



California ISO

**Self-Schedules Bid Cost Recovery Allocation and Bid
Floor**

Addendum to Draft Final Proposal

September 16, 2016

Table of Contents

- 1. Introduction 3
- 2. Plan for stakeholder engagement..... 4
- 3. Changes to Draft Final Proposal 4
 - 3.1. Bid Floor 4
 - 3.2. IFM BCR allocation 4
- 4. Consideration of stakeholder comments54
- 5. Background..... 6
 - 5.1. Bid floor..... 6
 - 5.2. IFM BCR76
- 6. Data Analysis 7
 - 6.1. Bid Floor 7
 - 6.2. IFM BCR allocation 9
- 7. Proposal.....12
 - 7.1. Bid Floor13
 - 7.2. IFM BCR allocation14
- 8. Next steps16
- Appendix A: Stakeholder Comments Summary17

1. Introduction

The ISO has identified that as the supply fleet evolves toward a 50 percent renewable portfolio standard for California, there will potentially be significant increases in over-supply conditions without a more flexible fleet of resources offered into the ISO market. Over-supply conditions necessitate the cutting of self-schedules at the power balance constraint relaxation price as opposed to dispatching downward supply through economic bids. This does not provide accurate price signals because the power balance constraint relaxation price is an administratively determined price. In contrast, economic bids reflect the marginal costs of supply.

To ensure the ISO is able to provide accurate price signals to incent a more flexible fleet of resources during this transition, market changes must be implemented to encourage generators to economically participate in the markets rather than self-schedule. Increased economic bidding of flexible resources and decreased self-schedules will provide the market optimization with more flexibility to economically mitigate instances of over-supply, as opposed to uneconomically cutting self-schedules.

This initiative explores two modifications to existing market design policies to incent more economic bidding by 1) lowering the bid floor, and 2) removing load served by self-scheduled generation's and import's exemption from being allocated day-ahead bid cost recovery costs. These modifications will more accurately represents costs in the ISO market and allocate them based on cost-causation. They will also provide greater incentive for economic bidding and allow the market to more efficiently and economically address over-supply conditions.

Specifically, this initiative is exploring to:

- Lower the bid floor from $-\$150/\text{MWh}$ to $-\$300/\text{MWh}$
- Modify the IFM tier 1 uplift cost allocation by no longer exempting load corresponding to self-scheduled supply from being allocated integrated forward market bid cost recovery costs

These modifications have previously been discussed in separate on-going initiatives¹, however both on-going initiatives are requiring more time to evaluate other aspects of the proposals. Given the need to address over-supply conditions, the ISO has combined the two modifications noted above into this initiative to allow the ISO and stakeholders to take these policy changes to the Board in 2016, thus facilitating an earlier implementation.

In compilation, the proposed modifications herein will incentivize more economic bidding to mitigate over-supply conditions, strengthen price formation in the markets, and further align cost allocation with cost-causation.

¹ Lower bid floor was previously discussed in the Stepped Constraints Parameter initiative. The modification to the IFM BCR uplift cost allocation methodology was previously discussed in the BCR Enhancements initiative.

2. Plan for stakeholder engagement

The schedule for stakeholder engagement is provided below.

The policy proposal in this initiative is not within the scope of and does not affect the ISO's Energy Imbalance Market.

Item	Date
Issue Paper posted - Stepped constraint parameters	May 10, 2016
Stakeholder call on Issue Paper – Stepped constraint parameters	May 12, 2016
Issue Paper comments due – Stepped constraint	May 26, 2016
Straw Proposal posted – BCR enhancements	June 3, 2016
Stakeholder call - BCR enhancements	June 21, 2016
Stakeholder comments due - BCR enhancements	June 28, 2016
Draft Final Proposal	August 11, 2016
Stakeholder call on Draft Final Proposal	August 18, 2016
Draft Final Proposal comments due	August 25, 2016
<u>Addendum to Draft Final Proposal</u>	<u>September 16, 2016</u>
<u>Stakeholder call on Addendum to Draft Final Proposal</u>	<u>September 27, 2016</u>
Board of Governors Meeting	October 26/27, 2016

3. Changes to Draft Final Proposal

3.1. Bid Floor

After consideration of stakeholder comments on the Draft Final Proposal, the ISO will defer proposing a lower energy bid floor, and will continue to monitor levels of self-schedule curtailments.

3.2. IFM BCR allocation

After consideration of stakeholder comments on the Draft Final Proposal, the ISO recognizes the rationale to continue exempting ETC/TOR self-schedules from IFM BCR cost allocation. The ISO has modified the proposal accordingly, as further discussed in Section 7.2.

3.4. Consideration of stakeholder comments

Stakeholders submitted comments regarding the proposed lower bid floor in response to the *Stepped Constraints Parameter Issue Paper*.

Comments generally supported lowering the bid floor, but there was not broad support for having a symmetrical bid floor and bid cap at this time (i.e. a -\$1,000/MWh bid floor). Stakeholders requested additional analysis to support the need of a lower bid floor, which is provided below. It was also noted by a couple stakeholders that lowering the bid floor should be considered only after implementation of Flexible Ramping Product (FRP).

