

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON
UM 1667**

In the Matter of
PacifiCorp
Smart Grid Report

STAFF'S COMMENTS

These comments are in response to the sixth smart grid report (the Report) of PacifiCorp (the Company). In Order No. 12-158, the Commission adopted a smart-grid reporting requirement for the Company as well as PGE 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 January 2020, 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 January 14, 2020, 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 PacifiCorp’s last Smart Grid Report, and identify issues and concerns Staff would like the Company to address in its reply comments due on November 22, 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. 18-045 accepted PacifiCorp's *2017 Smart Grid Report*, and included the following requirements:

1. PacifiCorp should 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. PacifiCorp should continue to update the [advanced metering 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. The Company should 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. The Company should 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 regards to the future of the load control program.
5. PacifiCorp should update their progress of linking distributed devices to its [outage management system (OMS)], [energy management system (EMS)], [distribution management system (DMS)] and each other, if applicable, in its 2019 Smart Grid Report. The Company should also provide an overview of its adherence to the International Electrotechnical Commission's IEC 61968 standard.
6. PacifiCorp should provide an update on any field area network or communication functionality implementation.
7. PacifiCorp should continue to keep the Commission apprised of demand response developments in future smart grid reports and should track and update in its next report the market development for [demand response (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. PacifiCorp should 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. PacifiCorp should summarize its findings of its smart inverter analysis project, and what projects or infrastructure involving smart inverters, if any, have been initialized.
10. The Company should 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. The Company should provide an update and results of the network monitoring system installation, as well as plans for future deployment.

In the comments that follow, Staff will first analyze how PacifiCorp addressed the original requirements for Order No. 12-158 and. Then, Staff will also analyze how the Company addressed the specific requirements set forth in Order No. 18-045.

Order No. 12-158 Requirements

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

Staff finds the Report did an adequate job conveying the Company's smart grid strategy. The *2019 Smart Grid Report* identifies PacifiCorp's main goals and objectives from AMI deployment.

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

Because the Company has run into some public opposition to AMI installation, knowing the percentage of customers who have opted out of smart meters is an important metric for assessing this project's status. This information was not included in the Report.

Requirement #3: Smart grid opportunities and constraints

Some identified opportunities require more detailed elaboration. The section on the Energy Imbalance Market (EIM) only introduces this opportunity in a generally qualitative way. Staff would like to see numbers behind these claims of benefits in the Report. The Company should identify the degree to which the Company's dispatch has become more efficient due to the EIM, the amount of the Company's renewable curtailment reduced by participation in the EIM, and the amount of reduction in the Company's need of flexible reserves due to EIM participation. Also, the Company mentioned "the cost of compliance with greenhouse gas emissions regulations when energy is transferred into the ISO to serve California load."³ Staff would like to see these costs detailed.

³ PacifiCorp Smart Grid Biennial Report – Oregon August 1, 2019, page 19.

An identified constraint requires more detailed explanation as well. For example, on page 10, the Company states "...in certain instances PacifiCorp can restore power while the customer center representative is still on the phone with the customer..." In what circumstances is this possible and what circumstances is it not possible?

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

Staff found the description of the technologies and applications sufficient. But requirement three of the Commission-approved recommendations in Order No. 18-045 requires more reporting as explained below in its Requirement #3.

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. 18-045 Requirements

Requirement #1: PacifiCorp should 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.

This requirement was met.

Requirement #2: PacifiCorp should continue to update the 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.

This requirement was met.

Requirement #3: 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.

On page 17, the Company describes a PMU placement philosophy of deploying at large generators of 75 megawatts (MW) or larger first before city center loads or where lines converge. Staff would like to know what percentage of this first stage of installation has been completed.

Requirement #4: The Company should 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 regards to the future of the load control program.

This requirement was met.

Requirement #5: PacifiCorp should update their progress of linking distributed devices to its OMS, EMS, DMS, and each other, if applicable, in its 2019 Smart Grid Report. The Company should also provide an overview of its adherence to the IEC 61968 standard.

This requirement was met.

Requirement #6: PacifiCorp should provide an update on any field area network or communication functionality implementation.

This requirement was met.

Requirement #7: PacifiCorp should continue to keep the Commission apprised of demand response 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.

This requirement was met.

Requirement #8: PacifiCorp should summarize any projects screened using the 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.

This requirement was met.

Requirement #9: PacifiCorp should summarize its findings of its smart inverter analysis project, and what projects or infrastructure involving smart inverters, if any, have been initialized.

This requirement was met.

Requirement #10: The Company should 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.

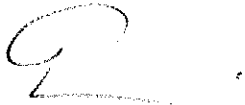
This requirement was met.

Requirement #11. The Company should provide an update and results of the network monitoring system installation, as well as plans for future deployment.

This requirement was met.

This concludes Staff's Comments.

Dated at Salem, Oregon, this 10th day of October, 2019.



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