with each Rhode Island city or town’s emergency, Department of Public Works, and/or public officials as a dedicated liaison. The Company’s Area Community Liaison Coordinators served as full-time resources supporting impacted communities and enabled direct communications back into the Company’s public information coordinators and Branch operations personnel.

**D. Customers**

The Company communicated with customers during the September 29-30, 2020 Storm through its Customer Contact Center, email, website, and social media. The Company’s Customer Contact Center secured additional staffing to respond to incoming life-support calls for those affected by outages, as well as additional staff to support the high call volume.

On Wednesday, September 30, 2020, at approximately 10:00 a.m., the Company made an outbound call to all life-support customers to notify them of the weather that had impacted the region resulting in numerous power outages across the state and to recommend taking necessary precautions and preparations to ensure their well-being in the event of an outage. The outbound call also informed life-support customers to contact 911 or their local public safety officials in the event of an emergency.

See Table 6 below for a detailed listing of each method of communication utilized throughout the September 29-30, 2020 Storm.

**Table 6. Communication Details**

<b><u>Method of Communication</u></b>	<b><u>Purpose of Interaction</u></b>	<b><u>Level of Interaction</u></b>
<b><u>Report Outage/Outage Follow-up</u></b>		
Number of Customer Calls Received by Customer Service Rep	Customer reports outage or issue	1,843
Number of Customer Calls Received by Interactive Voice Response (IVR)	Customer reports outage or issue	2,044
Number of Customer Calls Received by 21 <sup>st</sup> Century	Customer reports outage or issue	201
Number of Outbound Calls to Life Support Customers, Type 3 Event or greater	Company follow-up with Life Support Customers impacted by an outage	Not Applicable, this was a Type 4 Event
<b><u>Automated Outage Updates</u></b>		
Number of Inbound and Outbound Text Messages	Outage notification, update, or update request from customer	23,194
Number of emails sent	Outage notification, update, or update request from customer	83,623
Number of outbound calls made	Outage notification, update, or update request from customer	235
<b><u>Web and Social Media</u></b>		
Number of customer hits on Company website during preparation for, and response to, the event	Customers seeking information	25,388
Number of Facebook posts	Company preparation for the event, safety information, restoration updates	1
Number of tweets/re-tweets posted on Twitter	Company preparation for the event, safety information, restoration updates	8

## **E. Media**

The Company activated its Public Information Officer (“PIO”), along with additional PIO support staff for the Storm. The Company engaged both traditional and social media channels to distribute Storm and safety-related information. The Company’s Strategic Communications Department received two media requests for information related to the September 29-30, 2020 Storm in Rhode Island. Feedback and comments from media outlets and social media were received and monitored regularly, and overall sentiment was generally neutral.

## **VI. TECHNOLOGY ISSUES**

There were no technology issues experienced during this event that impacted restoration or communications.

## **VII. CONCLUSION**

The September 29-30 2020 Storm moderately impacted the Company’s electrical system, resulting in power outages to 37,530 of the Company’s customers. Damage was caused primarily by falling trees and limbs coming into contact with the Company’s poles and wires. The Company followed its Emergency Response Plan and was fully prepared to respond to the Storm, having secured all necessary resources and outside contractors to aid in the restoration effort required for the forecast predicted, and maintained communications with stakeholders through a variety of channels throughout the Storm.

The Company utilized its own distribution line resources and transmission line crews, contractor distribution line crews, and contractor tree crews to restore power to its customers. Power was restored to 95 percent of customers impacted in approximately 18 hours from the time of peak impact. The Company restored power to 100 percent of its customers impacted in approximately 42 hours from the time of the first customer impacted and in just under 36.5 hours from the time of peak impact. Power was restored to the final customer impacted by the September 29-30, 2020 Storm on October 1, at approximately 9:00 p.m.

The Company understands the impact that electrical outages have on its customers. The Company is proud of the restoration work that it accomplished during the September 29-30, 2020 Storm and is grateful for the support of customers, employees, state and local officials, and public safety officials, who experienced the effects of the Storm and were an integral part of the Company’s restoration efforts.



**Appendix A**

(Not applicable - No briefing calls were conducted for the September 29-30, 2020 Storm)

September 29 - 30, 2020 RI 90 Day Report  
Appendix B - Resource Staffing Levels

Date	Location	Number of Company Line Crews	Number of Contractor Line Crews	Number of Out-of-State Mutual Assistance Line Crews	Number of Contractor Tree Crews	Number of Out-of-State Mutual Assistance Tree Crews	Number of Company Underground Crews	Number of Contractor Underground Crews	Out-of-State Mutual Assistance Underground Crews	Number of Company Substation FTEs	Number of Contractor Substation FTEs	Out-of-State Mutual Assistance Substation FTEs	Number of Company Wire Down FTEs	Number of Contractor Wire Down FTEs	Number of Out-of-State Mutual Assistance Wire Down FTEs	Number of Company Damage Appraiser FTEs	Number of Contractor Damage Appraiser FTEs	Number of Out-of-State Mutual Assistance Damage Appraisers FTEs	Number of Company Transmission Crews	Number of Contractor Transmission Crews	Out-of-State Mutual Assistance Transmission Crews	
29-Sep-20 (night shift)	<b>Capital</b> Lincoln Providence/Chopmist	8			7		4													1		
	<b>Coastal</b> Middletown North Kingstown/Westerly	4			3																	
30-Sep-20	<b>Capital</b> Lincoln Providence/Chopmist	34	19		19	15*	10.5			36			25							1		
	<b>Coastal</b> Middletown North Kingstown/Westerly	28	8		10	12*							25									
1-Oct-20	<b>Capital</b> Lincoln Providence/Chopmist	34	40		19	15*	10.5			36												
	<b>Coastal</b> Middletown North Kingstown/Westerly	28	30		10	12*																

Note: Crews typically include two or three people, although there may be some one-person crews in damage assessment, wires down, distribution line (troubleshooters), and substation personnel. Transmission crews typically include 6-10 resources.

\* These crews were obtained from National Grid's NY sister Company, and were not acquired as part of a mutual assistance agreement.

## **Appendix C**

Please see the Excel version of Appendix C.

## **Appendix D**

Please see the Excel version of Appendix D.

## **Appendix E**

Please see the Excel version of Appendix E.