



Oregon

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Public Utility Commission

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March 19, 2024



BY EMAIL

Portland General Electric Company

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RE: Advice No. 24-03

At the public meeting on March 19, 2024, the Commission adopted Staff's recommendation in this matter docketed as ADV 1590. The Staff Report and a receipted copy of the sheets in your advice filing are attached.

Nolan Moser

Chief Administrative Law Judge

Public Utility Commission of Oregon

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**PUBLIC UTILITY COMMISSION OF OREGON
STAFF REPORT
PUBLIC MEETING DATE: March 19, 2024**

REGULAR _____ **CONSENT** X **EFFECTIVE DATE** March 20, 2024

DATE: March 11, 2024

TO: Public Utility Commission

FROM: Peter Kernan

THROUGH: JP Batmale and Sarah Hall **SIGNED**

SUBJECT: PORTLAND GENERAL ELECTRIC:
(Docket No. ADV 1590/Advice No. 24-03)
Requests updates to Schedule 25 nonresidential direct load control pilot.

STAFF RECOMMENDATION:

Approve updates to Schedule 25 Nonresidential Direct Load Control pilot to add a Bring Your Own Thermostat option and increase the flexibility of when events may be called.

DISCUSSION:

Issue

Whether to approve updates to Schedule 25 Nonresidential Direct Load Control pilot to add a Bring Your Own Thermostat option and increase the flexibility of when events may be called.

Applicable Rule or Law

In Order No. 20-152, the Commission acknowledged PGE's 2019 IRP action Item 1 B to achieve 141 MW (winter) and 211 MW (summer) of aggregate demand response capacity by 2025.

The Commission adopted Staff's recommendation in Order 24-049 to not approve the 2024 budget for the Pilot, keeping with precedent from Errata Order 22-115. Staff recommended PGE continue using Schedule 25 for the tariff and Docket No. UM 1514 for deferral reauthorization.

ORS 757.205(1) provides that a public utility must file schedules showing all rates, tolls, and charges for service that have been established and are in force at the time. Under ORS 757.210, the Commission may approve tariff changes if they are deemed to be fair, just, and reasonable.

ORS 757.220 provides that no change shall be made in any schedule, except upon 30 days' notice to the Commission prior to the time the changes are to take effect.

OAR 860-022-0025 sets forth requirements for filing tariffs or schedules changing rates. The utility must file either an entirely new tariff or revised sheets referring to the sheets on file and submit a statement indicating the nature of the change to the rate, charge, toll or rules and regulations, the number of customers affected and resulting change in revenue, and a detailed statement addressing the reasons for the proposed change.

Analysis

Background

The Nonresidential Direct Load Control pilot (Pilot) is a demand response option for eligible nonresidential customers filed under PGE's operational tariff Schedule 25. The Pilot, known to customers as Energy Partner Smart Thermostat, offers participating customers incentives to allow PGE to control thermostats during direct load control events while providing advance notice and a customer override.¹ The Pilot's existing customer incentives include free installation of multiple qualified thermostats and fixed payments per thermostat for each event season (summer and winter) in which the customer meets minimum participation requirements.

Proposed Changes to Schedule 25

In this filing, PGE requests two changes to increase participation and improve operational performance of the Pilot. First, PGE proposes to add a Bring Your Own Thermostat (BYOT) pathway allowing customers to participate who already have an eligible thermostat or who acquire one separately of the direct install pathway. Second, PGE proposes tariff changes to remove restrictions around calling events on weekends. This provides PGE with flexibility to call events during grid needs such as high market prices or system constraints, even if those grid conditions arise on a weekend. Removing the weekend restriction also better aligns the Schedule 25 tariff with other PGE flexible load pilots and programs.

To participate in PGE's proposed BYOT delivery channel, customers must use a qualified thermostat that is Internet-connected and controls an electric heating or cooling system. The Pilot proposes to offer customers one-time incentives of up to

¹ Portland General Electric Company, PUC Oregon No. E-18, Original Sheet No. 25-1.

\$200 per qualified thermostat enrolled. By comparison, the direct installation pathway offers customers a subsidized thermostat and install with a \$60 customer co-pay. On-going participation incentives are the same for customers regardless of which delivery channel used to enroll. Customers receive up to \$60 per qualified site for each event season they participate.² A customer using a qualified thermostat to control electric heating and cooling equipment could earn \$60 for both the summer and winter seasons, or up to \$120 per qualified site per Pilot year. Qualifying thermostats at qualified sites must participate in at least 50 percent of the season's event hours to receive incentives for that season. Staff reviewed the incentive levels compared to other pilots and programs in the flexible load portfolio and found them to be reasonable.

