

**CAISO CRR Auction Efficiency Initiative  
Track 1B: Review of Proposals to  
Replace CRR Auctions**

**April 2018**



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# CRR auctions are in the best interest of the wholesale market and benefit consumers

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## Purpose and Benefits of CRR auctions

- **CRR auctions enable access to hedging opportunities in the form of a transparent and robust clearing market**
  - Excess capacity after the allocation is available to all those seeking hedges
  - Provides the opportunity to match willing buyers and sellers in a simultaneous feasibility test; whereas bilateral and exchange markets are limited to exact matching of a buyer and seller at a specific location
  - Prices are transparent and provide a forward price signal at all nodal locations; whereas bilaterally traded swaps typically trade at liquid contract points
- **CRRs allow entities to manage basis risk**
  - CRR hedging leads to lower risk premiums that are ultimately reflected in the all-in cost to serve energy
- **Provide granular forward prices that can signal where resources are needed**
- **CRR auctions promote competition through open access**
  - Public auctions are the only fair way to allocate excess transmission capacity
    - Without transparent pricing there is no clear and fair way to assign capacity that doesn't also increase market power of incumbents and increase barriers to competition
  - Significantly more flexible and efficient in enabling competition
    - Low barrier to entry
    - Enables 3<sup>rd</sup> party competition on the network



# Proposals to replace the CRR auctions paint a narrow picture and do not take into account the benefits of CRR auctions

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## Problems with proposed replacements to the auction

- **Zero capacity auctions or bilateral market replacements to the CRR auction are limited to a sub element of the potential auction benefits to LSEs**
  - Solely focused on LSEs not obtaining adequate congestion rents through the excess capacity auctioned as CRRs
- **There is a much larger set of energy market benefits at stake in the ~8 \$billion/annum energy market**
- **Proposals run counter to the essence of “Open Access”**
  - The incumbent load serving entities would have *de-facto* monopoly
  - The ISO is prevented from selling any remaining capacity
  - Prevents the competitive use of available transmission (or its financial equivalent) to support competitive, more efficient power transactions, that would benefit the end consumer
- **Allocation of all congestion rents to loads would erode LMP market pricing incentives**



Bilateral markets do not foster the level of activity needed to serve the basis hedging needs of over 1,100 nodal settlement locations

