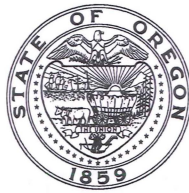


JOHN R. KROGER
Attorney General



MARY H. WILLIAMS
Deputy Attorney General

DEPARTMENT OF JUSTICE
GENERAL COUNSEL DIVISION

February 10, 2011

Attention: Filing Center
Public Utility Commission of Oregon
550 Capitol Street NE, #215
PO Box 2148
Salem, OR 97308-2148
puc.filingcenter@state.or.us

Re: *In the Matter of PUBLIC UTILITY COMMISSION OF OREGON Investigation into Rate Structures for Electric Vehicle Charging*
PUC Docket No.: UM 1461
DOJ File No.: 330-030-GN0185-10

Enclosed are an original and one copy of the OREGON DEPARTMENT OF ENERGY'S COMMENTS in the above-captioned docket for filing with the PUC today.

Sincerely,

Janet L. Prewitt
Senior Assistant Attorney General
Natural Resources Section

JLP:mme/#2546707
c: UM 1461 Service List

BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON

UM 1461

In the Matter of the)	
)	
PUBLIC UTILITY COMMISSION OF)	
OREGON)	OREGON DEPARTMENT OF
)	ENERGY'S COMMENTS
Investigation into Rate Structures for)	
Electric Vehicle Charging)	
_____)	

Background:

The Oregon Department of Energy (ODOE) respectfully submits its comments to both – Opening Comments by ODOE and other intervening parties and also to that of the Bench Request. Before ODOE provides specific responses to this critical dialogue on the “how’s, if’s and what’s” of “rate structure design of electric vehicle charging”, ODOE seeks to postulate that the electric vehicle (EV) industry is not ready for regulatory policies yet. The EV industry is in its infancy, heavily reliant on incentives and lacks social acceptability of the technology.

As a matter of context, Oregon’s transportation sector varies significantly across the residential, commercial, and industrial sectors that the electric utilities serve. The transportation sector relies on petroleum solely for 97 percent of its energy use and is completely unregulated. Furthermore, Oregon imports all (100 percent) of its petroleum demand; and mobility is centered around the “internal combustion engine,” in spite of its significant external environmental and human health costs.

Displacing petroleum with electricity as a fuel source in the transportation sector is a daunting task and ODOE commends current efforts by the Oregon Public Utility Commission (“Commission”) and Staff to identify regulatory policies for an Oregon EV market. While policies exist to promote low-carbon fuels (e.g. biofuels through the Renewable Fuel Standard (RFS)), other resources like natural gas and liquid propane have also faced market adoption

barriers. Even if maturity in technology and markets exist with a regulatory structure, certain fuels lack widespread adoption (i.e. Compressed Natural Gas (“CNG”).

Previous attempts by several vehicle manufacturers to develop electric vehicles (“EVs”) and related electric vehicle supply equipment (“EVSE”), were impeded by many factors such as inconsistent plug standards, lack of infrastructure, range limitations due to battery technology, and cheaper substitution of petroleum to name a few. While current federal and state efforts (policies and incentives) are pushing the growth of a nascent EV charging market (new battery technology and infrastructure build-out), the existing demand for plug-in vehicles represents only the “early buyers”. We still face an immature market with technological uncertainties that affect the assurance of subsequent wave of buyers and affordable ownership. Furthermore, this first wave of EVSE infrastructure has been largely if not almost entirely financed by federal and state funds alone.

It is imperative that the State of Oregon’s EV policy promote an investment-friendly environment for an EV industry that is in its’ infancy and looks past the early adopters to prevent regulatory strictures that inhibit cost-effective and flexible deployment options (and varied business models). These views are reinforced by other parties in various instances of their Opening Comments and especially, well summarized by Portland General Electric (“PGE”) on Page 2-3 of their Opening Comments (July 22, 2010).

ODOE also recognizes the need for pragmatic public policy solutions to evaluate the appropriate ownership options and rate design (as being done by other states) and the significant value that Oregon’s utilities can play in this arena.

Specific comments to the Bench Request are summarized below.

1. Utility Ownership of EVSE:

ODOE supports utility ownership of EVSEs in special circumstances or in ways that are prudent and truly facilitate cost-effective options for EV charging. ODOE agrees with the general comments by utilities to be flexible towards utility ownership of EVSEs. Specifically, ODOE supports PGE (Opening Comments, Page 12, July 22, 2010) in the sense that in some

cases, “public policy may well support some degree of utility investment in infrastructure where other models are too complex or risky.... And that also includes right of ways.” Only in such unique cases, utility recovery of investment is reasonable.

Utility ownership of EVSEs may be ideal through affiliate ownership models in ways that do not impact rate-payers and to that effect ODOE supports the Citizen Utility Board’s (“CUB”) Response Comments (Feb 9, 2011, Page 2). An affiliate ownership would call for provision of “value-added”-like services that may include some ancillary services; however, those are services sought by EV users exclusively who, in turn, would bear the costs for those services and not impact the entire rate-paying base of the utility.

Either way, the costs of “value-added services” or essential recovery of investment in EVSEs by the utility should not be regulated in ways that prevent independent operators to enter the market (i.e. prevent “crowding out”). Non-market mechanisms of restrictions to market entry for newer participants are especially possible in the case of “EV-like” markets.

2. Distribution System Upgrades Guideline:

ODOE identifies two pertinent issues.

First is the case of cost allocation for distribution system upgrades. EV customers should not be treated any differently than other customers. Standards for costs of distribution system extensions or upgrades, or both, should be the same as for any other customer.

