



Congestion Revenue Rights (CRR) Auction Efficiency – Track 1B

Pre-Market Simulation Webinar
October 31, 2018

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External Training and Readiness



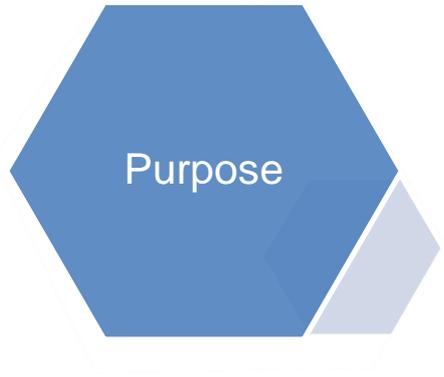
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Agenda



- Purpose of CRR Auction Efficiency – Track 1B
- Timeline
- Changes to:
 - Settlements
 - Reporting
 - Business practice manuals
- Market simulation activities





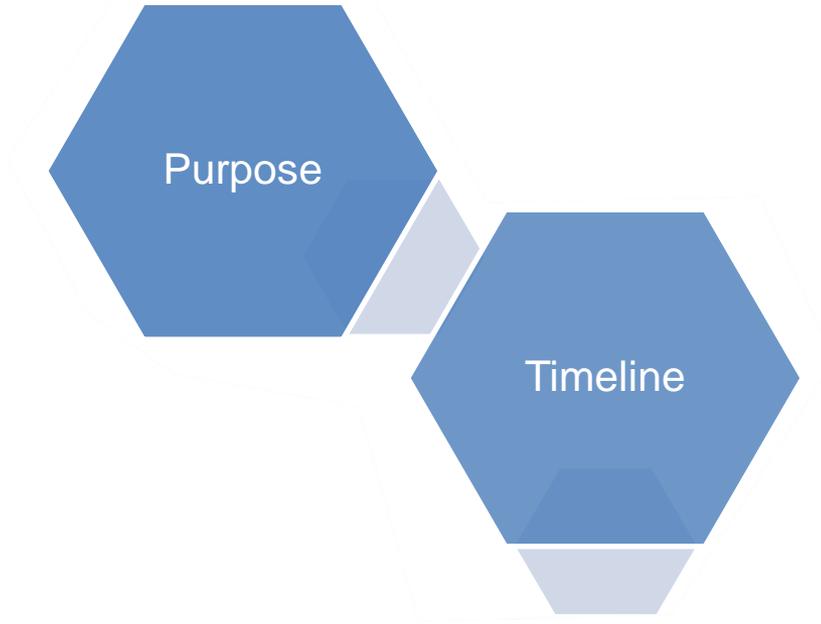
Purpose

Purpose of Congestion Revenue Rights Auction Efficiency – Track 1B

- Reduce the amount of system capacity that is released in the annual process from 75% to 65%
- Settlements enhancements to allocate available Integrated Forward Market (IFM) congestion revenue

