

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

In the Matter of

PORTLAND GENERAL ELECTRIC
COMPANY

Smart Grid Report

STAFF'S COMMENTS

These comments are in response to the sixth smart grid report (the Report) of Portland General Electric (PGE or the Company). In Order No. 12-158, the Commission adopted a smart-grid reporting requirement for the Company as well as PacifiCorp and Idaho Power, 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

In November 2019, Staff will file its findings on whether the Report meets the requirements of Order No. 12-158 and subsequent related orders, and will make a recommendation at the November 21, 2019 public meeting about whether the Commission should accept the filing. In these comments, Staff will briefly address the Company's compliance with the requirements of Order No. 12-158, the Company's response to recommendations in the order accepting PGE's last Smart Grid Report, and identify issues and concerns Staff would like the Company to address in its final comments due in September 27, 2019.

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; and
5. Related activities such as investment to addressed physical-and cybersecurity, privacy, customer outreach and education, etc.²

¹ Order No. 12-158, page 1.

² Ibid. page 6.

Order No. 17-446 accepted PGE's *2017 Smart Grid Report*, and included the following recommendations:

1. PGE report on the effectiveness of the proposed changes to the Energy Partner, Smart Thermostats, and other demand response pilot projects
2. PGE provide an update on cost-effectiveness methodologies of [distributed energy resources].
3. PGE provide an update to its [distribution resource planning] efforts as directed through LC 66 and other pertinent dockets
4. PGE provide specific examples of how [Customer Information System] and [Meter Data Management System] projects are enabling demand response and Customer Engagement Transformation projects.

In the comments that follow, Staff will first analyze how PGE addressed the requirements for subsequent smart grid reports to add incremental additions and updates. Then, Staff will also analyze how the Company addressed the specific requirements set forth in Order No. 17-446.

Order No. 12-158 Requirements

Requirement #1 Smart-grid strategy, goals, and objectives

Staff finds the Report has evolved into a more cohesive expression of the Company's smart grid strategy, reflecting PGE's substantial efforts in pioneering a smart-grid in its service territory. The *2019 Smart Grid Report* contains significant rewriting of the previous reports that clearly meets this requirement.

Requirement #2: Status of smart-grid investments the utility plans to take in the next five years and of projects already underway

Regarding the Rush Hour Rewards smart thermostat demand response pilot, the Report states "The program has now completed three impact and process evaluations with Cadmus and cost-effectiveness analysis, all of which indicate that the program has been successful at achieving cost-effective demand reductions."³ That is helpful, but dollar amounts would be more helpful. How cost-effective were these demand reductions?

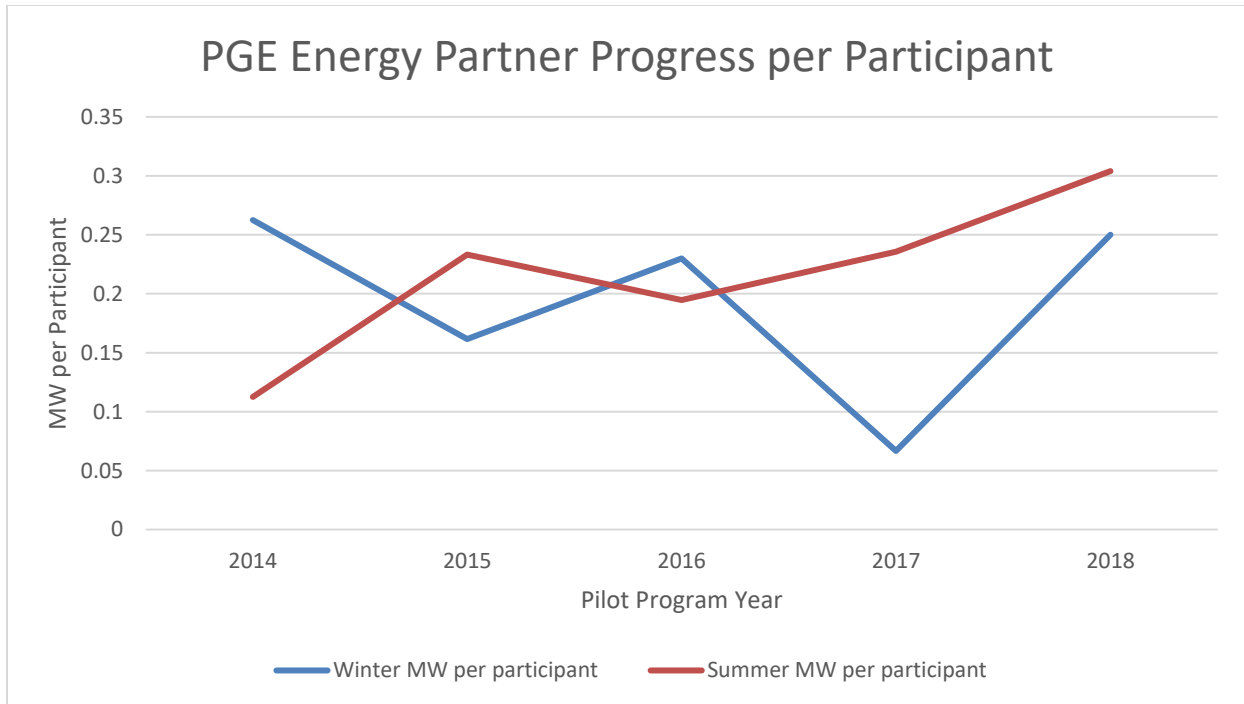
Requirement #3: Smart grid opportunities and constraints

