

**BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON  
UM 1657**

In the Matter of	)	
	)	
PORTLAND GENERAL ELECTRIC	)	COMMENTS OF THE
COMPANY,	)	NW ENERGY COALITION
	)	
2016 Smart Grid Report.	)	

The NW Energy Coalition (“NWEC”) offers the following comments on the Portland General Electric (“PGE” or “Company”) Smart Grid Report pursuant to UM1657.

The Coalition participated in the March 15, 2016 workshop on this topic. We commend PGE for a thorough and clear report which continues to evolve in reflecting the maturation of the smart grid effort.

**1. Alignment of Smart Grid activities, IRP and distributed resource planning**

Section 4A of the report (p. 19), “Alignment with Integrated Resource Plan (IRP)” has a very brief description of smart grid activities that are reflected in the IRP process. In comments on previous smart grid reports, we have emphasized the importance of alignment with energy efficiency development. But in addition, some parts of the smart grid effort are now poised to stimulate development of demand response and storage in ways that will be increasingly visible in the IRP process.

As we suggested in our comments on the 2015 smart grid report, it is time to move forward with an initial effort for distributed resource planning. We recommend the California approach of starting that as a stand-alone effort and at some point combining it with the longstanding IRP process.

We recognize that the institutional situation in California is considerably different. Their Long Term Planning Process involves coordination among three agencies, the California PUC, California Energy Commission and California ISO, while the distribution resource planning process mandated under AB 327 (2013) is solely under the CPUC. The most recent development is that under SB 350 (2015), California will now develop IRPs as well, although the exact approach is still under development.

While Oregon will take its own course, we believe that the time is ripe to start a distribution resource planning effort, in part to tie smart grid development to overall planning in a more

coherent way. The initial DRPs filed by California utilities, including PacifiCorp, are very useful in outlining differing distribution planning frameworks and techniques.<sup>1</sup>

## **2. Alignment of Smart Grid activities and new, flexible rate design**

We commend PGE for steady advancement of efforts to test and deploy new, more flexible rate structures supporting smart grid development. These are outlined in the report starting at p. 38 and include:

- Commercial and Industrial Time-of-Day Pricing (TOD) (active deployment via Schedules 83, 85, and 89)
- Residential and Small Commercial Time-of-Use Pricing (TOU) with 2,300 residential customers enrolled; this is being actively promoted to EV drivers
- Pricing Research Pilot under UM 1708 (Order No. 15-203), where customer recruitment began in February 2016

For the Pricing Research Pilot, the report states (p. 40), "PGE will continue to recruit participants with a target of 7,000 participants by end of 2017. PGE plans to identify one or more of the most effective pricing program options to scale to a program for all customers in 2019 after the deployment of the new Customer Information System."

As the Company moves toward a full-scale rollout in 2019, it is increasingly important to assess these pilot rate designs in the broader context of clean energy resource development, improved customer choice, equity in access to programs and in bill impacts, and a balanced approach to the impact on the Company's balance sheet.

## **3. Smart Water Heaters**

The report provides a summary (p. 51) of early stage progress on grid-interactive electric water heaters:

PGE has launched a small "smart" water heater demand response demonstration project and will use this experience to guide a 600-point regional pilot with BPA in 2017. The present demonstration involves fourteen residential customers who have installed a communications module that "plugs" into their water heater (no electrician is required for the installation) ... PGE anticipates two outcomes from this demo. In the short run, this will influence the design of a late-2017, or 2018 water heater pilot. Second, as an outcome of the BPA regional pilot, a business case to justify funding a market transformation effort (with NEEA) such that all new water heaters sold in the Pacific NW are sold as smart water heaters with a standard communication interface, thus enabling a customer-friendly and affordable means to implement demand response.

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<sup>1</sup> General information and links are available at <http://www.cpuc.ca.gov/general.aspx?id=5071>

This effort gained national attention when the White House held a workshop and issued a statement on June 16, 2016, “Obama Administration Announces Federal and Private Sector Actions on Scaling Renewable Energy and Storage with Smart Markets.”<sup>2</sup> The release states:

Portland General Electric (PGE) commits to implementing a new standard communication interface for smart water heaters that will enable customer-friendly and affordable large-scale residential demand response. PGE, Oregon’s largest electric utility company, is co-leading a market transformation effort with the Bonneville Power Administration that would replace the region’s 3.5 million water heaters with smart water heaters, creating a 10,000 MWh “battery” for less than \$40/kWh, and will launch a mass-market water heater program pilot including these new technologies in 2017. PGE also commits to investing \$366,000 in 2016 in energy storage research and development and early-stage technology deployment and to using smart meter data and distributed energy resources in its resource planning and investment decisions, including launching a second generation energy information system by the end of 2016. PGE is also announcing a pilot on time-variant prices for residential customers.

This is very welcome recognition for PGE’s effort, but NWECA wishes to highlight some additional considerations.

The state of the art for grid-interactive electric heaters and the entry of firms across the supply chain has now reached the point where we believe a faster scale-up of this resource is feasible over the next 3 to 5 years.

In addition, the onset of significant transmission system congestion in the Portland region during peak summer demand hours is a significant challenge to all transmission providers and utilities in this area, including PGE, Bonneville, PacifiCorp, and public power utilities such as Clark County PUD. Bonneville has issued a Request for Offers for a broad spectrum of resources (both “incs” and “decs”, including generation redispatch, demand response and storage), and is currently considering final offers for a program startup in July 2017.

NWECA suggests that further coordination by PGE with BPA, other utilities and potentially the Northwest Energy Efficiency Alliance (building on their experience in market transformation), specifically on Smart Water Heaters, offers an important opportunity for leveraging this work and gaining a significant benefit for reliability in the PGE system.

Finally, this is also connected to the new focus on demand response in the 7<sup>th</sup> Regional Plan of the Northwest Power and Conservation Council, which calls for 700 to 1300 MW of new DR resources by 2021 to address overall regional capacity needs. An effective multi-utility approach to Smart Water Heater market development and deployment could be a catalyst for the broader regional DR effort.

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<sup>2</sup> <https://www.whitehouse.gov/the-press-office/2016/06/16/fact-sheet-obama-administration-announces-federal-and-private-sector>

#### **4. Full inclusion of low income/hard to reach customers in smart grid activities**

We thank PGE for continuing to recognize the importance of full inclusion of low income/hard to reach customer segments in smart grid activities, as described in section 8D of the report, Low Income Customer Engagement (p. 55). The Company is committed to involvement of economically disadvantaged customers in the full spectrum of smart grid research, program development and implementation, and has conducted specifically targeted focus groups as well as ongoing monitoring of communications from customers and internal staff coordination.

With the emergence of full-scale flexible rate designs supporting smart grid and clean energy development, as discussed above, it is especially important to consider the opportunities to include low income customers fully and not inadvertently penalize them. We look forward to working further with the Company and the Commission to insure continued progress.

Dated this 15<sup>th</sup> day of July, 2016.

A handwritten signature in black ink that reads "Fred Heutte". The signature is written in a cursive, slightly slanted style.

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