



**PACIFICORP'S COMMENTS ON THE
FLEXIBLE RAMPING PRODUCT**

July 1, 2015

Comments Submitted by:	Phone #
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I. INTRODUCTION

PacifiCorp hereby submits the following comments to the California Independent System Operator Corporation ("ISO") for its Energy Imbalance Market ("EIM") Stakeholder Process on Flexible Ramping Product ("FRP") dated July 1, 2015. PacifiCorp appreciates the opportunity to provide these comments on this initiative for the ISO's consideration.

II. COMMENTS

A. Flexible Ramping Product Objective Function and Modeling

PacifiCorp understands the goal of the flexible ramping product is to address the operational challenges for EIM entities and maintain power balance in Real-Time operation for the respective BAA's. PacifiCorp would like to know if the ISO will incorporate the power balance penalty cost (marginal cost of power balance violation) directly in the optimization model. It would be helpful if the ISO provided a more realistic example reflecting the cost reduction in power balance violations due to increasing ramping capacity. PacifiCorp is concerned the resources selected for future intervals may not end up being the best resources in RTD and thus might not be the most optimal solution for the future interval. ISO should prove that the modeling will not cause any unexpected deviation from the optimal solution. Security Constrained Unit Commitment is a mix-integer problem, PacifiCorp is concerned that the Flexible Ramping Product might cause inefficient dispatch and result in increasing of production costs in order to procure flexible capacity for the future intervals such as unnecessary unit commitment.

B. Visibility and Verification on Flexible Ramping Product Inputs

PacifiCorp asks that before the Flexible Ramp Up and Down Product is implemented that an advisory non-binding trial period be in effect for six months to ensure all inputs to the calculations are accurately reflected and posted to the Customer Market Results Interface ("CMRI") and OASIS.

C. Uncertainty

PacifiCorp has witnessed challenges forecasting wind ramps and thus highlights the reliance on wind forecast providers accurately predicting wind generation. PacifiCorp asks the ISO to include as part of this implementation a wind forecast certification process and/or operational mechanism to prevent inaccurate wind forecasts from causing excessive over/under Flexible Ramp Up/Down requirements.

PacifiCorp also utilizes demand reduction programs during the summer. These programs will reduce the load when called upon and require load forecast adjustments to prevent the load drop from causing successive hours to be under forecast. PacifiCorp asks the ISO to ensure a long-term solution will account for the load drop to prevent the over-procurement of resources when load is curtailed.

D. Settlement

ISO seeks stakeholder input on how to measure unavailable FRP capacity. PacifiCorp selects 'comparing the Flexible Ramp Up or Flexible Ramp Down award to the difference between the metered output and the resource's upper and lower economic limits'.

This proposal references the first advisory 15-minute interval as being the reference interval that is applied to future binding five minute intervals. Please confirm that the settlements would reference each of the four 15-minute intervals and their respective binding five minute intervals. PacifiCorp asks the ISO if Variable Energy Resources will be allocated supply costs associated with not meeting Dispatch Operating Targets.

III. CONCLUSION

PacifiCorp appreciates the ISO's consideration of these comments and requests that the ISO clarify any of the information above that does not correspond with the ISO's proposal.