

**PUBLIC UTILITY COMMISSION OF OREGON
STAFF REPORT
PUBLIC MEETING DATE: August 27, 2019**

REGULAR CONSENT EFFECTIVE DATE April 18, 2019

DATE: August 19, 2019

TO: Public Utility Commission

FROM: Mitchell Moore

THROUGH: Jason Eisdorfer and John Crider **SIGNED**

SUBJECT: PORTLAND GENERAL ELECTRIC: (Docket No. UM 1827(2)) Requests reauthorization to defer costs associated with the PGE Demand Response Water Heater Pilot.

STAFF RECOMMENDATION:

Staff recommends the Commission approve Portland General Electric's (PGE, or Company) request for reauthorization to defer costs associated with its Demand Response Water Heater Pilot for the 12-month period beginning April 18, 2019.

DISCUSSION:

Issue

Whether the Commission should reauthorize PGE's request to defer for later ratemaking treatment the costs associated with its Demand Response Water Heater pilot program.

Applicable Law

PGE submitted its deferral application on April 17, 2019, pursuant to ORS 757.259 and OAR 860-027-0300. ORS 757.259 provides the Commission with authority to authorize the deferral of utility revenues and expenses for later inclusion in rates. OAR 860-027-0300 is the Commission's rule governing the use of deferred accounting by energy and large telecommunications utilities.

Analysis

Background

On June 28, 2017, the Commission approved the original deferral filing for PGE's Demand Response Water Heater Pilot. The purpose of the program is to retrofit existing water heaters in multifamily residences (MFRs) with demand response technology in order to help inform an effective design for a water heater demand response program, quantify energy consumption that can be shifted to different times, determine appropriate incentive levels for customers, integrate and test different technologies, and implement different demand response dispatch strategies.

PGE's 2016 Integrated Resource Plan (IRP) discussed various types of demand response, including those that utilize smart water heaters. Smart water heaters (installed with digital controls and the ability to readily attach communications equipment) are an important demand resource for PGE and present a wide array of use cases such as load shedding, load shifting and providing ancillary services.

The program targets MFR housing because of its high concentration of electric water heaters. The pilot, in addition to installing demand response-enabled technology on existing water heaters, also provides a monetary incentive to MFR property managers to replace aging water heaters with demand response capable water heaters (i.e., smart water heaters).

MFR demand response water heaters address a hard-to-reach segment of the residential market where few demand response technologies are currently feasible. Water heater demand response also supports PGE's mid-term demand-side management initiatives by allowing the researching of synergies between water heater demand response and smart thermostat programs. Further, water heaters represent a distributed resource, which supports PGE's long-term smart grid initiatives, as each water heater can be controlled to meet specific demand response needs. Finally, water heater demand response is a more flexible resource compared to other forms of demand response because it requires no notification, is a year-round resource, and has minimal customer comfort impact.

In 2018 PGE selected both a vendor for implementation and a Demand Response Management System (DRMS) vendor. Since May 2018, PGE has been successfully testing integration between the water heater retrofit switch and the DRMS.

PGE states in its filing that the pilot is on track and approximately 2,500 water heater retrofit switches have been installed in 14 distinct properties since the end of March 2019. PGE expects to have a total of 5,300 water heaters online by the end of 2019.

Description of Expense

Expenses for this deferral include: the cost of implementing the communication interface; managing defaults or repairs; and managing new participant enrollment; software licensing; data plan subscription; and PGE marketing.

Reason for Deferral

The use of deferred accounting for this pilot will minimize the frequency of rate changes and match appropriately the costs borne by and benefits received by customers.

Proposed Accounting

PGE proposes to record the deferred amount as a regulatory asset in FERC account 182.3, Other Regulatory Assets, with a credit to FERC account 456, Other Revenue.

Estimate of Amounts

PGE estimates the incremental costs of the pilot will be approximately \$3.5 million through the end of 2019, as illustrated in the following table:

Year	2017 Actual	2018 Actual	2019 Forecast	2020 Forecast	Total
Pilot Cost	\$93,970	\$1,592,378	\$3,494,260	\$3,555,770	\$8,536,378

Information Related to Future Amortization

- Earnings review – An earnings review is generally required prior to amortization of deferrals, pursuant to ORS 757.259(5). However, because this is associated with the Schedule 135 automatic adjustment clause, an earnings review will not be performed.
- Prudence Review – A prudence review is required prior to amortization and should include the verification of the accounting methodology used to determine the final amortization balance. In addition, PGE will submit a pilot evaluation report that will provide detailed cost summaries, estimated kW shifting and the result of customer surveys.
- Sharing – There is no sharing under the filed mechanisms.
- Rate Spread/Design – The demand response pilot amortizations will be spread as specified in Schedule 135.
- 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 (exceptions at ORS 757.259(7) and (8)) 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. Because PGE is an electric utility, ORS 757.259(8) allows the Commission to consider up to a six percent limit. The limit for these deferrals will be determined at the time of amortization.

Conclusion

The proposed multifamily residential demand response pilot is a cost effective investment in a necessary demand side resource and associated long term communication infrastructure. The program is expected to produce net benefits to ratepayers while advancing PGE's demand response capabilities. Staff recommends approval of the request for reauthorization of incremental program costs.

PROPOSED COMMISSION MOTION:

Approve PGE's application to defer the costs associated with the Demand Response Water pilot program, for the 12-month period beginning April 18, 2019.