



California ISO

Decision on congestion revenue rights auction efficiency Track 1B proposal

Greg Cook

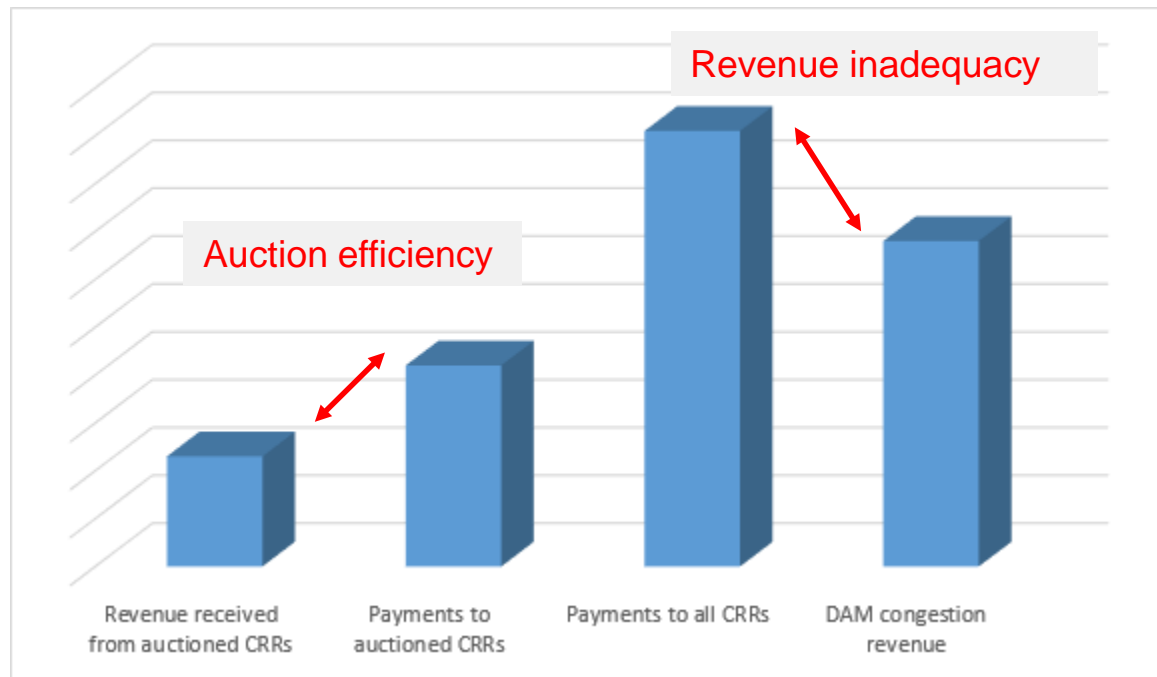
Executive Director, Market and Infrastructure Policy

