



April 24, 2017

Public Utility Commission of Oregon
201 High Street SE, Suite 100
Salem, OR 97301

Re: UM 1811 Portland General Electric (PGE) Transportation Electrification Program Application

Dear Commissioners:

Drive Oregon is a non-profit trade association working to accelerate the growth of the electric and “smart” mobility industry and promote greater adoption of these technologies. As recognized experts, we have over 120 members representing automakers, EVSE suppliers, industry partners, utilities, local governments, nonprofits and many other stakeholders within the transportation electrification “ecosystem”.

We were actively involved in the passage of SB 1547 in 2016, which recognized the important role for electric utilities in advancing transportation electrification. We have been in close communication with Portland General Electric as they developed their Transportation Electrification Program, and have worked to involve and inform our many member companies as well.

Overall, we support PGE’s proposal and encourage the Commission to approve it. We would like to share the following observations and suggestions for your consideration.

SB 1547 Requires a Focus on Transportation Electrification

It is worthwhile to revisit the findings of Section 20 of SB 1547. We note that the Legislative Assembly found, among other things, that transportation electrification is “...necessary” and “...requires that electric companies increase access to the use of electricity as a transportation fuel.”

It is also worth noting that SB 1547 requires utilities to submit plans “...for programs to accelerate transportation electrification.” There are a number of provisions elsewhere in the statute that the Commission is directed to consider when reviewing these plans – but the fundamental, primary purpose of these plans should be to accelerate transportation electrification. As the Commission reviews PGE’s proposal, the focus should be on its ability to achieve that goal. Other factors (grid impacts, innovation, prudence, etc.) should be considered as secondary evaluation criteria to help shape the best possible plan to accelerate transportation electrification.

PGE Proposal is Quite Modest

In this context, PGE has proposed a modest portfolio of pilot projects. As PGE notes in its filing, other utilities, from KCP&L to Southern California Edison, have proposed thousands of charging stations. Even a smaller utility like Avista is planning for more stations than PGE. PGE’s proposed total revenue requirement of approximately \$8 million is also modest compared to other utility plans around the country.

We understand PGE’s desire to move cautiously, given that this is new legislative authority. However, we do not believe this plan does enough to meet the statutory goals in SB 1547 to “accelerate transportation electrification” and “increase access to the use of electricity as a transportation fuel.” The Navigant analysis provided by PGE further reinforces the fact that this portfolio of projects will have a fairly modest impact on

accelerating electrification during the next few years, increasing vehicle registrations by a few hundred vehicles per year. We agree with PGE that estimating the impact of specific programs on individual consumer vehicle purchase decisions is quite difficult, and suspect that these programs will have larger impacts than projected. Nevertheless, we hope and expect that this initial filing will be followed fairly soon by updates proposing additional and expanded programs to accelerate transportation electrification.

Program 1: Education, Outreach and Technical Assistance

We agree with PGE that education, outreach, and technical assistance are critical components of a utility transportation electrification strategy. We also believe that PGE is targeting the key market barriers with these programs.

While there are other education and outreach efforts underway in the region, as well as direct sales efforts by individual automakers, PGE is uniquely positioned to provide reliable information to its customers about electricity as a transportation fuel. Residential and business customers alike have increasing questions about whether and how to add charging equipment; their natural first call is to their electric utility. This work is a natural extension of the work utilities have long done to promote other categories of energy efficient electrical “appliances.” As outlined, in the enclosed letter (Attachment 1), General Motors LLC believes PGE’s proposal directly addresses the key market barriers and will complement efforts by GM and other automakers.

Drive Oregon supports PGE approach regarding specific outreach and education targeting low and moderate income communities. This is a priority identified in SB 1547 and these communities are least likely to be reached by commercial charging and automotive companies – yet with increasing numbers of affordable electric vehicles, particularly used electric vehicles, these markets are increasingly promising.

Program 2: PGE and TriMet Mass Transit Pilot

Heavy duty electric vehicles are increasingly promising and cost-competitive, but transit agencies need to develop new expertise around electrical systems and charging as they add electric buses. We strongly support this program and believe the partnership between TriMet and PGE is natural and mutually beneficial.

We believe this program is particularly important given the Legislature’s findings in SB 1547 that “Widespread transportation electrification requires that electric companies increase access to the use of electricity as a transportation fuel in low and moderate income communities.” Transit electrification will provide a key benefit to such communities, increasing the accessibility of electric mobility to a wider range of PGE customers. By reducing TriMet’s infrastructure costs, TriMet will be able to purchase an additional electric bus and electrify an entire bus route. As outlined in the enclosed letter (Attachment 2), signed by environmental partners, electrifying transit is critical to reducing air pollution and climate pollution and will spread the benefits of electrification to additional communities.

We also note that heavy duty electric vehicles, especially transit buses, have larger batteries, higher power charging, and more reliable use schedules. These characteristics make them more promising platforms for testing various smart charging approaches, which will become increasingly important and valuable as electrification accelerates. Getting early experience with this technology will position PGE and TriMet well to explore these possibilities in coming years.

