Draft Final Proposal

Data Release & Accessibility

Phase 2
Convergence Bidding
Data Release

Jan-20-2010: Minor typo corrected on page 4.

January 15, 2010

Draft Final Proposal
Data Release & Accessibility
Phase 2: Convergence Bidding Data Release

Contents

1. Introduction

The ISO committed to take a broader look at the release of market information since the launch of the Locational Marginal Pricing (LMP) market. In this phase of the initiative, we have explored the issue of what information should be made available to the market to facilitate efficient market outcomes under convergence bidding. Our goal was to strike the right balance between the provision of information that would facilitate competition without compromising confidentiality or promoting unfair advantage. The ISO has already committed to the release of convergence bid information on the same timeline as that for physical bids which are currently published on a 90-day lag.

This effort is part of a broader stakeholder process to explore the issue of data release and accessibility in ISO markets. The Data Release & Accessibility Initiative consists of three phases:

- Phase 1: Transmission Constraints,
- Phase 2: Convergence Bidding Information Release (topic of this Draft Final Proposal), and
- Phase 3: Other types of market data to support well-functioning, competitive ISO spot markets, including Price Discovery and Outage Information. An issue paper was planned for December 2009, but put on hold to focus on resolution of Phases 1 & 2 at the February 2010 Board of Governors Meeting.

The schedule for Phase 2 was recently revised with the issuance of a Market Notice on January 13, 2010. As explained in the notice, posting the draft final proposal five days earlier than originally scheduled will allow for one week of stakeholder review prior to discussion of this issue at the January 22, 2010 Market Surveillance Committee (MSC) meeting. This earlier posting will also allow the ISO additional time to consider stakeholder comments on the draft final proposal prior to the Board of Governors Meeting on February 10-11, 2010.

The ISO Board of Governors approved the convergence bidding design proposal at its October 2009 meeting. Information on the stakeholder process is available on the Convergence Bidding Stakeholder Initiative, http://www.caiso.com/1807/1807996f7020.html. The ISO filed its convergence bidding design proposal in docket ER06-615 on November 20, 2009.

The focus of this Draft Final Proposal is on information related to Convergence Bidding; specifically, it addresses the question of the content and timing of convergence bidding information to be publicly released by the ISO.

2. Process and Proposed Timetable

The following timetable is for the policy stakeholder and Board approval process for Phase 2. The first four milestones shown below are complete. At this time the ISO anticipates completing this phase of the stakeholder process at the February Board Meeting.

Phase 2 Timetable

Date	Milestone
December 3, 2009	**Phase 2 Issue Paper on Convergence Bidding**
December 10, 2009	On-Site Meeting -- Jointly with Phase 1 & 2 at the ISO
December 17, 2009	Comments on Issue Paper are due
Dec. 31, 2009, Thu.	**Phase 2 Draft Final Proposal**
January 7, 2010	On-Site Meeting
January 11, 2010	Comments on the Phase 2 Draft Final Proposal
~~Jan. 20, 2010, Wed.~~ Jan. 15, 2010, Fri.	**ISO Draft Final Proposal**
Jan. 22, 2010, Fri.	Discussion at MSC Meeting
Jan. 27, 2010, Wed.	Comments on Draft Final Proposal Due
February 10-11, 2010	**Informational Briefing to ISO Board**

3. Convergence Bidding Information Release Options

The ISO posted an issue paper on December 3, 2009, and a straw proposal on December 31, 2009. On or shortly after January 11, 2010, ten sets of comments (about 25-pages in all) were received on the straw proposal by the following stakeholders: Citigroup Energy, CPUC Staff, DC Energy, DMM, Dynegy, J.P. Morgan, PG&E, SCE, Shell, and WPTF.

The major area of interest and contention in the stakeholder process was on the issue of whether to release any aggregated nodal virtual or physical bid data. There was, however, consensus on the release of a daily market report that would include a system wide summary of submitted and cleared physical and virtual bidding activity.

3.1. Nodal Data Release Options

During the stakeholder process, five nodal data release options were discussed and evaluated:

1. Release of Virtual and Physical Bids (with 90-day lag)
2. Net Cleared Virtual Quantity (Day After)
3. Gross Cleared Virtual Demand and Gross Cleared Virtual Supply (After Real Time Close)
4. Net Cleared Total Virtual and Physical Quantities
5. Percentage of Cleared Virtual and Physical Quantities

Under the first 90-Day Lag Release approach, the same information would be released for both physical and virtual transactions on a 90-day lag basis. All submitted bids would be released in the same manner as is currently done for physical bids. This was the recommendation set forth in the Convergence Bidding Design Draft Final Proposal[1] in September 2009. The 90-Day Lag Release approach is used by other ISOs which have similar convergence bidding market designs. The argument in favor of this approach is that (1) the convergence bidding structure proposed by the ISO is not that different from any other implemented design to warrant posting information that no other ISO posts, and (2) the need for some sort of nodal data release, in addition to the 90-day lag data, is not apparent given that other ISOs have not implemented additional safeguards, like position limits, that the ISO has proposed for its design.

