

February 1, 2019

VIA HAND DELIVERY & 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 November 3, 2018 Storm Summary Report

Dear Ms. Massaro:

In accordance with Order No. 20814 (November 20, 2012) in Docket D-11-94, I have enclosed four copies of National Grid's¹ summary report on the planning and restoration activities associated with the November 3, 2018 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 November 3, 2018 storm event will likely qualify for inclusion in the Company's Storm Contingency Fund. Accordingly, the Company is filing this 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 781-907-2153.

Very truly yours,



Celia B. O'Brien

Enclosures

cc: Christy Hetherington, Esq.
John Spirito, Esq.
Kevin Lynch, Division
John Bell, Division
Greg Booth, Division

¹ The Narragansett Electric Company d/b/a National Grid (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.

The 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

February 1, 2019
Date

**Docket No. 2509 – National Grid – Storm Fund
Service List as of 1/25/2019**

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Docket D-11-94 Review of National Grid's Storm Reports

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National Grid

The Narragansett Electric Company

**Report on
November 3, 2018 Event,
Damage Assessment and
Service Restoration**

February 1, 2019

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 NOVEMBER 3, 2018 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 November 3, 2018 Wind and Rain Storm (November 2018 Storm or the Storm), which moderately impacted Rhode Island and other states in New England. For pre-planning purposes, the Company classified the November 2018 Storm as a National Grid Type 4 emergency event, 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 three percent of customers interrupted. The November 2018 Storm was projected to bring heavy rain and hazardous winds, which potentially could cause significant damage to the Company's electric infrastructure. Ultimately, the November 2018 Storm brought rain and strong winds across Rhode Island, Massachusetts, and much of New England. Rhode Island received approximately 1 to 1.5 inches of rainfall across the state. Most of the state experienced gusts in the 30 to 45 mph range, with Westerly experiencing a peak wind gust of 46 mph. Although the November 2018 Storm brought heavy rain and high winds to the state, the impact of the Storm was less than anticipated in Rhode Island, interrupting power to 9,554 (approximately 4,261 at peak) of the Company's customers. Overall, just under two percent of the Company's customers in Rhode Island experienced outages, with 28 of the 38 communities served in Rhode Island impacted.

The Company began preparing for the November 2018 Storm on Friday, November 2, at 10:00 a.m. by conducting its first Pre-Event Stage Briefing Call, during which the Company reviewed the weather forecast and began planning for the possibility that the Storm would impact the Company's electric distribution system in New England. The Company held its second Pre-Event Stage Briefing Call on Saturday, November 3, at 8:00 a.m. As part of its preparation for the Storm, on Saturday, November 3, the Company opened a Branch Storm Room in Providence at approximately 6:00 a.m. and mobilized the Providence wires-down room at approximately 7:00 a.m. Later that same day, the Company conducted its Restoration Stage Briefing Call at 6:00 p.m. 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 contractors from outside the Company's service territory to help with restoration. Using its own crews and contractor resources, the Company restored power to 100 percent of its customers impacted in slightly more than a day from the time of the first customer impacted and in approximately eight and one-half hours from the time of peak impact. Power was restored to the final customer impacted by the November 2018 Storm on November 3, 2018 at approximately 11:17 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 November 2018 Storm and were an integral part of the Company's restoration efforts.

II. INCIDENT ANTICIPATION

A. Determination of Incident Classification

For its response to the Storm, the Company established a Branch Storm Room in Providence on Saturday, November 3, 2018, at approximately 6:00 a.m. As explained in more detail below, on Friday, November 2, the Company named a New England Incident Commander, who primarily was responsible for establishing the projected and actual incident classification level for the November 2018 Storm. Consistent with a Type 4 event, the Company did not open the Regional Emergency Operation Center in Worcester, Massachusetts.

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.

On Friday, November 2, 2018, at approximately 7:30 a.m., the New England Incident Commander classified the event as a Type 4 event. Through the Operations 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.

B. Activation of Incident Command System

The Company utilizes the Incident Command System, 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 and addresses the operation of Company Emergency Operation Centers.