Previously, stakeholders had expressed concerns that the transient nature of extreme prices increased risk to resources from being dispatched in one interval only to have price switch direction and the resource to have insufficient ramping capability respond to the updated dispatch. The ISO will be implementing the flexible ramping product in Fall 2016 to address the concerns previously raised regarding spurious price spikes. Thus, the need to mitigate extreme low prices with a lower bid floor is reduced. In addition, for EIM Balancing Authority Areas (BAAs) the current available balancing capacity design allows the EIM entity to identify additional supply that can be used to meet balancing authority responsibilities prior to triggering the power balance constraint relaxation parameter during over supply of the EIM BAA.

In response to the *Bid Cost Recovery Enhancements Straw Proposal*, stakeholders submitted comments regarding the proposed modification to no longer exempt load corresponding to self-scheduled supply from being allocated integrated forward market bid cost recovery (IFM BCR) costs.

SCE, SDG&E, and WPTF supported the modification as proposed stating it may lead to more optimal commitment and dispatch, increased economic bidding, and potentially lower bid cost recovery. SCE and SDG&E asked for clarification regarding the impact this modification has on the ISO's market functionality to transfer the cost allocation between scheduling coordinators, i.e. the "Inter-SC Trades of IFM Load Obligation." Inter -SC trades are an optional settlement service provided by the ISO to market participants. The ISO is not proposing to eliminate the Inter SC-Trades of IFM BCR Load Obligation functionality. Removing self-schedule's exemption from being allocated IFM BCR uplift does not result in the Inter-SC Trade functionality becoming obsolete; scheduling coordinators may still continue to utilize the Inter SC Trade of IFM Load obligation for other purposes.

CDWR, NCPA, Six Cities, and PG&E did not support the modification to no longer exempt load corresponding to self-scheduled generation or imports from being allocated IFM BCR costs. The opposition was on the basis that there are other incentives in place to provide economic bidding and it would not necessarily increase flexibility. It was also noted that some resources will continue to be self-scheduled out of necessity regardless of the modification. The ISO appreciated these comments but notes that in addition to providing an incentive for economic bidding, the modification will more appropriately allocate IFM BCR costs based on cost causation. The previous rationale for exempting load corresponding to self-scheduled supply from being allocated BCR costs was presumably that since self-schedules do not receive BCR

payments, load being served by this self-scheduled supply did not cause BCR costs. As discussed later in this document, this is no longer the case.

4.5. Background

In the absence of sufficient supply bids, the ISO must issue non-economic instructions (instructions not based on energy bids) to manage over-supply conditions, real-time congestion, and system ramping needs. The deeper pool of economic bids would allow the ISO to rely more on market-based curtailment in periods of over-supply, thus strengthening price formation in the markets. This initiative proposes two modifications to incent economic bidding, enabling the market to mitigate over-supply conditions through economic signals more frequently, improving price formation.

4.1.5.1. Bid floor

On, December 19, 2013 FERC accepted the ISO's proposal to lower the bid floor from - \$30/MWh to -\$150/MWh under the notion of facilitating increased real-time economic bidding by variable energy resources. By lowering the bid floor, the opportunity costs of not producing for many variable energy resources could be reflected in the resource's economic bid. It also provides an incentive for resources with positive marginal costs to economically bid instead of self-schedule. Those resources can avoid negative prices in both day-ahead and real-time, for schedules above day-ahead, and generate more revenues in real-time for detrimental dispatches below day-ahead. During the stakeholder initiative, it was contemplated that a further reduction to -\$300/MWh would occur at some later date.

In the recent issue paper², the ISO highlighted that currently the bid floor (-\$150/MWh) and bid cap (+\$1000/MWh) are not symmetrical. This results in under-scheduled load in the day-ahead market being potentially subject to real-time prices at the \$1,000/MWh bid cap, and for over-scheduled load in the day-ahead market potentially incurring a cost of \$150 per MWh. Thus the incentive for not under-scheduling load in the day-ahead market is not equivalent to the incentive for not over-scheduling load in the day-ahead market.

Furthermore, as the supply fleet evolves towards a 50 percent RPS, there will be increased instances of over-supply conditions. A deeper pool of economic bids will enable the market to more efficiently manage over-supply conditions, but requires a bid floor such that resources are able to fully reflect the cost of not producing. The current bid floor of -\$150/MWh may not be sufficiently low enough to incent the procurement of downward flexible resources that will be needed as we move toward a 50 percent RPS and provide accurate price signals during periods of high downward flexibility needs based on analysis provided below. A lower bid floor is also supported by a review of other ISO/RTO bid floors and continued renewable credits and tax incentives.

² The issue paper can be found at <http://www.caiso.com/informed/Pages/StakeholderProcesses/SteppedConstraintParameters.aspx>

4.2.5.2. IFM BCR

Bid Cost Recovery (BCR) payments ensure resources scheduled in the market recover their costs when the market does not provide sufficient revenues to do so. This daily calculation includes bids for start-up, minimum load, ancillary services, residual unit commitment availability, and day-ahead and real-time energy costs. Excessively high BCR payments can indicate inefficient unit commitment or dispatch. Costs of these BCR payments are funded through uplift costs which are allocated to market participants.

