



August 4, 2023

Emma Rodvien, Senior Economic and Policy Analyst
Public Utilities Commission
89 Jefferson Boulevard
Warwick, RI 02888

RE: Office of Energy Resources comments on Draft Examination of the Value of and Need for Energy Storage Resources in Rhode Island

Dear Ms. Rodvien:

The Office of Energy Resources (OER) appreciates this opportunity to submit comments on the Public Utility Commission's (PUC) draft report, Examination of the Value of and Need for Energy Storage Resources in Rhode Island (the Draft Report), produced in response to Senate Resolution 416. Examining the benefits and costs of, barriers to, and potential need of programs to support energy storage is a substantial and complex undertaking, and OER recognizes and is thankful for the effort the PUC staff took in producing the Draft Report. OER views a sustained effort to enable and foster the energy storage industry in Rhode Island to be conducive to managing total costs of the electric power system and necessary for meeting and maintaining the state's climate and renewable energy goals and mandates.

Energy storage is already operating and demonstrating its value in Rhode Island today. The Draft Report finds that "alternative resources are often capable of meeting the same system needs (and delivering the same values) as energy storage at a lower cost." It notes that energy storage resources have submitted bids in response to System Reliability Procurements but have not been selected due to cost. Still, a 3 MW, 9 MWh energy storage facility installed by Pascoag Utility District (PUD) was found to be a cost-effective alternative to transmission upgrades in 2022. The Draft Report highlights discrete modes of operation and revenue streams for energy storage; while the PUD energy storage project is an anecdote, it participates in ISO-NE wholesale markets, helps manage Regional Network System costs, and provides resiliency benefits, demonstrating the ability of energy storage to produce multiple benefits that alternative resources may not be capable of providing.

While the Draft Report concludes that "energy storage is not likely needed to meet the RES or Act on Climate by 2032 [the year referenced in SR 416]," it also finds that it is "advisable to consider... limited programs today that provide the State and the energy storage market with the necessary experience to prepare for significant growth in electricity demand and compliance obligations after 2030." As demonstrated by the PUD energy storage project, there are already instances in which energy storage is the most cost-effective solution. As we progress towards 2032, these opportunities will only increase. OER agrees with the PUC that, regardless of the specific need for and economic superiority of energy storage today, deliberate energy storage market transformation efforts now will pay dividends for Rhode Islanders in the future, as the



need for energy storage (including long-duration energy storage) becomes more acute in advancing our energy goals with Act on Climate.

Among the Draft Report's findings, OER fully supports the following:

- **Importance of programs to support the development of a mature energy storage industry.** As noted above, the Draft Report asserts the limited technical need for energy storage before 2032 but acknowledges the value of supporting the development of a energy storage industry in Rhode Island. As of June 2023, there were over 850 interconnected energy storage projects, mostly residential batteries co-located with solar. While OER agrees that there may be an opportunity for existing programs that have enabled these projects (and tariffs) to be better coordinated, OER believes that programs such as ConnectedSolutions and the Renewable Energy Fund's storage incentive are in line with the need to make sustained efforts to grow the energy storage industry in Rhode Island and should be continued (and regularly examined for opportunities for improvement).
- **Need for energy storage-specific retail service tariff.** OER agrees that applying retail rates designed for traditional customer load to charging batteries "may be inaccurate and may pose a hinderance to the development of net beneficial storage resources." Developing a tariff that better reflects the costs (and potential benefits) of energy storage to the electric power system will reduce the need for incentives to support energy storage, and, ultimately, reduce costs passed onto Rhode Islanders. Before engaging in this effort, however, OER would recommend careful consideration of whether such a tariff is likely to be accessed by a substantial number of projects. As discussed below, most front-of-the-meter energy storage resources participate in wholesale markets; such resources are likely eligible for a wholesale distribution access tariff.
- **Need for interconnection tariff suitable for energy storage.** The existing interconnection tariff was developed with distributed generation (primarily solar) in mind. Energy Storage, a dispatchable asset capable of both importing and exporting power, presents unique questions with respect to interconnection. A tariff that provides more predictability around questions such as how energy storage should be modeled (e.g., should it be assumed that energy storage will charge during periods of peak demand?) will help direct energy storage projects to areas where they are of most value to the grid and reduce project development costs. This will also provide certainty about interconnection timelines, fees and clarify the interconnection process for standalone batteries as well as those installed co-located with renewable resources.
- **Process for developing energy storage retail service tariff.** OER agrees that, given the complexity of the task, convening an informal stakeholder process to provide guidance for energy storage tariffs ultimately filed by Rhode Island Energy would be more



efficient than relying upon Rhode Island Energy to initiate and file such a tariff unilaterally.

