



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

February 10, 2021

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

**RE: Advice No. 21-03, NEW Schedule 53, Nonresidential Heavy-Duty Electric Vehicle Charging Program**

Portland General Electric Company (PGE) submits this filing pursuant to Oregon Revised Statutes 757.205 and 757.210, and Oregon Administrative Rule (OAR) 860-022-0025, for filing proposed tariff sheets associated with Tariff P.U.C. No. 18, with a requested effective date of **March 15, 2021**:

Thirtieth Revision of Sheet No. 1-1  
Twenty Fourth of Sheet No. 1-2  
Original Sheet No. 53-1  
Original Sheet No. 53-2  
Original Sheet No. 53-3

PGE hereby submits Schedule 53, PGE Nonresidential Heavy-Duty Electric Vehicle Charging Program. This program, more fully described in Attachment A, offers opportunities to nonresidential customers who develop electric vehicle charging sites designed to support heavy-duty vehicle charging levels of over 1 MW. The program will be active through March 14, 2023. The development of the charging sites can:

- Provide unique opportunities to better understand grid impacts from heavy duty electric vehicle charging rates and how complementary grid edge technology (storage, solar, demand response) can help ensure infrastructure can be deployed in ways that benefit the grid
- Offer opportunities to actively engage and provide helpful guidance to customers in the design, deployment, commissioning, and operation of heavy-duty vehicle charging infrastructure
- Obtain heavy-duty electric vehicle usage data and gain insights to charging load profiles

This filing aligns with and supports PGE's and the State's commitment to transportation electrification (TE) and prepares PGE for the adoption of new heavy-duty electric vehicle charging technologies and grid integration. 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.

As informed by its 2019 TE Plan (UM 2033), PGE identifies goals to address the need for reliable fueling infrastructure to eliminate obstacles to nonresidential customers in converting their fleets to electric vehicles (EVs)<sup>1</sup>. Through early engagement of high-powered charging infrastructure, this program supports the development of optimal charging solutions and grid integration for such vehicles and infrastructure as we prepare for broad commercialization. The learnings from this program will help PGE gain valuable insight into future planning, rate design and grid integration for medium/heavy duty fleet EV customers.

PGE will provide funding to develop the charging infrastructure in support of the heavy-duty vehicle electrification process and reduce the electrical infrastructure investment burden for customers.

As PGE engaged in furthering these goals, we sought opportunities for partnering on projects where such learnings could be gathered. In doing so, at the time, we acted without the appropriate tariff in place. The decision to proceed was made as the company anticipated additional legislative and regulatory authority to engage in such projects, but that authority did not materialize within the expected timelines. As such, PGE is seeking to remedy the situation through the filing of this tariff and hope that this tariff can be expedited and will be approved by OPUC before a project goes into service. While the process is not ideal, these projects are valuable and will deliver significant benefits for our customers.

PGE is including the Table of Contents to add new Schedule 53 in addition to Schedule 52 that was inadvertently excluded in previously approved Advice Filing 20-19. Sheet No. 1-2 also changes due to pagination.

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

Schedules 53 does not increase, decrease, or otherwise change existing retail rates or have anything other than a de minimis impact on revenues.

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<sup>1</sup> Portland General Electric 2019 Transportation Electrification Plan Page 135 2.2.3.2

Please direct questions to Teresa Tang at [teresa.tang@pgn.com](mailto:teresa.tang@pgn.com) Please direct all formal correspondence and requests to the following email address [pgc.opuc.filings@pgn.com](mailto:pgc.opuc.filings@pgn.com)

Sincerely,

*\s\ Robert Macfarlane*

Robert Macfarlane  
Manager, Pricing and Tariffs

Enclosures

PGE Advice No. 21-03  
NEW Schedule 53, Nonresidential Heavy-Duty  
Electric Vehicle Charging Program

Attachment A

## Attachment A

### Nonresidential Heavy-Duty Electric Vehicle Charging Program Transportation Electrification Program Application

1) A Transportation Electrification Program application must include:

(a) A description of the program that includes, but is not limited to, a description of:

(A) Program elements, objectives, timeline, and expected outcomes;

PGE proposes that the program include the following elements, objectives, timeline, and expected outcomes:

#### **Elements:**

- PGE will support eligible customers in the deployment of transportation electrification technologies that are pre-commercial, are likely to represent significant new load, and able to interact with other grid edge technologies to modify grid impacts.
- PGE will provide technical assistance, matching funds for eligible project costs (funding percentage determined on a project by project basis), and own, operate, and maintain make-ready infrastructure.
- Eligible customers will share data on site designs, technology performance, and technology energy use, with the exception of data deemed proprietary.
- The technology deployment must be open to the public.

