

June 22, 2021

## Via Electronic Filing

Public Utility Commission of Oregon Attention: Filing Center P.O. Box 1088 Salem, OR 97308-1088

Re: UM 1708 - Portland General Electric Demand Response Pilots Expenses Deferral

Dear Filing Center:

Enclosed for filing is Portland General Electric Company's (PGE) Application for Reauthorization of Deferral Expenses Associated with Two Residential Demand Response Pilots, with an effective date of June 23, 2021.

A notice regarding this reauthorization application has been provided to the parties on the UM 1708 and the UE 335 service lists.

Thank you for your assistance in this matter. If you have any questions or require further information, please call me at (503) 464-7488.

Please direct all formal correspondence, questions, or requests to the following e-mail address pge.opuc.filings@pgn.com.

Sincerely,

/s/ Jakí Ferchland

Jaki Ferchland Manager, Revenue Requirement

Enclosure

#### BEFORE THE PUBLIC UTILITY COMMISSION

#### OF OREGON

#### **UM 1708**

In the Matter of

PORTLAND GENERAL ELECTRIC COMPANY

Application for Reauthorization to Defer Expenses Associated with Two Residential Demand Response Pilots

Application to Reauthorize for Deferred Accounting of Costs Associated with Two Residential Demand Response Pilots

Pursuant to ORS 757.259 and OAR 860-027-0300, Portland General Electric Company (PGE) hereby requests approval to continue the deferral of costs associated with two residential demand response (DR) pilots: the Pricing and Behavioral Response pilot (Flex Pricing or Flex) and the Direct Load Control Thermostat pilot (DLCT). PGE seeks reauthorization to defer costs effective June 23, 2021 through June 22, 2022.

PGE requests that this deferral continue to be subject to an automatic adjustment clause so that costs can be recovered through PGE Schedule 135, Demand Response Cost Recovery Mechanism, per the conditions stated in Public Utility Commission of Oregon (Commission or OPUC) Order No. 18-381.

#### Overview

In alignment with the State of Oregon and Commission policies and requirements, PGE has developed Flex and DLCT to help address decarbonization goals, assist customers in managing their energy consumption and total energy costs, and enhance operational performance and efficiency. PGE's two residential DR pilots not only comply with Oregon's policy direction, but also support PGE's decarbonization and performance imperatives.

In 2016, Flex Pricing 1.0 began a pilot, testing 12 pricing design options, all aimed at reducing residential peak demand during summer and winter months. The Flex 1.0 pilot tested combinations of peak-time rebates with time-of-use pricing. In 2019, PGE transitioned to FLEX 2.0.

The DLCT pilot has been testing enabling technology and PGE's ability to achieve automated load control among residential customers. The DLCT pilot began as a "bring-your-own-thermostat" (BYOT) and was limited to thermostats from a single manufacturer. The pilot then expanded to allow thermostats from additional manufacturers. In 2018, PGE expanded the DLCT pilot to provide direct installation of residential thermostats. This aspect is focused on residential customers with ducted heat pumps and electric forced air furnaces due to their high DR capacity value.

The Commission approved PGE's initial deferral application via Order No. 15-203, and annually thereafter as shown in the Table 1 below. PGE seeks reauthorization for deferral of incremental expenses associated with the two pilots for the period beginning June 23, 2021. PGE is focused on the work required to transition these pilots into programs which includes ensuring performance and costs are predictable and stabilized. PGE is also addressing the overall treatment of its DR pilots and programs as part of its Flexible Load Plan where we will propose a portfolio level, multi-year plan in Docket No. UM 2141 later this year. Based on an eventual Commission decision in that docket, PGE's DR cost recovery will transition accordingly.

