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Rhode Island Energy™
a PPL company

April 30, 2025

VIA ELECTRONIC MAIL AND HAND DELIVERY

Stephanie De La Rosa, Commission Clerk
Rhode Island Public Utilities Commission
89 Jefferson Boulevard
Warwick, RI 02888

RE: Docket No. 24-38-GE - Rhode Island Energy Tariff Advice Filing to Amend Terms and Conditions for Distribution Service, R.I.P.U.C. No. 2243
Electric AMR/AMF Meter Opt-Out
Non-Communicating Time-of-Use Meters Analysis Compliance Filing

Dear Ms. De La Rosa:

On behalf of The Narragansett Electric Company d/b/a Rhode Island Energy ("Rhode Island Energy or the "Company"), the Company is submitting its compliance filing as referenced above in accordance with the Public Utilities Commission's ("Commission") directive issued to the Company at the Commission's Open Meeting on December 19, 2024.

Thank you for your attention to this matter. If you have any questions, please contact me at 401-316-7429.

Very truly yours,

Jennifer Brooks Hutchinson

Enclosures

cc: Docket No. 24-38-GE Service List

The Narragansett Electric Company d/b/a Rhode Island Energy
Non-Communicating Time-of-Use Meters Analysis
Compliance Filing

I. Introduction

Rhode Island Energy[1] has conducted an analysis on the feasibility of non-communicating time-of-use ("TOU") meters pursuant to the Rhode Island Public Utilities Commission's ("RIPUC") decision at its December 19, 2024 Open Meeting in Docket No. 24-38-GE - AMR/AMF Opt-Out Tariff Advice. The RIPUC directed the Company to file an analysis by April 30, 2025 that addresses the technical feasibility and financial impacts of installing interval meters or some other type of meter that would allow for time-of-use pricing on customers' residences applicable to customers who opt-out of AMR/AMF.

Today, the Company offers three TOU rates for the following non-residential rate customers: G-32 (Large Demand), B-32 (Large Demand Back-Up), and X-01 (Electric Propulsion). Approximately 1,200 non-residential customers (0.2% of the population) are on a TOU rate. These rates use seasonal on-peak/off-peak periods and incorporate both an energy and demand charge. Rhode Island Energy meters that measure energy for non-residential customers on TOU rates are one of the following types:

1. Cellular/Phone Line – Meters capture interval data that is transmitted via cellular or phone line connection to a back-end system that aggregates the interval data and calculates the on-peak and off-peak usage and peak demands for the billing cycle. The interval channels are programmed based on the billing requirements of the service, ranging from one to five distinct channels. These meters typically are referred to as "MV90" meters, referencing the back-end system.

[1] The Narragansett Electric Company d/b/a Rhode Island Energy ("Rhode Island Energy").

2. Manually read/probed – Meters' registers are programmed to capture the necessary reading types and on-peak and off-peak periods. The reads are stored in the meter and probed monthly by a meter reader. These meters are nearing the end of their useful life and are not currently stocked or ordered by Rhode Island Energy. They typically are used only for three-phase customers.

The billing determinants for TOU rates can be determined using either interval data or register reads. Interval data allows for more flexibility for potential changes in rate, granularity, and channels. Once the interval data is captured from the meter and sent to the Meter Data Management System ("MDMS"), the MDMS can then analyze the data accordingly based on the rate and requirements. Register reads require the TOU rate schedule(s) to be programmed into the meter itself, which reduces versatility and requires more specific meters for individual customers. Today, new or exchanged TOU meters are of the Cellular/Phone Line type described above.

The current TOU rates are simple relative to other time-varying rate ("TVR") structures found throughout other utilities across the United States. Any implementation of metering technology for future TOU/TVR rates would depend significantly on the structure of the rate, but, in general, 5- or 15-minute interval data captured in the meter can be manipulated in back-end systems to fit any TOU/TVR structure.

II. Technical Feasibility

Rhode Island Energy Meter Engineering conducted a series of meetings with various meter manufacturers to discuss the feasibility of a non-communicating TOU meter. Two potential solutions for non-communicating TOU meters were identified. Both solutions would

require configuration of the MDMS, additional hardware for field meter readers, and additional full-time employees to manually process reads each month.

