BEFORE THE STATE OF NEW HAMPSHIRE
PUBLIC UTILITIES COMMISSION

DE 17-189

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP.
d/b/a LIBERTY UTILITIES

Petition to Approve Battery Storage Pilot Program

Closing Statement of Sunrun Inc. and ReVision Energy, Inc.
on Settlement Agreement

Pursuant to the New Hampshire Public Utilities Commission ("Commission") ruling at the November 29, 2018 settlement hearing permitting parties to submit written closing statements, Sunrun Inc. ("Sunrun") and ReVision Energy, Inc. ("ReVision") submit the following closing statement on the Settlement Agreement filed by Liberty Utilities ("Liberty") on November 19, 2018 in the above-referenced docket. Sunrun and ReVision requested to submit a written closing statement in lieu of an oral closing statement in anticipation of a short hearing and appreciate the opportunity to submit this written closing statement.

I. Introduction

On December 1, 2017 Liberty filed its "Petition to Approve Battery Storage Pilot Program" requesting Commission approval of a pilot program ("Pilot") through which Liberty would purchase and install batteries and related equipment for up to 1,000 residential customers with the goals of saving transmission costs and studying other potential system benefits.[1] The Commission granted parties' petitions to intervene, including the petitions of Sunrun and ReVision, following a prehearing conference held January 4, 2018. Sunrun and ReVision filed direct testimony on May 2, 2018, focusing

[1] DE 17-189, Direct Testimony of Heather Tebbetts at p. 2 lines 3-6 (Nov. 30, 2017).

on suggested improvements to Liberty's Pilot proposal.[2] Specifically, Sunrun and ReVision recommended the Pilot provide for private sector participation through a bring-your-own-device ("BYOD") component to introduce competition and allow third-party non-utility storage developers and aggregators to deploy and coordinate BYOD customers' participation in the Pilot.[3] The BYOD component proposed by Sunrun and ReVision would allow customers and non-utility third parties to own and retain control of the batteries and participate in the Pilot through a third-party aggregator that would dispatch the BYOD batteries in response to the peak demand events forecast by Liberty.[4] Aggregators would earn a performance payment for dispatching the BYOD batteries in accordance with Liberty's instructions and generate savings for ratepayers.[5] The value of the performance payment would be based on various factors, including BYOD capacity, duration of performance, and the actual performance of the batteries in response to dispatch notices to meet peak demand event needs.[6]

Pursuant to the Commission's procedural schedule, settlement negotiations commenced May 29, 2018 and Sunrun and ReVision participated in these negotiations until their conclusion in November 2018, which resulted in the November 19, 2018 filing of the Settlement Agreement between Liberty, the City of Lebanon, the New Hampshire Sustainable Energy Association, the Conservation Law Foundation, the Acadia Center, the Office of the Consumer Advocate, and Commission Staff.[7]

Sunrun and ReVision commend Liberty for recognizing the grid benefits and

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2 Docket DE 17-189 Direct Testimony of Justin R. Barnes (May 2, 2018) ("Testimony of Barnes").
3 *Id.* at p. 32, lines 15-22; p. 33, lines 1-22..
4 *Id*.
5 *Id.*, Attachment JRB-2 at pp. 2-4.
6 *See* Testimony of Barnes at pp. 32-39 and Testimony of Barnes, Attachment JRB-2 at pp. 2-4 for detailed discussion of proposed pay for performance model.
7 Docket DE 17-189, Settlement Agreement (Nov. 19, 2018) ("Settlement Agreement").

ratepayer savings that behind-the-meter ("BTM") storage resources can provide and applaud the parties' thoughtful input and diligent efforts to improve Liberty's initial proposal and reach settlement. While the Settlement Agreement represents marked improvements from Liberty's initial proposal, for the reasons stated below, Sunrun and ReVision are not signatories to the Settlement Agreement but do support Commission approval of it.

II. Summary of Settlement Agreement

The Settlement Agreement proposes the Pilot proceed in two phases.[8] In Phase 1 Liberty would purchase a minimum of 100, and up to 200, batteries for installation at the homes of Liberty's residential customers and dispatch those batteries in response to peak demand events as forecast by Liberty.[9] Concurrent with Phase 1 implementation, a working group would be established to develop a BYOD component to be implemented in Phase 2.[10] While the Settlement Agreement would allow the BYOD component to proceed in Phase 1, it would not allow BYOD aggregators to dispatch the batteries pursuant to the peak forecasting Liberty conducts for dispatching the Liberty-owned batteries.[11] Instead, Phase 1 BYOD participation would require aggregators to perform the same peak forecasting function as Liberty to determine when to dispatch the BYOD batteries.[12] As discussed further below, this is neither desirable nor an efficient use of resources and means that the BYOD program is not able to participate in Phase 1.

