

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

In the Matter of

PORTLAND GENERAL ELECTRIC
COMPANY

Annual Smart Grid Report

STAFF'S COMMENTS

These comments are submitted in response to Portland General Electric's (PGE or Company) fifth annual *Smart Grid Report*.

In 2012, the Commission adopted a smart-grid reporting requirement for PacifiCorp, PGE, and Idaho Power Company to "ensure that utilities are systematically evaluating promising smart-grid technologies and applications, that the Commission is kept apprised of utilities' progress, and that stakeholders, Commission Staff, and the Commissioners have an opportunity to provide input into utility evaluations of smart-grid technologies and applications, as well as their plans for smart-grid investments."¹

At a minimum, the utility's Smart Grid Report must include:

1. Smart-grid strategy, goals, and objectives.
2. Status of smart-grid investments the utility plans to take in the next five years and of projects already underway.
3. Smart grid opportunities and constraints.
4. Targeted evaluations of technologies and applications pursuant to Commission-approved stakeholder recommendations.
5. Related activities such as investment to address physical-and cyber-security, privacy, customer outreach and education, etc.²

The Smart Grid Guidelines specify that each utility's first report must include all smart-grid reporting elements identified in Order No. 12-158. Subsequent reports need only

¹ Order No. 12-158 at 1.

² Order No. 12-158 at 6 (The actual guidelines include more detail regarding each of these requirements).

include incremental additions and updates of all elements in the first report and information that may be required by Commission in a previous order.³

Order No. 16-405 accepted PGE's *2016 Smart Grid Report*, with the inclusion of the following recommendations:

1. PGE provide the results and work papers used in the cost-effectiveness evaluation of the Energy Partner Pilot before the next *Smart Grid Report* filing.
2. In future *Smart Grid Reports*, PGE include copies of new or updated DSM and DER marketing material as an appendix.
3. PGE conduct a stakeholder process to develop metrics in which to compare cost-effectiveness methodologies across all current and future DER and DSM efforts.
4. PGE provide data on its Energy Partner, Flex: Pricing Research – Peak Time Rebate and Next Rush Hour Rewards pilot programs.
5. PGE identify and discuss the system and Company resources necessary to begin evaluation of DER value to customers and the additional resources needed to commence distribution resource planning.
6. PGE participate in a staff-led stakeholder workshop process to determine if and what changes should be made to the smart-grid reporting process.

In these comments, Staff will analyze how PGE addressed the requirements for subsequent *Smart Grid Reports* for incremental additions and updates of all elements in the first report and how PGE addressed the requirements set forth in Order No. 16-405. Staff reviewed PGE's *2017 Smart Grid Report* that was submitted on May 31, 2017. Staff finds the report has evolved into a cohesive, comprehensive and helpful report that reflects PGE's substantial efforts in producing a quality product. Staff lauds the Company's effort over the last five years that has resulted in a commendable product.

Below are Staff's brief comments to the Commission-adopted recommendations.

Order No. 16-405 Requirements

Requirement #1: Provide the results and work papers used in the cost-effectiveness evaluation of the Energy Partner Pilot.

PGE provided this in Appendix 8 of the *2017 Smart Grid Report*. At the end of the evaluation, Navigant provides conclusions and directions for future research based on

³ Order No. 12-158 at page 4, UM 1460, May 8, 2012.

the consultants analysis. Regarding data utilization, Navigant included the following opportunities for improvement:

- Consulting resource dispatch engineers to determine the threshold for the top number of hours in which demand response is most likely to be called as a resource.
- Using historical data to determine when these peak hours occur, and assign a dispatch importance weight to each of those hours.
- Collection performance history from Energy Partner to determine the hourly load impacts of the program.

Regarding indirect costs, Navigant stated participants in the Energy Partner program can curtail their load in a variety of ways, such as manual or automated, which can affect performance, costs, and value to participants. Because the conducted analysis assumes indirect costs are consistent across all participants, Navigant suggests that “future surveys of participants could provide information to more accurately quantify these factors.”⁴ These surveys could provide greater accuracy of actual participant costs.

Staff would like PGE in its reply comments to provide its opinions on the aforementioned suggestions by Navigant and indicate whether the Company is acting on any of them. If so, Staff would like to know the strategies the Company plans to pursue.

Requirement #2: PGE include copies of new or updated DSM and DER marketing material as an appendix.

PGE provided over 40 pages of marketing and outreach materials used in the Company's Rush Hour Rewards pilot (smart thermostat demand response program), Energy Partner pilot, and Flex: Pricing Research pilot.

Staff appreciates the time and effort PGE spent compiling the material and including it for stakeholder review. Doing so allowed Staff to have greater insight into how the Company and any of its vendors are engaging with customers. Not only does this information allow Staff to monitor a crucial component of any these pilots' success, but also provides Staff a high bar for reviewing other utilities' TOU and DR programs.

Staff looks forward to PGE's continued inclusion of updated marketing and outreach materials in future *Smart Grid Reports*.

⁴ See page 169

Requirement #3: Conduct a stakeholder process to develop metrics in which to compare cost-effectiveness methodologies across all current and future DER and DSM efforts.

