Stakeholder Comments Template

Subject: Cost Allocation to Convergence Bids

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<th>Submitted by</th>
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<td>February 29, 2008</td>
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The CAISO is requesting written comments on the Straw Proposal for Convergence Bidding Cost Allocation that was discussed at the February 8th MSC/Stakeholder meeting. This template is offered as a guide for entities to submit comments; however participants are encouraged to submit comments in any forma.

All documents related to cost allocation for Convergence Bids are posted on the CAISO Website at the following link:

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

Upon completion of this template please submit (in MS Word) to convergencebidding@caiso.com. Submissions are requested by close of business on Friday February 29, 2008.

Please submit your comments to the following questions for each topic in the spaces indicated.

SCE appreciates the opportunity to provide additional comments. These comments supplement and are generally consistent with SCE’s comments filed SCE has provided the CAISO with detailed comments related to Virtual Bidding on July 28, 2006, November 15, 2006, a presentation on August 10, 2007, comments August 24, 2007, November 30, 007. on this topic on

1. The proposed refinements to the cost allocation proposal described in the 2/9 Straw Proposal:

   a) Allocates costs for IFM tier 1 and RUC Tier 1 based on each SC’s gross cleared virtual bids rather than the net of each SC’s virtual transactions, and

   While SCE agrees that virtual bids (VB) should be allocated both IFM tier 1 and RUC Tier 1 charges, SCE supports neither the CAISO’s original netting proposal nor does we support the 2/9 proposal.

   The proposal continues to “net” virtual transactions, and then apply additional “tests” before allocating costs the virtual bids. The end result of the proposal is, in many
cases, to increase the share of uplift allocated to physical demand, above and beyond what would be allocated absent virtual bids. SCE object any allocation method that allows for the perverse outcome where under the guise of allocating uplift cost to virtual transaction, physical demand is require to pay an even greater share of the uplifts than they will absent virtual bidding (as illustrated below).

In addition, the CAISO proposal for netting goes against obvious cost-causation principles. For instance, in Example 1 of the presentation given at the MSC on 2/2/08, the CAISO shows an IFM result in which 6,000MW of Virtual Supply clears the market and the total demand clearing the market (both virtual and physical) is 2,000MW below the CAISO forecast. As a result the CAISO will now have to RUC a total of 8,000MW. 2,000MW is the result of demand clearing below the CAISO’s forecast, and 6,000MW is needed to replace the virtual generation that cleared the market with physical generation. However, under the CAISO’s perverse cost allocation mechanism, they propose to only allocate 1,000MW of the RUC cost to the virtual supply transactions (even though they cause 6,000MW of the RUC cost), and then allocating the remaining 7,000MW of cost to physical demand (even though they only cause 2,000MW of costs)\! Virtual supply pays 1/8 of the costs; physical demand pays 7/8 of the cost. Here the proposal more than triples the amount of uplift paid by physical demand compared to current allocation rules absent virtual bidding, and it does so, ironically, in the name of allocating uplifts to virtual transactions. Put simply, SCE finds this result and the proposal unjust and unreasonable.

Instead, the proper cost allocation should eliminate all consideration of virtual netting. In this same example, there is a direct causation of cost to virtual transactions and physical transactions: The 6,000MW of virtual supply caused the CAISO to replace virtual supply with 6,000MW of physical RUC supply. The 2,000MW below the CAISO’s forecast of physical demand that did not clear the market caused the CAISO to RUC 2,000 MW of physical supply resulting in a total RUC commitment of 8,000MW. The obvious and equitable allocation of costs is that virtual supply pays 6,000/8,000 of the costs and the physical demand that shows up in real-time pays 2,000/8,000 of the costs.

SCE continues to believe that physical and virtual demand should be treated in a like manner whenever there is a straightforward cost causation event. Here the causation is straightforward and we see no rational reason, rather than a desire by some to have physical demand subsidize virtual transactions, for anything other than the obvious cost allocation mechanism we reiterate above.

b) **Allocates IFM Tier 1 Uplift to virtual demand only in the case where physical demand plus virtual demand exceeds the CAISO Forecast.**

Again, SCE objects to this proposal in that it has the potential to create the perverse result that physical demand may pay more for uplifts than it would absent virtual bidding, and that it does not follow obvious cost causation principles. We reiterate that every form of demand, both physical and virtual, that goes in to the IFM
contributes the uplift created by the IFM. That is, the IFM dispatches generation, and creates uplift, whether it is serving virtual or physical demand. Thus, both forms of demand, virtual and physical should share the IFM uplift in a like manner.

