

PUBLIC UTILITY COMMISSION OF OREGON
STAFF REPORT
PUBLIC MEETING DATE: July 11, 2017

REGULAR _____ CONSENT X EFFECTIVE DATE June 23, 2017

DATE: July 5, 2017

TO: Public Utility Commission

FROM: ^{MPM} Mitchell Moore and ^{JS} Jason Salmi Klotz

THROUGH: ^{JE} Jason Eisdorfer and ^{MH} Marc Hellman

SUBJECT: PORTLAND GENERAL ELECTRIC: (Docket No. UM 1708(2)) Requests Reauthorization for Deferred Accounting Related to Two Residential Demand Response Pilots.

STAFF RECOMMENDATION:

Staff recommends that the Commission approve Portland General Electric Company's (PGE or Company) application for reauthorization of deferred accounting for costs related to two Residential Demand Response Pilots (Pilots) for the twelve month period from June 23, 2017 to June 22, 2018, subject to the following conditions:

1. PGE should look to more aggressively augment the Direct Load Control Thermostat (DLCT) program offering, including exploring system wide direct installation of smart thermostats in partnership with the Energy Trust of Oregon. By July 1, 2018, PGE should present an initial program design or several program designs to Commission Staff and possibly ETO staff if coordination with ETO would enhance the program offering or cost effectiveness.
2. PGE should follow the Cadmus recommendation to refine its first-year assessment of demand response capacity benefits and cost-effectiveness. Where possible, PGE should report how and at what incremental costs it could improve its meter data management system and customer information system to increase its participation tracking and meter data storage and processing capabilities to support a broader roll-out of the program and future demand response enabled assets.
3. PGE should also work to have a more robust verification of customer participation, including a customer retention process to lure customers back into participation.

4. PGE should update its planning assumptions. PGE should strongly consider developing a broader rollout of the program to be reflected in PGE's IRP.

DISCUSSION:

Issue

Whether the Commission should approve PGE's request for reauthorization of deferred accounting for costs related to two Residential Demand Response Pilots.

Applicable Law

PGE submitted its filing pursuant to ORS 757.259 and OAR 860-027-0300 and Commission Order No. 15-203. ORS 757.259 authorizes the Commission to allow utilities to defer expenses or revenues for later amortization into rates to appropriately match ratepayer costs and benefits or to minimize the need for rate changes. OAR 860-027-0300 specifies several requirements related to deferred accounting applications as well requests to amortize the deferred amounts. The Commission previously approved PGE's original request for deferral of the incremental costs associated with these two Pilots in its Order No. 15-203, and this was reauthorized in Order No. 16-292.

Analysis

Background

PGE has identified and researched two residential pilots that it believes will best inform development of future demand response programs. PGE believes that the Pricing Pilot will build on lessons learned from a residential critical peak pricing (CPP) pilot program that was effective from November 2011 through October 2013. PGE expects that the DLCT Pilot will test enabling technology and PGE's ability to achieve automated load control among residential customers. PGE began operating the pilot programs in the third quarter of 2015 and will run the programs for two years.

Pricing Pilot

The Pricing Pilot allows investigation of two types of demand response dynamic pricing strategies: Time of Use (TOU) rates, as well as TOU rates combined with a Peak Time Rebate (PTR) program. PTR rate programs offer rebates to customers who use less electricity during critical peak events. Participants are provided price signals to incentivize load reduction during higher cost hours. TOU tariffs segment each billing

month into smaller hourly windows each with a separate pricing level related to production costs.

PGE's Pricing Pilot has nine tracks (aka groups) of customer participants: (1) a control group that has standard pricing and receives no additional information, (2) a group that has standard pricing and that receives information regarding peak events but no incentives, (3) a group on standard pricing that receives information regarding peak events and PTRs, (4) a group on Day and Night TOU rates, (5) a group on Day and Night TOU rates that receives PTRs, (6) a group on Peak-Only TOU, (7) a group on Peak-Only TOU that receives PTRs, (8) a group on standard TOU rates with on-peak hours constant across the seasons, and (9) like group 8 but with PTRs.¹

PGE selects participants in the PTR pilot, but a third-party vendor administers the program. The third-party vendor: 1) determines the individual customer performance; 2) provides customer notifications; and, 3) calculates PTR rewards for customers that curtail during an event. Individual rebates are measured as the difference in energy over the peak period and the customer's personalized baseline. PGE calculates each customer's baseline using a "similar methodology" applied in PGE's industrial and commercial pilot program.²

PGE expects to call at least one event a season and no more than ten. The events are up to five hours in duration. The vendor provides customers with energy information and tips on how they can save during peak times via a number of channels (e.g., email, text, and web). Each customer's demand is compared to baseline usage to determine the amount of hourly kilowatt (kW) reduction.³

DLCT Pilot (Rush Hour Rewards)

Direct Load Control (DLC) programs are designed to reduce load during extreme events (e.g. high production costs, system reliability, etc.). Participants receive substantial credits for decreasing (shedding) load when an event is initiated by the utility. Some DLC programs provide the utility with direct control over shedding customer loads (i.e. air conditioning cycling or setback programs). Other programs allow the participants to choose how they will shed load (i.e. interruptible or load curtailment programs). Penalties are usually assessed for nonperformance. Again, during an event, customer demand must be compared to baseline usage to determine the amount of hourly kW reduction. For a program such as the one proposed by PGE, the baseline calculation is performed at the individual participant level and at the aggregate program level.

