

**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 2022** :

**ORDER**

On February 17, 2022, The Narragansett Electric Company (TNEC or Company) filed with the Public Utilities Commission (Commission or PUC) its 2022 Contact Voltage Annual Report (Report).<sup>1</sup> The Division of Public Utilities and Carriers (Division) filed a letter from its consultant, Gregory L. Booth, dated March 14, 2022 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.<sup>2</sup>

At an Open Meeting on July 14, 2022, 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 20% of the previously established Designated Contact Voltage Risk Areas (DCVRA) from November 15, 2021 to November 17, 2021. The surveys were conducted during the nighttime, included the testing of streetlights, and covered approximately 47 miles. TNEC 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

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<sup>1</sup> The Contact Voltage Annual Report provides a summary of the Company’s surveying and testing results for the period April 1, 2021 to March 31, 2022. 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>.

<sup>2</sup> Booth letter (Mar. 14, 2022).

distortion (THD) 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.<sup>3</sup>

Of the eighteen stops made to investigate elevated voltage readings<sup>4</sup>, one was below one volt, three were greater than one volt and less than 4.5 volts and thirteen were greater than 4.5 volts. There were eight events in 2021 and one in 2020 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.<sup>5</sup> In addition to the testing, the Company was previously ordered to conduct manual post mitigation testing to ensure repairs were addressed. The Company conducted post mitigation testing of eight mobile events that were repaired after the 2021 mobile survey and found all shunt voltage readings were less than 1 volt, so no further repair was necessary.<sup>6</sup>

Surveying and testing costs were approximately \$592 which will be reconciled with the Company's FY 2022 Electric Infrastructure, Safety, and Reliability Plan filing.<sup>7</sup> For the reporting period, April 1, 2021 through February 17, 2022, 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.<sup>8</sup>

The Company plans to continue the THD pilot program during the FY 2023 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

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<sup>3</sup> The Narragansett Electric Company 2022 Contact Voltage Report at 8 (Feb. 17, 2022).

<sup>4</sup> Twenty-six stops were made in FY 2022.

<sup>5</sup> The Narragansett Electric Company 2022 Contact Voltage Report Table 2 at 25.

<sup>6</sup> The Narragansett Electric Company 2022 Contact Voltage Report at 8-11.

<sup>7</sup> The Narragansett Electric Company 2022 Contact Voltage Report at 13.

<sup>8</sup> The Narragansett Electric Company 2022 Contact Voltage Report at 17, Exhibit 3.

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 2022. It will continue in FY 2023. The Company will issue another Request for Proposals for the FY 2024 mobile surveys. Based on the low number of events for the past three years, TNEC recommended continuation of the 20% sampling which will require fewer people to perform the testing.<sup>9</sup>

Both the Commission and the Division issued data requests asking for information and clarification on a number of issues. When questioned as to why the instant filing was made only six months after the one made for FY 2021, the Company responded that testing is based on the fiscal year and that the timing of the testing was based on Osmose's availability.<sup>10</sup> It explained that it had accompanied Osmose on surveys in New York and determined that Osmose was using the shunt reader properly.<sup>11</sup> It provided two explanations for the increase in mobile events. The first was that there has been a considerable time between the testing in some of the DCVRAs which would account for an accumulation of events. The second was that it does not track completeness or accuracy of repairs on streetlight owned by municipalities, implying that the events could be left over from previous years.<sup>12</sup>

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<sup>9</sup> The Narragansett Electric Company 2021 Contact Voltage Report at 19-25.

<sup>10</sup> PUC 6-3; DIV 1-4.

<sup>11</sup> PUC 6-2.

<sup>12</sup> DIV 1-1, DIV 1-3.

