

Stakeholder Process: Convergence Bidding on the Interties

Summary of Submitted Comments

Stakeholders submitted two rounds of written comments to the ISO on the following dates:

Real Time Imbalance Energy Offset (2011)

- Round One, 05/11/11
- Round Two, 06/01/11
- Round Three, 06/24/11
- Round Four, 08/05/11

Price Inconsistency Caused by Intertie Constraints

- Round One, 05/11/11
- Round Two, 06/01/11

Stakeholder comments are posted at:

Real Time Imbalance Energy Offset (2011)

<http://www.caiso.com/informed/Pages/StakeholderProcesses/RealTimeImbalanceEnergyOffset2011.aspx>

Price Inconsistency Caused by Intertie Constraints

<http://www.caiso.com/informed/Pages/StakeholderProcesses/PriceInconsistencyCausedIntertieConstraints.aspx>

Other stakeholder efforts include:

Real Time Imbalance Energy Offset (2011)

- Stakeholder conference call to review issue paper and straw proposal, 05/04/11
- Stakeholder conference call to review revised straw proposal, 05/25/11
- Stakeholder conference call to review revised straw proposal, 06/17/11
- Stakeholder meeting to discuss benefits of convergence bidding on interties, 07/19/11

Price Inconsistency Caused by Intertie Constraints

- Stakeholder conference call to review issue paper and straw proposal, 05/04/11
- Stakeholder conference call to review draft final proposal, 05/25/11

Stakeholder	Remove CB on Interties	Comment	Management Response
Brookfield Energy	Does not support	<p>Eliminating convergence bidding on the interties does not resolve root causes of the real-time imbalance energy offset. More moderate steps can be taken to attempt to address this problem before moving to such an extreme position as eliminating convergence bidding on the interties completely. Most of the dollar volume of the real-time imbalance energy offset uplift is driven by price spikes in real-time dispatch that will be addressed by the flexi-ramp constraint. Convergence bidding on the interties provides valuable benefits to the market and a legitimate hedging tool for market participants.</p>	<p>The ISO has acknowledged that eliminating convergence bidding on the interties will not fully resolve the real-time imbalance energy offset; however, while the proposal will not address the price differences between hour-ahead scheduling process and real-time dispatch, the proposal will decrease the quantity of MW that can impact the offset.</p> <p>The ISO is proposing to eliminate convergence bidding on the interties as a result of the market design issues identified through the stakeholder processes. Since the current market design has two settlement periods in real-time (hour-ahead scheduling process for interties and real-time dispatch for internal load/generation) and virtual bids are removed from the market optimization in HASP, the benefits of price convergence through virtual bids is reduced.</p>
Citigroup	Does not support	<p>Encourage the ISO to further review the other contributing factors to the real-time imbalance energy offset charge prior to taking drastic measures in removing convergence bidding. We do feel that a more conclusive stakeholder process that attempted to collectively dive into the various options to reduce the offset, would have benefitted the overall market.</p>	<p>The current real-time market design prevents the benefits of price convergence from being fully utilized. Enhancements to the real-time market are needed to efficiently integrate renewables at the 33% renewable portfolio standard. To address operational and market challenges due to the expanding renewable generation fleet and new technologies, the ISO has commenced a comprehensive initiative, RIMPR Phase 2, to identify market design enhancements to meet these challenges. The RIMPR Phase 2 includes enhancements to the real-time market and the ISO believes that it is appropriate to address other contributing factors to the real time imbalance energy offset through this initiative.</p>
CPUC	Supports	<p>Because of structural defects that result in systematic price differences between the hour-ahead scheduling process price for interties and the real-time dispatch price for internal generation and load, the CPUC staff supports the ISO's proposal to eliminate convergence bidding at the interties. Enhancements such as the flexible ramping constraint and increasing the negative bid floor appear to have potential to reduce the price differences. Nevertheless, the price differences have been persistent and other ISO</p>	<p>The ISO believes that the RIMPR Phase 2 initiative is the appropriate venue to address other contributing factors to the real-time imbalance energy offset. The ISO will continue to monitor for implicit virtual bidding and will take additional steps to address the issue if warranted.</p>

