

May 24, 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 February 25, 2019 Wind Storm Quiana 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 February 25, 2019 wind storm event (Quiana). Order No. 20814 directs National Grid to file a final written report with the Division within 90 days following major storm events. The February 25, 2019 wind 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: Kevin Lynch, Division
John Bell, Division
Greg Booth, Division
John Spirito, Esq.
Christy Hetherington, Esq.
Leo Wold, Esq.

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

National Grid

The Narragansett Electric Company

**Report on
February 25, 2019 Event,
Damage Assessment and
Service Restoration**

May 24, 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 FEBRUARY 25, 2019 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 25, 2019 Wind Storm Quiana (February 25, 2019 Storm or the Storm), which moderately impacted Rhode Island and other states in New England. For pre-planning purposes, the Company classified the 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 Storm was projected to bring some wintry precipitation followed by hazardous winds, which potentially could cause significant damage to the Company's electric infrastructure. Ultimately, the Storm did bring varying amounts of precipitation followed by strong winds across Rhode Island, Massachusetts, New York, and much of New England. Rhode Island experienced very little precipitation but did see maximum wind gusts in the 50 to 55 mph range. The Storm interrupted power to 41,697 (approximately 17,009 at peak) of the Company's customers. Overall, over eight 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 Friday, February 22, closely monitoring the weather forecasts and conducting an Operations Planning Call at 1:00 p.m. On Saturday, February 23, at 1:00 p.m., the Company conducted 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 Sunday, February 24, at 1:00 p.m. As part of its preparation for the Storm, the Company opened a Branch Storm Room in Providence at approximately 12:00 a.m. on Monday morning, February 25, and mobilized the Providence Municipal Room and Wires-Down Room at approximately 7:00 a.m. The Company conducted its first Restoration Stage Briefing Call on Monday, February 25, at 10:00 a.m., and continued these calls throughout the event. 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 approximately 43 hours from the time of the first customer impacted and in just over 24 hours from the time of peak impact. Power was restored to the final customer impacted by the February 25, 2019 Storm on February 26, 2019, at approximately 9:25 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 February 25, 2019 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 Monday, February 25, 2019, at approximately 12:00 a.m. As explained in more detail below, on Friday, February 22, 2019, the Company named a New England Incident Commander, who primarily was responsible for establishing the projected and actual incident classification level for the Storm. Consistent with a Type 4 event, the Company did not plan to open the Regional Emergency Operation Center in Worcester, Massachusetts at this time.

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, February 22, 2019, at approximately 1:00 p.m., the New England Incident Commander classified the event as a Type 4 event. Through the Operations Pre-Event 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 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 Operations Planning Call on Friday, February 22, at 1:00 p.m. and its first Pre-Event Briefing call on Saturday, February 23, at 1:00 p.m. to discuss planning efforts for the possibility of a significant winter storm forecasted to bring hazardous conditions to New England and New York. A System Level Briefing Call was conducted that same day at 4:00 p.m., and on Sunday, February 24, at 1:00 p.m., the Company held its second Pre-Event Briefing Call. The Company held its first Restoration Stage Briefing Call on Monday, February 25, 2019, at 10:00 a.m., and conducted subsequent Restoration Stage Briefing Calls that same day at 5:00 p.m., and on Tuesday, February 26, at 8:00 a.m. and 4:00 p.m. 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 Monday, February 25, at 12:00 a.m. to support Rhode Island restoration. The Company also planned to open the Providence Municipal Room and Wires-down Room that same day at 7:00 a.m. The New England Incident Commander activated the Rhode Island Branch Director, who oversaw Rhode Island restoration and was located in the Providence Storm Room, and several other Branch Directors in Massachusetts. Thereafter, the Company activated several other positions at the discretion of the Incident Commander and Branch Directors, considering the level of response expected for the February 25, 2019 Storm in their respective areas, including Rhode Island. Although the event level for Rhode Island was anticipated to be a Type 4, in Massachusetts the event level was raised to a Type 3 during the evening of Monday, February 25. The Company opened the Regional Emergency Operation Center in Worcester, Massachusetts at that time, predominantly to support restoration efforts in Massachusetts.

