



California ISO

# **Congestion Revenue Rights (CRR) Clawback Modification**

## **Issue Paper and Straw Proposal**

**April 13, 2016**

**CRR Clawback Modification**  
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## 1 Introduction

During the intertie liquidity workshop held last year, two items were identified that could address real-time intertie liquidity: (1) modifications to congestion revenue rights (CRR) clawback rules and (2) exempting FMM export bids from transmission access and measured demand uplift charges. This initiative focuses on modifications to the CRR clawback rule. The appropriateness of market charges for FMM export bids will be addressed in a separate initiative if prioritized through the annual market initiatives catalog process to be held in Q4.

The rebidding of day-ahead import/export schedules into the FMM is beneficial for real-time intertie liquidity. When bidding incremental imports and exports into the FMM, scheduling coordinators must secure external transmission prior to the start of the 15-minute market (FMM). During the workshop, stakeholders highlighted that determining if or how to include this incremental transmission cost into their real-time energy bid was difficult. However, for day-ahead schedules that are rebid into the FMM, the external transmission is already procured and compensated by the payment for the day-ahead schedule. Day-ahead imports which are reduced through an FMM bid provide downward flexibility and day-ahead exports which are reduced through an FMM bid provide upward flexibility. This flexibility can be bid into the FMM without incurring an additional transmission charge external to the ISO.

The CRR clawback rule, under Section 11.2.4.6 of the ISO tariff, treats a day-ahead intertie award that is reduced in real-time as a “virtual award.” If the flow impact of the real-time reduction to a day-ahead intertie award exceeds 10% of the transmission capacity, then 100% of the market participant’s CRR revenues from that path are subject to the clawback rule. The ISO proposes conditions by which a schedule change between day-ahead and real-time will not be considered a “virtual award”, thereby, not subjecting the change to the CRR clawback rule procedures.

In developing this proposal for import and export exemptions and in consultation with the Department of Market Monitoring, the ISO believes it is no longer appropriate to exempt convergence bids at default load aggregation points and trading hubs from the CRR clawback rule procedures.

The ISO is not proposing any changes to the CRR clawback rule procedures. The ISO is only proposing modifications to which transactions are considered “virtual awards” and therefore subjected to the CRR clawback rule procedures. The two modification are: (1) import and export changes that meet certain conditions are no longer subject to the rule and (2) convergence bids at default load aggregation points and trading hubs are no longer exempt from the rule.

## 2 Stakeholder process and timeline

The ISO plans to present its proposal developed through this initiative at the June 2016 Board of Governors meeting. The current schedule for the policy stakeholder process leading up to this Board of Governors meeting is below.

Item	Date
Post Issue Paper & Straw Proposal	April 13, 2016
Stakeholder Conference Call	April 20, 2016
Stakeholder Comments Due	May 4, 2016
Post Draft Final Proposal	May 16, 2016
Stakeholder Conference Call	May 23, 2016
Stakeholder Comments Due	June 3, 2016
Board of Governors Decision	June 28-29, 2016

**Table 1 - Schedule for CRR Clawback Modification Stakeholder Initiative**

### 3 Congestion revenue rights (CRR) clawback rule

The CRR clawback rule was developed to mitigate concerns that a market participant could utilize convergence bids to increase payments from their CRR portfolio. In addition, there was concern that import/export transactions could also be used for “implicit” virtual bidding. This led to imports/exports being included in the CRR clawback rule and the development of the hour ahead scheduling process (HASP) reversal rule to incentivize e-tagging prior to the start of the real-time market.

The relevant tariff section for the CRR clawback follows with the current language that will need to be modified highlighted in yellow.

#### **11.2.4.6 Adjustment of CRR Revenue Related to Virtual Awards**

*In accordance with this Section 11.2.4.6, the CAISO will adjust the revenue from the CRRs of a CRR Holder that is also a Convergence Bidding Entity whenever either of the following creates a significant impact on the value of the CRRs held by that entity: the CRR Holder/Convergence Bidding Entity submits Virtual Bids; or the CRR Holder/Convergence Bidding Entity reduces in the RTM an import or export awarded in a Day-Ahead Schedule. As set forth in Section 11.32, the CAISO will also adjust the revenue from the CRRs of a CRR Holder (regardless of whether the CRR Holder is also a Convergence Bidding Entity) where the Scheduling Coordinator representing that CRR Holder reduces in the RTM an import or export awarded in a Day-Ahead Schedule.*

*(a) For purposes of this Section 11.2.4.6 and the definition of Flow Impact, any reduction by a Scheduling Coordinator submitting Schedules on behalf of an entity that is a CRR Holder to an import or export Schedule in the RTM will be treated as a Virtual Award. For each CRR Holder subject to this Section 11.2.4.6, for each hour, and for each Transmission Constraint binding in the IFM or FMM the CAISO will calculate the Flow Impact of the Virtual Awards awarded to the*

*Scheduling Coordinator that represents the CRR Holder, excluding Virtual Awards at LAPs and generation Trading Hubs. For the purposes of calculating the CRR adjustments as specified in this Section 11.2.4.6.4, the CAISO will include nodal MW constraints that the CAISO applies to Eligible PNodes in the IFM pursuant to Section 30.10.*

