



# Oregon

Kate Brown, Governor

## Public Utility Commission

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May 17, 2022



BY EMAIL

Portland General Electric Company

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RE: Advice No. 22-04

At the public meeting on May 17, 2022, the Commission adopted Staff's recommendation in this matter docketed as ADV 1384. 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

(503) 378-3098

**PUBLIC UTILITY COMMISSION OF OREGON  
STAFF REPORT  
PUBLIC MEETING DATE: May 17, 2022**

REGULAR  CONSENT  EFFECTIVE DATE May 18, 2022

**DATE:** May 9, 2022

**TO:** Public Utility Commission

**FROM:** Nick Sayen

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

**SUBJECT:** PORTLAND GENERAL ELECTRIC:  
(Docket No. ADV 1384/Advice No. 22-04)  
Revises residential direct load control pilot and extends pilot through 2025 in Schedule 5.

**STAFF RECOMMENDATION:**

Approve Portland General Electric's (Company or PGE) Advice No. 22-04, authorizing revisions to Schedule 5.

**DISCUSSION:**

Issue

Whether the Oregon Public Utility Commission (Commission) should approve revisions to PGE's residential direct load control pilot, which include phasing out the Direct Installation delivery channel, allowing events to be called on weekends, increasing the enrollment cap, and extending the pilot through June 30, 2025.

Applicable Rule or Law

ORS 757.205 requires public utilities to file schedules showing all rates, tolls, and charges for service that have been established and are in force at the time. Pursuant to ORS 757.210, the Commission may approve tariff changes if they are deemed to be fair, just, and reasonable. Under OAR 860-022-0025, a public utility must submit the following information with their new or modified tariff filing:

- a) a statement indicating any change in existing rates, charges, or rules and regulations;

- b) a statement describing the number of customers affected by the proposed change and the change in annual revenue; and
- c) a detailed description of the reasons for the proposed change.

Filings that make any change in rates, tolls, charges, rules, or regulations must be filed with the Commission at least 30 days before the effective date of the changes. ORS 757.220; OAR 860-022-0015.

The Commission first approved PGE's residential demand response and load control pilots in 2015 in Order No. 15-203. The Commission most recently reauthorized the pilots in Order No. 20-480.

### Analysis

This memo discusses background and challenges of the Schedule 5 Residential Direct Load Control Pilot (DLCP) and summarizes the Company's proposed changes as presented in Advice No. 22-04. The memo concludes with Staff's recommendation to approve the Company's filing.

### *Background*

The DLCP offers incentives to allow the Company to control thermostats during demand response events. During summer events, the thermostat allows the temperature to increase above the customer set point, and during winter events the thermostat allows the temperature to fall below the customer set point. The DLCP is one of several residential demand response (DR) offerings operated by PGE. The Company also offers Peak Time Rebates and a Time-of-Use pricing option through Schedule 7. PGE began operating the Schedule 5 and Schedule 7 offerings in late 2015 with the intent of informing development of future DR programs to serve as dispatchable resources during system peak loads, and to ease the integration of renewable energy sources.

The goal of the offerings from the 2016 Integrated Resource Plan (IRP) was to contribute, in combination with several other programs, to PGE achieving at least 77 megawatts of demand response in the winter months and 69 MW in the summer months.<sup>1</sup> In PGE's 2019 IRP filing, this amount was forecast as 141 MW in the winter months and 211 MW in the summer months.<sup>2</sup> Looking forward, the significance of the DLCP is demonstrated in PGE's November 2021 Flexible Load Multi-Year Plan. By 2023, the DLCP is forecast to procure 34.7 MW in the summer and 9.2 MW in the

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<sup>1</sup> See Order No. 17-386, p. 9, <https://apps.puc.state.or.us/edockets/orders.asp?OrderNumber=17-386>.

<sup>2</sup> See Order No. 20-152, p. 21, <https://apps.puc.state.or.us/edockets/orders.asp?OrderNumber=20-152>.

winter.<sup>3</sup> This represents approximately one third of the summer MW savings of PGE's entire demand response portfolio.