The March 14, 2022 letter to the Division from Mr. Booth concluded that the Report complied with the statutory requirements and prior Commission orders. He noted that FY 2021 and FY 2022 have had a much higher number of events than previous years which he discussed with the Company. He also noted that Osmose uses a different technology than its predecessor, TRC. He stated that the Company explained Osmose always over-reported and that there were many more false positive readings than in the past. His conversation with the Company included an explanation by the Company of its analysis of the testing and why it was comfortable with the testing process. The Company also explained to Mr. Booth the increase in the number of events was likely the result of DCVRAs that had not been visited in four to five years and that ten of the thirteen streetlights with recorded events were in close proximity to one another. Mr. Booth was satisfied with the Company's response to the concerns raised with the FY 2021 testing. He expressed that as Osmose begins to test in areas previously tested by TRC, test data will become available to make comparisons with prior years.<sup>13</sup>

Mr. Booth noted that the majority of events during the past two fiscal years were associated with streetlights, of which only those in City of Newport are Company owned. The 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 stated that the thirteen events greater than 4.5 volts was a significant increase over those between 2015 and 2020. He also noted that there were no events over 1 volt in 2019 and only one in 2020. However, in 2021 and 2022 events over 1 volt skyrocketed to 21 and 16, respectively. He opined that this upward trend should be addressed as DCVRA testing is repeated by Osmose. He expressed that Osmose's three year testing results will

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<sup>13</sup> Booth Letter at 1-2 (March 14, 2022).

be informative of testing equipment sensitivity and accuracy and that the next two testing cycles should provide more data for comparison as there is currently no explanation for the difference in recorded events between Osmose and TRC.<sup>14</sup>

Mr. Booth recommended continuation of THD readings for contact voltages between 1 and 4.5 volts. He verified that there were no calls received by the Shock Line in 2022, which he stated is a worthwhile tool in identifying and mitigating hazardous contact voltage condition. Since all streetlights with the exception of Newport are owned by municipalities, repairs are done by municipal contractors. The Company only paid \$592 on post mitigation and quality assurance in FY 2022 and had no repairs.<sup>15</sup>

On behalf of the Division, he recommended that TNEC 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 the Company continue to investigate why Osmose's shunt reading process is producing results so dramatically different than in prior years with prior vendors. He also recommended continued reporting requirements and that the Company develop a comparison of results from the same DCVRA between new results and prior results for the DCVRA in order to gain more insight into even differences between testing technologies.<sup>16</sup>

At an Open Meeting on July 14, 2022, the Commission reviewed the Report and the Division's recommendation. It unanimously approved the Report finding it to be in compliance with R.I.

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<sup>14</sup> *Id.* at 2.

<sup>15</sup> *Id.* at 2-3.

<sup>16</sup> *Id.* at 3.

Gen. Laws § 36-2-25(b)(6). The Commission ordered TNEC to continue to conduct testing for 20% of the DCVRAs in FY 2023 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 TNEC 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. To accomplish this, the Commission ordered the Company continue to investigate why Osrose's shunt reading process is producing results so dramatically different than in prior years with prior vendors. 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.

Accordingly, it is hereby

(24577) ORDERED:

1. The Narragansett Electric Company shall continue the testing schedule for completing 20% of the Designated Contact Voltage Risk Areas in FY 2023.
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 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 shall notify municipalities that own streetlights of the increasing trend in mobile events.
7. The Narragansett Electric Company shall continue to investigate why Osmose's shunt reading process is producing results so dramatically different than in prior years with prior vendors.
8. The Narragansett Electric Company shall continue reporting requirements and develop a comparison of results from the same DCVRA between new results and prior results for the DCVRA in order to gain more insight into even differences between testing technologies.

EFFECTIVE AT WARWICK, RHODE ISLAND ON JULY 14, 2022  
PURSUANT TO AN OPEN MEETING DECISION ON JULY 14, 2022. WRITTEN  
ORDER ISSUED JANUARY 27, 2023.

PUBLIC UTILITIES COMMISSION



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Ronald T. Gerwatowski, Chairman



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Abigail Anthony, Commissioner



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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.