



Portland General Electric
121 SW Salmon Street • Portland, OR 97204
portlandgeneral.com

October 12, 2023

Public Utility Commission of Oregon
Attn: Filing Center
201 High Street S.E., Suite 100
P.O. Box 1088
Salem, OR 97308-1088

RE: Advice No. 23-17, Schedule 13 Smart Grid Testbed Pilot Update

Portland General Electric Company (PGE) submits this filing pursuant to Oregon Revised Statutes 757.205 and 757.210, and Oregon Administrative Rule 860-022-0025, for filing proposed tariff sheets associated with Tariff P.U.C. No. 18, with a requested effective date of **November 17, 2023**:

Fourth Revision of Sheet No. 13-1
Fourth Revision of Sheet No. 13-2
Second Revision of Sheet No. 13-3
Third Revision of Sheet No. 13-4¹
Original Sheet No. 13-5

PGE seeks to revise Schedule 13 Smart Grid Testbed (SGTB) Pilot to add the next two Phase II activities: the Flexible Feeder Study, and the Multi-family New Construction Study.

The Flexible Feeder demonstration seeks to explore the potential benefit of a concentrated number of connected Distributed Energy Resources (DERs) providing support to the grid. PGE will study this benefit by enrolling customers in the project area in existing energy efficiency and demand response offers (i.e., Schedules 5, 8, 14, and 25) as a precondition to participation in the study. Due to the complexity of the incentive offers, PGE is proposing publishing all incentive and eligibility details on the program website. A list of incentive offerings reviewed by the SGTB Demand Response Review Committee (DRRC) in September 2023 is included in this filing as Attachment A. PGE will review any subsequent changes to incentive offers with the DRRC and maintain historic records of incentive offer availability.

1. PGE withdrew the Second Revision of Sheet No. 13-4 due to pagination in Advice No. 22-24.

The Schedule 13 update also includes provisions to implement the Multifamily New Construction Study consistent with the Commission's approval of the implementation plan in Order 23-258, which will provide equipment incentives to participating multi-family properties to support the installation of flexible load enabled heat pump water heating equipment.

This filing does not include tariff updates for either of the two other studies approved by the Commission in Order No. 23-258, the Single Family New Construction demonstration or the Multi-family Retrofit study. The development of the Single Family New Construction demonstration will benefit from additional outreach and collaboration with potential builder participants to better define the market need and to inform the most effective incentive structure. Further refinement over the remainder of the year will inform future contracting and/or tariff updates for the implementation phase. The extension of a tariff filing for the Single Family New Construction demonstration does not impact any of the other testbed studies nor any existing PGE programs.

For the Multi-family Retrofit study, PGE has determined the project plan and incentive structure as proposed does not align well with the intended focus of the SGTB since adoption of flex load-ready equipment is now occurring naturally through building code requirements. Equipment incentives are not seen as primary drivers for this adoption. Therefore, PGE hopes to align SGTB efforts in support of existing ongoing programmatic updates, specifically the relaunch of the Multi-family Water Heater Pilot (Schedule 4). PGE intends to leverage the technical work moving forward in the SGTB Multi-family New Construction studies to inform the updates being made to the Multi-family Water Heater Pilot and intends to develop and share proposed next steps with the DRRC for how the Multi-family Retrofit budget can best support these efforts.

The Single Family New Construction and Multi-family Retrofit studies, along with additional demonstration projects, will be incorporated in a future tariff update as SGTB Phase II continues.

Attachment A contains enrollment and incentive estimates for the Flex Feeder demonstration.

A courtesy redline of Schedule 13 is attached.

To satisfy the requirements of OAR 860-022-0025, PGE responds as follows:

The changes do not increase, decrease, otherwise change existing rates, or impact revenues.

Please direct questions or comments regarding this filing to Casey Manley at (503) 464-8258. Please direct all formal correspondence and requests to the following email address pge.opuc.filings@pgn.com.