PGE held a stakeholder workshop on April 28th, 2017, where Staff and a number of other stakeholders were in attendance. The primary purpose of the workshop was to present and compare all cost-effectiveness methodologies currently being used or developed by PGE and allow stakeholders to discuss. No decisions were made, but important considerations and cross-cutting issues across a number of DERs were identified. PGE included the workshop's presentation in Appendix 6 of the *2017 Smart Grid Report*.

Staff appreciates PGE's work in conducting this workshop and looks forward to future efforts regarding improving cost-effectiveness methodologies.

Requirement #4: Provide data on its Energy Partner, Flex: Pricing Research – Peak Time Rebate and Next Rush Hour Rewards pilot programs.

PGE provided participant, maximum available winter capacity, and maximum available summer capacity data for all three programs in the *2017 Smart Grid Report*. Staff is very encouraged by the initial performance of the Flex and Rush Hour rewards program as well as glad to see the continued growth in performance of the Energy Partner pilot. Staff looks forward to the final analyses for both the Flex and Rush Hour pilots in docket No. UM 1708.

Staff would like PGE to comment on the results of the May 2017 RFP for vendors who would provide new opportunities for nonresidential customers and describe the strategy moving forward, especially considering the strong performance and participant engagement of the Energy Partner program.

Requirement #5: Identify and discuss the system and Company resources necessary to begin evaluation of DER value to customers and the additional resources needed to commence distribution resource planning.

Staff appreciates PGE's willingness to engage Staff's endeavor on conceptualizing and identifying discrete tasks in pursuing a distribution resource plan (DRP) or distribution system planning (DSP). In the *2017 Smart Grid Report*, PGE detailed a seven-step process in which the Company would produce an initial DRP for Commission review. Though each step faces its own hurdles, Staff recognizes one crucial challenge in implementing a DRP is the essential tools in order to generate the granular data or forecasts essential in capturing accurate costs and benefits of location-specific DERs. Staff has been conducting internal research and meetings on this very same topic and understands the lack of robust and well tested options.

Because the Commission indicated its support of Staff's recommendation to conduct an investigation into the distribution system planning in PGE's 2016 IRP (LC 66), Staff anticipates the primary discussions and efforts happening within whatever docket arises from that specific recommendation. Because of this, Staff asks PGE in future *Smart Grid Reports* to summarize developments in the DRP or DSP efforts that arise from Staff's recommendation in LC 66.

Requirement #6: Participate in a staff-led stakeholder workshop process to determine if and what changes should be made to the smart-grid reporting process.

On May 15, 2017, Staff hosted a workshop attended by PGE, PacifiCorp, Idaho Power, Energy Trust of Oregon, and ODOE to discuss the future of the Smart Grid Report Guidelines found in Commission Order No. 12-158. In addition to agreeing upon how stakeholders view the value of the utilities' smart grid reports, participants agreed that more time between reports would enable be valuable to all smart grid stakeholders. The one-year cycle is demanding on both utilities and stakeholders who review the reports. In Commission Order No. 17-290, the Commission approved a biannual submission cycle for all future smart grid reports, which means after the 2017 reports, the next year utilities will file will be 2019.

Staff concludes that PGE successfully satisfied all of Staff's recommendations.

Additional Topics

Customer Engagement Transformation (CET): Customer Touchpoints Project

Staff would like PGE to comment on how adaptable the systems and processes the CET is updating will be to future program developments. That is, can a future demand-side management or DER program be easily incorporated into these new systems? How future proofed are the results of the CET and does PGE know of any current limits with the improvements?

T&D Analytics

PGE describes how the data can be utilized for circuit analyses and asset management initiatives, but Staff would like PGE to discuss in its reply comments how the T&D analytics and data can be used in a future DRP or DSP?

Expansion of the Next Rush Hour Rewards Pilot

Staff approves of PGE's plans to expand the current smart thermostat demand response pilot detailed in Docket No. UM 1708 to include non-Nest smart thermostats in the program. As detailed in the most recent Staff Report on the docket, Staff recommends:

1. PGE should look to more aggressively augment the Direct Load Control Thermostat (DLCT) program offering, including exploring system wide direct installation of smart thermostats in partnership with the Energy Trust of Oregon. By July 1, 2018, PGE should present an initial program design or several program designs to Commission Staff and possibly ETO staff if coordination with ETO would enhance the program offering or cost effectiveness.
2. PGE should follow the Cadmus recommendation to refine its first-year assessment of demand response capacity benefits and cost-effectiveness. Where possible, PGE should report how and at what incremental costs it could improve its meter data management system and customer information system to increase its participation tracking and meter data storage and processing capabilities to support a broader roll-out of the program and future demand response enabled assets.
3. PGE should also work to have a more robust verification of customer participation, including a customer retention process to lure customers back into participation.
4. PGE should update its planning assumptions. PGE should strongly consider developing a broader rollout of the program to be reflected in PGE's IRP.⁵

Staff appreciates PGE's continued work in this demand response program and looks forward to the results of the expansion.

This concludes Staff's Comments.

Dated at Salem, Oregon, this 11th day of August, 2017.



Michael Breish
Senior Utility Analyst
Energy Resources and Planning Division
(503) 373-1583
E-mail: Michael.breish@state.or.us

 8/11/17

Mark Bassett
Senior Utility Analyst
Energy Resources and Planning Division
(503) 378-5363; e-mail:
mark.bassett@state.or.us

⁵ OPUC Staff Report, at pages 1-2, Docket No. UM 1708(2), July 11, 2017.