Template for Submission of Comments on Convergence Bidding and Bid Cost Recovery

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<th>Submitted by</th>
<th>Company</th>
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<td>CPUC</td>
<td>October 31, 2008</td>
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The CAISO is requesting written comments to presentations and documents discussed at the October 16th Convergence Bidding stakeholder meeting. This template is offered as an optional guide for entities to submit comments; however participants are encouraged to submit comments in any form.

Comments requested in this template are requested by close of business Friday, October 31, 2008 to MMiller@caiso.com. Please feel free to contact Margaret Miller at mmiller@caiso.com or 916 608-7028 with any questions. Comments received on the Bid Cost Recovery section of the template will be considered in the further development of a Straw Proposal for cost allocation of virtual bids and the overall policy for Bid Cost Recovery.
Additional comments on the MAP Program may be submitted at anytime to MAPImplementation@caiso.com. Additional comments on the policy development for Convergence Bidding may be submitted at anytime to ConvergenceBidding@caiso.com.

All documents and presentations discussed at the meeting are posted on the CAISO Website at the following link:

http://www.caiso.com/1807/1807996f7020.html

**CPUC Comments**

The CPUC staff appreciate the opportunity to provide comments in response to CAISO’s October 16 Convergence Bidding stakeholder meeting proposals and documents presented and discussed at the meeting. The following comments to respond to CAISO’s questions while acknowledging that CPUC reserves the right to provide additional comments as the CAISO proposals are further developed.

Please provide responses to the following questions:

Section 1 – MAP Program Update  
Presented by Janet Morris

1. Are you interested in Joint Application Development (JAD) sessions for test scenario development for element of MAP, like Convergence Bidding?

   **CPUC staff believe that JAD sessions for Convergence Bidding will be an excellent idea for test scenario development.**

2. If you are interested, what is your availability to participate?

   **CPUC staff will be available to participate in sessions that are crucial and will help support CPUC staff understanding.**

3. What high level test scenarios would you propose for Convergence Bidding?
CPUC staff are interested to see how convergence bidding activities can lead to extremely high prices, how such events can be prevented, and how to avoid market manipulation.

4. Additional comments?

Section 2 – Resource IDs for Convergence Bidding
Presented by Byron Woertz

1. Of the options presented in the white paper, are there any that are completely unworkable for you?
   It is not clear to CPUC staff why different options are ranked in terms of simplicity but not by accuracy. CPUC staff suggest selecting a Resource ID option that fully allows tracking all the activities of a virtual market participant (CAISO suggests option 4 (Review Modeling Approach) from its proposal that uses two IDs for each SC (virtual supply and virtual demand)). However in preferring simplicity CAISO should not choose a less transparent option that may, for example, potentially blur parent-affiliate transactions.

2. Do you have a preference among the options presented?

3. Other comments?

Section 3 – Cost Allocation for IFM, RUC and RTM Bid Cost Recovery Uplift Charges

1. Do you have any comments generally about cost allocation for virtual bids, or specifically about the discussion on IFM and RUC uplift charges for virtual bids? (The presentations that were discussed by SCE and WPTF are posted at: http://www.caiso.com/1807/1807996f7020.html.)

CPUC supports a two-tiered cost allocation approach for virtual bidders for both Day Ahead and Real Time Market

CPUC staff appreciate the presentations with numerical examples made by Southern California Edison and the Western Power Trading Forum at the October 16 stakeholder meeting that illustrated two approaches to Tier 1 and 2
uplift cost allocation for virtual and physical bidders in the IFM and RUC markets. The presentations looked at different ways Tier 1 IFM and RUC uplift costs can be allocated based on MW obligation and costs for virtual and physical bidders in the CAISO market.

