

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

In the matter of

PUBLIC UTILITY COMMISSION OF
OREGON,

Implementing Energy Storage Program
Guidelines pursuant to House Bill 2193

Comments of Sunverge Energy



**COMMENTS OF SUNVERGE ENERGY
*ON DRAFT GUIDELINES AND STORAGE POTENTIAL EVALUATION***

1. INTRODUCTION

Sunverge Energy, Inc. (“Sunverge”) appreciates the continued opportunity to participate in the important discussion about the role of energy storage in Oregon and the implementation of House Bill 2193.

Sunverge is dedicated to optimizing the value of renewable power by leveraging the practical advantages of distributed generation, energy storage and intelligent networks. The Sunverge platform provides value by optimizing distributed energy resources installed at the customer premise to provide both direct customer benefits and new system-level operational capabilities. In June 2016, Sunverge provided comments as part of this proceeding.

2. GENERAL REMARKS

We are encouraged by the Commission Order of August 19, 2016, which we believe establishes a thoughtful framework and process that will yield significant benefits. In particular, we read in the Order an enthusiasm on the part of the Commission for utilities to pursue objectives with which we agree, including:

- Proposing a full range of projects that reach the legislative cap,
- Developing a portfolio of projects that target both immediate and long-term objectives
- Recognizing the full suite of applications for which storage is available, including capital deferral, ancillary benefits, augmenting generation and ameliorating location-specific constraints,

Energy storage is a vital component of future grid operations that take full advantage of available renewable energy sources and distributed energy technologies, so we applaud the Commission for taking a leadership role that will have effects that extend beyond Oregon.

3. COMMENTS

As we have stated in earlier comments, Sunverge believes energy storage to be a key component of the value chain for a resilient grid that integrates clean energy and optimizes infrastructure investments. We support the development of policy regimes, rate structures and financial incentives that promote the near-term deployment of energy storage systems, particularly networked systems that can provide a variety of services to support grid operations. Storage can play a vital role in enhancing the “carrying capacity” of distribution circuits and congested areas by storing energy locally for use at more advantageous times.

Our comments address three general issues that are relevant to the overall process of developing a storage potential evaluation. First, given the current and continued growth of distributed energy resources, we believe that the evaluation process should facilitate and be developed within the context of comprehensive distributed resource planning efforts. Second, consistent with the language of HB 2193, we encourage the Commission to explicitly include consideration of renewable energy and greenhouse

gas benefits in the storage potential evaluation. Third, we offer some specific recommendations regarding the scope and activities of the proposed workshops identified in the Order.

We recognize that some of these recommendations may extend beyond the immediate scope of the proposed storage evaluation requirements, but we offer the following comments with the hope that they will enhance the final guidance developed by the Commission through this proceeding:

1. *The storage potential evaluation should facilitate and support a comprehensive distributed resource planning process.*

Identifying the potential of storage technologies requires an understanding of the overall system operation needs and constraints. While we believe that storage has unique characteristics and capabilities, it is only one of many technologies and resources increasingly available to meet the changing needs of the distribution system. As has been noted in the record for this proceeding, several other states (including California, New York, Hawaii and Texas) have established requirements for utilities to engage in distribution resource planning efforts and to make the results of those evaluations available to the market.

Accordingly, we believe that any storage potential evaluation should be conducted to facilitate and support comprehensive distributed resource planning. We suggest that the Commission direct the staff to develop recommendations within the identified workshops regarding the best strategies to move forward with immediate storage potential evaluations that enhance and support future distribution resource planning efforts.

2. *Potential evaluation should include analysis of benefits related to greenhouse gas emissions and renewable energy production.*

In describing the guidelines to be developed by the Commission, HB 2193 specifically identifies as objectives and benefits “reduced greenhouse gas emissions” and “improved integration of different types of renewable

resources.” However, the Order and the discussion of the storage potential evaluation do not include these items. We recommend that the guidance regarding the storage potential evaluations specifically identify the benefits available from storage technologies with regard to greenhouse gases and renewable energy integration, including both large-scale systems and distributed energy systems.

3. *Directives for the staff-led workshops should identify specific evaluation criteria and categories for discussion and recommendations.*

Currently, the guidance with regard to the staff-led workshops includes discussion (and possible resolution) of “a consistent list of use cases or applications.” Given the wide range of applications for which energy storage can be deployed, many of which are overlapping, we believe that it would be helpful for the Commission to offer more specific direction to guide these discussions. Specifically, we suggest that the Commission identify categories or classes of use cases for which they expect more detailed recommendations from the workshops. We propose that the workshop discussions organize the use cases according to, at a minimum, the following the classes:

- ***Energy:*** Energy and generation (e.g., load shifting)
- ***Capacity:*** Peak load reduction (e.g., capacity constraints)
- ***Grid Services:*** Grid operations and ancillary services (including voltage support)
- ***Distributed Energy:*** Increased “hosting capacity” for distributed energy
- ***Renewable Energy:*** Increased utilization of renewable energy resource (both grid-connected and customer-sited)

In addition, while we presume that the Commission intends that the storage potential evaluation address *all* available storage potential, we suggest the Commission specifically include in their directives for the workshops that the storage potential evaluation include *both* utility-owned and customer-owned resources.

