Stakeholder Comments Template

Subject: Regional Resource Adequacy Initiative

Submitted by	Company	Date Submitted
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PacifiCorp offers the following comments on the California Independent System Operator's (ISO) Regional Resource Adequacy Straw Proposal. PacifiCorp appreciates the ISO's efforts in educating regional entities, such as PacifiCorp, on the existing rules for the Resource Adequacy (RA) program.

As stated in its Issue Paper comments, PacifiCorp continues to believe that it is important that the ISO tariff be structured to enable load serving entities (LSEs) that participate in an expanded regional organization to continue their use of existing resource planning practices with minimal disruption and that the local regulatory authorities (LRAs) of LSEs maintain their role in establishing resource planning guidelines and processes. The following comments are provided on the six items in the Regional RA Straw Proposal:

1. Load Forecasting

The ISO proposes that the coincident system load forecast for an expanded balancing authority area (BAA) would be created each year by the ISO based on load forecast data created and submitted by LSEs. The ISO has proposed that it would utilize the forecast provided by each LSE, calculate a coincidence factor and determine the allocation of the coincident load to each LSE in the BAA.

PacifiCorp supports the ISO's proposal to utilize an LSE's existing method to forecast load for purposes of creating a coincident system load forecast for an expanded BAA. PacifiCorp requests the ISO provide additional details regarding how the ISO proposes to calculate the coincidence factor when determining the coincident load for each LSE, including the historical time period that would be used for the calculation and the historical coincident peak adjustments for demand response.

2. Maximum Import Capability Methodology

The ISO proposes to revise the existing methodology used to calculate the Maximum Import Capability (MIC) megawatt (MW) values to reflect different peak time periods in which non-

coincident peaking areas without commonly known simultaneous import constraints experience their own maximum simultaneous imports.

PacifiCorp supports the concept to allocate MIC based on different peak time periods. PacifiCorp continues to assess the ISO's current MIC calculation methodology and the impacts it would have on new participants' abilities to meet its RA obligations using wholesale firm market purchases. In particular, PacifiCorp is evaluating whether the current MIC calculation methodology adequately accounts for a non-contiguous BAA in which extensive amounts of third party transmission rights and pseudo-tie resources are relied upon to deliver system capacity. These areas will need additional study to understand if additional methodology changes will be needed. It is important that sufficient import rights be made available to accommodate the use of both resources and wholesale firm market purchases external to the BAA to meet RA requirements.

3. Internal RA Transfer Capability Constraints

The ISO proposes to add tariff and BPM language to determine and implement maximum RA transfer limits between different areas of the expanded BAA to ensure reliable operation of the grid by limiting transfers of RA resources between internal areas. The ISO will build on the methodology that is currently being used to address the "Path 26 transfer capability constraint."

PacifiCorp supports the ISO's recommendation to enforce internal transfer capability constraints by expanding on the methodology currently used for the Path 26 counting constraint. As with Path 26, the newly defined zonal transfer constraints will likely need to account for existing transmission contracts that serve load outside the regional ISO balancing area. Consideration should also be given to how the methodology could apply to paths on which some facilities included in the path definition are outside the regional ISO balancing area or where the path operator is not a participating transmission owner.

4. Allocation of RA Requirements to LRAs/LSEs

The ISO tariff currently requires the ISO to allocate local and flexible capacity requirements to LRAs. The ISO proposes to modify its tariff so that the ISO will directly submit to LRAs their allocation of local and flexible capacity requirements so that they can allocate such requirements to their jurisdictional LSEs. If an LRA does not want to receive the allocations, the ISO would allocate the requirements directly to the LSEs.

PacifiCorp continues to support allocation of the local and capacity requirement directly to LSEs. PacifiCorp is concerned that the ISO's proposal to submit an LSE's total load allocation to an LRA will be more complex than its existing submittals for LRAs in one state. For example, PacifiCorp's total allocation of local and flexibility requirement would be submitted to six LRAs in its service territory. Under the ISO proposed tariff modification, it is possible that one or more of PacifiCorp's LRAs choose an option to allocate local and flexible capacity requirements. Under such a scenario, it is not clear whether or how the ISO would determine local and flexible capacity requirements at the state level. PacifiCorp requests clarification on whether the ISO's proposal is to provide a separate jurisdictional allocation of local and flexible capacity requirements to each of the separate LRAs, and if so, to provide information on how this might be calculated. Initially, PacifiCorp could be the only entity regulated by utility commissions in

each state, except California, participating in a regional ISO. In the future, it is plausible that another entity in one of these states joins the regional ISO. Absent a state-specific allocation of local and flexible capacity requirements, that LRA would potentially receive PacifiCorp's total allocation, associated with its six-state total demand, as well as the allocation of the additional entity. Under such a circumstance, it is not clear how an LRA might determine what portion of the requirement is associated with the demand within its jurisdictional boundary. These types of complexities associated with a regional ISO that includes multi-jurisdictional utilities should be taken into consideration in the ISO's proposal for a regional ISO RA program. It may be best that the ISO simply allocate local and flexible capacity requirements directly to multi-jurisdictional LSEs.