Table 1 UM 1708 Authorizations

Filing Date	Deferral Period	Order No.	Approval Date
10/3/2014	1/01/2015 — 12/31/2015	15-203	6/23/2015
6/15/2016	6/23/2016 - 06/22/2017	16-292	8/2/2016
6/2/2017	6/23/2017 - 06/22/2018	17-244	7/11/2017
5/4/2018	6/23/2018 - 06/22/2019	18-381	10/11/2018
6/21/2019	6/23/2019 - 06/22/2020	19-313	9/26/2019
6/19/2020	6/23/2020 - 06/22/2021	20-480	12/22/2020
6/22/2021	6/23/2021 - 06/22/2022		

# (1) Bring Your Own Thermostat Channel

For the BYOT option, customers with a qualifying thermostat and Heating, Ventilation, and Air Conditioning (HVAC) system receive a \$25 sign-up incentive and an on-going incentive for each season in which they participate in 50% of the event hours per season. The incentive structure is as follows:

Table 2
BYOT Incentive Structure

HVAC System Type	Summer Incentive	Winter Incentive
Ducted Heat Pump	\$25	\$25
Central Air Conditioning	\$25	N/A
Electric Force Air Furnace	N/A	\$25
Electric Force Air Furnace w/AC	\$25	\$25

In November 2020, PGE launched the PGE Marketplace which allows customers to enroll in the BYOT channel at the time they purchase a qualifying smart thermostat. Customers with an eligible heating or cooling type receive the enrollment incentive as a rebate on the cost of the thermostat.

#### (2) Direct Installation Channel

For the direct installation option, PGE installs, through a third-party vendor, thermostats for our residential customers for free (if electrically heated) or a highly reduced cost (if air conditioning only). This "up-front" incentive is in lieu of the seasonal incentives those customers would receive under the BYOT option. Customers who select the direct installation option agree to participate in the DLCT pilot for 5 years or repay a prorated portion of the thermostat's installed cost should they unenroll from the pilot. Due to the Governor's Stay Home Order in response to COVID-19, PGE suspended the direct installation option in March 2020 and switched to guided virtual installations

using a virtual platform in June 2020. After the creation of safety protocols in line with Center for Disease Control guidelines, PGE briefly returned to direct installation in October 2020 until COVID transmission rates rose again in November. As of this filing, PGE plans to return to direct installation in customers' homes in July 2021.

# (3) Current Performance

As of year-end 2020, the enrollment for the DLCT pilot was 25,842 customers, and we project this to increase to approximately 34,714 customers by year-end 2021. Enrollment mix by heating and cooling type is as follows:

Table 3
DLCT Enrollment Mix

HVAC System Type	Percent of Total Enrollment
Ducted Heat Pump	19%
Central Air Conditioning	77%
Electric Force Air Furnace	3%
Electric Force Air Furnace w/AC	1%

For the summer 2020 event season, the DLCT pilot provided an average demand savings of approximately 13.8 MW per event<sup>1</sup>.

#### (4) Current Challenges

Current forecasts are impacted by 1) providing virtual installation rather than direct installation; and 2) a two-month marketing pause in response to the February ice storm emergency. In addition, the reduction of the Energy Trust of Oregon smart thermostat rebate from \$100 to \$80 may impact the number of customers enrolling in the BYOT channel and affect 2021 results. Further, to reduce the impact to customers from two extreme weather emergencies (i.e., September 2020)

<sup>&</sup>lt;sup>1</sup> Draft Impact Evaluation of PGE Bring-Your-Own Thermostat Pilot Program, Winter 2019/2020 and Summer 2020 Draft Memo, Cadmus; Direct Installation Smart Thermostat Pilot Draft Evaluation Report, Cadmus

wildfires and February 2021 ice storm), PGE decided not to call DR events in the summer 2020 and winter 2020/2021 seasons.

