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February 6, 2023

VIA ELECTRONIC MAIL

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

**RE: Docket No. 22-49-EL-The Narragansett Electric Company d/b/a Rhode Island Energy
Advanced Metering Functionality Business Case
Responses to PUC Data Requests – PUC Set 3**

Dear Ms. Massaro:

On behalf of The Narragansett Electric Company d/b/a Rhode Island Energy (“Rhode Island Energy” or the “Company”), attached is the electronic version of Rhode Island Energy’s remaining response to the Public Utilities Commission’s Third Set of Data Requests in the above-referenced matter, specifically PUC 3-18.¹ This completes the Company’s responses to the Third Set of Data Requests.

Thank you for your time and attention to this matter. If you have any questions, please contact Jennifer Brooks Hutchinson at 401-316-7429.

Very truly yours,

A handwritten signature in blue ink, appearing to read "Jennifer Brooks Hutchinson", with a long horizontal flourish extending to the right.

Jennifer Brooks Hutchinson


Enclosures

cc: Docket No. 22-49-EL Service List
John Bell, Division
Leo Wold, Esq.

¹ Per communication from Commission counsel on October 4, 2021, the Company is submitting an electronic version of this filing followed by hard copies filed with the Clerk within 24 hours of the electronic filing.

CERTIFICATE OF SERVICE

I certify that a copy of the within documents was forwarded by e-mail to the Service List in the above docket on the 6th day of February, 2023.



Adam M. Ramos, Esq.

The Narragansett Electric Company d/b/a Rhode Island Energy
Docket No. 22-49-EL Advanced Meter Functionality (AMF)
Service list updated 1/30/2023

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PUC 3-18

Relationship to Climate Mandates and Managing DER

Request:

Referring to the testimony of Walnock & Reder, p. 26 of 84, lines 11-13, it states: “The state cannot meet its Climate Mandates with continued use of the existing AMR meters because AMR meters lack the functionality necessary to provide grid operators with the system visibility they need.” (emphasis added) The testimony also states on the same page: “In short, AMR technology cannot retrieve metering data frequently enough to provide the visibility to operate the electric distribution system safely and reliably in a future that includes the level of DER integration necessary to achieve the State’s Climate Mandates. . . .” (emphasis added) Elsewhere, the testimony defines the term “Climate Mandates” in footnote 5 as referring to the Act on Climate emissions reduction mandates and the 100% renewables standard.

- (a) Please explain why grid operators not having the system visibility provided from AMF would prevent the state (i) from meeting its Act on Climate mandates and (ii) from meeting the 100% Renewable Energy Standard which is achieved through the purchase of renewable energy certificates from the regional market by obligated entities?
- (b) Did the witnesses perform any type of analysis that shows that meeting the Act on Climate mandates or purchasing enough renewable energy certificates to meet 100% renewables cannot be achieved by the State if the Company retains an AMR system? If so, please describe. If not, what is the basis of the claim?
- (c) Are the witnesses maintaining that the Company will not be able to operate the electric distribution system safely in the future without being able to retrieve real time 15-minute interval metering data provided by AMF? If so, please explain more completely, including the applicable assumptions and the date the Company is assuming that safety will be at risk.
- (d) Have the witnesses validated their assertion with the Company’s electrical engineering department that the Company will not be able to operate the system safely and reliably without the referenced frequency of metering data? If so, please describe how this was validated and identify the engineering personnel who can testify to the validation.
- (e) If the testimony is accurate that the Company will be unable to continue to operate the system safely and reliably unless it adds AMF, please explain why the

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Company does not have a duty to take action to address the safety and reliability problem without material delay, regardless of whether the Commission provides the level of assurance of “timely cost recovery” through a mechanism acceptable to the Company prior to the filing of the Company’s next distribution rate case?

- (f) Does the Company believe that it has the option to allow a material safety and reliability risk to exist without incurring the cost to address that risk if it is not receiving recovery of costs that it considers to be timely? Please explain.

Response:

- (a) The Company expects that it will need the visibility into conditions on the electric distribution system that AMF can provide to manage the additional complexity in electric distribution system operations that arises from increased interconnection of intermittent distributed energy resources (“DER”). To meet the Climate Mandates, the Company believes that the State will need the use of intermittent resources, either located in Rhode Island and/or through the purchase of renewable energy certificates from the regional markets, as well as the adoption of electric vehicles and other electrification measures. Although the mandate for 100% renewables can be met through the purchase of renewable energy certificates from the regional market by obligated entities, there will be a need for significant additional renewable energy resources in Rhode Island, both to add renewable energy certificate generating resources to the marketplace and to meet the carbon reduction requirements of the Act on Climate.

Interconnecting intermittent renewable distributed generation (“DG”) adds significant complexity to electric distribution system operations, and the lack of near real-time visibility into the system to enable management of that complexity increases risks. This increased complexity has begun to develop already as a result of the current level of intermittent DG interconnected to the Company’s electric distribution system, and the Company does not have the visibility into system conditions that provides a full picture of the potential issues and risks it is causing, such as hidden load. The Company is responsible for ensuring safe and reliable service in all circumstances, and its commitment to do so is unwavering. Thus, it has an obligation to take appropriate steps to ensure that it can safely and reliably manage the increased complexity that arises from the increase in interconnection of intermittent resources. Section 5 of the Grid Modernization Plan (“GMP”)¹ describes the Distribution Study that the Company performed to

¹ See the Grid Modernization Plan, submitted by the Company as Schedule KC/RC/WR-1 to the Joint Pre-filed Direct Testimony of Kathy Castro, Ryan Constable, and Wanda Reder in Docket No. 22-56-EL.