CAISO has defined the two-tiered allocation approach to uplift costs as follows: Tier 1 allocates uplift costs to specific market participants that created them based on cost causation and Tier 2 costs are designed to recover what could not be recovered through cost causation in Tier 1 and are charged to all scheduling coordinators in proportion to their measured demand. Even though the virtual bidding uplift cost allocation is under development, CPUC staff understand that currently CAISO is proposing a two-tiered cost allocation for both the Day-Ahead and Real-Time markets. CPUC staff believe that the two-tiered cost allocation approach in both Day-Ahead and Real-Time markets will provide a fair cost allocation and cost causation to address the uplift costs that will result from virtual bidding in the CAISO markets.

Virtual Bidders should be charged similar to Physical Bidders for Uplift Costs

Some stakeholders on the October 16 meeting argued that since virtual bidding will benefit all market participants (especially physical bidders), Tier 1 costs to virtual bidders should be different [lower] than Tier 1 costs to physical bidders. Virtual transactions can set prices and are considered as any other supply or demand component of the Day-Ahead market in price setting. CPUC staff are concerned that treating virtual bidding separately from physical bidding will result in an uneven playing field. Unless accurate benefit of virtual bidding is captured for every hour, any attempt to lower Tier 1 costs to virtual bidders will be flawed and unfair for load serving entities and ultimately to ratepayers who will pay for the bulk of the uplift costs. Besides, CPUC staff originally supported virtual bidding with the goal that virtual bidding provide market liquidity and lower prices. Now these theoretical benefits should not be treated as additional benefits that would lower the share of Tier 1 uplift cost to be allocated to virtual bidders unless it is done accurately. CPUC staff understand that hourly market benefits (or cost saving) due to virtual bidding are hard to measure. To date, there are very little transparent data that show the hourly dollar benefits (or cost saving) due to virtual bidding in ISO/RTO markets (where virtual bidding is implemented).

Netting virtual transactions for RUC Uplift Costs may blur Cost Causation and can lead to Strategic Cost Avoidance

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1 The basic idea of the Bid Cost Recovery Uplift charges were developed as part of the initial MRTU design process.
CAISO has suggested that it will net the total virtual demand in MW system wide against the total virtual supply in MW system wide. That means if the total system-wide net is virtual demand then SCs with virtual demand obligations will be charged for IFM Tier 1 Uplift and the obligation to virtual transactions for RUC Tier 1 Uplift will be zero. On the other hand if the total system net results in net virtual supply then SCs with a virtual supply obligation will be charged for RUC Tier 1 Uplift and the obligation to virtual transactions for IFM Tier 1 uplift will be zero. CPUC staff are not sure whether the netting principle appropriately allocates to all virtual participants based on their virtual transactions. CPUC staff are concerned that netting of virtual supply and demand may lead to the ultimate betting game of clearing the IFM and RUC markets with either virtual demand or virtual supply depending on what charge one is trying to avoid.

Absence of accurate demand and supply curves in examples may show erroneous cost savings and causation

CPUC staff understand that the examples presented by both SCE and WPTF are for illustrative purposes and may not represent the actual costs as presented. For example, supply and demand curves are assumed to be constant and hence the prices do not change despite different equilibrium positions. It is not clear how an upward sloping supply curve should have constant costs even for the sake of examples. As a result the IFM and RUC costs presented in the examples may not show the actual outcome of $/MW costs for IFM and RUC or whether IFM costs greater (lesser) than RUC costs. It is not clear from the examples when IFM costs go down whether RUC costs go up or vice versa. Both the SCE and WPTF examples were used to drive specific points. However it is clear that these examples will produce different results based on different numbers. For example, when virtual demand displace physical demand bids, virtual demand bids will clear at a higher price than physical demand bids and hence will increase IFM costs. Similarly, when virtual supply displaces physical supply, virtual supply bids will clear at a lower price than the displaced physical supply and therefore may result in lower IFM costs. However whenever virtual supply bids replace physical supply bids CAISO will have to RUC units to cover for the virtual MW and therefore will increase RUC costs.