#### **Objectives:**

- Enable the deployment of pre-commercial transportation electrification technologies within PGE's service area to create early learning opportunities for PGE.
- Capture early learnings on pre-commercial transportation electrification technologies, including load profiles, energy use, and grid impacts.
- Leverage early learnings to develop strategies, new products, and/or services to ensure that new transportation electrification technologies can be deployed quickly and have a positive impact on the grid.
- Ensure deployments benefit the public.

#### **Timeline:**

PGE proposes a program duration of two years.

#### **Expected Outcomes:**

- Increased numbers of pre-commercial heavy-duty transportation electrification technologies deployed within PGE's service area and early learning opportunities.
- Development of new strategies, products, and/or services that ensure the timely deployment of new transportation electrification technologies and positive grid impacts.
- Enhanced efficiency of existing planning, engineering, and operations services to serve new transportation electrification loads.
- Enhanced workforce readiness in pre-commercial heavy-duty transportation electrification infrastructure design, engineering, construction, operation, and maintenance.

*(B) Market baseline assumptions;*

PGE documented market baseline conditions in Section 1 of the 2019 Transportation Electrification Plan (2019 TE Plan)<sup>1</sup>. Section 1.6.1.2 details technology progress in the medium and heavy-duty vehicle space. Subsequent announcements by vehicle manufacturers show market launch for heavy-duty vehicles is planned for late 2021<sup>23</sup>.

Section 1.6.2.1 details increases in charging speeds, especially for medium and heavy-duty vehicles. Global vehicle charging standards development body CharIN has continued to work on their Megawatt Charging System, testing out connectors at the National Renewable Energy Laboratory in October of 2020<sup>4</sup>.

Section 1.4 – Table 21 shows PGE's latest projections for heavy-duty vehicles in our service area. PGE anticipates there to be 200 heavy duty vehicles by 2025, growing to 1,500 by 2030.

Based on our 2019 TE Plan market assessment and subsequent market activities described above, we believe:

- Heavy-duty transportation electrification technologies are rapidly evolving.
- Heavy-duty vehicle charging technologies may have a large impact on the electrical grid.

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<sup>1</sup> <https://edocs.puc.state.or.us/efdocs/HAA/haa102039.pdf>

<sup>2</sup> <https://media.daimler.com/marsMediaSite/en/instance/ko/Daimler-Trucks-launches-additional-electric-Freightliner-Customer-Experience-fleet.xhtml?oid=45823295>

<sup>3</sup> [https://tesla-cdn.thron.com/static/1LRLZK\\_2020\\_Q4\\_Quarterly\\_Update\\_Deck\\_-\\_Searchable\\_LVA2GL.pdf?xseo=&response-content-disposition=inline%3Bfilename%3D%22TSLA-Q4-2020-Update.pdf%22](https://tesla-cdn.thron.com/static/1LRLZK_2020_Q4_Quarterly_Update_Deck_-_Searchable_LVA2GL.pdf?xseo=&response-content-disposition=inline%3Bfilename%3D%22TSLA-Q4-2020-Update.pdf%22)

<sup>4</sup> <https://www.charinev.org/news/news-detail-2018/news/the-charin-path-to-megawatt-charging-mcs-successful-connector-test-event-at-nrel/>

- Heavy-duty vehicle technologies may scale quickly once commercialized.

*(C) Major performance milestones;*

Major program performance milestones may include:

- Project concept completion
- Customer agreement execution
- Preliminary design completion (30% construction drawings)
- Final design completion (100% construction drawings)
- Permit approval
- Groundbreaking
- 50% construction completion
- 100% construction completion
- Interconnection
- Commissioning
- Grand opening
- Annual reports, including energy use data, load profiles, grid impacts, and learnings.

*(D) Where applicable, a description of program phases, including a proposal for when each subsequent program phase will be submitted for Commission review;*

Program phases may include:

- Project evaluation
- Contract negotiation (contract subject to commission review for approval)
- Construction
- Commissioning
- Data Collection (continuous)
- Annual reporting (continuous, venue to communicate out project learnings)
- Decommissioning

*(E) Expected utilization, participation eligibility, and any incentive structures;*

**Utilization:**

PGE proposes to exclude traditional minimum utilization requirements from this program as pre-commercial transportation electrification technologies may periodically go unused during the life of the project.

