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January 30, 2013

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

Re: Commission's Proceeding Relating to Stray and
Contact Voltage Pursuant to Enacted Legislation
Docket No. 4237

Dear Ms. Massaro,

Enclosed herewith you will find an original and ten copies of the Power Survey Company Comments regarding National Grid's response to the January 14, 2013 Power Survey Company comments in the above matter. The same was e-mailed to the attached service list.

Very truly yours,

Joseph J. McGair

JJM:maf
Enc.
HAND-DELIVERED

POWER SURVEY
COMPANY

January 29, 2013

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

Re: Docket 4237
Commission Investigation Relating to Stray and Contact Voltage Occurring in Narragansett Electric Company Territories

Dear Ms Massaro,

This is in response to the National Grid response to the January 4, 2013 Power Survey Company comments.

For a great number of months, the Rhode Island Commission has born witness to a long arduous debate as to whether the serious public safety concern of contact voltage can be adequately addressed by an alternative to the long proven efficacy of the equipment and service provided by Power Survey Company. This debate has unfortunately strayed from the key principles that should guide decision making of this magnitude.

Contact voltage hazards are a result of infrastructure decay with only one remedy. Find and fix as many public safety hazards as possible. Ultimately, the test program under consideration relies on a single survey to provide 4 years' worth of improvement in public safety. Any discussion about such a program is wholly incomplete if it does not address the goal of finding as many hazards as possible, so repairs can be made to achieve that goal.

The debate before the Commission has strayed into a back and forth about whether the evaluation of alternative technology performed within the boundaries of a small stretch of Rhode Island roadway is valid in its method and result. This filing continues in that debate, but seeks to also address the broader and more relevant body of evidence about what works and what does not in the quest to find and fix contact voltage hazards. This debate could continue endlessly along the path of statistical design of experiments and extrapolation of anticipated results. The relevance of such a debate seems moot in light of the facts at hand.

The results obtained in Rochester, New York by directly comparing two technologies are the most complete and relevant available in this discussion. Standing out in those results is the simple undisputable fact that more hazards were found as a result of testing with the SVD 2000 than by any other method. The fact that in late 2012, the SVD 2000 identified ten times as many hazards as the alternative technology must reign as the cornerstone of evaluation evidence.

POWER SURVEY
COMPANY

On January 24, 2013 National Grid filed comments in response to Power Survey's January 4, 2013 letter and attached National Testing Systems benchmarking report. Unfortunately for the Commission, and the public, National Grid has reduced a technical discussion with well documented facts into a game of rhetorical wit.

In the normal course I would not be compelled to respond, but the burden placed on the Commission by National Grid may be lightened by a summary of the facts. Most significantly, that the system National Grid is proposing use missed over 90% energized objects in a real word, customer contracted, survey, leaving more than 200 hazards unaddressed.

National Grid's lengthy response is pre-textual and, contains gross errors, distortions, half-truths and invalid comparisons which are intended to manipulate and undermine the safety of the public! Most remarkably the response ignores the issue at hand, public safety. The following paragraphs will distill the narrative provided by National Grid and present the Commission with indisputable facts. National Grid's filing is divided into the following three sections:

1. Statistical Validity of the Pilot Exercise
2. Power Survey's assistance in the design of the pilot program
3. Rochester Benchmarking.

- **Section 1. Statistical Validity of "Pilot Exercise"**

In Section 1, National Grid discusses the Scientific and Statistical Significance of pilot, the rate of findings during the pilot, the detection rate of the MCVD, "false positives", and missed detections. National Grid claims that because the pilot covered 12 miles or 8% of the total DCVRA's that it was statistically significant. When put into context, this is misleading statement.

National Grid presents this fallacy in an attempt to demonstrate the efficacy of the Premier System by relating the statistical significance of a population study (i.e. How many energized objects exist in the entire service area) to the statistical significance of an efficacy study (how effective is a device at finding energized objects). If the intent of the pilot was to **assess how many contact voltage hazards exist** across the entire DCVRA by scanning a percentage of that area with a qualified detection system, 8% might be a statistically meaningful sample. However, as you know, that was not the intent of the pilot. The Pilot program was intended to **assess the relative ability of the device to detect contact voltage hazards.** A 12 mile test with a limited number of targets is statistically insignificant in a stand-alone evaluation of a single detection system. Since there is no information about the absolute number of energized structures within the pilot test area, even if National Grid had tested 100% of the DCVRA, it is impossible to discern the MCVD's ability to reliably detect hazards.

National Grid recently informed that the Premier's truck was stopped to perform field investigations over 300 times during the 12 mile route, approximately every 200 feet. Grid attributed these stops to an alleged unusual phenomenon relating to traffic lights. The National Grid assertion that traffic lights are present every 200 feet in the city of Providence is absurd.

One can easily conclude that the operator of the MCVD system was compensating for the system's inability to detect hazards by stopping the vehicle every 100-200 feet to test structures with a voltmeter. That was a clear manipulation of the exercise and was unaddressed because of the pilot's lack of scientific controls.

