

ITEM NO. CA1

**PUBLIC UTILITY COMMISSION OF OREGON  
STAFF REPORT  
PUBLIC MEETING DATE: May 31, 2022**

**REGULAR** \_\_\_\_\_ **CONSENT**  X  **EFFECTIVE DATE**  June 1, 2022

**DATE:** May 24, 2022

**TO:** Public Utility Commission

**FROM:** Heide Caswell

**THROUGH:** Bryan Conway, JP Batmale, Sarah Hall **SIGNED**

**SUBJECT:** PORTLAND GENERAL ELECTRIC:  
(Docket No. ADV 1385/Advice No. 22-05)  
Updates Schedule 200 for dispatchable standby generation with inclusion of battery energy storage systems and tariff changes.

**STAFF RECOMMENDATION:**

Approve Portland General Electric Company's (PGE or Company) Advice No. 22-05, updating its Schedule 200 Dispatchable Standby Generation (DSG) with an effective date of June 1, 2022.

**DISCUSSION:**

Issue

Whether the Public Utility Commission of Oregon (Commission) should approve PGE's advice filing to update Schedule 200, Dispatchable Standby Generation offering, to provide conditions and allowance for inclusion of battery energy storage systems.

Applicable Rule or Law

ORS 757.205 requires public utilities to file schedules showing all rates, tolls, and charges for service that have been established and are in force at the time. Pursuant to ORS 757.210, the Commission may approve tariff changes if they are deemed to be

fair, just, and reasonable. Under OAR 860-022-0025, a public utility must submit the following information with their new or modified tariff filing:

- a) a statement indicating any change in existing rates, charges, or rules and regulations;
- b) a statement describing the number of customers affected by the proposed change and the change in annual revenue; and
- c) a detailed description of the reasons for the proposed change.

Filings that make any change in rates, tolls, charges, rules, or regulations must be filed with the Commission at least 30 days before the effective date of the changes. ORS 757.220; OAR 860-022-0015.

The Commission first approved PGE's Schedule 200 Dispatchable Standby Generation in 2003 in Advice No. 03-2. The Commission most recently approved modifications to Schedule 200 in Advice No. 13-20.

## Analysis

### *Background*

This memo discusses background and summarizes the Company's proposed changes as presented in Advice No. 22-05. The memo concludes with Staff's recommendation to approve the Company's filing.

PGE submitted this filing to the Commission on April 7, 2022, pursuant to ORS 757.205 and 757.201 and OAR 860-022-0025, with a requested effective date of June 1, 2022. In its filing, the Company requests approval to revise Schedule 200 Dispatchable Standby Generation (DSG) for large nonresidential customers to accommodate battery energy storage systems (battery systems). The current DSG equipment is generally comprised of fossil-fuel based engines (generally diesel) which the Company says has grown to 59 sites with a cumulative nameplate capacity of 130 MW. The company proposes this inclusion for providing grid services and averting situations that could lead to power quality problems in PGE's service territory. Concurrently in Docket No. ADV 1386/Advice No. 22-06 PGE is seeking to update Schedule 26, the nonresidential demand response program known as Energy Partner, to better accommodate non-emitting resources.

PGE's filings reference each other and were filed on the same day with the same effective date. Staff has coordinated its review of these filings and Staff Memos. PGE

states in the filing that the proposed changes will allow the Company to meet the policy goals laid out in Oregon House Bill 2021 (HB 2021):

*In 2021, Oregon's Legislature passed House Bill 2021 (HB 2021) the Clean Energy Targets bill, requiring electricity providers to rely on non-emitting electricity and eliminate greenhouse gas emissions associated with serving Oregon retail electricity customers by 2040, in a way that also provides the additional direct benefit of resilience. One way PGE can begin to meet the policy goals set out in HB 2021 is revise existing tariffs to include non-emitting electricity resources.<sup>1</sup>*

#### *Estimate of Participation and Market Size*

The updates to this Schedule 200 focus on offering large nonresidential customers interested in siting non-emitting dispatchable resources such as battery systems, with nominable capacity of at least 250 kW, access to the DSG program. Since this is a new offering the Company has not yet determined the number of customers and their expected resource capacity. However, the Company's workpapers model 22 battery system additions over a five-year period with a total capacity of 5.5 MW, and estimated service life of 10 years.

