



ORA

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California Public Utilities Commission

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THE OFFICE OF RATEPAYER ADVOCATES' COMMENTS
ON THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR'S (CAISO)
CONGESTION REVENUE RIGHTS AUCTION EFFICIENCY TRACK 1B STRAW
PROPOSAL

May 4, 2018

Introduction

The Office of Ratepayer Advocates (ORA) is the independent consumer advocate within the California Public Utilities Commission (CPUC), with a mandate to obtain the lowest possible rates for utility services consistent with reliable and safe service levels, and the state's environmental goals.

ORA submits these comments and recommendations in response to the CAISO's April 19, 2018, *Congestion Revenue Rights Auction Efficiency Track 1B Straw Proposal*.¹ According to the CAISO, the Track 1A Straw Proposal sought to address low prices in the congestion revenue rights (CRR) auction by concentrating bidding activity in fewer eligible node pairs, and "partially addressed unforeseen transmission outages by requiring additional outage information in advance of the annual [CRR] allocation and auction process."² The Track 1B Straw Proposal is intended to "further address[] the systemically high payouts to CRRs due to modeling differences in the DAM (Day-Ahead Market) and the CRR Auction market."³ These modeling differences are the cause of persistent shortfalls⁴ that ratepayers must subsidize through the transmission access charge (TAC).⁵

In the Track 1B proposal, the CAISO proposes to move the annual CRR allocation and auction processes to ex-post partial funding to better align payouts in the DAM with CRR auction

¹ *Congestion Revenue Rights Auction Efficiency Track 1B Straw Proposal*, April 19, 2018 (CRR 1B Straw Proposal or Straw Proposal).

² CRR 1B Straw Proposal, p. 5.

³ CRR 1B Straw Proposal, p. 5.

⁴ *Congestion revenue rights auction efficiency Track 1 draft final proposal Paper*, February 8, 2018, CAISO, p. 3.

⁵ *Shortcomings in the Congestion Revenue Right Auction Design*, CAISO Department of Market Monitoring (DMM), November 28, 2016, p. 2.

modeling results. This approach would reduce CRR payments based on the effectiveness of the constraint in generating CRR shortfalls so that the CAISO does not pay CRR holders more than the available DAM congestion revenue.⁶

The CAISO also considers the following three Alternatives to the ex-post partial funding proposal to address persistent revenue shortfalls:

- 1) Alternative 1 - Reduce the percentage of system capacity available in the annual allocation and auction process to more accurately model the transmission that is ultimately available in the DAM.⁷
- 2) Alternative 2 - Reduce CRR quantities each day prior to the DAM so that the DAM more accurately reflects available transmission.⁸
- 3) Alternative 3 - Consider the willing counterparty auction design recommended by the Department of Market Monitoring (DMM) and Southern California Edison Company (SCE), which the CAISO described as “not releasing any transmission capacity in the congestion revenue rights auction so that bids would only clear if there was a corresponding bid in the opposite direction.”⁹

As discussed below, ORA supports the CAISO’s proposal to move to ex-post partial funding, and supports further consideration of Alternatives 1 and 2 listed above. However, the CAISO should continue to explore other proposals that would more effectively protect ratepayers from remaining a forced counterparty in the CRR Auction. Therefore, ORA recommends that the CAISO include evaluation of the willing counterparty auction design proposal in Track 2 of this initiative, including potential solutions to match CRR auction counterparties.

CAISO’s proposal of ex post partial funding more equitably allocates shortfalls from CRR modeling limitations.

The CAISO argues that the current full funding for CRRs incentivizes rent-seeking behavior by encouraging participants to target modeling differences between the DAM and the CRR auction in expectation of higher payouts.¹⁰ The CAISO observes that full funding “transfers the cost” for the shortfalls to “measured demand, even though measured demand may have little to no control over the causes of the shortfall.”¹¹ Correspondingly, the CAISO finds that “[a]llocating this

⁶ CRR 1B Straw Proposal, p. 25.

⁷ CRR 1B Straw Proposal, p. 30.