To illustrate the perverse results of the proposal, return again to CAISO’s Example 1 noted above. Here 33,000MW of physical demand clears the market along with 4,000MW of virtual demand. Because of the proposed netting of virtual supply against virtual demand, the CAISO will not allocate ANY uplift to the 4,000MW of virtual demand, but instead will require physical load to pay 100% of the uplift! Again we find this proposal unjust and unreasonable. The 4,000 MW of virtual demand is just as responsible for uplifts as the 33,000MW physical demand – the IFM had to dispatch generation and created uplift in order to satisfy total demand of 36,000.

Instead, SCE again supports the obvious and reasonable allocation of costs. The virtual load should receive 4,000/36,000 of the IFM uplift costs, and the physical load should receive 32,000/36,000 of the cost.

c) Allocates RUC Tier 1 Uplift to virtual supply based on the quantity of physical supply that was displaced by virtual supply in the DAM resulting in the need for the CAISO to procure additional supply in RUC. This quantity is equal to the net of all cleared virtual demand and all cleared virtual supply if the net virtual supply is positive.

SCE supports the allocation of RUC Tier 1 Uplift costs to virtual supply, but objects the CAISO’s proposal. Per our comments in a), virtual supply should share RUC costs directly, without any form of netting, RUC costs along with the shortfall in load that clears below the CAISO’s forecast.

Is this proposal a reasonable assessment of the uplift costs that should be imposed upon virtual transactions? How might it be improved?

As noted above, SCE does not find the proposal just and reasonable. Please see our response in a) for a correct allocation.

2. Is a flat fee a workable alternative for cost allocation to convergence bids as an initial starting point until the CAISO has market data available to analyze the impact convergence bids have on uplift costs?

Although a flat fee, such as a per bid charge associated with costs of running the virtual market appear reasonable, we do not support a flat fee to cover uplift transactions. Physical player are not offered an opportunity to pay a flat fee for uplifts, rather they are subject to the uncertainties and vagaries of the CAISO’s market on an hour-to-hour basis. We do not see why virtual transaction should be exempt for the risks of volatility in uplift
fees when physical transaction must assume this risk. Offering a fixed rate to virtual bidders is a form of a subsidy, and we do not think the CAISO should discriminate against physical participants in this manner.

Further, we feel it is important that virtual participants be held responsible for uplifts as they are created hour by hour. That is, there may be times here uplifts are predictably high, and other times where uplifts are predictably low. Providing a fixed uplift to virtual player would distort their behavior such that they would have an incentive to shift cost by participating at times when the fixed price is below expected uplifts, and to avoid participation when the fixed price is above expected uplifts.

Moreover, to the extent virtual transactions increase uplift costs, it is important that these increased uplift costs are “fed back” to the virtual participants. Without a fixed rate, virtual participants will not be accountable for increased uplifts, and as a result, they will have incentives to implement strategies which increase their profits, even if in the process they are increasing uplifts to the rest of the grid.

3. Other suggestions for methodology by which to allocate bid cost recovery uplift costs to convergence bids?

SCE reiterates that the CAISO must allocation portions of the real-time uplifts to virtual transactions, particularly to virtual supply. Even the CAISO agrees that real-time uplift should be allocated to virtual bidders. For example, the “Straw Proposal for Convergence Bidding Cost Allocation” dated January 29, 2008, states “the CAISO recognizes that a two tiered approach for allocating Real Time uplift may assign specific “Tier 1” costs to virtual bids…” The CAISO then argues that, “Thus the CAISO reiterates its proposal that no Real Time uplift be assessed to virtual bids upon the introduction of virtual bidding, but that virtual bids and other actions by market participants will be considered later when the CAISO develops, in coordination with stakeholders, a two-tiered design for Real Time bid cost recovery costs until we have a two-tier system for real-time uplifts.” Or to paraphrase, virtual bids should be paying real-time uplifts, but the CAISO will exempt virtual bidders from paying these, or have any obligation to pay these in arrears, until such time that the CAISO changes its current system of real-time uplifts. SCE finds this proposal unacceptable, unjust, and unreasonable.