In the days leading up to the November 2018 Storm, prior to activation of the Incident Command System, the Company's Operations management personnel were monitoring the weather forecast closely. The Company held its first Pre-Event Stage Briefing Call on Friday, November 2, at 10:00 a.m. to discuss planning efforts for the possibility of a severe wind and rain storm forecasted to bring hazardous conditions to New England. In accordance with the Company's Emergency Response Plan and anticipated Type 4 event, the Company activated the

Branch Level Emergency Response Organization in Rhode Island. At that time, the Company planned to open its Branch Storm Room in Providence on Saturday, November 3, at 6:00 a.m. to support Rhode Island restoration. The New England Incident Commander activated the Rhode Island Branch Director, who was in charge of Rhode Island restoration and located in the Providence Storm Room, and several other Branch Directors in Massachusetts. Thereafter, the Company activated a number of other positions at the discretion of the Incident Commander and Branch Directors, considering the level of response expected for the November 2018 Storm in their respective areas, including Rhode Island. As mentioned above, the Company did not plan to open the Regional Emergency Operation Center in Worcester, Massachusetts, consistent with the anticipated Type 4 event level for this storm.

C. Determination of Crew Needs and Pre-Staging

Given the potential magnitude of the November 2018 Storm and forecast of hazardous winds and heavy rain and some concern related to the already saturated ground from the previous weekend's storm and partially foliated trees, the Company secured crews in advance from its contractors of choice 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 Emergency Response Plan. As of Friday, November 2, at approximately 2:30 p.m., the Company had 49.5 internal overhead line crews, 8 external overhead line crews, and 42 external forestry crews at its disposal to respond to the Storm. By approximately 12:00 noon on Saturday, November 3, these numbers had been increased to include 49.5 internal overhead line crews, 68 external overhead line crews, 46 forestry crews, 12 internal underground crews, 36 internal substation resources, 1 internal transmission crew, and 73 internal wires down resources. The Company established one staging site to support restoration across the state at the Community College of Rhode Island in Warwick.

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 Tuesday, October 30, the weather forecasts began to indicate some potentially hazardous weather for Friday, November 2, possibly lingering into Saturday, November 3, consisting of gusty winds and rain. On Wednesday, October 31, the details of the forecast were further clarified, calling for rainfall of approximately 1 to 3 inches across the Company's service territory on Friday into early Saturday, with thunderstorms and gusty winds of 35 to 45 mph possible on Friday. There was also a 40 percent chance of stronger gusts of 40 to 50 mph along the coast for Saturday.

Later in the day on Thursday, November 1, the weather forecasts began to change, with some calling for a more severe event. The Company noted this change to the forecasts and

closely monitored these changes. Although the forecast rainfall amounts essentially remained the same across the Company's service territory, the forecasts for wind gusts were increasing. Peak gusts on Saturday were now forecast at 45 to 55 mph, with a 40 percent chance that these gusts would be greater than 45 mph.

By Friday morning, the forecasts were in closer alignment. Rainfall projections were lowered to 1 to 2 inches across the state, and peak wind gusts remained forecast at 45 to 55 mph. Saturday morning's forecasts called for the same amount of rainfall, and slightly increased peak wind gusts of 50 to 60 mph for Rhode Island.

The Storm's impact began in the morning hours of Saturday, November 3. Throughout the day, the forecast essentially remained the same as the previous day for Rhode Island. As the winds began to decrease later in the day, forecast peak wind gusts were revised to the 45 to 55 mph range.

B. Impact

The November 2018 Storm was a significant weather event that resulted in moderate damage to the Company's electrical system. The Storm brought widespread rain and gusty winds to the Company's service territory, along with snow showers in northern New England. Rhode Island experienced wind gusts in the 30 to 45 mph range, with peak gusts of 46 mph in Westerly and 44 mph in Providence and Pawtucket. Rhode Island also experienced heavy rainfall of one inch or more in several municipalities, including Providence, Newport, and Pawtucket.

The November 2018 Storm impacted a total of approximately 9,554 customers in the Company's Rhode Island service territory. The Storm impacted approximately 4,261 customers at its peak, which occurred on Saturday, November 3, 2018, at approximately 2:50 p.m. The Company restored power to all customers that same day by approximately 11:17 p.m. The Company experienced interruptions in 28 of the 38 Rhode Island communities it serves, with a total of 45 distribution feeders affected. The Town of Narragansett was affected most heavily with approximately 19 percent of its customers impacted by the event.

Figure 1 below shows the number of customers interrupted and restored, by hour, for the period November 3 to November 4, 2018.

