

## Stakeholder Process: FERC Order No. 764 Market Design Changes

# Summary of Submitted Comments

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

- Round One, 11/16/12
- Round Two, 01/08/13
- Round Three, 02/26/13
- Round Four, 04/16/13

Stakeholder comments are posted at

<http://www.caiso.com/Documents/FERC%20Order%20No%20764%20market%20changes%20-%20papers%20and%20proposals%7CStakeholder%20comments>

Other stakeholder efforts include:

- Stakeholder Meeting, 10/30/12
- Stakeholder Conference Call, 12/18/12
- Stakeholder Meeting, 02/12/13
- Stakeholder Meeting, 04/02/13
- Stakeholder Conference Call, 05/01/13

	Management Proposal: 15-Minute Settlement of Intertie Transactions			
	Intertie Scheduling Options and Timeline	No Price Guarantee for Hourly Fixed Schedules	e-Tag Energy Schedule Updated by ISO	RTD Price for 15-Minute Deviations
APS	<p>Oppose</p> <p>Hourly schedule process should remain in addition to 15-minute market. Risk shifted to imports/exports will reduce hourly liquidity.</p> <p>Allow generators the ability to revise bids and schedules intra-hour versus 75 minutes prior to operating hour.</p>	<p>Oppose</p> <p>Not willing to take on the additional price risk, particularly when other means of buying and selling hourly energy through traditional bilateral contracts across WECC exist.</p>	No Comment	No Comment
Brookfield	<p>Conditional</p> <p>Support the general direction proposed by the ISO to promote a 15-minute market throughout the West.</p>	<p>Oppose</p> <p>Bid cost recovery for hourly fixed schedules should be retained for 18 months to allow time for 15-minute market to develop.</p>	No Comment	Support
CalWEA	<p>Support</p> <p>Start of 15-minute market should be shortened from T-37.5 minutes when supported by WECC.</p>	No Comment	No Comment	No Comment
CPUC	No Comment	<p>Supports</p> <p>Better aligns incentives to lead</p>	No Comment	<p>Oppose</p> <p>Potential implicit virtual bids undermine market certainty.</p>

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		to accurate market prices by having those who can build the risk premium into a bid price.		
Iberdrola	Support  Promotes 15-minute market in the West and shares the concern that absent proper incentives this new market is unlikely to develop.	Conditional  Concerned that some adjacent balancing authorities will not make the required changes to processes and infrastructure to enable entities to fully participate in the 15-minute market.	No Comment	No Comment
Morgan Stanley	Support  ISO moving to 15-minute markets and settlements can help stimulate faster evolution of other balancing authorities to similar practices, an evolution they find highly desirable.	Support  Lack of price certainty at interties will increase the bid/ask spread and may reduce liquidity. However, we do not regard lack of price guarantee omission as a fatal flaw.	No Comment	Support
NRG	Support	Support  Providing price guarantee for	Support	No Comment

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	Both interties and internal resources will participate on an equal basis. The current problematic and discriminatory hour-ahead scheduling process cannot be eliminated quickly enough.	hourly intertie schedules would retain a preferential and discriminatory settlement that will discourage parties from expeditiously transitioning to 15-minute intertie scheduling.		
PG&E	Support  The economic fixed scheduling functionality should sunset after an appropriate but minimal transition window, is prudent.	Support  Intertie rules should encourage participation in the 15-minute market rather than the status quo. Providing price guarantee creates clear gaming opportunities that should not be allowed.	Support  Addresses a key implementation concern raised earlier by stakeholders	Conditional  See merit in future discussions on clearer protections, e.g. worse-of pricing, against willful deviations, if appropriate.
Powerex	Support  Commends the ISO for offering a myriad of flexible scheduling options that should go a long way towards increasing the intra-hour flexibility offered from the interties.	Support  Price guarantee may cause market inefficiencies and substantial unintended consequences.	Support	No Comment
SCE	Support  Provides more options than any other WECC balancing authority. Such a design structure is the foundation on which market liquidity can be observed due to the accommodating nature of the	Support  Price guarantee for hourly fixed transactions would go against Order No. 764 by transferring risk to load via market uplifts.	Support  The ability to opt out on an hourly basis is available to market participants.	Oppose  Implement a “worse-of” pricing mechanism or a decline charge for 15- minute participants that do not deliver.