OER offers the following comments related to the Draft Report:

- **Affirm the value of setting an energy storage target.** While OER understands that the PUC found that it did not have the resources necessary to study and set a specific target, OER's position is that developing and instituting an incremental energy storage target or mandate can help focus the efforts of those that can contribute to energy storage's success. Adopting a energy storage target would signal that Rhode Island is invested in the sustained development of a energy storage industry, which, in turn, will encourage the energy storage industry to invest in Rhode Island. In the Northeast, Maine, Connecticut, Massachusetts, and New York all have statutes setting energy storage targets or mandates for 2025 and/or 2030.
- **Address the potential need for a wholesale distribution access tariff for energy storage.** The Draft Report addresses the value of a retail service tariff for standalone energy storage. Recent activity in other states (including New York, Maine, Massachusetts, and Connecticut)¹, highlights that FERC-jurisdictional tariffs for energy storage assets connected to the distribution system but participating in wholesale markets (often referred to as a wholesale distribution access tariff) may be a critical component for supporting the development of the energy storage industry. While approving such a tariff may be outside of the PUC's authority, OER suggests that referencing this issue will enhance the value of the Draft Report.
- **Incorporate feedback from residential installers in the future.** As noted above, most energy storage projects currently operating in Rhode Island are residential. While the stakeholder group assembled by the PUC represented some industry interests, it did not represent entities with extensive experience currently installing energy storage in Rhode Island. OER encourages the PUC to include these installers in future energy storage-related processes and we can assist with coordinating those stakeholders for future discussions.
- **Expand tariff considerations to include energy storage co-located with renewables.** The Draft Report focuses on standalone energy storage in proposing revised retail charge and interconnection tariffs. While OER agrees that standalone and co-located energy storage each have unique considerations, energy storage co-located with renewables is also distinct from load or standalone renewables.

¹ See for example: Section 72 of [Chapter 179 of Massachusetts Acts of 2022](#) and Connecticut Public Utilities Authority [Decision](#) in Docket 22-08-05



- **Consider OER role in interconnection proceedings.** OER played a role in the development of the current interconnection tariff by providing support in stakeholder engagement, organizing stakeholder meetings, and providing feedback. OER enjoyed working with PUC staff on that effort. OER can provide similar support to the PUC staff with stakeholder engagement and meeting organization for the next update to the interconnection tariff. Additionally, OER can assist with developing suggested amendments to the current interconnection tariff to better account for energy storage or in the creation of a new interconnection tariff specifically for energy storage. Current and recent OER staff were lead authors of a National Renewable Energy Laboratories report² outlining the use of operating agreements and energy storage to manage interconnection costs; OER would be happy to leverage this experience and insight in discussion around a energy storage interconnection tariff, OER also recommends that such interconnection tariff reforms should be tied to larger distribution system planning efforts.
- **Consider additional energy storage incentive programs.** While OER agrees that energy storage incentive programs will be most effective and cost-effective with more suitable energy storage retail charge and interconnection tariffs in place, modeling performed by Sustainable Energy Advantage, LLC, on behalf of OER suggests that adding energy storage to solar installations may be cost effective. OER believes that animating the market now (which may produce net benefits) will help smooth the transition to a future in which energy storage will be needed to achieve climate mandates and maintain system reliability. Waiting for the completion of proposed energy storage activities may unnecessarily delay meaningful progress towards building beneficial energy storage incentive programs.

Again, OER greatly appreciates the PUC's diligent examination of energy storage and the opportunity to provide comments on the Draft Report. If the PUC needs analyses completed for future meetings or docket proceedings on energy storage subjects, OER would be happy to discuss and provide support. We look forward to working with the PUC and stakeholders to progress energy storage in Rhode Island.

Thank you,

A handwritten signature in black ink that reads "Chris Kearns".

Chris Kearns
Acting Commissioner
Rhode Island Office of Energy Resources

² <https://www.nrel.gov/docs/fy22osti/81960.pdf>