IFM BCR is calculated daily and considers eligible costs³ and revenues for resources committed through the IFM incurred in a single trade date. If the revenues earned within the trade date are not sufficient to cover incurred costs, the resource is then eligible for a bid cost recovery payment to make the resource whole.

The payments are funded through uplift charges, which are allocated using a two-tiered system. The first tier of IFM BCR uplift is allocated to scheduling coordinators based on the portion of their demand that is not served by self-scheduled generation and/or self-scheduled imports but is served by demand, including virtual demand supplied through the IFM.

The exemption of cost allocation provided to scheduling coordinators to the extent their cleared demand is met by self-scheduled supply was initially provided in times when peak load was the primary driver of market commitment decisions. Therefore cleared load met with self-scheduled generation and/or imports was not contributing to market commitment decisions, and thus not contributing to BCR uplift costs.

Given the increased need for flexibility, this rationale is outdated. Furthermore, the exemption provides preferential treatment to scheduling coordinators self-scheduling generation compared to those economically bidding. The discussion below is a continuation of the discussions that initiated in the Bid Cost Recovery Enhancements Straw Proposal.

5.6. Data Analysis

5.1.6.1. Bid Floor

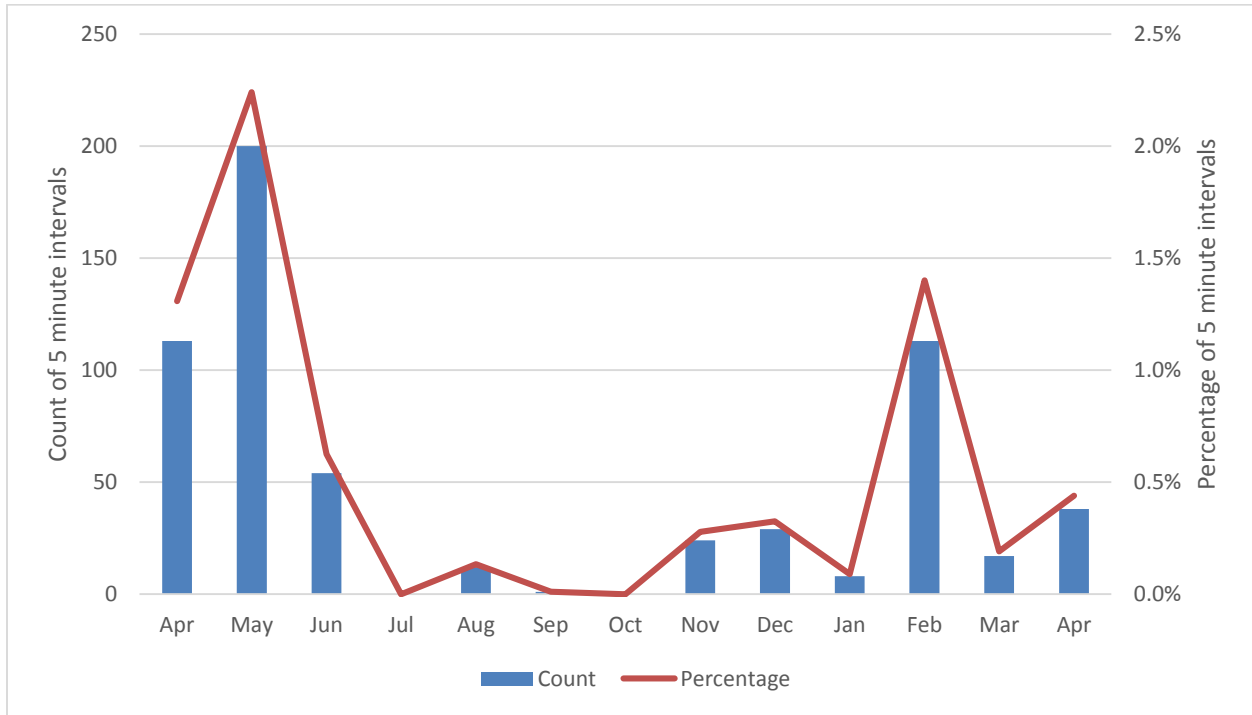
The primary need for lowering the bid floor is to incent more downward flexibility from economic bids as we move toward a 50 percent RPS. However, it is useful to look at how effective the current bid floor has been at providing sufficient economic bids to address over-supply conditions as an indicator for the need to lower the bid floor. The ISO has reviewed instances in RTD where the market has had to relax the power balance constraint due to excess supply and instances where the market has had to cut self-schedules. As explained below, both of these are indicators of insufficient economic bids to resolve over-supply.

When the power balance constraint is relaxed at the bid floor price there are insufficient economic bids to resolve a system wide over-supply issue. As Figure 1 shows, from April 2015

³ Costs include those for start-up, minimum load, transitions, energy, and ancillary services. Commitment costs are only considered for resources which are not self-scheduled or self-committed by the market participant.