The workshops should establish guidelines that require a diversity of projects according to (1) application (residential, commercial, distribution-level,

transmission-level) and (2) ownership models (utility-owned, customer-owned, etc.). In particular, residential applications provide valuable reliability and environmental benefits that are available directly to consumers. Therefore, workshops discussions should address recommendations regarding specific allocations or minimum requirements across the various use case categories.

4. *Directives for the staff-led workshops should include analysis of a wide range of deployment models.*

Guidance from the Commission to staff regarding the upcoming workshops should also include discussion of a wide range of possible deployment scenarios for energy storage within Oregon. While we expect and support utility procurement or development of storage resources in the near term, we believe that it would be a missed opportunity not to include discussion of a wide range of deployment models and supporting policies. For example, rates, tariffs and other incentives could be proposed by the utilities that would support customer-owned resources and leverage private investment capital. We note that HB 2193 specifically includes consideration of multiple ownership models for energy storage resources, defining “procure” to include both “acquire by ownership”, “acquire by contract the right to use the capacity of or the energy from a qualifying energy storage system” and “the acquisition of ancillary services.” Nationwide, distributed energy resources, including storage, are being deployed through both utility and consumer market channels. Regulatory commissions are examining the efficacy and impact of various ownership structures and business models with regard to distributed energy and storage. Accordingly, we believe it is appropriate and within the intent of HB 2193 to include a variety business models for project proposals. The Commission should establish an expectation that the working groups identify a full range of deployment models and corresponding rates or incentives.

5. *Directives for the staff-led workshops should include recommendations regarding the type and level of information required to support energy storage development.*

HB 2193 includes discussion of a wide range of information required to support the analysis of the project proposals, including:

- Current operations and electric system data
- Customer-side data
- Distribution data
- Transmission data

Based on the legislative language, the intent of including this information is to “identify areas in the electric company’s electric system where there may be opportunities to incentivize the value potentially derived from energy storage systems.”

We note that these topics areas involve detailed, complex and often sensitive data. Other states, notably New York and California, have determined that feeder-level information should be compiled and made available to market participants as part of comprehensive distributed energy resource planning practices. We believe it would be productive for the workshops to address, and potentially provide recommendations regarding, the type and granularity of information required to support the storage potential evaluation.

Given that distributed energy resources (including storage) provide very specific locational benefits, we believe that feeder-level information will yield a much more robust analysis. However, while we strongly believe that a comprehensive distributed energy resource planning process should be initiated and support by this preliminary storage potential evaluation, such a comprehensive plan may not be required in order to develop project proposals by the January 1, 2018 deadline established by the legislation.

6. *Directives for the staff-led workshops should include identification of “guiding principles” for energy storage proposals and distributed energy resource planning.*

We note that the National Association of Regulatory Utility Commissioners (NARUC) is nearing completion of a “Manual on Distributed Energy Resource Compensation” currently being drafted by the Subcommittee on Rate Design. In early drafts, this Manual includes discussion of guiding principles for distributed energy rate design and captures the evolving state of the art with regard to rate design. The Manual also includes discussion of resource planning strategies and resource types. It is anticipated that The Manual will be completed in November 2016. We believe that the workshops may benefit from identifying core principles that are common to all parties and that can guide the evaluation of energy storage potential and specific project proposals. Toward this end, we suggest that the results of the NARUC deliberations and the published Manual may provide a useful launching point for that discussion.

4. CONCLUDING REMARKS

As we have stated in previously, storage provides unique benefits to the distribution system, but can also provide benefits that are only available from energy storage systems located at the customer premise, including increased reliability, backup power, bill management and the utilization of clean, distributed energy resources. We believe energy storage is a key component of the value chain for a resilient grid that integrates clean energy and optimizes infrastructure investments. We support the development of policy regimes, rate structure and financial incentives that promote the near-term deployment of energy storage systems, particularly networked systems that can provide a variety of services to support grid operations.

Sunverge appreciates the work of the Commission and appreciates the opportunity to contribute to this discussion. We look forward to working with stakeholders and the Commission in the development of the record on this matter.

Dated: September 16, 2016

Respectfully submitted,

For **Sunverge Energy**

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