

**BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON**

**UM 1461**

**In the matter of** )  
 )  
 ) **CLOSING COMMENTS OF**  
**PUBLIC UTILITY COMMISSION OF** ) **ECOTALITY**  
**OREGON** )  
 )  
Investigation into Rate Structures for )  
Electric Vehicle Charging )

**Closing Comments of ECotality**

ECotality again thanks the Commission for its proactive stance in opening a docket specific to Electric Vehicle charging. Based on the thread of written comments and the ongoing dialogue between the parties at Commission sponsored workshops, there are many areas of consensus, both in identifying critical issues and proposing solutions for them. We all recognize that EVs hold huge promise for solving some of our most daunting national issues, including reduced reliance on fossil fuels, curtailment of greenhouse gas emissions and the integration of clean generation renewables. Whatever the ultimate roadmap for achieving this promise will look like, it will be based on the best collective efforts of all the stakeholders and leveraging ongoing research results, such as those obtained by the EV Project.

In our closing comments we want to focus only on areas in the Bench Request that we believe deserve additional emphasis as the Commission begins crafting its Order.

1. Utility Ownership of EVSE Guideline

To ensure competitive neutrality and consumer choice, the PUC must strongly consider the potential for latent competition emerging from utility involvement in publicly available EVSE. Any utility involvement in the EVSE market must be regulated in a manner that prevents the pricing of electricity for charging to be more advantageous for utilities and charging third party EVSPs different and higher rates.<sup>1</sup>

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<sup>1</sup>We wish to bring to the Commission’s attention the recently issued California PUC Proposed Decision that concluded that the “benefits of utility ownership of EVSE do not outweigh the competitive limitation that may result from utility ownership.” *Phase II Decision Establishing Policies to Overcome Barriers to Electric Vehicle Deployment and Complying with Public Utilities Code Section 740.2*, PD 09-08-009, March 15, 2011 at 68. The proposed decision is available at: <http://docs.cpuc.ca.gov/efile/PD/132120.pdf>. We note that CUB and ODOT support this proposition as well.

While utilities have openly stated that they have no current intention of being involved as EVSPs, they nonetheless want to preserve the option, in part because they do not know the extent to which their existing customer-base may request their involvement. Allowing utility ownership of EVSE in the early market, before competitive scale and uniform tariffs can be reached, presents a challenging environment for third party service providers to site and operate EVSE on a level market-driven playing field. For example, even in as seemingly benign a situation as the installation and maintenance of a demo charging station, such as at PGE's World Trade Center headquarters in Portland, concerns over non-competition arise. That station operates in the City's right of way and is owned by PGE who provides free power.

The example utilities most commonly cite is that local governments may be more comfortable with utility involvement in public rights-of-way ("ROW") than EVSPs, since municipalities have a long relationship with local governments. This argument, however, fails on several counts; first, there is absolutely no evidence that local governments have shown reluctance to work with EVSPs in installing EVSEs. In fact, several local governments in Oregon are underway in contracting with ECotality to install EVSEs as part of the EV Project. Moreover, ROW issues are overstated in terms of the number of potential sites involved. As the utilities admit, the likelihood of a municipality seeking EVSE from its electric utility is low and limited to outlying areas of service territories. This immediately calls into question how essential the siting might be relative to the early stages of charging station placement which must be especially strategic. Additionally, ECotality is currently receiving requests for EVSEs in locations well outside of planned corridors or EV Project territory. It is simply not the case that a need has been demonstrated for utility involvement, in fact the evidence is to the contrary.

