

August 21, 2017

***VIA ELECTRONIC FILING  
AND OVERNIGHT DELIVERY***

Steven V. King  
Executive Director and Secretary  
Washington Utilities and Transportation Commission  
1300 S. Evergreen Park Drive S.W.  
P.O. Box 47250  
Olympia, WA 98504-7250

**RE: Docket U-151958—Pacific Power & Light Company’s Comments**

In response to the Notice of Opportunity to File Written Comments issued by the Washington Utilities and Transportation Commission (Commission) on July 7, 2017 (Notice), Pacific Power & Light Company (Pacific Power or Company), a division of PacifiCorp, appreciates the opportunity to provide the following written comments regarding the investigation into reliability benchmarking in Docket U-151958, specifically the econometric reliability benchmarking and the study performed by Power System Engineering, Inc. (the Study). The Company’s first support for the Study began with a webinar on September 29, 2016, responses were filed for data requests on October 24 and December 5, 2016 and completed with a phone conference reviewing the process and findings on May 15, 2017. During this process the Company has been candid in its concerns but supportive of the need for the Commission to evaluate reliability delivered to customers.

PacifiCorp is a six-state utility providing safe, reliable service to over 1.8 million customers. The safety and reliability of the Company’s system is critical. In prior data requests, reports, informational sessions, and as a filed document in U-161024, the Company has outlined its process to ensure safe and reliable service to its customers. Fundamentally, the Company identifies core activities required to maintain its facilities consistent with safety rules and transmission reliability standards, replace equipment which is no longer able to operate safely or reliably, support new customer additions, augment its load serving capability, as well as make targeted customer reliability improvements. In each of these investment streams, impacts are considered, including those relating to customer reliability, as measured by the potential customer minutes interrupted. With this metric as a common denominator for assessing the benefit of any given investment, the Company is poised to make those investments which deliver best service to customers most economically.

Fundamentally, Pacific Power does not support the use of an econometric approach to assessing reliability and does not recommend the Commission adopt the Study for the purposes of setting reliability baselines or benchmarking utility reliability outcomes. Several factors contribute to reliability performance; many of these factors are outside of the direct control of the Company. In fact, the Company estimates that outage causes that are within the control of the Company account for approximately only 30% of the minutes customers are without power. Some of the largest contributions to reliability metrics include weather, the impact of transmission system outages, public interference, (which includes vehicle accidents and contractors damaging

company equipment). An econometric approach to reliability focuses on a limited set of factors that influence reliability and could have the unintended consequence of promoting or penalizing the wrong behaviors. For instance, since the benchmark sets targets for Pacific Power for SAIDI between 90 to 155 minutes and SAIFI between 1.17 to 1.83 events, it would suggest Pacific Power might be delivering reliability at too high of a level, to which its customers would likely disagree. Pacific Power also notes that, at this time, there is only limited research supporting econometric correlations to reliability,<sup>1</sup> suggesting that it would be premature to use an econometric methodology to assess reliability, particularly if the outcome suggests penalizing companies based on the performance against those questionable targets. Importantly, many of the variables identified in the Study are not those which appear to have been identified as significant by other investigators.

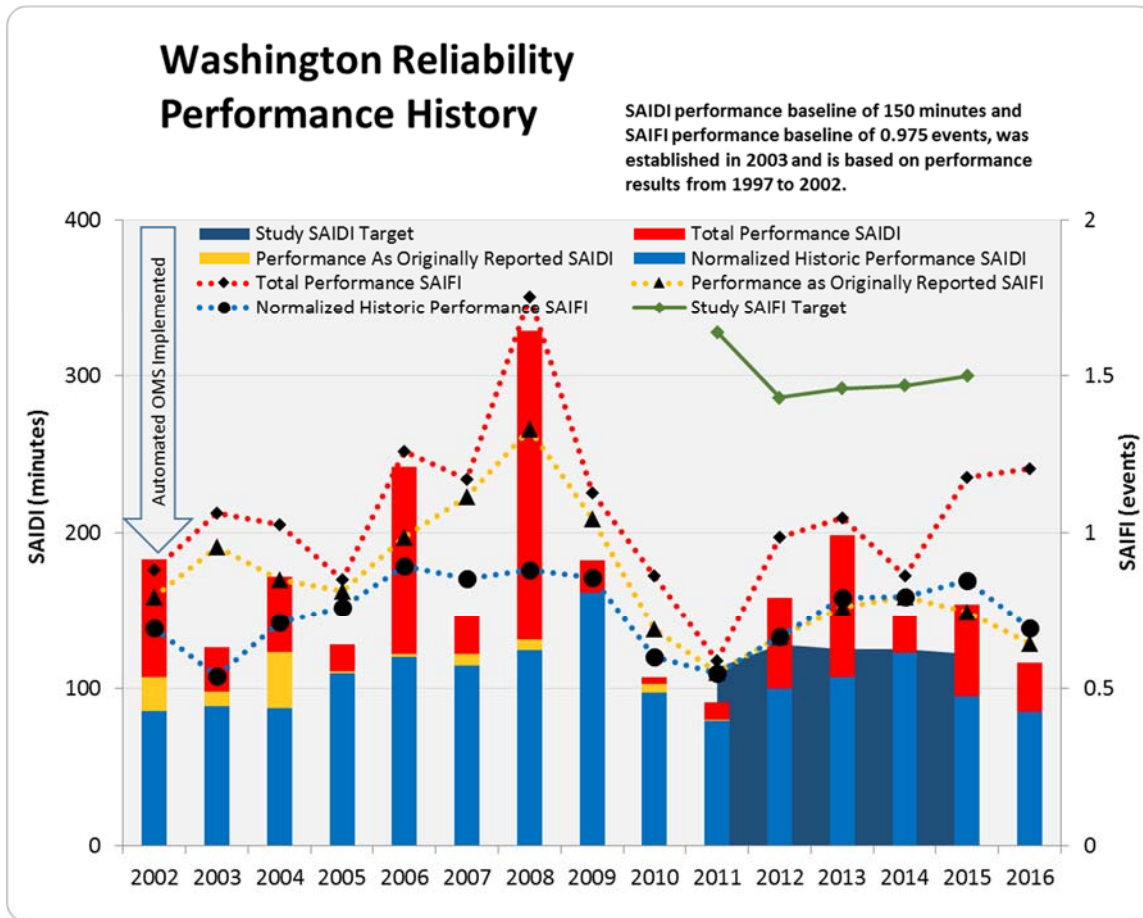
It appears the investigators are attempting to establish whether investment in facilities is warranted, but the study shouldn't be considered as a benchmark to evaluate the need for investment because it doesn't take into account factors which drive investment, which would generally include customer characteristics, circuit length, equipment age and particular exposure types (other than elevation change and forestation). Rather, its variables include level of forestation, amount of customers served within the geographic footprint, elevation change, thunderstorm hours experienced and percentage of underground facilities. Pacific Power is concerned that the factors in the study could dramatically impact how much investment is deemed appropriate without consideration of the characteristics noted above. Pacific Power points the commission staff to the Department of Energy's Interruption Cost Estimate (ICE) tool as a potential tool to inform decisions about reliability cost investments <https://psc.utah.gov/2016/06/20/docket-no-13-035-01/>.

