

EERMC Online Public Comment

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Public Comment

Problem Statement:

Rhode Island Energy (RIE) is preparing a System Reliability Procurement (SRP) Investment Proposal to significantly reduce the ConnectedSolutions Battery Demand Response (DR) Program incentive on April 1, 2024. The proposal would span reducing the residential battery customer incentive rate from \$400/kW-yr to \$200/kW-yr and also the incentive schedule, or number of years for which customers would lock in program participation and incentive payments, from 5 years to just 3 years. In addition, RIE has proposed to significantly limit access to the very successful HEAT Loan for residential battery customers.

The original RIE draft proposal was presented at a Rhode Island Energy Efficiency & Resource Management Council (EERMC) meeting on November 16, 2023. The main rationale RIE provided for the incentive reduction is that a lower \$275/kW-yr incentive has supported battery deployment in Massachusetts so that should be good enough for Rhode Island, and Rhode Island's new Renewable Energy Fund (REF) is sufficient additional incentive for participants to accept the reduced incentive. A few details are presented on slides 17-18 in RIE's draft "System Reliability Procurement Investment Proposal - INITIAL VERSION FOR COMMENT."

Specifically, slide 17 states the following rationale: "Recent changes to incentive levels in neighboring states suggest that participants are potentially willing to reduce peak demand for less incentive. Furthermore, Rhode Island's Renewable Energy Fund offers a purchase incentive for residential solar that is paired with energy storage. Therefore, Rhode Island Energy seeks to reduce the performance incentive to better align with revealed participant willingness to accept and account for external purchase incentives."

Response:

Lower Incentives Equals Lower Participation

Data from Enphase battery installations and program participation in both Massachusetts and Rhode Island show us that, in fact, participants are not equally willing to reduce peak demand for less incentive. The current ConnectedSolutions Battery DR Program in Rhode Island has been a great success story that demonstrates the scalability and value of grid services programs and Virtual Power Plants (VPPs). The slightly higher incentive in Rhode Island compared to Massachusetts has resulted in much higher battery deployment and program participation per capita in Rhode Island, and therefore, a greater reduction in supply costs for all ratepayers. Specifically, by providing a 45% higher incentive rate (i.e., \$400 compared to \$275/kW-yr), Enphase customers have enrolled well over four times more batteries per capita in the Rhode Island ConnectedSolutions Battery DR program than the Massachusetts program (i.e., 0.41 compared to 1.91 Wh/person), while solar installed capacities per capita are nearly identical between the states (i.e., 56.7 compared to 56.9 W/person).

REF Is Not Sufficient

Historically, it is our understanding that the higher Rhode Island ConnectedSolutions Battery DR Program incentive rate compared to Massachusetts was justified in part because Massachusetts had additional battery incentive programs, like the SMART Energy Storage Adder, which provided residential solar-plus-battery customers hundreds of dollars of additional incentives on top of ConnectedSolutions incentives. For example, even today (Tranche 10), the Massachusetts SMART Energy Storage Adder program typically results in an additional battery customer incentive of around \$500 per year for 10 years (i.e., \$5,000 lifetime incentive) assuming 9 kW solar and 15 kWh of installed battery capacity. However, Rhode Island customers cannot participate in either SMART.

Instead, Rhode Island battery customers can apply for the Renewable Energy Fund (REF) program, which provides a one-time \$2,000 upfront incentive for batteries paired with solar, which is a much lower lifetime incentive than the current Massachusetts battery incentive programs. In addition, the REF is limited to roofs with a TSRF over 80% and the grant only opens during certain periods of the year - delaying installations - and the process to obtain the funds can be difficult. Also, REF is only applicable to solar-plus-battery applications, so customers who install solar first and want to upgrade with a battery system later, cannot take advantage of REF. As an example of the challenges installers face using this program, in 2022, of the 37 battery sites installed by one installer, 10 customers were adding batteries to existing solar, so they did not qualify, and 5 didn't qualify due to the 80% TSRF requirement. That means that 40% of that installer's battery customers were not able to take advantage of REF in 2022.

RIE's Proposal Will Decimate Battery Enrollment

Consistency and predictability are key to developing and maintaining a successful DR program, especially for residential batteries. Guaranteeing at least 5 summers at a fixed incentive rate allows customers to make decisions about installing a battery system and participating in the DR program. Reducing the DR program incentive schedule to anything less than a 5-year incentive guarantee would have a major impact on a customer's value proposition and their decision to install batteries and enroll in the DR program. Also, without consistent and predictable year over year program incentives, it becomes very difficult for solar and battery installers to market a compelling value proposition to potential customers. For example, reducing the ConnectedSolutions program incentive rate and/or schedule in 2024 will turn-off most potential customers from considering installing batteries and enrolling in the DR program, and if incentives later increase (e.g., return to the previous level), many customers and OEMs will wait to see if incentives go up further before committing to participate in the program.