Second, in our experience with siting in Oregon on public ROWs, many of the issues precluding their placement have to do with safety concerns--concerns that would apply to all EVSPs. These include the difficulty of placement where parallel parking is involved and where charging equipment may expose pedestrians, bikers and other vehicles to hazardous contact. These issues face any potential EVSE installer, whether a utility or third party, and neither has an inherent advantage. However, because utilities do have inherent advantage given longstanding service relationships with municipalities, and under certain circumstances may be given the ability to offset some or all of the costs of the EVSE, to allow them access to even this *de minimis* market is to place third party EVSP interests at risk. The creation of pockets of "non-competitive" EVSPs within a larger competitive charging infrastructure inherently places stress on competitive EVSPs and allows municipalities to creatively sidestep third parties to get at below market charging resources. Requiring municipalities to contract with third parties for EV Services, whether from ECotality or a utility's independent affiliate, leads to robustness in the market structure, innovation in charging network systems and competitive neutrality without any gray area.

Utilities have also raised the "Streetlight" analogy, which is unrelated. In this scenario, a utility that provides EVSE is no different from one that provides streetlights at the request of its municipal customer. Streetlight requests, however, do not involve

supplying equipment delivering electricity to end-users and with the implicit potential to generate revenue. In fact it is highly unusual for utilities to be allowed to operate on the customer side of the meter, precisely because of concerns over non-competitiveness. The use of a streetlight analogy is misplaced given the Commission's policy favoring a competitive marketplace. We believe that a robust market is key to the success of EV deployment.

Utilities have also stated that providing EVSE at the request of outlying areas of their service territories can be analogized to their responsibility as a "provider of last resort." The concept of provider of last resort, however, only relates to the utility's obligations to provide electrical service, not equipment on the customer side of the meter, such that there is no basis for a utility to assert it has a public duty to provide EVSE. We agree with PGE's revised comments during the recent workshop that the obligation to serve does not mean the obligation to provide EVSE or related infrastructure services.

In the end, what utilities are seeking from the Commission is not so much flexibility but guidance. There would be inherent philosophical and practical conflict arising from the Commission's stated desire to facilitate a competitive market and its willingness to allow regulated utilities to have the capacity to join that market and use non-competitive advantages in the process. While flexibility is a virtue in an emerging market with many unknowns, third parties nonetheless need some degree of certainty that utilities won't be allowed to crowd out the rapid evolution of a cost effective, innovator-led market for the charging infrastructure space. Stated alternatively, the foundational rules of the market must be sound and predictable. Allowing utilities to profess lack of serious interest in being EVSPs on the one hand but granting them that future capacity on the other purposefully alienates those innovators who have made the commitment and allocated the resources to build robust Oregon wide charging station infrastructure right now. Accordingly, this is the Commission's best early market opportunity to provide guidance in a clear manner and protect the competitiveness of this fledgling industry.

Assuming utilities have a role in providing EVSE, the criteria to apply to those situations where utilities may be allowed to rate base EVSE must be highly restrictive and might include:

- Case by case evaluation subject to comment/bidding by third party providers including a right-of-first refusal to market based EVSPs;
- A determination of the "essentialness" of the location;
- Economic cost/benefit supporting decision that location lacks sufficient revenue to support competitive business model; and
- Rate recovery of charging infrastructure costs should be shared by all ratepayers.
- If a utility owns EVSE, it should be required to provide power and energy to all EVSPs at the same price it charges internally for its EVSE.

Any utility involvement in the early EV charging services market must allow the private sector the opportunity to develop a competitive marketplace to viable operational scale.

## 2. Rate Design Guideline

ECotality agrees with the PUC staff's position that the Commission should create a separate EV TOU rate for residential and commercial clients. The larger question, as to which of the staff's rate options will most favorably impact EV charging behavior through price signals, remains for the moment uncertain. We concur that, of the five options staff outlines, Options # 1 and 2 are less favorable in light of these goals. Any option being considered must reflect the need for consumer choice and flexibility while ongoing data is collected. For this reason, while mandatory separately metered EV rates for all EV customers under Option #3 may solve many issues, it also may be perceived as limiting consumer choice.

