

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
PUBLIC UTILITIES COMMISSION

IN RE: PROCEEDING TO ESTABLISH A :
CONTACT VOLTAGE DETECTION AND REPAIR : DOCKET NO. 4237
PROGRAM APPLICABLE TO NATIONAL GRID'S :
REVIEW OF CONTACT VOLTAGE ANNUAL :
REPORT – FISCAL YEAR 2015 :

ORDER

I. National Grid's Annual Report

On June 30, 2015, The Narragansett Electric Company d/b/a National Grid (National Grid or Company) filed with the Public Utilities Commission (PUC) its Contact Voltage Annual Report.¹ The report contains eight sections: (1) background and summary, (2) survey and mobile testing results for the contact voltage risk areas, (3) the contact voltage program costs, (4) calls into the shock line, (5) updated electric operating procedures, (6) results of the total harmonic distortion pilot program, (7) recommendations to test 100% of the contact voltage risk areas in 2016, and (8) an update on standards and equipment for testing.

In the report, National Grid stated that the fourteen contact voltage risk areas were surveyed during the period March 8-23, 2015 and covered a total of 141.5 miles, including both sides of the road. The testing included the total harmonic distortion pilot, designed to determine whether readings between one volt and 4.5 volts were contact voltage or not. Six locations were remediated after total harmonic distortion testing revealed readings that suggested the cause of elevated voltage above one volt was contact voltage. In addition, six locations were remediated although the results of the total harmonic distortion indicated that the voltage reading was not hazardous to the public. An additional seven assets registered above 4.5 volts which required immediate

¹ A copy of the FY 2015 Contact Voltage Annual Report is attached hereto as Appendix A. An electronic copy can be found at: http://www.ripuc.org/eventsactions/docket/4237-NGrid-2015AnnualRept_6-30-15.pdf.

remediation, all of which were on streetlights. According to the Company, all assets that registered greater than one volt were permanently repaired by April 2, 2015. Testing also detected contact voltage on four customer-owned assets, the owners of which were notified in accordance with the statute and the approved contact voltage program. The number of mobile events with readings less than one volt were lower than in FY 2014; readings between one and 4.5 volts was higher than in FY 2014, but did not include any repeat assets; and the instances of readings above 4.5 volts were the same, but again, did not include repeat assets.²

In its Order approving the FY 2014 Annual Report, the PUC ordered National Grid to conduct follow-up scans in areas where remediation work had been completed between mobile testing scans. The PUC further required National Grid to implement a process where random objects are selected in each contact voltage risk area for manual testing in order to verify areas not shown by mobile technology. According to National Grid, from October 7-9, 2014, it conducted post-mitigation manual testing of the FY 2014 mobile events and found all fifteen readings at or below one volt, thus requiring no remediation. In addition, from March 30-April 2, 2015, 977 National Grid-owned assets located within the contact voltage risk areas were tested. No elevated voltage was found on 968 of the assets and nine were inaccessible to the public or not located within the mobile testing field.³ The total cost of the mobile testing, post-mitigation manual testing, quality assurance manual testing, remediation, and repair was \$289,322.⁴

² FY 2015 Contact Voltage Annual Report at 10-14. The Company discussed the use of the total harmonic distortion testing and recommended continued use in FY 2016. *Id.* at 26-28.

³ FY 2015 Contact Voltage Annual Report at 15-16. Addressing stray voltage that had been found on Westwind Drive in South Kingstown in FY 2014, but not yet remediated, National Grid stated that the stray voltage has been reduced, but permanent remediation in the form of new construction of a permanent distribution system between Westwind Drive and Julia Court requires National Grid to secure the necessary rights from property owners. The Company indicated that it will notify the PUC when the issue is fully resolved. *Id.* at 16, n.10.

⁴ *Id.* at 18.

During FY 2015, National Grid received nine calls to its “shock line” from the public, one of which was a duplicate call pertaining to a specific street light. Subsequent testing of the relevant assets revealed three instances of elevated voltage in excess of one volt, and three in excess of 4.5 volts. In all but one of these instances, the Company remediated the problem or directed the remediation.⁵ At three of the locations that were subjects of “shock line” calls, no elevated voltage was detected.⁶

Next, the Company reviewed the contact voltage risk areas and recommended no changes to the previously identified contact voltage risk areas.⁷ National Grid did recommend that the PUC approve testing of 100% of the contact voltage risk areas in FY 2016 rather than the minimum 20% required by statute. National Grid offered that “[g]iven the similar number of events found in FY 2015 as compared to FY 2014, the Company concludes that testing 100 percent of the [designated contact voltage risk areas] is a reasonable approach.”⁸ National Grid also proposed to shift the timeframe for testing from March, the end of the Company’s fiscal year, to an April-June timeframe, the beginning of the Company’s fiscal year. In order to transition to that schedule, National Grid proposed testing in the Fall of 2015 (fiscal year 2016) and then in May 2017 (fiscal year 2017).⁹

Finally, providing an update on standards and equipment, National Grid noted that the Institute of Electrical and Electronics Engineers Working Group had not yet completed its work on developing standards for contact voltage testing. Nor was the Company aware of any changes in the mobile testing technology. National Grid will continue using its existing manual technology

⁵ *Id.* at 20-22. For instance, addressing a reading below two volts, the Company determined that the report was a possible occurrence of static shock and took no remedial action.

