

**STATE OF RHODE ISLAND
PUBLIC UTILITIES COMMISSION**

IN RE: PROCEEDING TO ESTABLISH :
CONTACT VOLTAGE DETECTION AND REPAIR :
PROGRAM APPLICABLE TO THE :
NARRAGANSETT ELECTRIC COMPANY’S : **DOCKET NO. 4237**
REVIEW OF CONTACT VOLTAGE ANNUAL :
REPORT – FISCAL YEAR 2023 :

ORDER

On January 12, 2024, The Narragansett Electric Company (RIE or Company) filed with the Public Utilities Commission (Commission or PUC) its 2023 Contact Voltage Annual Report (Report).¹ The Division of Public Utilities and Carriers (Division) filed a letter from its consultant, Gregory L. Booth, dated February 23, 2024 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. Mr. Booth made other recommendations which are discussed below.²

At an Open Meeting on April 29, 2024, the Commission unanimously approved the Report and adopted the Division’s recommendations regarding future administration of the Contact Voltage Mobile Surveys.

The Report identified Osrose Utilities Services, Inc. (Osrose) as the company that performed the surveying and testing of the previously established Designated Contact Voltage Risk Areas (DCVRA) from December 12, 2022 to December 15, 2022. The surveys were conducted during the nighttime, included the testing of streetlights, and covered approximately 97 miles. RIE was available to 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)

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>.

² Booth letter (Feb. 23, 2024).

test. Voltage level readings above 1 volt and less than 4.5 volts with a THD of less than 10% are considered contact voltage and require mitigation.³

Seventy-three mobile events having one volt or greater were recorded during the mobile scanning survey. Of the twelve stops made to investigate elevated voltage readings⁴, seven were greater than one volt and less than 4.5 volts and four were greater than 4.5 volts. There were no events in 2022 and eight in 2021 greater than 4.5 volts. Company assets accounted for eleven of the events while customer assets were responsible for the remaining 62 elevated voltage readings. The Company noted that manhole covers followed closely by streetlights were responsible for most of the elevated voltage readings. Streetlights have been consistently responsible for elevated readings in prior years and since the inception of the program.⁵ In addition to the testing, the Company was previously ordered to conduct manual post mitigation testing to ensure repairs were addressed. Since no Company owned assets required mitigation after the FY 2022 mobile survey, no post mitigation testing was necessary.⁶

Surveying and testing costs were *de minimus* which will be reconciled with the Company's FY 2023 Electric Infrastructure, Safety, and Reliability Plan filing. There were three repairs required during the period; however, because the costs were included under the blanket emergency work order, they cannot be sorted to determine the cost of the repair alone.⁷

For the reporting period, April 1, 2022 through October 27, 2023, the Company received one call of elevated voltage to its Shock Line.⁸ The cause of the elevated voltage of 0.1 Volts was a

³ The Narragansett Electric Company 2023 Contact Voltage Report at 8 (Jan. 12, 2023).

⁴ Eighteen stops were made in FY 2022.

⁵ The Narragansett Electric Company 2023 Contact Voltage Report at 8-11.

⁶ *Id.* at 12.

⁷ *Id.* at 14.

⁸ Shock Line calls to the Company record an event of elevated voltage reported by either the public or other entities such as another utility.

broken guy wire touching a secondary connector located on the pole. The condition was mitigated and the facilities repaired. There was no report of injury or property damage resulting from the elevated voltage.⁹ 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.¹⁰

The Company reported that there have been minor updates or modifications to the EOP-G016 since its last report was filed in 2022.¹¹ It plans to continue the THD pilot program during the FY 2024 mobile surveying. It noted that the costs of this program are minimal, and the additional information provided by the program will be beneficial to possible future modifications or changes to the Contact Voltage Program.¹² The Company did not recommend any changes to the list of fourteen DCVRAs that are currently surveyed.¹³ It reported that the standard P1695, *Guide to Understanding, Diagnosing and Mitigating Stray and Contact Voltage*, was approved 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.¹⁴

As set forth above, Osmose conducted the surveying and testing for FY 2023. The Company intends to continue its existing contract with Osmose for another year during which time it will evaluate the results and either continue to use Osmose or use another vendor for future years. The Company stated that the increase in number of mobile events can be traced back to a small number

⁹ The Narragansett Electric Company 2023 Contact Voltage Report at 16.

¹⁰ *Id.* at Exhibit 3.

¹¹ *Id.* at 18.

¹² *Id.* at 20.

¹³ *Id.* at 22.

