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ACTION REQUEST RESPONSE

To: Public Service Commission

From: Division of Public Utilities
Chris Parker, Director
Artie Power, Energy Section Manager
Abdinasir Abdulle, Utility Analyst
Charles Peterson, Utility Consultant

Date: July 29, 2015

Re: Docket No. 15-035-63, Annual compliance filing of PacifiCorp's Smart Grid monitoring report.

RECOMMENDATIONS (Do Not Acknowledge)

The Division of Public Utilities ("Division") recommends that the Commission NOT acknowledge PacifiCorp's ("Company") 2015 Smart Grid Annual Report (Report) that was filed with the Commission on July 1, 2014. As detailed below, the Division believes that there are significant deficiencies with the report as filed this year.

Given the categorical conclusion of the Company in its Report that "The business case indicates that an overarching smart grid vision will not benefit our customers," [Report, page 37] the Commission may want to reconsider whether the annual production of this report is worth the time and effort of the Company and is of real value to the regulatory community.

ISSUE

Pursuant to the Commission Orders in Docket 08-999-05 dated on December 17, 2009 and November 30, 2011, the Company filed its 2015 Smart Grid Annual Report on July 1, 2015. On the same day, July 1, 2015, the Commission issued an Action Request for the Division to review the Report for compliance and make recommendations. On July 6, 2015, the Commission issued a Notice of Filing and Comment Period asking any interested party to submit comments on the Report on or before July 31, 2015, and reply comments may be submitted on or before August 14, 2015. This memorandum is the Division's response to the Commission's Action Request.

REVIEW OF COMMISSION DIRECTION

In its Order in Docket No. 08-999-05 dated December 17, 2009, the Commission directed the Company to monitor the development of smart grid technologies and to consider their implementation as technologies mature and cost effectiveness analyses demonstrate appropriate benefits to the Company and its customers. The Company was also directed to file an annual report that outlines the findings of this monitoring effort.

In its Order dated November 30, 2011 in Docket No. 08-999-05, the Commission directed the Company to include a discussion in the Report of seven items:

1. All smart-grid related projects and activities the Company is actually engaged in throughout its system;
2. Smart grid-like activities the Company is either considering or has implemented which accrue some of the benefits of smart grid;
3. Upgrades or changes the Company is making relative to potential smart grid implementation and the related benefit-cost analyses;
4. Provide a list and description of smart grid pilot projects across the country being monitored by the Company;
5. Smart grid related activities and requirements in the Company's other jurisdictions;

6. The interaction of smart grid, rate structure, and customer behavior; and
7. Vehicle to grid applications. The Commission also directed the Company to file its annual report in July of each year.

In the November 30, 2011, Order, pages 9-10, the Commission stated that “in future filings we direct the Company to provide the worksheets and assumptions supporting the Financial Summary or other such analyses validating its results.” The Commission also directed “the Company to explain the relationship between the analysis provided in the Financial Summary and the demand side resource performance standards approved by the Commission in Docket No. 09-035-27....” [November 2011 order, page 10]. Also, the Company was to present its smart grid report to the DSM advisory group.

In its November 28, 2012 correspondence to the Company, the Commission directed the Company to provide additional information regarding the dynamic line rating projects in its annual Smart Grid Monitoring Report.

In its Acknowledgement letter dated October 30, 2014, the Commission indicated that it would acknowledge the Company’s 2014 Smart Grid Annual Report contingent upon the Company making a presentation to the DSM Advisory Group and “to notify the Commission when it has presented the 2014 Report to the DSM Advisory Group.”

DISCUSSION

In compliance with Commission Orders, on July 1, 2015, the Company filed its 2015 Smart Grid Monitoring Report. The Division reviewed this Report in light of the Commission’s requirements set forth above. The Division believes that the content of the Report is deficient with previous Commission direction.

The Company changed the format of the current Report from previous reporting years. This change, which resulted in a shorter report, was possibly intended to be more concise and

parsimonious,¹ but, in the Division's view, the report does not adequately cover the Commission's directives. The Division will discuss these deficiencies below.

On page 2 of the Report, the Company sets forth the Report requirements in Table 1. Table 1 lists nine report requirements and gives the page numbers where, presumably, the report requirement is fulfilled. The Division notes that for three of the requirements the page numbers given are "8-32," which, essentially, refers to the majority of the report. The Division did not find this aspect of the "table of contents" very helpful.²

The Report contains detailed description of the technologies that the Company has considered (See pages 8 – 32). The description of these technologies complies with the reporting requirements 1 and 2. A few of the projects are summarized below.

The Report includes a lengthy discussion of two dynamic transmission line rating projects in Idaho and Wyoming. These projects are expected to be completed in 2016. For a few years now the Company has been a participant in the WECC-sponsored transmission synchrophasor demonstration project. PacifiCorp's participation included working with other utilities to install eight "phasor measurement units" (PMU) at eight substations during the time since 2013. The Company currently has no plans in to install additional PMUs. The Report concludes regarding the synchrophasor project that "The 2016 report will provide an update on the benchmarking, validation and fine tuning of the system model evaluation" [page 14]. In another project, PacifiCorp was engaged in Oregon in a project to evaluate advanced metering infrastructure. The Company appears to have determined that much upgrading of information technologies must be implemented first before actual smart meters are rolled out, possibly in the mid-2020s. [see pages 20-22]. The Company represents that this discussion of projects in other states complies with Report requirement 5, "Smart grid related activities and requirements in the Company's other jurisdictions."