Stakeholder	Remove CB on Interties	Comment	Management Response
		<p>efforts to date to address implicit virtual bidding and bring price convergence between hour-ahead scheduling process and real-time dispatch prices have not succeeded. The CPUC staff therefore generally supports the ISO's proposal, except that it continues to urge the ISO to adopt rules to deter implicit virtual bidding within this stakeholder initiative.</p>	
DC Energy	Does not support	<p>Strongly opposes the ISO's proposal to suspend convergence bidding at the interties. As noted in earlier comments, DC Energy believes that intertie convergence bidding is an essential part of the ISO market – providing a number of benefits to participants (ability to bid out-of-state renewable energy in the integrated forward market, hedging of physical and congestion revenue rights positions, etc.) as well as the market as a whole (liquidity, market power mitigation, price formation, etc.). In addition to providing these benefits, as WPTF noted in its presentation, intertie convergence bidding is currently providing over \$300 million in annual savings to load. This is several times greater than the total increase to the real time imbalance energy offset charge from convergence bidding estimated by the ISO.</p>	<p>The ISO is proposing to eliminate convergence bidding on the interties as a result of the market design issues identified through the stakeholder processes. Since the current market design has two settlement periods in real-time (hour ahead scheduling process for interties and real-time dispatch for internal load/generation) and virtual bids are removed from the market optimization in hour-ahead scheduling process, the benefits of price convergence through virtual bids is reduced.</p> <p>The objective of convergence bidding is not the reduction in day-ahead market prices, but rather the convergence of day-ahead and real-time price through changes in the day-ahead unit commitment that result from virtual bids.</p> <p>The ability for out-of-state renewable energy to participate in the day-ahead market is not impacted by the decision to remove convergence bidding from the interties. Several stakeholders stated that virtual supply allows renewable resources to take a day-ahead position, but wait to secure transmission closer to actual delivery based upon a more updated and accurate forecast. However, the financially equivalent strategy can be employed by submitting a day-ahead physical import and securing transmission prior to the hour-ahead scheduling process and making the appropriate supply adjustments in the hour-ahead scheduling process.</p>
Financial Marketers	Does not support	<p>The Financial Marketers object to the draft final proposal to not allow interties to be eligible nodes for convergence bidding under the current market design. The Financial</p>	<p>The ISO originally planned to bring this matter to the Board for decision in July. Since the impact to the real-time imbalance energy offset moderated in May and June, the ISO and stakeholders took additional time to find intermediate alternatives to address the</p>

Stakeholder	Remove CB on Interties	Comment	Management Response
		<p>Marketers suggest that the ISO revisit the second straw proposal, in which the ISO recognized that operational improvements to address the hour-ahead scheduling process and real-time dispatch price differential resulted in a significant reduction in real-time imbalance energy offset costs. As stated above, the second straw proposal concludes that it would be “prudent to take additional time to develop a more comprehensive intermediate term solution instead of moving ahead with the proposed short-term settlement rule.” Instead of taking this prudent step, the draft final proposal would serve to eliminate the nascent market for convergence bidding at the interties.</p>	<p>issues. However, no proposal to address the structural issues with having two settlement optimizations for real-time prices (hour-ahead scheduling process for interties and real-time dispatch for internal load/generation) were identified which would have led to virtual bidding driving convergence between day-ahead prices and real-time prices.</p>
J.P. Morgan	Does not support	<p>J.P. Morgan does not support the ISO’s proposal. Elimination of convergence bidding at the interties will result in market inefficiencies and will obviate much of the benefit of convergence bidding as proposed and implemented by the ISO and approved by FERC. As presented by WPTF at the recent stakeholder meeting, convergence bidding at the ties offers quantifiable benefits to the market as a whole by increasing supply in the day-ahead market. The ISO has not supported the need to take such action. The ISO has not demonstrated that the current rules have had any deleterious impact on reliability. Furthermore, the ISO itself has acknowledged that real-time imbalance energy offset charges have declined over the last month and have remained at a more moderate level. Most recently, the ISO has presented information that reveals that the offset charge remains low and that, at times, convergence bidding has resulted in lower real-time imbalance energy offset charges</p>	<p>The ISO is proposing to eliminate convergence bidding on the interties as a result of the market design issues identified through the stakeholder processes. Since the current market design has two settlement periods in real-time (hour-ahead scheduling process for interties and real-time dispatch for internal load/generation) and virtual bids are removed from the market optimization in hour-ahead scheduling process, the benefits of price convergence through virtual bids is reduced.</p> <p>The objective of convergence bidding is not the reduction in day-ahead market prices, but rather the convergence of day-ahead and real-time price through changes in the day-ahead unit commitment that result from virtual bids.</p>
NCPA	Supports	<p>NCPA supports the ISO’s draft final proposal to remove interties as eligible convergence bidding nodes under the current market design.</p>	
NRG Energy	Does not support		The ISO is proposing to eliminate convergence bidding on the