¹⁴ *Id.* at 24.

of root causes and recommended continuation of the 20% sampling. Additionally, it noted that contract pricing is being currently negotiated.¹⁵

Prior to submitting his report, Mr. Booth and a representative of the Division met with representatives of the Company to discuss concerns with the Report. The Division asked a number of questions to which the Company responded to the satisfaction of the Division. The Commission also issued data requests asking for information and clarification on a number of issues. Many of the questions were about the significant increase in mobile events. In response to the Division's questions, the Company provided that the increase in mobile events is a direct result of superior equipment being used by its vendor which is now recognized as the industry standard by the IEEE. That coupled with an increased level of technical competence and experience and the performing of a manual assessment within a 30-foot radius of the mobile event all contributed to the sharp increase in mobile events.¹⁶

Mr. Booth noted that the majority of mobile events were associated with manhole covers followed by customer-owned streetlights. He recommended that the Company be ordered to continue to notify the municipalities that own streetlights of this continuing trend. Mr. Booth stated that no quality control process exists to assure that a municipality has adequately mitigated an event since the repair is exclusively with the municipality.¹⁷

On behalf of the Division, Mr. Booth recommended continuing the practice of utilizing THD readings for contact voltages between 1 and 4.5 volts continue. He noted that the Shock Line is a worthwhile tool in identifying and mitigating hazardous conditions. He supported the continuation of surveying 20 percent of the DCVA areas and continuation of post-mitigation annual testing and

¹⁵ *Id.* at 24, 26.

¹⁶ Booth letter at 1-2 (Feb. 23, 2024).

¹⁷ *Id.* at 2-3.

the use of THD testing. He also stated that the Company should continue to monitor IEEE developments and if changes are made to standards to notify the Division and the Commission. His recommendations also included that the Company determine the reason for the increase in the manhole cover and streetlight events, continue to comply with the terms of previous Commission orders, and develop a comparison of results from the same DCVRA once all five 20 percent area assessments are completed by the current vendor. Lastly, the Division and the Company agreed to transition the testing and reporting cycle back to testing in February and reporting by August of each year.¹⁸

In response to the Commission's and the Division's inquiries, the Company represented that it was not able to provide detail associated with the 62 mobile events that occurred on customer assets because the customer is responsible for repairs and did not provide this information to the Company.¹⁹ With regard to the manhole cover events, the Company noted that the area in Providence where the events occurred contains older Paper Insulated Lead Covered cable which is currently being targeted to be replaced. It was able to trace the cause of all but one of the mobile events as being from three underground Company equipment faults.²⁰ It is important to note that of the 73 mobile events, only 11 were on Company assets. The Company, in its response to inquiry from the Division, stated that it believes the improved accuracy of its testing is the reason for the increase in events.²¹ The Company was able to perform a quality control assessment of 54 of the recorded 73 mobile events that were either on customer assets or caused by the Company's equipment faults and confirmed that no voltage was present.²²

¹⁸ *Id.* at 3-4.

¹⁹ PUC 7-1, PUC 7-2, DPUC Question No. 3.

²⁰ PUC 7-3, DPUC Question No. 2.

²¹ DPUC Question No. 2, 4, 5, 7.

²² *Id.* at No. 10.

At an Open Meeting on April 29, 2024, the Commission reviewed the Report, the responses to data requests and Division questions, and the Division's recommendation. It found the Report to be in compliance with R.I. Gen. Laws § 36-2-25(b)(6). The Commission ordered RIE to continue to conduct testing for 20% of the DCVRAs in FY 2024 and to monitor IEEE Standard P1695 and to inform the Commission of any changes or other actions involving P1695. Verification of prior remediation is helpful in ensuring work previously performed was done properly. To accomplish this, the Commission ordered RIE to continue to perform post-mitigation testing on Company-owned assets by manually testing 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. It is important to understand the reasons for the dramatic increase in events from previous years. The Commission finds the Company's explanation that new and improved equipment and employee experience and competence is producing the increase in events is satisfactory to the Commission. In addition to continuing the Company's reporting requirements, the Commission ordered the Company to develop a comparison of results from the same DCVRA between new results and prior results for the DCVRA with the goal of gaining more insight into even differences between testing technologies. The Commission also found that testing should transition to the testing and reporting periods as agreed to with the Division.

Accordingly, it is hereby

(25121) ORDERED:

1. The Narragansett Electric Company shall continue the testing schedule for completing 20% of the Designated Contact Voltage Risk Areas in FY 2024.
2. The Narragansett Electric Company shall continue its current process for conducting mobile surveys.
3. The Narragansett Electric Company shall monitor IEEE Standard P1695 and inform the Commission of any changes or other actions involving P1695.
4. The Narragansett Electric Company 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 shall develop a comparison of results from the same DCVRA between new results and prior results for the DCVRA once the current vendor using the advanced technology has completed all five 20 percent area assessments so comparable data is being used.
6. The Narragansett Electric Company shall notify municipalities that own streetlights of the increasing trend in mobile events.
7. Future testing shall occur in February and reporting shall be by August of each year.

EFFECTIVE AT WARWICK, RHODE ISLAND ON APRIL 30, 2024
PURSUANT TO AN OPEN MEETING DECISION ON APRIL 30, 2024. WRITTEN
ORDER ISSUED JULY 24, 2024.

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.