⁸ CRR 1B Straw Proposal, p. 32.

⁹ CRR 1B Straw Proposal, p. 33.

¹⁰ “Full funding of congestion revenue rights creates incentives that exacerbate congestion revenue right revenue inadequacy and auction revenue shortfalls.” CRR 1B Straw Proposal, p. 22.

¹¹ CRR 1B Straw Proposal, p. 22.

revenue inadequacy directly back to congestion revenue rights rather than to load would reduce these incentives.”¹²

To combat these perverse incentives, the CAISO proposes to limit payments to CRR holders only from revenues generated over the CRR constraints.¹³ Specifically, the revenue shortfall would be calculated on a constraint-per-constraint basis, meaning that should a shortfall over a constraint occur, payments would be reduced only to those CRR holders that purchased CRRs over that constraint¹⁴. This would limit or eliminate payment of the revenue shortfalls by ratepayers, and would instead spread shortfalls among the CRR holders on that constraint. This method is also known as ex-post partial funding,¹⁵ and is employed by several other independent system operators (ISOs) and regional transmission organizations (RTOs).¹⁶

The CAISO identified three potential problems with ex-post partial funding. The first is that market participants may bid lower because they expect a lower payout, which would limit positive revenue shortfall effects. The other two potential problems are participants would also not be able to change their bilateral positions in advance of a new market, or change their position in the DAM to be consistent with their intended supply delivery hedge.¹⁷ However, the CAISO states that if partial funding is bounded to a particular constraint rather than across the entire LMP (Locational Marginal Pricing) system, it would lessen the impacts of these three problems.

The CAISO recognizes that this ex post partial funding approach is feasible within its current outage modeling parameters. Specifically, the CRR auction market lacks the daily granularity necessary to accurately model the outages. Therefore, “a targeted reduction of congestion revenue rights payouts on a constraint by constraint basis has the same net effect as if the congestion revenue rights auction released available transmission capacity daily or hourly”¹⁸, and more capacity would not be released in the market than is available in the DAM. Even if CAISO modeled the line as entirely out of service for a month, certain parties would exploit this in the DAM anticipating higher payouts from the shortfall. More specifically, under this strategy “congestion revenue rights are still compensated for the portion of the transmission that is still available for day-ahead schedules.”¹⁹

¹² CRR 1B Straw Proposal, p. 22.

¹³ CRR 1B Straw Proposal, p. 22.

¹⁴ *Congestion Revenue Rights Auction Efficiency Discussion Presentation*, April 5, 2018, Perry Serveido p. 6.

¹⁵ *Congestion Revenue Rights Auction Efficiency Discussion Presentation*, April 5, 2018, Perry Serveido p. 5.

¹⁶ CRR 1B Straw Proposal, p. 25.

¹⁷ CRR 1B Straw Proposal, p. 24.

¹⁸ CRR 1B Straw Proposal, p. 26.

¹⁹ CRR 1B Straw Proposal, p. 26.

The CAISO has not yet determined how to allocate any surplus revenues generated over the constraints. The CAISO does not plan to pay the surplus revenues back to the CRR holder, but will pay only what was promised in the DAM to buyers if the revenues generated meet that price.²⁰ The CAISO has not yet determined if the surplus revenues should roll into the CAISO's current joint balancing account (an account for allocated and auctioned CRRs) under its proposed partial funding mechanism²¹, or use it to fully fund other revenue shortfalls in the system²².

The CAISO should continue to explore ex-post partial funding.²³ As the CAISO stated in the Track 1B Straw Proposal, ex-post partial funding will eliminate revenue shortfalls that require ratepayer funding, even though ratepayers have no control over the cause of these shortfalls.²⁴ ORA concurs that continuing with full funding of CRRs would maintain incentives for rent-seeking entities to target CRRs that are likely to contain constraints that are modeled in the DAM but not in the auction, thereby exacerbating revenue inadequacy. ORA also concurs that ex-post partial funding would likely reduce incentives to exploit model differences and lead to a more equitable distribution of auction funds²⁵.