The second approach would release the net cleared virtual quantities by node at the close of the day-ahead market. This approach is recommended by the MSC, and fully supported by SCE and SDG&E. CPUC staff and PG&E support the second approach but prefer the third approach. However, in its comments on the straw proposal, PG&E observes that based on written comments from other market participants, there appears to be more support for the MSC proposal. PG&E states that it recognizes the similarity between the MSC and the PG&E proposals, and would consider supporting the MSC proposal if it would help the ISO meet its original objective to bring this issue to the February Board meeting. PG&E concludes by stating that although less information would be released under the second approach, there should be adequate information to meet PG&E's identified goals - greater market efficiency and better market monitoring and validation by all market participants.

In its October 19, 2009 Final Opinion on Convergence Bidding, the MSC provided two recommendations: (1) the day-ahead release of all virtual bids and offers and sales with or without explicitly identifying the market participant, or if this is not possible, (2) release of the net virtual position (total virtual supply bids accepts minus the total virtual demand bids accepted) at each location in the ISO control area and intertie point" at the close of the day-ahead

[1] Draft Final Proposal for the Design of Convergence Bidding (DFP), September 14, 2009, http://www.caiso.com/2429/24291016c12990.pdf

market. No stakeholder endorsed the first MSC option; however, both SCE and SDG&E have supported the second MSC recommendation for the release of net cleared virtual quantities.

SCE contends that market participants need the net cleared virtual quantities in order to formulate financial and physical responses, and that this information will accelerate the rate at which virtual bids bring convergence and overall market efficiency to the market. SDG&E contends that the timely posting of virtual bidding day-ahead market results is just as important as the posting of the current physical market results.

Stakeholders in opposition contend that posting net cleared quantities by node could disclose commercially sensitive information. Convergence bidding market results are said to be just as business sensitive to virtual participants, given that the net cleared quantities will reveal the locations that bidders found commercially beneficial. Others allege that releasing this commercially sensitive information would be as damaging to virtual participants as would releasing bid information for physical participants. However, in their comments on the Straw Proposal, DMM stated that the release of aggregate nodal data (in net or gross form) would not appear to reveal hedging or trading strategies of any specific participant. In addition, because this information is aggregated, publishing the net cleared quantities by node would not disclose information that would be prohibited under Section 20.2 of the ISO tariff.

The third release approach would release the gross cleared virtual demand and gross cleared virtual supply by price node after the close of the real time market. In support of this approach, PG&E contends that this would allow market participants to (1) identify nodes with high levels of virtual activity which will encourage participation and thus promote liquidity, (2) enable monitoring of the virtual markets which will allow market participants or monitors to spot malicious bidding behavior or detect possible market flaws, and (3) facilitate better validation of market results at individual nodes in a timely fashion (i.e., within the price correction window). It has also been argued that this 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.

PG&E also expresses the concern that the physical load side of the market will be required to bid at the LAP level but will not be able to bid physical load at particular nodes, whereas suppliers will submit physical bids at the nodal level. Consequently, because of LAP-level demand bidding, the only way an LSE will have to influence load at the nodal level will be through convergence bids. Without information about convergence bids, the LSE will not be able to identify the cause of market anomalies. The supply side of the market does not face such challenges since a market participant can alter its physical bid as well as use convergence bids to defend its positions.

In addition, given the credit requirements and convergence bidding transaction fee, it may be expensive for an LSE to protect nodal load positions, particularly if the LSE has many load nodes. Providing information about convergence bidding activity will help the LSEs to compete more effectively in the virtual market without imposing undue costs for participation. In addition to these benefits, the release of nodal virtual data may augment the liquidity of the virtual market by allowing more participants, including the IOUs, to play a more active role. Depending on the regulatory rules and the perceived uncertainty regarding expenditure recovery,

IOUs may be hesitant to participate actively in the virtual market, which could reduce the market liquidity.

