



# Oregon

Tina Kotek, Governor

## Public Utility Commission

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July 25, 2023



BY EMAIL

Portland General Electric Company

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RE: Advice No. 23-11

At the public meeting on July 25, 2023, the Commission adopted Staff's recommendation in this matter docketed as ADV 1523. 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: July 25, 2022**

REGULAR  CONSENT  EFFECTIVE DATE August 1, 2023

DATE: July 13, 2023

TO: Public Utility Commission

FROM: Kathy Zarate and Peter Kernan

THROUGH: Bryan Conway, and Marc Hellman **SIGNED**

SUBJECT: PORTLAND GENERAL ELECTRIC:  
(Docket No. ADV 1523/Advice No. 23-11)  
Multifamily Residential Demand Response Water Heater Pilot Update.

**STAFF RECOMMENDATION:**

Staff recommends the Public Utility Commission of Oregon (Commission) approve Portland General Electric's (PGE or Company) proposed Schedule 4, as described in the Advice Filing 23-11, effective with service rendered on and after August 1, 2023.

**DISCUSSION:**

Issue

Whether the Commission should approve revisions to Schedule 4, the Multifamily Residential Demand Response Water Heater Pilot.

Applicable Rule or Law

Every public utility must file, "schedules which shall be open to public inspection, showing all rates, tolls and charges that it has established and which are in force at the time for any service performed by it within the state, or for any service in connection therewith or performed by any public utility controlled or operated by it" with the Public Utilities Commission. ORS 757.205. Any proposed change in rates, tolls, charges, rules, or regulations must be filed with the Commission at least 30 days before the effective date of the change. ORS 757.220; OAR 860-022-0015.

“[I]n order to produce cost-effective energy savings, reduce customer demand for energy, reduce overall electrical system costs, increase the public health and safety and improve environmental benefits,” electric utilities must, “plan for and pursue all available energy efficiency resources that are cost effective, reliable and feasible.” ORS 757.054.

Energy utilities apply for Commission approval of programs designed to promote the acquisition of cost-effective conservation resources pursuant to OAR 860-027-310. The Commission reviews proposed programs and program modifications to consider whether the program includes cost-effective measures, incents cost minimization, is not easily manipulated by the utility, and is predictable and simple. OAR 860-027-310(2). The program must also fairly allocate risks and rewards between shareholders and ratepayers, minimize cross-subsidization by non-participants, and promote rate stability.

## Analysis

### *Background*

On June 16, 2023, PGE filed a request with the PUC to revise the Multifamily Residential Demand Response Water Heater Pilot to close the pilot to new enrollments after July 31, 2023; and, to extend the pilot period for an additional two years to July 31, 2025, while the pilot undergoes redesign. This will allow PGE to continue to study existing participants and utilize the existing demand response capacity.

### *Current Filing*

PGE anticipates this two-year extension will allow enough time for the market to respond to CTA-2045 code anticipated to go into effect Summer 2023, increasing availability of CTA-2045 enabled water heaters so PGE can resume installations. CTA-2045 technology is expected to increase the connectivity of the water heaters in multifamily residences (MFR), making them a more reliable and cost-effective demand response asset. The current pilot design’s reliance on connectivity shortcomings of WiFi switches led to poor cost effectiveness results in evaluation. Prior to the launch of the redesign, PGE will engage with OPUC Staff and stakeholders.

### *Multifamily Residential Demand Response Water Heater Pilot Redesign*

The current Schedule 4, states that, “The MFR enrollment period will be through July 31, 2023. PGE will enroll MFRs by contracting with the Multifamily Property Owners or their property manager. Unless this pilot is otherwise terminated, MFRs and participating Residential Customers will be enrolled for the entire pilot term.”

If approved, the new Schedule 4 will provide that, “Enrollment in this pilot will close to new participants after July 31, 2023. Unless this pilot is otherwise terminated, current MFRs and participating Residential Customers will remain enrolled in the pilot.”<sup>1</sup> In other words, enrollment in the pilot will close, but the pilot will continue with its existing participants. For context, PGE forecasted 15,500 connected water heaters by 2023 in the Flexible Load Multi-Year Plan.<sup>2</sup> As of December 2022, the Company reported 13,433 water heaters enrolled.<sup>3</sup> Staff supports ceasing new enrollment to reduce costs while maintaining existing participants so the enrolled demand response capacity is not eliminated.

### Conclusion

Staff finds that the proposed revisions reasonable, both in closing the tariff to new participants and extending the pilot for an additional two years. Staff recommends the Commission approve the tariff as filed by PGE.

The Company has reviewed this memo and has stated no objection.

### **PROPOSED COMMISSION MOTION:**

Approve PGE’s proposed Schedule 4, Multifamily Residential Demand Response Water Heater Pilot Update, as described in the Advice Filing 23-11, effective with service rendered on and after August 1, 2023.

ADV 1523

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<sup>1</sup> Portland General Electric Company Fifth Revision of Sheet No. 4-2 P.U.C. Oregon No. E-18 Canceling Fourth Revision of Sheet No. 4-2.

<sup>2</sup> See Docket No. UM 2141. PGE’s Flexible Load Multi-Year Plan Update. September 2022. Page 88. <https://edocs.puc.state.or.us/efdocs/HAD/um2141had163540.pdf>.