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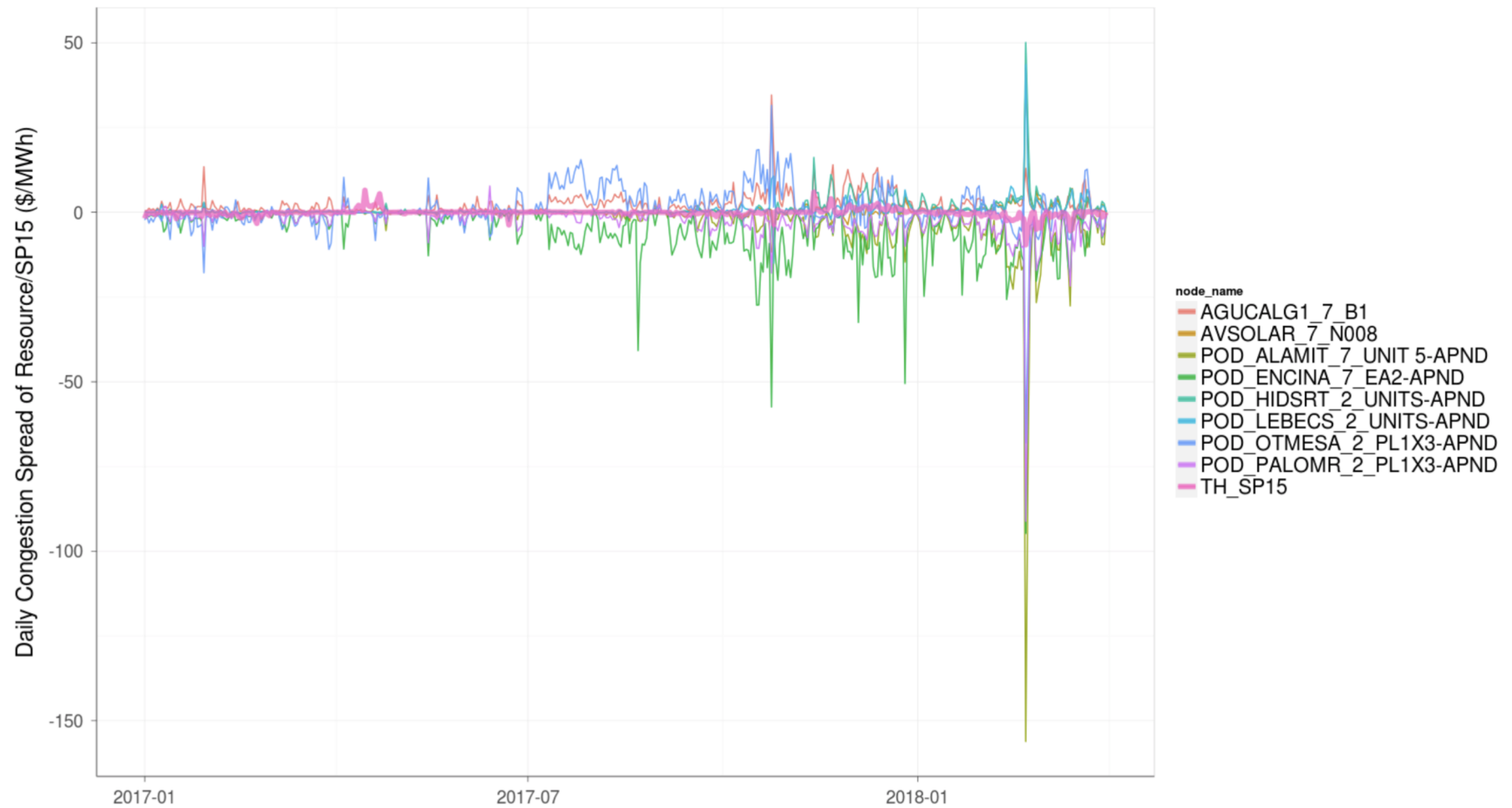
## Understanding the energy market landscape

- **Forward bilateral market products mostly trade at liquid aggregation points**
  - Today bilateral trades mostly occur at SP15 and to a lesser extent NP15
  - Trading activity occurs at Trading Hubs for a number of reasons
    - Standardized contracts at a basket of nodes leads to many buyers and sellers and frequent transactions
    - Many buyers and sellers leads to low bid/ask spreads
    - Frequent transactions lead to lower liquidity premiums and rational margin requirements
- **Relying on bilateral markets or zero capacity auctions to meet basis hedging demand would increase costs to end-use customers**
  - Regulatory constraints limit regulated LSE participation in the auctions
  - Full allocation of CRR to LSEs raises market power concerns
  - Sellers of the hedge would be taking on risk in a market with low liquidity
    - Nodal price volatility and liquidity premiums would be reflected in offers for hedges and might not be available for all paths
      - The risk premium associated with any forgone hedging would lead to energy suppliers charging higher prices to their end-use customers



