

THE STATE OF NEW HAMPSHIRE
PUBLIC UTILITIES COMMISSION

Liberty Utilities (Granite State Electric) Corp.
d/b/a Liberty

Docket No. DE 17-189

Petition to Approve Battery Storage Pilot Program

Liberty's Response to Staff's Recommendation

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty, through counsel, respectfully responds to Commission Staff's Recommendation of February 2, 2021 (the "Staff Recommendation").

Background

1. Liberty filed a Technical Statement on January 22, 2021, which updated the Commission on various aspects of the battery storage pilot (the "Pilot") and asked to confirm an interpretation of Order No. 26,209 (Jan. 17, 2019) that would allow batteries installed at the homes of net metering customers to be charged from the grid under certain limited circumstances. The Staff Recommendation recited some history of the Pilot, indicated Staff's disagreement with Liberty's interpretation of the Order, and suggested some further process.
2. Liberty provides this response to correct some inaccuracies and misunderstandings in the Recommendation, and to respond to Staff's suggested future steps.

3. First, however, Liberty is pleased to inform the Commission that the Pilot is a complete success to date. The batteries have been installed, they are being dispatched successfully, they are being dispatched at the monthly peak hours, are successfully lowering Liberty's peak load (the ultimate goal of the Pilot), customers are happy, and the Pilot is collecting substantial data (another important objective of the Pilot).
4. The issue that prompted the technical statement arises from, to this point, only three customers with solar PV systems that are too small to provide power to offset the home's full load and recharge the batteries -- the overwhelming experience of other customers has been positive.

Liberty Can Assure that the Batteries Will Not Export Non-Renewable Energy to the Grid.

5. The central misconception in the Staff Recommendation is in the following sentence (the substance of which Staff repeats elsewhere):

Commission Staff (Staff) does not agree with Liberty's request that net-metered solar customers be permitted to charge from the electric grid at any time, because that would be inconsistent with statutory provisions that restrict net metering to renewable energy sources. *Liberty's request does not assure that solar customer's batteries will export only renewable energy to the electric grid for net metering purposes.*

Staff Recommendation at 1 (emphasis added). The basis for Staff's concern is the statutory requirement that only renewable energy is eligible to obtain the benefits of net metering. RSA 362-A:1-a, II-b.

6. To the extent Liberty was not sufficiently clear in its technical statement and prior communication with Staff, Liberty now states, unequivocally, that the programming is such that no energy can be exported from the batteries for net metering purposes. Tesla

software simply precludes the batteries from ever exporting to the grid except when dispatched for an expected peak event as provided in the Pilot. The software also precludes customers from being able to export from their batteries.

7. Since energy is never exported from the batteries outside of a predicted peak, and since customers do not have the ability to export energy from their batteries, it is impossible for any energy (however generated) to flow from the batteries to the grid for net metering purposes, eliminating the concern raised in the Staff Recommendation.
8. To explain further, the systems of net metering customers participating in the Pilot currently operate as follows. Energy generated by participating customers' solar arrays goes, first, to offset current load behind the meter and, second, to charge the battery, if the battery is not fully charged. If there is solar energy available after serving current load, and if the batteries are fully charged, that excess energy would be exported from the solar array directly to the grid, for which the customer would appropriately receive net metering credit.
9. The batteries of participating net metering customers currently operate as follows. The Pilot is currently set up so that the batteries of net metering customers can only be charged by the solar array as described above – they can never be charged from the grid. Staff requested this limitation to ensure only non-renewable energy was ever discharged from the batteries.¹ However, the batteries are now programmed so that the energy (whether solar energy or grid energy) can leave the batteries in only one of the following three ways. First, the batteries automatically dispatch Monday through Friday, except

¹ The Settlement Agreement does not contain a similar limitation. The Settlement Agreement says, “Net-metered customers shall not be permitted to charge their batteries from the grid except when the batteries are under Liberty’s control ...” (emphasis added).

holidays, to serve behind-the-meter load during critical peak hours. Second, the Pilot can discharge the batteries to the grid to offset a predicted system peak. And third, the batteries are programmed to serve behind-the-meter load during an outage. The energy cannot leave the batteries for any other purpose.

