

California ISO CRR Market

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Discussion Overview

- *Where are we?*
 - *Implementation of Track 0*
 - *Track 1a – at FERC*
 - *Transmission Outage Process Enhancements*
 - *Removal of biddable paths*
 - *Track 1b*
 - *Changes to be implemented for 2019 CRR Settlement*
 - *Target June BOG*
 - *Track 2*
 - *Target needed changes to the CRR product prior to 2020 CRR auctions & settlements*

Discussion Overview – How did we get here?

- *CAISO's Dept. of Market Monitoring ("DMM") has on various occasions raised concerns regarding the performance of the CRR market*
 - *DMM claims the market is not functioning properly based upon the "net payment deficiency" where in recent years the aggregate DA congestion value of CRRs is greater than the aggregate auction value of CRRs*
 - *This is an overly-simplistic way to evaluate the health of the CRR market, as it ignores many other components that determine the value of the product to market participants*
- *DMM's concern regarding net payment deficiencies prompted CAISO's actions to evaluate the CRR market*
 - *CAISO found that since 2014, participants purchased CRRs in the auction for on avg \$99.5 million/year less than the eventual payouts (purchase of \$0.63 on the dollar)*
 - *DMM has labeled the results of this calculation as a loss to load serving entities and has used the calculation as "proof" that the CRR market is flawed*
- *CAISO identified additional concerns*
 - *DA underfunding*
 - *Transmission outages reported after CRR auctions (57% of outages subject to 30-day reporting requirement were not reported on time; 80%, when outages with durations less than 24 hours are included)*
 - *Participants base CRR nominations/bids on details of auction model rather than expected DA conditions*
 - *CAISO releases system capacity in the annual CRR auction which is inconsistent with actual transmission that is ultimately available*
 - *Large portion of net payment deficiencies associated with auctioned CRRs that are inconsistent with their intended purpose*
- *CAISO's view of the purpose of CRRs*
 - *CRRs are intended for hedging congestion associated with supply delivery in the DA market*
 - *According to CAISO, if CRRs are priced on this basis, auction prices should reflect market participants' expectations of congestion price exposure in the DA market and therefore expected CRR payments*

Discussion Points

- *Net Deficiency Equation – (Discussed in later slides)*
 - *Implement change to address the calculation*
- *Purpose of CRRs*
 - *Expressed views of the purpose of CRRs*
 - *CRRs are intended for hedging congestion associated with supply delivery in the DA market*
 - *According to CAISO, if CRRs are priced on this basis, auction prices should reflect market participants' expectations of congestion price exposure in the DA market and therefore expected CRR payments*
 - *FERC's Documented View:*
 - *"FTRs were designed to serve as the financial equivalent of firm transmission service and play a key role in ensuring open access to firm transmission service by providing a congestion hedging function." FERC Order on Rehearing and Compliance, January 3, 2017; Docket Nos. EL16-6-002, EL16-6-003, ER16-121-001*
 - *Important distinction: open access/congestion hedging function vs. hedging congestion for supply delivery*
- *Effort to bifurcate the market – Financial "speculators" vs. "legitimate" physical business*
 - *Initially was there an effort or purpose to differentiate between counter party's intentions when transacting CRRs?*
 - *Can we infer definitively the intentions of all counter parties without understanding each organization's entire portfolio?*
- *Difficulty of evaluation:*
 - *CRR current value*
 - *Changes in the product or the removal of the product*
 - *Direct or indirect impacts of TOs and PUC rule*

Net Payment Deficiency Calculation Is Misleading

- *Using this calculation as a basis for evaluating the performance of the CRR market is overly simplistic and incomplete*
 - *It focuses on only two components: DA congestion value minus CRR auction value*
 - *It ignores many other important components (e.g. the benefits of having the capability to transact in congestion on a forward basis)*
- *DA Congestion Paid to Auctioned CRRs – CRR Auction Revenue Received = “Loss to Load”*
- *Using numbers from the 4th quarter market report, the DMM has focused on: (\$1 – \$0.25) = \$0.75 loss to load*
- *What is the purpose of using the equation if its incomplete?*
- *While CAISO and DMM have relied on this calculation, there has been no effort to completely evaluate the CRR market from a comprehensive perspective*
 - *DMM’s 2017 4th Quarter Report on Market Issues and Performance, p. 26 - “Losses to ratepayers from the congestion revenue rights auction were the highest in three years. In the fourth quarter of 2017, congestion revenue rights auction revenues were \$61 million less than congestion payments made to non-load-serving entities purchasing these rights. This represents only \$0.25 in auction revenues received by transmission ratepayers for every dollar paid out to auctioned rights holders.”*
 - *Important value components have been excluded by CAISO and DMM in public statements/reports intended for stakeholders, regulators, and legislators*