2. Issue Paper on Two-Tier Real-Time Bid Cost Recovery Uplift
   (This paper considers separating the allocation of costs associated with the Real Time Market into two tiers, which could involve both virtual and "physical" bids. This paper is located at: http://www.caiso.com/205b/205bf1653cf60.pdf.)
Two Tier Real Time Bid Cost Recovery should accurately allocate costs to virtual bidders who will increase uplift costs in Real Time Market

CPUC staff support a Two-Tier Real-Time bid cost recovery to address uplift costs resulting from virtual bidding. Additionally CPUC staff recognize that FERC as part of its September 21 2006\(^2\) order asked the CAISO to develop a two-tier Real Time uplift charge no later than three years after MRTU start-up. Virtual bidding activities in the day-ahead market have impact in the real-time market and may result in uplift costs that should be allocated based on cost-causation principle.

CAISO released a Two Tier Real-Time Uplift\(^3\) issue paper that raises the basic issues of cost allocation and presents CAISO's initial ideas to the stakeholders. CPUC staff will wait to provide comments until CAISO comes out with its white paper with detailed fleshed-out examples. Nevertheless CPUC wants to make sure that appropriate cost-causing uplift costs are allocated to Tier 1 and the remaining costs are allocated to Tier 2.

A) Do you have a preference among the options reviewed in the issue paper?

- Option 1 – Each SCs need for inc or dec energy across their portfolio if aligned with the total system need for inc or dec energy would determine allocation for Tier 1 Real-Time uplift. This includes both virtual supply and virtual demand.

- Option 2 – Allocation for Tier 1 Uplift for each SC would be based on Net Negative Uninstructed Deviation and net Virtual Supply

CPUC staff are not in a position to opt for Option 1 or Option 2 without understanding the entire impact of a) rate determination for each tier and b) cost allocation among virtual players.

B) Do you have other thoughts on how costs should be allocated in Tier 1 for Real-Time uplift?

CPUC staff support a similar two-tier cost allocation process as CAISO is discussing in the day-ahead market. CPUC staff also understand that there are other uplift costs in the real time market that are caused by other activities besides

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\(^2\) The September 21, 2006 MRTU Order, Federal Energy Regulatory Commission, Docket ER06-615-000.

virtual bidding. CAISO should isolate and allocate accurate Tier 1 charge to virtual bidders whose actions result in uplift costs in the real-time based on cost-causation.

C) Do you have a preference on what the denominator should be for the calculation of the Real-Time Tier 1 purchase rate?

- Absolute Value of Real-Time instructed incs and decs
- Instructed incs only
- Net of instructed incs and decs

Accounting for inc and dec dispatches due to virtual bidding and allocating uplift costs appropriately is a good idea. However the above denominator choice of bullet 3, i.e. “net of instructed incs and decs” would lead to a larger denominator for rate determination and a lower rate in the Tier 1. Further, using absolute value of inc and dec could result in a very small rate (due to dividing the uplift costs by a large denominator that ultimately determines the rate) that would result in a more real time uplift cost recovery in Tier 2 that are socialized to all measured demand.

4. Additional comments?

**Conclusion:** If CAISO cannot accurately compute the hourly benefits of virtual bidding based on impacts in the day-ahead and real-time markets then cost allocation rules based on benefit-cost may not reflect true cost-causation and may harm ratepayers. CPUC staff encourage CAISO to address the following two questions carefully so the impact and cost of virtual bidding are fairly and accurately distributed to virtual players using the cost causation principle:

1. How to fairly allocate Tier 1 costs to both physical and virtual market participants?
2. How to determine the rate (the denominator as discussed in above section C so costs are not unnecessarily shifted from Tier 1 to Tier 2)? If costs are shifted from Tier 1 to Tier 2, this will harm ratepayers since Tier 2 costs are strictly allocated to ratepayers (measured demand) both in the day-ahead and real-time market.