However, the CAISO should maintain separate balancing accounts for the allocation and auction markets. This is because a joint balancing account may account for a cross-subsidy on auction shortfalls from load (customers who are receiving allocations). The CAISO should apply surplus revenues generated over each constraint in the auction to reduce the Transmission Access Charge (TAC) funds paid by ratepayers.

Alternative 1: The CAISO should continue to consider reducing the system capacity available in the annual allocation and auction process.

The CAISO investigated reducing the percentage of system capacity available in the annual CRR allocation and auction processes as one potential alternative or complement to, ex-post partial funding. The CAISO's evaluation of other ISOs/RTOs' efforts to address this issue revealed that most released lower capacity quantities in their CRR processes²⁶, with different apportionments of CRR shortfalls and surpluses than what the CAISO currently provides. Under this proposal, the CAISO would lower transmission capacity in the annual auction from 75% to 65%²⁷. In

²⁰ CRR 1B Straw Proposal, p. 29.

²¹ *Congestion Revenue Rights Auction Efficiency Web Conference*, April 23, 2018. Verbal response confirmed by Perry Serveido in response to question from Danielle Dooley.

²² CRR 1B Straw Proposal, p. 29.

²³ *Congestion Revenue Rights Auction Efficiency Discussion Presentation*, April 5, 2018, Perry Serveido, slide 5.

²⁴ CRR 1B Straw Proposal, p. 22.

²⁵ CRR 1B Straw Proposal, p. 22.

²⁶ CRR IC Straw Proposal, p. 19.

²⁷ CRR 1B Straw Proposal, p. 31.

CAISO's simulations, when capacity was lowered to 65%, CAISO observed a 57% reduction in revenue infeasibilities²⁸. In our January 12, 2018 comments, ORA recommended that the CAISO reduce capacity offered in the annual auction.²⁹ This alternative should reduce infeasibilities and the risk of ratepayers funding shortfalls.

Alternative 2: The CAISO should continue to research reducing quantities of CRRs prior to each auction.

The CAISO should continue to research its second proposed alternative, which would reduce quantities of CRRs prior to each auction to better align with information on outages and available transmission capacity. During the Market Surveillance Committee meeting on April 5, 2018, this approach was dubbed ex-ante partial funding.³⁰ Currently the DAM is in hourly increments but the CRRs are not. However, this proposal would make CRRs hourly and match the hourly CRRs with the hourly DAM, and provide market participants time to adjust their hedging positions as needed prior to the auction commencement. ORA recommends that the CAISO continues to research this alternative to determine if it may further reduce financial obligations of ratepayers.

Alternative 3: The CAISO should consider the willing counterparty proposal in Track 2 of the CRR initiative.

One of the proposals under consideration in Track 1B was a CRR auction design in which “auction bids would only clear to the extent that bids from other market participants create an equal but opposite counter-flow.”³¹ This auction design, also known as the “willing counterparty proposal,”³² would address the fundamental flaw of the existing CRR auction design. This flaw forces the customers of load serving entities (LSE) to “offer” CRRs at any requested source-sink combination, and to “accept” any price offered, even if the price is zero. The CAISO submitted tariff revisions to the Federal Energy Regulatory Commission (FERC) that would limit the available source-sink pairs to those related to the delivery of energy, and in this initiative seeks to limit the uplift paid to CRR auction holders. These changes constitute CAISO's Track 1A Proposal, detailed in the CAISO's March 8, 2018, *Track 1A Draft Final Proposal Addendum*. ORA supports the Track 1A proposed changes as interim measures. If approved by FERC, the

²⁸ CRR 1B Straw Proposal, p. 31.

²⁹ *ORA Comments on December 19, 2017, Working Group Meeting and Presentations*, January 12, 2018, p. 8.

³⁰ *Congestion Revenue Rights Auction Efficiency Discussion Presentation* April 5, 2018, Perry Serveido slide 8.

³¹ CRR 1B Straw Proposal, p. 33.

