


PUBLIC UTILITY COMMISSION OF OREGON  
STAFF REPORT  
PUBLIC MEETING DATE: January 14, 2020

REGULAR  X  CONSENT       EFFECTIVE DATE  January 14, 2020

DATE: January 8, 2020

TO: Public Utility Commission

FROM: Eric Shierman 

THROUGH: Michael Dougherty and JP Batmale 

SUBJECT: PACIFIC POWER:  
(Docket No. UM 1667)  
Staff Recommendation on Acceptance of 2019 Smart Grid Report.

**STAFF RECOMMENDATION:**

The Commission should accept Pacific Power's (PacifiCorp or the Company) *2019 Smart Grid Report* filing as having met the requirements of Order No. 12-158 established in UM 1460 and Order No. 18-045 in UM 1667.

**DISCUSSION:**

Issue

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

Applicable Rule

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 PacifiCorp'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 Staff recommendations for PacifiCorp's *2019 Smart Grid Report*, expressing the expectation that PacifiCorp should:

1. Continue to include a high-level table summary of all stakeholder informal comments and corresponding Company responses as an appendix in future smart grid reports.
2. Continue to update the [advanced meter infrastructure] AMI roadmap using the stated tracking methods. The Company should also specify a method for tracking customer engagement. The Company should also develop a system by the next smart grid report to perform and report on the impacts of financial modeling on AMI action prioritization and solution comparison among different applications.
3. Provide updates and results of its expanded [phasor measurement unit] PMU installation project and provide additional information in future smart grid reports on the evaluation process used by the company in choosing deployment locations for the synchrophasors that will provide the data critical for compliance.
4. Provide results from its 2017 RFP for load control services, and what projects, if any, were installed. The Company should provide its assessment of the pilot in regard to the future of the load control program.
5. Update their progress of linking distributed devices to its [outage management system] OMS, [emergency management system] EMS, [distribution management system] DMS, and each other, if applicable, in its 2019 Smart Grid Report. The

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<sup>1</sup> *In the Matter of the Public Utility Commission of Oregon Staff Recommendation to Use Oregon Electricity Regulators Assistance Project Funds from the American Recovery and Reinvestment Act of 2009 to Develop Commission Smart Grid Objectives for 2010-2014* (Docket No. UM 1460), Order No. 12-158, page 4.

Company should also provide an overview of its adherence to the IEC 61968 standard.

6. Provide an update on any field area network or communication functionality implementation.
7. Continue to keep the Commission apprised of demand response [DR] developments in future smart grid reports and should track and update in its next report the market development for DR technology, customer demand for DR products and services, and assess the impact of DR on smart grid initiatives, including but not limited to renewables integration.
8. Summarize any projects screened using the [distributed energy resources] DER tool where DER projects were found to be a cost-effective alternative to traditional solutions, and describe any DER projects that were or will be installed due to positive results. In addition, the Company should share in its next report the evaluation of the eight separate values found in the Utility Applications and Value streams, how those values may stack, and more information on the modeling the Company is using to value energy storage and any impacts from this modeling on project evaluation.
9. Summarize its findings of its smart inverter analysis project, and what projects or infrastructure involving smart inverters, if any, have been initialized.
10. Provide detail of the distribution automation project in the Lincoln City area and any other deployments, as well as any results observed from project deployment.
11. Provide an update and results of the network monitoring system installation, as well as plans for future deployment.

### Analysis

The guidelines for acceptance of PacifiCorp's *2019 Smart Grid Report* are provided by two Commission orders: Order No. 12-158 and Order No. 18-045. The former established the process for smart grid reporting. The latter accepted the Company's *2017 Smart Grid Report*.

#### *Order No. 12-158*

In comments filed on October 10, 2019, Staff found PacifiCorp met three of the five requirements in Order No. 12-158. To meet the 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 on the percentage of customers

who have opted out of smart meters. In reply comments, the Company said it was 1.2 percent.<sup>2</sup> Staff considers Order No. 12-158's second requirement now met.

To fulfill Order No. 12-158's third requirement, that PacifiCorp update the "smart grid opportunities the company is considering for the next five years and any constraints," Staff sought greater detail on the opportunity the Company's use of its smart grid for participation in the Energy Imbalance Market [EIM] offers its customers. In the section titled "Transmission Network and Operations Enhancements" of its *2019 Smart Grid Report*, PacifiCorp described the opportunities of the EIM as:

- More efficient dispatch, both inter- and intra-regional, by automating dispatch every 15 minutes and every five minutes within and across the EIM footprint;
- Reduced renewable energy curtailment by allowing balancing authority areas to export or reduce imports of renewable generation that would otherwise need to be curtailed; and
- Reduced need for flexible reserves in all EIM balancing authority areas, also referred to as diversity benefits, which reduces cost by aggregating load, wind and solar variability and forecast errors within the EIM footprint.<sup>3</sup>

In comments, Staff asked for a more detailed description of these benefits.