⁶ FY 2015 Contact Voltage Annual Report at 21-22.

⁷ *Id.* at 30.

⁸ *Id.*

⁹ *Id.* at 32.

and the chosen mobile testing vendor in the third year of the program, rebidding the contract in FY 2016 after completion of the October 2015 testing.¹⁰

II. Division's Position on the Contact Voltage Annual Report

On August 3, 2015, the Division of Public Utilities and Carriers (Division) submitted a letter from its consultant, Gregory L. Booth, P.E., of Power Services, Inc. Mr. Booth stated that after reviewing the Contact Voltage Annual Report, he found that it met the requirements set forth in R.I. Gen. Laws § 39-2-25(b)(6) and included the recommendations made by the Division after its review of the FY 2014 Contact Voltage Annual Report.¹¹ Mr. Booth noted that, although there were no actionable events found during the post remediation manual testing and the testing of random samples within the contact voltage risk areas, it is important to continue such additional manual testing. He also recommended the PUC approve the proposals to once again conduct mobile testing of 100% of the contact voltage risk areas and to modify the testing schedule.¹²

III. PUC Findings

At an Open Meeting conducted on September 22, 2015, the PUC reviewed National Grid's FY 2015 Contact Voltage Annual Report and the Division's recommendations. The PUC unanimously found National Grid's annual report to be in compliance with R.I. Gen. Laws § 39-2-25(b)(6) and PUC Order Nos. 20871, 20950, 21414, and 21780. The PUC also approved National Grid's proposed modification to the mobile testing schedule as well as the proposal to again test 100% of the contact voltage risk areas in lieu of the statutory minimum of 20%.¹³ The

¹⁰ *Id.* at 5. In a subsequent letter to the PUC on July 14, 2015, National Grid advised the PUC that the vendor selected by National Grid had been acquired by another entity. However, that entity did not acquire the mobile testing portion of the vendor's business. Therefore, National Grid would be rebidding the mobile testing work for FY 2016. National Grid subsequently advised the PUC that the vendor's parent company, Willsbros Group, was the successful respondent to the request for proposals and testing commenced at the end of October 2015.

¹¹ Letter from Gregory Booth to Steve Scialabba at 1 (Aug. 3, 2015).

http://www.ripuc.org/eventsactions/docket/4237-DPU-Booth_8-3-15.pdf.

¹² *Id.* at 1-2.

¹³ R.I. Gen. Laws § 39-2-25(b)(1).

Company shall also continue the random testing within the contact voltage risk areas and the post remediation testing recommended by Mr. Booth.

Accordingly, it is hereby

(22355) ORDERED:

1. The Narragansett Electric Company d/b/a/ National Grid is in compliance with Public Utilities Commission Order Nos. 20871, 20950, 21414, and 21780.
2. The Narragansett Electric Company d/b/a National Grid shall adopt a survey and testing schedule for completing 100% of the Designated Contact Voltage Risk Areas in Fall 2015.
3. The Narragansett Electric Company d/b/a National Grid shall continue to include in its FY 2016 Contact Voltage Annual Report the recommendations that were outlined in Order Nos. 21414 and 21780.
4. The Narragansett Electric Company d/b/a National Grid shall file its Annual Report sixty days prior to conducting its Calendar Year 2016 testing.
5. The Narragansett Electric Company d/b/a National Grid shall file with its Annual Report, prior to conducting its Calendar Year 2016 testing, a recommendation of the percentage and identification of contact voltage risk areas to be tested in the fourth year of the Contact Voltage Detection and Repair Program.
6. The Narragansett Electric Company d/b/a National Grid shall: (1) conduct follow-up scans in areas where remediation work has been completed between mobile testing scans, (2) implement a process where random objects are selected in each contact voltage risk area, and (3) manually test for contact voltage to spot-verify areas not indicated by mobile technology.

7. National Grid shall notify the Public Utilities Commission when it successfully remediates the elevated voltage at the Westwind Drive, South Kingstown locations, with an explanation of the source of the problem and the manner of remediation.
8. The Narragansett Electric Company d/b/a National Grid shall comply with all other findings and instructions contained in this Order.

EFFECTIVE AT WARWICK, RHODE ISLAND ON SEPTEMBER 22, 2015,
PURSUANT TO AN OPEN MEETING DECISION. WRITTEN ORDER ISSUED MARCH 14,
2016.

PUBLIC UTILITIES COMMISSION



Margaret E. Curran

Margaret E. Curran, Chairperson

*Paul J. Roberti, Commissioner

Herbert F. De Simone, Jr.

Herbert F. DeSimone, Jr., Commissioner

*Commissioner Roberti concurs with the decision but is unavailable for signature.

NOTICE OF RIGHT OF APPEAL: Pursuant to R.I. Gen. Laws § 39-5-1, any person aggrieved by a decision or order of the PUC may, within seven days from the date of the order, petition the Supreme Court for a Writ of Certiorari to review the legality and reasonableness of the decision or order.