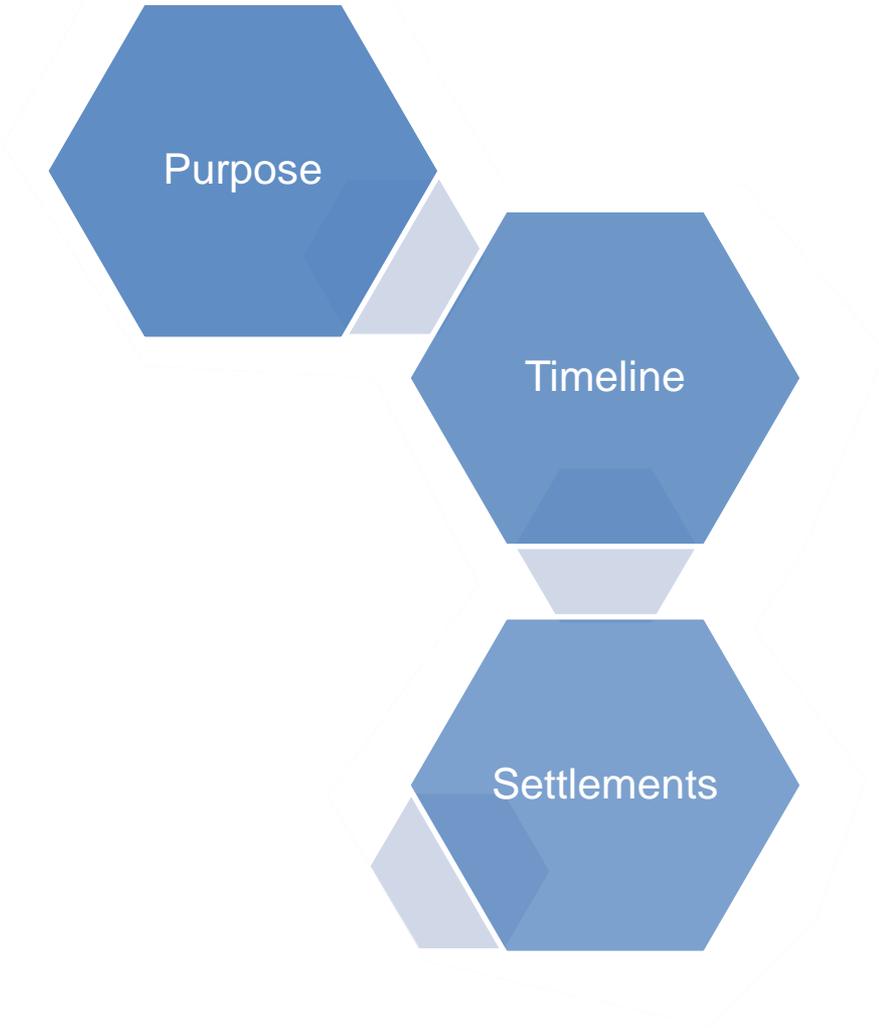
Why are these changes needed?

- Since 2012, CRR auction revenues that are allocated to load serving entities were on average \$130 million less than the congestion payments received by entities purchasing these CRRs
- In early 2017, the ISO began its initiative to address CRR auction efficiency. The ISO is concerned about the large CRR payments made to the holders of auction CRRs in comparison to the auction revenues collected when releasing the CRRs through the auctions
- The intent behind this policy is to reduce the shortfall between the auction revenues and congestion payouts



When will the changes take place?



