

December 2, 2016

**COMMENTS ON BEHALF OF THE CITIES OF ANAHEIM, AZUSA, BANNING,
COLTON, PASADENA, AND RIVERSIDE, CALIFORNIA
ON THE REVISED STRAW PROPOSAL & ISSUE PAPER FOR
GENERATOR CONTINGENCY & RAS MODELING**

In response to the ISO's request, the Cities of Anaheim, Azusa, Banning, Colton, Pasadena, and Riverside, California (collectively, the "Six Cities") submit the following comments on the ISO's Revised Issue Paper & Straw Proposal for Generator Contingency & RAS Modeling, posted on November 7, 2016 ("Straw Proposal"):

As described in the Straw Proposal, the ISO has narrowed the focus of this initiative to addressing the immediate impact of a generator loss or a combined loss of generation and transmission elements due to the operation of a Remedial Action Scheme ("RAS"). The Straw Proposal states that the revised scope of the initiative will reduce the complexity of the solution. The Six Cities appreciate the ISO's efforts to reduce the complexity of the proposed modeling enhancements by focusing on the operational and reliability concerns arising immediately after a contingency event.

Nevertheless, the Six Cities remain concerned that the incremental benefits of modeling generator contingencies and RAS events, as compared with continued reliance on manual intervention to address reliability impacts of such contingencies, may not justify the costs of developing and implementing the modeling enhancements or the increased complexity of the optimization. The Straw Proposal states that substantial amounts of capacity in the CAISO BAA may be armed for RAS response, but the ISO also states that not all of the capacity that is capable of being armed for RAS is likely to be armed at the same time. *See* Straw Proposal at 17. Although the Straw Proposal expresses the ISO's view that modeling of generator contingencies and RAS may produce lower cost solutions for ensuring that post-contingency flows do not exceed emergency ratings (*see, e.g.,* Straw Proposal at 25), there is no information regarding the costs to implement the modeling approach nor even a rough comparison of estimated costs versus anticipated benefits. It also is not clear whether the ISO plans to model the loss of all generators and RAS arrangements or, if not, how the ISO plans to select the contingencies to be modeled. In addition, the Straw Proposal notes at page 53 that modeling changes to reflect generator contingencies and RAS arrangements may require design changes to the congestion revenue rights allocation and auction processes. In the absence of a well-founded demonstration that anticipated benefits of the proposed modeling changes will outweigh implementation costs and other burdens on ISO and market participant resources, the Six Cities remain unable to express a substantive position with respect to the desirability of generator contingency and RAS modeling as described in the Straw Proposal.

The Six Cities also remain concerned that the proposal to treat virtual bids the same as physical bids in applying the model (*see* Straw Proposal at 53) will undermine potential efficiency benefits of the modeling changes. As described in the Straw Proposal, a primary

objective of Generator Contingency and RAS modeling is to identify the most efficient solution for ensuring that post-contingency flows will not exceed emergency ratings. See Straw Proposal at 25. Contingency events involve physical impacts on the grid. Virtual bidding results in virtual flows that may either add to or offset physical schedules in the Day-Ahead Market optimization. If virtual bids are included in the optimization used to address the potential impacts of generator loss contingencies or RAS events under the suggested modeling approach, it is not clear how the ISO can be confident that the optimization solutions will produce an efficient response to an actual contingency when a post-contingency topology is likely to be very different from the combination of virtual and physical schedules utilized in the optimization process.

Finally, the Six Cities reiterate their previous recommendation that the ISO conduct appropriate market simulations before implementing the modeling changes described in the Straw Proposal.

Submitted by,

Bonnie S. Blair
Thompson Coburn LLP
1909 K Street N.W., Suite 600
Washington, D.C. 20006-1167
bblair@thompsoncoburn.com
202-585-6905

Attorney for the Cities of Anaheim, Azusa,
Banning, Colton, Pasadena, and Riverside,
California