In reply comments the Company said the smart grid report "is not the appropriate place to include the level of EIM information that Staff is requesting" but went on to describe where to find the information: the Company's annual transition adjustment mechanism filing.<sup>4</sup> After some data requests for the exact citations PacifiCorp referred to, Staff was able to find the description of the impacts of EIM mentioned in PAC's Smart Grid report, which are broadly summarized below:

- The benefit of more efficient dispatch: **[Begin Confidential]** [REDACTED] **[End Confidential]** forecasted for 2020.<sup>5</sup>
- In response to a data request, PacifiCorp revealed it "does not track renewable curtailment reduced by participating in the energy imbalance market (EIM)."<sup>6</sup>

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<sup>2</sup> PacifiCorp. *UM 1667—PacifiCorp's Reply Comments* November 22, 2019, page 2.

<sup>3</sup> PacifiCorp. *2019 Smart Grid Report* August 1, 2019, pages 18,19.

<sup>4</sup> PacifiCorp. *UM 1667—PacifiCorp's Reply Comments* November 22, 2019, page 2.

<sup>5</sup> Wilding, Michael G. Direct testimony in *Advice No. 19-007/UE 356—PacifiCorp's 2020 Transition Adjustment Mechanism* April 1, 2019, page 27.

<sup>6</sup> PacifiCorp. Response to OPUC Data Request 59, December 16, 2019, page 1.

- The amount of reduction in PacifiCorp's need of flexible reserves: **[Begin Confidential]** [REDACTED] **[End Confidential]** forecasted for 2020.<sup>7</sup>
- The cost of compliance with greenhouse gas emissions regulations when energy is transferred into the CAISO to serve California load is: **[Begin Confidential]** [REDACTED] **[End Confidential]** forecasted for 2020. This is a cost savings to PacifiCorp because revenue from zero-emitting resources is expected to exceed PacifiCorp's compliance obligation for the Company's sales of energy from emitting resources.<sup>8</sup>

Staff also sought more detail on a constraint PacifiCorp implied in its *2019 Smart Grid Report*. The Company explained it can restore power for a customer, in real time, while a customer service representative is still on the phone with the customer "in certain instances."<sup>9</sup> Staff sought clarification on the instances this is not possible. In PacifiCorp's reply comments, it clarified this "is typically due to a physical blocking of communication to the meter (something placed on the meter or in front of the meter that impacts radio frequency performance), meter failure, and tampering."<sup>10</sup> The Company also explained this occurs in less than 1 percent of these calls.

Staff appreciates the Company providing these additional details. We consider Order No. 12-158's third requirement now met.

#### *Order No. 18-045*

When PacifiCorp's *2017 Smart Grid Report* was accepted by the Commission in Order No. 18-045, eleven requirements were added. In comments filed on October 10, 2019, Staff found the *2019 Smart Grid Report* had met ten of these eleven requirements. Staff asked for more detail on the third requirement that: "The Company should provide updates and results of its expanded PMU installation project and provide additional information in future smart grid reports on the evaluation process used by the company in choosing deployment locations for the synchrophasors that will provide the data critical for compliance."

In the *2019 Smart Grid Report*, PacifiCorp described a PMU placement philosophy of deploying at large generators of 75 megawatts (MW) or larger first before city center loads or where lines converge.<sup>11</sup> Staff asked for the percentage completion of this first stage.

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<sup>7</sup> Wilding, Michael G. Direct testimony in *Advice No. 19-007/UE 356—PacifiCorp's 2020 Transition Adjustment Mechanism* April 1, 2019, page 27.

<sup>8</sup> Brown, Kelcey. Reply Testimony in *UE 356—PacifiCorp Reply Testimony and Exhibits* July 15, 2019, page 18.

<sup>9</sup> PacifiCorp. *2019 Smart Grid Report* August 1, 2019, page 10.

<sup>10</sup> PacifiCorp. *UM 1667—PacifiCorp's Reply Comments* November 22, 2019, page 3.

<sup>11</sup> PacifiCorp. *2019 Smart Grid Report* August 1, 2019, page 17.

In reply comments, the Company reports all 13 of these first stage sites have completed physical installation, but they are not yet streaming data yet “due to firmware and bandwidth issues.”<sup>12</sup> Staff considers Order No. 18-045’s third requirement now met.

### Conclusion

After engaging with Staff with its reply comments and responding to data requests, PacifiCorp has met all the requirements of Order No. 12-158 and Order No. 18-045.

### **PROPOSED COMMISSION MOTION:**

Accept PacifiCorp’s 2019 Smart Grid Report.

PacifiCorp 2019 Smart Grid Report

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<sup>12</sup> PacifiCorp. *UM 1667—PacifiCorp’s Reply Comments* November 22, 2019, page 3.