Sincerely,

\s\ Robert Macfarlane

Robert Macfarlane
Manager, Pricing and Tariffs

Enclosures

**SCHEDULE 13
SMART GRID TESTBED PILOT**

PURPOSE

The Smart Grid Testbed Pilot (SGTB) is a first-of-its-kind research project meant to advance Portland General Electric's (PGE) collective understanding and development of demand response (DR) to gain insight into how PGE could provide a demand-side resource at scale in lieu of traditional supply-side resources. The second phase (Phase II) of the SGTB seeks to expand upon the research and planning conducted in Phase I, which concluded on December 31, 2022, to increase PGE's understanding of how customers perceive and value DR so that PGE may more effectively engage customers in flexible load efforts. All Phase I activities concluded December 31, 2022.

To achieve these goals, PGE is piloting the Test Bed Smart Solar Study (Smart Solar Study), Test Bed EV Charging Study (EV Charging Study), Flexible Feeder, and Multi-Family Bundle demonstration projects.

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Smart Solar Study: PGE will leverage customer owned "smart inverters" (those equipped with the IEEE 1547-2018 Standard) to assess the value of inverter-based controls to deliver distribution operations value (e.g., Volt/VAR support); address hosting capacity issues; and support orchestration of Distributed Energy Resources (DERs) together with distributed solar and storage to minimize grid export. PGE will recruit customers with qualifying equipment by offering an upfront incentive in addition to an ongoing monthly incentive for continued enrollment throughout the project duration (January 2023 – December 2024).

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EV Charging Study: PGE will communicate with qualifying customer-owned electric vehicles (EV) to control the time of EV charging, while ensuring that the vehicles meet the operational needs of participants, and will evaluate customer acceptance of charge rate, charge time and Location-based Price Signals. Research in this project area will focus on improving understanding of the technical paths for charge management, costs, performance, and limitations. Customers within the EV Charging Study test bed with qualifying electric vehicles will opt in to receive an ongoing monthly incentive throughout the project duration (January 2023 – December 2024).

Flexible Feeder Study: The flexible feeder study seeks to explore the potential benefit of a concentrated number of connected DERs providing support to the grid. PGE will provide incentives, in addition to those offered to customers when enrolling in the respective DER programs, to promote installation of flexible load enabling and enhancing technologies within the project area. Eligible DERs include qualifying smart thermostats, battery energy storage systems, smart inverters, smart water heaters, and electric vehicles. Enrollment in the flexible feeder study will end at the earlier of August 31, 2026, or when incentive funds are exhausted.

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SCHEDULE 13 (Continued)

PURPOSE (Continued)

Multi-Family Bundle: The Multi-Family Bundle will promote the installation of flexible load enabling and enhancing technologies in newly constructed Multi-Family Dwellings. PGE will provide equipment purchase incentives for qualifying heat pump water heater (HPWH) systems that are flex load enabled, which will be used to assess load flexibility potential, building construction and design considerations, system operation and maintenance, and occupant feedback. Incentives will be available through the end of the study in December 2025 or until incentive funds are exhausted.

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DEFINITIONS

IEEE 1547-2018 Standard – The standard that establishes the criteria and requirements for interconnection of distributed energy resources with electric power systems and associated interfaces.

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Electric Vehicle Service Equipment (EVSE) – The device, including the cable(s), coupler(s), and embedded software, installed for the purpose of transferring alternating current electricity at 208 or 240 volts between the electrical infrastructure and the EV.

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Location-based Price Signals – The notification that a specific utility rate is being offered to a customer determined by their location in an eligible territory, allowing the utility to drive customer participation to achieve specific load shifting or load reduction goals of the area or feeder.

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AVAILABLE

Each demonstration area will have a different and distinct project boundary based on research conducted in Phase I. PGE customers may be eligible to enroll in the SGTB demonstration projects if located within a testbed’s geographic region as defined on PGE’s Smart Grid Test Bed webpage.

