



Portland General Electric
121 SW Salmon Street · Portland, Ore. 97204

July 17, 2020

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

RE: Advice No. 20-19, NEW Schedule 52, Nonresidential Electric Vehicle Charging Rebate Pilot

Portland General Electric Company (PGE) submits this filing pursuant to Oregon Revised Statutes 757.205, 757.210, and Oregon Administrative Rules (OARs) 860-022-0025, for filing proposed tariff sheets associated with Tariff P.U.C. No. 18, with a requested effective date of **December 18, 2020**:

Original Sheet No. 52-1
Original Sheet No. 52-2
Original Sheet No. 52-3

PGE hereby submits Schedule 52, a nonresidential electric vehicle (EV) charging rebate pilot. This Pilot, more fully described in Attachment A, aligns with, and supports, PGE's and the State's commitment to transportation electrification (TE) by providing an incentive to nonresidential customers to procure charging infrastructure. PGE is committed to leading the transformation to a clean energy future for its customers and region by decarbonizing its energy supply, electrifying customer end uses, and delivering operational excellence.

This pilot proposal addresses the guidance and actions directed by Oregon Senate Bills 1547 and 1044. In addition, as most recently articulated in Executive Order No. 20-04,¹ Governor Kate Brown calls for substantial reductions in greenhouse gas emissions (GHG) (i.e. reduce GHG emissions to 45% below 1990 levels by 2035) and there is urgency to act now as they "present a significant threat to Oregon's public health, economy, safety, and environment" and "the transition from fossil fuels to cleaner energy resources can significantly reduce emissions and increase energy security and the resilience of Oregon communities in the face of climate change."

¹ Brown, Kate. "Executive Order No. 20-04." Office of the Governor. State of Oregon. 10 Mar 2020, page 8. Retrieved from <https://drive.google.com/file/d/16isIO3GTqxVihqhhlcjGYH4Mrw3zNNXw/view>

As informed by its 2019 TE Plan (UM 2033), PGE identified three goals for 2025 to address critical barriers to accelerating transportation electrification and ensuring efficient integration into the grid:

- **Charging Adequacy:** Facilitating the pathways for the installation of 5,000 new non-residential ports² by 2025;
- **Fleet Interconnection:** Timely and affordable interconnection to PGE's electric grid;
- **Charging Optimization:** Demand Response-enabled charging infrastructure will enable PGE to create long-term flexible loads that reduce the costs of integrating renewable resources.

Through this pilot, PGE seeks to accelerate the electrification of the transportation sector and efficiently integrate those loads into the system. Specifically:

- **Charging Adequacy:** This pilot will reduce the up-front cost for business customers deploying EV charging infrastructure. Reduced friction in deploying EV charging infrastructure will result in the necessary rapid deployment of EV charging stations to ensure charging adequacy for residential EV drivers;
- **Fleet Interconnection:** Reduced friction in electrifying fleets will result in more electric fleets coming onto PGE's system faster;
- **Charging Optimization:** Data and site planning will enable PGE to minimize grid integration costs and create long-term flexible loads that reduce the costs of integrating renewable resources.

In addition, this pilot is meant to compliment PGE's TE Line Extension Allowance that was recently filed (PGE Advice No. 20-17).

The overarching goals of this pilot are to:

- Accelerate EV adoption by ensuring adequate charging infrastructure is available to meet customers' charging needs;
- Reduce the cost and complexity of installing EV Supply Equipment that can preclude Customers from deploying charging infrastructure; and
- Create a network of demand-side resources to reduce the costs of serving EV loads by supporting efficient grid operations and future renewables integration.

This pilot is supported by OPUC Docket No. UM 2003, PGE's application to defer costs associated with this pilot for future ratemaking.

To satisfy the requirements of OAR 860-022-0025(2), PGE responds as follows:

Schedule 52 does not increase, decrease, or otherwise change existing retail rates or have anything other than a de minimis impact on revenues.

²The cable and coupler used to transfer energy from the EVSE to the EV. The number of Ports is defined by the number of EVs that can be charged simultaneously by a given EVSE. There are commonly one or two Ports per EVSE.

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Charging Rebate Pilot
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Please direct any questions regarding this filing to Kalia Savage at (503) 464-7432.