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	framework.			
SDG&E	Support A significant step forward in addressing several major problems with the current markets.	Support	No Comment	No Comment
Six Cities	Support	Support	No Comment	Oppose Inadequate measures to discourage deviations from the ISO's dispatch instructions.
WPTF	Conditional Concerned that neighboring balancing authorities will not be able to support a robust 15-minute market.	Oppose Price guarantee for fixed hourly schedules should be retained for 18 months to allow time for 15-minute market to develop.	No Comment	Supports
<b>Management Response</b>	<p><b>The proposed market design enables 15-minute scheduling across the interties in order to comply with FERC Order No. 764. The scheduling options provided support hourly fixed schedules, 15-minute scheduling and dynamic transfers consistent with WECC business practices and e-Tagging timelines. Not providing price guarantees to hourly fixed schedules will result in prices that reflect their value and incentivize the movement to 15-minute intertie scheduling. The mechanisms for ensuring dispatch instructions are consistent with the existing policies which have been in place since the 2009 market redesign (MRTU). The proposed design changes result in all market participants being settled comparably.</b></p>			

	Management Proposal: Convergence Bidding on Interties			
	Reinstatement	Intertie Position Limits	Resolution of Dual Constraint	No Convergence Bidding between 15-Minute Market and RTD
CDWR	<p>Oppose</p> <p>Only after the one year minimum observation period has passed should a stakeholder process be started to evaluate the benefits of reinstating intertie convergence bidding.</p>	No Comment	No Comment	Support
CPUC	<p>Conditional</p> <p>Concerned about the reinstatement of convergence bidding on the interties. ISO should monitor for potential gaming.</p>	<p>Support</p> <p>Position limits necessary.</p>	No Comment	No Comment
Morgan Stanley	Support	<p>Support</p> <p>Position limits “default” actions, with phase-in of less restrictive limits only able to be delayed upon discovery of problematic evidence.</p>	<p>Support</p> <p>A creative and sound solution.</p>	No Comment
NRG	Support	<p>Conditional</p> <p>Looks forward to those limits</p>	Support	No Comment

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		automatically increasing on the schedule proposed.		
PG&E	<p>Oppose</p> <p>Activation of convergence bidding on the interties simultaneously with Order No. 764 changes is inappropriate, risky, and unnecessary. At a minimum, the ISO should wait 120 days after Order No. 764 and the EIM have been implemented to ensure the market functions properly such that virtual bidding will improve market efficiency.</p>	<p>Support</p> <p>Limits buffer against excessively rapid increases in uplift charges.</p>	<p>Conditional</p> <p>ISO should commit to monitor liquidity effects in the integrated forward market.</p>	No Comment
Powerex	<p>Oppose</p> <p>ISO should commence a separate stakeholder process to review convergence bidding more holistically in its markets.</p>	<p>Oppose</p> <p>Intertie-specific limits will hinder the important ability of market participants to respond to (and eliminate) price anomalies.</p>	<p>Support</p> <p>But, believes these schedules that are allowed to e-tag day ahead, must also be obligated to e-tag day-ahead - not given the option to e-tag day ahead.</p>	Support
SCE	<p>Oppose</p> <p>ISO modeling of the system</p>	<p>Conditional Support</p> <p>Intertie convergence bidding has not been considered within the energy imbalance market</p>	<p>Oppose</p> <p>Physical and convergence bids are</p>	Support

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	<p>between the day-ahead and real-time market runs can produce price divergence that makes convergence biddings profitable. The profits are funded through uplifts to load.</p> <p>This current structure is unjust and unreasonable and must be remedied before any attempt to address intertie convergence bidding implementation.</p>	<p>framework with no demonstration of how these changes will interact or whether they will even perform as intended.</p>	<p>not fungible in the ISO's proposal which may threaten intertie liquidity.</p>	
SDG&E	<p>Oppose</p> <p>Recommends the ISO conduct further analysis and comprehensively vet appropriate protections in a separate initiative.</p>	<p>Oppose</p> <p>There must be defined metrics and triggers, not a rigid timeframe for gradually increasing convergence bidding position limits</p>	<p>No Comment</p>	<p>No Comment</p>
Six Cities	<p>Oppose</p> <p>Should not return simultaneously with the adoption of the 15-minute scheduling processes.</p>	<p>No Comment</p>	<p>No Comment</p>	<p>Support</p>
WPTF	<p>Supports</p>	<p>Oppose</p> <p>Firm timeline is important for establishing full convergence</p>	<p>No Comment</p>	<p>No Comment</p>