However, eligible customers must provide reasonable assurances that the technology will be used.

**Eligibility:**

This program is eligible to customers that manufacture or operate pre-commercial heavy-duty transportation electrification technologies.

For this program, pre-commercial technologies are defined as technologies that manufacturers or operators have made public announcements about development and/or future availability (1 – 3 years) but that most customers cannot purchase today.

**Incentives:**

PGE will fund a portion of eligible project costs, including design, engineering, construction, and commissioning. PGE will own and operate the make-ready infrastructure for the duration of the project.

PGE will also provide technical assistance for make-ready infrastructure design.

The total aggregate amount of Company contributions under this program is \$10 million for all projects.

*(F) Identification of market barriers, program implementation barriers, and program strategies to overcome the identified barriers;*

**Market Barriers:**

PGE discusses market barriers in Section 1.2 of the 2019 TE Plan. PGE anticipates heavy-duty transportation electrification technologies to face barriers of cost and infrastructure availability.

PGE also expects that the deployment of heavy-duty vehicle charging infrastructure will require expertise in civil, electrical, and utility infrastructure that may be new to traditional vehicle manufacturers. Charging rates in excess of 1 MW may also generate additional deployment costs through required utility infrastructure upgrades, further detailed in 2019 TE Plan Section 1.7.4.

**Program Implementation Barriers:**

Potential implementation barriers may include:

- Vendor risk: Pre-commercial technologies may not yet have sources of revenue.
- Technology risk: Pre-commercial technologies may not perform as desired and/or require improvements and modifications during the program. Pre-commercial technologies may also never be commercialized.

- Market risk: Pre-commercial technologies may not end up playing a significant role in the market if other technologies are adopted more widely.

### **Strategies to Overcome Barriers:**

This program will address market barriers by:

- Providing funds for pre-commercial technology deployments within PGE's service area, bringing down the overall cost of deployment;
- Capturing early learnings on how heavy-duty charging infrastructure can be deployed most cost effectively, including minimizing grid impacts
- Providing technical assistance in civil, electrical, and utility infrastructure design, ensuring efficient infrastructure design
- Owning, operating, and maintaining the make-ready infrastructure, further reducing deployment costs and required customer expertise in electrical and utility infrastructure

*(G) Description of the electric company's role and, if applicable, a discussion of how the electric company proposes to own or support charging infrastructure, billing services, metering, or customer information;*

PGE's role will be to:

- Provide technical assistance to aid in the design and engineering of technology deployments;
- Provide funds for eligible project costs (funding percentage determined on a project by project basis); and
- Own, operate, and maintain make-ready infrastructure.

*(H) Whether transportation electrification adoption attributed to the program will likely necessitate distribution system upgrades;*

Some projects in this program may require distribution system upgrades. The costs of these upgrades may be considered eligible project costs and included in any cost sharing agreement between PGE and the program participant.

*(I) Where applicable, a discussion of ownership structure;*

PGE will own, operate, and maintain all make-ready infrastructure associated with the project. PGE may also own and operate other grid edge technologies, including but not limited to energy storage systems, on-site generation, and control systems. The program participant would own, operate, and maintain all other aspects of the project.

*(J) Where applicable, a discussion addressing interoperability of invested equipment;*

PGE seeks to maximize the interoperability of the technologies deployed through this program but recognizes that industry standards regarding these pre-commercial technologies are still in development.

*(K) Where applicable, a discussion of any national standards for measurement and communication; and*

PGE seeks to conform to any national standards for measurement and communication for technologies deployed through this program but recognizes that pre-commercial technologies may not yet be subject to industry or government standards.

*(L) Any other information requested by the Commission.*

PGE will provide additional information as requested.

*(b) Data used to support the descriptions provided in paragraphs (1)(a)(A)-(L) of this rule.*

PGE has included citations to supporting data throughout the program proposal.

*(c) A description of program coordination that includes a description of:*

*(A) Stakeholder involvement in program development;*

PGE conducted informal engagement with heavy-duty fleet vehicle operators, transit agencies, and heavy-duty vehicle manufacturers to understand how heavy-duty vehicle charging infrastructure might be deployed in the future. Informal engagements took the form of participation in industry conferences and meetings with customers.