C. Determination of Crew Needs and Pre-Staging

Given the potential magnitude of the Storm and forecast of hazardous winds, the Company secured crews in advance from its contractors of choice and other outside contractors to support restoration efforts for all New England as part of its regional preparation for the Storm, consistent with its Emergency Response Plan. By 8:00 a.m. on Monday, February 25, the Company had 60.5 internal overhead line crews, 106 external overhead line crews, 64 external forestry crews, 10 internal underground crews, 18 internal substation resources, 1 internal transmission crew, and 50 internal wires down resources. The Company established two staging sites to support restoration across the state at the Community College of Rhode Island in Warwick and the Twin River Casino in Lincoln.

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 Thursday, February 21, 2019, the weather forecasts began to indicate potentially hazardous weather for Sunday, February 24, and Monday, February 25, 2019, consisting of some wintry precipitation followed by a period of strong winds and wind gusts. By Friday, February 22, the forecast had become more detailed, with the wintry precipitation being forecast for mainly western Massachusetts and New Hampshire. Widespread hazardous winds were forecast to follow the precipitation. Common wind gusts of 45 to 50 mph and peak gusts of 55 mph were forecast for Rhode Island, beginning on Monday morning, February 25. This forecast remained consistent over the next two days, through Sunday evening, February 24.

By the early morning of Monday, February 25, the forecast had intensified slightly. Common wind gusts for Rhode Island were now forecast to be in the range of 50 to 55 mph, and peak winds gusts were forecast at 60 mph. Throughout the day, the forecast remained essentially the same for Rhode Island.

B. Impact

The February 25, 2019 Storm was a significant weather event that resulted in moderate damage to the Company's electrical system. The Storm brought widespread hazardous winds to the Company's service territory. Much of Rhode Island experienced wind gusts in the 50 to 55 mph range, with a peak gust of 56 mph in Providence.

The Storm impacted a total of 41,697 customers in the Company's Rhode Island service territory. The Storm impacted 17,009 customers at its peak, which occurred on Monday, February 25, 2019, at approximately 7:25 p.m. The Company restored power to all customers interrupted by approximately 9:25 p.m. on Tuesday, February 26. The Company experienced interruptions in 36 of the 38 Rhode Island communities it serves, with a total of 86 distribution feeders affected. The Towns of West Greenwich and Little Compton were affected most heavily with approximately 71 and 52 percent of their customers impacted, respectively, by the event.

Figure 1 below shows the number of customers interrupted and restored, by hour, for the period of February 25 and 26, 2019.

