

**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
PUBLIC UTILITIES COMMISSION**

IN RE: PROCEEDING TO ESTABLISH A :
CONTACT VOLTAGE DETECTION AND REPAIR :
PROGRAM APPLICABLE TO NATIONAL GRID’S : **DOCKET NO. 4237**
REVIEW OF CONTACT VOLTAGE ANNUAL :
REPORT – FISCAL YEAR 2019 :

ORDER

I. Introduction

On September 18, 2019, The Narragansett Electric Company d/b/a National Grid (National Grid or Company) filed with the Public Utilities Commission (PUC or Commission) its 2019 Contact Voltage Annual Report.¹ On November 7, 2019, the Division of Public Utilities and Carriers (Division) submitted a memorandum which opined that the Company’s 2019 Contact Voltage Annual Report met the statutory requirements of R. I. Gen Laws. §39-2-25 (b) (6) while also incorporating all previous Division recommendations and Commission orders.² The Division also recommended approval of the Company’s methodology for conducting the FY 2020 contact voltage survey.³ The Division additionally made several specific recommendations concerning the future surveys and an upcoming Request for Proposals (RFP) process. At an Open Meeting on November 22, 2019, the PUC approved the Annual Report and adopted all the Division’s recommendations regarding current and future administration of the Contact Voltage Mobile Surveys.

¹ All filings in this docket are available at the Commission offices located at 89 Jefferson Boulevard, Warwick, Rhode Island or at: <http://www.ripuc.ri.gov/eventsactions/docket/4237page.html>. This report provides a summary of the Company’s surveying and testing results for the period March 18, 2019 to March 20, 2019.

² Memo of Gregory L. Booth, PE (Nov. 7, 2019); <http://www.ripuc.ri.gov/eventsactions/docket/4237-DIV-Memo%2011-7-19.pdf>.

³ *Id.* at 1.

II. National Grid's Annual Report

The report contains nine 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 emergency operating procedures, (6) results of the total harmonic distortion pilot program, (7) recommendations to test 20% of the contact voltage risk areas in 2020, (8) an update on standards and equipment for testing, and (9) recommendations for fiscal year 2020 Contact Voltage program.

In its report, National Grid stated that twenty percent of previously established Designated Contact Voltage Risk Areas (Designated Areas) were surveyed during the nighttime hours through the period March 18, 2019, through March 20, 2019, and covered approximately 21 miles. While there were a total of thirty-two mobile events that were detected and investigated during the survey, there were zero mobile events recorded for one volt or greater.⁴ This is a reduction from four mobile events recorded in 2018. In prior years, the report included a Total Harmonic Distortion (THD) pilot, designed to determine whether readings between one volt and 4.5 volts were contact voltage or not. In 2019, THD testing was not necessary because all locations identified in the survey measured less than one volt.⁵ The Company proposed continuation of the THD pilot in the 2020 survey because its costs are minimal and because THD testing will provide the Company and the PUC with useful information for possible future modifications to the Contact Voltage program.⁶ The cost to conduct the mobile survey, post-mitigation manual testing and quality assurance manual testing in twenty percent of the previously established Designated Areas was

⁴ *Id.* at 11. Seventeen of the elevated voltage readings were from streetlights.

⁵ *Id.* at 21.

⁶ *Id.*

\$80,000. This cost will be reconciled in the Company's FY 2019 Electric Infrastructure, Safety, and Reliability Plan Reconciliation Filing.⁷

Pursuant to prior Commission orders, the Company was required to report annual calls to its shock line. For the period April 1, 2018, through March 31, 2019, the Company received four calls, three of which were verified as an elevated voltage event above one volt. For each of these events, the Company investigated and mitigated problems with two Company owned assets. The remaining asset, which was improperly grounded, was privately owned, and the Company advised the customer of the need to repair.

National Grid noted that the Institute of Electrical and Electronics Engineers (IEEE) Standards Board approved standard P1695, *Guide to Understanding, Diagnosing and Mitigating Stray and Contact Voltage*, which is currently pending editorial revisions and approval. As the IEEE has not officially published any final documentation or final recommendations on elevated voltage, the Company indicated it will continue using existing manual technology and its vendor's chosen mobile technology for the FY 2020 Contact Voltage Program.⁸

Finally, the Company reported that its second four-year contract with its testing vendor, TRC, LLC, concluded with the 2019 survey and that the next request for proposals would be for the upcoming 2020 survey.⁹ The Company provided that it had secured both one-year and three-year contract extension proposals from its vendor and included the costs for testing 20%, 50%, or 100% of the Designated Areas.¹⁰

⁷ *Id.* at 17.