# Congestion price spreads are significantly more volatile than outright Trading Hub prices

## Congestion Spreads compared to SP15 – 2017-01-01 to 2018-03-01 –

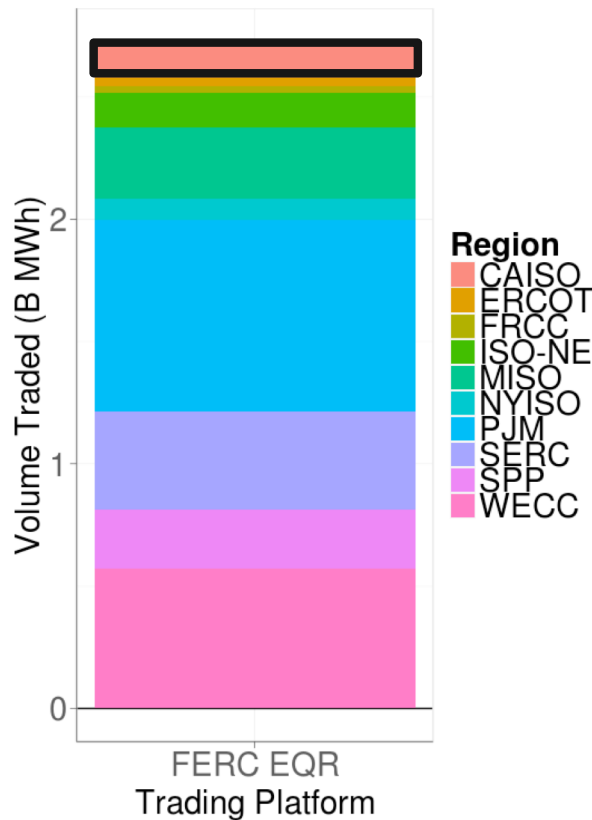




California has roughly 90 MM MWh of physical counterparty trading per year based on the FERC EQR database

## Total Physical Counterparty Trade Volumes

– 2015-04-01 to 2017-03-31 –



### Methodology:

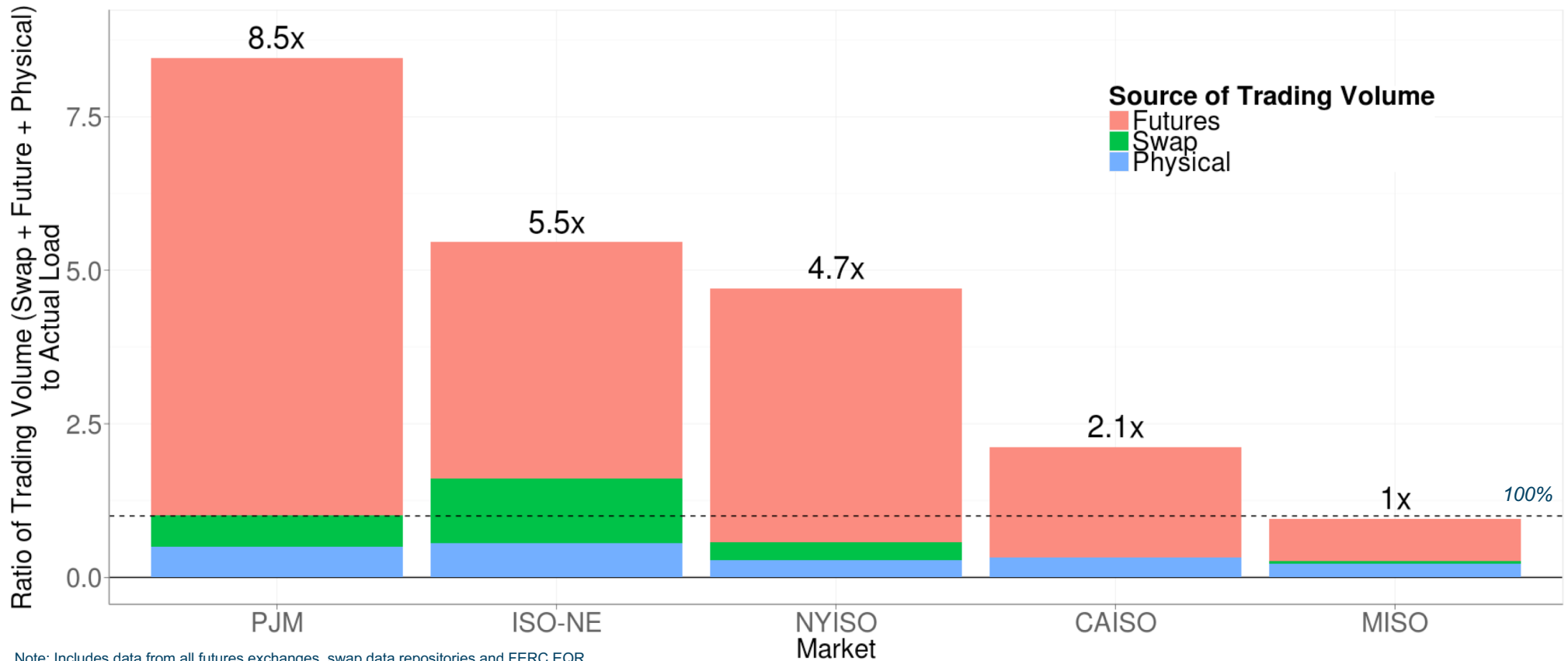
- **Physical Trading:** Sum up all non-affiliate and non-ISO reported energy volumes in the FERC EQR, correcting for obvious reporting errors (e.g., kWh instead of MWh). Includes both outright and basis trades.



