

**PUBLIC UTILITY COMMISSION OF OREGON  
STAFF REPORT  
PUBLIC MEETING DATE: November 21, 2019**

REGULAR  X  CONSENT       EFFECTIVE DATE  November 21, 2019

**DATE:** November 13, 2019

**TO:** Public Utility Commission

**FROM:** Eric Shierman

**THROUGH:** Michael Dougherty and JP Batmale **SIGNED**

**SUBJECT:** PORTLAND GENERAL ELECTRIC:  
(Docket No. UM 1657)  
Staff Recommendation on Recognition of 2019 Smart Grid Report.

**STAFF RECOMMENDATION:**

The Commission accept Portland General Electric Company's (PGE or Company) 2019 *Smart Grid Report* filing as having met the requirements of Order No. 12-158 established in UM 1460 and Order No. 17-446 in UM 1657.

**DISCUSSION:**

Issue

Whether the Commission should accept PGE's 2019 *Smart Grid Report*.

Applicable Rule or Law

In 2012, the Commission issued Order No. 12-158, establishing smart-grid policy goals and objectives, utility reporting requirements, and Commission guidelines for utility actions related to smart grid planning. Under Order No. 12-158, utilities were required to file an initial smart grid report that, at a minimum, included the following main elements:

1. Smart grid strategy, goals and objectives.
2. Status of smart grid projects, initiatives, and activities that are underway, results of implemented smart grid projects, and planned smart grid investments for the next five years.

3. Smart grid opportunities the company is considering for the next five years and any constraints.
4. Targeted evaluations pursuant to Commission-approved stakeholder recommendations.
5. Related activities such as investment to address physical and cybersecurity, privacy, customer outreach and education, etc.

Thereafter, utilities were required to file an annual smart grid report. This requirement was changed to biannual by Order No. 17-290.

This subsequent biannual report is required, at a minimum, to include incremental additions and updates of all elements of the initial report.<sup>1</sup> The Commission accepted PGE's *2017 Smart Grid Report* as having met the requirements of Order No. 12-158. At the same time, in its order accepting that report, the Commission adopted a list of Staff recommendations for PGE's *2019 Smart Grid Report*. The Commission expressed the expectation that in the next smart grid report:

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 DERs [distributed energy resources].
3. PGE provide an update to its DRP [distributed resource planning] efforts as directed through LC 66 and other pertinent dockets.
4. PGE provide specific examples of how CIS [customer information systems] and MDMS [meter data management system] projects are enabling demand response and Customer Engagement Transformation projects.

### Analysis

PGE made a significant effort to rewrite its smart grid report, offering readers a clearer description of an integrated strategy to manage distributed energy and other technological advances in the Company's interaction with its customers. In filed comments, Staff commended the Company for this improvement, which met three of the five requirements in Order No. 12-158, the first, fourth, and fifth, where the company was asked to detail its:

1. Smart grid strategy, goals and objectives.
4. Targeted evaluations pursuant to Commission-approved stakeholder recommendations.

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<sup>1</sup> Oregon Public Utility Commission. *Order No. 12-158* Docket No. UM 1460, May 8, 2012, page 4.

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

What follows is a summary of how the Company has met the other two requirements from the original Smart Grid order.

To meet Order No. 12-158's second requirement, that the Company update the "Status of smart grid projects, initiatives, and activities that are underway, results of implemented smart grid projects, and planned smart grid investments for the next five years," Staff sought a more detailed update of PGE's Rush Hour Rewards smart thermostat demand response pilot. The report stated: "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."<sup>2</sup> Staff asked for the exact amounts to better understand how cost-effective these DR activities were. In its reply comments, the Company shared the following table:<sup>3</sup>

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<sup>2</sup> PGE. *2019 Smart Grid Report* page 47.

<sup>3</sup> PGE. *2019 Smart Grid Report: Portland General Electric Response Comments* September 27, 2019, page 2.