Figure 1

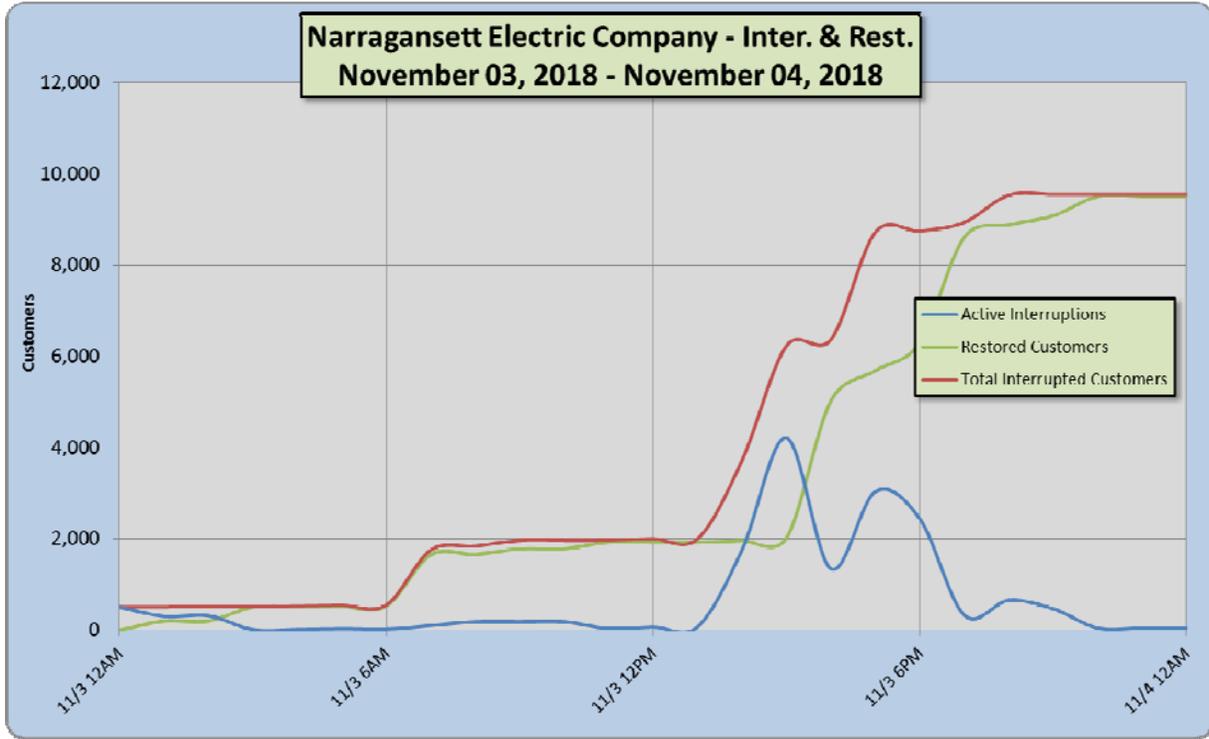


Figure 2 below shows all municipalities that experienced interruptions during the Storm.

Figure 2

Town Name	Total Customers Interrupted	Customers Served	Percent of Total
BARRINGTON	40	6,876	0.58%
BRISTOL	28	10,451	0.27%
BURRILLVILLE	474	2,627	18.04%
CHARLESTOWN	5	5,724	0.09%
COVENTRY	48	13,822	0.35%
CRANSTON	15	31,761	0.05%
CUMBERLAND	20	15,340	0.13%
EAST PROVIDENCE	233	22,214	1.05%
EXETER	125	3,034	4.12%
FOSTER	179	2,028	8.83%
GLOCESTER	65	4,628	1.40%
HOPKINTON	1,732	3,946	43.89%
JOHNSTON	18	13,711	0.13%
LINCOLN	114	10,223	1.12%
LITTLE COMPTON	14	2,568	0.55%
NARRAGANSETT	2,065	10,609	19.46%
NEWPORT	3	14,967	0.02%
NORTH KINGSTOWN	34	13,479	0.25%
NORTH PROVIDENCE	21	16,148	0.13%
PAWTUCKET	45	33,702	0.13%
PORTSMOUTH	5	9,202	0.05%
PROVIDENCE	1,143	72,943	1.57%
RICHMOND	372	3,468	10.73%
SCITUATE	412	4,571	9.01%
SOUTH KINGSTOWN	160	14,740	1.09%
WARWICK	1,206	40,490	2.98%
WEST GREENWICH	1	2,726	0.04%
WESTERLY	435	14,486	3.00%

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 impacted as quickly as conditions warranted, also as set forth in the Emergency Response Plan.

B. Restoration Coordination

The Company dispatched crews to respond to outages from the Branch Storm Room in Providence beginning on Saturday, November 3, 2018, at approximately 6:00 a.m. 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 one staging site to support restoration across the state at the Community College of Rhode Island in Warwick. The Company did not activate Task Force teams for this event because of the limited damage across the Company's service territory.

On Saturday, November 2, at approximately 7:00 a.m., the Company also mobilized the Providence wires-down room, with approximately 73 internal resources available, including wires-down appraisers, cut and clear restoration resources, and stand-by resources.