CAISO has almost no swap trading and significantly lags PJM, ISO-NE and NYISO in trading from all sources

## Market Trading Ratios for Outright and Spread Trades

– 2015-04-01 to 2017-03-31 –

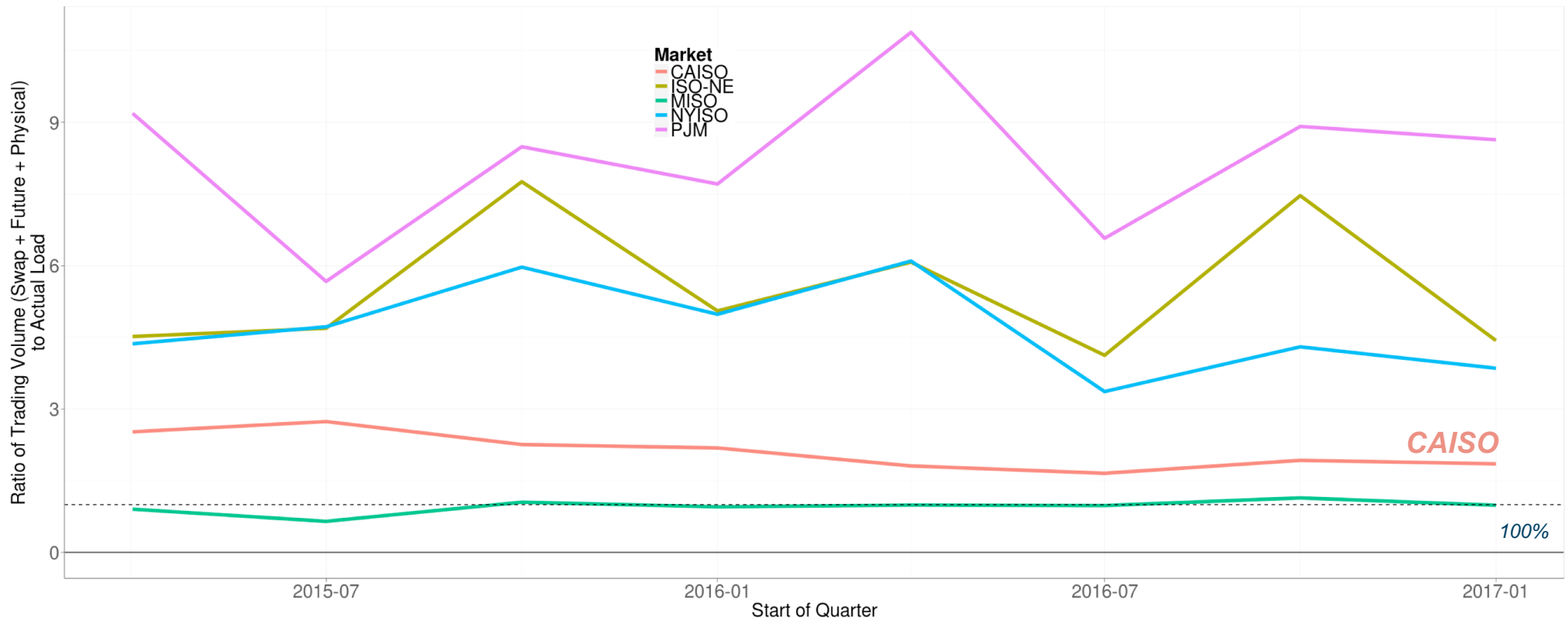






# While trading ratios in PJM remain strong, CAISO's has continued to decline over the last two years

## Market Trading Ratios – 2015-04-01 to 2017-03-31 –



Note: FERC EQR is non-ISO & non-affiliate sales  
Source code: counterparty/AdHocAnalysis/sdr/combined.R Plot 9

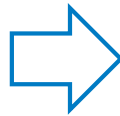


# The facile load entitlement argument to all congestion revenues is a flawed framework

## The Entitlement Argument Flaws

### Entitlement Premise

- [primary] Native retail load entities are entitled to congestion rents since they fund transmission infrastructure
- [secondary] Native retail load entities are entitled to all congestion rents since they pay for the congestion as part of LMP



### Flaws of Entitlement Premise

- Congestion rents do not arise from transmission expenditure, but from a lack of it in the right places
- Native loads do not fund all transmission
  - Transmission access charges are paid for by entities who export power on behalf of generation owners
  - Generation owners pay for transmission access and delivery (network upgrades for interconnection)
  - Loads are already entitled to CRR allocation up to their expected peak demand
- Native loads do not pay for all congestion charges
  - Congestion is paid by importing or exporting entities
  - Congestion is paid by constrained generators (e.g., renewable generators located in a generation pocket without sufficient transmission for peak production)



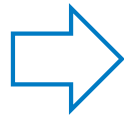


# The entitlement argument is also fails to capture the bigger picture and is prone to erroneous conclusions and solutions

## The Entitlement Argument Flaws (Cont'd)

### Entitlement Argument

- CRR market is flawed because CRRs in aggregate are profitable. If buyers of CRRs are making money, ratepayers must be losing that money. (e.g., it's a zero sum game)
