



California ISO

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## MARKET ISSUES BULLETIN

# Scheduling Issues with Intertie Resources

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## Revision History

Date	Version	Description	Author
2015-08-06	1.0	First draft	Guillermo Bautista Alderete

**Note:** *The purpose of this market issues bulletin is to provide information to market participants concerning market issues as that term is described in Attachment G to the Business Practice Manual for Market Operations.*

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## Executive Summary

On May 1, 2014 the ISO implemented the fifteen-minute financially binding market (FMM), which included the ability for intertie resources to submit one of three different types of intertie bids. This market issue bulletin addresses an issue related to clearing of fifteen minute bids in the fifteen minute market when there is no transmission profile in the Scheduling Coordinator's e-tag associated with that bid at T-37.5. When there is no e-tag submitted by T-37.5, the fifteen-minute market is configured to assume the transmission profile does not bind for the fifteen-minute bid, and potentially is awarded at a non-zero MW in the fifteen-minute market. The ISO has implemented a fix on August 6 to limit the fifteen-minute market bid in the fifteen-minute market to zero when there is no transmission profile provided to support that fifteen minute bid.

## Background and Scope

Prior to May 1, 2014, intertie resources could only participate in the hour-ahead scheduling process (HASP) with a bid for hourly blocks, and could only receive hourly awards that were fixed for the whole hour. The hourly awards were not re-optimized in the subsequent real-time unit commitment process.

With the implementation of FERC order 764, the ISO real-time market allows for more flexibility for scheduling of intertie resources. In addition to the hourly block schedules, participants can bid for two other types of schedules. One type is the hourly intertie with a single change to allow participants to make one time change of the schedule within the hour, which the scheduling coordinator could effectuate once in any of the subsequent fifteen-minute market runs. Once the change is made, the intertie awards remain the same for the rest of the hour. Another type of schedule is to provide the resources with the full capability of changing schedules on fifteen-minute basis, i.e., fifteen minute economic bids.

Consistent with NAESB e-tagging requirements and regardless of the bid option selected by the scheduling coordinator, the CAISO approved tags can be updated hourly by the deadline T-20.<sup>1</sup> By that time, for all cleared bids the transmission profile must be greater than or equal to the energy profile in their relevant tags. The CAISO does not require parties to submit or update e-tags prior to T-20, but the CAISO market systems consider submitted e-tags or the lack of an e-tag through the market time line. For example, the e-tag associated with the FMM economic bids, the transmission profile must be greater than or equal to the maximum bid-in capacity for the operating hour in order for the FMM market to be able to fully consider the bid-in capacity in the applicable FMM interval. The energy profiles are expected to be the MWs awarded for the FMM interval of the operating hour on a 15-minute basis because that is what the expected delivery is given the market outcome. Therefore, if an e-tag is submitted before the applicable FMM interval is executed, for the e-tags associated with the FMM economic bids and economic hourly block bids with intra-hour option, the energy profile must be updated to reflect any schedule changes before the start of the FMM interval to which the schedule change applies.

The CAISO has adopted an automated procedure to update the energy profile with the MWs cleared in the FMM as a courtesy. The scheduling coordinator is still responsible for ensuring that the e-tag energy profile reflects the delivered quantity. If a scheduling coordinator submits an e-tag prior to T-37.5, when the CAISO conducts the financially binding FMM, the scheduling coordinator can actually limit their participation in the FMM relative to the submitted FMM economic bids by lowering the transmission profile based on the HASP advisory energy schedule, including taking it down to zero, may update its transmission profile to the maximum amount it wants to make available to the fifteen-minute market. This must be done prior to the start of the binding fifteen-minute market optimization is executed. The fifteen-minute market will not schedule the energy for amounts greater than what is

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<sup>1</sup> More information about e-tagging CAISO awards can also be found at the following document:  
<http://www.caiso.com/Documents/E-TaggingYourCalifornialSOMarketAwards.pdf>  
[www.caiso.com](http://www.caiso.com)

listed in the transmission profile. Section 7.2.2 of the business practice manual for market operations provides more details about the e-tagging requirements<sup>2</sup>.

The ISO markets rely on two main applications to handle scheduling of intertie resources. One application is the real-time market, which includes the hour ahead scheduling process and the fifteen-minute market. The real-time market is the series of processes through which the CAISO clears bids –in any of the allowed options – considering available information about the e-tags and energy and transmission profile. The intertie scheduling system (ITS) is the complementary application that handles all the tagging. This application provides inputs to the market application like the tag values and the energy and transmission profiles. There is coordination and logic built between these two applications to enforce and ensure the proper logic of the e-tagging requirements.

This market issue bulletin addresses an issue related to clearing of fifteen minute bids in the fifteen minute market when there is no transmission profile in the Scheduling Coordinator’s e-tag associated with that bid at T-37.5.

## No Tag or Transmission Profile Submitted

The CAISO has identified an issue with the processing of the FMM economic bids based on the e-tag information. Fifteen-minute resources are optimized in the hour-ahead scheduling process but the awards and prices issued through the hour-ahead scheduling process for fifteen minute economic bids are purely advisory. Then at T-37.5, which is time for certain fifteen-minute market to start to run, the market process considers what the available e-tags are.

Section 30.6.2.5 of the CAISO tariff states that if “the Scheduling Coordinator does not have a transmission profile greater than or equal to its advisory Energy schedule, then the CAISO will limit the schedule for Energy in the fifteen-minute market so that it does not exceed amounts greater than what is listed in the transmission profile.”

Under the current implementation, when the scheduling coordinator actually submits an e-tag prior to T-37.5, the FMM appropriately limits the resources participation in the FMM based on the transmission profile. However, if there is no e-tag submitted by that time, the FMM is configured to assume the transmission profile does not bind the FMM bid, and potentially is awarded at a non-zero MW in FMM market. Then in Real Time Economic Dispatch (RTED) because the resource does not have a tag or transmission profile the resource is schedule at 0 MW. However, the CAISO believes that consistent with section 30.6.2.5 of the tariff, if there is no e-tag and hence no transmission profile at T-37.5, the FMM

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<sup>2</sup> More information on e-tagging is available on the Interchange Scheduling webpage at <http://www.caiso.com/market/Pages/InterchangeScheduling/default.aspx>  
[www.caiso.com](http://www.caiso.com)

process should limit the FMM bid in that upcoming fifteen-minute market run to 0 MW because there is no transmission profile provided to the CAISO to support that fifteen minute bid. It is inappropriate to assume that at T-37.5 the lack of an e-tag with a transmission profile means the scheduling coordinator has unlimited amounts of transmission at that time.

## Next Steps

The issue described in this technical bulletin has been present since May 1, 2014. Effective as of hour ending 11 for trade date August 06, 2015, the ISO has deployed a software fix to the ITS application to remedy the issue prospectively. The ISO will carry out an impact assessment for the period of May 1, 2014 through August 06, 2015. This technical bulletin will be updated once that information becomes available. Based on that impact assessment, the ISO will determine and communicate the next steps through this technical bulletin.

The ISO has scheduled a conference call on August 13 to discuss this issue. Details of this call are available in the market notice posted for this bulletin and also in the main ISO's calendar on the ISO website. Participants can submit written comments to [gbalderete@caiso.com](mailto:gbalderete@caiso.com) by close of business August 20, 2015.