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		bidding at the interties, however, there is no justification for delaying convergence bidding at the interties for 12 months.		
<b>Management Response</b>	<p><b>By aligning the convergence bidding real-time settlement of intertie schedule points and internal nodes to the 15-minute market, the fundamental market inefficiency which led to the suspension of convergence bidding on the interties has been addressed. The resolution of the dual constraint issue addresses the previously observed price inconsistencies for physical imports and export. The ISO is proposing position limits which will allow both the 15-minute market and the energy imbalance market to be implemented prior to convergence bidding returning on the interties.</b></p> <p><b>After considering stakeholder comments, Management modified the position limit proposal to not reinstate convergence bidding until 12 months after the new market structure is implemented. This will allow the ISO and stakeholders to review the market results under the new structure and EIM before reintroducing convergence bidding on the interties.</b></p>			

	Management Proposal: PIRP Design Changes			
	Forecasts & Scheduling	Allow Economic Bid	No Monthly Netting of Imbalance Energy	No Grandfathering of Existing PIRP Resources
CalWEA	<p>Support</p> <p>Use of T-7.5 minute forecast for real-time dispatch is a significant improvement, but T-37.5 minute forecast for 15-minute market should be shortened when supported by WECC.</p>	No Comment	<p>Oppose</p> <p>Requests that monthly imbalance settlement netting schemes be kept in place for at least a year after all market changes are fully implemented.</p>	<p>Oppose</p> <p>PIRP should be grandfathered for all projects with existing power purchase agreements that were executed during PIRP's existence.</p>
Iberdrola	<p>Support</p> <p>Significantly improves the granularity of forecast data used to populate variable energy resources energy schedules.</p>	Support	<p>Support</p> <p>Scheduling coordinator for 570 MWs of wind in ISO. Proposal settles variable energy resources on a level that is comparable to all other generator types.</p>	<p>Conditional</p> <p>Certain variable energy resources may have operational characteristics that preclude their ability to mitigate imbalance risk under the new market structure. PIRP imbalance netting should be continued for these projects.</p>
IEP	No Comment	No Comment	<p>Conditional</p> <p>"Hold harmless" PIRP resources that have no reasonable means of cost recovery of additional costs due to elimination of the netting period associated with imbalance energy.</p>	
LSA	<p>Conditional</p> <p>Concerned that, while the proposal allows</p>	No Comment	<p>Oppose</p> <p>Monthly imbalance netting should apply to the small number of</p>	

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	Forecasts & Scheduling	Allow Economic Bid	No Monthly Netting of Imbalance Energy	No Grandfathering of Existing PIRP Resources
	use of 5-minute forecast to reflect expected intra-hour ramps, the method for constructing 15-minute schedules, and measuring 5-minute imbalances from them, would undercut the benefits of the greater granularity.		contracts under which suppliers are responsible for imbalance energy risk.	
NRG	Conditional Concerns about using a simple average of the three 5-minute forecasts instead of using each individual 5-minute forecast as the basis for determining 5-minute instructed deviations from 15-minute schedules.	No Comment	Oppose Grandfathering monthly netting for current PIRP resources until the consistent accuracy of the ISO's forecasts can be proven, and the reduced exposure to uninstructed deviations can be verified.	
PG&E	Support Closer timelines for forecasting production are key improvements that will enhance market efficiency and reduce deviations.	No Comment	Support Scheduling coordinators of intermittent resources should be given the correct price signals to determine whether to modify their output.	Support Claims that elimination of PIRP netting will cause widespread disruption in the market or cause risk of abrogation are false.
SCE	Support	Support	Support	Support Do not believe that the contemplated changes to PIRP would trigger a right to renegotiate in the majority of their intermittent power purchase contracts.
SDG&E	Support	Support	Support	

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				Support  Grandfathering to hedge against “widespread market disruption” associated with the proposed PIRP modifications are largely misplaced, and borne of theoretical rather than actual concerns.
Six Cities	Support	No Comment	Support	Support
<b>Management Response</b>	<p><b>The proposed real-time market changes will allow the ISO to effectively and efficiently integrate a large amount of renewable variable energy resources into the fleet. The proposed real-time market is structured around the characteristics of variable energy resources. Variable energy resources can now be scheduled more effectively through with more granularity and significantly shortened forecast lead times. Management’s proposal includes the ability of variable energy resources to provide economic bids indicating their willingness to be curtailed in over-generation conditions. This provides significant benefits to the resources and the ISO’s ability to maintain system reliability.</b></p> <p><b>Management proposes to establish a process to identify existing PIRP resources that have operational characteristics that require additional protective energy settlement measures under the proposed market design changes. This process will be used to identify if there are any impacted resources, so that mitigation measures can be developed that address the specific issues identified.</b></p>			