



CLEAN ENERGY NH

Your Voice in All Energy Matters

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January 11, 2021

Ms. Debra A. Howland
Executive Director
New Hampshire Public Utilities Commission
21 South Fruit Street, Suite 10
Concord, NH 03301

Re: Docket No. IR 20-166, Investigation into Compensation of Energy Storage Projects for Avoided Transmission and Distribution Costs

Dear Executive Director Howland,

This letter is in response to the opportunity for intervening parties to present initial comments in Docket No. IR 20-166, relative to an investigation into compensation of energy storage projects for avoided transmission and distribution costs. Clean Energy NH (CENH) is pleased to submit the following comments and looks forward to further dialogue and progress in this docket to ensure New Hampshire utilizes energy storage to its fullest potential to reduce energy demand and provide net savings to both residential and commercial/industrial consumers.

As an organization dedicated to promoting clean energy and clean technology, CENH is supportive of innovative energy storage projects that can provide a multitude of benefits to New Hampshire. Effective energy storage encourages the utilization of renewable energy by providing clean energy to the region's power grid even during periods of low production for technologies such as solar and wind. Energy storage strengthens a region's electricity grid by targeting and reducing peak demand, providing reliability and resilience, and lowering energy costs for customers.

As part of this proceeding, the Commission has been tasked with addressing several questions and our comments will focus on answering many, but not all, of these queries.

Accurate and Efficient Price Signals - Time of Use Rates

Firstly, accurate and effective price signals play a pivotal role in the adoption of energy storage technology. Customers, including those that net meter and those that install energy storage devices and receive compensation for avoided transmission and distribution costs, should have the option to opt into a time of use (TOU) rate. TOU rates offer accurate and efficient price

signals to customers by providing them with an opportunity to (1) make informed decisions, (2) adapt their schedules in order to reduce their energy costs, and (3) provide grid benefits by shifting demand to off-peak hours. A TOU rate allows batteries to charge at a low price when demand on the grid is low. When rates are high during peak periods, the batteries provide their stored power to homes and businesses. This model saves participating customers money and removes demand from the grid, which provides system-wide benefits for those non-participating customers.

CENH would like to call attention to the importance of a well-designed and effective TOU rate, which will more effectively incentivize customers to shift their demand away from peak periods. An effective TOU rate should include a three-part rate design (featuring off-peak, mid-peak, and peak periods) and an annual average price differential of at least 3:1 between peak and off-peak periods. When compared to a two-part rate (peak and off-peak), three-part rates send more accurate price signals based on system costs and help reduce peak demand more effectively by offering more impactful changes in price in smaller segments of time.

For example, the Liberty Utility three-part TOU rates approved by the Commission for the Battery Storage Pilot (Docket No. DE 17-189) currently achieve a 3.56:1 ratio for the summer period, with a 2.51:1 ratio for the winter period for an average annual ratio of 3.04:1, and were recently lauded by the Regulatory Assistance Project (RAP) as “the most advanced modern rate design in New England”.¹ CENH supports this structure and encourages the Commission to adopt a similar structure for all battery storage programs.

TOU rates can be implemented together with BYOD programs as proposed in phase 2 of the Liberty Utilities pilot program. The Commission in order 26,029 required each utility to implement a TOU net metering pilot however, none of these pilots have begun or moved forward. We urge the Commission to require utilities to move forward and complete these pilots with a focus on net metered renewable energy systems paired with energy storage.

Accurate and Efficient Price Signals - Charging Tariffs and Demand Charges

In CENH’s view, it would be inappropriate for stand-alone energy storage installations to be charged tariffs that include existing commercial/industrial demand charges. Existing demand charges are not time varying or peak coincident. Energy storage acting as a non-wires alternative and/or as a merchant project doing arbitrage in the wholesale market will strategically charge at

¹ David Littell and Joni Sliger, *Rate Designs That Work for a Modern, Customer-Oriented Grid, A Look at New England Rate Design: Issue Brief #3*, at 11 (February 2020), available at <https://www.raponline.org/wp-content/uploads/2020/02/rap-littell-sliger-rate-designs-modern-customer-oriented-grid-2020-february.pdf>. See also: David Littell and Joni Sliger, *Time-Varying Rates in New England: Opportunities for Reform, A Look at New England Rate Design: Issue Brief #4*, at 7-8 (October 2020), available at <https://www.raponline.org/wp-content/uploads/2020/10/rap-littell-sliger-time-varying-rates-in-new-england-opportunities-for-reform-2020-october.pdf>.

off-peak or low-price times and discharge during peak demand high-price events. Therefore, blunt demand charges would unnecessarily harm the economic viability of energy storage projects without providing accurate cost causation price signals. We propose that a charging tariff be developed that modifies demand charges to peak coincident demand charge or the Commission should consider other modifications of demand charges that would be appropriate for energy storage charging.