#### *Customer Funding Levels*

Customers can participate by providing access to the batteries for either ancillary service (which includes contingency reserve and frequency response) or for both demand response and ancillary service. The Company provides two alternative project funding levels for these participation levels. The Company stated that the funding levels were structured with values from the 2019 IRP and calculated to be cost effective from the total resource cost perspective. PGE provided workpapers that demonstrated the calculations, which Staff finds reasonable and accurate. Should the battery system only be used for ancillary service, the Company will provide project funding at \$39.50 times the nominated capacity. If it is available for either ancillary service or demand response, the Company will provide project funding at \$82.40 times the nominated capacity. The workpapers supplied by the Company support these calculations. The customer would be responsible for any project costs that exceed the funding level calculated based on the choice selected.

Staff would also note that the amount offered under this program is different than what PGE is offering for similar services in ADV 1386 Schedule 26 because underlying

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<sup>1</sup> See Docket No. ADV 1385, Initial Utility Filing, p. 1, <https://edocs.puc.state.or.us/efdocs/UAA/uaa131658.pdf>.

assumptions for usage and access are different, even though the resource pricing for both programs is derived from published IRP values. Most notably, this tariff supports immediate access to the resource once it is placed in reserve status, while ADV 1386 provides customers to select differing access windows and the values are decremented to reflect the time restrictions.<sup>2</sup>

Staff recognizes valuation processes are involved in several different proceedings underway at this time, including UM 2225 (Clean Energy Plans) and UM 2005 (Distribution System Plans). Staff supports valuation approaches that are consistent, transparent, locally useful and able to evolve as technology and value streams change over time. Similar benefits should be extended to all resources that comprise the integrated portfolios, including battery systems and other distribution connected technologies, in order not to favor certain technologies or customers. This includes battery systems participating in PGE's residential DR pilot, IEEE 1547-18 inverters with two-way communications installed on new or existing solar systems, and other provisions under HB 3141 distribution-system connected technologies in future. Staff looks forward to working with PGE to ensure all distribution technologies capable of providing support to the grid have an equal opportunity to be compensated accordingly in the future.

#### *Program Role in Energy Storage Resources*

The Company states that this tariff update is intended to support PGE's efforts to decarbonize its energy supply in alignment with its policy direction of decarbonization. Further, this program is intended to complement other clean energy resources discussed in the Company's Distribution System Plan.<sup>3</sup> That Plan forecasts all potential storage resources, for which the high case forecast for those resources is 70 customers totaling 17.4 MW.<sup>4</sup>

The proposed changes focus on establishing funding levels to accommodate this new resource option and provisions for the immediacy of access to the resource. The summary below outlines the changes being proposed as part of the update application.

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<sup>2</sup> See Docket No. ADV 1385, Initial Utility Filing workpapers, <https://edocs.puc.state.or.us/efdocs/UAA/uaa131658.pdf>.

<sup>3</sup> See Docket No. UM 2197, Initial Utility Filing DSP <https://edocs.puc.state.or.us/efdocs/HAA/um2197haa85326.pdf>.

<sup>4</sup> See Docket No. ADV 1385, Initial Utility Filing, Attachment A, Table 3, p. 12, <https://edocs.puc.state.or.us/efdocs/UAA/uaa131658.pdf>.

**Table 1 - Comparison of Schedule 200: Current (Adv 13-20) and Proposed Tariff Changes (Adv 22-05)**

| Schedule heading          | Schedule provision                 | Current Tariff   | Proposed Tariff   | Staff response  |
|---------------------------|------------------------------------|--|---|---|
| Purpose                   | type of equipment                  | standby or backup generator  | Generation Resource   | none taken  |
|                           | situation                          | averting situations affecting power quality problems in the region                         | providing Grid Services and averting situations affecting power quality in the region               | none taken  |
| Availability              |                                    | all territory  | no change   |   |
| Applicability             | customers                          | non-residential customers with permanently installed standby or backup generation capacity | non-residential customers with permanently installed Generation Resources                           | none taken  |
| Definitions               |                                    | did not exist  | aligned with current tariff structures  | none taken  |
| Customer Responsibilities | access                             | generation/generator   | Generation Resource   | none taken  |
|                           | operation                          | limited number of hours per year...specified in service agreement                          | [hour limitation removed and now terms as] specified in Dispatchable Standby Generation Agreement   | none taken  |
| Company Responsibilities  | interconnection analysis and costs | develop a cost estimate  | cost estimate for the installation of the equipment necessary for participation under this schedule | Staff supports greater transparency in program costs, including cost estimates to enable customers to better decide which Schedule meets their energy needs |
|                           | fuel cost                          | company will pay for fuel for generator up to 15 hours over non-outage periods             | company will pay for fuel for internal combustion generator up to 15 hours over non-outage periods  | none taken  |
|                           | maintenance and testing            | company responsible for testing and maintaining generator                                  | company responsible for testing and maintaining Generation Resource                                 | none taken  |
|                           | monitoring and reporting           | company responsible for power quality monitoring and data                                  | company responsible for power quality monitoring and data reporting for facility                    | none taken  |

