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August 6, 2021

Public Utility Commission of Oregon
Attn: Filing Center
201 High St. SE, Suite 100
Salem, OR 97308-1088

Re: Docket No. ADV 1288 – Pacific Power Transportation Electrification Pilot Program Proposals

Attached for electronic filing in the above-referenced matter, please find comments on behalf of ChargePoint, Inc. in response to Pacific Power's proposed Transportation Electrification Pilot Programs filed on June 30, 2021.

Please let me know if you have any questions.

Respectfully,

A handwritten signature in black ink, appearing to read "Matthew Deal".

Matthew Deal
Manager, Utility Policy
ChargePoint, Inc.

cc: Eric Shierman, Senior Utility Analyst, Program Development & Resources, Energy Resources & Planning

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Comments by ChargePoint, Inc.

I. Introduction

ChargePoint, Inc. (ChargePoint) submits these comments to the Public Utilities Commission of Oregon (Commission) regarding Pacific Power's (Pacific Power or the Company) proposed portfolio of three new transportation electrification (TE) pilot programs.

ChargePoint generally supports the Company's proposed TE pilot programs. As a participant in developing utility electric vehicle (EV) programs in many jurisdictions, ChargePoint supports the goals and objectives of the proposed TE pilot programs and respectfully offers several recommendations intended to strengthen the programs, encourage greater participation and ensure a healthy and competitive market for EV charging services.

In summary, our comments are as follows:

- ChargePoint recommends removing any program requirement for chargers to run on the Open Charge Point Protocol (OCPP) platform, as an OCPP requirement is inappropriate, unnecessary and will diminish customer choice.
- ChargePoint recommends that any future technical standards developed for these pilot programs be reviewed and approved by the Commission with an opportunity for stakeholder input.
- ChargePoint recommends that the requirements in the Residential and Nonresidential Charging Pilot programs for participants to be enrolled in a TOU rate for one year be modified to instead give participants a choice to be enrolled in either a TOU rate or a demand response program for at least one year.

II. About ChargePoint

ChargePoint is a world leading electric vehicle charging network, providing scalable solutions for every charging scenario from home and multifamily to workplace, parking, hospitality, retail and transport fleets of all types. ChargePoint's cloud subscription platform and software-defined charging hardware is designed to enable businesses to support drivers, add the latest software features and expand fleet needs with minimal disruption to overall business.

ChargePoint's hardware offerings include Level 2 (L2) and DC fast charging (DCFC) products, and ChargePoint provides a range of options across those charging levels for specific use cases including light duty, medium duty, and transit fleets, multi-unit dwellings, residential (multi-family and single family), destination, workplace, and more. ChargePoint's software and cloud services enable EV charging station site hosts to manage charging onsite with features like Waitlist, access control, charging analytics, and real-time availability. With modular design to help minimize downtime and make maintenance and repair more seamless, all products are also UL-listed and CE (EU) certified, while Level 2 solutions are ENERGY STAR® certified.

ChargePoint's primary business model consists of selling smart charging solutions directly to businesses and organizations while offering tools that empower station owners to deploy EV charging designed for their individual application and use case. ChargePoint provides charging

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network services and data-driven, cloud-enabled capabilities that enable site hosts to better manage their charging assets and optimize services. For example, with those network capabilities, site hosts can view data on charging station utilization, frequency and duration of charging sessions, set access controls to the stations, and set pricing for charging services. These features are designed to maximize utilization and align the EV driver experience with the specific use case associated with the specific site host. Additionally, ChargePoint has designed its network to allow other parties, such as electric utilities, the ability to access charging data and conduct load management to enable efficient EV load integration onto the electric grid.

III. Summary of Pacific Power's Proposed Pilots

Pacific Power filed its Transportation Electrification Program proposal on June 30, 2021 in Docket No. ADV 1288. The proposed TE Program includes proposals for three separate, three-year pilot programs: a Residential Charging Pilot Program, a Nonresidential Pilot Program, and an Outreach and Education Pilot Program.

