

DC Energy, Comments on Congestion Revenue Rights Auction (CRR) Auction Efficiency Initiative

Submitted by	Company	Date Submitted
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DC Energy appreciates the opportunity to provide comments on the CAISO’s CRR auction action plans presented at the December 19, 2017 CRR Auction Efficiency Analysis Working Group (“working group meeting”). The comments start with a review of the purpose and benefits of CRR auctions, then provide support for the CAISO’s near-term action plan to improve CRR auction models. This is followed by a review of the “solution space” presented at the working group meeting.

- I. ***When considering proposals to the CRR auction design it is important to consider the purpose and benefits of CRR auctions and avoid proposals based on flawed premises:***

During the working group meeting a few stakeholders claimed that CRR auctions were causing ratepayer losses. The underpinning of this conclusion was that all congestion rents used to fund CRR congestion payments belong to Load Serving Entities (LSEs), since they fund the transmission system through the payment of transmission access charges.¹ This reasoning was used to support the sweeping conclusion that CRR auctions should be either eliminated, replaced with a bilateral market structure, or undergo major structural changes. DC Energy submits the following points to explain the flaws of this reasoning and to offer a more holistic view of the purpose and benefits of CRR auctions. DC Energy urges the CAISO to consider these points as it reviews proposals.

 - a. ***The argument of entitlement to retail customers (through their LSEs) of all congestion rents based on the premise that they are the ultimate payer for transmission access charges is problematic as a premise for asserting ratepayer losses.***
 - i. The argument relies on a faulty assumption that congestion rents somehow come from transmission expenditures. This is not the case; congestion rents come from a lack of transmission and building more transmission will only act to reduce congestion rents. In fact, congestion rents come from the need to overcome a transmission deficiency through an alternative means, typically the re-dispatch of more expensive generation, or the economic, voluntary curtailment of load (i.e., “demand response”).
 - ii. The argument also makes a faulty implicit claim that native retail customers are the only ultimate payers of transmission charges. Transmission access charges are also paid for by entities who import or export power (typically on behalf of generation asset owners or customers external to the ISO) and

¹ https://www.caiso.com/Documents/DMMWhitePaper-Problems_Performance_Design_CongestionRevenueRightAuction-Nov27_2017.pdf

generation asset owners within the ISO. Yet the entitlement argument ignores this altogether.

- b. ***Congestion rents are an intrinsic component of Locational Marginal Pricing (“LMP”) and represent the economic re-dispatch cost component of the fair wholesale price of power at a specific location. Customers are not “entitled” to a refund on total market congestion rents.***
 - i. The entitlement argument implies that somehow the LMP price is not correct – that it “overcharges” customers and requires a “refund” in order to avoid an inappropriate “loss”. However, this is not the case. The LMP is the fair market price for power at a given location given the topology, generation availability, fuel costs and state of demand throughout the wholesale market.
 - ii. The implicit argument that customers have a “right” (i.e., an “entitlement”) to be compensated for the market aggregate congestion spend is problematic given that customers do not actually pay for all congestion rents as a portion of their LMP payments. Significant portions of congestion rent are collected from importers and exporters of power or from internal generation. The latter entities are often in generation “pockets” where LMP prices are depressed to reflect the lack of transmission available to export all of the power that is economically available. This is especially true for renewable generation facilities who lack sufficient transmission to accommodate peak production periods.
- c. ***The allocation of excess congestion rents and/or CRR auction revenue to customers (through the LSEs) is a reasonable policy objective; however, it should not be elevated above the need for robust wholesale market competition and open access.***
 - i. The allocation of excess congestion rents and/or CRR auction revenue to customers helps fulfill the objective of keeping retail rates low while enabling robust wholesale market competition and open access.
 - ii. The indirect allocation methodology avoids the potential for unwinding LMP pricing signals and also allows competitive forces to price and allocate access to financial hedges.
- d. ***The CRR allocation process is designed to meet the hedging needs of LSEs (on behalf of their customers), and the residual capacity is auctioned in order to facilitate open access and provide hedges that enable wholesale competition. The goal of competition is to foster new entrants, enable innovation and eventually provide for a lower cost of delivered power:*** The CRR allocation process helps ensure that the customers of the LSEs are insulated from congestion charges. The quantity of CRRs allocated is a function of peak load and the amount of transmission capacity available. This approach is conservative since the peak load allocation is greater than the average load. This allocation process comprises the majority of the transmission system.

