

Narragansett Electric

A National Grid Company



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June 3, 2004

VIA HAND DELIVERY & ELECTRONIC MAIL

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

Re: Narragansett Electric Company, Petition for Amendment of Meter Accuracy and Testing Requirements Prescribed Under of Section VII of Rules Prescribing Standards for Electric Utilities – Docket No.

Dear Ms. Massaro:

In accordance with Section 13(b) of the Division's Rules of Practice and Procedure, The Narragansett Electric Company ("Narragansett" or "Company") hereby encloses four (4) copies of a Petition proposing to amend the Division's current meter testing practices established by Section VII, Meter Accuracy and Testing, of the Division's Rules Prescribing Standards for Electric Utilities ("Rules"). The Division's Rules prescribe certain in-service testing plans for single-phase, network, and polyphase watt-hour meters. Narragansett is proposing an alternative testing plan based on standards developed and prescribed by the American National Standards Institute ("ANSI") that it plans to implement once the new rules are permitted to go into effect.

It is important to note that Narragansett is not proposing to eliminate the present testing standards. Rather, Narragansett is proposing a third alternative testing standard that would apply in addition to the present testing standards. Narragansett is proposing this as an alternative simply because the new testing plan is unlikely to be cost effective for other electric utilities in the state that operate on a smaller scale than Narragansett. Thus, under Narragansett's proposal, the present testing standards could continue to apply to those utilities.

For Narragansett, the ANSI-based testing plan has several advantages over the current testing requirements, including improved quality and collection of meter performance data, an improved ability to monitor meter performance trends to ensure the accuracy of the meter population, and lower implementation and execution costs for in-service meter testing. These

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and other benefits are described in more detail in the enclosed Petition. Representatives of Narragansett have met several times with members of the Division staff regarding this matter. As a result, the Division has indicated that it would not object to a program that presents these kinds of advantages for the Company and its customers.

Thank you for your attention to our filing. Please contact me if you have any questions regarding this Petition.

Very truly yours,

A handwritten signature in black ink, appearing to read "Terry L. Schwennesen". The signature is fluid and cursive, with a long horizontal stroke at the end.

Terry L. Schwennesen
Attorney for Narragansett Electric Company

Enclosures

Cc: Thomas Ahern, Administrator
John Spirito, Esq., Division Chief of Legal Services
Jim Lanni, Associate Administrator
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**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DIVISION OF PUBLIC UTILITIES AND CARRIERS**

Re: Petition of The Narragansett Electric Company)
 To Amend Section VII of the Rules)
 Prescribing Standards for Electric Utilities) Docket No.

**PETITION OF THE NARRAGANSETT ELECTRIC COMPANY
PROPOSING TO AMEND SECTION VII, METER ACCURACY AND TESTING, OF
THE DIVISION'S RULES PRESCRIBING STANDARDS FOR ELECTRIC UTILITIES**

I. Introduction

In accordance with Section 13(b) of the Rhode Island Division of Public Utilities and Carriers' ("Division's") Rules of Practice and Procedure, The Narragansett Electric Company ("Narragansett" or "Company") hereby submits four (4) copies of this Petition proposing to amend the current meter testing practices established by Section VII, Meter Accuracy and Testing, of the Division's current Rules Prescribing Standards for Electric Utilities ("Rules"). In support of this Petition, the Company is proposing specific amendments to Section VII of the Division's Rules as set forth in Attachment A. Both clean and redlined copies marked to show changes from the presently effective Rules have been provided for the Division's convenience. In accordance with Section 13 (b) of the Division's Rules of Practice and Procedure and § 42-35-3 of the Rhode Island General Laws, Narragansett respectfully requests the Division to initiate rulemaking procedures to adopt these amended rules.

The Division's Rules presently prescribe certain in-service testing plans for single-phase, network, and polyphase watt-hour meters under both periodic test schedules and selective test plans.

In this Petition, Narragansett is requesting to include a third alternative testing plan based on standards developed and prescribed by the American National Standards Institute (“ANSI”). Narragansett is not proposing to eliminate the present testing standards as they may continue to apply to other utilities.

While the proposed alternative testing plan presents several advantages for Narragansett and its customers, such a plan may not be cost effective for other electric utilities operating on a smaller scale. For Narragansett, the ANSI testing plan has several advantages over the current testing requirements, including improved quality and collection of meter performance data, an improved ability to monitor meter performance trends to ensure the accuracy of the meter population, and lower implementation and execution costs for in-service meter testing. These and other benefits are described in more detail below.

II. Description of Proposed Statistically-Based In-Service Meter Testing Plan

The Company’s proposed statistical sampling plan is based on the provisions of ANSI/ASQC Z1.9, *Sampling Procedures and Tables for Inspection by Variables for Percent Nonconforming*, which was developed under the guidelines provided by ANSI C12.1-2001, *American National Standard for Electric Meters, Code for Electricity Metering*.¹ The main elements of the proposed testing plan are as follows:

- a. The meter population will be divided into groups by meter manufacturer and type of meter;
- b. The minimum required sample size for each meter group will be based solely on each group’s population size, which eliminates the risk that any meter group will be under-represented in the annual test sample;

¹ ANSI C12.1-2001 specifically lists ANSI/ASQC Z1.9 as a suitable statistical sampling plan for the in-service testing of electric meters.

- c. Test results for each group will be analyzed using the weighted average result to determine the mean and standard deviation of the weighted average for each group;
- d. These statistical values will be used for each meter group to calculate a numerical estimate of the failing percentage of the meters in each group. This value is known as percent nonconformance;
- e. The actual (calculated) percent nonconformance for each group will be compared to the allowed percent nonconformance to determine the pass/fail status for the group; and
- f. Narragansett will take appropriate actions for the remediation or disposition of any failing groups.

