

August 31, 2020

**VIA ELECTRONIC MAIL**

Luly E. Massaro, Commission Clerk  
Rhode Island Public Utilities Commission  
89 Jefferson Boulevard  
Warwick, RI 02888

**RE: Docket 4237 – National Grid 2020 Contact Voltage Annual Report  
Responses to PUC Data Requests – Set 1**

Dear Ms. Massaro:

I have enclosed the electronic version of National Grid's<sup>1</sup> responses to the Public Utilities Commission's First Set of Data Requests in the above-referenced docket.<sup>2</sup>

Thank you for your attention to this filing. If you have any questions, please contact me at 781-907-2121.

Very truly yours,



Raquel J. Webster

Enclosure

cc: Docket 4237 Service List  
John Bell, Division  
Leo Wold, Esq.

---

<sup>1</sup> The Narragansett Electric Company d/b/a National Grid (the Company).

<sup>2</sup> Per practice during the COVID-19 emergency period, the Company is providing a PDF version of this transmittal. The Company will provide the Commission Clerk with one hard copy and, if needed, additional hard copies at a later date.

Certificate of Service

I hereby certify that a copy of the cover letter and any materials accompanying this certificate was electronically transmitted to the individuals listed below.

The paper copies of this filing are being hand delivered to the Rhode Island Public Utilities Commission and to the Rhode Island Division of Public Utilities and Carriers.



\_\_\_\_\_  
**Joanne M. Scanlon**

August 31, 2020

**Date**

**Docket No. 4237 – Commission’s Proceeding Relating to Stray  
and Contact Voltage Pursuant to Enacted Legislation  
Service List updated 10/4/18**

| <b>Name</b>  | <b>E-mail Distribution List</b>  | <b>Phone</b> |
|--|--|--------------|
| Raquel Webster, Esq.<br>National Grid<br>280 Melrose Street<br>Providence, RI 02907-1438   | <a href="mailto:Raquel.webster@nationalgrid.com">Raquel.webster@nationalgrid.com</a> ; | 781-907-2121 |
|  | <a href="mailto:Celia.obrien@nationalgrid.com">Celia.obrien@nationalgrid.com</a> ;     |              |
|  | <a href="mailto:Joanne.scanlon@nationalgrid.com">Joanne.scanlon@nationalgrid.com</a> ; |              |
| Leo Wold, Esq.<br>Dept. of Attorney General<br>150 South Main St.<br>Providence, RI 02903  | <a href="mailto:lwold@riag.ri.gov">lwold@riag.ri.gov</a> ;                             | 401-274-4400 |
|  | <a href="mailto:John.bell@dpuc.ri.gov">John.bell@dpuc.ri.gov</a> ;                     |              |
|  | <a href="mailto:Al.contente@dpuc.ri.gov">Al.contente@dpuc.ri.gov</a> ;                 |              |
|  | <a href="mailto:Thomas.kogut@dpuc.ri.gov">Thomas.kogut@dpuc.ri.gov</a> ;               |              |
|  | <a href="mailto:joseph.shilling@dpuc.ri.gov">joseph.shilling@dpuc.ri.gov</a> ;         |              |
|  | <a href="mailto:jmunoz@riag.ri.gov">jmunoz@riag.ri.gov</a> ;                           |              |
| Greg Booth<br>Power Services, Inc.   | <a href="mailto:gbooth@powerservices.com">gbooth@powerservices.com</a> ;               | 919-256-5900 |
|  |  |              |
| <b>Original &amp; 9 copies file w/:</b><br>Luly E. Massaro, Commission Clerk<br>Margaret Hogan, Commission Counsel<br>Public Utilities Commission<br>89 Jefferson Boulevard<br>Warwick, RI 02888 | <a href="mailto:Luly.massaro@puc.ri.gov">Luly.massaro@puc.ri.gov</a> ;                 | 401-780-2107 |
|  | <a href="mailto:Margaret.hogan@puc.ri.gov">Margaret.hogan@puc.ri.gov</a> ;             |              |
|  | <a href="mailto:Cynthia.WilsonFrias@puc.ri.gov">Cynthia.WilsonFrias@puc.ri.gov</a> ;   |              |
|  | <a href="mailto:Alan.nault@puc.ri.gov">Alan.nault@puc.ri.gov</a> ;                     |              |

The Narragansett Electric Company  
d/b/a National Grid  
RIPUC Docket No. 4237  
In Re: 2020 Contact Voltage Annual Report  
Responses to Commission's First Set of Data Requests  
Issued on August 11, 2020

PUC 1-1

Request:

Please identify the streets that were surveyed during the 2020 testing cycle.

