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PacifiCorp's Comments on the Imbalance Conformance Enhancements
Draft Final Proposal

PacifiCorp hereby submits the following comments to the California Independent System Operator Corporation ("ISO") on the Imbalance Conformance Enhancements draft final proposal that was published January 30, 2018, ("Draft Final Proposal"). PacifiCorp appreciates the opportunity to provide comments for the ISO's consideration.

Ramping Capacity and Imbalance Conformance Tool

In the Draft Final Proposal the ISO proposes to improve the imbalance conformance process through the implementation of a ramping capacity tool and imbalance conformance tool. The ISO explains that the proposed tools will improve the imbalance conformance process through providing a better estimate of needed conformance as well as available ramping capacity on the system.

PacifiCorp appreciates the ISO's efforts to provide additional system information to the operators to improve reliability and situational awareness. PacifiCorp seeks clarification on whether the ISO's proposed tools would be made available to both the ISO and energy imbalance market ("EIM") entity operators. PacifiCorp is supportive of this effort and in fact has consistently expressed interest in this type of information, such as the imbalance conformance tool described by the ISO, for its EIM entity operators to provide more accurate conformance to the market and better understand market model deviations from actual operations within the balancing area.

PacifiCorp supports the development of the ramping capacity tool (made available to both EIM entity and ISO operators) and agrees with the ISO that North American Electric Reliability Corporation ("NERC") standards provide 30 minutes to correct for area control error ("ACE") deviations and it is reasonable and preferable for the operator to "ramp" the adjustment into the market, rather than put in an adjustment that attempts to correct the situation in five-minutes. However, the ramping capacity tool, which would display the ramping capacity available for each market run, would inform the grid operator as to whether or not the conformance would trigger penalty prices. PacifiCorp is concerned that the introduction of the ramping capacity tool has the potential to distort operator behavior. As stated in the Draft Final Proposal, "The grid operator's

primary objective is to ensure grid reliability with disregard to how this may impact prices throughout the balancing area." Allowing the grid operator instantaneous visibility into the effect that the conformance will have in the triggering of penalty prices, may potentially bias the operator's behavior away from a sole focus on reliability due to pricing implications.

PacifiCorp recommends that the ISO explore an after the fact report, specific to each EIM entity and the ISO, that reviews intervals during which the imbalance conformance limiter was triggered, in order to alleviate concerns about the incentives created by the ramping capacity tool, which has the potential to inappropriately constrain the coarseness of the operator's conformance to the available ramping capacity of the system. This report could also be used in the interim, prior to implementation of the ramping capacity tool, and would potentially highlight the system conditions during this interval, the underlying cause of conformance, the actual conformance input and a more optimal conformance input, given data available to the operator at the time the conformance decision was made. Through a more informed, aware and knowledgeable operator, the goal of eliminating coarse conformances could be more appropriately realized. PacifiCorp would be interested to understand how the use of these tools ends up impacting the use of the conformance tool, frequency of exceptional dispatches and the ISO's NERC Control Performance Standard (CPS1) scores.

Conformance Limiter

PacifiCorp continues to support the ISO's proposed enhancement to allow the conformance limiter to be triggered when there is a "change" in the load conformance between the previous interval and the current interval, even if the load conformance is at 0 MW in the current interval, and there exists an infeasibility in the current interval. PacifiCorp reiterates its suggestion that the enhanced logic should look further back than just the previous interval for the change in load conformance.

The ISO has repeatedly made the point that the load conformance is the result of the operator's best judgement of current system operation and reliability needs; it is not a precise tool, but are "coarse adjustments made to respond quickly to rapidly changing system conditions and tend not to be finely tuned or gradually applied." PacifiCorp agrees with the ISO's characterization, and expands further on the point, to include the fact that the operator's ability to respond to changes in system conditions is always lagged after the actual values have occurred. Due to the fact that the operator is attempting to manually input a value for system conditions that are already occurring, there will be multiple impacted real-time dispatch ("RTD") periods on the way into and out of almost every system issue, and therefore, a single interval will regularly be insufficient to capture the reaction time of the system or the operator. Additionally, due to the coarseness of the adjustment, some amount of variability is to be expected even with no major changes. PacifiCorp suggests that the ISO include subsequent periods in its limiter calculation to maintain the trigger for subsequent infeasibilities or the ISO could include a percentage margin, versus zero, to absorb small differences. Excluding subsequent intervals to the load conformance limiter and assuming that any change in infeasibility, even 1 MW, is not the result of the initial conformance amount implies a high level of accuracy in the initial conformance amount for subsequent intervals.

Conclusion

PacifiCorp appreciates the ISO's consideration of these comments and looks forward to the ISO's response.