Bring Your Own Device Programs

CENH urges the Commission to approve and expeditiously implement the bring your own device (BYOD) programs that are already proposed. The proceedings of this docket should not impede the adoption of those proposals, including the proposed advanced demand reduction programs utilizing batteries in the 2021-2023 Statewide Energy Efficiency Plan (Docket No. DE 20-092) or the BYOD program already approved for phase 2 of the Liberty Utilities battery pilot program (Docket No. DE 17-189). BYOD programs offer customers an opportunity to make personal investments and this will help stimulate employment opportunities and economic growth in an expanding technology industry in New Hampshire. BYOD programs have proven cost effective in numerous other states and programs have been successfully implemented.

CENH does not think there are any necessary statutory changes to implement the programs already approved by the Commission or currently proposed and under review in the EERS docket. It would be helpful however, to provide a clear signal to industry and customers by developing a statewide energy storage deployment target.

Compensation of Avoided T&D and Participation in Wholesale Markets

According to the Clean Energy Group report, *Energy Storage: The New Efficiency*², compensation of energy storage projects should include three elements; an up-front rebate, a performance incentive, and access to financing. CENH agrees with this general model and urges the Commission to adopt a similar approach in order to provide net-savings to customers. Reducing the initial capital cost of adopting energy storage is accomplished with an up-front rebate. A performance incentive ensures long term demand reduction savings and encourages customers to adapt their battery use to cost-saving applications. Programs specific to low and moderate income customers should be implemented within any compensation model. While limiting utility ownership, third party vendors should be allowed to offer customers a wide variety of financing and leasing options in order to promote adoption of energy storage in a competitive marketplace.

² Todd Olinsky-Paul, *Energy Storage: The New Efficiency*, (April 2019), available at <https://www.cleangroup.org/ceg-resources/resource/energy-storage-the-new-efficiency/>.

Utility Compensation

To compensate the utilities for their participation in energy storage programs, performance based rate-making (PBR) should be considered. PBR allows utilities to recover their costs while providing value and net-savings to customers and investing in grid modernization.

As an outcome of this investigation docket, the Commission should consider requiring procurement of non-wires alternatives when any significant investment is considered and during required utility planning such as LCIRP. Comprehensive consideration of non-wires alternatives, including energy storage, microgrids, solar, and other on-site or distributed generation, can reduce costs for ratepayers, reduce risk of stranded costs, increase system resilience, improve environmental outcomes, and potentially avoid costly siting conflicts.

Grid Modernization

NH has had an ongoing docket regarding grid modernization since 2015 and several elements of grid modernization are relevant to building markets for energy storage in NH. Those elements include advanced ratemaking, interconnection procedures, hosting capacity analysis, non-wires alternatives, reliability/resilience, better integration of distributed energy resources (DERs), and stakeholder informed utility planning. After the Commission issued order 26,358, Eversource filed a motion for reconsideration and/or clarification on 6/22/20 which resulted in the Commission suspending order 26,358 and no further action or progress in the docket has occurred since then.

Energy storage is a key element of grid modernization and will improve grid reliability. Moving forward with grid modernization in New Hampshire is important to the success of energy storage and other DERs. New Hampshire already has a plan for grid modernization that has been unnecessarily delayed. CENH urges the Commission to move forward with reviving progress on grid modernization especially several topics important to DERs, including energy storage.

Ownership and RSA 374-F and G

CENH favors non-utility ownership of energy storage and the implementation of price signals and fair compensation that will encourage private investment. Utility ownership should only be allowed if it can be demonstrated to be more cost effective than a privately owned option or in the case of a demonstrated market failure. The electricity discharged from utility owned energy storage should have restricted uses including serving or offsetting local load for that utility's own customers. However, utility owned energy storage should not be allowed to sell discharged electricity into the wholesale market because this would undermine restructuring and divestiture.

CENH does not believe changes to RSA 374-F are necessary at this time. CENH has supported proposed changes to RSA 374-G to clarify that if utilities were to own energy storage those assets should not be considered "generation" for the purposes of 374-G:4 II. CENH thinks that

several of the filing and review requirements included in RSA 374 G-5 would be relevant to consider when determining if it is appropriate for utilities to own and operate energy storage.

Other

Any energy storage projects in New Hampshire should have a clearly defined regulatory path to interconnection. To do so, the Commission should adopt rules clarifying policy for the installation, interconnection, and use of energy storage systems by customers of utilities. Those rules should include, but not be limited to, the following:

1. Regulations designed to remove barriers to the installation, interconnection, and use of customer-sited, behind-the-meter energy storage systems in New Hampshire.
2. Regulations that are not overly burdensome or associated with unreasonable rates or fees, but still establish size and safety considerations for energy storage systems.
3. A process for interconnection approval by the utility(s) that is streamlined, affordable, and simple for the customer.
4. New Hampshire policies and programs should allow for participation in wholesale and capacity markets, as well as serving local uses for non-utility owned storage.

CENH appreciates the opportunity to provide initial comments in Docket No. IR 20-166 and looks forward to working with the utilities, Staff, and other parties in the coming months to further investigate the compensation of energy storage projects for avoided transmission and distribution costs. CENH urges the Commission to develop programs and policies that utilize energy storage to its fullest potential, which will help reduce energy demand and provide net savings to both residential and commercial/industrial consumers.

Sincerely,



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