Pacific Power's proposed Residential Charging Pilot and Nonresidential Charging Pilot Programs would provide cash or on-bill incentives for customers to install qualifying EV chargers.¹ Customers participating in these programs would own the charging equipment and would consent to share certain charging data with Pacific Power for the life of the equipment.² Customers would also be required to enroll in a time-of-use (TOU) or time-varying rate option for at least one year, to ensure price signals are sent to participants.³ Pacific Power states that after two years it may consider deployment of demand response options once the impacts of TOU/time-varying rates are assessed.⁴ Additionally, Pacific Power states that a third-party coordinator will be hired to assess technology standards and best practices in electric vehicle supply equipment (EVSE) incentive programs;⁵ and a pre-qualified list of eligible equipment will be developed for both programs to ensure reliable access to charging data and to ensure that the equipment meets certain standards.⁶

Pacific Power also proposes an Outreach and Education Pilot Program, building on an initial outreach and education pilot, to promote TE in Oregon through customer education. The proposed program is broadly split into three categories: decision making support, high quality EV experiences, and planning and studies.⁷ Pacific Power states that all three proposed pilot programs will remain technology and brand neutral to encourage competition and customer choice.⁸

¹ See p. ii of Pacific Power's Residential Charging Pilot proposal, p. 5 of the Nonresidential Charging Pilot proposal.

² See p. 16 of the Residential Charging Pilot proposal, p. 23 of the Nonresidential Charging Pilot proposal.

³ See p. 7 of Pacific Power's Residential Charging Pilot proposal, p. 7 of the Nonresidential Charging Pilot proposal.

⁴ See p. 20 of the Residential Charging Pilot proposal, p. 27 of the Nonresidential Charging Pilot proposal.

⁵ See pp. 16-17 of the Residential Charging Pilot proposal, p. 24 of the Nonresidential Charging Pilot proposal.

⁶ See p. 15 of the Residential Charging Pilot proposal, and p. 24 of the Nonresidential Charging Pilot proposal.

⁷ See pp. 1-3 of Pacific Power's Outreach and Education Pilot Program proposal.

⁸ See p. 35 of Pacific Power's Residential Charging Pilot proposal, p. 38 of the Nonresidential Charging Pilot proposal, and p. 21 of the Outreach and Education Pilot proposal.

IV. Comments

EVSE Technical Requirements and Standards for Program Eligibility

ChargePoint is encouraged that Pacific Power recognizes the critical role that home charging will play as EV adoption grows, and the importance of “smart” or networked chargers. Networked chargers allow for additional functionality that will play a key role in maximizing the benefits of adding EVs and associated EVSE technology to the grid; including the ability to conduct managed charging and demand response programs through EV charging stations. Requiring smart charger capabilities from the outset will future-proof the investment in EV charging infrastructure, and enable Pacific Power, third-party providers, vendors, and customers to reap significant benefits from increased functionality and a wider range of future program design options.

Pacific Power states that it will coordinate “with other electric utilities (particularly PGE, to preserve consistency across the State) and [consult] with experts” to determine “best-practice technology standards.”⁹ As an active participant in PGE’s existing residential and nonresidential EV charging incentive programs, ChargePoint appreciates Pacific Power’s commitment to coordinate with PGE regarding best practices.¹⁰ ChargePoint supports many of the best practices outlined in Pacific Power’s proposal, as they align with the existing program requirements currently in place for PGE, but is concerned by the potential requirement for home charging hardware to operate on the OCPP platform. OCPP is a voluntary communication protocol used to communicate between a networked charger and a network management system. OCPP supports an extremely limited set of network management functionality, and a mandate for chargers to operate on specific software or communication protocols would effectively limit the flexibility for charging companies to provide consumer-facing and cybersecurity features, which could prevent companies from maintaining robust security regimes.

Additionally, OCPP has not been adopted or approved by any international or national standards organizations such as ANSI or ISO/IEC, and no nationally or internationally recognized standards bodies have adopted or approved any standards for communication between an EV charging station and an EV charging network. Accordingly, it is premature and inappropriate to include a requirement for OCPP compliance. Further, there are numerous examples of utility rebate programs for other “smart devices” of a similar, or higher in some cases, ratepayer cost (e.g., smart thermostats, smart water heaters, etc.) that are not subject to specific communication protocols or interoperability requirements; similar to networked chargers these devices also utilize manufacturer-specific apps (e.g., Rheem’s EcoNet mobile app, GE’s SmartHQ mobile app, ecobee’s mobile app, Google Nest’s mobile app). Often these “smart devices”, including most

⁹ See p. 16 of Pacific Power’s Residential charging Pilot proposal.