5. Updating ISO Tariff Language to be More Generic

The ISO proposes to make the ISO tariff language more generic to accommodate additional entities by using more universal language than the terms currently in use.

PacifiCorp continues to support this recommendation, as it is important for any ISO tariff revisions to accommodate participating entities that operate in states in addition to California and necessarily outside of the exclusive jurisdiction of the CPUC.

6. Reliability Assessment

To ensure reliable operation of the BAA, each month the ISO will conduct a reliability assessment for the upcoming month using the information submitted by LSEs in RA showings and generators in supply plans.

a. Planning Reserve Margin for Reliability Assessment

To do the reliability assessment, the ISO proposes to use a system Planning Reserve Margin (PRM) that would be established through a study conducted under a stakeholder process, with the study updated when significant changes occur to the ISO's BAA.

The planning reserve margin, measured as a percentage of coincident system peak load, is used in resource planning to ensure there are adequate resources to meet forecast load over time. PacifiCorp currently establishes its PRM within its Integrated Resource Planning (IRP) process by studying the relationship between cost and reliability measures among ten different PRM levels, ranging from 11 percent to 20 percent, along with system production costs. A detailed discussion of how PacifiCorp utilized a stochastic loss of load study to calculate its reliability metrics at each of the tested PRM levels is provided in Appendix I – Planning Reserve Margin Study in the 2015 IRP.[1] PacifiCorp continues to evaluate and evolve its planning reserve margin study through each of the IRP processes through feedback from its LRAs and stakeholders.

PacifiCorp understands the need to establish a minimum PRM for an expanded BAA as a means to ensure reliable operation. PacifiCorp further supports developing a minimum PRM through a transparent stakeholder process; however, the PacifiCorp recommends the ISO consider adopting some basic principles that will define the scope of this effort. One of these principles should be a

[1] https://www.pacificpower.net/content/dam/pacificorp/doc/Energy_Sources/Integrated_Resource_Plan/2015IRP/PacifiCorp_2015IRP-Vol2-Appendices.pdf

commitment to establish a PRM that considers the incremental cost of achieving incremental improvements in reliability. In developing this analysis, the ISO should identify the types of reliability measures it will report and use to inform selection of a PRM level (i.e., expected unserved energy, loss of load hours, loss of load events, etc.), the types of uncertainties the method will consider (i.e., unforced outages, load, generation from variable energy resources, hydro generation levels, etc.), and how it will develop resource portfolios for different PRM levels. Further, it is not clear whether minimum PRM levels will be established for each month, or whether a single PRM level will be calculated for a given year and applied to all months. In addition, it will be important to understand how costs associated with a PRM may disproportionately affect each LSE within the ISO BAA depending on the contribution to coincident system peak.

If the ISO establishes a planning reserve margin that creates a "shortfall" for an LSE that is inconsistent with the direction that it has received from its LRA, the LSE could be placed in the position of having to procure additional capacity that may not receive positive regulatory treatment for cost recovery. The ISO stated in its straw proposal that LRAs and LSEs can continue to establish their own PRM and procure to that level if they so choose for their planning purposes. However, the ISO then states it may utilize backstop procurement to resolve shortfalls that it determines are necessary based on its own reliability study. To mitigate this risk, the ISO might consider establishing a minimum PRM and allow LRAs to establish their own PRM levels so long as they achieve the same or greater level of reliability.

b. Resource Counting Methodologies for Reliability Assessment

The ISO proposes to develop consistent counting methodologies for the amount of capacity that each type of resource can contribute toward meeting RA requirements. The resulting level of capacity would be used in the reliability assessment to assess how the resources used for RA meet reliability needs established by the ISO.

A consistent counting methodology would need to take into consideration established resource planning principles of new entrants. For instance, in its IRP, PacifiCorp considers the capacity contribution from short-term firm market purchases procured at market hubs outside of the BAA. A standardized approach would also need to be based on industry best practices while also considering the LRAs having jurisdiction over LSEs in a regional ISO of new entrants may support or require different approaches for establishing resource counting criteria, particularly for intermittent resources. LRAs across PacifiCorp's jurisdictions have and continue to explore preferred methods for establishing capacity contribution values for intermittent renewable resources. A regional organization must be flexible and allow LSEs to incorporate any changes acknowledged or approved by an LRA in the RA plans for new entrants. Moreover, it is critical that any counting methodology adopted by the ISO be consistent with the capacity contribution values used to develop a minimum PRM.

c. ISO Backstop Procurement Authority for Reliability Assessment

If the ISO identifies any shortfalls after considering all of the RA capacity provided, the ISO will provide LSEs an opportunity to cure the shortfall. If a shortfall still remains after the opportunity to cure has passed, the ISO would have the ability to procure backstop capacity if needed and allocate costs to LSEs that are short.

Please refer to above comments regarding concerns that backstop procurement implemented based on the ISO's PRM or resource counting methodology may be inconsistent with the PRM or resource counting methodology of the LSE as determined in its resource planning process.