

CRR Auction Efficiency Analysis Working Group meeting comments

DC Energy appreciates the CAISO's efforts to gather feedback on its proposed CRR study. The need to conduct a study was motivated by an analysis provided by the Department of Marketing Monitoring that highlighted the overall difference between CRR auction purchase prices and congestion payments to CRR holders. This high level analysis did not isolate where the perceived issues were occurring or ascertain potential drivers. In an effort to learn more about the potential issues, the CAISO proposed to initiate a comprehensive study of the CRR market. DC Energy supports the proposed study and believes it is an important first step to fully understand the current state of the CRR market. During the CRR Auction Efficiency Analysis Working Group meeting ("CRR study meeting"), stakeholders proposed study parameters that involved the CRR auction structure, operational practices, and external market factors. The assessment of how these parameters impact market prices is a challenging endeavor; however, it is necessary to understand these results in order to arrive to meaningful conclusions. We believe the CAISO is well suited for this endeavor, as they have access to the information (e.g. constraint level pricing, network models, and insight into the operational practices) necessary to conduct a thorough study. We appreciate the CAISO's efforts to gather stakeholder input and want to emphasize the importance of providing updates and collecting feedback as the study progresses.

There are numerous parameters that need to be evaluated in order to perform a viable study of the CRR Market

Overall, we believe the proposed 'bottom-up' approach is the best method for conducting the CRR study. Ideally, this would start with the CAISO identifying material differences between CRR purchase prices and congestion payments to CRR holders. From there the CAISO would review the potential conditions that led to the difference. We believe the study should include a broad range of parameters with a special emphasis on the following items:

- 1) Transparency and modeling: DC Energy submits that transparency into the fundamental drivers of energy prices allow market participants to compete for investment opportunities and rationalize the cost of products between sequential markets. In addition, modeling practices can have a significant impact on market outcomes. The assessment of modeling and transparency should focus on the impact of asymmetries between the CRR auction and Day-Ahead Market and address the following points:
 - a. What impact did outages and modeled constraints/contingencies differences have on auction revenue?
 - b. Were these differences able to be captured in the market models at the time of the auction?
 - c. If yes, how could the auction process be improved to incorporate this modeling?
 - d. If no, why were these differences not able to be captured in the market models (were they unknowable ahead of time (e.g., forced outage, or did they result from newly defined constraints/procedures)?

- e. What has been the impact of various auction modeling changes on auction outcomes (e.g., nodal group constraint enforcement starting in the Summer of 2014)?
 - f. Consistency of contingency modeling between CRR auction and Day-Ahead Market
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- 2) Congestion management practices: The CAISO should assess whether inconsistent practices were applied between markets and how this might have impacted any results. For example, the crosstrip nomogram was introduced in late December 2016, however it was not defined in the CRR auctions for that month. Also, the ISO should weigh the potential impact of general transparency to operational procedures related to congestion management (e.g. 'T-135' and 'T-133' operating procedures).
 - 3) Exogenous factors: Consider the impacts of market events producing energy price volatility (e.g. SONGS retirement, extreme heat/drought/hydropower)
 - 4) Market transparency improvements: The CAISO should assess the impact of outage publication improvements on market pricing. The improvements were delivered on June 1, 2016.

The CRR study elements should have a clear and defined link to the stated issues

DC Energy is concerned that the CRR study could become cumbersome and less meaningful if its components are not relevant to the stated issues. As entities propose items for the study, the CAISO should seek to understand their potential causality to the issues at hand. In the absence of clarity, the stakeholder proposing the item should provide a detailed explanation of why its proposed item is relevant.

Defining CRR study elements: the distinction between revenue adequacy and market pricing

Revenue adequacy is the degree to which the Day-Ahead Market ("DAM") generates sufficient congestion rents to fund payments to awarded CRRs. It is a function of the modeled topology between the CRR auction and the DAM. It is distinct from the measurement of differences between CRR purchase prices and congestion payments to CRR holders; however, the two can be influenced by similar market factors. Consider the scenario where there was a planned transmission outage scheduled in time for inclusion in the DAM model, but not the CRR auction model. The reduced transmission system capability in the DAM can impact revenue adequacy. In addition, the asymmetry of available information can impact market prices between the CRR auction and the DAM. Despite the common underlying driver, the items are separate and it is important for stakeholders and the CAISO to maintain this distinction as the study progresses.