- [Conclusion] The best solution is to eliminate the CRR auction. As an alternative, CAISO would allocate all CRRs or congestion rents to native load entities



### Flaws of Entitlement Agrument

- This measure of ratepayer impact is incomplete and misleading. Consumer benefits of the CRR market extend beyond the myopic focus on CRR profitability. The ability for generators and power marketers to acquire congestion hedges enhances competition and drives prices lower for ratepayers
- Auctions provide a superior and equal opportunity to acquire congestion hedges from unallocated transmission capacity
  - Support competition in the overall energy market
  - Provide robust liquidity and forward curve since all nodal locations receive a price and clear within a network
- Full CRR allocation to LSEs promotes the ability to exercise market power
- Full refunding of congestion dilutes critical locational pricing signal



# The CRR policy review represents an opportunity to adopt proposals that would foster even greater CRR auction efficiency

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## Potential CRR Market Enhancements

- **A balancing auction structure would better support the needs of competitive suppliers and help address a substantial portion of the auction revenue deficiencies**
  - PJM, MISO, and NYISO all have a balancing auction structure
  - Balancing auctions provide more opportunities for competitive load-serving entities to shape, by period (balance of planning year, quarterly, and/or monthly) and by block (peak and off-peak), the congestion risk in their retail portfolio
  - Balancing auctions would likely improve the demand for CRRs
  - Enhanced price discovery: rationalize CRR clearing prices since all participants benefit from more up-to-date pricing information
  - CRR revenue inadequacy: helps strike the right balance between capacity availability and information certainty
  - Enhanced credit requirements through an enhanced forward curve for basis prices
- **Monthly granularity in the annual auction**
  - Align CRR models beyond the seasonal approach utilized today
  - Help reduce modeling difference that give rise to CRR inadequacy