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assess electric distribution system needs. That study drew two critical conclusions: 1) as DER penetration continues to increase with associated two-way power flow, the Company will need increased visibility, situational awareness, and operational control to continue to operate the distribution system safely and reliably and incorporate the expected increased levels of intermittent DG on to the electric distribution system; and 2) the State will not be able to interconnect significant additional intermittent renewable resources without grid modernization and AMF because they provide the data and visibility necessary to effectively manage these intermittent resources and avoid significant DER curtailment that otherwise would be required. Accordingly, the Company reasonably expects that it will need the visibility provided by AMF coupled with grid modernization investments to enable the State to achieve the Climate Mandates.

- (b) Yes. The Company performed the Distribution Study discussed in the response to part (a), above, and described in Section 5 of the GMP. That study demonstrates that the granular data provided by AMF is necessary to facilitate the operational and behavioral shifts necessary for the State to meet the Climate Mandates. For example, the Distribution Study showed that, in addition to the need for situational awareness and electric distribution visibility to safely interconnect intermittent DG, it also will be necessary to facilitate load shifting behavior to meet the Climate Mandates. As discussed in Section 13 of the AMF Business Case, AMR meters do not provide the detailed information necessary to enable programs that will drive load shifting behavior because AMR meters provide usage information one time per month for the sole purpose of billing. Without the ability to provide near-real-time consumption information, the Company will not be able to enable customer behavioral shifts, such as through time-varying rates (“TVR”).
- (c) The Company always will do what is necessary to operate the electric distribution system safely and reliably, regardless of whether it is authorized to implement AMF meters. Thus, no, the Company is not stating unequivocally that it must have AMF 15-minute interval data to operate the system safely and reliably in the future. The Company is saying, however, that the best option for the safe and reliable operation of the electric distribution system in the future is to implement AMF to provide the Company with the visibility and situational awareness that it provides into the complexities of the modern grid.

The Company will be able to operate the electric distribution system safely in the future in the absence of 15-minute interval metering data provided by AMF;

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however, the Company would need to curtail distributed generation significantly to maintain safety and reliability as indicated by the Distribution Study discussed in the response to part (a), above. Alternatively, the Company potentially could avoid curtailment of intermittent resources by building traditional infrastructure to extremes to protect against the risks posed by the increased complexities they engender. Neither of these alternatives, however, is preferable. Curtailment of DER works against the achievement of the Climate Mandates and the transition to renewable energy. Building to extremes is costly and does not completely mitigate risk because it still does not provide visibility into the system conditions that create the operational challenges.

Thus, although the Company maintains that it will operate the system safely and reliably in any and all circumstances, the risk exists now of conditions on the system that jeopardize safe and reliable service that are hidden because of the lack of access to the granular data provided by AMF. Although the Company cannot pinpoint a date or even a specific timeframe when those risks will reach a tipping point, as time passes, the risks that currently exist will persist and increase as system complexity increases. AMF will allow the Company to manage those risks proactively. In the absence of AMF, the Company will have to react to any risks that materialize to continue to provide safe and reliable service.

- (d) Yes, the witnesses have validated the conclusions and positions described in the testimony referenced in this data request as further explained in the responses to parts (a), (b), and (c), above, with the Company's engineering department. That department was heavily involved with the Distribution Study, discussed above. It was overseen by Ryan Constable, Engineering Manager in the Distribution Planning and Asset Management Department, who is a key witness for the Grid Modernization Plan.
- (e) The Company does have a duty to take action to address safety and reliability problems without material delay. As described in the responses to parts (a), (b), and (c), above, the Company will maintain its unwavering commitment to maintain safe and reliable service whether or not it obtains approval for AMF in this docket. As part of this commitment, the Company is making the operating challenges and risks known to stakeholders and has brought this AMF Business Case proposal to the Commission because it believes it is the most cost effective and responsible proposal path forward to address safety and reliability risks. Therefore, the Company asserts that it should receive cost recovery assurances for making these prudent investments. If the Company does not obtain those cost

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recovery assurances, it will assess the best alternative to fulfill its obligation to provide safe and reliable service.

- (f) The Company does not believe that it has the option to allow a material safety and reliability risk to persist without addressing it prudently through the necessary investments. The Company also has a right to cost recovery for prudent investments. The Company asserts that it is acting responsibly and prudently to address safety and reliability risks through this AMF Business Case, which demonstrates the cost-effectiveness of the proposal through a benefit-cost ratio that is significantly positive. Accordingly, the Company is seeking cost recovery for that prudent investment through a mechanism that it believes is fair and appropriate – both for the Company and for customers. The Company does not, however, take the position that it can or will allow a material safety and/or reliability issue persist if it does not receive assurances of cost recovery that it considers to be timely. As described in the responses to parts (a), (b), (c), and (e), above, the Company will do what is necessary to ensure safety and reliability on the system, whether or not it receives approval for the AMF Business Case and its requested cost recovery mechanism, but the Company may pursue a different, more reactive approach.