| Schedule heading                            | Schedule provision                | Current Tariff                              | Proposed Tariff   | Staff response   |
|---|-----------------------------------|---|---|--|
|   |                                   | reporting for facility and generator system | and Generation Resource   |  |
| Funding Level/Aid in Construction Allowance |                                   | Funding Level                               | Aid in Construction Allowance   | none taken   |
|   | funding level                     | \$31.50/kW historically                     | \$39.50/kW (ancillary services) and \$82.40/kW (ancillary services and demand response) for 10-year agreement | Staff supports this program addition and recommends incorporation of BESS placed into annual Flex Load Plan update             |
| Special Conditions                          | permits                           |   | permits capped at \$10,000 annually   | Staff was told by Company that permits average around \$8,000 annually, for which this level of participation seems reasonable |
|   | immediacy of operation            | 24 hour minimum                             | no advance notice if place on Reserve Status; courtesy notice if possible                                     | none taken   |
|   | certainty of storage availability |   | customer is responsible for maintaining the nominated capacity per Agreement                                  | none taken   |

*Added Definitions in Filing*

In the filing, the Company adds definitions that can be characterized as related to bulk power system operations such as ancillary service, contingency reserve, frequency response, and grid services. Other definitions are more specific to the terms of operation (reserve status and dispatchable standby generation agreement), and the equipment classifications (battery energy storage system and internal combustion generator). Additional definitions focus on project costs (aid in construction allowance). The Company explained these additions are consistent with other PGE tariffs. The Company also included information regarding the calculation for its aid in construction allowance for customers nominating specific amounts of either ancillary service or demand response and ancillary service.

*Interactions with Other Programs*

Staff notes two programmatic interactions. First, the demand response aspect of Schedule 200 is related to the Company's Flexible Load Plan. Staff and the Company agreed that it would be appropriate the Company to report on any battery energy

storage system sited under Schedule 200 in its Annual Flexible Load Plan updates, due to the nascent state of the offering, use cases, and interaction with other clean energy options. The Company should include the use cases under which the system was operated, and the refinement of any valuation assumptions learned during the period.

Second, should customers meet the size requirement of 250 kW or more of nominated capacity, there is potential for customers to either utilize Schedule 26 or 200. As a result, Staff encouraged the Company to consider methods for customers to have better insight into which option would best suit their needs. At Staff's suggestion, the Company committed to developing a one-page document that would contrast the contrast the value proposition of each program, and programmatic features (such as terms and conditions).

In accordance with OAR 860-022-0025(2), the Company states that the changes do not increase, decrease, otherwise change existing rates, or impact revenues.

Staff recommends approval of this filing with the following conditions:

1. PGE report on installation and usage of battery systems through Schedule 200 as a specific program element in its Annual Flexible Load Plan Update, including identifying use cases for which the battery systems were operated and updating any key assumptions that modify resource valuation.
2. PGE develop and make broadly available to potential Schedule 200 and Schedule 26 customers a comparison document. The document should enable the customer to compare the value proposition of each program, and programmatic features such as terms and conditions under either tariff, by September 1, 2022.

### Conclusion

Staff finds that PGE's proposed revisions represent progress toward clean energy goals by valuing grid services that leverage choices available to large nonresidential customers. The revisions are projected to be a cost-effective means for procuring additional capacity from battery systems that customers might choose to site and ensure alignment of costs and benefits for both the participating and non-participating customers. PGE's proposal to incorporate this offering of grid services and demand response is found to be progress toward clean energy subject to the conditions identified by Staff. In sum, because the proposal is projected to be a cost-effective means to support additional capacity, Staff supports this change.

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**PROPOSED COMMISSION MOTION:**

Approve PGE's Advice No. 22-05 for update of Schedule 200 Dispatchable Standby Generation, effective June 1, 2022, with Staff recommendations.

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