Narragansett's proposed in-service testing plan is described more fully in Attachment B. The Company has also included a draft annual report to the Division based on the statistically-based testing plan as Table VII of Attachment B. This report would be filed with the Division annually in lieu of Form E-2 and Form E-2A identified in Section IX, Records and Reports, of the Division's Rules.

III. Benefits of Proposed Statistically-Based In-Service Meter Testing Plan

In developing the proposed test plan, Narragansett reviewed its in-service testing requirements and analyzed the use of statistical testing plans in other states. These reviews pointed to several significant benefits of using a statistically-based in-service testing plan that are not provided under the current testing requirements in Section VII, Meter Accuracy and Testing, of the Rules.

a. Improved quality and collection of performance data for in-service meters.

Statistically-based testing plans provide better quality data on meter performance

since meters are grouped for testing by specific meter manufacturer and type. Meters are then selected for test from each group using a statistically-derived sampling plan, and the resulting test data is statistically analyzed to determine specific performance characteristics. This provides more useful information than the pass/fail data provided by the current in-service testing plan, which does not require making an assessment of the in-service meter population using statistical measures. Additionally, neither the Company's current practices nor Division's Rules contain a provision for testing meters by specific manufacturer or type. Under the existing Rules, it is possible that certain meter types may be under-represented in annual tests when compared to their proportion of the installed population.

b. Improved ability to monitor meter performance trends.

By having access to a higher quality of meter performance data, Narragansett expects to be able to identify performance trends for each meter group that will help it evaluate the effective operations of the meters it purchases. The Company believes that in identifying such trends, benefits should be realized in the following areas:

i. More-informed decision-making on meter remediation issues;

The better quality of performance data means that poorly performing meter types can be identified more quickly and removed from service sooner. In general, improved data on meter performance allows for better decisions on which meter types to remove and replace.

ii. Better decision-making on new meter purchasing;

The improved data on meter performance can be used to evaluate different meter types and manufacturers and allows for more informed purchasing decisions which will improve the overall meter population over time.

iii. Improvements in the accuracy of the overall meter population;

As poorly performing meters are removed from service and the best available meters are bought to replace them, the overall accuracy of the meter population will improve.

iv. Overall customer service improvements through fewer customer interruptions; and

Since fewer meters need to be tested in the statistically-based sampling plan, customers will benefit from fewer service disruptions.

v. Improved operating efficiencies.

Using a statistical sampling plan will result in the same, if not better, level of meter accuracy while concurrently reducing the cost of testing from improved operating efficiencies. The increase in operating efficiency would result primarily from a reduction in the number of annual meter tests required with the statistical testing methodology. The Company estimates that the reduction in the number of meter tests

will save approximately 1400 work-hours annually. This reduction in work-hours equates to approximately \$80,000 of increased efficiency, decreasing estimated annual meter testing costs from \$132,000 to \$52,000. The Company anticipates using the resources freed up from meter testing to perform other functions. The Company's calculation of the estimated value of the increased operating efficiency related to the proposed in-service testing plan is provided in Attachment C.

IV. Precedent in Other States

Many states have either adopted statistical sample testing plans for the in-service testing of meters or allow for their use with regulatory approval. Specifically, sixteen (16) states directly authorize the use of statistical sample testing plans for in-service meter testing. An additional twenty-five (25) states and the District of Columbia permit statistical sample testing plans with regulatory approval of a request for waiver, or as part of an approved rate or tariff filing. In fact, the jurisdictions that explicitly identify a statistical sampling plan in their regulations most frequently reference the ANSI/ASQC Z1.9 plan.² The Company's three retail affiliates in New England, Massachusetts Electric, Nantucket Electric and Granite State Electric have received the necessary approvals and are implementing the proposed statistical sampling plan this year. A summary of the statistical testing plan usage for in-service electric meter testing by state is provided as Attachment D to this Petition.

² It should be noted that a few states utilize test plans based on MIL-STD-414, *Sampling Procedures and Tables for Inspection by Variables for Percent Defective*. This Military Standard was cancelled in 1999 and replaced by ANSI/ASQC Z1.9 in an effort by the U.S. Department of Defense to commercialize military standards and reduce the number of standards that they maintained. ANSI/ASQC Z1.9 was based on MIL-STD-414, and the two documents are nearly identical.

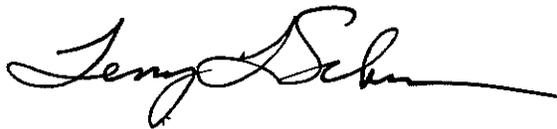
V. Conclusion

Based on the foregoing, Narragansett respectfully requests the Division to initiate rulemaking procedures to adopt the amended rules provided in Attachment A to this Petition. Expeditious approval would permit Narragansett to immediately implement the changes necessary to move forward with this plan, thereby allowing Narragansett to improve quality and collection of meter performance data, the ability to better monitor meter performance trends to ensure the accuracy of the meter population, and lower implementation and execution costs for in-service meter testing beginning in calendar year 2004.

THE NARRAGANSETT ELECTRIC COMPANY

By its Attorney,

TERRY L. SCHWENNESEN, ESQ.

A handwritten signature in black ink, appearing to read "Terry L. Schwennesen", written in a cursive style.

Terry L. Schwennesen, Esq. (#6703)
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CERTIFICATE OF SERVICE

I hereby certify that on this 3rd day of June 2004 that a copy of the cover letter, a copy of the within Petition and/or any materials accompanying this certificate has been mailed or hand-delivered to the parties listed below.



Joanne M. Scanlon
The Narragansett Electric Company

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