C. Personnel Resources

As part of its planning process, the Company prepared for a Type 4 event in Rhode Island based on the forecasts. The Company's plan remained consistent throughout the Pre-Event Stage Briefing Calls on Friday, November 2 and Saturday, November 3, 2018, as well as the Restoration Stage Briefing Call on Saturday, November 3.

The Company initially had secured 99.5 internal and external field crews¹ to restore power to customers in Rhode Island. By Saturday, November 3, at approximately 12:00 noon, the Company had increased the number of available field crews to approximately 285.5 field crews to restore power to customers in Rhode Island, consisting of approximately 114 external crews and 171.5 internal crews. The internal and external field crew numbers included

¹ 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.

transmission and distribution overhead line, forestry, wires down, substation, and underground personnel.

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, both 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 November 2018 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 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 National Grid workers and contractors prior to the start of the day. 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 November 2018 Storm.

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 November 2018 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 November 2018 Storm on Friday, November 2, 2018, at 10:00 a.m. by conducting an initial Pre-Event Stage Briefing Call, during which the Company reviewed the weather forecast and began planning for the possibility that the Storm would impact the Company's electric distribution system in New England. The Company held its second Pre-Event Stage Briefing Call on Saturday, November 3, at 8:00 a.m., and its first and only Restoration Stage Briefing Call that same day at 6:00 p.m. Additionally, the Company issued communications to field crews with both restoration and safety information throughout the Storm.

C. Public Officials

1. Governor's Office

The Company's Jurisdictional President communicated regularly with the Governor's office during the November 2018 Storm.

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

The Company's Manager of Regulatory Affairs first reached out to the Division and the Office of Energy Resources on Friday, November 2, 2018, regarding the Company's preparation for the November 2018 Storm and provided an update on Saturday morning, November 3. The final update was provided early in the evening on Saturday, indicating that the Company was transitioning its operations back to normal. The Company utilized its RIEMA Liaisons to post outage number updates virtually on RIEMA's WebEOC throughout the day on Saturday, November 3.

3. Municipalities

The Company opened a Municipal Room in Providence on Saturday, November 3, 2018, at 7:00 a.m. The purpose of the Company's Municipal Room was to manage and communicate effectively with any potentially impacted communities in Rhode Island. The Municipal Room was located together with the Company's Branch Emergency Response Organization personnel. This arrangement afforded efficient access to key restoration personnel in researching and communicating the priorities of municipalities, including regarding critical customers such as hospitals, nursing homes, and schools. The Company deactivated the Municipal Room on that same day at 7:00 p.m.

The Company activated 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 Branch Municipal Room, public information coordinators, and Branch operations personnel. In particular, they requested that communities prioritize their requests on items such as blocked roads and other emergencies, which in turn were forwarded to the Storm Room Leads to provide crews with prioritized work.

D. Customers

The Company communicated with customers during and after the November 2018 Storm through its Customer Contact Center, website, direct email, and social media. The Company monitored social media channels throughout the event and posted messages, responding to general customer issues. This included, but was not limited to, communications in the following

areas: promoting storm safety messages; how customers could contact the Company; and information on how customers could report outages.

On Friday, November 2, 2018, at 2:00 p.m., the Company made an outbound call to all life-support customers to notify them of the upcoming weather 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. 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 an expected high call volume. No life-support customers were affected by outages from the November 2018 Storm.

E. Media

The Company activated its Public Information Officer (PIO) who participated in the Pre-Event and Restoration Stage Briefing Calls conducted by Company Operations, 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 no media requests for information or interviews related to the November 2018 Storm in Rhode Island. There was little interest in this storm as feedback and comments from media outlets and social media were received and monitored regularly, and overall sentiment generally was neutral.

VI. CONCLUSION

The November 2018 Storm moderately impacted the Company's electrical system, resulting in power outages to approximately 9,554 of the Company's customers. Although there was some concern related to the already saturated ground from the previous weekend's storm as well as some partially foliated trees, the damage to the Company's distribution infrastructure was somewhat less than expected because of actual peak wind gusts being lower than forecast. Damage primarily was limited to falling trees and limbs coming into contact with the Company's poles and wires. The Company 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.

Through use of the Company's own distribution line resources and transmission line crews, contractor distribution and transmission line crews, and contractor tree crews, the Company restored power to 100 percent of its customers impacted in slightly more than a day from the time of the first customer impacted, and in approximately eight and one-half hours from the time of peak impact. The Company restored power to the final customer impacted by the Storm on November 3, 2018, at approximately 11:17 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 November 2018 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.