Figure 1

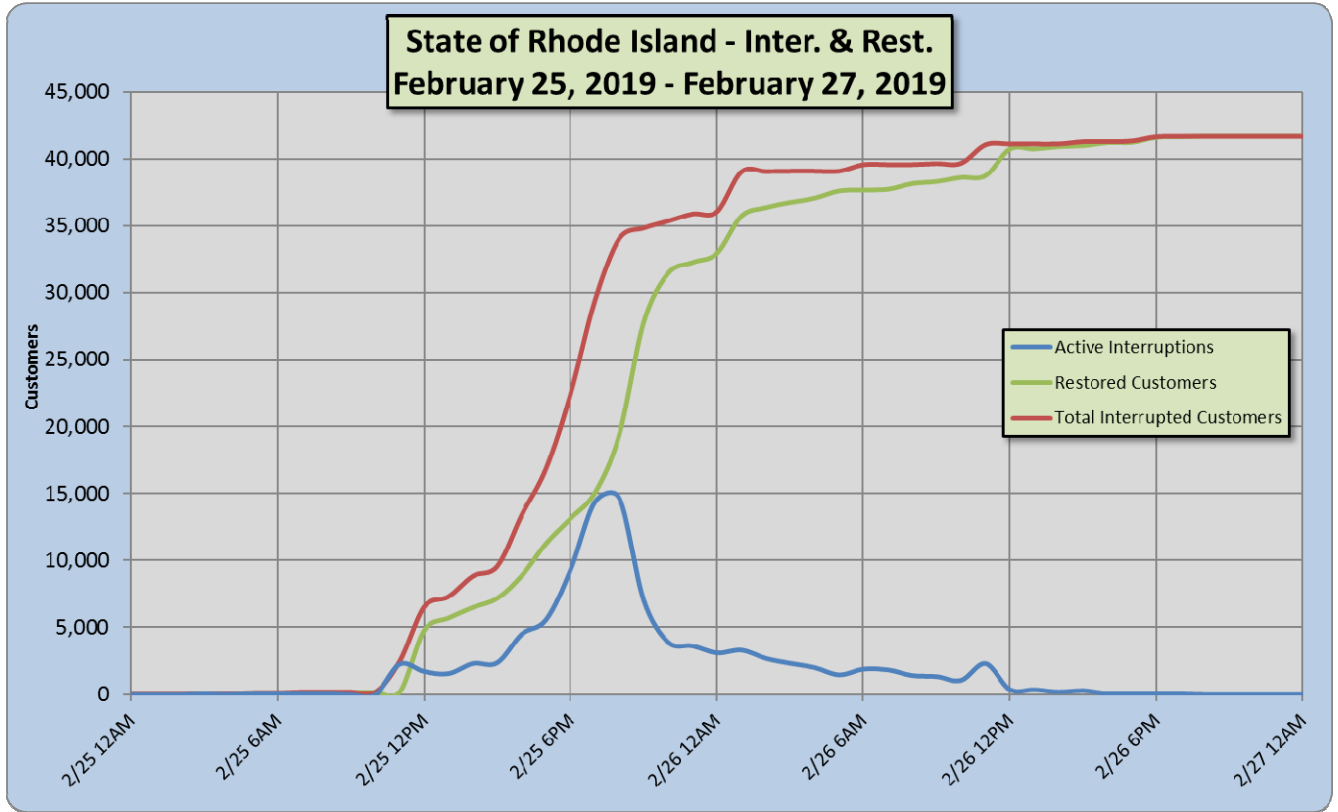


Figure 2 below shows all municipalities that experienced interruptions during the Storm.

Figure 2

Town Name	Customers Served	Total Customers Interrupted	Percent of Total
BARRINGTON	6,880	302	4.39%
BRISTOL	10,465	115	1.10%
BURRILLVILLE	2,632	394	14.97%
CHARLESTOWN	5,743	896	15.60%
COVENTRY	13,861	828	5.97%
CRANSTON	31,822	1,367	4.30%
CUMBERLAND	15,378	3,072	19.98%
EAST GREENWICH	6,144	721	11.74%
EAST PROVIDENCE	22,259	312	1.40%
EXETER	3,031	1,287	42.46%
FOSTER	2,035	956	46.98%
GLOCESTER	4,634	883	19.05%
HOPKINTON	3,955	230	5.82%
JOHNSTON	13,751	229	1.67%
LINCOLN	10,228	996	9.74%
LITTLE COMPTON	2,561	1,326	51.78%
MIDDLETOWN	8,378	3	0.04%
NARRAGANSETT	10,597	3,081	29.07%
NEWPORT	14,998	10	0.07%

Town Name	Customers Served	Total Customers Interrupted	Percent of Total
NORTH KINGSTOWN	13,522	2,563	18.95%
NORTH PROVIDENCE	16,195	1,612	9.95%
NORTH SMITHFIELD	5,786	2,578	44.56%
PAWTUCKET	33,913	3,608	10.64%
PORTSMOUTH	9,210	210	2.28%
PROVIDENCE	73,708	1,401	1.90%
RICHMOND	3,488	1,054	30.22%
SCITUATE	4,603	178	3.87%
SMITHFIELD	8,932	803	8.99%
SOUTH KINGSTOWN	14,752	840	5.69%
TIVERTON	8,258	3	0.04%
WARREN	6,047	400	6.61%
WARWICK	40,576	159	0.39%
WEST GREENWICH	2,731	1,942	71.11%
WEST WARWICK	13,627	1,200	8.81%
WESTERLY	14,509	65	0.45%
WOONSOCKET	19,025	5,890	30.96%

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.

