

**STATE OF RHODE ISLAND
PUBLIC UTILITIES COMMISSION**

IN RE: PROCEEDING TO ESTABLISH :
CONTACT VOLTAGE DETECTION AD REPAIR :
PROGRAM APPLICABLE TO NATIONAL GRID’S : **DOCKET NO. 4237**
REVIEW OF CONTACT VOLTAGE ANNUAL :
REPORT – FISCAL YEAR 2021 :

ORDER

On August 18, 2021, The Narragansett Electric Company d/b/a National Grid (National Grid or Company) filed with the Public Utilities Commission (Commission or PUC) its 2021 Contact Voltage Annual Report (Report).¹ The Division of Public Utilities and Carriers (Division) filed a letter from its consultant, Gregory L. Booth, dated August 31, 2021 and addressed to John Bell, concluding that the Report met the statutory requirements of R.I. Gen. Laws § 39-2-25(b)(6) and incorporated all prior Commission orders.²

At an Open Meeting on October 14, 2021, the Commission unanimously approved the Report and adopted the Division’s recommendations regarding future administration of the Contact Voltage Mobile Surveys.

The Report identified Osmose Utilities Services, Inc. (Osmose) as the company that performed the surveying and testing of 20% of the previously established Designated Contact Voltage Risk Areas (DCVRA) from February 22, 2021 to February 25, 2021. The surveys were conducted during the nighttime, included the testing of streetlights, and covered approximately 128 miles. National Grid shadowed the surveyors to immediately mitigate any high voltage discoveries during the surveying and testing if necessary. In addition to the testing in the DCVRA, the Company conducts a total harmonic distortion (THD) test. Voltage level readings above 1 volt and less than

¹ The Contact Voltage Annual Report provides a summary of the Company’s surveying and testing results for the period April 1, 2020 to March 31, 2021. 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>.

² Booth letter (Aug. 31, 2021).

4.5 volts with a THD of less than 10% are considered contact voltage and require mitigation. During the instant surveying and testing, five locations revealed a THD of less than 10% which were safeguarded from the public and permanently repaired.³

Of the estimated twenty-six stops made to investigate elevated voltage readings⁴, five were below one volt, thirteen were greater than one volt and less than 4.5 volts and eight were greater than 4.5 volts.⁵ There was only one event in 2020 and no events in 2019 greater than 4.5 volts. The Company noted that streetlights were responsible for most of the elevated voltage readings which is consistent with results from prior years since the inception of the program. In addition to the testing, the Company was previously ordered to conduct manual post mitigation testing to ensure repairs were addressed. Because none of the Company's assets required repair, manual post mitigation testing was not necessary.⁶

Surveying and testing costs were approximately \$5000 which will be reconciled with the Company's FY 2021 Electric Infrastructure, Safety, and Reliability Plan filing.⁷ For the reporting period, April 1, 2020 through March 31, 2021, the Company did not receive any calls of elevated voltage on its Shock Line. Included as an exhibit with the Report was an updated Electric Operating Procedure (EOP)-G016 that outlines the requirements for the equipment elevated voltage testing on the Company's facilities.⁸

National Grid plans to continue the THD pilot program during the FY 2022 mobile surveying. It noted that the costs of this program are minimal, and the additional information provided by the

³ National Grid 2021 Contact Voltage Report at 8 (Aug. 18, 2021).

⁴ Eighteen stops were made in FY 2020.

⁵ The figures in Table 2 were not consistent with the testimony and were corrected in a supplemental filing made on September 8, 2021.

⁶ National Grid 2021 Contact Voltage Report at 8-11.

⁷ National Grid 2021 Contact Voltage Report at 13. The remaining dollar of cost is for the survey, post-mitigation testing, and quality assurance manual testing.

⁸ National Grid 2021 Contact Voltage Report at 18, Exhibit 3.

program will be beneficial to possible future modifications or changes to the Contact Voltage Program. The Company did not recommend any changes to the list of fourteen DCVRAs that are currently surveyed. It reported that the standard P1695, *Guide to Understanding, Diagnosing and Mitigating Stray and Contact Voltage*, is pending editorial revisions and approval by the Institute of Electrical and Electronics Engineers (IEEE) Standards Board. It is not aware of any changes to the mobile testing technology and plans to continue to use its existing manual technology and chosen vendor technology. As set forth above, Osmose conducted the surveying and testing for FY 2021. It will continue in FY 2022 and FY 2023 at a price that will remain consistent regardless of the DCVRA percentage surveyed and tested. A request for proposals will be issued for the FY 2024 mobile survey. National Grid recommended continuation of the 20 percent sampling which will require fewer people to perform the testing.⁹