Board of Governors Meeting

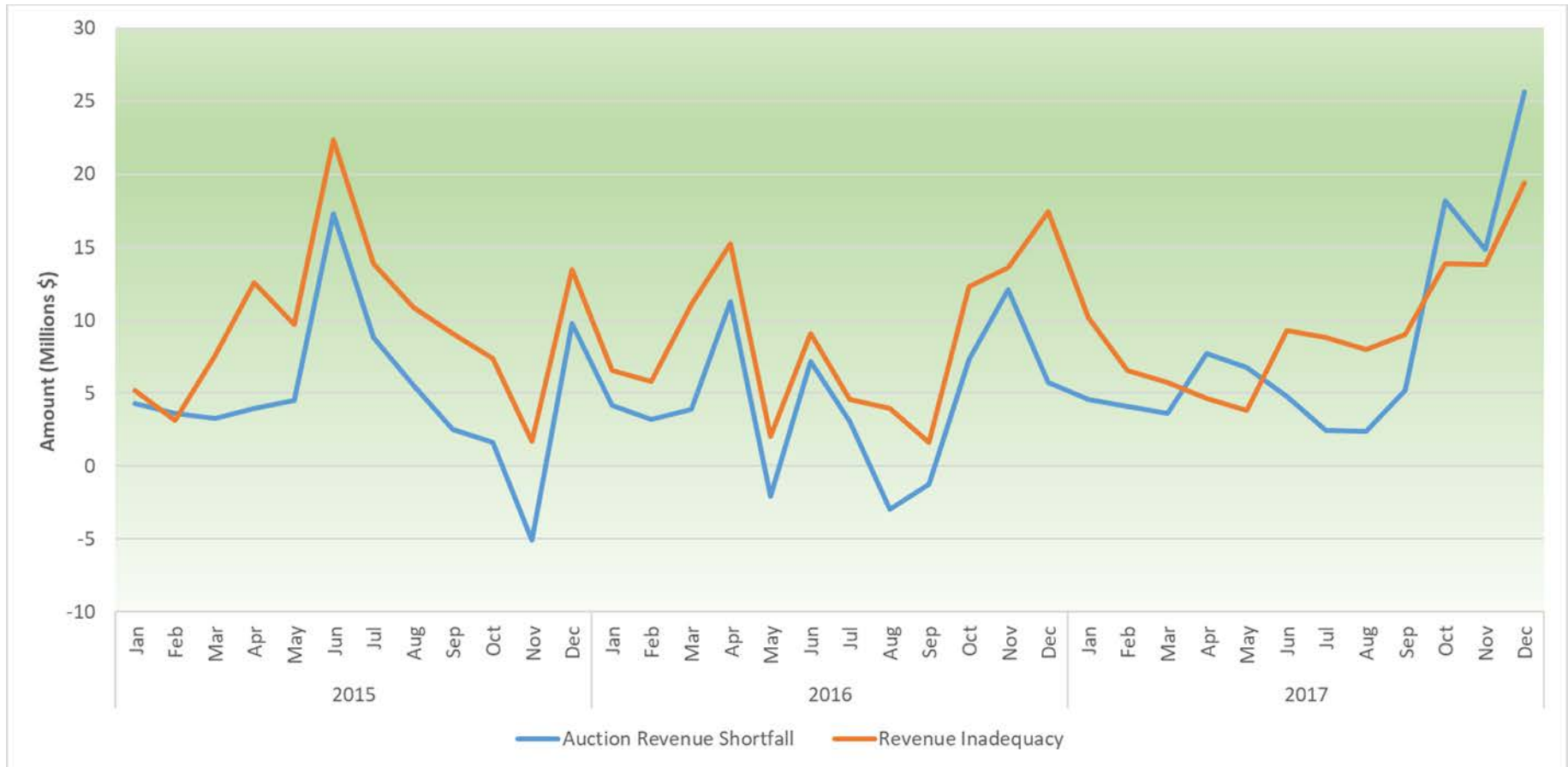
General Session

June 21, 2018

Track 1A specifically targeted auction efficiency, Track 1B targets revenue inadequacy which has additional benefits to auction efficiency



Auction revenue shortfalls have a strong correlation to revenue inadequacy



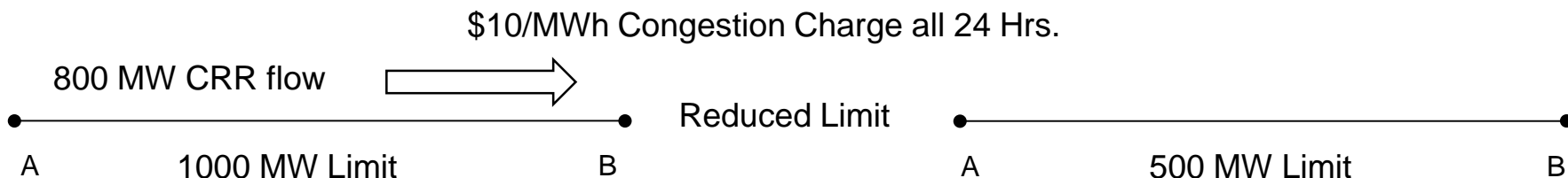
Current congestion revenue rights market design results in inequitable allocation of revenue inadequacy