National Grid later attempts to compare the Premier results in Providence with results obtained in various NY cities using the SVD2000. This comparison is meaningless and without merit as it compares two inconsistent data sets generated by two very different technologies. During Power Survey's publicized Providence survey of 2010, Power Survey found 43 hazards within 36 miles. The SVD detected hazards at a rate of 1.19 per mile in Providence.

Grid states that the MCVD system detects hazards in Rhode Island at rate of .17 per mile. If that is true, there would exist a total of 25 hazards across the entire DCVRA. However, Power Survey found 43 hazards in downtown Providence alone. These 43 findings were detected at 7 times the Premier detection rate and represent twice the National Grid anticipated statewide total findings with the MCVD device. When direct comparisons are drawn, it is clear that the arguments presented are greatly flawed. It is not difficult to understand why Power Survey would not wish to participate in a National Grid controlled pilot test.

- **Section 2. Power Survey's Assistance in the Design of the Pilot Program**

In section 2, Grid spends two and half pages lamenting the alleged lack of Power Survey participation in the construction of a scientifically meaningful pilot effort.

National Grid is a 40 billion dollar multinational utility company. The assertion that it lacked the wherewithal to independently organize a scientifically viable benchmarking study is preposterous. In truth, Power Survey summarized five principle concerns the Power Survey September 21st filing to the commission, each with obvious solutions. National Grid addressed none of these concerns and proceeded to perform a one party benchmarking study which does not comport with a most basic examination.

- **Section 3. Rochester Benchmarking**

Rather than trying to understand the NTS report and data, Grid rushed to dispute it. This is troubling, because as Grid alludes in Section 3, a virtually identical report in 2010 proved that the Narda device failed to detect hazards. The 2010 report prompted all NY utilities, including National Grid, to discontinue consideration to use that device. In Rhode

Island, National Grid has decided not to consider facts but has only attempted to manipulate them. In section 3. National Grid falsely claims:

"The NTS study offers no opinion on the capabilities and accuracy of either Premier or Power Survey's mobile equipment. This is because the NTS study only seeks to confirm Power

Survey's ***manual testing findings after a mobile hit was detected,*** *instead of examining a side-by-side comparison of each vendor's mobile equipment capabilities."*

This statement is without merit. If National Grid had fully reviewed the report rather than rushed to dispute it, they would have read the following in Section 5.2 of NTS report:

"For each location previously identified by Power Survey a NTS Technician traveled to the location in the SVD-2000 with a Power Survey Technician. ***The NTS Technician observed the Power Survey technician operating the SVD2000 equipment and performing the detection of energized objects."***

A thoughtful review of the report would lead any reader to understand that the NTS report does compare the performance of both systems directly. If the more than 200 objects found by Power Survey and validated by NTS had been detected by Premier they would have been mitigated and unavailable for detection.

In paragraph 4 of Section 3, Grid claims that information was omitted from NTS report including the length of the ground lead, suitability of ground, and other factors. This is false. As specified throughout the document, measurements were taken with a 6-8 foot consistent with the RG&E process. This same process was used by Premier during their 2012 Rochester survey. All ground points were tested to be suitable as is detailed in also detailed in section 5.2 of NTS' report.

Lastly Grid claims the Rochester test lacked "consistency and controls." This is absurd considering the test was overseen by NTS, the same nationally recognized lab that Grid has relied on for the basic certification of the MCVD system.

Conclusion

If this proceeding is to correctly assess the facts at hand and provide a safer environment for the people of Rhode Island, then the following conclusions are readily drawn. The equipment known as the Narda 8950/10 and Premier MCVD has been tested in two large scale exercises in Rochester, New York. To date, the system has not shown an ability to detect a sufficient or even marginal numbers of contact voltage hazards. As a result, fewer repairs and improvements in public safety have been achieved. These comparison studies were no small undertaking aimed at a quick pass/fail conclusion, but instead weeks of effort by two

parties to find and report contact voltage hazards so they may be repaired. The dramatic result and disparity in the results is the single overriding factor available for the basis of correct conclusions.

While the discussion to date has been tedious and has followed many detours, the results are quite evident. What is clear, is that performance is inadequate for anything more than checking off a box and filing a report that some type of test was performed with no confidence of success. There is far greater confidence in the proven miss rate of the Narda equipment than any other single aspect of these proceedings.

If these proceedings are to provide mechanism to find and fix the contact voltage hazards in Rhode Island, it must conclude there is only one proven resource with capability to achieve that goal. Only one system has proven results in tens of thousands of miles of testing and in tens of thousands of contact voltage findings.

National Grid has decided to fortify their position with grandiloquence, instead of evaluating the new facts, and giving care and consideration for public safety. Imagining that the use of the twice failed Premier/Narda System in Rhode Island will yield different results than it did in Rochester New York is simply irrational. Any reasonable observer will readily conclude that if National Grid is allowed to use the Narda device in Rhode Island, they will miss hundreds of energized objects leaving the public exposed.

Sincerely,

Angelo Verdoni, PhD.
Sr. Member Technical Staff

Docket No. 4237 – Commission's Proceeding Relating to Stray and Contact Voltage Pursuant to Enacted Legislation
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