⁸ *Id.* at 25.

⁹ *Id.*

¹⁰ *Id.* at 27.

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

On November 7, 2019 the 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 incorporated all previous recommendations of the Division and multiple PUC Orders incorporating program additions and enhancements.¹¹ Mr. Booth noted that the Company reported a significant year over year increase in mobile events, from 13 events to 32 events, when comparing FY 2018 to FY 2019, with the majority of events in both years caused by streetlights. Mr. Booth recommended, as he did last year, that National Grid develop a methodology to be used in the future to compare survey results in the current year with results from the same Designated Areas in prior years.¹² Otherwise, he opined, there was a statistical distortion by comparing the results from a survey of 100% of Designated Areas vis-à-vis 20% Designated Areas.

Mr. Booth noted that National Grid maintained a shock line where it received calls that recorded an event of elevated voltage reported by either the public or another entity such as a utility. Two events with significantly elevated voltage were recorded, both from customer-owned equipment. Mr. Booth recommended that National Grid continue to maintain regular contact with these customers since elevated voltage may be contact or stray voltage.¹³

Mr. Booth observed that the Company has used the same mobile survey vendor since FY 2016 and that the Company's next request for the contract will be for the FY 2020 mobile survey. He recommended that the Company's next RFP process be comprehensive and incorporate

¹¹ Letter from Gregory Booth to John Bell at 1 (Nov 7, 2019); <http://www.ripuc.gov/eventsactions/docket/4237-DIV-Memo%2011-7-19.pdf>.

¹² Booth letter at 2 (Nov.7, 2019)

¹³ *Id.*

multiple options, including 20%, 50%, and 100% area testing pricing, to allow for a contract that offers long-term options without the need for subsequent price negotiations.

Mr. Booth recommended that the Company be required to monitor potential changes to IEEE Standard P1695, as it is currently pending editorial revisions and approvals. Mr. Booth further suggested that the Company should inform the PUC, of any changes to P1695. He opined that the Contact Voltage Program is mature and that the remediation benefits have become evident and were positive. Finally, Mr. Booth favored approving the Company's recommendations for the program.¹⁴

III. PUC Findings

At an Open Meeting on November 22, 2019, the PUC reviewed National Grid's FY 2019 Contact Voltage Annual Report and the Division's recommendations. After highlighting the continuing important nature of the Contact Voltage testing program, which began in Rhode Island after stray voltage killed a dog walking on a sidewalk, the PUC unanimously found National Grid's annual report in compliance with R.I. Gen. Laws § 39-2-25(b)(6) and with the PUC's prior orders in this Docket. The PUC further approved the Division's programmatic recommendations.

¹⁴ *Id.* at. 3.

Accordingly, it is hereby

(23761) ORDERED:

1. The Narragansett Electric Company d/b/a/ National Grid is in compliance with prior Public Utilities Commission Order Nos. 20871, 20950, 21414, 21780, 22357, 22567, 23270, and 23442.
2. The Narragansett Electric Company d/b/a National Grid shall continue the testing schedule for completing 20% of the Designated Contact Voltage Risk Areas in FY 2020, all of which shall be in the City of Providence.
3. The Narragansett Electric Company d/b/a/ National Grid's next Request for Proposals for mobile survey vendor, for FY 2021, shall be comprehensive and shall incorporate multiple options, including 20%, 50%, and 100% area testing pricing.
4. The Narragansett Electric Company d/b/a/ National Grid shall continue its current process for conducting mobile surveys.
5. The Narragansett Electric Company d/b/a/ National Grid shall monitor IEEE Standard P 1695 and inform the PUC of any changes or other actions involving P-1695.
6. The Narragansett Electric Company d/b/a/ National Grid shall perform post-mitigation testing on Company-owned assets by manually testing the areas where previous remediation work was completed after the prior year's mobile survey.

EFFECTIVE AT WARWICK, RHODE ISLAND ON NOVEMBER 22, 2019, PURSUANT TO AN OPEN MEETING DECISION. WRITTEN ORDER ISSUED FEBRUARY 6, 2020.

PUBLIC UTILITIES COMMISSION



Handwritten signature of Margaret E. Curran in blue ink.

Margaret E. Curran, Chairperson

Handwritten signature of Marion S. Gold in blue ink.

Marion S. Gold, Commissioner

Handwritten signature of Abigail Anthony in blue ink.

Abigail Anthony, Commissioner

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.