- All revenue inadequacy is allocated to measured demand (load + exports)
- No consideration of location of constraints causing revenue inadequacy
- Provides incentives to procure low priced congestion revenue rights that profit purely from differences between auction model and day-ahead market model
- Release thousands of megawatts of transmission capacity in the annual auction that is ultimately unavailable

Management proposes two enhancements to further address congestion revenue rights auction efficiency

- Partial funding: Allocate revenue inadequacy to congestion revenue right holders in proportion to their flow over each constraint
 - Congestion revenue rights holders receive day-ahead market payments aligned with available transmission capacity
 - Results in equitable allocation to all congestion revenue rights holders on locational basis
 - Mitigates profits made purely on differences between auction model and day-ahead market model
- Reduce the amount of system capacity released in the annual process from 75% to 65%
 - Resolves majority of annual auction infeasibilities

Example of partial funding proposal



Under Current Design:

CRR Payment = 800 MW * \$10/MWh * 24 Hrs. = \$192,000

Congestion Rent = 500 MW * \$10/MWh * 24 Hrs. = \$120,000

Revenue inadequacy charged to load = \$192,000 - \$120,000 = \$72,000

Under Track 1B Proposal:

Allocate revenue inadequacy to CRRs

Ex: CRR₁ = 400 MW CRR₂ = 200 MW CRR₃ = 200 MW

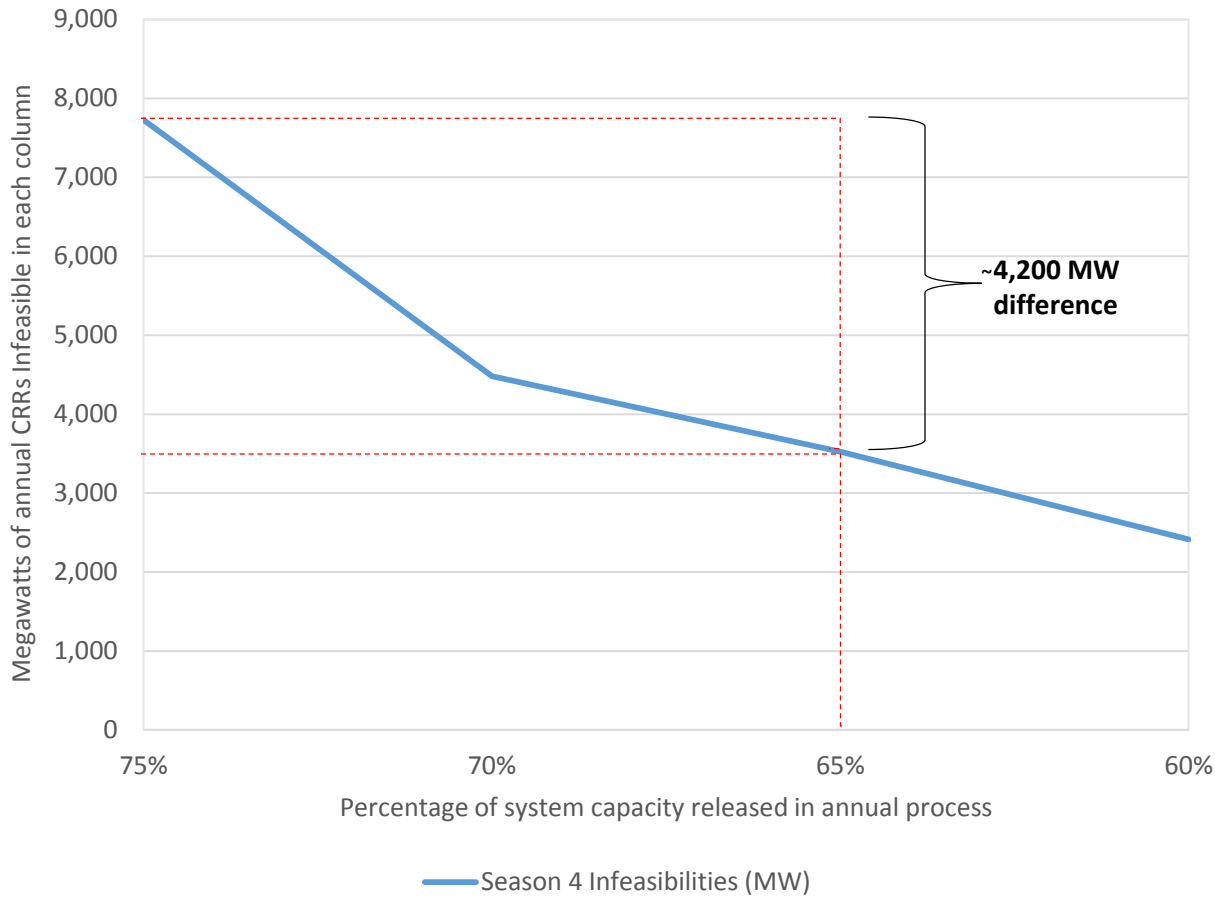
$$\text{CRR}_1 = \$72,000 * \frac{400 \text{ MW}}{800 \text{ MW}} = \underline{\$36,000}$$