Stakeholder	Remove CB on Interties	Comment	Management Response
		<p>While NRG, among other parties, was skeptical of the ISO's initial proposal to "claw back" revenues associated with balanced internal/intertie virtual positions, NRG is discouraged and perplexed by the ISO's unilateral decision to eliminate that proposal from consideration. NRG is especially perplexed by the ISO's removal of the claw back proposal from consideration because it seemed to completely address the chief concern by the ISO associated with offset costs while still allowing convergence bidding at the interties. Hoping that the ISO will reconsider this "nuclear option", but expecting that it will not, NRG urges the ISO to "fast-track" modifications to its market design in Phase 2 of the Renewable Integration and Market Product Review to eliminate discrimination between suppliers internal and external to the ISO and to restore convergence bidding on the interties.</p>	<p>interties as a result of the market design issues identified through the stakeholder processes. Since the current market design has two settlement periods in real-time (hour-ahead scheduling process for interties and real-time dispatch for internal load/generation) and virtual bids are removed from the market optimization in hour-ahead scheduling process, the benefits of price convergence through virtual bids is reduced.</p> <p>The objective of convergence bidding is not the reduction in day-ahead market prices, but rather the convergence of day-ahead and real-time price through changes in the day-ahead unit commitment that result from virtual bids.</p> <p>The focus of RIMPR Phase 2 is to redesign the real-time market and the ISO believes that it is appropriate to address other contributing factors to the real-time imbalance energy offset through the changes necessary to meet future renewable generation penetration.</p>
PG&E	Supports	<p>PG&E fully supports the ISO's proposal to seek Board approval in August to remove convergence bidding from the interties. We agree with the ISO's assessment that the benefits of continuing to allow convergence bidding at the interties do not outweigh the ongoing market risks. However, PG&E also believes further efforts to address non-convergence bidding real-time imbalance energy offset issues should continue through a stand-alone initiative, rather than being tabled until implementation of the Renewable Integration Phase 2 roadmap in 2014. The real-time imbalance energy offset remains unacceptably high, and to the extent that action can be taken to reduce the magnitude of this uplift, it should be pursued on an expedited basis.</p>	<p>The ISO is continuing to develop and implement enhancements to its operational practices and systems to converge HASP and RTD prices which should further reduce the real-time imbalance energy offset. Furthermore, the ISO will continue to closely monitor the level of real-time imbalance energy costs and take additional actions if warranted. The real-time market structural issues are being addressed in the RIMPR Phase 2 initiative.</p>
Powerex	Supports	<p>Under the current market design, intertie convergence bids do not substantially lead to improved efficiency in the commitment or dispatch of physical resources, which Powerex submits is their primary objective. Rather than</p>	<p>The ISO agrees and will address the real-time market structural issues in the RIMPR Phase 2 initiative.</p>

Stakeholder	Remove CB on Interties	Comment	Management Response
		<p>adopting a patchwork fix, Powerex believes resources are better directed at identifying and remedying the root underlying causes of the persistent price divergences in the ISO market. An important stakeholder discussion on implicit virtual bidding specifically – and on non-performing physical awards generally – was underway, but it appears to have been prematurely terminated by the ISO, largely as a result of nebulous and speculative comments of some of the stakeholders. Powerex believes that a prudent course of action is for the ISO to seek approval from its board of directors to suspend convergence bidding on interties. However, the issue of whether to adopt additional measures to discourage implicit virtual bidding need not – and should not – be decided at the same time.</p>	
Six Cities	Supports	<p>Fully supports the ISO’s determination in the final proposal to remove interties as eligible convergence bidding nodes. In addition, however, the ISO should continue to monitor carefully the levels of Real-Time Imbalance Energy Offset costs and act promptly to mitigate such costs if they return to the high levels experienced in several previous months.</p>	<p>The ISO is committed to continuing to monitor the real-time imbalance energy offset costs and implement operational and system enhancements to converge HASP and RTD prices to keep the offset costs at acceptable levels. If the offset costs rise to unacceptable levels, the ISO will consider additional intermediate term solutions to address the issues.</p>
SWP	Supports	<p>Removing convergence bidding at interties should eliminate the impact of convergence bidding at interties and could resolve part of the real-time imbalance Energy Offset issue and the price inconsistency caused by intertie constraints issue. Although the ISO expects to fully address the offset issue within the Renewable Integration Market and Product Review Phase 2 Stakeholder process, SWP considers an intermediate term solution for the offset issue is also necessary.</p>	<p>The ISO is committed to continuing to monitor the real-time imbalance energy offset costs and implement operational and system enhancements to converge HASP and RTD prices to keep the offset costs at acceptable levels. If the offset costs rise to unacceptable levels, the ISO will consider additional intermediate term solutions to address the issues.</p>
SCE	Supports	<p>SCE supports suspension of virtual bidding at the interties. While such a measure is unfortunate, we have found no other workable solution, and further, no other stakeholder has offered a workable alternative. At its core we have a</p>	<p>The ISO is proposing to eliminate convergence bidding on the interties as a result of the market design issues identified through the stakeholder processes. Since the current market design has two settlement periods in real-time (HASP for interties and RTD for internal load/generation) and virtual bids are removed from the</p>