Each SGTB Phase II demonstration project will have different and distinct applicability. Smart Solar and EV Charging applicability is defined on PGE’s Smart Grid Test Bed webpage. Flexible Feeder project applicability and incentives will be on a dedicated website available to eligible customers. For the Multi-Family Bundle, PGE will designate eligible building owners and their associated new construction projects. Interested building owners can request inclusion of eligible new construction projects in the Multi-Family Bundle by emailing smartgridtestbed@pgn.com. An overview of the customers eligible for the demonstration projects is as follows:

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Smart Solar Study: Eligible Schedule 7 and Schedule 32 customers with interconnected photovoltaic (PV) systems behind the meter with qualifying smart inverters as defined on the SGTB webpage may elect to enroll in the project.

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SCHEDULE 13 (Continued)

AVAILABLE (Continued):

EV Charging Study: Eligible Schedule 7 customers with a qualifying EV as defined on the SGTB webpage and a Level 2 EVSE may elect to enroll in the project.

Flexible Feeder Study: Eligible customers who install any of the following technologies: smart thermostats, battery energy storage systems, smart inverters, smart water heaters and electric vehicles or who are already enrolled in the Smart Solar, EV Charging, or Smart Battery Pilot and within the project boundary. Specific eligibility for each technology is dictated by Schedules 5, 8, 14, and 25.

Multi-Family Bundle: Multi-Family Dwelling new construction projects where the accounts associated with the water heaters will receive service under either Schedule 7 or 32, depending on how the building is metered. Multifamily new construction project property owners must commit to the installation of qualifying HPWH equipment.

ENROLLMENT

Qualifying customers can enroll in the Smart Solar Study and EV Charging Study demonstration projects through the Smart Grid Test Bed webpage until December 31, 2024. Unless PGE terminates these demonstration projects, customers will remain enrolled for the entire project term. Each demonstration project within the SGTB Phase II will be subject to its own enrollment cap of a maximum of 500 participants for the Smart Solar Study and a maximum of 500 participants for the EV Charging Study.

For the Flexible Feeder demonstration, enrollment in PGE's demand response programs for thermostats and battery energy storage systems governed by Schedules 5, 8, 14, and 25 is required as a precondition to enrollment in Flexible Feeder offers. Customers in the Flexible Feeder project area may also enroll in the Smart Solar Study and EV Charging Study demonstration projects through the Smart Grid Test Bed webpage until December 31, 2024. Unless PGE terminates these demonstration projects, customers will remain enrolled for the entire project term.

For the Multi-Family Bundle, PGE will work directly with multifamily new construction project property owners to participate. A signed participation agreement will be obtained for each participant group at the time of enrollment in the demonstration. Unless PGE terminates these demonstration projects, this participation agreement will indicate enrollment for the entire project term.

INCENTIVES

Customers participating in a demonstration project within the SGTB will continue to pay all fees and charges associated with their currently enrolled rate schedule. Customers can qualify for the following incentives based on the demonstration project(s) enrolled:

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SCHEDULE 13 (Continued)

INCENTIVES (Continued)

Smart Solar Study

Eligible participants will receive a \$250 incentive paid at time of enrollment and will receive an additional ongoing incentive of \$10 per month while enrolled. The monthly incentive will begin at the month of enrollment after the tariff effective date and will continue through the end of the demonstration period (December 2024) unless the customer chooses to unenroll.

To remain enrolled in the project and to continue to receive monthly incentives, the customer must maintain the connection of their smart inverter to their WiFi network and must continue to allow PGE to communicate with their system via the manufacturer's interface.

EV Charging Study

Eligible participants will receive an incentive of \$20 per month while enrolled. The monthly incentive will begin at the month of enrollment after the tariff effective date and will continue through the end of the demonstration period (December 2024) unless the customer chooses to unenroll. Customers must first enroll in Schedule 8 and remain enrolled in the EV Charging Study demonstration to continue to receive monthly incentives.

Flexible Feeder Study

Eligible participants will receive a combination of incentives depending on the number of upgrades and flexible load capable equipment/upgrades installed. All incentive offers and eligibility terms will be published on PGE's Smart Grid Test Bed Collaboration website. Potential modifications to incentive offerings will be provided to the Demand Response Review Committee (DRRC) for review and feedback prior to rollout.

