

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

REGULAR CONSENT EFFECTIVE DATE April 21, 2022

DATE: May 24, 2022

TO: Public Utility Commission

FROM: Heide Caswell

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

SUBJECT: PORTLAND GENERAL ELECTRIC:
(Docket No. UM 2078)
Requests reauthorization to defer costs associated with residential battery energy storage pilot, under Schedule 14.

STAFF RECOMMENDATION:

Staff recommends that the Public Utility Commission of Oregon (Commission) approve Portland General Electric Company's (PGE or Company) application for reauthorization of deferral of costs associated with the residential battery energy storage pilot, for the 12-month period beginning April 21, 2022.

DISCUSSION:

Issue

Whether the Commission should approve PGE's application for deferral of costs associated with the residential battery energy storage pilot (Pilot) for the 12-month period beginning April 21, 2022.

Applicable Rule or Law

Under ORS 757.259, the Commission may authorize deferred accounting for later incorporation in rates. Specific amounts eligible for deferred accounting treatment with interest authorized by the Commission include:

Identifiable utility expenses or revenues, the recovery or refund of which the commission finds should be deferred in order to minimize the frequency of rate

changes or the fluctuation of rate levels or to match appropriately the costs borne by and benefits received by ratepayers.

In OAR 860-027-0300(3), the Commission has set forth the requirements for the contents of deferred accounting applications. Applications for reauthorization must include that information along with a description and explanation of the entries in the deferred account to the date of the application for reauthorization and the reason for continuation of deferred accounting. OAR 860-027-0300(4). Notice of the application must be provided pursuant to OAR 860-027-0300(6).

Unless subject to an automatic adjustment clause under ORS 757.210(1), amounts deferred are allowed in rates to the extent authorized by the Commission in a proceeding under ORS 757.210 to change rates and upon review of the utility's earnings at the time of application to amortize the deferral.

Analysis

Background

PGE submitted this filing to the Commission on April 20, 2022, pursuant to ORS 757.259 and OAR 860-027-0300, with a requested effective date of April 21, 2022. In its filing, the Company requests reauthorization to defer for later rate-making treatment incremental operation and maintenance (O&M) costs associated with the Residential Battery Storage Pilot.

The Pilot supports PGE's efforts to decarbonize its energy supply in alignment with the State of Oregon's policy direction of decarbonization. The Pilot also furthers PGE's goal of increasing electricity as a share of total energy use and enhancing operational performance and efficiency.

The Commission opened Docket No. UM 1751 in September 2015 to implement legislation, HB 2193 (2015), which required PacifiCorp and PGE to submit proposals to develop qualifying energy storage systems with the capacity to store at least five megawatt hours of energy. The Commission subsequently opened UM 1856 to investigate PGE's energy storage proposals.

Staff reviewed the Pilot proposal in Docket No. UM 1856,¹ and the Pilot is subject to the conditions set forth in Order No. 18-290.² In addition, in Order No. 20-208, it was noted

¹ Docket No. UM 1856, Staff's Comments on PGE's Revised Residential Storage Pilot Proposal filed April 9, 2020.

² See Commission Order No. 18-290, Appendix A, at <https://apps.puc.state.or.us/orders/2018ords/18-290.pdf> for a listing of the stipulated conditions PGE must meet.

that in Docket No. UM 1856 the Commission ordered that compliance evaluation reports would be required after years one, two, and four. After year three, expected to be in 2023, a comprehensive mid-pilot evaluation would be required.

The objective of this five-year Pilot is to install and connect 525 residential energy storage batteries, behind the meter, that will contribute up to 4 MWs of energy to PGE. Once installed, these distributed assets are envisioned as a virtual power plant of small units, 5 kW – 10 KW each. PGE will operate these battery units either individually or in aggregate to provide grid services and thereby add flexibility in support of PGE's transition to a cleaner energy future. In an outage event, the batteries will island from the grid and provide energy for the customer, furthering the customers' resiliency.

Deferral Filing

Staff reviewed the Company's application for deferred accounting and finds that it conforms to the requirements of OAR 860-027-0300. Since approval of the Pilot, PGE has undertaken numerous activities both internally and with external partners/vendors to enable the integration and dispatch of residential batteries. These activities and associated costs include:

- Software subscription and customization to enable battery dispatch;
- Operationalization of the partnership between PGE and the Energy Trust of Oregon to utilize the existing solar trade ally networks and rebate processing capabilities; and,
- Updates to internal PGE billing and net metering application systems.

The company conducted a soft launch of the Pilot in September 2020 and invited pre-qualified customers to enroll their existing batteries into the Pilot and begin receiving bill credits. The soft launch enabled PGE to perform safety verifications on existing devices to ensure participants meet code requirements. Since the Pilot launch, the Company's progress in achieving its targets for participation, resource and cost are shown below. The Target column shows the values of the original filing, while After Year 1 shows the updated values provided in April 2021 and After Year 2 contains the most recent values.