We agree with allowing multiple rate options for residential customer classes, including whole premises TOU and the possibility of separate metering, as means of providing consumer choice and flexibility. Option 5 allows residential customer choice while requiring all non-residential EV customers to be on a separately metered EV rate. We believe Option 5 best balances the policy objective of consumer choice while addressing cost-shifting concerns that would otherwise exist from daytime non-residential charging as well as create the broadest consistency of EVSE by keeping the rate structures identical. A mandatory separately metered EV rate will also address concerns we have about the potential impact of demand charges on the hosts of certain publicly available charging stations. ECotality is still very concerned with the potential impact of demand charges on EVSE installations, particularly small commercial customers who are likely sites for DC fast-charging stations. These sites, like convenience/gas stations, often have high traffic and limited pre-existing electric service, and their operation of EVSE or DC fast chargers will exceed their monthly peak and incur demand and capacity charges that may prove untenable. We have encountered this in other parts of the country and anticipate encountering it in Oregon, particularly as placement of DC fast chargers gain speed. We strongly recommend the Commission allow the creation and availability (mandatory or otherwise) of a separate EV TOU rate to commercial EVSPs to address this concern wherever demand charges would otherwise render charging stations uneconomic. We recognize that whatever option is initially chosen will likely be adjusted later as more information concerning costs, consumer behavior and market penetration clarify how best to encourage off-peak charging.

We continue to believe that separate metering will become de-emphasized over time as the advantages of embedded meters become clearer. Embedded meters are currently being released into the market from a variety of providers as validated by staff's investigation. These meters can measure usage and time of use and can be certified to meet the accuracy and quality expected of conventional utility meters. Since embedded meters present an important potential solution to rate related issues and data collection, we strongly agree with Staff's assessment that a second investigation into sub-metering is warranted. Pilot studies or voluntary joint collaboration with utilities on the issue of submetering might also occur concurrently to better define and resolve any technical and logistical issues. We agree with CUB's suggestion that a pilot study examining smart charging and wind integration be immediately set in motion given the imminent issues facing wind integration in the Northwest and allow it to be rate based because it benefits all ratepayers.

Any proposed rate design should also reflect the degree to which EV users deliver system benefits as an additional rate based incentive. As EV use and its smart charging technology exerts greater impact on utility load, the Commission should allow the use of discounted rates or dynamic pricing as a means of allocating to EV users an equitable share of the resulting savings.

Lastly, we concur with the staff that consumer education will be a critical component for the success of any proposed rate guideline. Allowing utilities to recover the costs of a consumer education program is reasonable provided such programs reflect educational goals which are dispassionate and designed primarily to ensure safety, reliability and cost reductions for the utility's electric system.

### 3. IRP Flexible Resources Guideline

ECOTality urges the Commission to require the utilities to adopt IRP guidelines as Staff proposed. IRPs are a long-range planning activity. If utilities fail to begin the process of considering the impact of EV related charging on their systems, such as its integration of wind resources or their present and future ability to provide ancillary services through V2G, they will not be well-positioned should events eclipse planning. Indeed construction of additional wind resources in the Northwest is accelerating and its impact on load balancing will only continue to grow. We believe that utilities overstate the technological challenges involved in utilizing smart charging to address load-related issues; in fact the use of embedded metering, demand response and dispatchable charging are being done now by utilities in Tennessee, Arizona and California. While market penetration does remain a variable, the twenty year IRP planning horizon covers the time period that adoption rates will become significant enough to impact load and generation. PGE's own earlier estimate, assuming high-end adoption rates of 10% by 2020, showed a load increase of 50aMW<sup>2</sup>, which in our view is significant.

Most importantly the Commission is already considering how to require utilities to analyze and implement a wide range of smart grid technologies through a coordinated Smart Grid Planning and IRP process. Since utilities are already undertaking analysis of the use of flexible resources to fill gaps in their IRPs, they shoulder no significant additional burden by also considering EVs. Inasmuch as EVs represent the first widespread application of a smart appliance, the Staff's recommendation should be formally adopted as part of the IRP requirements.