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 & Tariffs

Enclosures

Cc: UM 1811 Service List
Eric Shierman, OPUC

**SCHEDULE 52
NONRESIDENTIAL ELECTRIC VEHICLE CHARGING REBATE PILOT**

PURPOSE

This Nonresidential Electric Vehicle (EV) Charging Rebate Pilot provides eligible Customers a rebate towards the purchase and installation of EV charging infrastructure. The overarching goals of the pilot are to:

- Accelerate EV adoption by ensuring adequate charging infrastructure is available to meet customers' charging needs;
- Reduce the cost and complexity of installing EV Supply Equipment that can preclude Customers from deploying charging infrastructure; and
- Create a network of demand-side resources to reduce the costs of serving EV loads by supporting efficient grid operations and future renewables integration.

AVAILABLE

In all territory served by the Company.

APPLICABLE

This pilot is applicable to Nonresidential Customers and property managers/owners of multifamily residence(s) until the cap approved in OPUC Order No. 19-385 has been reached. Temporary customers such as construction sites which have not received their certificate of occupancy are excluded.

DEFINITIONS

Electric Vehicle Supply 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.

Income-Eligible Multifamily Residence – A multifamily residence where residents in at least 50% of the dwelling units are at or below 80% area median income as defined by the US Department of Housing Urban Development, or the facility qualifies as Section 8 housing.

Operational – An EVSE installed on the premises that is able to transfer energy between the premises wiring and the EV, with all the applicable payment methods (e.g., credit card, phone app, subscription card), and transmit operational data (e.g. energy usage, session start/end times) to the EVSP.

Port – The cable and coupler used to transfer energy from the EVSE to the EV. The number of Ports is defined by the number of EVs that can be charged simultaneously by a given EVSE. There are commonly one or two Ports per EVSE.

SCHEDULE 52 (Continued)

DEFINITIONS (Continued)

Qualified EVSE –The list of qualified EVSE(s) that are available for rebate is determined by the Company and listed on PortlandGeneral.com.

ELIGIBILITY

Eligible Customers must own, lease, or demonstrate control over the site where the EVSE(s) are installed. The Customer will be responsible for procuring the EVSE(s).

ENROLLMENT

The customer enrollment period will be open until funds have been allocated. Eligible Customers may enroll at PortlandGeneral.com.

REBATE

The standard rebate is up to \$500 per Port for the installation of Qualified EVSE(s). Income-Eligible Multifamily Residence participants receive up to \$2,300 per Port. Rebates are available on a first come-first serve basis and the total rebate amount is limited to \$50,000 for any one Customer or location. Eligible Customers must comply with the application instructions and agree to the pilot Terms and Conditions on PortlandGeneral.com to receive the rebate.

Participating Customers will receive the one-time payment by check no later than 90 days from the Company receiving a complete application. All EVSE(s) installed under the pilot are subject to verification by PGE.

Participating Customers must meet the pilot requirements for 10 years. In the event the Participating Customer does not meet this commitment, the Participating Customer commits to reimburse PGE the pro-rata value of the rebate, calculated over the 10-year term.

SCHEDULE 52 (Concluded)

SPECIAL CONDITIONS

1. Participation in this pilot is not mandatory to install EV charging equipment.
2. The Customer's charges for Electricity Service under any of the Company's Standard Service or Direct Access Service schedules are not changed or affected in any way by service under this schedule and are due and payable as specified in those schedules.
3. The Company will defer and seek recovery of all pilot costs not otherwise included in rates.
4. Participating Customers will maintain the EVSE(s) on a Standard Service Schedule. Customers on Direct Access Service must have the participating chargers separately metered and on a Standard Service Schedule.
5. Participating Customers will ensure the EVSE(s) are Qualified and Operational. If a property with EVSE(s) installed under the pilot changes ownership, leaseholdship or management, participation in the pilot can be assumed by a new owner, lessee or manager that is willing to meet the pilot requirements.
6. Participating Customers will authorize the EVSP to provide operational data (e.g. energy usage, time of day usage and number of unique drivers) to PGE. Participating Customers agree to allow Company and its agents and representatives to use data gathered as part of the pilot in regulatory reporting, ordinary business use, industry forums, case studies or other similar activities, in accordance with applicable laws and regulations and to participate in Company-led research such as surveys.
7. Participating Customers may terminate participation in the pilot after providing PGE no less than 30 days' notice and are subject to the noncompliance reimbursement referenced in this Tariff. At the end of the 10-year term, Participating Customers have the option to continue to participate in the pilot if it is still active, but there is no obligation to do so.