Some potential constraints appear to have been discovered in the Energy Partner pilot. More detail is required to explain the lessons learned from the significant decline in this pilot's performance in 2017. In the 2017 Report, the Company stated the winter 2016-17 reduction dropped to 8.3 MW from the previous year's 13.1 MW and this was caused by "loss of customers to direct access and some reduced nominations from a small set of

³ PGE. *2019 Smart Grid Report* page 47.

poor performing participants.”⁴ In the 2019 Report, however, the Company reveals program participation only dropped down to 45 participants, a sample size not substantially smaller than 2016’s 57 and that would not be expected, in terms of probability, to present a substantially different central tendency.⁵ The 2019 Report also shows the 2017 winter reduction was 3 MW, not 8.3 WM, much lower than previously reported.

When depicted as a reduction in megawatts per participant, this pilot program shows a big drop in its 4th winter.



Staff would like to see a detailed explanation for this drop in winter 2017. The 2019 Report says something similar to the last report – that the results dropped because “loss of customers to direct access and poor event realization rates caused nominated commitments to drop below 8.5 MW in subsequent months.”⁶ Tracking this pilot in MW per participant helps control for the reduced participation, but Staff would like to know why there was “poor event realization” in that year and what specific lessons were learned to avoid it in the future. And what caused the need to restate the 2017 results down to 3 MW from what was reported in the *2017 Smart Grid Report*?

Requirement #4: Targeted evaluations of technologies and applications pursuant to Commission-approved stakeholder recommendations

⁴ PGE. *2017 Smart Grid Report* page 45.

⁵ PGE. *2019 Smart Grid Report* page 43.

⁶ Ibid.

Staff found the description of the technologies and applications mostly sufficient. But requirements two and three of the Commission-approved recommendations in Order No. 17-446 require more reporting as explained below.

Requirement #5: Related activities such as investment to address physical and cybersecurity, privacy, customer outreach and education, etc

Staff found these topics to be covered adequately in this Report.

Order No. 17-446 Requirements

Requirement #1: PGE report on the effectiveness of the proposed changes to the Energy Partner, Smart Thermostats, and other demand response pilot projects.

As mentioned above, more detail is required. Staff appreciates that the Company has other channels to communicate this information, but Order No. 17-446 requires it to be consolidated into this Report.

Requirement #2: PGE provide an update on cost-effectiveness methodologies of DERs

The Company's response was "As discussed at a workshop April 28, 2017, current PGE valuation practices are based on capacity savings in-line with our current acknowledged IRP."⁷ Staff interprets this response to mean that the cost-effectiveness methodology has not changed since PGE's *2017 Smart Grid Report*. However, changes are being considered for various types of technologies. For example, PGE's Demand Response Advisory Group has been charged with looking into the cost-effectiveness of demand response. In the Company's storage pilots in UM 1856, PGE is testing approaches to valuing that DER technology's cost-effectiveness. The approach to evaluating the cost-effectiveness may have even been updated in PGE's 2019 IRP methodology. Staff would like the Company to provide more information to clarify activities related to cost-effectiveness of DER and the alternative methodologies that may be in the process of being considered by the Company.

Requirement #3: PGE provide an update to its [distribution resource planning] efforts as directed through LC 66 and other pertinent dockets.

The Company's response to this requirement was less clear of an indication that its DRP efforts have not changed since filing its *2017 Smart Grid Report*. The 2019 Report gives an undetailed summary of the emerging distribution planning docket. If the Company's DRP efforts *have* changed since 2017, then this was an insufficient response: "The OPUC opened a formal investigation into [distribution system planning] on March 22, 2019 (UM 2005). PGE will be providing updates to the DSP consistent with the schedule and requirements coming out of UM 2005."⁸ If the Company's strategy in distribution resource

⁷ PGE. *2019 Smart Grid Report* page 26.

⁸ Ibid.

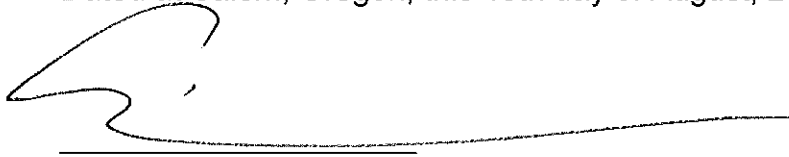
planning has changed since its last smart grid report, Order No. 17-446 requires that change get fully updated in the *2019 Smart Grid Report*.

Requirement #4: PGE provide specific examples of how [customer information system] and [meter data management system] projects are enabling demand response and Customer Engagement Transformation projects

Staff appreciates how the Company answered this fourth requirement directly.

This concludes Staff's Comments.

Dated at Salem, Oregon, this 15th day of August, 2019.

A handwritten signature in black ink, appearing to read 'Eric Shierman', is written over a horizontal line. The signature is stylized and cursive.

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