In all cases, the customer will be responsible for meeting eligibility criteria and maintaining good standing in the program as defined in applicable tariffs. PGE may call events outside of existing programmatic seasons and schedules. Additional monthly Flexible Feeder incentives will be available at the month of enrollment and will continue through the end of the demonstration period (August 31, 2026) unless the customer unenrolls.

Multifamily Bundle

Participating multifamily new construction project property owners will receive equipment purchase incentives of amounts up to \$1,800 per unitary HPWH system installed and up to \$1,000 per unit served by a central HPWH system. Installed HPWH equipment will subsequently be enrolled in PGE's Multifamily Residential Demand Response Water Heater Pilot (Schedule 4) once available to receive on-going participation incentives.

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SCHEDULE 13 (Concluded)

SPECIAL CONDITIONS

1. The Customer may unenroll from the Smart Grid Test Bed demonstrations at any time. If a Customer unenrolls, the Customer is not eligible to re-enroll during the pilot period.
2. At any time, PGE can interact with customer-owned equipment with intention to remotely adjust the device settings in accordance with project goals.
3. The participant will retain ownership of the PV system equipment and is responsible for all maintenance, replacement, and disposal costs.
4. Customers already enrolled in the Solar Payment Option are not eligible for the Smart Solar Study demonstration.
5. Incentives may be provided at PGE's discretion via an on-bill credit on the Customer's next monthly billing statement, direct deposit or check issued to participants by PGE, PGE's authorized consultants, or the Energy Trust of Oregon.
6. PGE is not responsible for any direct, consequential, incidental, punitive, exemplary, or indirect damages to the participating Customer or third parties that result from performing direct load control on a participating appliance.
7. PGE shall have the right to select the schedule and the percentage of the Customer's appliance(s) to cycle at any one time, up to 100%, at its sole discretion.
8. PGE will defer and seek recovery of all pilot costs not otherwise included in customer prices.

TERM

Phase II of the Smart Grid Test Bed concludes on December 31, 2027. The Smart Solar Study and EV Charging Study pilots will conclude on December 31, 2024. The Multifamily Bundle will conclude December 31, 2025. The Flexible Feeder study will conclude on August 31, 2026.

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PGE Advice No. 23-17

Schedule 13
Residential Testbed Pilot Update

Attachment A

Attachment A: Offers and Incentives Related to Flexible Feeder

Research Area: Flexible Feeder

Demonstration: Smart Grid Test Bed Collaboration

In accordance with PGE’s Flexible Feeder research plan, the Testbed team engaged with the Demand Response Review Committee (DRRC) to assess and prioritize various design options related to incentives. The DRRC reviewed and provided feedback on the incentive tables listed below in September 2023. Any additions or changes to Flexible Feeder incentive offerings will be provided to the DRRC for review and feedback prior to implementation.

Measure information will be made available to partners and eligible customers via PGE’s Smart Grid Test Bed Collaboration website.

Table 1: Market Rate Residential Energy Efficiency Offers

Measure Description	Typical Cost	ETO Max Incentive	PGE Added Incentive	Estimated Customer Co-Pay	Participation Requirements
Insulation: Single and Multi-Family					All measure-level eligibility provisions to be specified by Energy Trust of Oregon
Attic Insulation (per Sq. Ft.)	\$2.26	\$1.53	\$0.73	\$0	
Floor Insulation (per Sq. Ft.)	\$3.42	\$2.01	\$1.30	\$1.35	
Wall Insulation (Sq. Ft.)	\$4.39	\$2.78	\$1.30	\$1.23	
Smart Thermostats - All HVAC types					
Smart Thermostat Contractor Installed	\$400	\$250	\$200	\$0	
Smart Thermostat Retail or Online	\$250	\$189	\$50	\$11	
Water Heating: Single and Multi-Family					
Heat Pump Water Heater	\$3,500	\$390	\$2,000	\$1,110	
HVAC System Replacement					
Single Family Ductless Heat Pump	\$10,873	\$2,900	\$0	\$7,973	
Multi Family Heat Pump Conversion	\$8,758	\$5,624	\$3,000	\$134	
Single Family Heat Pump Conversion	\$10,261	\$5,624	\$3,000	\$1,637	

**All incentive values are displayed at the highest available value. Actual customer eligibility may vary depending on existing conditions.*

The table below lists the enrollment and monthly incentives available to customers participating in the Flexible Feeder demonstration via PGE Demand Response programs. Enrollment and monthly incentive amounts shown in Table 2 are additional to any customer incentive offerings offered to all participants in these programs.