Response:

The following chart lists all streets that were surveyed during the 2020 testing cycle:

| Street Names    |                      |                   |
|-----------------|----------------------|-------------------|
| ACCESS RD       | FINANCE WAY          | POWER ST          |
| ADMIRAL ST      | FONES ALLEY          | PROSPECT ST       |
| ANGELL ST       | FRANCIS ST           | RANDALL SQ        |
| ASHBURTON ST    | GANO ST              | RANDALL ST        |
| ATWELLS AVE     | GASPEE ST            | SHIP ST           |
| BENEFIT ST      | GEORGE M. COHEN BLVD | SMITH ST          |
| BENEVOLENT ST   | GEORGE ST            | SOUTH ANGELL ST   |
| BROOK ST        | GOVERNOR ST          | SOUTH COURT ST    |
| BROWN ST        | HOPE ST              | SOUTH MAIN ST     |
| CADY ST         | IVES ST              | SOUTH WATER ST    |
| CANAL ST        | JAMES ST             | STATE ST          |
| CAPITOL HILL ST | LYMAN ST             | STILLMAN ST       |
| CHAD BROWN ST   | MAGEE ST             | STIMSON AVE       |
| CHARLES ST      | MANNING ST           | THOMAS ST         |
| CHARLESFIELD ST | MEETING ST           | THROOP ALY        |
| CLEMENCE ST     | MEMORIAL BLVD        | TOCKWOTTON ST     |
| COLLEGE ST      | MILL ST              | TRAVERSE ST       |
| COOKE ST        | MOSHASSUCK CT        | WASHINGTON ST     |
| COTTAGE ST      | NORTH CT             | WATERMAN ST       |
| CUSTOM HOUSE ST | NORTH MAIN ST        | WAYLAND AVE       |
| DIMAN PL        | OREGON ST            | WEST EXCHANGE ST  |
| DOLLAR ST       | ORMS ST              | WESTMINSTER ST    |
| EAST ST         | PACKET ST            | WHIPPLE ST        |
| EDDY ST         | PARK ST              | WICKENDEN ST      |
| ELIZABETH ST    | PINE ST              | WILLIAMS ST       |
| EMPIRE ST       | PITMAN ST            | WORCHESTER ST     |
| EXIT 21         | PLANET ST            | YOUNG ORCHARD AVE |
| FILLMORE ST     | POINT ST             |                   |

PUC 1-2

Request:

In paragraph 3 of Order No 23442 in this Docket, the Company was directed to develop a methodology to compare survey results in the current year with results from the same Designated Contact Voltage Risk Areas from prior Years. Last year, it responded that since it had zero findings of greater than one volt on both Company-owned and Municipal-owned assets in the DCVRAs in 2020, the Company did not develop a methodology to compare the 2019 survey results with from the same DCVRAs from prior years. Is this still the case in the 2020 year?

Response:

The mobile survey had one finding greater than one volt on a Municipal-owned asset. However, because the Company had zero findings of greater than one volt on Company-owned assets in the Designated Contact Voltage Risk Areas ("DCVRAs") in 2020, the Company did not develop a methodology to compare 2020 survey results with results from the same DCVRAs from prior years.

As of the date of this response, streetlight assets in Newport and Woonsocket continue to be Company-owned. Therefore, given the sale of streetlight assets from the Company to municipalities in twelve of fourteen of the DCVRAs, the Company would like to revisit the requirement of developing a methodology to compare survey results since the Company no longer owns a majority of the assets and, therefore, would not have the information necessary to conduct the comparison. Going forward, the Company could develop a methodology for comparing current year survey results in DCVRAs with Company-owned assets against results from the same DCVRAs from prior years.