In 2015, DLCP began as a "Bring Your Own Thermostat" (BYOT) delivery channel and was initially limited to one thermostat manufacturer, later expanding to others. BYOT customers receive an enrollment incentive and an incentive for each DR season in which they participate. In 2018, PGE expanded the pilot from BYOT to include a Direct Installation delivery channel with the goal of enrolling dual season customers (those with cooling and electric heating). In lieu of enrollment and participation incentives, Direct Installation customers receive a thermostat installed at no cost. In 2020, PGE launched a third delivery channel, the online PGE Marketplace, which allows customers to enroll in the DLCP as a BYOT customer at the time they purchase a qualifying thermostat. The DLCP was most recently evaluated in September 2021. The evaluation reported the pilot provides over 13 MW of peak capacity.<sup>4</sup> Staff met with the Company as it was developing this filing. Company staff reported that as of February 2022 the DLCP had enrolled approximately 34,000 customers.

#### *Program challenges*

In pre-filing meetings and discussions, PGE also reported that the DLCP is experiencing challenges with the Direct Installation delivery channel. First, the Direct Installation channel is far less cost-effective than the overall DLCP due to the costs associated with a technician installing the devices in customers' homes. The overall DLCP cost-effectiveness score from a Total Resource Cost (TRC) perspective is approximately 1.0.<sup>5</sup> However, the TRC cost-effectiveness score for the Direct Installation channel is 0.48. Second, enrollment of new dual season customers through the Direct Installation channel has declined, falling by approximately 65 percent in 2020 and 30 percent in 2021. Finally, customers are confused by three delivery channels, and about the respective incentives they provide.

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<sup>3</sup> See Docket No. UM 2141, Flexible Load Multi-Year Plan 2022-2023, November 2021, p. 88, <https://apps.puc.state.or.us/edockets/edocs.asp?FileType=HAD&FileName=um2141had16243.pdf>.

<sup>4</sup> See Docket No. UM 1708, PGE's Smart Thermostat program Winter 2019/2020 and Summer 2020 for the BYOT and Direct Installation Channels, October 18, 2021, p. 1, <https://apps.puc.state.or.us/edockets/edocs.asp?FileType=HAD&FileName=um1708had165015.pdf>.

<sup>5</sup> The DLCP TRC score was 1.06 in the Flexible Load Plan, December 2020, p. 149, <https://apps.puc.state.or.us/edockets/edocs.asp?FileType=HAA&FileName=haa125814.pdf>.

The DLCP TRC score was reported as 0.9 in discussions with Staff in August 2021 regarding reauthorization for deferred accounting for the DLCP,

<https://apps.puc.state.or.us/edockets/edocs.asp?FileType=HAU&FileName=um1708hau9481.pdf>.

The DLCP TRC score was 0.89 in the Flexible Load Multi-Year Plan, November 2021, p. 118, <https://apps.puc.state.or.us/edockets/edocs.asp?FileType=HAD&FileName=um2141had16243.pdf>.

*Summary of proposed changes*

To address these challenges PGE has proposed several revisions to the DLCP.

*1. Phase out the Direct Installation delivery channel*

Beginning June 1, 2022, PGE proposes to close the Direct Installation delivery channel to new customers. In pre-filing meetings and discussions, PGE reported to Staff that current Direct Install customers would continue with the DLCP and transition to BYOT after five years, with the first transitions in 2024. The Company reported that it would provide tech support to these customers for one year, warranty thermostat installations for one year, and that the Call Center would continue to support program questions. The most recent evaluation reported approximately 6,000 customers enrolled in the DLCP through the Direct Installation channel.<sup>6</sup>

As noted in the filing, PGE believes this change will result in a more streamlined experience for customers, and a more cost-effective DLCP. The Company expects the change will not have a substantial impact on the enrollment of dual season customers, as enrollment of these customers through the Direct Installation channel had already dropped significantly. Finally, PGE does not expect that removing the Direct Installation delivery channel will substantially impact participating customers.

Staff supports this change for several reasons. First, it does not affect the incentives for Direct Installation customers. Second, PGE will provide tech support, Call Center support, and warranty thermostat installations to these customers. Third, there is a significant difference in cost-effectiveness and removing this delivery channel will improve the overall cost-effectiveness of DLCP.