PGE Advice No. 20-19
Attachment A

PGE's Business Electric Vehicle Charging Rebate Pilot

July 2020



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Acronyms

Acronym	Term
AC	Alternating Current
COVID-19	Coronavirus Disease of 2019
DER	Distributed Energy Resource
DR	Demand Response
DRMS	Demand Response Management System
EV	Electric Vehicle
EVSE	Electric Vehicle Supply Equipment
EVSP	Electric Vehicle Service Provider
GHG	Greenhouse Gas
IRP	Integrated Resource Plan
LDV	Light Duty Vehicle
L2 EVSE	Level 2 Electric Vehicle Supply Equipment
O&M	Operations and Maintenance
OAR	Oregon Administrative Rule
OCPP	Open Charge Point Protocol
OPUC	Oregon Public Utility Commission
ORS	Oregon Revised Statutes
PGE	Portland General Electric Company
SB	Senate Bill
TE	Transportation Electrification
TOU	Time of Use
USEPA	United States Environmental Protection Agency
USDOE	United States Department of Energy
USHUD	United States Department of Housing and Urban Development
ZEV	Zero-Emission Vehicle

Key Terms and Concepts

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

Demand Response (DR) – “Demand response is a non-persistent intentional change in net electricity usage by end-use customers from normal consumptive patterns in response to a request on behalf of, or by, a power and/or distribution/transmission system operator. This change is driven by an agreement, potentially financial, or tariff between two or more participating parties.”¹

Demand Response Management System (DRMS) – Software platform that allows the monitoring, control, scheduling, and management of Demand Response (DR) programs and Distributed Energy Resources (DERs) by PGE.

Electric Vehicle Service Providers (EVSPs) – Companies that provide the connectivity across a network of EVSE(s). Connecting to a central server, they manage the software, database, and communication interfaces that enable operation of the EVSE.

Light Duty Vehicle (LDV) – A vehicle with a maximum Gross Vehicle Weight Rating < 8,500 lbs.²

Open Charge Point Protocol – An open networking standard enabling interchangeable services and operations between EVSE(s) and networks.³

Port – The cable and coupler used to transfer energy from the EVSE to the EV. The number of Ports is defined by the number of EVs that can be charged simultaneously by a given EVSE. There are commonly one or two Ports per EVSE.

Site – A physical location housing one or more EVSE(s).

¹ Northwest Power and Conservation Council. *Demand Response Advisory Committee*. Retrieved from <https://www.nwccouncil.org/energy/energy-advisory-committees/demand-response-advisory-committee>.

² USEPA. *Vehicle Weight Classifications for the Emission Standards Reference Guide*. Emission Standards Reference Guide. USEPA. 23 Feb 2017. Retrieved from <https://www.epa.gov/emission-standards-reference-guide/vehicle-weight-classifications-emission-standards-reference-guide>.

³ For more information, go to: <https://www.openchargealliance.org>

Preface on Procedural History

This document supersedes Section 3, Business Charging, of Portland General Electric Company's (PGE's) proposal filed on February 15, 2019, in Public Utility Commission of Oregon (OPUC or Commission) Docket No. UM 1811.⁴ This filing includes PGE's tariff to support a Business Electric Vehicle Charging Pilot (Pilot) of \$1 million in non-capital expenses, in response to stakeholder feedback, and the amended stipulation⁵ for Order 19-385.

The stipulation states:

PGE agrees to propose a workplace charging and/or fleet charging program within one-year of the date of the Stipulation, conditioned on Commission approval of the Stipulation. The approximate total cost of the proposal to be charged to customers will be \$1M (only nominal O&M costs will be charged to customers in this proposal). The program shall be open to both cost-of-service and direct access customers. The proposed \$1M results from a removal of \$1M from the PGE's proposed Education and Outreach budget in its application. PGE will also separately consider developing programs to increase access to electricity as a transportation fuel at multifamily dwellings.⁶

⁴ Portland General Electric Company. *UM 1811 Transportation Electrification Compliance Filing*. UM 1811. Public Utility Commission of Oregon. 15 Feb 2019. Retrieved from <https://edocs.puc.state.or.us/efdocs/HAD/um1811had151943.pdf>.

