

Comments on Convergence Bidding Data Release
Department of Market Monitoring
January 13, 2010

Background

As noted in DMM's Board memo on the ISO's final convergence bidding design,

In the [convergence bidding] stakeholder process, LSEs have identified several types of information that – if released on a relatively frequent basis – could alleviate some of their concerns about being able to quickly and effectively modify their convergence bidding to ensure better price convergence and “defend” against ways in which convergence bidding by other participants may raise overall costs... DMM believes that pursuing ways to make such information publicly available may provide a reasonable and effective way of increasing the potential efficiency benefits of convergence bidding and alleviating concerns about convergence bidding at a nodal level.¹

Specifically, DMM believes that accelerated release of aggregated convergence bidding data may help mitigate concerns with how the Local Market Power Mitigation (LMPM) that are incorporated in the ISO's final convergence bidding design could be undermined by virtual demand bids, as described in DMM's November 2007 whitepaper.² This potential problem can be mitigated as long as there is a sufficient supply of very competitively priced virtual supply bids at a nodal level to meet this additional virtual demand. However, as noted in DMM's Board memo on the ISO's final convergence bidding design:

While generators and traders have argued that market forces will ensure a sufficient supply of very competitively priced virtual supply bids at a nodal level, load-serving entities (LSEs) and the California Public Utilities Commission (CPUC) have urged caution about adopting a virtual bidding market design that relies heavily upon this assumption. DMM is also cautious about adopting a market design that relies on an extremely competitive supply of relatively low-priced virtual supply bids at a nodal level to ensure that the ISO's LMPM procedures remain highly effective within transmission constrained areas. While aggressive bidding of virtual supply by LSEs and traders in transmission constrained areas could mitigate the ways in which LMPM might be undermined by virtual bidding, the degree to which LSEs may be authorized to engage in virtual bidding by the CPUC is still unresolved.³

DMM has identified an alternative LMPM approach that DMM believes would be highly effective at mitigating this concern, even without the accelerated release of convergence bidding data.⁴ However, the ISO has indicated that this alternative option could not be sufficiently

¹ Memo to ISO Board of Governors, from Eric Hildebrandt, Interim Director, Market Monitoring, October 21, 2009, re: Market Monitoring Report, p. 8, <http://www.caiso.com/244f/244f99f1605d0.pdf> (October 31 DMM Board Memo).

² *Convergence Bidding: DMM Recommendations, Attachment A: Examples of Convergence Bidding and Local Market Power Mitigation*, November 2007 <http://www.caiso.com/1c8f/1c8ff4236e8e0.pdf>

³ October 31 DMM Board Memo, p. 5, <http://www.caiso.com/244f/244f99f1605d0.pdf>

⁴ *Local Market Power Mitigation Options Under Convergence Bidding*, Department of Market Monitoring, October 2, 2009 (<http://www.caiso.com/243b/243bebe3228c0.pdf>) and *Illustrative Examples of Alternative Local Market*

reviewed and implemented in conjunction with convergence bidding in February 2012. Given this constraint, DMM ultimately supported the LMPM approach incorporated in the ISO's final convergence bidding on the grounds that this approach "provides a reasonable level of protection against the ways in which convergence bidding could undermine LMPM," but "urge[d] further consideration of [the alternative approach proposed by DMM] as a further improvement in LMPM that could still be further reviewed and implemented prior to convergence bidding."⁵

In this context, DMM continues to believe that more accelerated release of aggregated virtual bidding data (i.e. before the current 90 day period) may help promote the needed competition from virtual supply to ensure that current LMPM procedures are not undermined by virtual demand bidding at a nodal level. Since the specific data release option that may best meet this objective depends largely on how such data may be actually used by participants, DMM continues to be interested in hearing stakeholders views on which option best meets this objective. In order to contribute to this stakeholder process at this time, DMM's is providing its initial assessment of the options identified in the ISO's December 31, 2009 whitepaper. DMM shared the crux of these comments on the January 7, 2010 conference call on this topic.

Review of Options

As an initial matter, DMM notes that the ISO December 31, 2009 whitepaper may somewhat misrepresent the position outlined in DMM's October 31 DMM Board Memo. Rather than recommending any specific option, DMM's Board memo notes that during the convergence bidding stakeholder process LSE's had indicated that the release of some type of aggregated convergence bidding data on an accelerated basis would alleviate some of their concerns by facilitating more competitive convergence bidding at a nodal level, and that "pursuing ways to make such information publically available may provide a reasonable and effective way of increasing of the potential efficiency benefits of convergence bidding and alleviating concerns about convergence bidding at a nodal level."⁶ The specific reference to "aggregate virtual bid curves by node" in the section of DMM's memo cited in the ISO's whitepaper was provided as an example of the type of information that DMM understood LSE's felt might help alleviate their concerns based on verbal comments in the stakeholder proceedings. DMM acknowledges that it may have misunderstood and/or mis-described previous comments by LSEs on this issue in prior stakeholder meetings. In any event, DMM clarifies that DMM did not intend this as a recommendation as to the specific data that should be released, but rather recommended that this be explored in a stakeholder process. As noted above, since the specific data release option that may best meet this objective depends largely on how such data may be actually used by participants, DMM continues to be interested in hearing stakeholders' views on which option best meets this objective.