³² See e.g. *Decision on congestion revenue rights auction efficiency proposal*, presentation of Greg Cook, CAISO Director, Market and Infrastructure Policy, at March 22, 2018 Board of Governors' Meeting, slide 10. The CRR Track 1B straw proposal also refers to the willing counterparty proposal as “the SCE proposal” and “[e]liminating release of available transmission system capacity in the auction.” CRR 1B Straw Proposal, p. 33.

changes would alleviate but not eliminate the CRR auction design’s reliance on LSE customers as “conscripted sellers”³³ of auctioned CRRs at a net loss of over \$750 million since the market’s inception in 2009.³⁴

Citing “technical, competitive, and legal/regulatory concerns,” the Track 1B Straw Proposal states that it “does not propose to eliminate the release of available transmission system capacity in the auction.”³⁵ Therefore, it appears that the CAISO will no longer consider the willing counterparty proposal in this initiative. ORA recommends that the CAISO consider the willing counterparty proposal in Track 2 of the CRR initiative because it would effectively protect ratepayers from remaining a forced counterparty in the CRR Auction.

The Track 1B Straw Proposal notes that under the willing counterparty proposal, it would be difficult for an auction participant to find the CRRs it seeks, given the more than 1100 nodes on the CAISO transmission system.³⁶ This is also referred to as “stranded counterparties,” where a CRR cannot find a bilateral participant to take on the counterflow necessary for the CRR to clear.³⁷ This problem is not insurmountable. A potential solution is that the CAISO could develop a transparent and centralized source of information such as a bulletin board, or “multi-stage auctions to reveal interested sources and sinks. Another solution is that the CAISO could create an exchange where bids and offers could be matched as they occur during specific windows of time.”³⁸ Although the Straw Proposal rejects the bulletin board suggestion, the CAISO expressed interest in data supporting multi-stage auctions but appeared unwilling to conduct such research.³⁹ Rather than removing the willing counterparty proposal from further consideration, the CAISO should include the development of solutions to match CRR auction counterparties within the scope of Track 2 of this initiative.⁴⁰

The Track 1B Straw Proposal notes that the current CRR market design is supported by some smaller LSEs and LSEs serving direct access customers, who allege that potential adverse consequences would result from the willing counterparty CRR auction design.⁴¹ The Straw

³³ *Department of Market Monitoring Comments on the CRR Auction Analysis Working Group*, January 16, 2018, p. 3.

³⁴ *Department of Market Monitoring Report Comments on CRR Proposal Memorandum*, March 14, 2018, Eric Hildebrandt, p. 1.

³⁵ CRR 1B Straw Proposal, p. 33.

³⁶ CRR 1B Straw Proposal, p. 34.

³⁷ “Finally, it would take much more time to develop and implement multi-stage auctions or exchange policies than available in the Track 1B schedule.” CRR 1B Straw Proposal, p. 33.

³⁸ CRR 1B Straw Proposal, p. 34.

³⁹ CRR 1B Straw Proposal, p. 33.

⁴⁰ It would be challenging to develop a multi stage auction or exchange by the CAISO’s announced June 2018 deadline for presenting its Track 1B proposal to the board. CRR 1B Straw Proposal, p. 6.

⁴¹ A number of the non-IOU LSEs also oppose the CAISO’s proposal to limit source-sink pairs available in the auction to those related to the delivery of energy. *See e.g.*

http://www.caiso.com/Documents/Decision_CongestionRevenueRightsAuctionEfficiencyProposal-

Proposal explains that [t]o avoid such adverse consequences, the [willing counterparty] proposal cannot be considered without careful consideration of whether the existing allocation rules and structure would also need to change.”⁴² While it is important to consider whether the willing counterparty proposal would require changes to the existing allocation rules and structure, the need to examine such changes does not justify removal of the willing counterparty proposal as an option for reforming the CRR auction.

The Track 1B Straw Proposal notes that implementing the willing counterparty proposal could result in higher costs to market participants,⁴³ but no party has quantified the potentially higher costs. A representative of Vitol Energy presented an equation that includes two variables for costs and benefits of the CRR Auction Market.⁴⁴ However, using combinations of different variables in the equation would not provide a definitive result due to the uncertainty of how many benefits or cost variables exist, and how they influence each other to produce market outcomes, which the equation cannot determine. This exercise would also require confidential information on the part of the market participants, and is therefore unlikely to provide a definitive answer to any costs and benefits the CRR market provides.