Table 2: Flex Load Enrollment and Incentive Estimates

Flexible Load Description	Enrollment Incentive	Monthly Incentive	Participation Requirements
Smart Thermostats (Residential)	\$25	\$10	Customer must enroll and maintain enrollment in PGE’s Direct Load Control Pilot (Schedule 5) to receive enrollment and monthly incentives. Customer must maintain the connection of their smart thermostat to their WiFi network and must continue to allow PGE to communicate with their thermostat via the manufacturer’s interface.
Smart Water Heaters	\$0	\$10	To be available following PGE program development and launch. Customers who enroll an eligible water heater and connect via Universal Control Module (UCM) allowing PGE to communicate with their system via the manufacturer’s interface will be eligible for a monthly participation incentive until the end of the demonstration project as long as the water heater maintains communications.
EV Charging (Vehicle Telematics-)	\$0	\$10	Customer must maintain enrollment in PGE’s Residential EV Charging Pilot (Schedule 8) and SGTB EV Charging Study to receive monthly incentives.
Energy Storage	\$0	\$20	Customer must maintain enrollment in PGE’s Residential Battery Energy Storage Pilot (Schedule 14) to receive monthly incentives.

SCHEDULE 13 SMART GRID TESTBED PILOT

PURPOSE

The Smart Grid Testbed Pilot (SGTB) is a first-of-its-kind research project meant to advance Portland General Electric's (PGE) collective understanding and development of demand response (DR) to gain insight into how PGE could provide a demand-side resource at scale in lieu of traditional supply-side resources. The second phase (Phase II) of the SGTB seeks to expand upon the research and planning conducted in Phase I, which concluded on December 31, 2022, to increase PGE's understanding of how customers perceive and value DR so that PGE may more effectively engage customers in flexible load efforts. All Phase I activities concluded December 31, 2022.

To achieve these goals, PGE is piloting ~~both~~ the Test Bed Smart Solar Study (Smart Solar Study), ~~and~~ Test Bed EV Charging Study (EV Charging Study), Flexible Feeder, and Multi-Family Bundle demonstration projects.

Smart Solar Study: PGE will leverage customer owned "smart inverters" (those equipped with the IEEE 1547-2018 Standard) to assess the value of inverter-based controls to deliver distribution operations value (e.g., Volt/VAR support); address hosting capacity issues; and support orchestration of Distributed Energy Resources (DERs) together with distributed solar and storage to minimize grid export. PGE will recruit customers with qualifying equipment by offering an upfront incentive in addition to an ongoing monthly incentive for continued enrollment throughout the project duration (January 2023 – December 2024).

EV Charging Study: PGE will communicate with qualifying customer-owned electric vehicles (EV) to control the time of EV charging, while ensuring that the vehicles meet the operational needs of participants, and will evaluate customer acceptance of charge rate, charge time and Location-based Price Signals. Research in this project area will focus on improving understanding of the technical paths for charge management, costs, performance, and limitations. Customers within the EV Charging Study test bed with qualifying electric vehicles will opt in to receive an ongoing monthly incentive throughout the project duration (January 2023 – December 2024).

Flexible Feeder Study: The flexible feeder study seeks to explore the potential benefit of a concentrated number of connected DERs providing support to the grid. PGE will provide incentives, in addition to those offered to customers when enrolling in the respective DER programs, to promote installation of flexible load enabling and enhancing technologies within the project area. Eligible DERs include qualifying smart thermostats, battery energy storage systems, smart inverters, smart water heaters, and electric vehicles. Enrollment in the flexible feeder study will end at the earlier of August 31, 2026, or when incentive funds are exhausted.

