



California ISO

# Congestion revenue rights auction efficiency discussion

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# Roadmap for addressing congestion revenue rights auction efficiency

- **Track 0:** Process changes under current authority
  - Ongoing
- **Track 1A:** Measures in time for annual 2019 congestion revenue rights process
  - Adopted at March 2018 BOG
  - FERC filing this week
- **Track 1B:** Measures in time for 2019 congestion revenue rights settlement
  - Target June BOG
- **Track 2:** Potential comprehensive changes
  - 2020 congestion revenue rights implementation

# Track 1B focuses on partial funding and other short implementation effort approaches

- CAISO congestion revenue rights are currently fully funded
  - Auctioned rights provide a complete hedge
  - Auctioned rights always receive payment for the full difference in marginal congestion components
- Other ISO/RTOs throughout the United States use various financial transmission rights partial funding methods
  - Auctioned rights share in payment shortfalls
  - Auctioned rights do not provide complete hedge
- The CAISO will also consider approaches that could be implemented fairly quickly after receiving a FERC order and prior to 2019 auction

# Certain partial funding approaches may disincentivize model gaming and highly speculative behavior in the auctions

- Load-serving entities pay all shortfalls to fully fund auctioned congestion revenue rights
- In a sense, there are two classes of congestion revenue rights
  - Fully funded auctioned congestion revenue rights
  - Partially funded allocated congestion revenue rights
  - Allocated rights on the same constraints as auctioned rights do not receive equivalent payouts
- If all rights share shortfalls appropriately, all rights flowing on the same constraint receive an equivalent payout
- If certain constraints were mostly purchased on a speculative basis
  - Holders of rights purchased to game model differences would pay back their share of the shortfall
  - Holders of low-value highly speculative rights would pay back their share of the shortfall

# Partially funding congestion revenue rights ex ante versus ex post

- In ex ante approaches, the ISO de-rates congestion revenue rights prior to the day-ahead market
  - Shape the congestion revenue rights quantity to the hourly granularity
  - Allows market participants to adjust forward energy positions prior to day-ahead market to be consistent with their final supply delivery hedge
  - Potential incentives for higher bid-values depending on de-rate method
- In ex post approaches, the ISO charges congestion revenue rights holders for shortfalls after the day-ahead market
  - Shape the congestion revenue rights payouts to the hourly granularity
  - Payouts aligned with revenues collected in the day-ahead market
  - Potential to eliminate incentives to game model differences between the congestion revenue rights market and day-ahead market