*(B) Efforts to coordinate with related state programs;*

This program is consistent with state executive and legislative goals supporting transportation electrification. However, PGE is not aware of any specific state programs that support the deployment of pre-commercial heavy-duty transportation electrification technologies.

PGE also intends to use the data gathered from these projects to participate in research with universities, national laboratories, and the U.S. Department of Energy.

*(C) Coordination, if any, of delivery with other market actors and activities, and how the market and other market actors can leverage the underlying program or projects within the program.*

PGE intends for these projects to be collaborative in nature and welcomes the participation of other market actors, including transportation electrification charging hardware, charging software, vehicle, grid edge control, energy storage system, energy generation, and/or other vendors.

*(d) A description of the electric company's long-term strategy to accelerate transportation electrification in its service territory in an effective and efficient manner and how the proposed program fits within the long-term strategy. To the extent possible, the strategy description shall include, but not be limited to, a discussion of the following:*

*(A) The current condition of the transportation electrification market in the electric company's service territory and the outlook for development of the market in the absence of the proposed program;*

Section 1.4 – Table 21 in PGE's 2019 Transportation Electrification Plan shows PGE's latest projections for heavy-duty vehicles in our service area. PGE anticipates there to be 200 heavy duty vehicles by 2025, growing to 1,500 by 2030. Vehicle manufacturers have stated the intention for these vehicles to charge at rates from 1.5 to 3 MW, further detailed in Section 1.6.2.1.

While these technologies remain pre-commercial, the future implications are significant. PGE anticipates that heavy-duty vehicle charging technology may be located a retail distribution centers, highway fueling stations or truck stops, and/or vehicle depots and even small numbers of 1 MW+ chargers may trigger distribution or substation level upgrades. Example scenarios are further detailed in PGE 2019 TE Plan Section 1.7.4.

Without this program, PGE loses the opportunity to obtain early learnings in how this new charging infrastructure will be utilized and may be delayed in developing new products and services to enable customers to quickly and cost effectively deploy this technology. Without these early learnings, PGE may only be able to provide customers with traditional solutions to serve large new loads. PGE believes this may slow the rate of heavy-duty vehicle deployment in their service area.

*(B) Near and long-term market barriers to the development of transportation electrification and how the electric company proposes specifically to address those barriers;*

The cost and timing of distribution system and substation system upgrades may present significant barriers to customers who deploy multiple 1 MW+ charging stations. These barriers are further detailed in PGE 2019 TE Plan Section 1.7.4.

PGE proposes to address these barriers by obtaining early learnings in heavy-duty charging infrastructure deployment and grid impacts and developing new products and services to service customers that wish to deploy heavy-duty charging infrastructure can do so quickly and cost effectively. Such deployments may also offer PGE the opportunity to establish best practices for the use of complementary grid edge

technologies to reduce deployment costs and ensure positive grid impacts.

This program represents a critical first step to addressing these market barriers.

*(C) Near and long-term opportunities for improving the operation and reliability of the electric company's power system through transportation electrification and how the electric company proposes specifically to take advantage of those opportunities; and*

PGE anticipates heavy-duty vehicle charging infrastructure will present opportunities to improve power system operations by supporting the efficient integration renewables, further detailed in PGE 2019 TE Plan Section 5.1.

PGE may also explore the use of optimization and control software to further enhance power system operations by starting, stopping, or modifying the power output of charging stations.

*(D) Other factors pertinent to the electric company's plans for transportation electrification.*

PGE may use projects as platforms for the testing and evaluation of other transportation electrification or grid edge technologies.

*(e) A description of program costs that includes, but is not limited to:*

*(A) Estimated total program costs, including incentives, program delivery, evaluation, marketing, and administration costs;*

PGE proposes a total program cost cap of \$10 million, including program administration, cost sharing, marketing, and evaluation. Each customer participating in the program is limited to \$5 million total.

*(B) Estimated participant costs;*

Program participants are responsible for at least half of all eligible project costs.

*(C) How the electric company proposes to recover costs; and*

PGE proposes to recover program costs as a new capital investment included in the revenue requirement of the next general rate case.