10. Importantly, since energy from the batteries *never* travels to the grid outside of when a peak event is called, there is *zero* risk that non-renewable energy in the batteries can be exported for net metering purposes.
11. Given that Staff may not have understood the above limitations on how the batteries could, and could not, be dispatched, the Staff Recommendation stated: “Unless Liberty can assure the Commission that the power exported to the grid from the batteries of net-metered customer-generators, except during a forecasted peak event, is exclusively renewable energy, then such customers should not be permitted to have their batteries charged from the grid without restriction, in order to comply with the statute and rules.” Staff Recommendation at 4.
12. Liberty can, and hereby does, provide such assurance because power is exported from the batteries to the grid *only* during a forecasted peak event.
13. With this assurance, Liberty repeats its request that the Commission confirm Liberty’s interpretation that Order No. 26,209 (Jan. 17, 2019) allows batteries of participating net metering customers to be charged from the grid each night to ensure that those with small solar arrays may benefit from the Pilot, and that the Pilot may benefit from the availability of those customers’ batteries. A change to Order No. 26,209 is not necessary.

14. If confirmed, Liberty will direct Tesla to: (1) have the batteries charge from the grid overnight (i.e., during off peak hours); (2) have the energy from the solar array serve current load first, as is currently the case, but then export any excess solar energy to the grid for net metering purposes, bypassing the batteries. The solar array would no longer charge the batteries and, as stated above, the energy in the batteries will continue to be exported to the grid only for system peak events.

Compliance with Program Conditions

15. The Staff Recommendation listed the “approved conditions from Order Nos. 26,337, 26,364, and 26,366,” Staff Recommendation at 2, suggesting that Liberty has not met those conditions.² The conditions listed in the Staff Recommendation, with Liberty’s responses, follow:

- Liberty must begin installing the meters within one week of the effective date of Order No. 26,337 and have all meters installed and operational by June 30, 2020 to begin collecting electricity usage data prior to battery installation.

Response: Liberty installed all meters by June 30, 2020, in satisfaction of this condition.

- A minimum of 100 batteries must be installed and operational by August 31, 2020 (an additional extension from June 30, 2020), with the remainder of the batteries, up to 200, installed and operational by October 31, 2020 (a further extension from September 30, 2020).

Response: Liberty completed installation of the batteries on November 24, 2020, and so notified Staff on November 30, 2020. Liberty kept Staff informed of the difficulties and delays that

² “Staff also has concerns regarding Liberty’s implementation of the pilot and the number of deviations from the program features specified in the Settlement Agreement and in the Commission’s relevant orders.” *Id.* at 3.

COVID-19 caused to meet the extended deadlines. Although Staff does not “believe” that “the program implementation delays and changes may be attributed to the effects of the pandemic,” the fact is that the pandemic effects were real and substantial. The pandemic caused all work to cease for several months (the state shut down March 16, 2020, only days after Order No. 26,366 (Mar. 9, 2020) authorized the Company to install batteries, imposed substantial restrictions once work could resume, and affected customers in many different and unpredictable ways.

- Liberty must notify Staff once it has approved and has binding contracts with the first 50 customers, signaling that it will begin installing the batteries.

Response: Liberty so notified Staff in early January, 2020.

- Liberty must notify Staff once the first 100 batteries are installed and operational.

Response: Liberty so notified Staff on November 30, 2020.

- Liberty must notify the Commission of the number of meters installed as of June 30, 2020.

Response: Liberty so notified the Commission on June 30, 2020.

- Liberty must file the supporting documentation for its cybersecurity evaluation, subject to appropriate claims of confidential treatment.

Response: Liberty filed the supporting documentation on November 25, 2019, and received an Order approving the documentation on March 9, 2020.

- The analysis of actual Phase 1 results will include the program changes and updates and reflect the actual benefits and costs of implementation.

Response: This will be completed after the conclusion of Phase 1.

- Liberty must modify the customer materials to reflect that customers will no longer receive an advance notice of dispatch events.

Response: This condition has been met as Liberty has provided information to customers as they signed up and has had individual conversations with all participating customers about how the Pilot works.

- In the event the first 100 batteries were not installed, operational, and available for dispatch by July 1, 2020, then Phase 1 would be extended through August 31, 2022.

Response: Liberty agrees that Phase 1 will run through August 31, 2022.

16. Later the Staff Recommendation specifically stated that certain conditions were not

met. Staff Recommendation at 3. Those statements and Liberty's responses follow:

Staff was not notified of binding contracts with 50 customers, triggering the beginning of installation of the first 100 batteries.