Pacific Power appreciates that the Study appears to recognize that the Company has delivered reliable service throughout its service area, as evidenced by the historic performance against the calculated benchmarks.

The Commission currently evaluates Pacific Power's reliability against the benchmark levels established by each company in compliance with WAC 480-100-393 & 398. These rules required Pacific Power (as well as other investor-owned utilities) to establish a baseline for performance. If a company has met targets, and no system changes have occurred that would lead to a need to modify the baselines, it should be considered to have delivered an acceptable level of reliability. The reliability metrics used within these rules include system average interruption duration index (SAIDI), system average interruption frequency index (SAIFI) and customer average duration index (CAIDI). SAIDI is the cumulative duration the average customer is without power, typically measured for a year. SAIFI is the number of times the average customers experiences a sustained interruption (more than five minutes in duration). Finally, CAIDI is the average duration of an outage. Baseline performance of each of these metrics was established by Pacific Power based upon performance in 2003. Since those baselines were set, the Company has successfully delivered upon them. Interestingly enough, this process works. Below is the history reported by the Company in its most recent Reliability Report, augmented with the calculated targets derived by Power System Engineers.

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<sup>1</sup> <https://emp.lbl.gov/sites/all/files/lbnl-188741.pdf>



This performance demonstrates that the current model is delivering reliable service for customers. However, to the extent the Commission is interested in changing its approach to evaluating reliability, substantial work has been done by the Department of Energy to expand a methodology for estimating the Value of Service of reliability for customers mentioned above, called the Interruption Cost Estimate tool. Value of Service studies establish by customer class the impact of unplanned outages, and creates a value proxy for reliability, since the most significant measure of any given outage is associated with the consequential impacts to the customer of that outage. This means commercial and industrial customers with limited backup options will value an outage highly while those customers who have limited commercial energy uses or have backup options value them less significantly. Use of Value of Service models could serve to inform reliability decisions made by companies. While Pacific Power has used the ICE calculator to estimate customer value of reliability, in order to determine each project's ranking for funding a different method is performed. Reliability projects are gauged by each project's cost to improve divided by the estimated avoided customer minutes interrupted; others might use expected unserved energy as a gauge for investments. Pacific Power believes that each company is inspired to provide best cost solutions for its customers. It is important to note that many of the policies in the DER are actually contrary positions to that explored in this econometric study.

To the extent that reliability metrics need to be econometrically-derived, the industry should be afforded the opportunity to explore the appropriate variables against which it could set baselines and subsequently be measured. Finally, if such an action is taken, performance metrics which

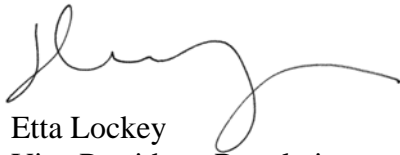
are used to judge under-performance (and presumably penalize those underperformers) should also be used to judge over-performance and reward those parties for that performance. Another approach which could be taken, while not based in econometric theory, would be that each company could develop a mechanism similar to production control charts. It points the commission and staff to <https://psc.utah.gov/2016/06/20/docket-no-13-035-01/> in which the Utah Division of Public Utilities and PacifiCorp developed performance bands similar to the method used in production quality assessment. Each day a 365-day rolling SAIDI and SAIFI value is prepared and based upon the most recent five years of daily data, with a 90% confidence interval established for upper and lower performance bounds. In Utah, if this performance is exceeded, the company is required to notify the commission within a proscribed time period and identify what the underlying reasons are for performance beyond bounds. The reason might include specifics such as environmental factors unique to service territories.

As evidenced by the study, Pacific Power is providing highly reliable service to our customers. We expect to continue to explore how to evolve our analysis of reliability and performing improvement projects as we leverage our data in the future.

Pacific Power appreciates the opportunity to provide these comments and looks forward to further participating in this proceeding.

Please direct inquiries to Jason Hoffman, Regulatory Projects Manager, at (503) 331-4474.

Sincerely,

A handwritten signature in black ink, appearing to read 'Etta Lockey', with a long, sweeping horizontal line extending to the right.

Etta Lockey  
Vice President, Regulation