Power Mitigation, Department of Market Monitoring, October 6, 2009
(<http://www.caiso.com/243f/243fce76bf30.pdf>).

⁵ October 31 DMM Board Memo, p. 6, <http://www.caiso.com/244f/244f99f1605d0.pdf>

⁶ October 31 DMM Board Memo, p.8. , <http://www.caiso.com/244f/244f99f1605d0.pdf>

Option 1: Release of Virtual and Physical Bids (with 90 day lag)

This option appears to be generally favored by suppliers on the grounds that (1) virtual and physical bids should be treated equally, (2) more accelerated release of virtual bids on a more granular (nodal) level could reveal hedging strategies of generators, and /or (3) reveal trading strategies of traders and thereby decrease the likelihood that they would participate in convergence bidding.

Unlike physical supply bids, which can only be placed by suppliers at nodes where they control generation, virtual supply and demand bids can be placed by any entity at any node. Assuming that there is indeed a deep and liquid market for convergence bids at a nodal level (as generators and traders have argued should occur), it should not be possible to infer any knowledge of individual participants convergence bidding based on aggregated virtual bidding data. Thus, while release of such aggregate data may facilitate competition among different entities, it would not appear to reveal hedging or trading strategies of any specific participant.

Although other ISO's have apparently adopted this approach for release of virtual bidding data, DMM notes that the LMPM mechanism used by other ISO's do not appear to have the same potential limitations as the approach that will be incorporated in the ISO's initial design. As noted above, DMM views the more accelerated release of aggregated convergence bidding data as a way to mitigate concerns about the manner in which virtual demand bids at a nodal level could undermine LMPM procedures in the absence of a sufficiently deep and competitive supply of virtual supply bids at a nodal level. Thus, to the extent that the LMPM measures incorporated in the ISO's initial convergence bidding design could be further refined to mitigate this concern directly, this could greatly reduce or eliminate what DMM views as the primary rationale for accelerated release of virtual bid data.

Option 2: Net Cleared Quantity (Day After)

This approach has been recommended by SCE, SDGE and the MSC, and appears to be supported by PG&E as the minimum level of data that should be released. This approach appears to provide information that could quickly identify areas in which additional nodal demand could be driving up prices above levels that would otherwise result under LMPM procedures within transmission constrained load pockets. Specifically, if the net quantity of virtual supply and demand was negative (using the formulas in Table 1 on page 12 of the ISO's December 31, 2009 whitepaper), this could be used (along with publically available data on load clearing on a LAP level) to identify the extent to which total IFM demand at specific nodes was higher than the forecast of physical load used in LMPM procedures. This information – along with the resulting LMPs – could help facilitate entry of more competitively priced virtual supply, as illustrated in DMM's November 2007 whitepaper⁷, by LSEs or other traders.

⁷ *Convergence Bidding: DMM Recommendations, Attachment A: Examples of Convergence Bidding and Local Market Power Mitigation*, November 2007 (<http://www.caiso.com/1c8f/1c8ff4236e8e0.pdf>)

Option 3: Gross Cleared Virtual Demand and Gross Cleared Virtual Supply

This approach has been recommended by PG&E. The additional information in this approach may make this approach somewhat more effective than the first option at facilitating entry of more competitively priced virtual supply by LSEs or other traders, as discussed above. In addition, it seems that by providing information on the actual volume of virtual supply clearing in the IFM, this approach could provide additional information to participants on uplift costs that may be associated with additional Residual Unit Commitment (RUC) that may be necessary in the event that high volumes of virtual supply clear the market in place of physical supply.

Option 4 (ISO Straw Proposal #1): Net Cleared Total Quantities

DMM is unclear about what potential benefits this option may offer (e.g. in relation to other options). From the perspective of encouraging entry of competitively priced supply of virtual supply bids, this option does not appear to offer significant benefits.

Option 5 (ISO Straw Proposal #2): Percentage of Cleared Quantities

From the perspective of encouraging entry of competitively priced supply of virtual supply bids, this option may provide some benefits. However, DMM's concern about this option is that it would give additional information to entities that control all or most of the physical supply or demand at individual nodes, since these entities could use this information to precisely calculate the amount of virtual supply or demand clearing at these nodes, while other participants could not. For instance, if a physical supplier had 100 MW cleared at a node, and the data publicly released by the ISO indicated a 50%/50% ratio of physical and virtual supply at that node, then the generator could calculate that 100 MW of virtual supply at the node was cleared. Similarly, any entity knowing the approximate LDFs for a node could utilize information on LAP level load clearing the IFM to calculate the volume of virtual demand clearing at a node. Thus, it seems that Option 2 or 3 discussed above provide information more equally to all participants.