

**BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON**

**UM 1657**

In the Matter of )  
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PORTLAND GENERAL ELECTRIC )  
COMPANY, )  
 )  
Annual Smart Grid Report )  
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COMMENTS OF THE  
CITIZENS' UTILITY BOARD OF OREGON

July 1, 2013



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The Citizens' Utility Board of Oregon (CUB) appreciates the opportunity to submit comments on Portland General Electric's (PGE) Smart Grid Report. CUB recognizes that PGE has made extensive efforts to research various possible uses for the smart grid and that PGE has made a number of attempts to develop smart grid projects. While CUB appreciates PGE's notable role in the region regarding the development of the smart grid, CUB would also like to comment on a few areas that PGE can better communicate how it intends to move forward.

***Proposed AMI Conditions in UE 189***

CUB has steadily articulated its vision for smart grid technology over the past few years. As part of its overarching view, CUB believes that one of the primary benefits of the smart grid is its potential ability to establish a two-way communications system between the utility and its residential customers. In docket UE 189, PGE filed a "Joint Exhibit with Staff of Proposed AMI Conditions (2007)" which lists several areas that projected some possibilities of such communication:

- UE 189/Joint/Exhibit 101/Schwartz – Owings – Tooman, page 6 discusses a potential ability to detect overloaded transformers more accurately and in a timely manner.
- On page 7, PGE states that the proposed AMI system would enable Operators to identify isolated outages and initiate repairs without having to wait for customers to notify the Company.<sup>1</sup>
- On page 8, PGE projects that the cost of restoring customers' service after an outage could be reduced through the implementation of an AMI system. PGE explains that the system would save both time and money, as it would be able to detect multiple, isolated customer outages (particularly after a storm) and prevent a crew from having to return at another point in time. PGE also explains that an AMI system would result in faster identification of substation feeder faults.<sup>2</sup>

Furthermore, in UE 189/Joint/200/ Schwartz – Owings – Tooman, page 3, PGE and Staff discuss the benefits of the communications system:

PGE's proposed AMI system consists of fully two-way, low-cost communication capability that will connect with every home and business in PGE's service territory and provide all the benefits described in previous UE 189 testimony. This system will also be able to "talk" with devices capable of "hearing" the signal so as to provide additional benefits related to direct and automated load control. Interval data and two-way communications are the core capabilities of AMI systems. Given this level of full functionality, we do not see a basis for this system becoming obsolete in the foreseeable future.<sup>3</sup>

In addition to these benefits, PGE states on page 3 of Exhibit 101 that it was expecting higher peak loads partly due to central air conditioning and that the load could be managed through

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<sup>1</sup> UE 189/Joint/Exhibit 101/ Schwartz – Owings – Tooman/6.

<sup>2</sup> UE 189/Joint/Exhibit 101/Schwartz – Owings – Tooman/8.

<sup>3</sup> UE 189 /Joint/200/Schwartz – Owings – Tooman/3 and 4.

direct load control of appliances.<sup>4</sup> The current Smart Grid Report does not detail direct load control in relation to central air conditioning, although PGE does discuss a similar program with electric water heaters.

### ***Linking the Past to the Future***

Though CUB appreciates PGE's extension of the possibilities of direct load control through other venues, as well as the numerous other possibilities of smart grid technologies listed throughout PGE's 2013 Smart Grid Report, CUB believes that the connection between the potential of the smart grid presented in the Proposed AMI Conditions in 2007 and the current Draft Report have not been extensively outlined. While there is discussion about a pilot for electric water heaters and for critical peak pricing, there is no significant update to many of the other goals listed in UE 189.

CUB believes that in the final Smart Grid Report for 2013, PGE should have expanded on the types of infrastructure already invested in, the types of infrastructure already utilized, and whether the infrastructure has been utilized in the way PGE originally claimed it would. Specifically, what, if anything, has changed between 2007 and the present? How much did PGE invest in the projects from that time period? Which ones have been disappointing, if any, and why? Which projects have succeeded, if any, and why? PGE should have provided a detailed comparison of projects that did and did not accomplish the goals PGE had planned in 2007, as well as current projects PGE continues to explore. It is CUB's opinion that PGE's 2013 Smart Grid Report fails to answer questions pertaining to the evolution of its smart grid program.