*(D) Any other information requested by the Commission.*

*(f) A description of the expected program benefits that includes, but is not limited to:*

*(A) Program benefits, including to whom and when benefits are accrued;*

Program benefits include:

- Early learnings in heavy-duty vehicle charging infrastructure energy use, load profiles, and grid impacts
- A platform for the development of strategies, new products, and/or services to ensure that new transportation electrification technologies can be deployed quickly and have a positive impact on the grid
- Early adoption of new technology for future fleet electrification customers and minimize cost of grid integration
- Enable unique industry insights to better service fleet customers quicker and at lower costs
- Increased public access to charging infrastructure

*(B) Electrical system benefits; and*

Electrical system benefits include:

- Early learnings about the grid impacts of heavy-duty charging infrastructure
- Potential opportunity to test the use of complementary grid edge technologies to mitigate the impact of heavy-duty charging infrastructure.
- Potential opportunity to receive grid services from vehicles or other grid edge technologies such as energy storage system, on-site generation, or grid edge controls.
- Opportunity to enhance planning estimates for heavy-duty fleet vehicle loads.
- Potential opportunity to better understand the value and use cases associated with vehicle-to-grid technologies.
- Development of standards and safety protocols for electrical system workforce training and deployment

*(C) A discussion of how a net benefit to ratepayers is attainable.*

PGE believes that the benefits of obtaining early learnings on pre-commercial technologies that could significantly impact the grid when deployed at scale will create a positive net benefit for ratepayers. Early learnings enable PGE to have a strong understanding of the grid impacts of new technologies before scale is achieved; develop new products, programs, and/or services to help mitigate grid impacts; and potentially explore the use complementary grid edge technologies to efficiently and cost effectively serve new load.

PGE also believes these early learnings will help accelerate the deployment of new transportation electrification technologies, bringing new load to our system.

Projects may also generate other monetary benefits, including Clean Fuels Program credits and new retail electricity revenues.

*(g) A description of how the electric company will evaluate the program that includes, but is not limited to:*

*(A) Timeline of program evaluation and proposed evaluation reporting schedule;*

PGE proposes to submit annual reports for all projects in this program.

*(B) Estimated cost of evaluation;*

PGE anticipates the use of existing PGE and participant staff to complete the annual reports at no additional cost.

*(C) How the evaluation will be conducted and whether third-party evaluation is necessary;*

PGE does not believe that third-party evaluation is necessary for this program. The evaluation will be conducted by PGE and program participant staff and will focus on heavy-duty charging infrastructure energy use, load profiles, and grid impacts.

*(D) How the evaluation will address identified barriers; and*

The evaluation will address identified barriers by capturing early learnings on heavy-duty charging infrastructure grid impacts that will be used to inform new products, programs, and/or services.

*(E) A discussion of the method of data collection that is consistent with subsection (1)(b) of this rule and how the data will be used to evaluate the effectiveness of the program.*

PGE will collect energy use, load profile, and grid impact data through a combination of meter data, charging station data, and/or grid edge control system data (where applicable).

*(F) Any other evaluative information requested by the Commission.*

*(h) A description of how the program addresses the considerations in Oregon Laws 2016, chapter 028, section 20(4)(a)-(f).*

The program will serve the customers in the service territory of PGE. PGE will fund a portion of eligible project costs, including design, engineering, construction, and commissioning. PGE will own and operate the make-ready infrastructure for the duration of the project. The make-ready infrastructure is the backbone of fleet charging infrastructure, the physical network that transfer electricity from the grid to the vehicles themselves. After make-ready infrastructure is in place, the charging site will be energized and start serving heavy-duty vehicles. The early learnings in heavy-duty charging infrastructure deployment energy use will enable PGE to better understand grid impacts and develop new programs, products, and/or services to reduce deployment costs and ensure positive grid impacts. The successful deployment of pre-commercial technologies can stimulate market adoption of the new technology and improve

grid efficiency at larger scale. The best practices can provide guidance for fleet customers in the fleet electrification process and increase electrical system efficiency and reduce costs for all Oregon customers. Learnings on grid impacts of heavy-duty charging stations will inform future system planning and the long-term strategy for how electric transportation can improve the efficiency of the electrical system and support a modern and efficient electric system.