Furthermore, changing the incentive rate or schedule on extremely short notice (i.e., by April 1, 2024) is very disruptive to all program participants including customers, solar and battery installers, distributors, and battery OEMs, who are actively marketing the program with the current incentives. For example, it can take many months for installers and OEMs to formulate a customer marketing strategy, and several more months to execute that strategy (e.g., customer value prop evaluation, installer trainings, and creation of marketing materials including customer brochures, program webpage updates, customer marketing emails), which would result in additional battery deployment and enrollments into the program. Affected stakeholders need at least 9 months after any final decision is made before a major change like this is enacted, so they have time to effectively communicate changes to customers and prevent a poor customer experience.

In addition, unlike other DR options, the current ConnectedSolutions Battery DR Program incentive rate directly supports local jobs because the incentives are used by local solar and battery installers to sell residential battery systems to RIE customers. If the current ConnectedSolutions Battery DR Program incentive rate is reduced from \$400 to \$200/kW-yr, installers' battery business would likely decrease to at least one quarter of what is being installed today, which would have a significant impact on the ability for these installers to support their current local workforce.

If the RIE incentive schedule is also reduced below 5-years, new battery installations and enrollments could plummet to levels not seen in Rhode Island since before the ConnectedSolutions Battery DR program began. This comes at a time when residential solar installations are slowing nationwide due to high interest rates. Residential batteries, which can currently be financed using the 0% interest HEAT Loan in Rhode Island and Massachusetts, are an important lifeline that is helping to keep solar and battery installers employed during the current high-interest rate environment. Additional cuts to the HEAT Loan on top of the other reductions proposed in the most recent RIE Draft SRP Investment Proposal will take away this important lifeline.

Residential Battery Benefit Potential is Large

We believe residential batteries are more reliable, environmentally healthy, and environmentally responsible compared to other DR options. Residential batteries don't emit any emissions when operated or when charged by 100% renewable power from residential rooftop solar. Also, residential batteries can more reliably supply DR than other options, because they are not limited due to customer fatigue like thermostat programs, especially during long-duration or multi-day events, and they are not limited due to poor availability like electric vehicle (EV) charging programs, since EVs are not always plugged in and charging when DR is needed most. In addition, because participants are only incentivized for the power they actually deliver during DR events, and there are no upfront or fixed incentives, the ConnectedSolutions Battery DR Program is very cost-efficient with no wasted incentives on customers who do not participate or do not deliver the expected DR performance.

Importantly, in addition to reducing electricity supply costs and avoiding electric system infrastructure investments, residential batteries provide local resiliency (i.e., on-site back-up power and alleviating demand for emergency services), which thermostat, EV charging, and most commercial DR programs cannot provide. For example, residential batteries can reliably provide on-site power to customers during grid outages, even very long-duration outages when paired with solar (i.e., solar-plus-battery configuration).

Recommendation:

Residential batteries offer a very compelling opportunity to leverage customer-sided resources for the benefit of the grid, which will be increasingly more critical as Rhode Island experiences higher demand due to beneficial electrification (EVs and heat pumps) and global climate change. We believe RIE, like many utilities, is just beginning to scratch the surface in terms of being able to quantify and monetize the value from residential batteries through grid services programs like ConnectedSolutions. We recognize that Grid Modernization and RI PUC Docket 5000 will enable RIE and Rhode Island regulators to be able to more fully evaluate, quantify, and monetize additional energy storage benefits that are currently difficult to estimate. In the meantime, given the significant benefit and monetization potential of residential batteries, and disruption to all stakeholders (including customers, solar and battery installers, DERMS provider, and battery OEMs) if the incentive is changed so abruptly, we believe it is premature to reduce the incentive rate or schedule for the ConnectedSolutions Battery DR Program or HEAT Loan eligibility at this time.

Instead, we implore RIE to work with EERMC consultants, local solar and battery installers, residential battery OEMs, and other industry representatives to develop and review an updated benefit-cost analysis (BCA) using the Rhode Island Test, and then determine what the appropriate long-term customer incentive should be based on the updated BCA results. The updated BCA should consider the current and expected future benefits (e.g., emergency load reduction, frequency response distribution network management) from this important DR resource, including those that can be derived from Grid Modernization and RI PUC Docket 5000, and the impact on the local economy. For example, we believe RIE should include environmental, economic development, and

reliability benefits in their BCA, which they don't appear to include in their current cursory benefit assessment.

We strongly believe the quantification of these benefits, and all other costs and benefits that could have significant impact to Rhode Islanders, need to be assessed by RIE, the EERMC, and EERMC consultants with input and review by local solar and battery installers, residential battery OEMs, and other industry experts before making any decisions related to the ConnectedSolutions Battery DR Program incentive rate or schedule.

Conclusion:

The undersigned organizations, including Enphase Energy, Sunrun, Nexamp, Rooftop Power, Newport Solar, NEC Solar, Sol Power Solar, New England Clean Energy, and other partnering solar-plus-storage installers and financing providers, appreciate the EERMC's consideration of these comments. We believe residential DERs are poised to play an important role in the long-term reliability and resiliency of local and regional grid and respectfully urge all affected stakeholders to collaborate on a thoughtfully developed grid services program and incentive structure that will support sustainable DER deployment going forward.

Respectfully submitted,

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