¹ If this were indeed the intention, the Division generally supports that reports should be to the point and as short and concise as possible while still adequately covering the subject matter.

² There are page numbers of "41" and "47" given in Table 1 that are beyond the page range of the Report as the Division has it. The Division assumes these numbers are given in error.

Report requirement 3, “Upgrades or changes the Company is making relative to potential smart grid implementation and the related benefit-cost analyses” the Company represents is contained throughout pages 8-32 of the report [see Report, page 2]. Presumably the benefit-cost analyses are set forth in the confidential Attachment A. While the Company can argue that it has complied with this requirement, the Division notes that one has to search virtually the entire report and liberally interpret what is contained there in order to see the compliance with this requirement. The Division recommends that in any future reports, the Company set forth the compliance with this requirement in a recognizable section or provide in summary form how the report satisfies each of the reporting requirements.

Pages 22-27 of the Report have a description of DSM projects and discuss those projects possible smart grid connections. This corresponds to the eighth requirement listed on page 2 of the Report and to one of the additional requirements of the Commission November 30, 2011 order. The reference to the eighth requirement in the table “A discussion of alignment of the demand-side resource standards approved by the Commission with the smart grid analysis” omits the part in the Commission’s order that the Company was **to explain the relationship between the analysis provided in the Financial Summary and the demand side resource performance standards**. [Emphasis added]. The Division is unable to identify any meaningful discussion of the bolded portion of the above statement in the Report.

Report requirement 4 states “Provide a list and description of smart grid pilot projects across the country being monitored by the Company.” In the Company’s 2014 Smart Grid Annual Report, Appendix B provided a description of the smart grid technologies at other companies that have been implemented in the past and presented as well as those the Company was monitoring nationwide. Appendix B was four full pages long. In this year’s Report, Appendix B briefly mentions one project and is four lines long. If there is truly exactly one project in the entire country that holds any interest for the Company, then that alone is worth a brief explanation. The Division believes the Company’s compliance with requirement 4 is inadequate.

Report Table 1 indicates that report requirement 6 “The interaction of smart grid, rate structure, and customer behavior,” is satisfied on pages 37-41. As mentioned in footnote 2 above, page 41

does not exist in the Division's copy of the Report. Furthermore, the Division is unable to discern where in the Report requirement 6 is satisfied.

Electric vehicles (report requirement 7) are discussed beginning on page 31.

The additional requirement to discuss microgrids is discussed beginning on page 33. However, what is provided this year is copied verbatim from last year's smart grid report. The Division continues to believe that microgrids are an issue of growing interest and importance. The U.S. Department of Energy seems to include microgrids as a subset of the larger smart grid field.³ A quick internet search turned up some additional information on recent microgrid activities.⁴ The Division does not consider the Report to be responsive to this report requirement.

The Company was directed by the Commission "to provide the worksheets and assumptions supporting the Financial Summary or other such analyses validating its results." The Division notes that the Financial Summary, Attachment A was filed as a pdf file so that a reader would have to try to recreate any formulae the Company used. The Division has been unable to identify documents, worksheets or other analyses that validated the results of Attachment A that would indicate compliance with this filing directive.

Finally, the Company was expected to file a notice with the Commission once it had complied with the directive to present its 2014 Smart Grid Annual Report to the DSM Advisory Group. The Division believes that such a presentation was made to the DSM Advisory Group on November 6, 2014. However, the Division has not found any indication that the Company followed-up with a notification to the Commission.

As has been the case in previous years, this year's Report concludes that "Presently the economics to implement a comprehensive smart grid system throughout PacifiCorp are cost prohibitive. The business case indicates that an overarching smart grid vision will not benefit our

³ <http://energy.gov/oe/services/technology-development/smart-grid/role-microgrids-helping-advance-nation-s-energy-system> last accessed July 21, 2015.

⁴ For example see <http://www.microgridinstitute.org/> last accessed July 21, 2015

customers,” [Report, page 37]. That there may be a few niches that smart grid-like technologies will be useful to the Company and cost effective to customers that occasionally become available, the general conclusion has been the same for several years: a full-fledged smart grid system is years away, maybe decades. The Company gives no indication that this conclusion will change anytime soon.

This gives rise to the question about the usefulness of continuing to have an annual report that says about the same thing each year. There are some options to consider. The first is to discontinue requiring the Company file a report until such time as there are clear indications that the smart grid landscape has changed in a significant way. (DSM-related projects will continue to be reported separately just as they are today). A second option is to have the Company report every two or three years, instead of every year. This would give the Company and, perhaps, regulators the opportunity to identify significant changes in smart grid technologies and economics. A third option might be to have the Company report annually on the specific activities it is engaged in with respect to smart grid and then include an in-depth discussion on technology that is on the horizon that the Company is particularly interested in. Finally, the default option is to continue as we are. In any case the Division believes that including extensive DSM-related discussions in this report are redundant to what the DSM groups are doing and should be eliminated. To the extent that smart grid informs DSM, it should be relative to new technologies that are on the horizon or are reaching a point where they might be implemented.

CONCLUSION AND RECOMMENDATIONS

Based on the above discussion, the Division believes that the Company’s Report is significantly deficient and should not be acknowledged by the Commission. Additionally, the Division recommends that the Commission order the Company to notify the Commission after it has made its annual smart grid presentation to the DSM Advisory Group. The Division also recommends that the Commission reconsider the need and usefulness of the Smart Grid report going forward.

CC: Bob Lively, RMP
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