# Partially funding congestion revenue rights ex ante versus ex post

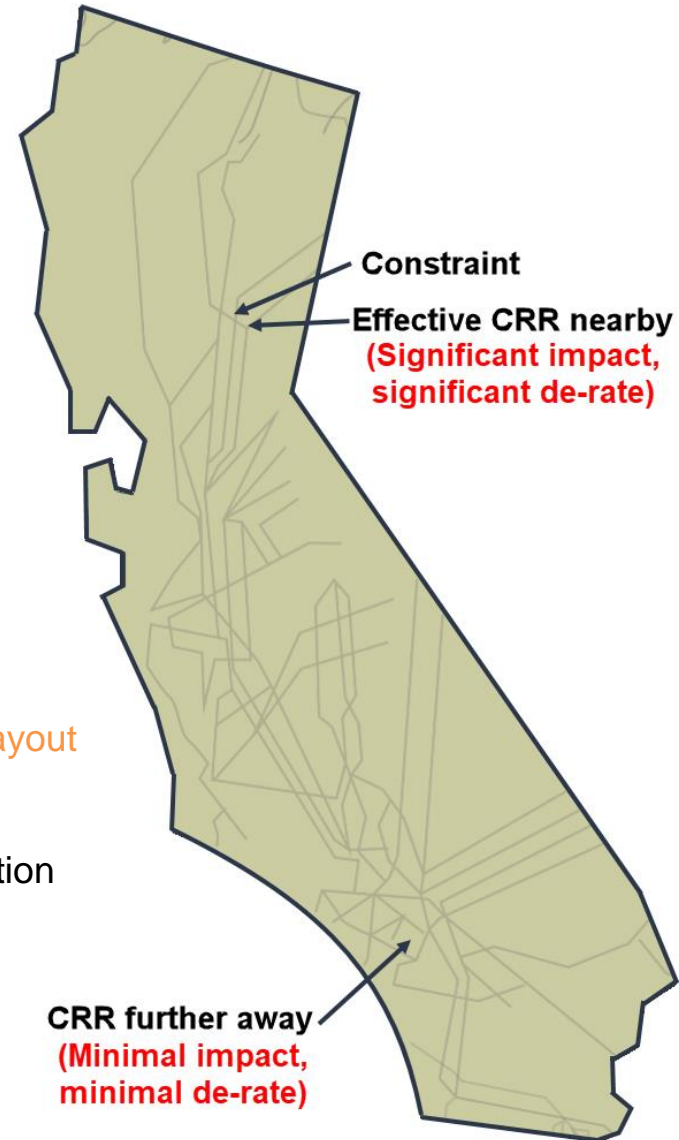
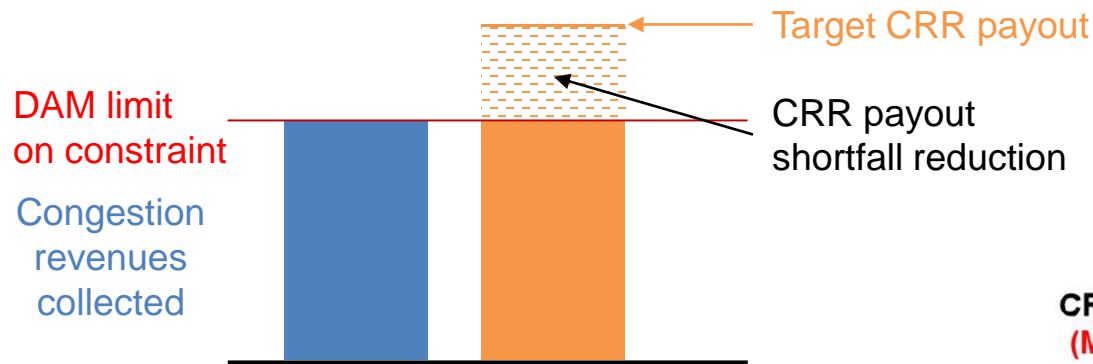
- Under either ex ante or ex post approach, the ISO will not pay congestion revenue rights holders for the full quantity of the congestion revenue rights all the time
- Participants likely will lower their bid values in anticipation of lower payouts
- Are there any partial funding approaches that reduce the incentive for market participants to lower bid values in the auction?

## Ex ante de-rate based on bid value

- One day prior to day-ahead market, re-run the simultaneous feasibility test using the most recent day-ahead model
  - Most accurate model
  - Allow participants the opportunity to react to the de-rate
- De-rate congestion revenue rights to hourly granularity based on available transmission and bid value
  - The ISO would de-rate lowest value congestion revenue rights first
  - Allocated congestion revenue rights would have priority in the adjustment process
  - Basing on bid values provides the incentive to not completely reduce bid values in auctions

# Ex post payment reduction based on effectiveness

- After the day-ahead market, calculate the revenue shortfall per constraint
- Reduce payments to only those congestion revenue rights effective on specific constraints that generated the revenue shortfall





## Other approaches under consideration with potentially short implementation timelines

- Lower the percentage of system capacity released in the annual congestion revenue rights process
- DMM and Southern California Edison proposal to eliminate using the available transmission system in the auction
- Implement reserve prices
  - Point-to-point based on historical day-ahead market congestion between nodes
  - Data analysis on impact on auction revenue shortfall of low-priced congestion revenue rights