### 4. Distribution System Upgrades Guideline

We agree with staff that private and public charging related distribution upgrades on the utility side of the meter should be allowed to be rolled into rate recovery from all ratepayers until the EV market penetration begins to more substantively impact the system. Separate metering may be an option for some EV users, in which case they should pay for it. "Last to the system pays for distribution upgrades" is a concept

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<sup>2</sup> See PGE Opening Comments at 5.

correctly panned by all parties both because of the logistical difficulty identifying the responsible party and the shared benefits of EVs to all ratepayers. ECOtality also supports the proposition that cost allocation for implementation of separate rate schedules, so-call back office costs, should fall on all ratepayers during the early market.

#### 5. Additional Guidelines Related to Regulation of EV Charging

ECOtality recommended additional reporting guidelines in its Combined Responses. These were: i.) enabling consumer choice by allowing them to assign EV charging to a third party service provider; ii) facilitating dynamic pricing of EV charging and tariff design that accounts for aggregation and charge management delivering system benefits; iii.) Implementing sub-metering to provide direct measurement and tracking mechanism of EV load to facilitate appropriate tariff design; and iv.) allow utility billing from non-utility owned meters. We continue to believe these issues are especially relevant given the role of embedded meters, however, they appear better suited for development in a future submetering docket.

#### Conclusion

As the lone third party EVSP weighing in with written comments, ECOtality appreciates the opportunity to voice its concerns and recommendations to the Commission. We respect the participation of all the stakeholders, and particularly the Commission's staff, in the healthy debate over the best regulatory policies for promoting the deployment of EVs and their charging infrastructure. While we agree with the need to remain open to policy change as data from the EV Project and other studies lend clarity going forward, we also believe that the public interest is best served by establishing the ground rules for a competitive and open market, when capital investment is at its most sensitive stage. Providing clear and unambiguous guidance at this stage will serve to create a fertile investment environment, will create a partnership between the stakeholders and will successfully launch the technologies all of us agree are of critical importance to our national interests and the ongoing transformation of the grid.

Dated: April 1, 2011

Respectfully submitted,

Donald Karner

By:     /s/ Donald Karner  
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April 1, 2011

**VIA ELECTRONIC FILING AND U.S. MAIL**

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550 Capitol Street NE, #215  
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Salem, OR 97308-2148

RE: UM 1461- Investigation into Rate Structures for Electric Vehicle Charging  
ECOTality's Closing Comments

Dear Sir/Madam:

ECOTality encloses for filing its Closing Comments in the above referenced docket.

Please contact me at the above mentioned address and at (503) 504-6492 should you have any questions relating to this filing.

Sincerely,

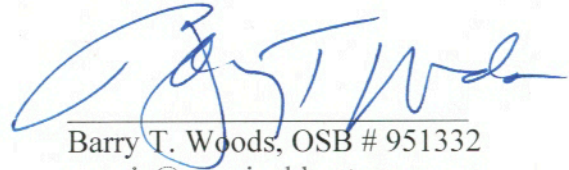
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Cc: Service List- UM 1461

**CERTIFICATE OF SERVICE**

I hereby certify that on this day, April 1, 2011, I served a true and correct copy of the foregoing document in Docket No. UM 1461 upon each party listed in the UM 1461 OPUC Service List by email and, where paper service is not waived, by U.S. Mail, postage pre-paid.

Dated at Portland, Oregon, this 1st day of April, 2011.



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**Summary Report****UM 1461 INVESTIGATION INTO RATE STRUCTURES FOR ELECTRIC VEHICLE CHARGING****Category:** Miscellaneous

In the Matter of  
PUBLIC UTILITY COMMISSION OF OREGON  
Investigation of matters related to electric vehicle charging.

(Staff report for December 8, 2009, Public Meeting [Item No. 4]; filed by Ed Durrenberger.)  
(Public Meeting Information is located...

**Filing Date:** 12/8/2009**Case** Bless, Adam**Law Judge(s):** KIRKPATRICK, TRACI (503) 378-6683**SERVICE LIST:**

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**Summary Report**

**UM 1461 INVESTIGATION INTO RATE STRUCTURES FOR ELECTRIC VEHICLE CHARGING**

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