Activity	2015-2017 Actuals	2018 Actuals	2019 (Jan-Jun) Actuals	2019 (Jul-Dec) Forecast	2020 Forecast	2021 Forecast
Incremental Contract Labor	\$110,000	\$102,000	\$96,000			
Incremental PGE Labor	\$ 9,000	-	-	\$60,000	\$120,000	\$120,000
DERMS Provider	\$427,000	\$834,000	\$861,000	\$581,000	\$1,094,000	\$1,658,000
Evaluation	\$130,000	\$95,000	\$33,000		\$40,000	\$40,000
Recruitment & Customer Outreach	\$12,000	\$38,000	\$69,000	\$25,000	\$75,000	\$55,000
Third party services	-	-	-	\$105,000	\$57,000	
<b>Total Administrative Costs</b>	<b>\$687,000</b>	<b>\$1,069,000</b>	<b>\$1,059,000</b>	<b>\$771,000</b>	<b>\$1,386,000</b>	<b>\$1,873,000</b>
<b>Total Direct Install Costs</b>	<b>-</b>	<b>\$190,000</b>	<b>\$739,000</b>	<b>\$1,050,000</b>	<b>\$1,774,000</b>	<b>\$1,211,000</b>
<b>Total Incentives</b>	<b>\$322,000</b>	<b>\$345,000</b>	<b>\$94,000</b>	<b>\$379,000</b>	<b>\$818,000</b>	<b>\$1,318,000</b>
<b>Grand Total</b>	<b>\$687,000</b>	<b>\$1,070,000</b>	<b>\$1,060,000</b>	<b>\$2,074,000</b>	<b>\$3,978,000</b>	<b>\$4,402,000</b>
<b>MW</b>	<b>4</b>	<b>7.3</b>		<b>17.4</b>	<b>29.3</b>	<b>48</b>

With this detailed response, Staff considers Order No. 12-158's second requirement met. The Energy Partner program has not reached this level of analysis. Staff sought greater explanation for its delay under the third requirement of Order No. 12-158.

To fulfill Order No. 12-158's third requirement, that PGE update the "Smart grid opportunities the company is considering for the next five years and any constraints," Staff sought clarification on the constraints the Company has faced in its Energy Partner

demand response pilot and asked for more detail on the lessons learned from the significant decline in this pilot's performance in 2017. PGE explained how this program's largest participants transferred their load to direct access. There has also been a change of vendors to manage the program. With this response from the Company, Staff now considers Order No. 12-158's third requirement met.

When PGE's *2017 Smart Grid Report* was accepted by the Commission in Order No. 17-446, four requirements were added. Two of these additional requirements were met by the *2019 Smart Grid Report* as filed, the first and the fourth:

1. PGE report on the effectiveness of the proposed changes to the Energy Partner, Smart Thermostats, and other demand response pilot projects.
4. PGE provide specific examples of how CIS [customer information systems] and MDMS [meter data management system] projects are enabling demand response and Customer Engagement Transformation projects.

Staff asked for more detail on the other two. Order No. 17-446's second requirement asked PGE to "provide an update on cost-effectiveness methodologies of DERs." In the *2019 Smart Grid Report*, the Company said: "As discussed at a workshop April 28, 2017, current PGE valuation practices are based on capacity savings in-line with our current acknowledged IRP." Staff interpreted this response to mean that the cost-effectiveness methodology has not changed since PGE's *2017 Smart Grid Report*.

However, since 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 DER technologies' cost-effectiveness, the approach to evaluating the cost-effectiveness could have been updated since PGE's last IRP methodology. Staff asked the Company for more information to clarify activities related to the cost-effectiveness of DER and the alternative methodologies that may be in the process of being considered by the Company.

In its reply comments, PGE stated definitively that it "has not changed its practice of demand response cost effectiveness analysis."<sup>4</sup> Staff accepts this answer and now considers the second requirement of Order No. 17-446 met.