Phase 2 provides for Liberty to purchase and deploy additional Liberty-owned

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8 Settlement Agreement at 6.
9 *Id*.
10 *Id.* at 6, 14.
11 *Id.* at 15-16.
12 *Id.* at 6, 15.

batteries (up to 500 inclusive of Phase 1 and Phase 2)[13] and for the deployment of up to 500 additional batteries (or an equivalent capacity of 2,500 kW) owned by customers or non-utility providers through the BYOD component.[14] Unlike Phase 1, in Phase 2 BYOD aggregators would be allowed to dispatch the BYOD batteries pursuant to instructions from Liberty based on Liberty's peak forecasting.[15] However, Phase 2 is contingent upon Liberty successfully implementing Phase 1 and requesting and receiving Commission approval to commence Phase 2.[16]

III. Statement Regarding Settlement Agreement

Sunrun and ReVision commend Liberty for recognizing the benefits that BTM storage assets offer and the parties' efforts to improve upon Liberty's initial proposal by including the BYOD component in the Pilot. The BYOD program, if implemented, will provide the means to test the implementation of the Liberty-owned battery model with the non-utility-owned BYOD model in a manner that will allow the Commission, Liberty, and stakeholders to evaluate how to best deploy, manage, and deliver grid benefits from BTM storage assets going forward.[17]

Put simply, a BYOD program is nothing more than a demand response program where non-utility capital is used to deploy and manage the assets, and the risk of non-performance is on the private market participants, not utility ratepayers. The BYOD component of the Pilot allocates risks to private markets and is grounded in enabling competitive market participants to educate and engage customers, deploy battery storage assets, and optimize the operation of these assets to meet customer needs and Liberty's

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13 Settlement Agreement at 10.
14 *Id.* at 6.
15 *Id.* at 6, 15-16.
16 *Id.* at 8, 10.
17 *See* Testimony of Barnes at p. 32 lines 1-11.

grid management and cost reduction goals. The BYOD model is an existing framework for adopting as a component to this Pilot, and provides the framework for integrating customer-owned batteries to provide grid services in the future and scale the learning gained from this Pilot to broader applications across New Hampshire.[18] This is particularly important for customers adopting battery storage on their own volition in the future, as the BYOD provides a scalable design to integrate these customers' assets into a platform to provide valuable grid services that benefit both participating and non-participating customers going forward.[19] As such, the Settlement Agreement's inclusion of the BYOD component is visionary in its recognition of not only the grid management and customer saving benefits that BTM storage assets can provide, but also because it has the potential to stimulate the establishment of a neutral platform upon which customer-based assets can be deployed to meet system needs and reduce costs for all ratepayers, while at the same time promoting a robust, competitive, and sustainable distributed energy resource ("DER") market in New Hampshire.[20]

While Sunrun and ReVision strongly support the inclusion of the BYOD component and believe its inclusion supports Commission approval of the Settlement Agreement, underlying concerns about the Settlement Agreement's endorsement of a utility ownership model for BTM storage assets and the phased structure of the Pilot to exclude BYOD participation in Phase 1 prevent Sunrun and ReVision from being signatories to the Settlement Agreement.

Utility ownership of DERs is out of step with national trends in BTM storage deployment and regulators across the country have consistently expressed concerns

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18 *Id.* at p. 9, lines 19-22; p. 10, lines 1-11.
19 *Id.* at p. 4, lines 1-3.
20 *Id.* at p. 34, lines 2-6.

about the cost-effectiveness of utility ownership relative to non-utility ownership, and the potential impacts of utility ownership on the competitive market for the same product or service.[21] New Hampshire ratepayers are similarly best served by leveraging the private competitive market to deploy and control BTM storage assets. Shifting capital investment and customer management responsibilities and risk from the utility (and therefore away from ratepayers) to BTM storage providers insulates ratepayers from risks of utility underperformance by not putting ratepayer dollars at risk. Indeed, the lowest risk scenario for ratepayers would be one in which Liberty does not own any batteries, but instead conducts peak forecasting and sends dispatch notices to aggregators to dispatch BYOD batteries.

The BYOD model also facilitates customer choice and additional use-cases of the asset, stimulates innovation, and fosters the creation of a sustainable and scalable BTM storage market that the utility ownership model does not achieve.[22] Private non-utility solar and storage developers have proven expertise in marketing, installing, and managing customer-sited resources that offers a natural partnership opportunity between utilities and private market participants to provide the innovative grid services and customer savings benefits that Liberty has proposed to achieve through the Pilot program.

While Sunrun and ReVision have concerns about utility ownership and ratepayer risk, the inclusion of the BYOD component to the Pilot provides an avenue for competitive market providers to participate and appropriately shifts some of the risk from ratepayers to the private market. This represents a significant improvement

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21 *See* Testimony of Barnes at pp. 5-9.

22 *Id.* at p. 34, lines 9-20; p. 41, lines 14-18.

to Liberty's initial proposal and as such, the Pilot should be given the opportunity to proceed to test the Pilot concepts.