The August 31, 2021 letter to the Division from Mr. Booth concluded that the Report complied with the statutory requirements and prior Commission orders. Mr. Booth noted that he found a few discrepancies in the tables submitted by the Company that he expected to be corrected.¹⁰ He stated that although there was a significant increase in the number of mobile events, the Company had explained that when it went to make the repairs, many of the locations had no contact voltage. Noting that this same issue had occurred in New York, the Company is addressing this issue with Osmose to determine whether Osmose needs to adjust its methods for obtaining the shunt readings for verification.¹¹

Mr. Booth noted that the majority of events during the past two fiscal years were associated with streetlights, of which only those in Newport and Woonsocket are Company owned. The

⁹ National Grid 2021 Contact Voltage Report at 19-25.

¹⁰ See n. 5.

¹¹ Booth Letter at 1-2 (Aug. 31, 2021).

remaining municipalities in the state own the streetlights within their boundaries. He recommended that since streetlights account for most of the mobile events, the Company notify municipalities of the increasing trend of mobile events. He verified that there were no calls received by the Shock Line in 2021, which he stated is a worthwhile tool in identifying and mitigating hazardous contact voltage condition.¹²

Mr. Booth stated that because of the increase in mobile events, it is important that the Company be engaged in Osmose's technology utilization and equipment accuracy over the next two years. He noted that the Company has an agreement with the City of Providence that shifts the costs of repair and mitigation work to the City. On behalf of the Division, he recommended that National Grid continue to monitor IEEE committee activities and developments and notify the Commission if there are any changes for future consideration. Mr. Booth described the program as mature and noted that the remediation benefits are evident. He supported the Company's recommendation that the program continue with a 20% DCVRA survey each year. Finally, he recommended that National Grid continue to investigate why Osmose's shunt reading process is not determining false event readings. In some instances, National Grid responded to an event and found no repair required.¹³

At an Open Meeting on October 14, 2021, the Commission reviewed the Report and the Division's recommendation. It unanimously approved the Report finding it to be in compliance with R.I. Gen. Laws § 36-2-25(b)(6). The Commission ordered National Grid to continue the testing schedule for completing 20% of the DCVRAs in FY 2022 and its process for conducting mobile surveys. It ordered that the Company continue to monitor IEEE Standard P1695 and to inform the Commission of any changes or other actions involving P1695. The Commission

¹² *Id.* at 2-3.

¹³ *Id.* at 3.

ordered National Grid to perform post-mitigation testing on Company-owned assets by manually testing the where previous remediation work was completed after the prior year's mobile survey. It ordered the Company to continue to compare current year survey results in the Designated Contact Voltage Risk Areas with company-owned assets against results from the same DCVRAs from prior years. Because most municipalities own the streetlights within their borders, the Commission finds that these municipalities should be notified that mobile events are increasing. Finally, it ordered National Grid to investigate and provide findings in its FY 2022 Contact Voltage Annual Report of why Osmose's shunt reading process is not determining false events.

Accordingly, it is hereby

(24263) ORDERED:

1. 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 2022.
2. The Narragansett Electric Company d/b/a National Grid shall continue its current process for conducting mobile surveys.
3. The Narragansett Electric Company d/b/a National Grid shall monitor IEEE Standard P1695 and inform the Commission of any changes or other actions involving P1695.
4. 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.
5. The Narragansett Electric Company d/b/a National Grid shall continue to compare current year survey results in the Designated Contact Voltage Risk Areas with company-owned assets against results from the same DCVRAs from prior years.

6. The Narragansett Electric Company d/b/a National Grid shall notify municipalities that own streetlights of the increasing trend in mobile events.
7. The Narragansett Electric Company d/b/a National Grid shall pursue with Osmose why its shunt reading process is not determining false event readings and provide an explanation in its 2022 Contact Voltage Annual Report.

EFFECTIVE AT WARWICK, RHODE ISLAND ON OCTOBER 14, 2021 PURSUANT TO AN OPEN MEETING DECISION ON OCTOBER 14, 2021. WRITTEN ORDER ISSUED NOVEMBER 12, 2021.

PUBLIC UTILITIES COMMISSION



Ronald T. Gerwatowski, Chairman



Abigail Anthony, Commissioner



John C. Revens, Jr., Commissioner

NOTICE OF RIGHT TO 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.