*2. Allow events to be called on weekends*

Currently, events may not be called on the weekends or holidays. PGE proposes that events may be called on the weekends. Staff understands this change will improve program flexibility to respond to system needs, and in doing so may also improve program cost-effectiveness. Staff supports this change.

*3. Increase the enrollment cap*

PGE proposes to increase the DLCP enrollment cap from 60,000 to 80,000 residential customers. As noted previously, DLCP is an important program within PGE's Flexible

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<sup>6</sup> See Docket No. UM 1708, PGE's Smart Thermostat program Winter 2019/2020 and Summer 2020 for the BYOT and Direct Installation Channels, October 18, 2021, p. 2, <https://apps.puc.state.or.us/edockets/edocs.asp?FileType=HAD&FileName=um1708had165015.pdf>.

Load forecast. To reach the goal in that forecast, DLCP must grow. For these reasons, Staff supports this change.

4. Extend the pilot through June 30, 2025

PGE proposes to extend the pilot from June 30, 2022, to June 30, 2025. Staff supports this change for the same reason noted above: to reach the savings forecasts the DLCP must grow, and this change provides time for that growth.

5. Miscellaneous tariff language changes

PGE proposes miscellaneous language clean up in the tariff, including:

- Event notification: removing language requiring customers to choose at least one method for receipt of notification.
- BYOT description: removing language that incentives are paid to the Customer at time of purchase.
- Special conditions: adding and removing language clarifying customer notification of participation termination.
- Special conditions: removing language regarding providing customer incentives by check.
- Special conditions: removing language regarding Schedule 6.
- Revising language to reflect that Direct Installation customers will transition to BYOT customers after five years.

Staff supports these changes. Additionally, Staff finds that the Company's filing meets the requirements of statute and rule.

Conclusion

Staff finds that PGE's proposed revisions to the residential direct load control pilot will result in a more cost-effective pilot without adversely affecting customers. Staff thinks these changes should provide more flexibility and allow additional enrollment and time for the pilot to meet the MW savings forecast for 2023.

**PROPOSED COMMISSION MOTION:**

Approve Portland General Electric's Advice No. 22-04, authorizing revisions to Schedule 5.

**SCHEDULE 5  
RESIDENTIAL DIRECT LOAD CONTROL PILOT**

**PURPOSE**

This direct load control pilot is a demand response option for eligible Residential 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 Customers for Direct Load Control Events. The pilot is expected to be conducted from December 1, 2015 through June 30, 2025.

(C)

**AVAILABLE**

In all territory served by the Company.

**APPLICABLE**

This program is available to up to 80,000 eligible Residential (Schedule 7) Customers that elect to enroll and participate in the pilot. Customers will remain on Schedule 7 and will be eligible for the incentives described in this schedule.

(C)

**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 Customer's heating or cooling through the Customer's Qualified Thermostat to reduce the Customer's energy demand.

Direct Load Control Event – A period 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. 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.

(C)

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

## SCHEDULE 5 (Continued)

### DEFINITIONS (Continued)

Holidays – The following are holidays for purposes of the pilot: New Year's Day (January 1), Memorial Day (last Monday in May), 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.

Qualified Thermostat – Thermostats that are Company-approved and listed on PortlandGeneral.com.

Summer Event Season – The summer event season includes the successive calendar months June through September.

Winter Event Season – The winter event season includes the successive calendar months December through February.

### ELIGIBILITY

Eligible Customers must have a Network Meter and connectivity to the internet. To participate in the Winter Event Season, the Customer must have a Ducted Heat Pump or Electric Forced Air Heating. To participate in the Summer Event Season, the Customer must have Central Air Conditioning or a Ducted Heat Pump.