Why does SCE view this as such an important issue? First, we expect the magnitude of real-time uplifts to be significant, even when compared to the IFM. Thus exempting virtual transactions from real-time uplifts has the effect of exempting virtual bids from a significant obligation, irrespective of the allocation ultimately utilized for the IFM and RUC. Why have we reached this conclusion? Because of experiences at other ISOs.

For example, based on data from PJM most recent “2006 State of the Market Report” real-time uplifts, know as “Balancing” charges in PJM, were the vast majority of uplift charges for all years reported. Table 3-42 from that report, shown below, indicates that real-time uplift was about 75% of the total in 2006 and about 87% in 2005.
If California experiences similar results, simply ignoring real-time uplifts when virtual bidding goes live is clearly no a just and reasonable option.

In turn, SCE offers two proposals for allocating real-time uplifts to virtual bids. The first proposal allocates real-time uplift only to negative real-time deviations and to virtual supply, while the second method simply includes virtual supply along with physical demand in the allocation of real-time up-lifts. Neither proposal requires the CAISO to implement a tier 1/tier 2 system coincident with the implementation of virtual bidding.

**Proposal 1:** The CAISO simply spreads all real-time uplift pro rata between negative physical load deviations and virtual supply. The logic here is that what likely caused the majority of real-time uplifts were CAISO real-time dispatch decisions to 1) satisfy physical load in that did not clear in the IFM but materialized in the real-time markets, and 2) dispatch physical generation to “backfill” virtual supply that cleared in the day-ahead market.

Under this allocation, for instance using CAISO’s Example 1, we have 6,000MW of Virtual Supply and the example implies there is 7,000MW of physical demand that did not clear in the IFM...
the IFM but materializes in the real-time market\(^1\). Thus, the CAISO has a total of 13,000 MW that “caused” the uplift.

Here the CAISO simply allocates 6,000/13,000 of the cost to virtual supply and 7,000/13,000 to physical demand.

**Proposal 2:** The CAISO includes virtual supply in a like manner as physical demand in the process of allocating real-time uplift. The logic here is consistent with the CAISO’s current method for real-time uplifts. The CAISO currently distributes all real-time uplift to all physical demand without making special provisions for “underscheduled load” versus load scheduled in the IFM. In Proposal 2, the CAISO would include virtual supply in the allocation, noting that the CAISO must replace virtual supply with physical supply and thus it is reasonable to assume virtual supply contributed to real-time uplift.

Under Proposal 2, for instance as in Example 1, assume we have 6,000 MW of virtual supply and CAISO forecasts load of 35,000 MW. Moreover, assume real-time load turns out to be the same as the forecast, or 35,000 MW. The CAISO has a total of 35,000 MW of physical demand and 6,000 MW of virtual supply, for a total of 41,000 MW that “caused” the real-time uplift. Here the CAISO simply allocates 6,000/41,000 of the cost to virtual supply and 35,000/41,000 to physical demand.

SCE suggest these proposals for discussion, noting that either proposal will allow an immediate allocation of real-time uplift to virtual participants prior to the CAISO implementing a tier 1/tier 2 system. We will likely have to revisit the allocation again when the CAISO implements a full tier 1/tier 2 real-time uplift methodology.

For emphasis, SCE believes it would be unjust and unreasonable for the CAISO to implement virtual bidding if it does not have some reasonable form of real-time virtual uplift cost allocation in place. Without such a structure, parties would likely seek FERC process to ensure that virtual payments would be subject to refund until a cost allocation methodology could be adopted, and then retroactively applied. Based on what we observed at the MISO, we feel it is crucial that all parties clearly understand their obligations for uplifts, or if they may be subject to rate adjustments in the future. SCE strongly recommends that the CAISO resolve this issue prior to implementing virtual bidding so that all market participants are perfectly clear of the types of uplift charges they will face when they clear virtual transactions.

\(^1\) The CAISO forecast was 35,000 MW, and the physical demand that cleared was 28,000 MW, implying that 35,000 – 28,000 = 7,000 MW of physical demand cleared in the real-time market.