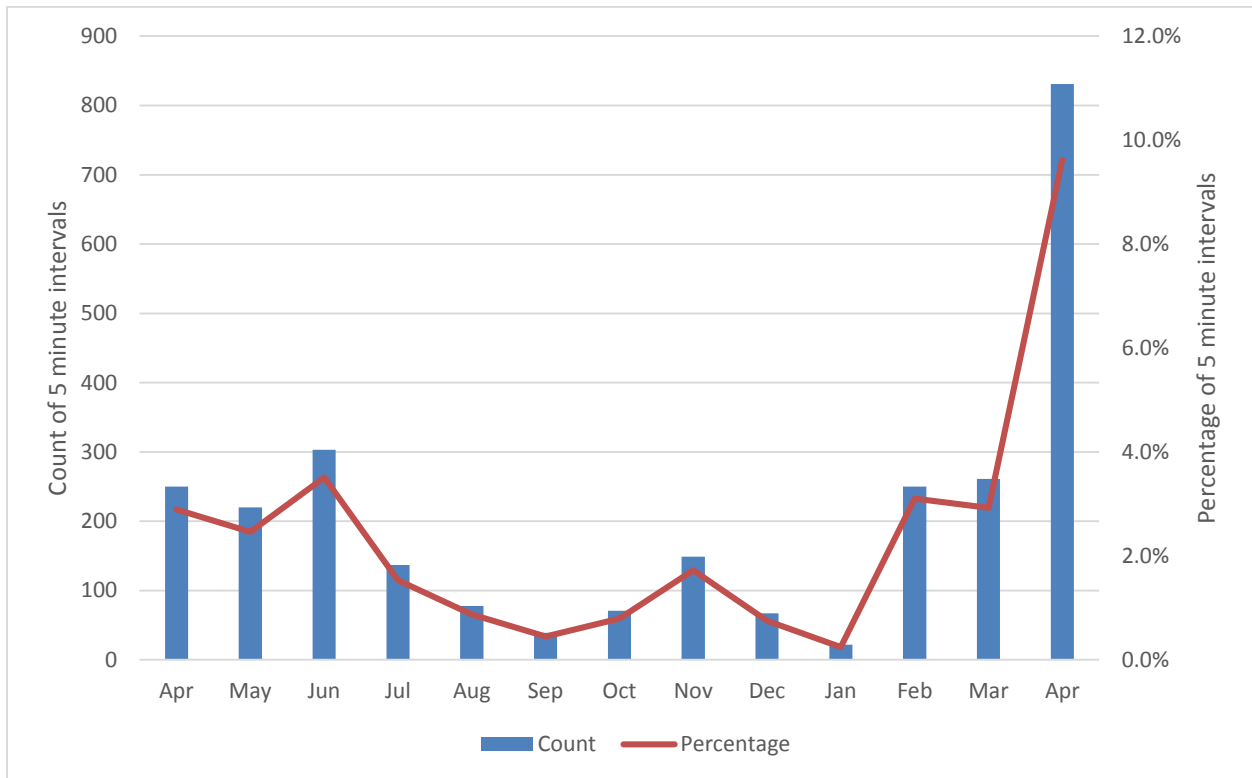
to April 2016, the ISO real-time market has had to relax the power balance constraint less than 0.5 percent of the five-minute intervals during this time period. However, there have been three months in which the number of intervals for which the real-time market relaxed the power balance constraint in a given month was in the range of 1-2 percent of all real-time intervals.

Figure 1 Frequency of real-time intervals with power balance constraint violation CAISO BAA April 2015 – April 2016



Curtailement of self-schedules in real-time show that there were insufficient downward economic bids to balance supply and demand. In Figure 2 below, over the same timeframe, the number of intervals in which self-schedules were curtailed was approximately 2.5 percent. However, in the month of April 2016 the number of intervals neared 10 percent. When self-schedules are cut, this can be to address system wide over-supply or when there are insufficient bids to address local congestion. This is why the number of intervals with self-schedule cuts exceeds the number of intervals with a power balance constraint violation. The high instances of self-schedule curtailments in April 2016 was caused by high spring runoff where hydro resources were not economically bid in combination with increased solar. The levels of hydro and solar in 2016 thus far have both been higher than any of the previous three years. There will be more solar on the system next year, and likely more instances of self-schedule curtailments.

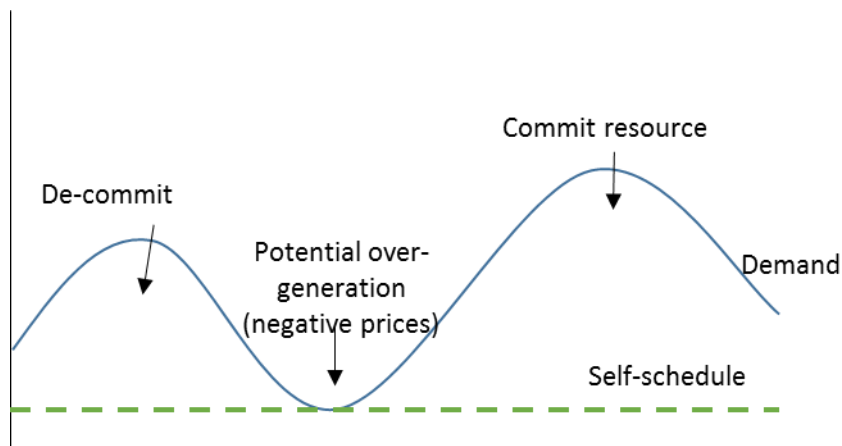
Figure 2 Frequency of real-time intervals with curtailed self-schedules CAISO BAA April 2015 – April 2016