⁵ Public Utility Commission of Oregon. Order 19-385. UM 1811. Public Utility Commission of Oregon. 07 Nov 2019. Retrieved from <https://apps.puc.state.or.us/orders/2019ords/19-385.pdf>.

⁶ Public Utility Commission of Oregon. *Order 18-054*. UM 1811. Public Utility Commission of Oregon. 16 Feb 2018. Retrieved from <https://apps.puc.state.or.us/edockets/orders.asp?OrderNumber=18-054>.

Background

PGE is pleased to submit our Business Electric Vehicle Charging Rebate Pilot (Pilot) for consideration by our customers, stakeholders, and the Commission. This filing satisfies the amended stipulation in OPUC Docket No. UM 1811 and the intent of the Oregon State Legislature,^{7,8} and is one of the many proposals that carries out the transportation electrification vision set forth in our 2019 Transportation Electrification (TE) Plan. PGE's TE portfolio of offerings, including the Pilot proposed herein, will play a critical role in powering the advancement of Oregon's transition to a clean energy future. Our programs will support the state's goals to decarbonize the transportation sector while ensuring that we are building a grid that can maximize value from new distributed energy resources (DERs).

PGE is committed to delivering clean, reliable, and affordable transportation fuel to our customers.

Our goals and commitments align with and support the State's commitment to TE. In 2016, the Oregon State Legislature passed Senate Bill (SB) 1547, which notes "transportation electrification is necessary to reduce petroleum use, achieve optimum levels of energy efficiency and carbon reduction, meet federal and state air quality standards, meet this state's greenhouse gas emissions reduction goals" and "improve the public health safety". In 2019, SB 1044 established state-wide goals for zero-emission vehicle (ZEV) adoption, including that the vehicle market must be transformed by 2035 to meet statewide greenhouse gas (GHG) reduction goals.⁹ Furthermore, in 2020, Oregon Executive Order 20-04, established that "the rapid transition from internal combustion engines to zero-emission vehicles will play a key role in reducing emissions from the transportation sector and advancing the state's GHG emissions reduction goals," and "it is in the interest of utility customers and the public generally for the utility sector to take actions that result in rapid reductions of GHG emissions... including... expanding low carbon transportation choices for Oregonians."¹⁰

In 2018, PGE made a commitment to lead the transformation to a clean energy future for our customers with a focus on three objectives: decarbonize our generation mix, electrify end uses, and perform efficiently and reliably. This commitment was the solidification of multiple years of working with policymakers, environmental groups, community organizations, and our customers to create the policies and programs necessary to support Oregon's overall clean energy goals. As a result of this work and because the transportation sector is Oregon's largest and fastest growing contributor to state-wide GHG emissions,¹¹ PGE is taking specific steps to ensure that clean electricity is the fuel source for Oregon's transportation system.

As a result of SB 1547, the OPUC promulgated Oregon Administrative Rules (OARs), Chapter 860, Division 087, Transportation Electrification Programs. OAR 860-087-0001 and -0020, directs PGE to file a TE Plan that sets forth the programs that PGE will propose "to accelerate transportation electrification" in its service territory. OAR 860-

⁷ In the passing of Chapter 28, Oregon Laws 2016, the state legislature acknowledges that there is a role for electric companies to play in accelerating TE.

⁸ Senate Bill (SB) 1547, Section 20.1, 78th Oregon Legislative Assembly, 2016 Regular Session. Chapter 28, 2016 *Oregon Laws*. Retrieved from https://www.oregonlegislature.gov/bills_laws/lawsstatutes/2016orlaw0028.pdf

⁹ SB 1044, <https://olis.leg.state.or.us/liz/2019R1/Downloads/MeasureDocument/SB1044/Enrolled>

¹⁰ Executive Order No. 20-04. Retrieved from https://www.oregon.gov/gov/Documents/executive_orders/eo_20-04.pdf

¹¹ Oregon Department of Environmental Quality. *Statewide Greenhouse Gas Emissions*. Retrieved from <https://www.oregon.gov/deq/aa/programs/Pages/GHG-Oregon-Emissions.aspx>

087-0030, sets forth that “[a]n electric company must file an application with the Commission for each program to accelerate transportation electrification,” and the requirements for that application.