The phased structure of the Settlement Agreement and requirement that BYOD aggregators conduct their own peak forecasting as a condition for participating in Phase 1 is unfortunate as it delays until Phase 2 the ability of the Pilot to achieve the objectives of Phase 1—which is to test "pilot program concept and execution, benefit cost analysis parameter assumptions, and incurred actual costs, as well as customer acceptance and engagement."[23]

Private developers possess customer engagement, marketing, service, and BTM asset management experience that utilities do not. This is a function of the experience and expertise gained by private developers in the competitive DER market for BTM assets and the distinction between the respective roles that utilities and private market participants play in delivering energy services to customers. Conditioning the BYOD component of the Pilot on Liberty successfully executing the marketing, customer engagement, asset management, and other aspects of the Liberty-ownership model necessary to allow Phase 1 to commence and succeed inserts a level of risk that Phase 2 of the Pilot may not commence if Liberty is unable to meet customer acquisition or other Phase 1 requirements, such as Tesla not supplying the batteries to Liberty on schedule, that private market participants are better suited to perform under a BYOD model.

Moreover, while the Settlement Agreement would allow the BYOD component to commence in Phase 1 if aggregators perform their own peak forecasting, this is neither reasonable nor desirable. Having Liberty and aggregators predict system peaks, and independently dispatch their respective batteries pursuant to their individual forecasts is

[23] Settlement Agreement at 6.

inefficient, does not satisfy basic tenets of system management and resource dispatch coordination, and is not a role that competitive providers play in DER integration. Simply put, non-utility companies do not engage in this sort of system forecasting. It would also require costly investments to duplicate the system operator and coordination function that is, and should continue to be, a utility-based function. Liberty manages and operates its distribution system, has access and the resources to analyze customer usage patterns, and has other system data and information necessary to accurately predict system peaks that non-utility aggregators simply do not possess.

The appropriate means to test the Pilot concept with both the Liberty-owned and BYOD components is to allow both components to proceed simultaneously, with both relying on Liberty's peak forecasts for dispatch. This reflects the future for DER integration by combining utility core competencies (system knowledge) and competitive developer core competencies (customer interaction and DER management). As such, Phase 2 appropriately provides for BYOD participation through coordinated dispatch of the battery assets, whether Liberty-owned or BYOD, in response to Liberty's peak forecasting. This also provides the appropriate framework within which to gather information and compare the Liberty-owned model with the BYOD model under a common platform where Liberty performs peak forecasting and provides dispatch signals to Liberty-owned batteries, and to the batteries under aggregator control. This data and information will be critical to evaluate the success of the Pilot and developing future programs for deploying BTM storage assets on a larger scale to deliver the grid benefits and ratepayer savings anticipated by Liberty.[24] Despite limiting BYOD participation to Phase 2, the Settlement Agreement represents a significant

[24] Testimony of Barnes at p. 32, lines 1-11

improvement to Liberty's initial proposal and as such, the Pilot should be given the opportunity to proceed to test the Pilot concepts.

While Sunrun and ReVision have reservations about the utility ownership of BTM storage assets and restricting BYOD participation to Phase 2, the Settlement Agreement's adoption of the BYOD component to the Pilot offers a cutting-edge opportunity to leverage utility core competencies in grid management, system operation, and dispatch coordination with those of private market participants in marketing, installation, and management of BTM storage assets. This is a visionary step forward and, if approved, would place New Hampshire and Liberty among the leading states and utilities in the country for BTM asset integration and innovation. Sunrun and ReVision are confident that if the Settlement Agreement is approved and the Pilot proceeds to Phase 2 with the BYOD component, the Pilot will provide the Commission, Liberty and stakeholders with valuable information to inform the development of future programs aimed to scale the deployment of BTM storage assets and deliver customer savings and grid benefits to customers throughout New Hampshire.

IV. Conclusion

For the reasons stated above, Sunrun and ReVision are not signatories to the Settlement Agreement but do support Commission approval of it. Sunrun and ReVision commend Liberty and the parties for their efforts throughout this proceeding and look forward to future opportunities to work with the Commission, the parties and other stakeholders to develop and implement a successful BYOD program to obtain the information necessary to develop future programs to deploy BTM storage assets and deliver grid benefits and savings to customers throughout New Hampshire.

Respectfully submitted,

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Dated: this 5th day of December 2018

CERTIFICATE OF SERVICE

RE: Docket No. DE 17-189 Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities, Petition to Approve Battery Storage Pilot Program

I hereby certify that I have this day served a true copy of the **Closing Statement of Sunrun Inc. and ReVision Energy, Inc. on Settlement Agreement** upon parties of record on the attached service list in accordance with the requirements of N.H. Admin. Rule Puc 203.11.

Dated: December 5, 2018.

/s/ Blake Elder

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