	Target	After Year 1	After Year 2
Participants enrolled and interested in enrolling	525	64	102
Total Participants enrolled		39	78 ³
Total Participants interested in enrolling		25	24

³ In its filing, the Company indicated participation at 75 enrolled and 27 interested in enrolling and updated its data when Staff requested updated data for capacity and discharge information.

	Target	After Year 1	After Year 2
Capacity (enrolled and interested) (MW)	2-4		0.773
Discharge (enrolled and interested) (MWh)	6-8		2.3
MW Currently enrolled			0.623
MW Interested in enrolling			0.150
MWh currently enrolled			1.6
MWh interested in enrolling			0.7
Income qualified rebates reserved			25 of 25 @\$5000
Non-Income qualified rebates reserved			5 of 67 @\$3000 0 of 67 @ \$2000 0 of 66 @ \$1000
Program year cost estimate	\$560,000	\$860,000	\$594,199
Total Program Estimate	\$3,400,000	\$3,100,000	\$2,800,000

PGE states in its filing that it will continue to grow the Pilot to increase participation as well as the capacity to test grid services and model the flexible load value of distributed residential batteries. This will include activities to guide research in order to conduct discrete exercises that generate data for eventual measurement and verification for various scenarios. The Company further indicated that it will be evaluating the participation level it has achieved and determining adjustments that may be beneficial in order to deliver on the Pilot objectives, even if the target enrollment is not achieved. It indicated this refinement will likely take place in the form of workshops to ensure exploration of opportunities that align with the Pilot use case objectives and support the overarching storage Pilot strategy.

In addition, Staff noted that a nine-month grace period exists for approved applicants in order to receive the appropriate rebates and inquired whether current supply chain issues were potentially putting customers' rebates at risk. The Company indicated that it originally proposed a six-month grace period, however due to the pandemic, extended that to afford customers needed time. The Company further conveyed that it had received no feedback that the grace period was insufficient, as interpreted from interactions with trade allies, on whom the Company relies for such information.

As Staff noted above, the Company reports receiving no substantive suggestions for the program, particularly as communicated through its trade allies.

In accordance with Commission Order No. 18-290, PGE has not included administration or evaluation costs associated with its portfolio of battery storage projects in this deferral.

Estimated Deferrals in Authorization Period

PGE estimates total deferrable costs to be approximately \$2.8 million over the Pilot's five-year period. The estimated cost for 2022 is \$594,199.

Information Related to Future Amortization

- Earnings Review – An earnings review is required prior to amortization, pursuant to ORS 757.259(5).
- Prudence Review – No less than 90 days prior to filing to adjust tariff rates, PGE will submit a report with detailed demonstration and explanation of the costs it proposes to amortize for Staff review.
- Sharing – Staff anticipates that there will be no sharing between PGE and its customers for this deferral.
- Rate Spread/Design – Rate spread/rate design will be determined during the proceeding to authorize amortization of the pilots' deferred costs.
- Three Percent Test (ORS 757.259(6)) – The three percent test measures the annual overall average effect on customer rates resulting from deferral amortizations. The three percent test limits the aggregated deferral amortizations during a 12-month period to no more than three percent of the utility's gross revenues for the preceding year.

Conclusion

Staff concludes that the Company's application for reauthorization of deferred accounting for costs related to its Residential Battery Storage Pilot is consistent with ORS 757.259 and OAR 860-027-0300 and should be approved, subject to the following conditions. These are restatements of Order Nos. 20-208 and 21-156, with the addition of Staff's recommendations for Pilot reporting requirements in 3 a.- d. below.

PGE must:

1. At least annually, and not less than 90 days prior to the filing to adjust Schedule 14 tariff rates, submit program costs (including forecasted program costs) to Staff for review of prudence.
2. No less than 90 days prior to filing to adjust tariff rates, hold at least one workshop to present Pilot costs, findings, and any design updates.
3. Ensure that modifications to this Pilot are integrated into the "after year 3" comprehensive reporting requirement identified in UM 1856 and Order No. 20-208. Staff recommends that Pilot modifications and learnings could include:
 - a. Conducting a survey of customer awareness;
 - b. Developing ranges of target-level goals for Pilot materialization;

- c. Detailing Pilot use cases and the Company's ability to test them under the various target level goals; and,
- d. Validating that Pilot design choices result in customer enrollment, particularly with respect to grace periods that may place customers' rebates at risk.

PROPOSED COMMISSION MOTION:

Approve PGE's application for reauthorization of deferral of costs associated with the residential battery energy storage pilot under Schedule 14, effective April 21, 2022, subject to Staff recommendations.