# (5) Pilot to Program Steps

PGE continues to develop the DLCT pilot into a program by integrating program evaluation recommendations into the overall pilot design including:

- Engaging customers before and during operating seasons to help them understand how the pilot works with the goal to support event participation (reduce event level overrides). This current summer, PGE will test day-ahead event notifications via email in the Smart Grid Test Bed. Currently, customers are notified via their thermostat panel or smart phone app one hour to 10 minutes before an event starts.
- Refining customer recruitment as better data about household heating and cooling equipment becomes available.
- Implementing intelligent DR control strategies to optimize demand savings and reduce event level overrides.

Additionally, the pilot is continuing to reduce costs by increasing operational efficiency, automating manual processes, and taking advantage of previously negotiated vendor volume pricing.

#### Flex Pricing

# (1) Peak Time Rebates and Time of Use

In March 2019, the Commission approved Advice filing No. 19-03, granting permission for PGE to move forward with the Peak Time Rebate (PTR) pilot with the expectation that PGE would follow with a new proposal for a Time of Use (TOU) rate. The first stage of Flex 2.0 was the launch of a PTR-only pilot in April 2019. PTR provides educational energy saving tips and rewards customers for shifting their energy use during 3-4 hour "event" periods when energy costs and

demand are high. Customers earn \$1.00 for every kWh they shift during an event, and the rebate appears as a credit on their next monthly bill. There is no penalty should a customer use more than expected energy during an event, making PTR a no-risk, win-only offering for our customers. In its first year of operation, 77,000 residential customers chose to enroll (opt-in), exceeding our Year 1 enrollment goal by 28% (55,000 customer forecast). Additionally, some 13,400 customers were enrolled in PTR through an opt-out model as part of PGE's DR Testbed Pilot. In December 2020, after extended collaboration with Staff, PGE proposed a revised TOU rate that was approved by the Commission and became effective May 1, 2021.

# (2) PTR Current Performance

In the first year of operations, PTR has made significant improvements to pilot operations resulting in consistent customer performance and enrollment of 103,034 participants (as of May 31, 2020). In 2020, PGE moved to an industry-standard, X-in-Y baseline model with weather adjustment. The new baseline was tested during the winter 2019/2020 season, but PGE was only able to call one event given mild temperatures. PGE was able to call five events during the summer 2020 season, and the new baseline achieved desired results with forecasted event impact mapping closely to actual event results. Load shift impact ranged between 10 MW to 12 MW, with slightly more than 50% of customers earning rebates each event (average value of \$2 to \$3 per event). In addition, PGE successfully leveraged PTR usage-based micro segments in its recruiting efforts, by inviting customers who are most likely to be successful and satisfied to enroll in the program.

#### (3) PTR Challenges

Enrollment campaigns and the summer PTR season (which normally extends to Sept. 30) were cut short on Sept. 8, 2020 as a result of massive wildfires that resulted in poor air quality and evacuations. Those factors along with challenges faced with COVID-19, impacted PGE's ability to achieve our 2020 enrollment target of 110,000 customers ending the year with 90,993 participants.

Additionally, a massive ice storm in February 2021 resulted in widespread and extended outages, forcing an early end to the 2020/21 PTR winter event season. Enrollment campaigns were cancelled, and monthly enrollment targets were missed at the outset of the year.

# (4) PTR Pilot to Program

PGE experienced ongoing notification failures in which several thousand customers each event did not receive email or mobile text (SMS) notifications. Beginning summer 2021, PGE will use an in-house solution to send event email and SMS notifications. This will achieve substantial cost savings, enable customized messaging, and will improve both customer satisfaction and load shift as all enrollees will be notified and can participate in events.

PGE continues to develop and refine the PTR pilot and hopes to transition it to program status in the coming years. Flex 2.0 is expected to be our broadest most inclusive offering, providing a significant portion of our flexible load offering portfolio.