In February 2018, the OPUC adopted in part and modified in part a stipulation which included an agreement for future TE program proposals, specifically residential home charging, workplace, and/or fleet charging programs.¹² In PGE’s 2019 TE Plan, we forecasted around 100,000 EVs in PGE’s service territory by 2025, powered by over 50,000 Level 2 electric vehicle supply equipment (L2 EVSE) – more than 6,000 of which are needed at multifamily, workplace, public and light-duty fleet locations.¹³ In response to these changing legislative and market dynamics, PGE proposes the following Pilot.

¹² OPUC. *Order No. 18-054. OPUC Docket No. UM 1811*. 2018 Feb 16. Retrieved from <https://apps.puc.state.or.us/orders/2018ords/18-054.pdf>

¹³ PGE 2019 Transportation Electrification Plan, Table 21 – PGE Service Area EV Forecast through 2050 by Vehicle Type (Reference Case) and Table 22 – EV Charging Future Needs: Port Count, by Use Case, Year, and Charger Type. <https://www.portlandgeneral.com/-/media/public/our-company/documents/pge-2019-transportation-electrification-plan>.

Section 1 Case for Business Charging

PGE’s surveys and interviews with residential and non-residential customers indicate that current and prospective EV drivers need access to more charging infrastructure,¹⁴ and our business customers want PGE to support them in deploying workplace and public charging.¹⁵ This customer research is supported by the results of an EV charging needs assessment, as identified in PGE’s TE Plan.¹⁶ As indicated in Table 1, below, this assessment estimates customers will need approximately 6,500 and over 53,000 L2 charging ports by 2025 and 2050, respectively:

Table 1 – Currently-Deployed and Projected Need for EV Charging in PGE Service Territory (L2 Port Count by Use Case and Year)

Use Case	2019	2025	2050
Multifamily	Unknown ¹⁷	856	20,525
Workplace and Fleet (LDV)		2,200	21,548
Public	822	3,392	11,692
Total	822+	6,448	53,765

The Pilot will reduce cost and complexity for business customers deploying EV charging infrastructure to serve their employees, customers, residents or fleet vehicles. Cost and complexity were already barriers to the installation of EV charging; the emergence of the COVID-19 pandemic, and subsequent global economic upheaval, has increased the importance of PGE supporting our customers in their efforts. By providing a rebate to offset the cost for up to 1,000 new charging ports in our service territory, this Pilot will accelerate EV adoption and create a network of grid-edge resources that can be utilized in the future to support efficient grid operations and renewables integrations by shifting load to times when clean energy is abundant. In addition, by providing an increased rebate for income-eligible multifamily participants, PGE is able to fully offset the cost of the EVSE and increase equity of access to EV charging.

The Pilot delivers on the criteria the Oregon Legislature directed the Commission¹⁸ to consider when evaluating TE programs:¹⁹

- The criteria that **the pilot be in the utility’s service territory** is addressed by the fact that the Pilot will only be applicable to the deployment of EVSE(s) physically located inside PGE’s service territory.
- The criteria that **the pilot be prudent** is addressed by the fact that the Pilot is time- and cost-limited by the stipulated \$1 million cap, and PGE has designed the Pilot to support the state’s legislative and

¹⁴ Portland General Electric Company. *PGE Electric Vehicle Survey (Residential Customers)*. PGE. Oct 2018.

¹⁵ Portland General Electric Company. *PGE Commercial Customer Interviews*. PGE. Jul 2019.

¹⁶ Portland General Electric Company. *PGE’s 2019 Transportation Electrification Plan*. UM 2033. Public Utility Commission of Oregon. 30 Sep 2019 PGE TE Plan, pages 52-54. Retrieved from <https://edocs.puc.state.or.us/efdocs/HAA/haa165721.pdf>

¹⁷ The number of currently deployed Multifamily and Workplace and Fleet (LDV) charging ports in PGE’s service area was not available / published at the time of this writing. As of Q1 2019, the USDOE Alternative Fuels Data Center (see: <https://afdc.energy.gov/>) estimated 822 Public (not Multifamily or Workplace and Fleet) charging ports in the PGE service area.

¹⁸ Senate Bill 1547, Section 20(4), “Transportation Electrification Programs”, 78th Oregon Legislative Assembly, 2016 Regular Session.