SCHEDULE 13 (Continued)

PURPOSE (Continued)

Multi-Family Bundle: The Multi-Family Bundle will promote the installation of flexible load enabling and enhancing technologies in newly constructed Multi-Family Dwellings-. PGE will provide equipment purchase incentives for qualifying heat pump water heater (HPWH) systems that are flex load enabled, which will be used to assess load flexibility potential, building construction and design considerations, system operation and maintenance, and occupant feedback. Incentives will be available through the end of the study in December 2025 or until incentive funds are exhausted.

DEFINITIONS

IEEE 1547-2018 Standard – The standard that establishes the criteria and requirements for interconnection of distributed energy resources with electric power systems and associated interfaces.

Electric Vehicle Service Equipment (EVSE) – The device, including the cable(s), coupler(s), and embedded software, installed for the purpose of transferring alternating current electricity at 208 or 240 volts between the electrical infrastructure and the EV.

Location-based Price Signals – The notification that a specific utility rate is being offered to a customer determined by their location in an eligible territory, allowing the utility to drive customer participation to achieve specific load shifting or load reduction goals of the area or feeder.

AVAILABLE

Each demonstration area will have a different and distinct project boundary based on research conducted in Phase I. PGE customers may be eligible to enroll in the SGTB demonstration projects if located within a testbed's geographic region as defined on PGE's Smart Grid Test Bed webpage.

Each SGTB Phase II demonstration project will have different and distinct applicability. Smart Solar and EV Charging applicability is defined on PGE's Smart Grid Test Bed webpage. Flexible Feeder project applicability and incentives will be on a dedicated website available to eligible customers. For the Multi-Family Bundle, PGE will designate eligible building owners and their associated new construction projects. Interested building owners can request inclusion of eligible new construction projects in the Multi-Family Bundle by emailing smartgridtestbed@pgn.com. An overview of the customers eligible for the demonstration projects is as follows:

Smart Solar Study: Eligible Schedule 7 and Schedule 32 customers with interconnected photovoltaic (PV) systems behind the meter with qualifying smart inverters as defined on the SGTB webpage may elect to enroll in the project.

SCHEDULE 13 (~~Concluded~~Continued)

AVAILABLE (Continued):

EV Charging Study: Eligible Schedule 7 customers with a qualifying EV as defined on the SGTB webpage and a Level 2 EVSE may elect to enroll in the project.

Flexible Feeder Study: Eligible customers who install any of the following technologies: smart thermostats, battery energy storage systems, smart inverters, smart water heaters and electric vehicles or who are already enrolled in the Smart Solar, EV Charging, or Smart Battery Pilot and within the project boundary. Specific eligibility for each technology is dictated by Schedules 5, 8, 14, and 25.

Multi-Family Bundle: Multi-Family Dwelling– new construction projects where the accounts associated with the water heaters will receive service under either Schedule 7 or 32, depending on how the building is metered. Multifamily new construction project property owners must commit to the installation of qualifying HPWH equipment.

ENROLLMENT

Qualifying customers can enroll in the Smart Solar Study and EV Charging Study demonstration projects through the Smart Grid Test Bed webpage until December 31, 2024. Unless PGE terminates these demonstration projects, customers will remain enrolled for the entire project term. Each demonstration project within the SGTB Phase II will be subject to its own enrollment cap of a maximum of 500 participants for the Smart Solar Study and a maximum of 500 participants for the EV Charging Study.

For the Flexible Feeder demonstration, enrollment in PGE's demand response programs for thermostats, and battery energy storage systems governed by Schedules 5, 8, 14, and 25 is required as a precondition to enrollment in Flexible Feeder offers. Customers in the Flexible Feeder project area may also enroll in the Smart Solar Study and EV Charging Study demonstration projects through the Smart Grid Test Bed webpage until December 31, 2024. Unless PGE terminates these demonstration projects, customers will remain enrolled for the entire project term.