$$\text{CRR}_2 = \$72,000 * \frac{200 \text{ MW}}{800 \text{ MW}} = \underline{\$18,000}$$

$$\text{CRR}_3 = \$72,000 * \frac{200 \text{ MW}}{800 \text{ MW}} = \underline{\$18,000}$$

Lower annual capacity release translates to lower monthly infeasibilities

CRR infeasibilities in monthly auctions compared to percentages of capacity released in the annual process



- Majority of annual auction infeasibilities eliminated by reducing system capacity released to 65%

Generally, other ISO/RTOs release less system capacity than the CAISO over equivalent timeframes

ISO/RTO	Total system capacity released 4 to 16 months forward
CAISO	75%
ERCOT	40-55%
ISO-NE	50%
MISO	~60%
NYISO	5-100% *
PJM	100% *
SPP	0-60%

*NYISO releases 100% from 4 to 6 months, 30% for 6 to 12 months, and 5% for 12 to 16 months

*PJM releases 100% of what remains after adjustments for loop flows and historic flow ratings

Most stakeholders support the proposal to allocate revenue inadequacy to congestion revenue rights holders

- DMM, SCE, Six Cities, and the CPUC support the proposal as an improvement
 - Continue to prefer a design in which only a “willing counterparty” would fund a congestion revenue right’s payments in exchange for a fixed payment
- Other stakeholders oppose and offer different revenue inadequacy allocation methodologies
- Some stakeholders recommend that the ISO first observes results of its track 0 and track 1A efforts

Stakeholders are divided on the proposal to reduce the amount of system capacity released in the annual process to 65%

- MSC supports the proposal as a measure to protect congestion revenue rights holders from extreme devaluations
- CDWR is concerned that this proposal will impede their ability to obtain needed congestion revenue rights
- PG&E is concerned that this proposal may prevent some congestion revenue rights that would have been revenue sufficient from being released

Management recommends the Board approve the congestion revenue rights auction efficiency track 1B proposal

- Aligns congestion revenue right payments to available transmission capacity
- Provides for equitable allocation of congestion payment shortfalls among all congestion revenue rights holders
- Mitigates incentives to bid for congestion revenue rights that could have inflated payouts relative to auction prices
- ISO will include analysis and data in its monthly market performance reports on the impacts of the proposal