Under the third gross cleared approach, information would be released after the completion of all markets for a particular trade date. The release this information after the real-time market would prevent physical bidders from taking advantage of this information in the formulation of their real-time bids. The other option is to release this information at the close of the day-ahead market. However, releasing information after the close of the Real-Time (RT) market would prevent physical bidders from taking advantage of this information in the formulation of their RT bids. The concern with day-ahead release is the potential for the information to affect bids or behavior by supply resources in real-time. Nonetheless, the easiest and most practical solution to address this concern would be to delay the data release until after the close of the RT market. Data release after the RT market can be applied to any of the other approaches.

Under both the fourth and fifth approaches, both virtual and physical bids would be treated equally. Interestingly, stakeholders in support of a 90-day lag simultaneous release of both virtual and physical bid data do not support any of the nodal data release approaches, even the fourth and fifth approaches which would release virtual and physical bid information simultaneously.[2] With regard to the fourth Net Cleared Total Virtual and Physical Quantities approach, DMM states that it is unclear about what potential benefits this option may offer, but from the perspective of encouraging entry of competitively priced supply of virtual supply bids, this option does not appear to offer significant benefits.

With regard to the fifth option which includes percentage of Cleared Virtual and Physical Quantities, DMM states that its concern 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 calculate the precise amount of virtual supply or demand clearing at these nodes, while other participants could not. 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, according to DMM, it seems that Option 2 or 3 discussed above provide information more equally to all participants.

3.2. Day Ahead Market Summary Report

There was consensus on the release of a daily market report that would include a system-wide summary of submitted and cleared physical and virtual bidding activity. This system-wide report would provide a high-level public summary of Day-Ahead Market activity for virtual and physical supply and demand for both energy and dollars cleared and submitted at the close of the Day-Ahead Market. This report would incorporate features from similar reports at MISO and NYISO.

[2] The one exception is Citigroup which did express cautious support for the fourth approach, the release of Net Cleared Total Virtual and Physical Quantities.

4. ISO Draft Final Proposal

The ISO appreciates the more robust response to the straw proposal than was received on the issue paper. Stakeholders clearly took the opportunity to clarify and augment their positions. In addition, the ISO benefited from input received during the January 7th stakeholder conference call, and further consultation with its MSC. As a result, the ISO is now more fully informed. The ISO now proposes the release of (1) a daily market summary report, and (2) the net cleared virtual quantities by node at the close of the real-time market for the trade day. For example, net cleared virtual quantities by node that cleared the Day-Ahead Market for trade day January 15th would be posted the morning of January 16th after all hours of the real-time market are closed for the 15th. The public release of this data will promote the development and operation of an efficient, effective convergence bidding market in California.

4.1. Nodal Data Release

The ISO proposes to release the net cleared virtual quantities at the node at the close of the real-time market. This would include cleared net virtual quantities at the trading hubs and Default LAPs. This recommendation combines the data release design of the MSC/SCE approach with the timing of the PG&E approach after the close of the real-time market. The release of the net cleared virtual quantities by node will promote competition by encouraging participation and thus increase market liquidity, especially during the early stages of the market. The MSC supports this approach, and as observed by DMM, while the 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. DMM also commented that accelerated release of aggregate convergence bidding data could help mitigate concerns with how the existing Local Market Power Mitigation (LMPM) could be undermined by virtual demand bids by increasing liquidity and helping to ensure that an adequate supply of competitively priced virtual supply bids exists at the nodal level to meet this additional virtual demand.

Market liquidity will increase with participation. PG&E stated that the release of nodal virtual data may augment the liquidity of the virtual market by allowing more participants, including the IOUs, to play a more active role. IOU participation will depend on CPUC rules and the perceived uncertainty regarding expenditure recovery. To the extent the IOUs may be hesitant to participate actively in the virtual market, this would reduce market liquidity.

A number of stakeholders, representing traders and suppliers, have stated that the release of net cleared virtual quantities at the node exposes hedging strategies of physical resources and releases commercially sensitive information that would be harmful to market participants. Dynegy has asserted that Dynegy alone would be submitting virtual bids at its own supply nodes. However, that may not necessarily be the case, the submission of virtual bids, unlike physical bids, has no locational restrictions. Virtual bids can be submitted by market participant, at anytime, at any node.

Further, supplier concerns that virtual bid transparency would expose their hedging strategies are not reasonable given that individual bidders would not be specifically identified, and that suppliers have multiple options (correlated nodes, DLAPS, and trading hubs) to hedge outage

risks without bidding at the node directly connected to a supplier's unit. This type of bidding flexibility should alleviate concerns that the publication of net cleared virtual quantities will expose supplier hedging strategies. In support, SCE submitted a price correlation table with pricing nodes that have a 98% or higher correlation to the LMP price of Moro Bay Unit 3 in both the day-ahead and real-time market. This would indicate that a supplier has many virtual bidding options to hedge outage risk at pricing points other than at a specific unit with an outage risk.