Program 3: Electric Avenue Network

The current Electric Avenue, and its predecessor, have been models for the country. We know from this experience and others, such as the West Coast Electric Highway, that high visibility, clearly priced fast charging

with multiple ports helps drive sales and encourage EV owners to drive more electric miles. This model is now being replicated by Electrify America as part of their national infrastructure investment in key corridors, and elsewhere around the country. We believe that PGE's proposal will create a much needed, highly visible, backbone of fast charging that will help drive rapidly increasing electric vehicle sales in the region. Our previous research and analysis highlights the importance of DC fast charging and the need for additional such charging.

We note that significant increases in fast charging are particularly critical to support car sharing services such as BMW ReachNow that want to expand the number of electric vehicles in their fleet; taxi services; and transportation network companies such as Uber and Lyft. In fact, we recently announced a partnership with PGE and Uber to dramatically expand EV use by Uber drivers – but that expansion depends in large part on PGE's proposed fast charging expansion.

We understand that concerns have been raised about utility ownership of charging infrastructure. However, we support PGE ownership and operation within the context of this proposal. As outlined in the enclosed letter (Attachment 3), signed by several of our charging company members, there are many good reasons to support this proposal. Most notably, creating a highly visible backbone of fast charging will help drive increased sales, and PGE's plans for an open RFP process ensure innovation, competition, and customer choice.

Program 4: Residential Smart Charging Pilot

In coming years, there will be tremendous opportunities to provide grid benefits, manage charging demand, integrate renewables, and use vehicle batteries to help store and integrate renewables. However, for this to be practical, there needs to be a dramatic increase in the number of electric vehicles registered in Oregon; an expanded network of charging, ideally with its own associated storage; and a number of technical, warranty, and business model issues need to be addressed.

It is critically important that efforts to promote and encourage "smart" charging not confuse, discourage, or slow electric vehicle sales. Nor should electric vehicles be treated in a disadvantageous way compared to other sources of electrical load, particularly those with no broader social benefits or legislative findings of support (e.g. hot tubs, plasma televisions, etc.) Any efforts to push electric vehicle owners to time of use rates or "smart chargers" need to be simple, positive, incentive based, and entirely optional.

We support PGE's proposed smart charging pilot program and believe this is the kind of learning project that PGE should be conducting at this stage. Siting public chargers near residents of multi-family housing and in or near low-income neighborhoods ensures these communities have the option to choose an electric vehicle and reduce overall transportation costs.

In summary, Drive Oregon encourages the Commission to approve PGE's Transportation Electrification Plan, and hopes to see additional projects proposed by PGE in the coming years.

Sincerely,


Jeanette Shaw

Director, Government Relations

Drive Oregon

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April 24, 2017

Public Utility Commission of Oregon
201 High Street SE, Suite 100
Salem, OR 97301

Re: UM 1811 Portland General Electric (PGE) Transportation Electrification Program Application

Commission:

General Motors supports Drive Oregon's Comments on PGE's filing under UM1811 and looks forward to continue working together with stakeholders in Oregon to support the deployment of electric fleets, such as through our current efforts with Drive Oregon. The focus remains an accessible, dependable grid-integrated network for both retail consumers and commercial applications that realizes cost-savings.

GM has a strong commitment to transportation electrification and new mobility systems. With the best-selling plug-in electric vehicle on the road, the Chevrolet Volt, and the recent introduction of the Chevrolet Bolt EV, a long-range, affordable vehicle, GM is a leader in the commercialization of low and zero-emission technologies. Our commitment includes working closely with stakeholders, including electric utilities, to ensure a successful, integrated system.

While a more ambitious proposal could have been justified given the opportunity and State goals, GM believes PGE's proposal complements market needs.

- **GM supports PGE's role in Education, Outreach, and Technical Assistance.** Many customers are still unfamiliar with electric vehicle technology, charging systems, costs, etc. PGE can be a trusted voice for the consumer around questions of charging and the use of electricity as a fuel. PGE is also in a strong position to work with other regional stakeholder, including automakers, on brand neutral awareness efforts. This work is a natural extension of the work utilities have long done to promote other categories of energy efficient electrical "appliances." We believe PGE's proposal directly addresses the key market barriers and will complement efforts by GM and other automakers.
- **GM reinforces the need for more "Electric Avenue" or hub-style locations.** PGE's proposal to replicate the "Electric Avenue" bank of fast chargers in six other locations is directly in line with current customer interest and industry thinking. Electric Avenue represented a first-of-a-kind demonstration that is now widely seen as a best practice. More dense, reliable charging, that includes substantial access to DC Fast Charging, drives consumer awareness and confidence while meeting the needs of multiple consumer segments from commuters to shared-used applications, such as electrifying ride-sharing services. We also applaud PGE for working to "future proof" these installations for higher power chargers.