Pilot Status

As of December 29, 2023, when PGE filed its most recent deferral reauthorization request, PGE reported successful integration of 145 new thermostats in the Pilot between June 1, 2023, and December 31, 2023.³ Cumulatively, PGE reported 2,250 thermostats enrolled. According to the Company's 2024 Supplemental Flexible Load Multiyear Plan, the Company has a goal of enrolling 3,500 thermostats by the end of 2024.⁴ With increased enrollment, PGE's goal is 2.6 MW of enrolled summer capacity by the end of 2024, up from 0.8 MW.⁵

The Pilot goal of 3,500 thermostats and 2.6 MW of summer capacity remains elusive. When PGE reported 2,167 thermostats enrolled at the end of 2022, the Company set the 2023 target at 3,500 thermostats, but fell 1,250 thermostats short.⁶ Going further back, PGE reported more ambitious goals in the September 2022 Update to the Flexible Load Multiyear Plan, targeting 5,400 thermostats by 2023 and 8,000 by 2024.⁷ Staff supports the work that PGE completed over the past couple of years to expand the number of eligible thermostats and, as proposed by this filing, streamline the enrollment of eligible thermostats with a BYOT channel. However, past performance against goals reduces confidence in the Company's ability to meet its own targets.

² A Qualified Site, as defined by PGE, is a Nonresidential Customer building under a qualifying PGE rate Schedule, with unique PGE service address and utility meter. A Qualified Site may have multiple qualified thermostats, but on-going incentives are dictated by the site, not the individual thermostat. Individual thermostats are eligible for the one-time, \$200 incentive.

³ See Docket No. UM 1514, *PGE's Application for Reauthorization of Deferral of Incremental Costs Associated with Non-Residential Direct Load Control Pilot*, (December 29, 2023), <https://edocs.puc.state.or.us/efdocs/HAQ/um1514haq325935054.pdf>.

⁴ See Docket No. UM 2141, *PGE's Supplemental Flexible Load MYP*, (December 1, 2023), p. 19, <https://edocs.puc.state.or.us/efdocs/HAQ/um2141haq144139.pdf>.

⁵ *Ibid*, p. 18.

⁶ *PGE's 2022 Flexible Load Customer Pilot Programs Annual Report*.

⁷ See Docket No. UM 2141, *Flexible Load Multi-Year Plan September 2022 Update*, (September 23, 2022), p. 84, <https://edocs.puc.state.or.us/efdocs/HAD/um2141had163540.pdf>.

Further, Staff maintains concerns about the cost-effectiveness of the Pilot, which decreased year-over-year to 0.17 on the total resource cost (TRC) test.⁸ Staff understands this low value to be plagued by two independent factors. First, avoided costs used in valuing the flexible load portfolio have not been updated to reflect the benefits of on-system resources identified in PGE's 2023 Integrated Resource Plan and Clean Energy Plan. Second, an evaluation of the Pilot reported a lower-than-expected demand reduction per thermostat.⁹ This had the effect of reducing the Pilot's total capacity available to PGE, despite enrollment increasing.

The Commission adopted Staff's recommendation in Order 24-049 to not approve the 2024 budget of \$1.28 million for the Pilot, keeping with precedent from Errata Order No. 22-115. Instead, Staff recommended PGE continue using Schedule 25 for the tariff and Docket No. UM 1514 for deferral reauthorization until the time at which Staff can recommend approval of a Pilot budget based on the merits of its performance. This separation from the rest of the flexible load portfolio will better enable Staff to evaluate PGE's intention to include this Pilot in the next multiyear plan filing anticipated later this year.

Conclusion

Staff supports the proposed tariff changes because they increase the likelihood of Pilot success. The addition of a BYOT channel may assist PGE in hitting the enrollment targets set by the Company and the removal of event restrictions creates alignment across flexible load assets. Finally, the tariff gives PGE ability to deploy flexible load resources when they are most valuable, an issue of Staff priority. In the upcoming 2025-2026 Flexible Load Multiyear Plan, to be filed by the end of 2024, Staff expects the Company to address cost-effectiveness, enrollment targets, and enrolled capacity targets.