Order No. 17-446's third requirement asked PGE to "provide an update to its DRP efforts as directed through LC 66 and other pertinent dockets." If the Company's DRP efforts have changed since 2017, then this was an insufficient response: "The OPUC

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<sup>4</sup> PGE. *2019 Smart Grid Report: Portland General Electric Response Comments* September 27, 2019, page 10.

opened a formal investigation into DSP 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.”<sup>5</sup> If the Company’s strategy in distribution resource 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*.

PGE’s reply comments followed through with five thoughtful paragraphs describing how the Company’s DRP efforts have been changing since it filed its *2017 Smart Grid Report*. Staff accepts this reply as an adequate response, meeting the third requirement of Order No. 17-446.

Finally, in the *2019 Smart Grid Report*, PGE questioned “whether future Smart Grid Reports as envisioned in 2012 are necessary.”<sup>6</sup> The Company arrives at this conclusion because “the evolution of the Smart Grid and the Smart Grid Report has progressed to a point where the Smart Grid for PGE is a reality and should be treated as such, a major event, an area of investment for PGE and its customers.”<sup>7</sup>

Staff agrees with Commissioner Tawney, who responded to this suggestion at the July 16, 2019 public meeting by saying: “This is moving from pilots over here and the R&D side of PGE, interesting, cool things, to core to your business, which it needs to be, because that is where the customers are going and so what does that mean for culture change inside your business?”<sup>8</sup> Commissioner Tawney’s question has yet to be fully answered.

The smart grid report covers not just the transition from concepts to pilots. The original requirements from Order No. 12-158 also cover the transition from pilots to utility scale implementation. PGE has not arrived at that final destination. Staff finds the broad principles of Order No. 12-158 remarkably future proof in its original vision. They remain relevant.

Staff looks forward to a day when distributed resources and the infrastructure to support them become so commonplace that the function of this report is replaced by a new distribution resource planning process. Until that replacement arrives, Staff recommends this reporting process remain in place.

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<sup>5</sup> PGE. *2019 Smart Grid Report* page 26.

<sup>6</sup> *Ibid.*, page 36.

<sup>7</sup> *Ibid.*

<sup>8</sup> Tawney, Letha. At time mark 55:01 of [https://oregonpuc.granicus.com/MediaPlayer.php?view\\_id=2&clip\\_id=416](https://oregonpuc.granicus.com/MediaPlayer.php?view_id=2&clip_id=416)

### *Stakeholder Comments*

The Northwest Energy Coalition (NWECC) filed comments. Like Staff, NWECC commended PGE “for a comprehensive and well organized report.”<sup>9</sup> NWECC stated that “PGE now has a clear roadmap moving rapidly from a long gestation period of assessment, testing and pilots to transitional and full-scale programs.”<sup>10</sup> NWECC also sees UM 2005 as the place to develop a reporting process that eventually replaces the smart grid report.

NWECC warned of four challenges ahead:

- Resource adequacy from the closure of Boardman and congestion on the South of Allston transmission line.
- Accommodating more renewable energy.
- Engaging with local governments in PGE’s territory to develop and deepen joint efforts for system resilience.
- Engagement with customers and communities beyond basic market segmentation.

### Conclusion

After engaging with Staff with its reply comments, PGE has met both the requirements of Order No. 12-158 and Order No. 17-446. The Company also requested the smart grid report be replaced by a reporting process in UM 2005. Staff would welcome that development, but holds off on recommending the discontinuation of the smart grid report until such an alternative reporting process is fully in place.

### **PROPOSED COMMISSION MOTION:**

Accept PGE’s 2019 Smart Grid Report.

PGE 2019 Smart Grid Report

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<sup>9</sup> Huette, Fred. *Comments on Portland General Electric Company's 2019 Smart Grid Report, UM 1657* August 16, 2019, page 1.

<sup>10</sup> *Ibid.*, page 2.