**SCHEDULE 53  
NONRESIDENTIAL HEAVY-DUTY ELECTRIC VEHICLE CHARGING**

**PURPOSE**

This Nonresidential Heavy-duty Electric Vehicle Charging offering aims to provide learnings about high-powered charging infrastructure, integrated energy storage and on-site generation technologies, and vehicle-to-grid technologies. This schedule is designed solely for the use of electricity as a transportation fuel for heavy duty vehicles. The objectives of this offering are:

- Provide unique opportunities to better understand grid impacts from heavy duty Electric Vehicle charging rates and how complementary grid edge technology (storage, solar, demand response) can help ensure infrastructure can be deployed in ways that benefit the grid
- Offer opportunities to actively engage and provide helpful guidance to customers in the design, deployment, commissioning, and operation of heavy-duty vehicle charging infrastructure
- Obtain heavy-duty Electric Vehicle usage data and gain insights to charging load profiles

**AVAILABLE**

In all territory served by the Company.

**APPLICABLE**

This offering is applicable to nonresidential heavy-duty Electric Vehicles manufacturers who deploy high-powered charging infrastructure and also allows for public charging for light, medium and heavy-duty vehicles at the same site, and following conditions:

1. Where the site is made-ready to host or hosts at least one heavy-duty Electric Vehicle charging station capable of an output of at least one MW per port or greater;
2. Where the site is made-ready to host or hosts an energy storage system; and
3. Where the site is made-ready to host or hosts on-site generation.

**DEFINITIONS**

Charging Infrastructure – All infrastructure and equipment required to deliver energy to an Electric Vehicle, including all civil and electrical infrastructure or equipment located downstream of the Service Meter such as panelboards, switchboards, conductors, pathway, equipment foundations.

Clean Fuels Credits – Non-monetary asset generated by Electric Vehicle Charging Stations under Oregon's Clean Fuels Program

## SCHEDULE 53 (Continued)

### DEFINITIONS (Continued)

Electric Vehicle Charging Software - Software used to monitor, control, optimize, or perform other functions on Electric Vehicle Charging Stations, or other devices.

Electric Vehicle Charging Station – Equipment designed and installed specifically for the purposes of transferring energy to an Electric Vehicle.

High Power – Electric Vehicle charging rates in excess of 1 MW.

Vehicle Classes - The vehicle weight classes are defined by Federal Highway Administration (FHWA) and are used consistently throughout the industry. Vehicle classes, 1-8, are based on gross vehicle weight rating (GVWR), the maximum weight of the vehicle, as specified by the manufacturer. GVWR includes total vehicle weight plus fluids, passengers, and cargo. FHWA categorizes vehicles as Light Duty (Class 1-2), Medium Duty (Class 3-6), and Heavy Duty (Class 7-8).

Light Duty Vehicle – gross vehicle weight rating less than 10,000 lbs.

Medium Duty Vehicle – gross vehicle weight rating between 10,001 – 26,000 lbs.

Heavy Duty Vehicle – gross vehicle weight rating higher than 26,001 lbs.

### ELIGIBILITY

Nonresidential customers may participate in this offering if the following conditions are met:

1. Customer agrees to co-development of a large public charging site for medium- and heavy-duty electric commercial vehicles.
2. The large public charging site is designed to support customer's vehicle charging activities and give access to public to charge heavy-duty vehicles.
3. The site is made ready to host or hosts multiple grid edge technology such as: on-site energy storage, on-site energy generation, demand response capabilities, advanced grid edge controls, and/or other new and novel grid edge technologies.
4. Customer signs up for Oregon Clean Fuels Program
5. Customer will provide electric usage data and operational data to the Company upon request.
6. Customer has not been granted any transportation line extension allowance associated with the subject project.

### COMPANY RESPONSIBILITY

Upon request from a Customer, the Company will contribute a portion of the project development costs including costs related to investments behind the customer meter. The total aggregate amount of Company contributions under this schedule is \$10 million for all projects. Each customer participating in the program is limited to \$5 million total. Due to the individualized nature of each project, specifics on the development of the project and payment responsibilities will be contained in a service agreement. Upon termination of the agreement, the Company may remove or abandon Company owned Charging infrastructure in place.

**SCHEDULE 53 (Concluded)**

**SPECIAL CONDITIONS**

1. 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.
2. Prior to receiving service on this schedule, the Customer and the Company must enter into a written agreement, signed by the Customer.
3. Customers receiving service under this schedule will agree to a multi-year term for the agreement. Should the Customer terminate the agreement before the end of the term, the Customer will reimburse the Company for a portion of the capital investment as specified in the service agreement.

**TERM**

Effective March 15, 2021 through March 14, 2023.

**PORTLAND GENERAL ELECTRIC COMPANY  
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**PORTLAND GENERAL ELECTRIC COMPANY  
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