To: California Independent System Operator

Re: CPUC Staff Comments on the CAISO’s Conceptual Design Proposal for Convergence Bidding

CPUC staff appreciate the opportunity to provide comments in response to the CAISO’s May 31, 2007 Key Elements for the Conceptual Proposal for Convergence Bidding in the MRTU Markets (“CB Proposal”). The CPUC recognizes that in its September 21, 2006 Order Conditionally Accepting The CAISO’s Electric Tariff Filing To Reflect Market Redesign And Technology Upgrade (“MRTU”), FERC directed the CAISO to implement convergence bidding (“CB”) within 12 months after MRTU startup. In the CB Proposal the CAISO states that it is seeking focused stakeholder input over the next three months to complete the design elements of CB so that necessary software features and business processes can be developed to meet a reasonable implementation schedule. At the CAISO’s June 6, 2007 Market Surveillance Committee (“MSC”) meeting the CAISO staff presented their conceptual design elements of CB, or virtual bidding. The following CPUC staff comments are based on the CB Proposal and discussions during the June 6 MSC meeting.

CPUC Staff Believe CAISO Should Initiate CB At The LAP Level Rather Than The Nodal Level, And Progress To Nodal CB Only After Established Milestones.

The CAISO stakeholder process has developed certain core elements of the market design aspect of the CB in past months, including:

1. Flagging of Explicit virtual bids,
2. Load Distribution factors for virtual bids that are identical to Physical bids,
3. Capability to run the market with and without virtual bids,
4. Initially Virtual supply and demand bids submitted at the Load Aggregation Point (LAP) level.

These core elements were decided for practical and specific reasons.

For example, CPUC staff agree with some market participants that, hypothetically, the greatest benefit of CB may be ultimately realized by implementing CB at the nodal level. As a practical matter, however, quicker implementation of MRTU calls for CB at the LAP level.

CPUC staff believe that CB at the LAP level is likely to help correct any incentive to under-schedule load, reduce implicit virtual bids, increase market liquidity, and allow generators to hedge against real time outages. Under MRTU, load will be able to bid at the LAP level, so it is important to allow CB at the LAP level, as well. The use of locational marginal pricing (“LMP”) and congestion revenue rights (“CRR”) in MRTU will introduce new variables to California’s energy market. Under such
conditions, implementing CB at the nodal level may mismatch market risks between supply and demand bids. CAISO’s Department of Market Monitor (“DMM”) Report of October 2006 points out that initially “allowing CB at the LAP only will provide most of the potential benefits of convergence bidding, while avoiding most of the potential detrimental impacts of convergence bidding.”

CPUC staff also believes that CAISO should establish transparent market milestones as to when and under what conditions CB at the nodal level will be introduced into the MRTU market. This will reduce potential risks for both market participants and ratepayers. During the MSC meeting, CAISO staff pointed out that even though CB will be implemented at the LAP level, the MRTU software will integrate nodal CB capabilities from the time that CB is initiated. Therefore, transition from LAP level to nodal level CB will be relatively simple.

**Costs of Convergence Bidding Should Be Jointly Borne By Both Virtual Demander And Virtual Supplier**

The introduction of CB will require additional uplift charges created due to the potential arbitraging between Day Ahead and Real Time market prices. CPUC staff support the CAISO proposal regarding Tier 1 cost allocation in which the virtual demander shall pay for Integrated Forward Market uplift costs, and the virtual supplier shall pay for Residual Unit Commitment uplift costs. In theory, CB may increase liquidity in the Day Ahead market, potentially reducing Day Ahead prices. CPUC staff agree that Tier 2 cost allocation charges that are not caused by any particular virtual market participant should be spread to all measured demand. Similarly, CPUC staff agree with the CAISO’s proposal that Tier 1 and Tier 2 charges should not be allocated to the procurement of Ancillary Services since procurement of Ancillary services are based on CAISO demand forecast, and are not impacted by virtual bids.

**CPUC Staff Urge Development Of Market Power Mitigation Tools For DB**

CPUC staff urge the CAISO to address potential market power that may arise under CB. CAISO’s DMM pointed out in a previous report that CB may be used by a market participant to manipulate Day Ahead market prices in order to increase revenues from the market participant’s CRR. A virtual participant owning CRRs can increase the value of the CRRs by virtually bidding demand at a constrained transmission path. CPUC staff suggest that the CAISO hold a stakeholder process to address potential market power and form mitigation measures to remedy this potential form of market manipulation. CAISO should seek out DMM and MSC opinions on whether restrictions of Bid Price Quantity Pairs or allowing price taker virtual bids, or both, would address such market power concerns. Similarly, like the NYISO, the CAISO should to track each virtual participant’s profits and losses from CB with relatively little time lag. Such observations may shed light on market participants’ ability to influence Real Time prices and CRR values.

**Ability of Investor Owned Utilities to participate in the CB**

CPUC staff understand that California’s Investor Owned Utilities (IOU) have raised concerns that they may not have authority to participate in CAISO’s CB market
because of the potential for financial gains or losses. It is premature for CPUC staff to address this concern in terms of a specific process that will address how IOUs can participate in CB. Ordinarily, the regulated utilities seek authorization through an application requesting guidance on issues that need to be examined or authorized by the CPUC.

It is the CPUC staff’s understanding that in the eastern markets where CB is in place the IOU’s regularly participate in the CB market. For example, in New York the New York PSC approved for Consolidated Edison Company of New York’s tariff\(^1\) a process where 100% of the reasonable costs and benefits of participating in NYISO’s CB market is allowed to be recovered subject to NYPSC tariff approval.

**Conclusion**

CPUC supports CAISO’s current effort on the conceptual design for convergence bidding mechanics. The final CAISO proposal should balance between protecting California ratepayers from market manipulation and/or collapse and maintaining efficient market rules to be applied uniformly to market participants.

Elizabeth Dorman/Legal Division; edd@cpuc.ca.gov  
Bishu Chatterjee/Energy Division; bbc@cpuc.ca.gov

---

\(^1\) Consolidated Edison Company of New York, Inc. P.S.C. No. 9 – Electricity, Tariff Section VII. 1. (15) Market Supply Charge, Monthly Adjustment Clause, and Adjustments