B. Restoration Coordination

The Company dispatched crews to respond to outages from the Branch Storm Room in Providence beginning on Monday, February 25, 2019, at approximately 12:00 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 two staging sites to support restoration across the state at the Community College of Rhode Island in Warwick and the Twin River Casino in Lincoln. The Company activated Task Force teams for this event because of the anticipated degree of damage expected across the Company's service territory.

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 Saturday, February 23 and Sunday, February 24, 2019, as well as the Restoration Stage Briefing Calls on Monday, February 25 and Tuesday, February 26, 2019.

The Company secured 309.5 internal and external field crews¹ to restore power to customers in Rhode Island, consisting of approximately 170 external crews and 139.5 internal crews. The internal and external field crew numbers included transmission and distribution overhead line, forestry, substation, and underground personnel.

¹ The crew counts in this paragraph are consistent with the detailed crew counts provided in Paragraph II.C. on Page 3 of this report. 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.

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 February 25, 2019 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 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 February 25, 2019 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 February 25, 2019 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 February 25, 2019 Storm on Friday, February 22, 2019, monitoring forecasts and conducting an Operations Planning Call at 1:00 p.m. The Company continued to prepare for the Storm on Saturday, February 23, 2019, at 1:00 p.m. by conducting a Pre-Event Stage Planning 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 Sunday, February 24, 2019, at 1:00 p.m. The Company held its first Restoration Stage Briefing Call on Monday, February 25, 2019, at 10:00 a.m., and conducted subsequent Restoration Stage Briefing Calls that same day at 5:00 p.m., and on Tuesday, February 26, at 8:00 a.m. and 4:00 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

During the Storm, the Company's Jurisdictional President participated in the State's planning call facilitated by the Rhode Island Emergency Management Agency (RIEMA) and attended by the Governor's staff.

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, February 22, 2019, regarding the Company's preparation for the February 25, 2019 Storm and provided an update on Saturday, February 23 and Sunday, February 24, 2019. The next update provided on Monday morning, February 25, at approximately 10:00 a.m., indicated that the Company was continuing to monitor the forecast and, although customer impacts were minimal at the time, the Company remained prepared for a Type 4 event. Subsequent updates later that day at 7:00 p.m. and on Tuesday, February 26, at 9:40 a.m. provided updates on the weather as well as numbers of customers impacted. The final update, which was provided on February 26 at approximately 6:00 p.m., indicated that customer interruptions were minimal, and the Company was putting plans in place to return to normal operations.

The Company's Jurisdictional President was in regular communication with RIEMA regarding the Company's storm preparations. Additionally, the Company deployed its RIEMA liaisons on February 25 at approximately 7:00 a.m. The Company utilized RIEMA's WebEOC to facilitate communications with Emergency Support personnel throughout the event.

3. Municipalities

In preparation for the anticipated impact from this event, the Company opened a Municipal Room on Monday, February 25, at 7:00 a.m. 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 February 25, 2019 Storm through its Customer Contact Center, email, website, and social media. The Company monitored social media channels and posted messages and responded to customer issues. Communications included but was not limited to: information on how customers could stay safe during the Storm; information on what the Company was doing to respond to the Storm; and information on how customers could contact the Company.

On Saturday, February 23, 2019, at 3:00 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 all incoming calls for those affected by outages, as well as additional staff to support an expected high call volume.

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 nine media requests for information related to the February 25, 2019 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. CONCLUSION

The February 25, 2019 Storm moderately impacted the Company's electrical system, resulting in power outages to 41,697 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 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 line crews, and contractor tree crews, the Company restored power to 100 percent of its customers impacted in approximately 43 hours from the time of the first customer outage and in just over 24 hours from the time of peak impact. Power was restored to the final customer impacted by the February 25, 2019 Storm on February 26, 2019, at approximately 9:25 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 February 25, 2019 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.