*(b) The CAISO will determine the peak and off-peak hours of the day in which Congestion on the Transmission Constraint was significantly impacted by the Virtual Awards awarded to the Scheduling Coordinator that represents the CRR Holder. Congestion on the Transmission Constraint will be deemed to have been significantly impacted by the Virtual Awards awarded to the Scheduling Coordinator that represents the CRR Holder if the Flow Impact passes two criteria. First, the Flow Impact must be in the direction to increase the value of the CRR Holder’s CRR portfolio. Second, the Flow Impact must exceed the threshold percentage of the flow limit for the Transmission Constraint. The*

*threshold percentage is ten (10) percent of the flow limit for each Transmission Constraint.*

*(c) For each peak or off-peak hour that passes both criteria in Section 11.2.4.6(b), the CAISO will compare the Transmission Constraint's impact on the Day-Ahead Market value of the CRR Holder's CRR portfolio with the Transmission Constraint's impact on the FMM value of the CRR Holder's CRR portfolio, as applicable.*

*(d) The CAISO will adjust the peak or off-peak period revenue from the CRR Holder's CRRs in the event that, over the peak or off-peak period of a day, the Transmission Constraint's contribution to the Day-Ahead Market value of the CRR Holder's CRR portfolio exceeds the Transmission Constraint's contribution to the FMM value of the CRR Holder's CRR portfolio, as applicable. The amount of the peak period adjustment will be the amount by which the Transmission Constraint's contribution to the Day-Ahead Market value of the CRR Holder's CRR portfolio exceeds the Transmission Constraint's contribution to the FMM value of the CRR Holder's CRR portfolio for the peak-period hours that passed both criteria in Section 11.2.4.6(b), as applicable. The amount of the off-peak period adjustment will be the amount by which the Transmission Constraint's contribution to the Day-Ahead Market value of the CRR Holder's CRR portfolio exceeds the Transmission Constraint's contribution to the FMM value of the CRR Holder's CRR portfolio for the off-peak period hours that passed both criteria in Section 11.2.4.6(b), as applicable.*

*All adjustments of CRR revenue calculated pursuant to this Section 11.2.4.6 will be added to the CRR Balancing Account.*

#### **4 Import/Export schedule changes**

Convergence bids are cleared according to their economic bids in the day-ahead market and then automatically liquidated at the FMM price. This allows the market participant to be settled based upon the difference between the day-ahead price and the FMM price. Virtual supply is paid the day-ahead price and charged the FMM price. Virtual demand is charged the day-ahead price and paid the FMM price.

An "implicit" virtual bid using imports and exports can be constructed to replicate virtual supply and virtual demand settlement. In the day-ahead, a market participant submits an economic bid to schedule an import. The import clears the day-ahead market. The market participant then re-bids the import into the real-time market at a high price, for example the \$1000 bid cap. This bid will have an extremely high probability of not clearing the FMM which will reduce the import schedule to zero. This bidding strategy allows the import to replicate virtual supply settlement.

A similar bidding strategy allows an export to replicate virtual demand settlement. In the day-ahead, a market participant submits an economic bid to schedule an export. The export clears the day-ahead market. The market participant then re-bids the export into the real-time market

at a low price, for example the (\$150) bid floor. This bid will have an extremely high probability of not clearing the FMM and reduce the export schedule to zero.

Another approach to replicate convergence bidding settlement is for a market participant to not submit an e-tag for the day-ahead schedule. This concern was addressed by the HASP reversal rule which eliminates all profit from schedule changes if the day-ahead schedule is not tagged through the HASP process. This ensures that the market participant has procured external transmission necessary to deliver the day-ahead schedule prior to clearing the FMM.

However, if a market participant has tagged its day-ahead import schedule and submits an economic bid equal to or less than the day-ahead price, it is not appropriate to consider this an “implicit” virtual bid. First, the market participant has submitted an e-tag which supports physical delivery of the day-ahead schedule prior to the start of the FMM. Second, there is no guarantee that the day-ahead import schedule will be reduced in the FMM. Only in the event that system conditions have changed from the day-ahead, such that the import is no longer economic to balance real-time supply and demand would the import schedule be reduced. The same logic can be applied to a day-ahead export.

The ISO proposes to modify the CRR clawback rule as follow:

- If the import/export passes the HASP reversal rule test (e-tag support day-ahead schedule prior to FMM), then
  - If import bid  $\leq$  day-ahead price, then the import is not considered a virtual award
  - If export bid  $\geq$  day-ahead price, then the export is not considered a virtual award
  - If an import/export bid/self-schedule in real-time market is less than the day-ahead schedule, then the difference shall be still subject to HASP reversal rule.

## 5 Trading hubs and load aggregation points

Currently convergence bids cleared on trading hubs and load aggregation points are not included in the flow impact used to determine if the 10% threshold is reached. The market optimization clears bids at the aggregation point and manages congestion using the shift factor of the aggregation point to constraints. Thus, bids at aggregation points can cause constraints to bind resulting in congestion. The ISO believes that the CRR clawback rule should not differentiate between a convergence bid at an aggregation point and at an individual node when calculating the flow impact of a CRR holder since both can impact congestion.

## 6 Next Steps

The ISO plans to discuss this issue paper and straw proposal with stakeholders during a stakeholder conference call to be held on April 20<sup>th</sup>. The ISO requests comments from stakeholders on the proposed Congestion Revenue Rights Clawback Modifications. Stakeholders should submit written comments by May 4<sup>th</sup> to [intitatives@caiso.com](mailto:intitatives@caiso.com).