### Time of Use

The effective date for PGE's new TOU rate was May 1, 2021, upon which customers could call a PGE Customer Service Advisor to enroll in the program. This soft introduction will be followed mid-summer 2021 with online enrollment, new website content, and marketing recruitment to targeted customers who are most likely to benefit from TOU and who are most likely to adopt a time-varying rate. Customer awareness and education are essential to TOU adoption as is the ability to provide customers with personalized rate comparison information (customer cost per year on Basic Service vs. estimated cost per year on TOU). This work is in progress and we expect annual adoption

will increase steadily as awareness, interest, and rate comparison access grows. Table 4 below, lists estimated adoption levels by program years, which begin in mid-summer.

Table 4
Estimated TOU Adoption Levels

	2021 - 2022	2022 - 2023	2023 - 2024	2024 - 2025	2025 - 2026
# of Customers	7,000	17,000	40,000	53,000	66,000

# **OAR 860-027-0300 Requirements**

## I. The following is provided pursuant to OAR 860-027-0300(3):

a. <u>Description of utility expenses for which deferred accounting is requested.</u>

Pursuant to ORS 757.259(2)(e), PGE seeks continued reauthorization for deferred accounting treatment of the incremental costs associated with the two residential DR pilots: Flex Pricing and DLCT. PGE requests reauthorization for the effective period June 23, 2021 through June 22, 2021.

# b. Reasons for deferral

See Overview above. In addition, the two residential DR pilots will help PGE meet its goal to acquire 77 MW of winter DR capacity and 69 MW of summer DR capacity as specified by Commission Order No. 17-386 (Docket No. LC 66). The granting of this reauthorization will minimize the frequency of rate changes and/or match appropriately the costs borne by and benefits received by customers.

PGE is filing this reauthorization for the period beginning June 23, 2021 through June 22, 2022. PGE also proposes that the Flex Pricing and DLCT deferral remain subject to an automatic adjustment clause so that costs can continue to be recovered through PGE Schedule 135, Demand Response Cost Recovery Mechanism, in accordance with the conditions stated in Commission Order No. 19-313.

#### c. Proposed accounting for recording amounts deferred.

PGE proposes to record the deferral as a regulatory asset in FERC Account 182.3 (Other Regulatory Assets) and credit the appropriate FERC expense accounts. When specific identification of the particular source of the regulatory asset cannot be reasonably made, then FERC account 407.4 (Regulatory Credits) will be credited. In the absence of a deferred accounting order, the costs would be debited to the appropriate cost accounts.

### d. Estimate of amounts to be recorded for the next 12 months.

PGE estimates the total incremental costs of the two residential DR pilots to be approximately \$6.5 million in 2021 as listed in Table 5, below.

Table 5
2021 Cost per Pilot (thousands)

Pilot	2021 Estimate
Flex Pricing - PTR	\$3,302
Flex Pricing - TOD	\$642
Flex Pricing - TOTAL	\$3,944
DLCT	\$2,683
Total	\$6,626

#### e. Notice F

A copy of the notice of application for reauthorization of the deferred accounting treatment and a list of persons served with this Notice are provided as Attachment A.

# II. The following is provided pursuant to OAR 860-027-0300(4).

a. <u>Description of deferred account entries</u>.

Please see Sections I (a), (b), and (c) above.

b. The reason for continuing the deferred accounting.

Please see Section I (b) above. PGE seeks to continue to defer incremental expenses associated with the two residential DR pilots pursuant to Commission Order Nos. 15-203, 16-292, 17-244, 18-381, and 19-313 as described above. Without reauthorization this deferral will expire on June 22, 2021.

# **III.** Summary of filing conditions

# a. Earnings review.

Cost recovery of the two DR pilots will be subject to an automatic adjustment clause rate schedule and would not be subject to an earnings test under ORS 757.259.

#### b. Prudence review.

In accordance with Commission Order No. 19-131, no less than 90 days prior to filing to adjust tariff prices, PGE will submit combined reports on the pilots, which will provide third-party evaluations, cost summaries, estimated curtailment impacts, and results of customer satisfaction surveys for Commission Staff to review.