With regard to the issue that the release of net cleared virtual quantities at the node would also release commercially sensitive information that would harm virtual participants, this approach would not reveal bidder identity, nor would it reveal the actual bid curves that were submitted. The fact that supply and demand bids are netted further ensures that sensitive information is protected. The market would be unable to determine bidder identity, the contents of the bids submitted, or the number of bids submitted at a given node.

We are unpersuaded that the hedging strategies of physical resources and the commercially sensitive information of either virtual or physical market participants would be compromised. We believe the release of the net cleared virtual quantity data by node at the close of the real-time market should promote the development and operation of an efficient, effective convergence bidding market in California. Since the nodal information the ISO proposes to post is aggregated, publishing the net cleared quantities by node would not disclose information that would be prohibited under Section 20.2 of the ISO tariff. Therefore the posting of this information will not require ISO Board approval or filing with FERC. Since the posting of this information does not require a FERC filing, we have the flexibility to consider modifications to the information release policy, in the event there is demonstrated harm to the market. We will monitor the market for any adverse impacts.

4.2. Day Ahead Market Summary Report

Early on, there was consensus on the release of a daily market report that would include a summary of submitted and cleared physical and virtual convergence bidding activity. This system-wide report would provide a high-level public summary of Day-Ahead Market activity for virtual and physical supply and demand for both energy and dollars cleared and submitted at the close of the Day-Ahead Market. This report would incorporate features from similar reports at MISO and NYISO. In addition to system-wide activity, information would also be shown at the load aggregation point (LAP) level.

The Day Ahead Market Summary Report would at least include the following elements shown in the Table 3 below. In addition, this report will include the information in the Table 3 below for activity on the interties separately from internal node activity.

Table 3 Straw Proposal: Day-Ahead Supply & Demand Report Virtuals & Physicals (Numbers are Illustrative Only to Show Format)				
DEMAND	**Demand Self Schedule**	**Demand Economic Bid**	**Demand Virtual**	**Demand Total**
Energy Submitted (MWh)	1,464,566	29,896	100,234	1,594,696
Dollars Submitted	$46,061,249.36	$970,580.03	$2,945,793.49	$49,977,622.88
Energy Cleared (MWh)	1,464,566	29,896	100,234	1,594,696
Dollars Cleared	$46,061,249.36	$970,580.03	$2,945,793.49	$49,977,622.88
SUPPLY	**Supply Physical**	**Supply Virtual**	**Supply Total**	
Energy Submitted (MWh)	1,535,985	50,916	1,586,901	
Dollars Submitted	$45,061,847.00	$1,540,233.20	$46,602,080.20	
Energy Cleared (MWh)	1,535,985	50,916	1,586,901	
Dollars Cleared	$45,061,847.00	$1,540,233.20	$46,602,080.20	

Dollars cleared of virtual supply is the total supply dollars cleared in the day-ahead market for the market date based on virtual offers. Dollars cleared of virtual demand bids is the total demand dollars cleared in the day-ahead market for the market date based on virtual bids. This would be similar to that shown MISO report shown in the straw proposal.[3]

[3] See MISO DA Report Reader's Guide, http://www.midwestmarket.org/publish/Document/2a74f7_108e84afbec_-6e1a0a48324a/1410-Midwest%20ISO%20Day-Ahead%20Pricing%20Report%20Readers%20Guide.pdf?action=download&_property=Attachment

5. Conclusion

Our goal in this phase of the initiative was to strike the right balance between the provision of information that would facilitate competition without compromising confidentiality or promoting unfair advantage. The draft final proposal achieves this mark. In addition to the release of convergence bid information on the same timeline as that for physical bids, which is currently published on a 90-day lag, we now propose to release (1) a daily market summary report, and (2) the net cleared virtual quantities by node at the close of the real-time market for the trade day. The release of nodal virtual data will increase market transparency, participation, and liquidity.

Because this nodal information is sufficiently aggregated, publishing the net cleared quantities by node would not disclose information that would be prohibited under Section 20.2 of the ISO tariff. Accordingly, implementation of this data release approach will not require formal approval by the ISO Board or an additional FERC filing. The ISO will present this proposal for data release to the ISO Board in February as an informational briefing but no Board decision will be required. As mentioned above while the ISO believes that the public release of this data will promote the development and operation of an efficient, effective convergence bidding market in California we will actively monitor the market for potential harm and consider modifications to the information release policy as necessary.