¹⁹ Id.

executive goals, maximize both benefits for customers, and derive specific learnings to inform future EV offerings.²⁰

- The criteria that **the pilot be reasonably expected to be used and useful** is addressed by the fact that rebates will not be paid until a site is confirmed to be commissioned.
- The criteria that **the pilot be reasonably expected to support the grid, improve grid efficiency, and improve operational efficiency** is addressed by the fact that EVs can create system value for all customers by supporting flexible loads, as well as the fact that EVs support PGE's efforts to help our customers achieve their clean energy goals.

Through this Pilot, PGE aims to create a network of grid assets that will be capable of providing grid services in the future. All EVSE(s) will provide PGE with operational data (e.g. energy usage), which allows PGE to better understand the impact of EV charging to the grid and the opportunities for system value. All EVSE(s) will be DR-enabled to ensure that PGE can integrate those EVSE(s) into the Energy Partner program in the future.

The Pilot also provides an important touchpoint between PGE and our customers. PGE will be able to use the opportunity to educate our customers about Time-of-Use (TOU) rates and demand charges. PGE will work with the customer and participating charging service providers to encourage the default pricing that a participant chooses to charge their users is built upon a TOU rate to optimize grid efficiency.

Further, we believe that broad EV adoption presents opportunity to create a benefit for all PGE customers by adding electric load, and thereby, new revenue.

- The criteria that **the pilot be expected to stimulate innovation, competition, and customer choice** is addressed by the fact that the Pilot will support business customers by allowing them to choose the charging equipment that meets their needs. EV charging equipment and service providers will have the opportunity to compete for such work. By supporting the build-out of a broader EV network, the Pilot will reduce barriers to EV adoption; in turn, PGE expects this will create more demand for EV-related products and services.

In addition to its standalone benefits, the Pilot is intended to fit seamlessly with PGE's other planned and proposed TE offerings. Customers who enroll in the Pilot and accept PGE's TE Line Extension Allowance (TLEA)²¹ with utility ownership of behind-the-meter infrastructure, for example, will realize savings on the installation of EV charging infrastructure, with similar timelines and conditions between the two offerings. Over time, as the Pilot reaches its conclusion and the EV charging market matures, PGE envisions that the TLEA could evolve into a market appropriate TE rate.

²⁰ PGE acknowledges that determinations of prudence are ultimately within the authority of the OPUC.

²¹ As of this filing, the TLEA is pending with the Commission via PGE Advice Filing No. 20-17.

Section 2 Pilot Overview

PGE proposes this Pilot to learn about and support business customers' deployment of EV charging equipment. Under the agreed cap of \$1 million operation and maintenance cost (O&M) expense,²² PGE estimates that it can offer business customers rebates for up to 1,000 EV charging ports. PGE will offer a rebate for the installation and enablement of qualifying EV charging equipment. This rebate may be combined with other programs that support the expansion of EV charging.

This Pilot will require that charging equipment communicate operational data (e.g. energy usage) to PGE over the useful life of the equipment (10 years). This communication is essential to meet the Pilot's goal to learn about users' charging behavior. PGE will leverage this data to prepare our products, services, and/or system for forecast increases in EV load.

To participate in the Pilot, customers' charging equipment will be required to be Demand Response (DR) enabled. Although PGE does not plan to call DR events as part of this Pilot, we want to ensure that the charging equipment can provide grid services in the future. To that end, PGE will ensure that charging equipment is DR-enabled so that customers may participate in PGE's Energy Partner program and deliver flexible value to the grid, if and when PGE makes such an offering available.

2.1 Eligibility

The Pilot will target, but not be limited to, the following participants, including those customers who take electricity under Cost of Service or Direct Access Service:

- **Workplaces** – Places of employment;²³
- **Multifamily** – Multiple separate housing units for residential inhabitants contained within one building or several buildings, with a central parking area with contiguous parking stalls;²⁴
- **Multitenant** – Properties such as large office buildings or mixed use with multiple tenants;
- **Destination Centers** – Properties such as retail or other public location whose owners and/or tenants want to provide charging for their clientele; and
- **Light-Duty Fleets** – Vehicles could include city inspection vehicles, transportation network companies, etc.