5.2.6.2. IFM BCR allocation

Figure 4 below illustrates how self-scheduled generation and imports may be contributing to commitment of other resources, and thus indirectly to IFM BCR. Assume the resource is self-scheduled across the day. The market will then have to de-commit resources to prevent over-generation during the belly of the duck, and then commit additional resources to help meet the second peak. To the extent the self-schedule contributes to over-generation during the “belly of the duck”, this will result in lower, possibly negative, energy LMPs, which can also increase bid cost recovery payments. Had the resource not self-scheduled, the market may have been able to commit a more optimal mix of flexible resources, further reducing overall market production costs.

Figure 3 Illustration of self-scheduling contributing to bid cost recovery payments



Stakeholders asked for analysis via submitted written comments on the straw proposal to support this claim. To support the concept that self-scheduled generation and imports indirectly contribute to IFM BCR, the ISO analyzed 1) the quantity of units de-committed in the IFM prior to the “belly of the duck” to the relative difference between IFM net load and self-schedules, and 2) the correlation between the quantity of unit de-commitments in the morning and unit commitments over the same trade date.

Figure 4 shows the upper and lower quartiles of the daily minimum difference between self-scheduled generation and imports and the belly of the duck, from April 2015 through April 2016. The two box-plots group the days by days during which the market de-committed less than ten resources in the morning and days where the market de-committed ten or more resources in the morning⁴. This analysis shows that on days where self-scheduled generation and imports are closer to the belly of the duck (indicated by a lower y-axis value), the market de-commits more resources prior to the belly of the duck (indicated by being a day in the group on the right).

⁴ The analysis included de-commitments between HE3 and the belly of the duck.

Figure 4 Quantity of unit de-commitments relative to the minimum difference between self-schedules and IFM net load

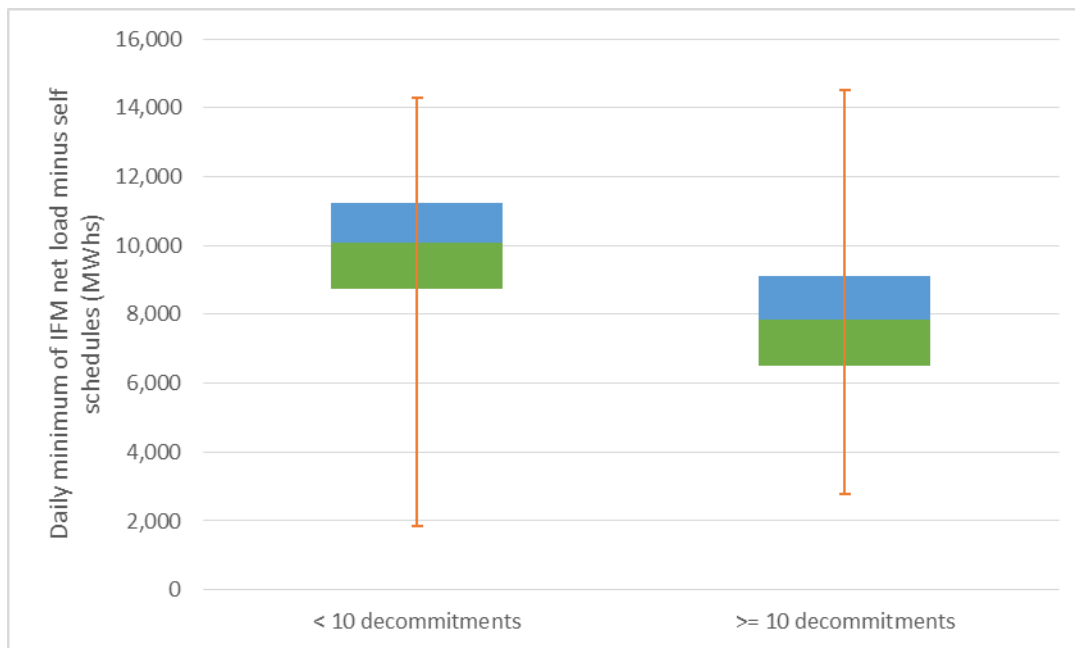
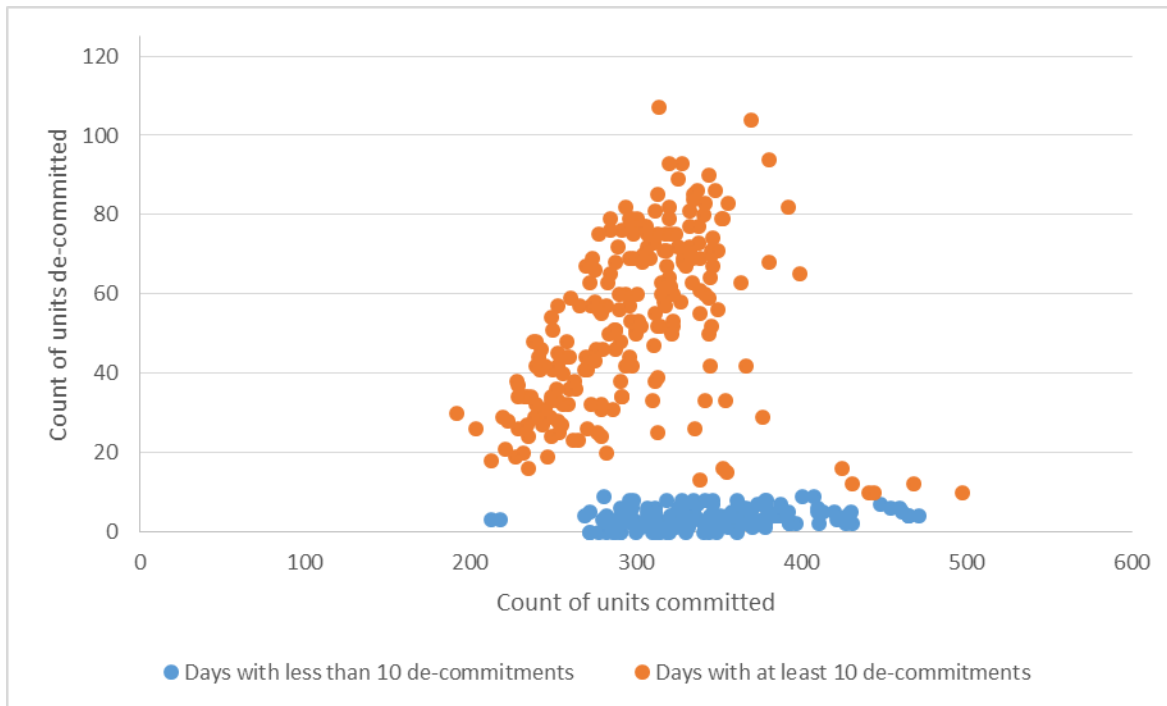