In CUB's informal comments to PGE prior to the final Smart Grid Report filing, CUB notes that it was most expectant to hear results about how two-way communications networks

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<sup>4</sup> UE 189/Joint/Exhibit 101/ Schwartz – Owings – Tooman/3.

have changed PGE's systems. Among the most valuable contributions of smart grid technology is the two-way communications system that allows the utility to be able to respond to outages and interact with customers. CUB is concerned that the two-way communications system may not be providing the necessary two-way platform that is crucial for demand response. Part of PGE's response to CUB's concern as expressed in the 2013 Smart Grid Report is as follows:

“CUB also expressed interest in having PGE demonstrate usage of the two-way communication network for other purposes such as appliance control. At this time PGE has elected to leave the question of communication path inside the home open since it may ultimately be through the AMI system—but at this time it is too early to say. *It should be noted that other utilities, such as Southern California Edison, are moving away from using smart meters as a gateway*” (emphasis CUB's).<sup>5</sup>

This response is concerning to CUB because it appears that PGE is saying that the AMI system may not provide the benefits that were originally advertized. If this is the case, CUB would have liked to see these details more fully explained in the Smart Grid Report. It may be that PGE was overly optimistic in certain cases; CUB would now like to know more about the progression and reasons for curtailment of any investments made by PGE in its smart grid programs and projects—both successful and unsuccessful. It would have been useful for the final report to have included more discussion on the investments that have already been made and the results of those investments, including a section of updates on each of the goals listed in UE 189. CUB does not feel that the updates provided by the Company to date have sufficiently explained the development of its smart grid initiatives. What sorts of programs proved to be more difficult to implement than originally planned? After investigation, would other programs have been easier to implement? CUB believes that this kind of analysis would provide useful information about the benefits and complications associated with smart grid technology.

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<sup>5</sup> PGE's 2013 Smart Grid Report, page 7.

### ***Smart Grid, Energy Efficiency, and Demand Response***

While we often think of smart grid-enabled demand response as separate from energy efficiency, this distinction may not hold. PGE's smart grid-enabled Energy Tracker, which informs customers about their usage, has some similarities to the Energy Trust of Oregon's (ETO) OPower pilot. ETO's pilot is built to provide customers with usage information that encourages behavioral change. However, there is a distinction between dispatchable demand response a utility can utilize to reduce demand at specific times on the system and non-dispatchable demand-side programs that get customers to reduce demand more generally (though these can also be focused on specific uses or times – for example, air conditioning programs). CUB encourages PGE to think about both dispatchable demand response programs and non-dispatchable energy efficiency. It would have been beneficial to have seen a discussion not just about what the smart grid can do for dispatchable demand response, but also which broader energy efficiency programs can be supported by smart grid investments.

### ***Conclusion***

CUB appreciates PGE's efforts to evaluate smart grid opportunities. There is a great deal of potential in the smart grid that could benefit customers. CUB continues to be interested in PGE's on the ground, in-pilot, and in-operation smart grid developments. However, CUB would also like to see a more concrete basis for comparison between programs that PGE has started and programs that it is continuing, has ended, or changed. Additional analysis of the relationship between smart grid technologies, demand response, and energy efficiency would also be beneficial for future reports.

Sincerely,

A handwritten signature in black ink, appearing to read 'Nadine Hanhan', with a long horizontal stroke extending to the right.

Nadine Hanhan

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## UM 1657 – CERTIFICATE OF SERVICE

I hereby certify that, on this 1<sup>st</sup> day of July, 2013, I served the foregoing **COMMENTS OF THE CITIZENS' UTILITY BOARD OF OREGON** in docket UM 1657 upon each party listed in the UM 1657 PUC Service List by email and, where paper service is not waived, by U.S. mail, postage prepaid, and upon the Commission by email and by sending one original and five copies by U.S. mail, postage prepaid, to the Commission's Salem offices.

(W denotes waiver of paper service)

(C denotes service of Confidential material authorized)

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