#### c. Sharing.

All prudently incurred costs are to be recoverable by PGE with no sharing mechanism.

#### d. Rate Spread/Rate Design

The rate spread/rate design will be determined during the proceeding to authorize amortization of the pilots' deferred costs (i.e., Schedule 135 cost recovery).

#### e. <u>Three percent test (ORS 757.259 (6)).</u>

The amortization of the pilots' deferred costs will be subject to the three-percent test in accordance with ORS 757.259(7) and (8), which limits aggregated deferral amortizations during a 12-month period to no more than three percent of the utility's gross revenues for the preceding year.

# **IV. PGE Contacts**

The authorized addresses to receive notices and communications in respect to this application are:

Loretta Mabinton Associate General Counsel Portland General Electric Company 1 WTC1301 121 SW Salmon Street Portland, OR 97204 Phone: 503.464.7822

E-mail: loretta.mabinton@pgn.com

PGE-OPUC Filings Rates & Regulatory Affairs Portland General Electric Company 1 WTC0306 121 SW Salmon Street Portland, OR 97204 Phone: 503.464.7805

E-mail: pge.opuc.filings@pgn.com

In addition to the names and addresses above, the following are to received notices and communications via the e-mail service list:

Alex Tooman, Sr. Regulatory Consultant, Regulatory Affairs

E-mail: <u>Alex.Tooman@pgn.com</u>

# V. Conclusion

For the reasons stated above, PGE requests permission to continue to defer for later ratemaking treatment the expenses associated with the two residential DR pilots, effective June 23, 2021 through June 22, 2022.

DATED this 22<sup>nd</sup> day of June 2021.

/s/ Jakí Ferchland

Jaki Ferchland Manager, Revenue Requirement Portland General Electric Company 121 SW Salmon Street, 1WTC0306 Portland, OR 97204

Telephone: 503.464.7488

E-Mail: Jacquelyn.Ferchland@pgn.com

# **UM 1708**

# **Attachment A**

Notice of Application to Reauthorize for Deferred Accounting of Costs Associated with Two Residential Demand Response Pilots BEFORE THE PUBLIC UTILITY COMMISSION

OF OREGON

UM 1708

In the Matter of

**PORTLAND** GENERAL **ELECTRIC** 

COMPANY

Application for Reauthorization to Defer Expenses Associated with Two Residential

**Demand Response Pilots** 

Notice of Application to Reauthorize for **Deferred Accounting of Costs Associated** with Two Residential Demand Response **Pilots** 

On June 22, 2021, Portland General Electric Company (PGE) filed an Application to

Reauthorize Deferred Accounting of Costs Associated with Two Residential Demand Response Pilots

with the Public Utility Commission of Oregon (Commission or OPUC).

Approval of PGE's application for deferred accounting as proposed will support the use of an

automatic adjustment clause rate schedule, which will provide for changes in rates reflecting

incremental costs associated with the pilot.

Persons who wish to obtain a copy of PGE's application will be able to access it on the OPUC

website.

Any person who wishes to submit written comments to the Commission on PGE's application

must do so no later than July 22, 2021.

Dated: June 22, 2021.

/s/Jaki Ferchland

Jaki Ferchland Manager, Revenue Requirement Portland General Electric Company

121 SW Salmon Street, 1WTC0306

Portland, OR 97204

Telephone: 503.464.7488

E-Mail: Jacquelyn.Ferchland@pgn.com

# **Certificate of Service**

I hereby certify that I have this day caused the foregoing Notice of Application to Reauthorize for Deferred Accounting of Costs Associated with Two Residential Demand Response Pilots to be served by electronic mail to those parties whose e-mail addresses appear on the attached service list for OPUC Dockets No. UE 335 and UM 1708.

Dated at Portland, Oregon, this 22<sup>nd</sup> day of June 2021.

/s/ Jaki Ferchland
Jaki Ferchland
Manager, Revenue Requirement
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