For the Multi-Family Bundle, PGE will work directly with multifamily new construction project property owners to participate. A signed participation agreement will be obtained for each participant group at the time of enrollment in the demonstration. Unless PGE terminates these demonstration projects, this participation agreement will indicate enrollment for the entire project term.

INCENTIVES

Customers participating in a demonstration project within the SGTB will continue to pay all fees and charges associated with their currently enrolled rate schedule. Customers can qualify for the following incentives based on the demonstration project(s) enrolled:

SCHEDULE 13 (~~Concluded~~Continued)

INCENTIVES (Continued)

Smart Solar Study

Eligible participants will receive a \$250 incentive paid at time of enrollment and will receive an additional ongoing incentive of \$10 per month while enrolled. The monthly incentive will begin at the month of enrollment after the tariff effective date and will continue through the end of the demonstration period (December 2024) unless the customer chooses to unenroll.

To remain enrolled in the project and to continue to receive monthly incentives, the customer must maintain the connection of their smart inverter to their WiFi network and must continue to allow PGE to communicate with their system via the manufacturer's interface.

EV Charging Study

Eligible participants will receive an incentive of \$20 per month while enrolled. The monthly incentive will begin at the month of enrollment after the tariff effective date and will continue through the end of the demonstration period (December 2024) unless the customer chooses to unenroll. Customers must first enroll in Schedule 8 and remain enrolled in the EV Charging Study demonstration to continue to receive monthly incentives.

Flexible Feeder Study

Eligible participants will receive a combination of incentives depending on the number of upgrades and flexible load capable equipment/upgrades installed. All incentive offers and eligibility terms will be published on PGE's Smart Grid Test Bed Collaboration website. Potential modifications to incentive offerings will be provided to the Demand Response Review Committee (DRRC) for review and feedback prior to rollout.

In all cases, the customer will be responsible for meeting eligibility criteria and maintaining good standing in the program as defined in applicable tariffs. PGE may call events outside of existing programmatic seasons and schedules. Additional monthly Flexible Feeder incentives will be available at the month of enrollment and will continue through the end of the demonstration period (August 31, 2026) unless the customer unenrolls.

Multifamily Bundle

Participating multifamily new construction project property owners will receive equipment purchase incentives of amounts up to \$1,800 per unitary HPWH system installed and up to \$1,000 per unit served by a central HPWH system. Installed HPWH equipment will subsequently be enrolled in PGE's Multifamily Residential Demand Response Water Heater Pilot (Schedule 4) once available to receive on-going participation incentives.

SCHEDULE 13 (Concluded)

SPECIAL CONDITIONS

1. The Customer may unenroll from the Smart Grid Test Bed demonstrations at any time. If a Customer unenrolls, the Customer is not eligible to re-enroll during the pilot period.
2. At any time, PGE can interact with customer-owned equipment with intention to remotely adjust the device settings in accordance with project goals.
3. The participant will retain ownership of the PV system equipment and is responsible for all maintenance, replacement, and disposal costs.
4. Customers already enrolled in the Solar Payment Option are not eligible for the Smart Solar Study demonstration.
5. Incentives may be provided at PGE's discretion via ~~an~~ an on-bill credit on the Customer's next monthly billing statement, direct deposit or ~~by~~ check issued to participants by PGE, PGE's authorized consultants, or the Energy Trust of Oregon.
6. PGE is not responsible for any direct, consequential, incidental, punitive, exemplary, or indirect damages to the participating Customer or third parties that result from performing direct load control on a participating appliance.
7. PGE shall have the right to select the schedule and the percentage of the Customer's appliance(s) to cycle at any one time, up to 100%, at its sole discretion.
8. PGE will defer and seek recovery of all pilot costs not otherwise included in customer prices.

TERM

Phase II of the Smart Grid Test Bed concludes on December 31st, 2027. The Smart Solar Study and EV Charging Study pilots will conclude on December 31st, 2024. The Multifamily Bundle will conclude December 31, 2025. The Flexible Feeder study will conclude on August 31, 2026.