Second is the issue of cost of determining separate rate schedules. Implementation of a separate rate schedule for EV charging to the EV customer class may result in discriminatory pricing. If such a customer class were to be made, then all costs should be wrapped into the existing rate-payer’s costs. Assigning these costs to a separate rate class would be very expensive to the “early adopters” when there would be very few to share costs. It will take some time before there are enough EV users to justify a separate rate class and cost-effective regulation of the same. Assigning costs and administrative tasks to such a small class of users may be inefficient as well.

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3. EV rate design guideline:

ODOE appreciates the Bench Request laying out some options for consideration on alternative rate scheduling. We provide our response below and follow-up with a couple of examples.

Mandatory EV rate schedules for the residential and commercial sectors would be burdensome and could be a barrier to EV adoption, particularly in the residential sector. EVs currently have higher procurement costs vis-à-vis “plug-ins” that have lower operating costs. The costs associated with an additional meter would erode this advantage. In the residential sector, adding an additional second meter or even a communication feature with an internal EVSE meter would exempt the EVSE installation from the minor label program. Many of the EVSEs available to consumers such as the “Aero –Vironment” home unit as currently sold with the Nissan Leaf is devoid of a meter and others do not have revenue grade meters as well.

Developing separate EV rate schedules for the residential sector especially, would not only call for EV customers to go through the standard permit and inspection protocols that delays EVSE installation by weeks, but also create dissatisfaction for potential purchasers. Requiring a whole residence to adopt a time-of-use pricing program simply because the customer owns an EV could also be a barrier. In short, there are many user-behavior characteristics of a residence that are unknown.

Illustration 1: Currently, plug-in vehicles and the batteries associated with them are built in low volumes and are very expensive with cost premiums of \$15,000 and up. The expectation is that mass production with new technologies would reduce the cost premiums and increase market penetration. Until then, exploring other cost premium options may not be prudent. ODOE reiterates that the current technology is immature and will take a number of years before a sufficient market-base can bear the cost of end-user specific regulations. Hybrid vehicles have taken just over 10 years to get to 1 percent of the vehicles driven in Oregon (i.e. approximately 30,000). How long would plug-in vehicles take to reach a similar threshold?

Illustration 2: According to the National Spa and Pool Institute, spas consume an average of 2,514 kWh per year, resulting in the average cost of use to be at \$250 a year (at 10 cents/kWh) or more. An EV that achieves 4 miles per kWh and drives 12,000 miles per year and charges 80 percent at home would consume 2,400 kWh or cost \$240 for the home owner (at 10 cents/kWh). A typical spa and an EV have very similar energy use patterns and yet there is not an attempt to create a separate rate and regulations for spas.

In summary, ODOE seeks to make the case using the illustrations as above, that EVs are like any other electronic appliance and may not be candidates for differential pricing structure yet. The commercial sector may be less of a challenge, as they are not able to take advantage of the minor label program, creating mandatory rate structures and metering could be perceived as burdensome as well. Businesses that might want to acquire an EV fleet could find regulations for separate metering and billing to be an administrative burden.

A voluntary EV rate with time-of-use flexibility for both residential and commercial customers may be logical, if a separate rate design is considered. However this feature should not be imposed mandatorily. If such a pricing option is explored, ODOE recommends additional discussions in that direction. Do any rate designs exist which factor in time, season, sector and customer application (Public DC fast charger vs. Level II public charger etc.)?

4. IRP Flexible Resources Guideline

ODOE supports Staff guidelines on evaluating EVs induced demand and supply of flexible resources as part of an Integrated Resource Planning effort.

5. Planning and Reporting Guideline

ODOE recommends the extension of current efforts through possibly a newer docket to examine ways in which data can be collected from existing “pilot EVSE” deployment and the usage patterns of the “first-time” EV owners. ODOE also requests for Staff to track the federal efforts to integrate smart grid technologies with EVs and related usage as funded through the American Recovery and Reinvestment Act’s (ARRA 2009) Smart Grid Demonstration Pilot

Grant efforts. If possible, a utility providing the load profile that depicts the load impacts associated with EV usage across different time periods would be ideal and worthy to examine.

Conclusion:

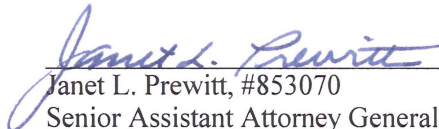
In summary, ODOE recognizes the vital role for utilities to play in developing the EV market and also in some cases, with facilitating cost-effective deployment of EVSEs. Utilities can also provide EV owners with educational information such as adoption of voluntary time of use rates and best-practices for energy-use, if the EVs are charged at off-peak times.

ODOE requests all parties, Staff and Commission to be mindful of an infant industry that is going through its waves of innovation diffusion. As a result, pre-selecting pricing and regulatory structures can create market distortions before a reliable degree of market penetration occurs. ODOE supports future efforts in this regard and wants to be a participant in future conversations and workshops as the industry matures.

DATED this 10th day of February, 2011.

Respectfully submitted,

JOHN R. KROGER
Attorney General



Janet L. Prewitt, #853070
Senior Assistant Attorney General
Of Attorneys for Oregon
Department of Energy

SERVICE LIST UM 1461

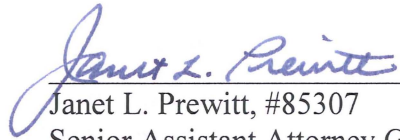
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CERTIFICATE OF SERVICE

I hereby certify that on the 10th day of February 2011, I served the foregoing OREGON DEPARTMENT OF ENERGY'S COMMENTS upon the persons named on the service list, by mailing a full, true and correct copy thereof to such persons waiving such service by mail who were served at their e-mail address as listed on the service list.

DATED: 10th February, 2011



Janet L. Prewitt, #85307
Senior Assistant Attorney General