- e. ***The residual capacity remaining after the allocation process is made available in public CRR auctions. The CRR auction serves two important functions for the promotion of wholesale competition:***
- i. The auction provides a clear price for the future expectation of congestion. This price discovery function is not available anywhere else at the granularity available in the CRR auction.
 - ii. The auctions facilitate open access by providing a fair opportunity for all market participants to acquire transmission congestion hedges. The role of CRR auctions in facilitating open access and hedging was affirmed in a recent order of the Federal Energy Regulatory Commission (“FERC”):

We reject the 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. 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. The purpose of FTRs to serve as a congestion hedge has been well established. In the Energy Policy Act of 2005, Congress added section 217(b)(4) to the FPA,²⁹ directing the Commission to exercise its authority to “enable load serving entities to secure firm transmission rights (or equivalent tradable or financial rights) on a long-term basis for long-term power supply arrangements made, or planned, to meet such needs. In Order No. 681, the Commission clearly emphasized the significance of FTRs in hedging congestion price risk.²

Market participants utilize CRRs in a variety of different ways to the benefit of consumers. Energy providers and generation owners utilize the CRRs to hedge congestion risk, which serves to lower the price of delivered power.³ Financial participants foster liquidity by accepting and managing price risk, which contributes to maximizing the value of the transmission system. Financial market participants include CRRs in their portfolios of diverse products that they can leverage to provide competitive risk management and hedging services to load serving entities, generation owners, and generation developers.

- f. ***Proposals based on the premise that load is entitled to receive all congestion revenues are prone to preventing equal access to congestion hedges:***
- i. All types of market participant are exposed to congestion charges and have the need to manage basis risk. An obvious example is a constrained

² *PJM Interconnection, L.L.C.*, Order on Rehearing and Compliance, 158 FERC ¶ 61,093 (2017)

³ Testimony of Chris Moser, Senior Vice President for Operations for NRG Energy, Inc. before the Subcommittee on Energy and Commerce Committee, U.S. House of Representatives Washington, DC on November 29th, 2017
<http://docs.house.gov/meetings/IF/IF03/20171129/1066663/HHRG-115-IF03-Wstate-MoserC-20171129.pdf>

renewable generator that produces at a significantly lower price than the prevailing marginal system price. These suppliers bring power to the market and pay for the building and maintenance of transmission facilities related to their interconnection to the bulk transmission system. Proposals based on the premise that load is entitled to all congestion revenues do not recognize the hedging needs and contributions of power suppliers and more generally have the propensity to prevent equal access to congestion hedges across the market. DC Energy encourages the CAISO to dismiss the entitlement argument and instead focus on changes that promote competition and fair access.

g. *Replacing the CRR auction with a bilateral market structure would subject market participants to a different set of regulatory requirements and would reduce the availability of congestion hedges:*

- i. When considering replacing the CRR auction with a bilateral swap market construct, one must weigh the consequences to participants of having to transact in a FERC-regulated market for some activities and in a CFTC-regulated over-the-counter (“OTC”) swaps market for others. The OTC swaps market is subject to different rules, requirements, credit exposure, market risk, margin, etc. and requires a new and more complicated structure to identify swap counterparties, negotiate contracts, evaluate their and their counterparties’ credit, do billing, make credit postings, conduct valuations, submit additional reports, etc. This is an important consideration because being subject to new requirements would introduce new costs and burdens to market participants.
- ii. Prior to the Market Redesign and Technology Upgrade (MRTU), generation and load were settled at zonal locations. This design produced a limited set of hedging locations that were readily satisfied in a bilateral market. Today, in the nodal market, there are over 1,100 settlement locations, which would make it very challenging to connect with a seller for any one of these locations. The Department of Market Monitoring’s “swap pool” proposal attempts to enhance the standard bilateral market design by considering the interaction of bids and offers within an aggregated pricing zone; however, this structure’s critical shortcoming is that it does not offer available transmission capacity. It instead primarily depends on bilateral submissions clearing against each another. This type of market would not provide the same level of access to congestion hedges as CRR auctions, which offer available transmission capacity within a fully configurable network.

- II. ***DC Energy supports the CAISO’s near-term plan to improve CRR auction models:*** The CAISO’s CRR study showed there is no persistent profit capturing opportunity in the CRR auctions and competition is working.⁴ It also identified modeling improvements that would

⁴ <http://www.aiso.com/Documents/CRR Auction Analysis Report.pdf> at P.74

enhance the efficiency of the CRR auction. The improvements are centered on outage submission requirements, modeling practices, and expansion of enforced contingencies and constraints. The record demonstrating the need for these improvements has been well established with numerous examples provided by DC Energy and the CAISO.⁵ In addition, the CAISO should eventually review its current practice of systemically blocking outages from its reporting.⁶ The current practice was put in place due to concerns that non-modeled outages would be made available and possibly lead to CRR Revenue inadequacy. DC Energy understands this concern; however, the policy's inherent impairment to market transparency is likely a much larger loss to overall efficiency once the models are improved.