Stakeholder	Remove CB on Interties	Comment	Management Response
		<p>structural market design issue, and thus a solution requires a structural change. Moreover, arguments by some stakeholders that somehow virtual bids produce a net-benefit to Load - even considering the \$80 million uplift - are both unjustified and irrelevant. Convergence bids are intended to <i>converge</i> prices. Arguments that instead convergence bids systematically depress prices over a long-term horizon are, in effect, arguments that the current implementation is dysfunctional and contravenes its intended purpose.</p>	<p>market optimization in HASP, the benefits of price convergence through virtual bids is reduced.</p> <p>The objective of convergence bidding is not the reduction in day-ahead market prices, but rather the convergence of day-ahead and real-time price through changes in the day-ahead unit commitment that result from virtual bids.</p>
SDG&E	Supports	<p>SDG&E supports the ISO's proposal to suspend convergence bidding at interties under the current market design. Specifically, such a suspension should remain until convergence bids for interties are settled in the same real-time market as internal nodes (i.e. no hour-ahead scheduling process settlement for convergence bids). SDG&E believes a separate initiative should be started now to redesign the hour-ahead scheduling process market that eliminates the driver of offset costs, deters the physical substitute for SC Balanced Virtual bids or fairly allocates uplift costs until such redesign is implemented, and is consistent with the policy objectives of RIMPR Phase 2.</p>	<p>The ISO is committed to continuing to monitor the real-time imbalance energy offset costs and implement operational and system enhancements to converge HASP and RTD prices to keep the offset costs at acceptable levels. If the offset costs rise to unacceptable levels, the ISO will consider additional intermediate term solutions to address the issues.</p>
WPTF	Does not support	<p>WPTF continues to strongly believe that suspending convergence bidding at the ties is mis-directed and would be counterproductive to the ISO market.</p> <ul style="list-style-type: none"> • The ISO should focus foremost on a sustainable market design that conforms settlements for internal and external resources; • The real-time imbalance energy offset charge is primarily driven by factors other than convergence bidding; • The actions of the ISO to reduce the offset have been productive but the charge is still very sensitive to ISO operator actions and other factors unrelated to convergence bidding; • Convergence bidding has reduced costs to LSEs well in 	<p>The ISO is proposing to eliminate convergence bidding on the interties as a result of the market design issues identified through the stakeholder processes. Since the current market design has two settlement periods in real-time (HASP for interties and RTD for internal load/generation) and virtual bids are removed from the market optimization in HASP, the benefits of price convergence through virtual bids is reduced.</p> <p>The objective of convergence bidding is not the reduction in day-ahead market prices, but rather the convergence of day-ahead and real-time prices through changes in the day-ahead unit commitment that result from virtual bids.</p> <p>The ISO acknowledges that several market participants who originally highlighted concerns with price inconsistencies arising</p>

Stakeholder	Remove CB on Interties	Comment	Management Response
		<p>excess of any real-time imbalance energy offset cost impacts stemming from convergence bidding;</p> <ul style="list-style-type: none"> • Convergence bidding is a useful market feature, and convergence bidding at the ties provides hedge capabilities that cannot be replaced by an internal node-only convergence bidding policy; • Parties are willing to further consider settlement rules and other means to manage the impact of intertie convergence bidding on the real-time imbalance energy offset; • WPTF members are willing to manage the risks of the dual constraint issue for convergence bidding, and thus this should not be a driver for suspending convergence bidding. 	<p>from enforcement of the dual constraint of the interties are willing to manage the risks associated with this market issue over the alternative of removing convergence bidding at the interties.</p>