<sup>3</sup> See Docket No. UM 1827. Application for Reauthorization of Deferred Accounting of Costs Associated with Demand Response Water Heater Pilot. April 2023. Page 2, <https://edocs.puc.state.or.us/efdocs/HAQ/um1827haq143014.pdf>.

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**SCHEDULE 4  
MULTIFAMILY RESIDENTIAL DEMAND RESPONSE WATER HEATER PILOT  
NO NEW SERVICE**

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**PURPOSE**

The Multifamily Residential Demand Response Water Heater Pilot is a demand response option for eligible Multifamily Properties. The objectives of the Multifamily Residential Demand Response Water Heater Pilot are:

- To quantify the energy consumption that can be shifted to different times from:
  - Water heaters equipped with a communication interface that supports Direct Load Control Events, or
  - Water heaters retrofitted with a control switch in the power supply to the tank
- To inform further the program design for a water heater demand response program;
- To determine an appropriate incentive level for Multifamily Property Owners and Residential Customers who choose to participate in a demand response program for water heaters;
- To integrate and test different technologies; and
- To implement different demand response dispatch strategies.

**DEFINITIONS**

Customer Override – The ability for the Residential Customer to temporarily suspend Direct Load Control for a period of 24 hours.

Direct Load Control – The means for a utility to remotely control an appliance. In terms of this pilot, direct load control allows the Company to control when the water heater uses electricity to heat water.

Direct Load Control Event – A period in which the Company will provide Direct Load Control.

Conventional Electric Resistance Water Heater – Multifamily Property Owners' existing electric resistant water heaters will be retrofitted to be demand response enabled. Water heaters that require replacement will be replaced with smart electric resistance water heaters with the approval of the Multifamily Property Owners.

Heat Pump Water Heater – Models compatible with the Company's available hardware, software, and communication technology that can engage in direct load control events.

**AVAILABLE**

In all territory served by the Company where the Company's demand response communication networks are available.

## SCHEDULE 4 (Continued)

### APPLICABLE

Subject to selection by the Company, Multifamily Property Owners may participate in the pilot. Residential Customers in multifamily residences (MFRs) will be the primary target of the pilot. In cases of rental properties, the pilot will be structured as an opt-out program, meaning Residential Customers will be automatically enrolled in the pilot if their Multifamily Property Owners enrolls in the pilot and the Residential Customer must withdraw from the program if they do not want to participate.

Residential Customers will be given notice about this pilot at the time of installation of the communication interface or at the start of their service. The Company will provide Residential Customers with information that they will be automatically enrolled in the pilot if they do not opt out. The notice will also provide the Residential Customer the contact information and instructions on how to opt out of the pilot at the time of installation or at the start of their service. If a Residential Customer chooses to opt out of this pilot, the installed communication interface and any other installed Company equipment will remain on the water heater. A Residential Customer that has elected to opt out will be removed from the dispatch of direct load control events. As new Residential Customers move into a participating MFR. The Company will be aware of a new Residential Customer based on customer data from the Company's Customer Information System (CIS). The number of eligible Residential Customers to participate in the pilot is 18,000 customer households. Residential Customers will remain on Schedule 7 and will be eligible for the incentives described in this schedule.

### ELIGIBILITY

For MFRs, the Company will initially select large complexes, negotiating with Multifamily Property Owners or their property manager for the installation of retrofit devices as well as new demand response enabled water heaters. At the Company's discretion, the Company will select qualifying properties based on number of apartments, size of apartments, occupancy, and size of existing water heater.

### DIRECT LOAD CONTROL EVENT

During the pilot there will be no limitation on the hours of Direct Load Control Events. This pilot will offer the ability for the Residential Customer to override a direct load control event, under the terms listed in Special Condition 4 of this pilot.

### ENROLLMENT

Enrollment in this pilot will close to new participants after July 31, 2023. Unless this pilot is otherwise terminated, current MFRs and participating Residential Customers will remain enrolled in the pilot.

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**SCHEDULE 4 (Concluded)**

**DATA COLLECTION**

In consideration for being allowed to participate in the Pilot, Multifamily Property Owners and Residential Customers agree that the Company or its representative may collect certain information from Multifamily Property Owners and Residential Customer's participation in the Pilot and use such information as described herein. Such information may include, but is not limited to, general energy usage and associated account and billing data (such information includes, but is not limited to, consumption and billing data, billing records, billing history, meter usage data, and rate information), name, email address, service address, account number, appliance serial number, activation date, runtime data, set-points, application and survey information. This data will be retained by the Company and its representatives for an indefinite amount of time. Multifamily Property Owners and Residential Customer agree that the Company and its Pilot representatives may use the information obtained through Pilot participation (a) to operate, administer, market, evaluate, analyze, change or improve the Pilot or utility services, (b) for the Company to prepare and present general, aggregated or anonymized results and information about the Pilot to third parties, including governmental entities such as the electricity system regulatory bodies, (c) for the Company to understand and evaluate participant habits and to inform the development and creation of utility programs and load planning, and (d) to inform Multifamily Property Owners and their property managers of irregularities associated with a given water heater. The Company and its Pilot representatives and agents will not use the data collected in the Pilot except as provided herein and will not otherwise disclose, transfer or sell this data.

**TERM**

The duration of this pilot is through July 31, 2025.

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