Participating customers must meet the Pilot requirements for a 10-year term which include, but are not limited to, the EVSE's ability to deliver a charge to a vehicle with all applicable payment methods (e.g. credit card, phone app, subscription card), authorizing the transmission of operational data to PGE and utilizing pre-qualified equipment which is DR-enabled. In the event the participant does not meet these obligations, the participant

²² Senate Bill 1547, Section 20(4), 78th Oregon Legislative Assembly, 2016 Regular Session.

²³ PGE recognizes that Covid-19 and increased work-from-home options may impact the need for workplace charging and has adjusted its forecasts for this target segment accordingly.

²⁴ The target customer at multifamily locations is the property manager, landlord, HOA or similar entity. Individual residential customers are not eligible for this pilot.

commits to reimburse PGE the value of the rebate on a pro-rata basis (i.e. the participant will reimburse PGE one-tenth of the rebate for each remaining year in the 10-year term).

If a property with EV charging equipment supplied by the Pilot changes ownership, the new owner may assume the right to keep the charging equipment functional and the site agreement can be reassigned to the new owner (assuming they meet the program participation requirements). If the agreement is not reassigned, the participant agrees to reimburse PGE the pro-rata portion of the rebate.

Rebates will be paid upon completion of the charging equipment installation and certification that the site is operational and able to charge vehicles.

2.2 Qualified Product List

PGE will establish a qualified charging equipment product list before the official launch of the Pilot. Criteria for the qualified product list include, but are not limited to:

- EVSPs that are Open Charge Point Protocol compliant or support a standard application protocol. PGE will consider EVSPs that have a documented open application program interface capable of communicating EVSE operational data (e.g. such as number and length of charging sessions, energy consumed) via a network and allowing control via a Demand Response Management System (DRMS);
- EVSPs open to educating customers about the Pilot and driving customer enrollment therein;
- EVSPs either initiating their own outreach activities or having collaborative outreach activities to sell, install, and enroll customers in the Pilot.

Given the financial investments, staffing needs, and information technology resources required to establish connectivity between the EVSPs and DRMS, it is essential for PGE to be thorough in its selection and commitments.

2.3 Pilot Costs

Pilot expenses include the rebate incentive, education and outreach, internal labor resources to administer the Pilot, and evaluation expenses. The Pilot is limited to \$1 million nominal value, which supports up to 1,000 charging ports. The standard rebate amount is planned at \$500 per port, while the rebate for income-eligible multifamily participants²⁵ is planned at \$2,300 per port. The standard rebate will offset approximately 20% of the EVSE cost, whereas the income-eligible rebate will offset up to 100% of the EVSE cost. Rebates will be offered on a “first come, first served” basis to encourage adoption. Total rebates are limited to \$50,000 for any one customer.

Table 2, below, outlines the estimated costs of the Pilot. As the Pilot proceeds, costs will be monitored and adjusted accordingly so as not to exceed \$1 million in non-capital expenses as per the stipulation.

²⁵ **Income Eligible Multifamily Housing** is defined as residents in at least 50% of the dwelling units must be at or below 80% of area median income as defined by the U.S. Department of Housing and Urban Development (USHUD) or the facility must qualify as Section 8 housing. Qualifying facilities must continue to meet the income eligibility requirement as specified in the service agreement.

Table 2 – Projected O&M Budget 2020 – 2024

O&M Categories	Expenses for 1,000 Ports
Rebates	\$611,000
Education and Outreach	\$89,000
Labor Resources ²⁶	\$225,000
Evaluation	\$75,000
Total	\$1,000,000

PGE plans to begin accepting applications to the Pilot following Commission approval, and offer rebates until incentive funds are exhausted (depending on the rate of adoption, will likely occur by the end of 2024). PGE’s evaluation vendor will submit an interim pilot report to PGE in 2022 and a final report at the end of the Pilot period.

2.4 Education and Outreach

The Pilot may employ the following methods for outreach and recruitment:

- **Outreach staff** – Leverage outreach personnel to engage, inform, and sign-up customers, as well as engage municipalities and bring trade allies into the Pilot;
- **Website** – Create an online forum that educates customers about the Pilot and allows them to request a follow-up conversation. The website will be promoted via search engine optimization, social media and online advertising, and email outreach, as appropriate;
- **PGE newsletters** – Create general awareness for the Pilot via regular outreach channels targeting customers interested in an EV charging pilot; and
- **Trade ally network** – Socialize the Pilot with EVSPs and electricians and provide support so they direct potential customers to participate.