PROPOSED COMMISSION MOTION:

Approve updates to Schedule 25 Nonresidential Direct Load Control pilot to add a Bring Your Own Thermostat option and increase the flexibility of when events may be called.

⁸ Ibid, p. 21.

⁹ See Docket No. UM 1514, *Evaluations of PGE's Energy Partner Schedule 25 Direct Load Control Pilot for the Summer 2021 and Winter 2021/2022 Seasons*, (October 11, 2022), <https://edocs.puc.state.or.us/efdocs/HAH/um1514hah15355.pdf>.

**SCHEDULE 25
NONRESIDENTIAL DIRECT LOAD CONTROL PILOT**

PURPOSE

This Direct Load Control Pilot is a demand response option for eligible nonresidential Customers. The Direct Load Control Pilot offers incentives to allow the Company to control thermostats during Direct Load Control Events while providing a customer override. The Company provides advance notice to participating Nonresidential Customers for Direct Load Control Events. The Pilot is expected to be conducted from December 1, 2017 through May 31, 2025.

DEFINITIONS

Central Air Conditioning – Air conditioner tied into a central ducted forced air system.

Direct Load Control – A remotely controllable switch that allows the utility to operate an appliance, often by cycling. In terms of this pilot, direct load control allows the Company to change the set point or cycle the Nonresidential Customer's heating or cooling through the Customer's Qualified Thermostat in order to reduce the Customer's energy demand.

Direct Load Control Event – A period of time in which the Company will provide direct load control.

Ducted Heat Pump – Heat pump heating and cooling system hooked into a central ducted forced air system.

Electric Forced Air Heating – An electrical resistance heating system tied into a central ducted forced air system.

Event Notification – The Company will issue a notification of a Direct Load Control Event to participating Customers. Participating Nonresidential Customers must choose at least one method for receipt of notification. Notification methods may include email, text, auto-dialer phone call, on thermostat display screen, or via mobile app notification. Notification may also be available on the Company's website.

Event Season – The pilot has two event seasons: the Summer Event Season and the Winter Event Season.

Holidays – The following are holidays for purposes of the pilot: New Year's Day (January 1), Martin Luther King Day (third Monday in January), President's Day (third Monday in February), Independence Day (July 4), Labor Day (first Monday in September), Thanksgiving Day (fourth Thursday in November), and Christmas Day (December 25). If a holiday falls on a Saturday, the preceding Friday will be designated the holiday. If a holiday falls on a Sunday, the following Monday will be designated the holiday.

(D)

SCHEDULE 25 (Continued)

DEFINITIONS (Continued)

Non-Ducted HVAC System Thermostat Demonstration – A demonstration within the smart grid test bed that meets Special Conditions 8 through 10. Demonstrations are limited in scope and will not interfere with the operations of the Nonresidential DLC Pilot.

Qualified Site – Nonresidential Customer building served under qualifying PGE rate Schedule (as defined in Applicable section below) with a unique PGE service address and utility meter. Additionally, Qualified Sites meet HVAC system requirements defined in Eligibility section below.

Qualified Thermostat – Thermostats that are Company-approved have been integrated with Company's demand response management system for event calling.

Summer Event Season – Includes the successive calendar months June through September. (M)

Winter Event Season – Includes the successive calendar months November through February. (M)

AVAILABLE

In all territory served by the Company.

APPLICABLE

To qualifying Nonresidential Customers served under Schedules 32, 38, 47, 49, 75, 83, 85, 89, and 90. The Company will limit participation to 7,000 Qualified Thermostats. Nonresidential Customers will remain on their base schedule and will be eligible for the incentives described in this schedule.

ELIGIBILITY

Eligible Nonresidential Customers must have a Network Meter. Nonresidential Customers must have a Qualified Thermostat connected to the internet and the heating or cooling system at their expense, except as provided in the Incentives section of this schedule. To participate in the Winter Event Season, the Nonresidential Customer must have a Ducted Heat Pump or Electric Forced Air Heating. To participate in the Summer Event Season, the Nonresidential Customer must have Central Air Conditioning or a Ducted Heat Pump.