Response: Liberty notified Staff in early January 2020 that this threshold was nearly met and that the Company was ready to install batteries. Staff asked Liberty to wait until the Commission acted on the then pending motion to extend deadlines. The Commission issued the order granting the extension two months later, on March 9, 2020.

The August 31, 2020, deadline for minimum Phase 1 battery installation was not met, nor the October 31, 2020, deadline for completion of battery installation for Phase 1.

Response: See response to the same issue above. Liberty had already acknowledged and agreed that Phase 1 would extend through August 2022, to make sure sufficient peak data were obtained, the pandemic continued to disrupt planning and schedules, Staff was informed, and the Company chose not to file one last request to extend.

Also, important features of pilot implementation have changed, such as the fact that solar customers can no longer exercise any control over their batteries as was originally provided for in the approved Settlement Agreement, and solar customers have not been adequately educated on the

terms of the pilot, including battery charging and discharging requirements.

Response: Staff was kept informed of the programming changes. Liberty strongly disagrees that “solar customers have not been adequately educated.” There has been constant communication with all participating customers, especially those with solar arrays, about the program. They understand they will not be notified of peak events and that they have to charge with their solar. This did not cause issues until they learned in real time that their batteries were not charging fully because the arrays were covered in snow and winter sunlight was not sufficient. It is a pilot for customers as well so they are also gaining knowledge as the pilot progresses.

Staff is well aware of the current state of emergency associated with the COVID-19 pandemic, but does not believe that all of the program implementation delays and changes may be attributed to the effects of the pandemic. In fact, Liberty agreed to a revised schedule in the midst of the pandemic, but additional delays occurred both before and during the pandemic. Staff therefore is unconvinced that the pandemic is responsible for more than a few months of delay, which should have been accounted for in the extensions granted in Order No. 26,337 and Order No. 26,366.

Response: Whether Staff is convinced or not, the fact is the pandemic was a major complicating factor. Staff was not in the field; Liberty and Tesla were. That the Company was able to launch this complex Pilot in the midst of the pandemic warrants congratulations, not complaints.

Note also that some significant delays were due to regulatory lag. Liberty made the cyber security filing in November 2019 and notified Staff in early January 2020 that there were sufficient customers signed up to commence installation. Staff’s recommendation was filed a month later, and the Commission issued its order authorizing the Company to proceed a month after that, on March 9, days before the pandemic caused the state to shut down.

17. Liberty submits that it has in good faith, and with great effort, complied with the conditions that the Commission has imposed on the Pilot.

Staff's Recommendations

18. Staff recommends the following steps going forward:

Staff recommends that the Commission direct Liberty to [1] file a detailed status update describing all material changes to its pilot program implementation, including changes to the pilot terms, deadlines missed, treatment of solar customers, number of meters and batteries installed and the applicable dates, and compliance with other applicable conditions. Staff further recommends that, following the filing of that update, [2] the Commission hold a hearing to address the updated program information with an opportunity for the Commission, parties, and Staff to question Liberty regarding the status of the pilot

Staff Recommendation at 4-5 (numbering added).

19. Liberty respectfully suggests that the information provided in the technical statement and in this response satisfy Staff's requests in section [1] above. The most significant change in the Pilot is at the center of Liberty's request – that Tesla's more advanced software changed the control and dispatch of the batteries. The Company has already disclosed when batteries were installed (the granular details of which will be part of the future EM&V process), and this response addresses the deadlines and customer notification. Liberty does not object to an opportunity to appear before the Commission to explain what has occurred over the past year – the successes, the challenges, to answer any questions, and to discuss any future improvements, but it may be a better use of time to conduct such a hearing after the batteries have been in service for a longer period of time so that the Company could also provide substantive information about how the Pilot is working.

WHEREFORE, Liberty respectfully asks that the Commission:

- a. Confirm Liberty's interpretation that Order No. 26,209 (Jan. 17, 2019) allows batteries of participating net metering customers to be charged from the grid conditioned on the

Company's assurance that their batteries are never to be discharged to the grid for net metering purposes; and

- b. Grant such other relief as is just and reasonable.

Respectfully submitted,
Liberty Utilities (Granite State Electric) Corp.
By its Attorney,



Date: February 12, 2021

By: _____

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Certificate of Service

I hereby certify that on February 12, 2021, a copy of this response has been electronically forwarded to the service list.



By: _____

Michael J. Sheehan