



Portland General Electric Company
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June 30, 2020

Via Electronic Filing

Public Utility Commission of Oregon
Attn: Jill Goatcher
201 High Street SE, Suite 100
P.O. Box 1088
Salem, OR 97308-1088

RE: AR 616 - In the Matter of Public Utility Commission of Oregon Rulemaking Regarding Renewable Portfolio Standard Planning Process and Reports

Dear Filing Center:

Pursuant to the Public Utility Commission of Oregon (“Commission”) Staff’s June 19, 2020 Request for Comment, Portland General Electric Company (PGE) provides these responses to Staff’s questions.

1. What was the purpose of including ‘associated energy storage’ in the language SB1547? What facts or policy reasons support your position?

The inclusion of the phrase ‘associated energy storage’ within SB 1547 was to recognize that storage is a necessary resource for the broad facilitation of compliance with the updated renewable portfolio standards, established within the same bill. The phrase intentionally recognizes the link between storage and renewables and shows an understanding that there are needed benefits from coupling the two resources together, especially as renewables become a greater portion of the regional energy supply. All storage that is necessary to facilitate this integration should be considered ‘associated energy storage’ and should be eligible for recovery under ORS 469A.120 in order to match the intentions of lawmakers.

2. Should the administrative rules require ‘associated energy storage’ to be located on the site of a renewable resource? What legal or policy reasons support your position?

No. It would be inappropriate to define ‘associated’ as ‘co-located’ when the ability to integrate the output of a renewable resource does not depend on the location of the energy storage facility. Rather, an energy storage system can be operated to provide these services at any point

on the connected grid. In addition, the language of SB 1547 is not technology specific. Some technologies, like pumped storage, thermal energy storage, or chemical storage could provide the integration services envisioned within SB 1547 yet generally due to their locational requirements cannot be located with an onsite renewable resource. Further, there may be better reasons to locate associated energy storage facilities at specific locations in a utility's service territory rather than at the renewable resource site; for example, power flows can create opportunities for optimally located energy storage to alleviate transmission constraints or defer investments in the transmission and distribution systems while still providing the integration services envisioned in SB 1547. This example is one that highlights the unique aspects of energy storage and the ability to stack values with a single storage resource. On-system energy storage provides the opportunity for the most value stacking while still allowing for renewable integration. There may also be good reason to utilize a storage resource to integrate, firm, or shape multiple renewable resources to leverage the diversity benefits across those resources to reduce the integration burden placed on the storage resource. The definition of "associated energy storage" should not discourage the utility from pursuing these opportunities in favor of co-location with a single renewable resource.

3. Should the administrative rules require 'associated energy storage' to be located on the site of a renewable resource? What legal or policy reasons support your position?

An energy storage facility should be considered as 'connected to' (or 'associated with') renewable energy resources if it is used to integrate the energy produced by the renewable resources. Broadly, integrating renewables ranges from the moment-to-moment changes in output to shifting the output of renewables throughout the day to better meet system needs. This can be achieved in a manner specific to a single renewable resource or it can be achieved on a systemic level by using the storage resource to integrate a portfolio of renewable resources by mitigating the combined variability and forecast errors across the system. Specifically, associated energy storage resources have the ability to reduce or respond to renewable curtailments during high renewable output periods or transmission constraints, to shift the output to needed periods across the day, and/or to provide hourly and sub-hourly dispatch flexibility to respond to renewable ramping events.

4. Should the administrative rules require 'associated energy storage' to be located on the site of a renewable resource? What legal or policy reasons support your position?

As noted above, a primary indicator of the association of an energy storage facility with renewable resources is whether the energy resource is operated in a way to integrate the renewable generation. Some possible examples of criteria to consider for associated energy storage if the energy storage resource that is not physically co-located with a specific renewable include:

- Whether the storage facility is intended, able, and likely to be dispatched to integrate a renewable resource;
- Whether the resource was procured to meet renewable integration or system flexibility challenges identified within the IRP or another regulatory docket/process; and
- Whether the resource can be dynamically dispatched by the utility based on technical specifications and relevant contract provisions.

Sincerely,

/s/ Jaki Ferchland

Jaki Ferchland

Manager, Revenue Requirement

Portland General Electric Company