A More Robust Evaluation

- *A proper comprehensive evaluation must include all aspects of the impact that CRRs have on the market and participants*
- *Using numbers from the 4th quarter market report, the DMM has focused on: $(\$1 - \$0.25) = \$0.75$ loss to load*
- *A better evaluation would consist of $(\$1 - X) - (\$0.25 + Y) = \text{benefit/cost}$, where*
 - *$(\$1 - X)$ = day-ahead congestion minus costs related to transacting and managing the CRR product within a portfolio, such as credit/collateral, carrying costs, position evaluation, settlement, etc.*
 - *$(\$0.25 + Y)$ = auction revenues plus benefits of the forward CRR product, such as hedge value, reduced market power, open access, transparency, reduced risk premiums, liquidity, etc.*

Evaluation

- *Implement then evaluate our current planned Tracks*
 - *Preferably using an equation and the component of that equation that determine true value*
- *Evaluate all of the indirect and direct costs and benefits currently associated with the CRR product*
 - *Controllable factors:*
 - *CAISO management of transparency – Ongoing*
 - *What is the cost contribution related to mismanagement of avoidable transmission outages?*
 - » *Is the proposed TO policy /process sufficient enough?*
 - *What is the cost contribution related to reduced management of a counter parties CRR portfolio relative to their overall portfolio based on the PUC's speculative rules surrounding CRR trading?*
 - » *Understanding "Speculation" as it relates to the PUC's rules on CRR Trading*
 - » *Speculation vs. Arbitrage*
 - *Benefits related to the product – As explained in the equation*

“Willing Counter Parties”

- *Bilateral markets vs. Organized markets - Where is the analysis?*
 - *What is the value in “turning back time” with respect to transmission basis products?*
 - *Have we concluded that the the old bilateral construct provides “more valuable and less cost to load” vs. an organized LMP market?*
 - *Potential counter parties willing to offer hedge services or basis products in the market – Who will participate?*
 - *What factors should counter parties consider?*
 - *Costs & Impacts on risk premiums*
 - *Lack of competition*
 - *Direct counter party risk*
 - *Regulatory scrutiny – Will be product fall under CFTC jurisdiction*
 - » *Cost impacts of increase Regulatory oversight, reporting, etc.*
 - *Papering & managing individual counter party contracts*
- *Remove efficiencies of an organized market (the purpose of the LMP market) while introducing all the struggles of a bilateral market including but not limited to:*
 - *Reduced*
 - *Transparency, Liquidity, competitive direct access, risk premiums, etc.*
 - *Removal of:*
 - *Open access – Longer term access to valuing constraints*
 - *Increased concerns of*
 - *Market Power*
 - *Indirect & direct cost to load*
 - *Illiquid and non-competitive market – Barriers to entry & underlying cost*

A Better Path Forward for the CRR Market

- *CAISO must conform to FERC's view on the purpose of CRRs*
- *Disregard incomplete or misleading equations*
- *Disregard proposals that contradict efficiency, impede open access and have no just and reasonable analysis to determine its legitimacy*
- *Resolve the obvious deficiencies first...*
 - *Implement justifiable change that improves the efficiency of the product*
- *Evaluate current benefits of the product*
- *Evaluate areas of deficiency*
 - *CAISO Management of Transparency*
 - *PUC Rule*
 - *TO Outage Scheduling – Relationship to moving avoidable costs from the TO to load*
- *Evaluate cost of change – if a change is contemplated*

- *Determining what's next?*

At the CAISO Board of Governors meeting on March 22, CAISO's CEO Steve Berberich stated three important items for consideration

- *CRRs benefit the overall market (e.g. they reduce risk premiums)*
- *CAISO wants to avoid negatively impacting the underlying markets*
- *CAISO will move forward on other improvements (e.g. improved modeling)*