2.5 Evaluation

The evaluation will measure the effectiveness of the Pilot in meeting its objectives and identify areas for enhancement. PGE may measure the energy impacts on PGE’s system as part of additional research with separate funding. The following are some of the learning objectives:

- Track customer participation and satisfaction levels with pilot offerings (e.g. rebates, equipment choices);
- Understand PGE’s ability to influence customers’ decisions to install charging equipment and/or (as appropriate) operate EV fleets;

²⁶ Labor to support program administration including but not limited to pilot set up, processing rebate applications, issuing incentive payments, addressing customer questions, tracking expenses.

- Document charging installation successes and challenges, and customers’ perceptions of working with PGE;
- Understand the load curves of EV charging based on site type, and potential implications for the distribution grid; and
- Identify Pilot implementation successes and challenges, and improvement opportunities.

Expected process evaluation activities include:

- **Logic Model**²⁷ – Early in the evaluation process, PGE and its evaluator will review and update the logic model to ensure that it accurately illustrates how the Pilot’s planned activities lead to a set of expected short- and longer-term outcomes. The logic model will help to structure evaluation activities and help identify gaps in the Pilot design if goals are not achieved.
- **Data analytics** – The evaluation will track and report participation levels and include firmographic analysis²⁸ to determine which types of customers are participating. The evaluation will also leverage metering data from the EVSE(s) to establish load curves.
- **PGE administrator interviews** – PGE’s evaluator will conduct annual in-depth interviews with PGE staff and implementation partners on a wide range of pilot topics. The initial interviews will focus on the launched pilot design, customer targeting and outreach activities, as well as pilot implementation and staff coordination. Subsequent interviews will focus on implementation successes and challenges, pilot design or delivery changes enacted (and anticipated), and lessons learned.
- **Participant web surveys (in 2022 and 2023)** – Topics may include sources of Pilot awareness, ease of enrollment, satisfaction with equipment choices and the rebates process, impacts on employee EV ownership/leasing, experience working with PGE, energy bill impacts and tariff changes (if any), and impact of EV charging on fleet operations (where applicable).
- **Attribution analysis** – The participant surveys will include a series of questions to help gauge the influence of PGE’s rebates on their decisions to install EV charging and/or operate EV fleets. These types of “self-report” questions cannot conclusively measure the value of PGE’s Pilot to customers but can provide feedback to shape the Pilot design.

2.6 Direct Access Considerations

The Pilot is open to both cost-of-service and direct access customers, but participation is not mandatory (i.e. a customer can install EV charging equipment independently from the Pilot). Direct access participants will be required to meter EV charging energy separately (bearing the cost of the meter installation) and the energy used to fuel the EVSE purchased on a cost-of-service basis. These requirements have been established to create a

²⁷ Navigant defines a logic model as “a visual representation of a plausible and sensible method of how a program will work under certain conditions to solve an identified problem and achieve the program goals.”

²⁸ The Wiglaf Journal defines firmographics as the “descriptive attributes of firms that can be used to aggregate individual firms into meaningful market segments.” Retrieved on 11/06/2019 from <https://www.wiglafjournal.com/marketing/2013/01/what-are-firmographics/>

pathway towards attaining a net benefit for all PGE customers. As designed, one of the primary benefits associated with this Pilot is incremental revenues associated with the new charging loads (which may apply downward pressure on all customer rates). PGE's costs in this Pilot are borne by all PGE customers. New charging load associated with this Pilot must be served on cost-of-service basis so that *all* PGE customers also benefit from new load revenue attributable to the Pilot.

If a customer (Direct Access Service or Cost-Of-Service), who installed the EV charging equipment as part of the Pilot, opts out of cost-of-service, the participant commits to reimburse PGE the pro-rated rebate value.

Section 3 Conclusion

The Pilot will help PGE learn and support business customers' deployment of EV charging equipment. The data collected regarding charging behavior will help PGE prepare for the forecast increase in EV load.²⁹ The requirement that EV charging equipment be DR-enabled sets the stage for these assets to support the grid and improve operational efficiency. We anticipate these EVSE(s) will provide valuable grid services in the future through PGE's Energy Partner program.

²⁹ Navigant. Distributed Resource and Flexible Load Study (from PGE's 2019 IRP, page 465).



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