1. **Option 1: Order Non-Communicating TOU Meters** – Order meters that have load profile and/or TOU registers with an internal clock, necessary for metering TOU rates, but do not have any internal radio/communications ability.

    a. **Implementation:** This option would require First Article Testing[2] of the meters, which is an industry standard and typical requirement for any first-time meter purchase. This includes additional programming with new software and IT system configuration for extracting the readings, loading that data into the MDMS, and configuring the Billing System to accept the new readings file from the MDMS.

    b. **Customer Experience:** Customers would not be able to participate in the other benefits of AMF such as near-real time interval data via the AMF Customer Portal, the Sense application and faster connections for move ins and outs. Customers would be able to see their interval data monthly once their monthly meter read was completed and the data was manually processed.

    c. **Meter Reading:** The readings would be collected once per month manually by a Rhode Island Energy meter technician visiting the meter and collecting the readings using a laptop and optical probe. This would be done using manual-read hardware/software.

    d. **Financial Impact:** Ordering specific non-communicating TOU meters from the manufacturer would require additional work for First Article Testing, which requires roughly 80 hours of work from a Rhode Island Energy meter test shop employee and 40 hours of work from the Rhode Island Energy meter engineer. The specific cost of these meters is unknown, but it is expected to be less than the AMF meters. Purchasing these additional meters for opt-out customers would be an additional cost above the meters that were included in the AMF program costs.

[2] Prior to accepting a new or modified meter for use on its electrical system, Rhode Island Energy conducts First Article Testing ("FAT"). FAT serves as a primary method for the inspection and testing of vendor meter components and determines if a meter type and configuration meet the acceptance, safety, and quality control criteria set forth by Rhode Island Energy Meter Engineering.

The meter reading process outlined above would also come with additional costs including (1) the purchasing of optical probes (2) the increased labor associated with manually probing the meter monthly and (3) the potential purchase and implementation of software needed to upload the interval data. The Company has not quantified these costs as of the date of this analysis.

Lastly, incorporating this solution would require configuration in backend systems including the AMF Head-End System ("HES"), MDMS, CSS, and the field work management tool. Any effort to incorporate non-communicating TOU meters into Rhode Island Energy's systems would be incremental to any general system implementation for all TOU rates in the future; the financial impact of this incremental work is difficult to quantify because the entire scope and timing is unknown.

2. **Option 2: Modify AMF Meters** – Modify existing AMF meters currently in Rhode Island Energy inventory to disable communications by muting the RF output. This is an irreversible step because the manipulation of RF output can be accomplished only via a wireless tool. These meters have both load profile and TOU registers that can be programmed accordingly when a more specific rate schedule is determined.

   a. **Implementation:** The Company would turn off the communications in the meter in its meter testing shop as customers opt-out of AMF. Unlike Option 1, these meters already have gone through First Article Testing.

   b. **Customer Experience:** Like Option 1, customers would not be able to participate in the other benefits of AMF such as near-real time interval data via the AMF Customer Portal, the Sense application and faster connections for move ins and outs. Customers would be able to see their interval data monthly once their monthly meter read was completed and the data was manually processed.

   c. **Meter Reading:** Like Option 1, the readings would be collected once per month manually by a Rhode Island Energy meter technician using a laptop and optical probe visiting the meter and collecting the readings. This would be done using manual-read hardware/software and would take longer per meter than Option 1.

   d. **Financial Impact:** Purchasing additional AMF meters for opt-out customers would be an additional cost above the meters that were included in the AMF program costs. Currently, the unit price per meter has not changed since the

Company provided its response to RR 1 in Docket No. 22-49-EL; however, this could change after the project is complete.

Like Option 1, the meter reading process outlined above also would come with additional costs including (1) the purchasing of optical probes (2) the labor associated with manually probing the meter monthly and (3) the purchase and implementation of software needed to upload the interval data. The Company has not quantified these costs as of the date of this analysis.

Also like Option 1, incorporating either solution would require configuration in Rhode Island Energy's backend systems including the AMF HES, MDMS, CSS, and the field work management tool. Any work to incorporate non-communicating TOU meters into Rhode Island Energy's systems would be incremental to any general system implementation for all TOU rates in the future; the financial impact of this incremental work is difficult to calculate because the entire scope and timing is unknown.

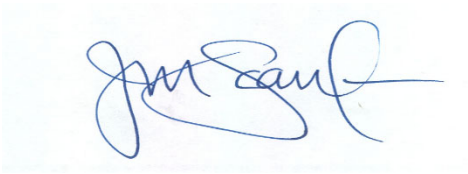
III. Conclusion

In short, a non-communicating TOU meter for AMF opt-out customers is feasible technically. That said, ordering meters for this sole purpose would be an incremental cost to the AMF program and would require additional up-front work and cost to incorporate the meters into Rhode Island Energy's systems. Accordingly, pursuing non-communicating TOU meters with limited functionality and the attendant costs for a small group of customers who opt out of receiving AMF meters would result in increased costs that are uncertain to add any benefit. For these reasons, Rhode Island Energy does not recommend pursuing either solution discussed above.

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

April 30, 2025
Date

The Narragansett Electric Company d/b/a Rhode Island Energy
Docket No. 24-38-GE Tariff Advice Filing to Amend Electric Automated Meter Reading (AMR)/Advanced Meter Functionality (AMF) and Gas Automated Meter Reading (AMR) Meter Opt-Out
Service list updated 1/10/2025

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