The Track 1B Straw Proposal refers to a FERC decision regarding the Financial Transmission Right (FTR) market in PJM power pool⁴⁵ as foreclosing consideration of the willing counterparty proposal.⁴⁶ The Straw Proposal cites FERC’s statement that the purpose of FTRs is to provide hedges and notes that FERC rejected arguments that “the sole purpose of FTRs is to return congestion revenue to load and the market should therefore be redesigned to accomplish that directive.”⁴⁷ Neither of these statements warrant eliminating consideration of the willing counterparty proposal, which is designed to accomplish hedging at a reasonable price to the ratepayers who fund the CAISO transmission system.

Finally, the Track 1B Straw Proposal notes that “some stakeholders opined that this [willing counterparty proposal] may risk the CAISO’s U.S. Commodities Futures Trading Commission

[StakeholderCommentsMatrix-Mar2018.pdf](#) (Calpine Energy Solutions, Alliance for Retail Energy, Load Serving Entities in Support of Market Efficiency and the CRR Auction oppose limiting source-sink pairs in the CRR auction.)

⁴² CRR 1B Straw Proposal, p. 35.

⁴³ CRR 1B Straw Proposal, p. 36

⁴⁴ *California ISO CRR Market Presentation*, April 10, 2018, Kolby Kettler – Vitol Energy (Vitol CRR Presentation), slide. 5.

⁴⁵ PJM is an acronym for the regional transmission RTO that stands for the Pennsylvania, Jersey, Maryland (PJM) Power Pool. It “coordinates the movement of wholesale electricity in all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia.” PJM website, 2018. Located at: <http://www.pjm.com/about-pjm/who-we-are.aspx>

⁴⁶ CRR 1B Straw Proposal, p. 36.

⁴⁷ PJM Interconnection, L.L.C., 158 FERC ¶ 61,093, at P 27 (2017).

exemption.”⁴⁸ The CAISO should allow the opportunity to evaluate this assertion. In the absence of additional information, including legal analysis, this opinion should not foreclose consideration of the willing counterparty proposal in Track 2.

Conclusion

The CAISO’s and stakeholders’ studies and evidence demonstrate that the current CRR market is producing “inefficient outcomes.”⁴⁹ This leads to a situation where “market participants purchase congestion revenue rights for 63 cents on the dollar.”⁵⁰ Any shortfalls between day-ahead congestion charges and real-time market prices are uplifted to load, which CAISO terms “net payment deficiencies.”⁵¹ This net payment deficiency is currently in excess of \$750 million since 2009 to date.⁵² ORA supports the move to ex-post partial funding, with more research on the three alternatives CAISO posed in the Track 1B Straw Proposal as interim solutions to the flawed CRR market design. The CAISO should further consider the willing counterparty proposal in Track 2 of this initiative, which would be effective in protecting ratepayers from remaining a forced counterparty in the CRR Auction.

If you have any questions or comments, please contact Danielle Dooley at Danielle.Dooley@cpuc.ca.gov or 415-703-3666

⁴⁸ CRR 1B Straw Proposal, p. 36. The stakeholders in the above quote refers to stakeholders from the April 10, 2018 working group meeting.

⁴⁹ *Congestion revenue rights auction efficiency Track 1 draft final proposal Paper*, February 8, 2018, CAISO, p. 3.

⁵⁰ *Congestion revenue rights auction efficiency Track 1 draft final proposal Paper*, February 8, 2018, CAISO, p. 3.

⁵¹ *Congestion revenue rights auction efficiency Track 1 draft final proposal Paper*, February 8, 2018, CAISO, p. 3.

⁵² *Department of Market Monitoring Report Comments on CRR Proposal Memorandum*, March 14, 2018, Eric Hildebrandt, p. 2.