¹⁰ <https://portlandgeneral.com/energy-choices/electric-vehicles-charging/charging-your-ev/ev-charging-pilot-program-home>; <https://portlandgeneral.com/energy-choices/electric-vehicles-charging/business-charging-fleets/ev-charging-pilot-program-business>

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home EV chargers, are not designed for the software and hardware to be separated, but rather as a single integrated product to ensure a seamless, reliable customer experience, which may be compromised if the software and hardware are unnecessarily decoupled.

However, there are other approved standards and communication protocols that manufacturers have integrated into their products to enable increased functionality and interoperability. For example, networked home chargers utilize standards-based application programming interfaces (APIs) or OpenADR which allow load management signals to automatically send demand response commands to the chargers. OpenADR is an open, highly secure, and two-way information exchange model and global Smart Grid standard that is also utilized for demand response on other smart devices, such as smart thermostats.¹¹ OpenADR has received approval as an international electrotechnical standard, providing an important standard to allow for utilities to conduct demand response programs via communication with networked charging stations. While many utility demand response pilots use custom APIs, utilities are increasingly adopting OpenADR. ChargePoint believes that an OCPP requirement would unnecessarily disqualify most home chargers on the market from inclusion in the pilot program, reduce participant choice, and provide no benefit to the utility or program participants; for these reasons ChargePoint strongly recommends removing any program requirement for the residential chargers to run on the OCPP platform.

Additionally, Pacific Power states, for both the Residential and Nonresidential Charging Pilot Programs, that a third-party coordinator/vendor will be hired to assess the technology standards that are emerging as best practices in EVSE incentive programs or utilize standard national resources (such as Energy Start Qualified Products List).¹² Further, the coordinator will review, and score L2 chargers based on the requirements outlined in the program and participant considerations including affordability, network capability and ease of use. ChargePoint recommends that any future technical standards developed for these pilot programs be reviewed and approved by the Commission with an opportunity for stakeholder input.

Time-of-Use Rate Requirements

The Residential Charging Pilot Program and Nonresidential Pilot Program both include requirements for participants to enroll in a TOU rate for the first year of participation in the program. Pacific Power further states that it will consider the possibility of additional load management options as the pilots develop, and a roadmap of considerations for a potential demand response program is included for both programs. This roadmap consists of assessing the effectiveness of the TOU rates after two years of running the pilots, and “if the data reveals a significant impact due to the increased load, the Company may look to deploy Demand Response (DR) for cost- effective, coordinated, diversified managed charging control.”¹³

¹¹ <https://www.openadr.org/overview>

¹² See p. 16 of Residential Charging Pilot Program application, and p. 27 of the Nonresidential Charging Pilot Program.

¹³ See p. 24 of Residential Charging Pilot Program application, and p. 27 of the Nonresidential Charging Pilot Program.

While ChargePoint supports integrating EV charging load into the grid in the most beneficial manner possible, time-varying rates are only one of the options available to encourage beneficial EV charging and are not always the best available option. We encourage Pacific Power to consider all available options at its disposal, including active managed charging (e.g., managed charging programs through networked EV chargers, demand response programs). One of the benefits of networked chargers is the ability for utilities to engage in active managed charging; as the programs will require all participating chargers to be networked, Pacific Power will have the ability to conduct a demand response program from the outset of the pilots. ChargePoint recommends Pacific Power modify the requirements in both programs for participants to be enrolled in a TOU rate for one year to instead give participants a choice to be enrolled in either a TOU rate or a demand response program for at least one year. TOU rates are not a precursor to demand response programs but rather an alternative; by expanding the program requirements to allow a demand response option Pacific Power will build greater participant choice into the program which could increase participation, and be able to compare the effectiveness of TOU rates and demand response programs.

V. Conclusion

ChargePoint appreciates the opportunity to provide these comments. We look forward to continuing to work with the Commission and Pacific Power to achieve Oregon's energy, environmental, transportation, and economic development goals by reducing barriers to sustainable and scalable growth in the competitive EV charging market.