### DELIVERY CHANNEL

#### BRING YOUR OWN THERMOSTAT

This delivery channel allows the Customer to use their Qualified Thermostat, which must be connected to the internet and the heating or cooling system, all at the Customers' expense, to participate in Direct Load Control Events and receive incentives. Participating Customers receive a one-time payment of up to \$105 for signing up for this delivery channel. In addition, Customers receive \$25 for each Event Season they participate. A Customer participating in all Event Seasons receive up to \$155 for the first participating year and \$50 for additional years. Incentives are paid to the Customer with a check, bill credit, generic gift card, or credit. To receive payment for an Event Season, the Customer must participate in at least 50% of the event hours for which the Customer is eligible to participate in that Event Season.

(C)



**SCHEDULE 5 (Continued)**

DELIVERY CHANNEL (Continued)

RESIDENTIAL THERMOSTAT DIRECT INSTALLATION – NO NEW SERVICE

(C)

As of May 30, 2022, this delivery channel will be closed to new Customers. Existing Customers enrolled in the pilot through this channel will continue to be governed by the incentive and participation structure defined below until they have successfully participated in Direct Load Control events for five years, at which time, they will be eligible to receive seasonal incentives. Thermostat installations will be warranted for one year.

(N)

(N)

This delivery channel allows Customers who own a qualifying Ducted Heat Pump, Electric Forced Air Heating, and/or Central Air Conditioner but do not own a Qualified Thermostat to participate by receiving one from the Company.

The Company will provide the following to Eligible Customers within the participation cap:

- For those Customers with a Ducted Heat Pump or Electric Forced Air, with or without Central Air Conditioner system, a connected thermostat that is installed, provisioned, and enrolled into PGE's demand response platform at no additional charge; or
- For those Customers with a Central Air Conditioner, for a fee up to \$150, a connected thermostat that is installed, provisioned, and enrolled into PGE's demand response platform.

PGE may, at a later date, apply a mechanism to recover labor and materials costs if the Customer opts-out of more than 50% of the event hours in an Event Season or the Customer removes the enrolled thermostat. The Customer may be charged up to the following:

<b>Participation Year Customer Opts- Out</b>	<b>Customer Payback of Thermostat Labor &amp; Materials</b>
1	100%
2	80%
3	60%
4	40%
5	20%
6	0%

If, a Customer returns the working qualified thermostat within 90 days of installation, they are not charged for the cost of the thermostat and are only charged for the labor associated with installing the thermostat.

**SCHEDULE 5 (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 via the thermostat. The Company initiates Direct Load Control Events with Event Notification. The Company will call Direct Load Control Events only in the following months: December, January, February, June, July, August, and September. 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)

**SPECIAL CONDITIONS**

1. The Customer may enroll at any time but must participate for the minimum number of hours described in the delivery channel section.
2. The Customer may notify PGE they wish to terminate enrollment in the pilot at any time. PGE will unenroll the customer from the program within approximately one week of the request. The Customer may be charged additional costs described in the participating Customers enrolled delivery channel section.
3. The Customer may opt-out of any Direct Load Control Event; however, if the Customer does not participate in at least 50% of Direct Load Control Events in an Event Season, the Customer may be charged additional costs described in the participating Customer's enrolled delivery channel section.
4. If a participating Customer is eligible for an incentive, it will be provided at the next billing statement after the event season ends.
5. The Company will defer and seek recovery of all pilot costs not otherwise included in rates.
6. 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 AC Cycling or changing the thermostat set point.
7. 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.

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**SCHEDULE 5 (Concluded)**

SPECIAL CONDITIONS (Continued)

8. 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 associated with the Customer's Schedule 7 charges and associated charges. (T)
9. PGE has the right to remove a Customer from the pilot when good cause is shown including, but not limited to, for poor customer responsiveness, consistent customer non-participation in called events, or issues with customer equipment that impact customer's participation. (T)

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 residence is not considered a new enrollment.
2. If the participating Customer moves to a different residence, the Customer may continue participation if the new residence meets the eligibility requirements.

PERTAINING TO RESIDENTIAL THERMOSTAT DIRECT INSTALLATION

1. Customers in the residential thermostat direct installation delivery channel are excluded from receiving thermostat incentives by the Energy Trust.
2. Customers will be eligible for seasonal incentives after completion of five years of successful participation, as described in the delivery channel section, in Direct Load Control Events. (C)

**TERM**

This pilot began December 1, 2015 and ends June 30, 2025. (C)