SCHEDULE 25 (Continued)

DIRECT LOAD CONTROL EVENT

Direct Load Control Events occur for one to five hours. The Company may call two events per day but will not exceed five cumulative hours for the day. During Direct Load Control Events the Customer may allow the Company to control their thermostat for the duration of the event. The Customer has the option not to participate by overriding the temperature setpoint via the thermostat. The Company initiates Direct Load Control Events with Event Notification. The Company will call Direct Load Control Events only during the Event Seasons. Direct Load Control Events will not be called on Holidays. Reasons for calling events may include but are not limited to: energy load forecasted to be in the top 1% of annual load hours, forecasted temperature above 90 or below 32, expected high generation heat rates and market power prices, and/or forecasted low or transitioning wind generation. The Company will call no more than 150 event hours per Event Season.

(C)

ENROLLMENT

The Customer may enroll at any time but must participate for the minimum number of hours described in the incentive section.

INCENTIVES

(C)

BRING YOUR OWN THERMOSTAT

(N)

This delivery channel allows the Customer to use their Qualified Thermostat, which must be connected to the internet and the electric heating or cooling system, at the Customers' expense, to participate in Direct Load Control Events and receive incentives. One-time Incentives of up to \$200 per thermostat may be issued for signing up for this delivery channel. Customers receive up to \$60 per Qualified Site for each Event Season they participate. A Customer participating in all Event Seasons receives up to \$120 per Qualified Site per Pilot year. To receive payment for an Event Season, all Qualifying Thermostats at the Qualified Site must participate in at least 50% of the event hours for which the Customer is eligible to participate in that Event Season.

(N)

DIRECT INSTALLATION

Participating Customers receive a Qualified Thermostat for signing up for the Direct Load Control Pilot's Direct Installation channel. A Customer may receive multiple Qualified Thermostats for separate spaces subject to verification by the Company. A Customer co-pay of up to \$60 per installed thermostat is required for participation. Customers receive up to \$60 per Qualified Site for each Event Season they participate. A Customer participating in all Event Seasons receives up to \$120 per Qualified Site per Pilot year. Incentives are paid to the Customer with an automated clearing house (ACH,) check, bill credit, or generic gift card. To receive payment for an Event Season, all Qualifying Thermostats at the Qualified Site must participate in at least 50% of the event hours for which the Customer is eligible to participate in that Event Season.

SCHEDULE 25 (Continued)

SPECIAL CONDITIONS

- | | |
|--|------------------|
| | (T) |
| | (T) |
| | (D) |
| 1. The Company will defer and seek recovery of all pilot costs not otherwise included in rates. | (T) (M) |
| 2. The Company is not responsible for any direct, consequential, incidental, punitive, exemplary, or indirect damages to the participating Customer or third parties that result from Air Conditioning Cycling, changing the thermostat set point, or the functionality of the device. | (T)
(C) (M) |
| 3. The Company shall have the right to select the cycling schedule and the percentage of the Customer's heating or cooling systems to cycle at any one time, up to 100%, at its sole discretion. | (T) |
| 4. The Company shall have the right to pre-heat or pre-cool the Site as part of the Direct Load Control event in order to thermally condition the space to increase occupant comfort and site performance for the duration of the event. | (T) |
| 5. The provisions of this schedule do not apply for any period that the Company interrupts the Customer's load for a system emergency or any other time that a Customer's service is interrupted by events outside the control of the Company. The provisions of this schedule will not affect the calculation or rate of the regular service schedule and associated charges and Customers will not be charged for energy not used or demand not set during Direct Load Control Events. | (T) |
| 6. The Company may engage with Customers who have existing qualified thermostats installed at their Sites to enroll them in the pilot. Customers with pre-existing thermostats that were not installed through the Direct Installation channel are eligible for seasonal incentives. | (T) |
| 7. PGE has the right to remove a Customer from the pilot when good cause is shown including, but not limited to, poor customer responsiveness, consistent customer non-participation in called events, or issues with customer equipment that impact customer's participation. | (T) |
| | (M) |

SCHEDULE 25 (Concluded)

SPECIAL CONDITIONS (Continued)

PERTAINING TO BRING YOUR OWN THERMOSTAT

1. Customers that reenroll in the program are not eligible for a second payment for signing up. A Customer continuing service at a new location is not considered a new enrollment.
2. If the participating Customer relocates to a different location, they may continue their participation in the program, provided that the new location meets the eligibility requirements.

PERTAINING TO DIRECT INSTALLATION

1. Customers that reenroll in the program are not eligible for additional Qualified Thermostats for signing up.
2. If the participating Customer relocates to a different location, they may continue their participation in the program, provided that the new location meets the eligibility requirements.

TERM

This pilot term is December 1, 2017 through May 31, 2025.

(N)

(N)

(M)

(M)