¹ UM 1708 PGE/100, Keller-Macfarlane/15.

² UM 1708 PGE/100, Keller-Macfarlane/16.

³ UM 1708 PGE/100, Keller-Macfarlane/17.

PGE has contracted with a third-party vendor to implement its Direct Load Control Thermostat Pilot, Rush Hour Rewards. Only customers with programmable controllable thermostats (PCTs) are eligible for this pilot. PGE intends to call no more than ten events per season, using the same criteria for calling an event as used in the Pricing Pilot Program. PGE pays customers \$25 for enrolling in the program plus \$25 per season (winter and summer) if the customer participates in at least 50 percent of the events called in the season.⁴

Proposed Accounting

PGE will record deferred costs as a regulatory asset in FERC Account 182.3001, Other Regulatory Assets, with a credit to FERC Account 456, Other Revenue.

Estimated Deferrals in Authorization Period

Cost per Pilot by Year (\$000)

Pilot	2015 Actuals	2016 Actuals	2017 Estimate	2018 Estimate	Estimated Totals	Notes
Pricing Pilot	\$392,588	\$748,847	\$835,734	\$938,875	\$2,916,044	Extended through 12/31/2018
DLCT-Pilot: NEST	\$29,076	\$332,337	\$657,896	\$899,435	\$1,918,744	Target 12,000 participants by the end of 2018
DLCT-Pilot: Other	\$0	\$0	\$276,500	\$564,700	\$841,200	Target 3,500 Participants by the end of 2018
Totals	\$421,664	\$1,081,184	\$1,770,131	\$2,403,010	\$5,675,988	

Information Related to Future Amortization

- Earnings Review – ORS 757.259(5) requires the Commission to review the utility’s earnings at the time of application to amortize the deferral for amounts deferred pursuant to ORS 757.259(2)(e).
- Prudence Review – PGE will submit two combined reports on the pilots, which will provide third-party evaluations, cost summaries, estimated curtailments, and results of customer satisfaction surveys.
- Sharing – Staff anticipates that there will be no sharing between PGE and its customers for this deferral.

⁴ UM 1708, PGE/100, Keller-Macfarlane/23-25.

- 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.

Staff program recommendations

Staff supports deferred accounting for the pilot programs. However, Staff believes that the success of PGE's DLCT program, Rush Hour Rewards, which is described in the Cadmus program evaluation submitted with PGE's filing,⁵ indicates that PGE should be looking to expand the program to a greater portion of their residential customers.

In the evaluation submitted with PGE's filing, Cadmus recommends that for resource planning purposes PGE should assume an average demand reduction of 0.7 kW per Rush Hour Rewards customer at the meter for winter and 0.8 kW per RHR customer at the meter for summer. Assuming total incentive of \$50 per year per customer, Commission Staff believes the proposed program is cost effective given the cost of capacity noted in PGE's most recent IRP. Additionally, Cadmus points out that when accounting for line losses of 7% the assumed impacts are 0.75 kW per participating customer for winter and 0.85 kW per customer for summer. However, Staff recommends PGE use the same 10 percent residential line loss assumed by Energy Trust of Oregon in their Nest Thermostat program, which reflects the standard assumption in the Northwest region and further increases the cost-effectiveness of the program.

Given the rate of customer satisfaction, overall performance and assumed cost effectiveness of the DLCT pilot, aka the Rush Hour Rewards program, Staff requests PGE look to more aggressively augment the program offering including exploring system-wide direct installation of smart thermostats in partnership with the Energy Trust of Oregon. Staff is open to hearing proposals that include offering customers smart thermostats at little to no upfront costs to the customer in exchange for several year commitments to remain in the program. Staff suggests PGE present an initial program design or several program designs to Commission Staff and possibly ETO staff if coordination with ETO would enhance the program offering or cost effectiveness. Staff would like to see PGE make such a presentation within one year.

⁵ UM 1708 PGE's Reauthorization Application for Deferral of Expenses Associated with Two Residential Demand Response Pilots, Att. B.

Staff also requests that PGE follow the Cadmus recommendation that the company refine its first-year assessment of demand response capacity benefits and cost-effectiveness. Where possible, PGE should report how and at what incremental costs it could improve its meter data management system and customer information system to increase its participation tracking and meter data storage and processing capabilities to support a broader roll-out of the program and future demand response enabled assets. In addition, PGE should also work to have a more robust verification of customer participation, including a customer retention process to lure customers back into participation. Lastly, Cadmus has recommended PGE update its planning assumptions. Thus Staff expects a broader rollout of the program to be reflected in PGE's next IRP.

Conclusion

Staff concludes that the Company's application for reauthorization of deferred accounting for costs related to two Residential Demand Response Pilots is consistent with ORS 757.259.

The Pilot programs are important to the development of future demand response programs and that granting reauthorization of the deferral will minimize frequency of rate changes and appropriately match the costs borne, and benefits received, by PGE customers.

While an earnings review is required prior to amortization of this deferral pursuant to ORS 757.259(5), the Commission is not required to perform an earnings test that could result in sharing of deferred costs between the Company and its customers. Staff recommends that deferred amounts not be subject to an earnings test.

PROPOSED COMMISSION MOTION:

Approve PGE's request for reauthorization of deferred accounting for costs related two Residential Demand Response Pilots for the twelve month period from June 23, 2017 to June 22, 2018.