

May 13, 2016

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

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 Generator Contingency & RAS Modeling Issue Paper, posted on April 19, 2016 ("Issue Paper"):

Further Information Is Necessary to Evaluate Costs Versus Benefits and Potential Impacts of Generator Contingency and RAS Modeling. - - At this time the Six Cities are unable to express a substantive position with respect to the desirability of generator contingency and RAS modeling as described generally in the Issue Paper. The Issue Paper provides a conceptual description of the potential modeling approach but lacks essential details, including the anticipated scope of the modeling and the process for selecting the contingencies to be modeled. There also is no information regarding the costs to implement the modeling approach nor even a rough comparison of estimated costs versus anticipated benefits. What is clear to the Six Cities is that generator contingency and RAS modeling would increase complexity of the ISO's already extremely complex market processes. In general, the Six Cities oppose market design changes that increase complexity unless there is a well-founded basis for concluding that anticipated benefits will outweigh implementation costs and other burdens on ISO and market participant resources. That demonstration has not yet been made with respect to generator contingency and RAS modeling.

The ISO Should Evaluate the Impact of Virtual Bids and Unit Commitment on Contingency Modeling Outcomes. - - As described in the Issue Paper, the objective of Generator Contingency and RAS modeling would be to enhance the efficiency of the market optimizations by taking into consideration the effects of potential contingency events and selecting resources able to address such events as efficiently as possible. 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 select resources for generator contingencies or RAS events under the suggested modeling approach, it is not clear how the ISO can be confident that the selected resources will be either effective or efficient in recovering from an actual contingency leading to a post-contingency topology that may be very different from the combination of virtual and physical schedules utilized in the optimization process.

Similarly, a resource cannot assist in addressing a contingency event unless it is committed in time to operate in the Real-Time Market. In developing a generator contingency and RAS modeling approach, the ISO must consider whether modifications to the unit commitment process will be necessary and the cost and operational impacts of any such changes in the unit commitment process.

ISO representatives stated during the April 25, 2016 stakeholder conference call on the Issue Paper that the ISO does not plan to conduct any prototype analysis or simulations with respect to generator contingency and RAS modeling. Given the complexities of the ISO's market processes and the potential impacts of modeling changes on multiple elements of the ISO's market design, the Six Cities question the prudence of adopting such modeling changes without prototype testing and simulations, lest such modeling changes give rise to more problems than they solve.

Submitted by,

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