PUC 1-3

Request:

Please provide an explanation of the significance of the voltage levels and the implications of someone or something coming into contact with the asset having a voltage level in that specific range, for example less than 1 volt, between 1 and 4.5 volts, and greater than 4.5 volts.

Response:

The 4.5 volts baseline is the same standard used by the Company in Massachusetts today. As part of the Massachusetts Department of Public Utilities (“DPU” or “Department”) Order on Distribution System Safety, issued on December 9, 2005, the DPU ordered utilities in Massachusetts to file plans to implement the recommendations contained in a report<sup>1</sup> by Navigant Consulting, Inc. (“Navigant”), which was part of the Stray Voltage and Manhole Safety Assessment performed by the Department. In this report, Navigant notes “[w]hile there is no strict definition (at this point) as to what constitutes harmful voltage levels, elevated voltages below 8 to 10 volts generally are not detected by humans; however, elevated voltages below 10 volts may cause discomfort to some animals, particularly for domestic pets, but may not always be harmful.” Furthermore, the report states that “[e]vidence and industry data suggest *potentially* hazardous voltages manifest at or above 20 volts.<sup>2</sup> Between 8 to 20 volts, stray voltages can be detected and considered an irritant by humans.” While both Maryland and New York utilize 1 volt thresholds in their contact voltage programs, New Jersey, in its recent order adopting a pilot contact voltage program, noted that “there is not sufficient data available to determine the risks arising from contact voltage in our State or the best practices to approach those possible risks in a cost effective manner”, and in the pilot program, has adopted an actionable contact voltage level of 5 volts.<sup>3</sup> Accordingly, the Company believes that the existing standard of 4.5 volts or greater is appropriate for protecting public safety while at the same time efficiently managing the costs to customers of this program.

For voltage level findings above 1 volt in the Rhode Island Designated Contact Voltage Risk Areas, a THD (“Total Harmonic Distortion”) reading is taken with a Fluke Scope Meter. As noted in the Company’s previous Contact Voltage Annual Reports, the Company uses the THD to determine if the voltage is normally occurring voltage (“Stray Voltage”) or Contact Voltage. If the voltage returned has a THD higher than ten percent, it is considered normally occurring voltage.

---

<sup>1</sup> Independent Assessment of Stray Voltage in Underground Distribution Systems of Massachusetts Electric Companies, dated December 9, 2005, by Navigant Consulting, Inc.

<sup>2</sup> Navigant Report at 8-9

<sup>3</sup> New Jersey Board of Public Utilities, *Matter of the Issue of Contact Voltage*, Docket No. EO10100760 at 4. (2011)

PUC 1-3, page 2

If the voltage returned has a THD less than ten percent, it is considered contact voltage and requires mitigation.

From a safety and reliability perspective, the Company believes that taking THD readings on all findings above 1 volt should continue to be part of contact voltage process/procedure. In the absence of an IEEE Standard for contact voltage thresholds, the Company believes that its current voltage benchmark and processes are appropriate for the contact voltage program. These current procedures were developed to enhance safety and reliability and reflect good utility practice.

PUC 1-4

Request:

With regard to the call to the shock line, please provide a more detailed description of the facilities, what caused the call to the shock line, what type of shock effect was experienced by the individual who called the shock line.

Response:

A contractor contacted the shock line and reported being shocked when touching an oil cap on the side of a house and baseboard heating on Walton Street in Jamestown, Rhode Island. No injuries were reported. National Grid conducted testing and measured 1 volt. National Grid concluded that the cause of the voltage was a broken neutral on a triplex, located on Hull Cove Street, that was feeding houses on Walton Street. National Grid repaired the broken neutral, and the voltage reading after the repair was less than 0.1 volts.

The Narragansett Electric Company  
d/b/a National Grid  
RIPUC Docket No. 4237  
In Re: 2020 Contact Voltage Annual Report  
Responses to Commission's First Set of Data Requests  
Issued on August 11, 2020

---

PUC 1-5

Request:

Is there any post mitigation testing requirement for remediation done by the municipal contractors?

Response:

In the cities/town where the Municipalities have purchased assets from the Company, the municipal contractors are responsible for performing all required mitigation efforts on those assets. The Company is not familiar with any post mitigation procedures and/or protocols the municipal contractors may employ.