While Oregon has ambitious requirements for electric vehicle sales, Oregon is also working to implement consumer-facing policies and programs that encourage consumer adoption. PGE's proposal aligns with the goals and complementary investments to establish a long-term, sustainable market. GM encourages the Commission to approve the proposed plan.

Sincerely,

A handwritten signature in black ink, appearing to read "Alexander Keros".

ALEXANDER KEROS, Manager, Public Policy
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**Drive
Oregon**

Innovation in Electric Mobility

Attachment 2

April 24, 2017

Public Utility Commission of Oregon
201 High Street SE, Suite 100
Salem, OR 97301

Re: UM 1811 Portland General Electric (PGE) Transportation Electrification Program Application

Dear Commissioners:

Our organizations work to promote clean air and reduced climate pollution. We are writing in general support of Portland General Electric's proposed Transportation Electrification Program under UM-1811. We would like to emphasize the following points:

- Oregon has ambitious goals to increase electric vehicles to roughly 15% of new cars sold by 2025 (ZEV mandate) and 100% of new cars sold by 2050 (Governor Brown's commitment, and necessary to meet state climate goals.)
- PGE's proposal to spend approximately \$8 million on a modest portfolio of pilot projects will not do enough to accelerate transportation electrification. It is a good first step, but we encourage PGE and the Commission to increase this investment and to quickly add additional programs to increase PGE's impact.
- We support PGE's proposal to provide electric vehicle charging for TriMet electric buses. Electrifying transit is critical to reducing air pollution and climate pollution, and will spread the benefits of electrification to additional communities.
- We encourage PGE and the Commission to add further programs that specifically focus on low and moderate income communities. These programs could include targeted pilot and demonstration projects, culturally appropriate outreach programs, or support for charging at lower-wage workplaces. PGE should be a strong partner in developing and testing strategies to ensure that all customers have access to clean electric vehicles.
- We strongly support PGE's proposal for outreach, education, and training. Ignorance is a key barrier to electric vehicle adoption, and one that car companies will not overcome on their own.

We would be happy to provide additional information or insight as the process moves forward.

Sincerely,

Rhett Lawrence
Sierra Club

Meredith Connolly
Climate Solutions

Jana Gastellum
Oregon Environmental Council



Attachment 3

April 24, 2017

Public Utility Commission of Oregon
201 High Street SE, Suite 100
Salem, OR 97301

Dear Commissioners:

We represent companies that produce and manage electric vehicle charging and service equipment (EVSE.) We are writing in support of Portland General Electric's proposed Transportation Electrification Program under UM-1811.

The biggest problem facing the electric vehicle market today is that most consumers don't know these vehicles exist. Electric utilities have a long history of educating their customers about the benefits of electric appliances, and experience has shown that an actively engaged utility will help accelerate electric vehicle sales.

In particular, we want to address concerns about PGE's proposal to own EVSE at a limited number of locations. We understand that PGE is proposing to issue an RFP for fast charging equipment at six additional "Electric Avenue" sites, and will own EVSE to service TriMet's first five electric transit buses. We support PGE's proposal to own EVSE in this context, for a number of reasons:

1. The most important factor in our industry's success and continued innovation is the number of electric vehicles on the road. We believe that PGE's proposal will create a much needed, highly visible, backbone of fast charging that will help drive rapidly increasing electric vehicle sales in the region.
2. PGE is proposing an open and competitive RFP process to select interoperable hardware, back office software suppliers, and other vendors. We have confidence that this process will allow open competition. Furthermore, we have previously worked with PGE as a partner on other installation projects, and we are confident that PGE will continue to collaborate with us in good faith as we work with other partners in the region to install EVSE to complement PGE's installations.
3. PGE's proposed pricing is in the midpoint range of other fast charging pricing in the region, so we are not concerned that it will undercut our pricing.
4. It is critically important that the region provide a reliable foundation of fast charging to support growing electric vehicle adoption in the region. In the past, PGE has been able to 'rescue' chargers in the past that were at risk of abandonment. We believe consumers have confidence that PGE will be there to support them and fuel their vehicles.
5. PGE brings a unique set of partnerships, skills, and patience to the market that will help grow the business for all competitors. For example, PGE is in a unique position to place EVSE where it will best serve drivers without home garages, lower income drivers, and drivers in car sharing and transportation network vehicles, and to be patient in recovering those costs.

We urge the Commission to support PGE's proposal, and we would be happy to provide additional information or insight as the process moves forward.

Sincerely,

Jordan Ramer
CEO, EV Connect

Thomas Ashley
Senior Director of Government Affairs & Public Policy, Greenlots

Heather Flanagan
Marketing Manager, EVCI, ABB Inc.

Suresh Jayanthi
Head, EV Infrastructure Solutions & Services, Schneider Electric

Michael Rockwood
General Manager, Eluminocity

Eric Smith
Northwest Regional Manager, SemaConnect

Tim Kreukniet
Director, North America, EV-Box

Dexter Turner
CEO, OpConnect