Figure 5 shows the correlation between the quantity of units de-committed in the morning hours and quantity of units committed on the given trade date. The data is grouped by days with less than ten units de-committed, and days with more than ten units de-committed, in the morning. The grouping allows for easier comparison between Figure 4 and Figure 5. The analysis shows, for days where more than ten units are de-committed in the morning, there is a strong positive correlation for unit commitment decisions on the trade date; the more units de-committed in the morning to mitigate over-supply conditions, the more units are committed by the market.

Figure 5 Correlation between unit de-commitments and commitments in the day-ahead



In summary, the analysis has indicated that:

1. When self-scheduled supply approaches the belly of the duck, the market de-commits more resources in the morning, and
2. When the market de-commits more resources in the morning, more resources are committed across the day, which
3. Contributes to commitment costs considered in bid cost recovery.

As discussed in more detail below, but noteworthy here, the justification for modifying the IFM BCR allocation methodology is not solely due to the direct or indirect contribution to BCR uplift costs of self-scheduled generation and imports. Additional justifications for the proposed modification is to no longer provide preferential treatment to scheduling coordinators that self-schedule over those that provide economic bids, and to align the methodology with the ISO's efforts to incentivize economic participation.

6.7. Proposal

The ISO has identified that as the supply fleet evolves toward a 50 percent renewable portfolio standard for California, that there will be increased instances of over-supply which necessitate the cutting of self-schedules at the power balance constraint violation price versus through economic bids. The ISO will continue limiting the flexible resource adequacy product definition to upward capacity and not enforce a downward capacity requirement, as noted in the Flexible Resource Adequacy Criteria Phase 2 straw proposal. Rather, the ISO will continue to make

market design enhancements to provide accurate market signals that will 1) incentivize procurement of resources with attributes needed to support operational needs, 2) incentivize contractual provisions that enable and incent procured attributes to be available in the markets, and 3) incentivize economic participation that will ultimately improve price formation.

To obtain the objectives noted above, the ISO is proposing the two market enhancements discussed below.

6.1.7.1. Bid Floor

If resources continue to self-schedule during periods of over-supply, this indicates that the existing bid floor may be insufficient to cover out of market opportunity costs. The Energy Imbalance Market (EIM) can assist in instances of over supply; however, other states in the West are also pursuing additional supply from variable energy resources in order to reduce the carbon intensity of the energy sector. Since the EIM is an extension of the ISO's real-time market, the bid cap/floor and market relaxation parameters are the same across the entire EIM footprint.

The data provided in Section [6.15.4](#) shows that from a system level, current over-supply conditions are less than 0.5 percent, but instances of insufficient bids to resolve local congestion have been problematic in several months. The ISO is also concerned that with insufficient downward bids, the downward ramp sufficiency test under FRP will fail. This would result in over-supply conditions and freezing export transfers, most notably in the fall and spring. A lower bid floor has been identified as a policy change that would mitigate this concern.

