

# ETRACOM LLC Comments on Draft 2017 Stakeholder Initiatives Catalog

17 November 2016

## Initiative 6.6.1 Congestion Revenue Rights Auction Efficiency

We find this initiative potentially damaging to the CAISO market by taking the market in the wrong direction for the following reasons:

1. The fundamental premise of the initiative is that “The CRR auction revenues collected by the ISO are persistently less than the payments that the ISO pays to auctioned CRR holders, indicating an issue with the efficiency of the CRR auction. An efficient CRR auction should lead to auction revenues that approach the auction payments.” This premise is flawed. In fact, if it were correct, it would indicate that market participants in CAISO CRR market are irrational as they ignore the risk premium and the market price of risk and thus exhibit a risk-seeking behavior rather than being risk-averse, as rational market participants are. In a nutshell, the reason for the existence of a risk premium and the market price of risk is that a market participant is exchanging a fixed payment now for an uncertain payoff in the future. Numerous publications in academic and industry literature studied and documented the existence of a risk premium and a market price of risk in commodity markets in general and in electricity markets in particular.<sup>1</sup> An additional source for discounting the potential revenue from holding the CRRs acquired in the annual auctions is related to the time value of money and interest rates, which is secondary as compared to the dominant factor of uncertainty associated with transmission congestion, which is greater, the longer a time horizon is considered.
2. The alternative proposed by the Department of Market Monitoring (DMM) is to convert the current auction into a type of a bilateral market with bids individually cleared against offers. While such a market in principle is possible, it will not produce the benefits of price discovery at all biddable locations associated with running the full network model in a CRR auction. Neither will it offer nearly the same depth and breadth of hedging opportunities to market participants.
3. The initiative proposal runs contrary to the trend in other ISO markets, such as PJM, MISO, and ERCOT which *expanded* the CRR auctions to long-term multi-year, multi-round, and multi-period multiple intra-year auctions. Such expansion aided the depth and breadth of hedging options as well as improved price discovery.

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<sup>1</sup> See, e.g. Hendrik Bessembinder, and Michael L. Lemon, 2002, Equilibrium Pricing and Optimal Hedging in Electricity Forward Markets, *The Journal of Finance*, 1347 – 1382; Francis A. Longstaff, and Ashley W. Wang, 2004, Electricity Forward Prices: A High-Frequency Empirical Analysis, *The Journal of Finance*, 1877 – 1900; Ehud I. Ronn, 2003, *Real Options: The Valuation of Flexibility in the Energy Sector*, in *Real Options and Energy Management* (Risk Books, London); Kolos, S. P., and Ronn, E. I. (2008). Estimating the commodity market price of risk for energy prices. *Energy Economics*, 30(2), 621-641.

4. Another troubling aspect of the proposal is that DMM, which is a unit attached to CAISO, is treated as a stakeholder in the current process along with market participants. This CAISO unit has its proposal assessed by another CAISO unit with the outcome that DMM's initiative ends up on par with other top priority items. This calls into question the integrity of the process vis-à-vis this specific proposal. Is this really appropriate for a stakeholder process?

### Initiative 6.6.2 Long Term Congestion Revenue Rights

We support this initiative and would like to see both allocations and auctions expanded to long-term, multi-period, and potentially a multi-round model. Such auction structures were implemented and expanded by PJM, MISO, and ERCOT in recent years. These expansions aided the depth and breadth of hedging options and improved price discovery.

### Initiative 6.7.2 Implement Point-to-Point (PTP) Convergence Bids

We support this initiative for the following reasons.

Currently CAISO market participants (MPs) can bid either virtual supply or virtual demand. In theory Virtual Transactions (VTs) should lead to convergence between day-ahead market (DAM) and real-time market (RTM). In practice having only virtual supply (VS) or virtual demand (VD) can lead to divergence if MPs are bidding on constraints, as such bidding may require them to place "price taking" pair of VS and VD, thus diverging DAM and RTM prices instead of converging them. The implementation of this initiative will allow MPs to bid a Point-to-Point (PTP) – a source and a sink combined with specified price. Such PTP will clear as long as the specified price is greater than the difference between sink and source in DAM. The MP, who cleared a given PTP, will pay the difference of LMP at the sink minus LMP at the source in DAM and will be paid that difference in RTM. These price differences may be positive or negative, determining whether the MP is paid or has to pay in either DAM or RTM. The advantages of having PTPs in addition to VS and VD are:

1. For the CAISO market as a whole:

Better convergence of DAM to RTM as it allows PTPs to be aligned with constraints and thus converge shadow price in DAM to shadow prices in RTM. Constraints are linear instruments and are better served with linear Virtual Spread Products, i.e. PTPs, as opposed to VTs that may achieve only point by point convergence but not constraint by constraint convergence.

2. For MPs:

Better risk management for MPs as they do not have to submit price taking pair of VS and VD, when bidding on constraints, and thus unwillingly expose themselves to unrealistic levels of DAM shadow prices that are unlikely to materialize in RTM. There is also no risk of exposure to system energy price due to asymmetric clearing, which is always present when bidding a pair of VS and VD. PTPs always have its source and sink clear together.

Since CAISO already has wheeling transactions implemented in its clearing system, it seems to be a matter of extending those to include internal VT locations to enable PTPs to clear alongside VS and VD system-wide. Other markets, such as PJM and ERCOT, have successfully implemented PTP bids (aka in PJM as “Up-to-congestion bids” or UTCs).

Thank you,

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