III. ***The CRR auction initiative objectives were defined by the CAISO as:***

- 1) Minimize net payment deficiency in the CRR auction; and***
- 2) Maintain market efficiencies associated with ensuring all market participants have the opportunity to obtain congestion hedges.***

DC Energy agrees that, over time, it is a desirable outcome for CRR auction price discovery to efficiently reflect congestion rents (and, therefore, fund CRR Auction Revenue Distribution). DC Energy submits that this objective is better served by continuing to improve market models than by proposals which attempt to “shortcut” this process by diluting price signals and adding barriers to CRR participation.

- a. *Proposals to replace the CRR auction with a bilateral market structure:* This would not promote the initiative's objectives of ensuring access to congestion hedges for reasons articulated in section I.g. of these comments.
- b. *Create constraint reserve price:* The imposition of a minimum clearing price on CRR auction constraints regardless of the pricing produced by the market inputs via the optimization process is troubling. This will produce an auction solution that is not governed by market pricing on congestion elements. It is challenging to provide in-depth comments on this concept without any details; however, DC Energy submits that the best course of action is to improve the CRR auction models and not jump to proposals that force certain outcomes through external interference.
- c. *Limit source-sink pairings associated with hedging physical deliveries and allow only aggregate locations for sources and sinks to ease liquidity:* DC Energy explained at the working group meeting that limiting CRR activity would erode competition and lead to less auction value. CRR auction bids represent injections and withdrawals that clear against enforced constraints. These bids and offers drive auction value, as market participants compete for transmission capacity. It is unclear how restricting available CRR paths would increase value and resolve the net payment objective. During the working group meeting, it was suggested that paths that do not

⁵ See CAISO's CRR Auction Analysis Report <http://www.caiso.com/Documents/CRR Auction Analysis Report.pdf> at P. 88-201 and DC Energy's comments <http://www.caiso.com/Documents/DC Energy Comments-CRR Auction Analysis Report.pdf>

⁶ Today, the CAISO pauses the reporting of all transmission outage submissions between the CRR market model build and the close of the CRR bid window. Instead, during this period, the CAISO only publishes those outages that start within the next seven days.

represent physical delivery are not liquid, because very few “different awards” were awarded on these paths. This suggestion was used to call into question the need to make these paths available. This perspective fails to capture the dynamics of the network topology. All CRR paths are related to some degree and therefore unique sets of “different awards” may all impact flows on the same transmission constraint. In this way, CRR network capacity can be awarded in many configurations, which promotes the overall liquidity of the market. For this reason, DC Energy again reiterates that when measuring the liquidity or competitiveness of the auction all awarded paths must be assessed within the full network model.

- d. *Limit eligible injections/withdrawals on electrically equivalent nodes in the CRR model:* This is a longstanding deficiency that needs to be addressed. DC Energy submits that the best practice is to programmatically remove bids on electrically equivalent settlement location pairs prior to clearing the CRR auction. This up-front screening mechanism was recently adopted by the Southwest Power Pool⁷ and the Midcontinent Independent System Operator.

IV. *The policy review process represents an opportunity to adopt proposals that would foster even greater CRR auction efficiency*

- a. The proposal for monthly granularity in the annual auction would help align CRR models beyond the seasonal approach utilized today. The merits of this proposal are compelling because load distribution factors, outages, transmission upgrades can materially vary within each season.
- b. CRR balancing auctions are conducted in the PJM, MISO, and NYISO markets, and could be utilized to promote CRR auction efficiency. Today, 75% of the available network capacity is offered in the annual CRR auction, which is followed by one additional offering at the prompt month for the remaining amount. Under a balancing auction framework, auction capacity is released on a graduated scale at more frequent intervals. This can reduce CRR revenue inadequacy because capacity is released as information becomes more certain. To be clear, this could be achieved today by simply reserving more transmission capacity for monthly CRR auctions; however, this would provide less opportunity to acquire hedges prior to the prompt month. The flexibility of the balancing auction design provides a unique opportunity to strike the right balance between these two objectives. In addition, it would help rationalize CRR clearing prices since all market participants would benefit from more up-to-date pricing and constraint information. Lastly, the more frequent price discovery could be utilized in the CAISO credit requirements by using the mark-to-market of CRR positions. Under this construct, credit requirements can utilize more up-to-date CRR auction prices as CRRs approach settlement. This enhanced measurement of forward congestion risk would help rationalize credit requirements.

⁷ <https://www.ferc.gov/CalendarFiles/20170104140528-ER17-310-000.pdf> and https://www.spp.org/documents/47359/2017-01-17_compliance%20filing%20-%20attachment%20-%20revisions%20to%20clarify%20tr%20electrically%20equivalent%20settlement%20location_er17-310-001.pdf