~~As the frequency of over-supply conditions are likely to only increase over time, the ISO is proposing to lower the bid floor to -\$300/MWh as previously contemplated. The ISO will continue to monitor the number of intervals where power balancing violations occur or self-schedules must be cut to determine if the bid floor should be further reduced in the future. It's also important to note that a lack of bids at the current bid floor is not an indication that the bid floor does not need to be lowered. If a generator's opportunity costs are greater than \$150/MWh the generator is likely currently self-scheduling rather than bidding.~~

A -\$300/MWh bid floor was initially contemplated in the 2012 RIMPR Phase 1 initiative. As sited in the 2012 Draft Final Proposal of RIMPR Phase 1, there are numerous data points including, but not limited to, Production Tax Credits (PTCs), Renewable energy credits (RECs), Power Purchase Agreements, which in culmination support a -\$300/MWh bid floor to reflect the total cost of curtailment. At that time, the ISO took a phased approach of lowering the bid floor with an initial step from -\$30/MWh to -\$150/MWh, and stated it would re-evaluate the need to lower the bid floor to -\$300/MWh in the future. As shown in Table 1, almost all other ISO/RTOs have a bid floor more negative than -\$300/MWh. Furthermore, a -\$300/MWh bid floor will enable the demand curve cap under Flexible Ramping Product design to be the same for both upward and downward ramp; without such a change in the bid floor, downward ramp would be valued less than upward ramp.

Table 1 Survey of energy bid floors across ISO/RTOs

ISO/RTO	Energy bid floor
NE-ISO	-\$150/MWh
ERCOT	-\$250/MWh
MISO	-\$500/MWh
NYISO	-\$1,000/MWh
SPP	-\$1,000/MWh
PJM	No bid floor

As previously noted, the ISO decided to not pursue downward flexible capacity requirements and instead decided to focus on energy market enhancements that provided better price signals. Prices that can go more negative provide incentives to market participants to balance increased capacity costs to procure more downwardly flexible capacity against increased energy market costs due to more negative prices, or forgone energy market revenue for not being able to be dispatched down with more negative prices. Therefore a lower bid floor will also incentivize procurement of resources with attributed needed to meet operational needs. Furthermore, even though the majority of new renewable generation Power Purchase Agreements (PPAs) with the IOUs have provisions to allow them to submit economic bids, there is nothing requiring them to submit these bids. As noted in their recent procurement plans submitted to the CPUC⁵, lowering the bid floor to -\$150 was what incented them to now include these bidding provisions. Further lowering the bid floor will strengthen this incentive and provide more assurance that they will submit economic bids.

After consideration of stakeholder comments on the Draft Final Proposal, the ISO will defer proposing a lower energy bid floor, and will continue to monitor levels of self-schedule curtailments.

6.2.7.2. IFM BCR allocation

The first tier of IFM BCR uplift is allocated to scheduling coordinators based on the portion of their demand that is not served by self-scheduled generation and/or self-scheduled imports but is served by demand, including virtual demand supplied through the IFM. This allocation is determined by calculating each scheduling coordinator's day-ahead scheduled demand less self-scheduled generation and imports plus or minus any inter-scheduling coordinator trades of IFM load obligation. The rationale for the first tier's allocation is that the demand allocated the first tier costs is the portion of the demand causing commitment costs; it is the demand using

⁵ <http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M158/K663/158663671.PDF> and <http://docs.cpuc.ca.gov/publisheddocs/efile/report/135299.pdf>

generation committed and scheduled by the market, rather than using its own self-scheduled generation or imports.

Given the advancing needs for flexible grid operation, the ISO questions how applicable the historical rationale, that resources providing their own generation and imports through self-schedules reduce the demand for generation scheduled by the market, is to the current and future grid conditions. The data analysis provided in Section [6.25-2](#) supports the concept that the market has to de-commit and commit other, potentially less economical resources, around the self-scheduled generation and imports to address potential over-supply conditions during the belly of the duck. Therefore self-scheduled generation and imports may be contributing to, rather than minimizing, commitment of other resources.

The market has to ensure sufficient flexibility to meet not only the peak net load, but also the downward and upward ramps as the belly of the duck becomes more prominent with increased renewables. The more self-scheduled generation and imports, the less flexibility the market has to meet those ramps with online resources. The market has to de-commit resources during the morning ramp down to mitigate over-supply conditions, and commit resources to meet the upward ramp. This results in an increase in ISO commitment decisions on days where more resources were de-committed in the morning. While self-schedules may not directly create BCR uplift costs, they indirectly contribute to the costs as the market has to de-commit and commit other resources around the self-schedules, incurring additional resource commitment costs. The intention of this proposed modification is to provide additional incentive for economic bidding in the day-ahead market, and thus strengthen price formation. The market has to ensure sufficient flexibility to meet not only the peak net load, but also the downward and upward ramps as the duck curve becomes more prominent with increased renewables. The more self-scheduled generation and imports, the less flexibility the market has to meet those ramps with online resources. The current practice may provide an adverse behavioral incentive for market participants to self-schedule resources to avoid uplift charges, and is inconsistent, as noted by SCE, with the ISO's efforts to incent economic bidding. Eliminating the adjustment of self-schedules in the Tier 1 IFM BCR uplift cost allocation would further align this allocation with the ISO's goal of encouraging generators to provide flexibility through market changes, and could also result in a more market efficient dispatch.

Second, the current methodology provides preferential treatment to scheduling coordinators that provide self-scheduled generation and imports to meet their cleared demand over those scheduling coordinators that provide economic supply bids. For example, consider two scheduling coordinators that have 5,000MWs cleared demand. Scheduling coordinator A (SC A) self-schedules 5,000MWs of generation. Scheduling coordinator B (SC B) economically bids 5,000MWs of generation. SC A will not be allocated any BCR uplift costs whereas SC B will be exposed to the uplift cost allocation. The proposed modification will provide equitable treatment between scheduling coordinators that submit economic supply bids in the IFM market versus those that provide self-scheduled generation and imports.

The ISO proposes to modify the IFM tier 1 uplift cost allocation by eliminating the self-scheduled generation and import offset for self-schedules not associated with balanced ETC/TOR

schedules. The valid and balanced portion of an SC's ETC or TOR self-schedule will continue to provide an offset to the SCs cleared IFM demand in the IFM BCR uplift load obligation calculation.

Specifically, the IFM Load uplift obligation for the IFM -with BCR will be determined by the current calculation of DA Demand in charge code 6636⁶, which already adjusts each SC's load obligation for self-schedules associated with the balanced portion of an ETC/TOR schedule. ~~calculating each scheduling coordinator's day-ahead-scheduled demand plus or minus any inter-scheduling coordinator trades of IFM load obligation.~~

7.8. Next steps

The ISO will discuss this addendum to the draft final proposal with stakeholders on a conference call on September 27, 2016.

⁶ The DA Demand calculation in CC 6636: $DADemand\ Bmdh = \text{Max}(0, \text{TotalLoadScheduleQuantity Bmdh} + \text{BAHourlyDAPumpEnergyForIFMTier1Quantity Bmdh} + \text{TotalExportSelfScheduleQuantity Bmdh} + \text{TotalLoadUpliftObligationInterSCTradeToForIFMTier1 Bmdh} - \text{TotalLoadUpliftObligationInterSCTradeFromForIFMTier1 Bmdh} - \text{BAHourlyDABalancedTORQuantity Bmdh})$

Appendix A: Stakeholder Comments Summary

Issue	Stakeholders	Comments	Response
Methodology for IFM BCR	CDWR, NCPA, PG&E, Six Cities	Some commenters were concerned with the ISO's proposal to eliminate demand offsets for Self-Scheduled generation when calculating BCR in the IFM. It was noted that other incentives exist to encourage economic bidding and that some self-scheduling resources will continue to do so regardless of BCR uplift for external reasons. Finally, commenters believed that this would not improve flexibility in the market.	The ISO understands some resources will continue to self-schedule, but needs to provide market design incentives to deepen the pool of economic bids in the market, especially as the supply fleet reaches 50% RPS. The current bid floor may not be low enough to reflect costs of not producing, therefore resources are self-scheduled as opposed to economically bid; a lower bid floor may enable those resources to economically bid.
	SCE, SDG&E, WPTF	Some commenters support the removal of credits for self-scheduled generation as it may lead to more optimal commitment decisions and economic bidding, and lower BCR costs.	The ISO appreciates the comments.
	SCE	SCE further notes that IFM BCR takes into account inter SC trades of load obligation. SCE assesses that if these trades were designed exclusively for the purpose of facilitating self-scheduled generation and imports to provide their contractual Load Serving Entities credits to help reduce the LSE IFM BCR obligation and with the removal of credits for self-scheduled generation and imports, this product would then become obsolete	The ISO has provided additional clarity in section 3 of the Draft Final Proposal.
Lower Bid floor	Chelan, NRG, and Powerex	Support lowering the bid floor.	The ISO appreciates the comments.

	LSA, SDG&E, WPTF, and NRG	Support a lower bid floor, but not necessarily to $-\$1,000/\text{MWh}$. NRG supports the exploration but asks that it be supported by data analysis.	The ISO appreciates the comments. Additional data analysis has been provided in Section 5.1 of the Draft Final Proposal to support a lower bid floor.
	SCE and SixCities	Do not support lowering the bid floor without economic demonstration that the current floor is not sufficient.	The ISO has provided data analysis in Section 5.1 of the Draft Final Proposal supporting the need for a lower bid floor.
	CDWR and PG&E	Do not support lowering the bid floor as it will result in more extreme negative prices, increased volatility, and therefore push more costs into BCR.	A lower bid floor will enable the market to economically solve local congestion which would not necessarily result in more extreme negative prices system wide. Furthermore, the ISO is implementing FRP in the Fall of 2016 which will address concerns previously raised regarding spurious price spikes, reducing the need to mitigate extreme low prices.
	Calpine and BPA	Suggests the ISO wait until implementation of FRP to remove the spurious price spikes caused by power imbalance or ramping constraints.	The ISO appreciates the comments and notes that implementation of a lower bid floor will be post FRP implementation.
	PAC	Asks the ISO to clarify what resources it would anticipate becoming available below $-\$150/\text{MWh}$.	Resources for which the cost of not producing is more than $\$150/\text{MWh}$ would now be able to economically reflect the cost of not producing, and therefore no longer self-schedule.