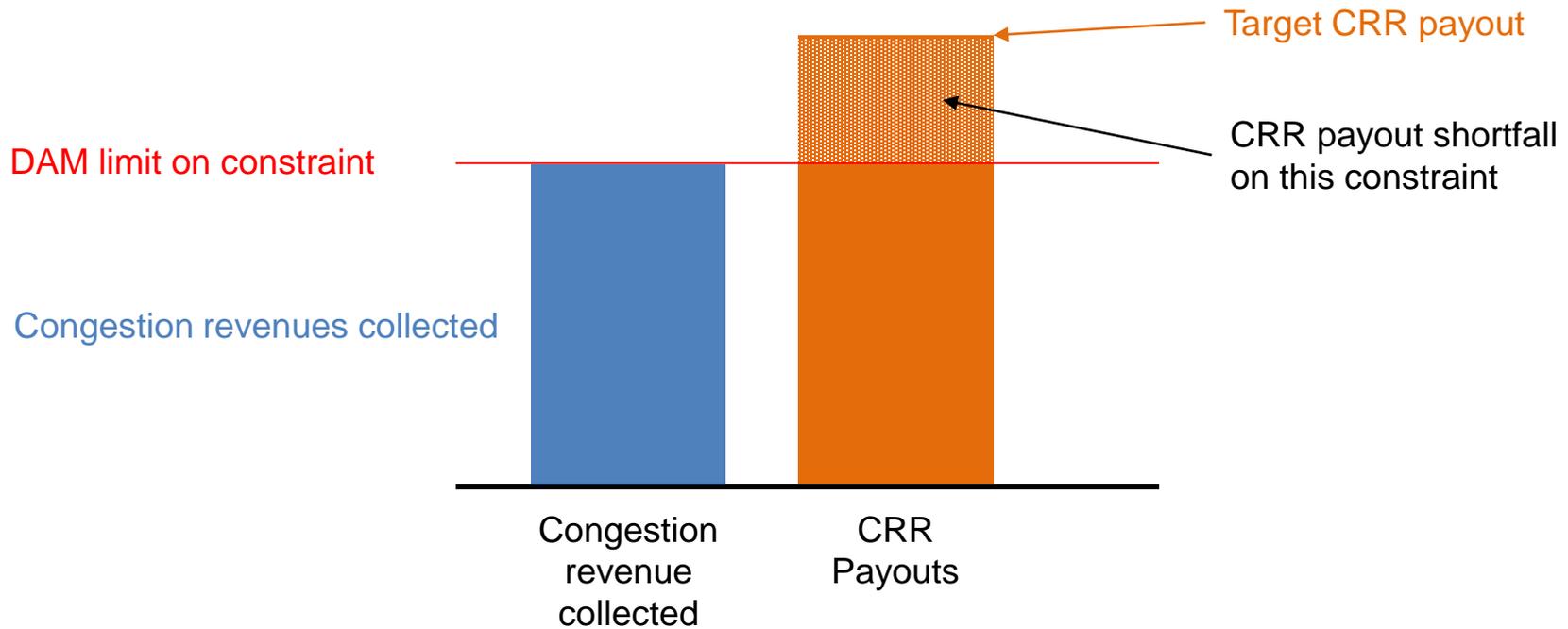


What are the CRR changes with Track 1B?

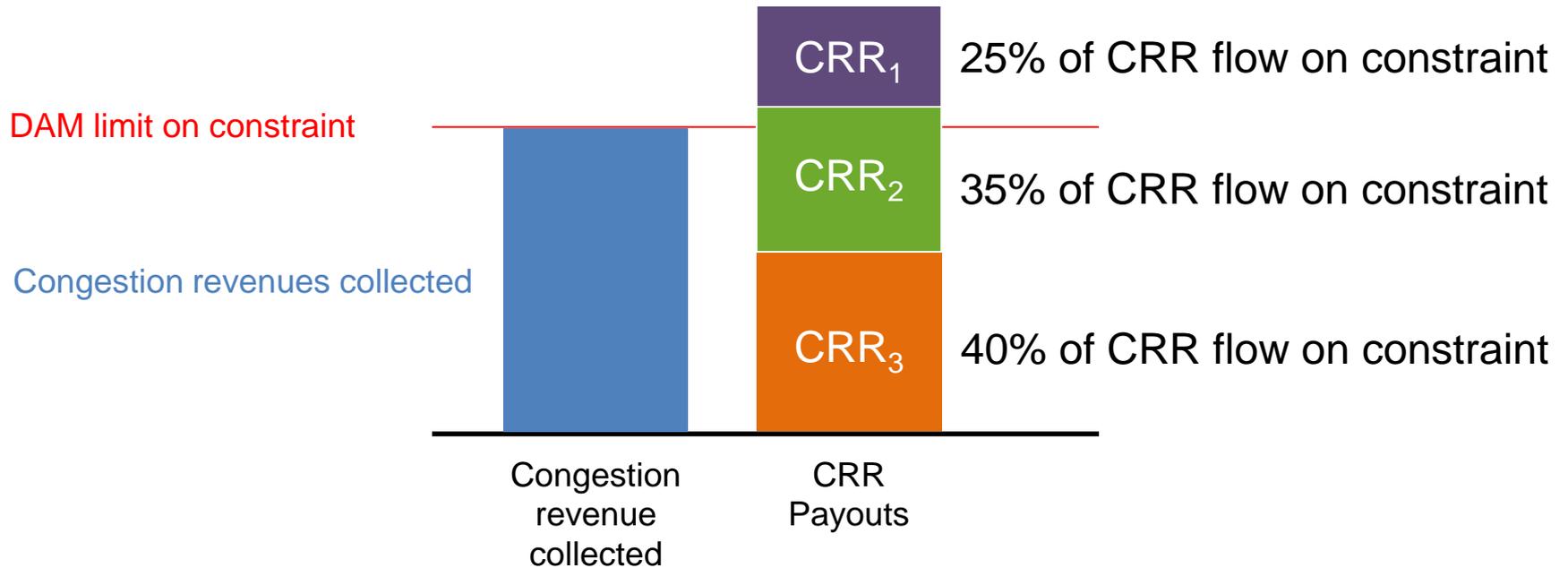
Calculate offset MW for netted CRRs per portfolio per constraint/contingency case per hour:

- Calculate CRR portfolio flow portion based on the portfolio's netted prevailing flow over all portfolios' netted prevailing flow on a constraint (alpha)
- Calculate the difference between the IFM flow and CRR flow (CFD)
- Calculate netted CRR portfolio Offset MW = $\alpha \times \text{CFD}$
- Calculate netted CRR portfolio Notional, Offset, Clawback and Circular Scheduling Revenue values

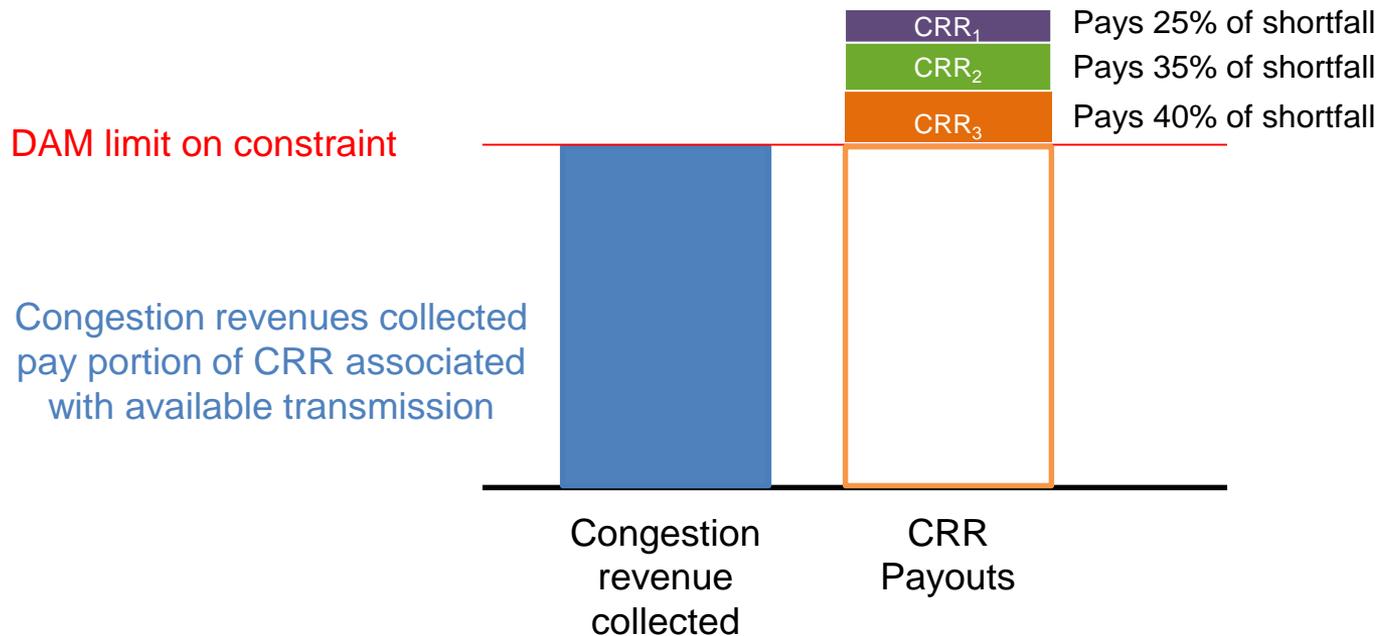
CRR 1B proposes to evaluate day-ahead constraints to determine if revenue was collected to payout CRR Notional Value (Shortfall)



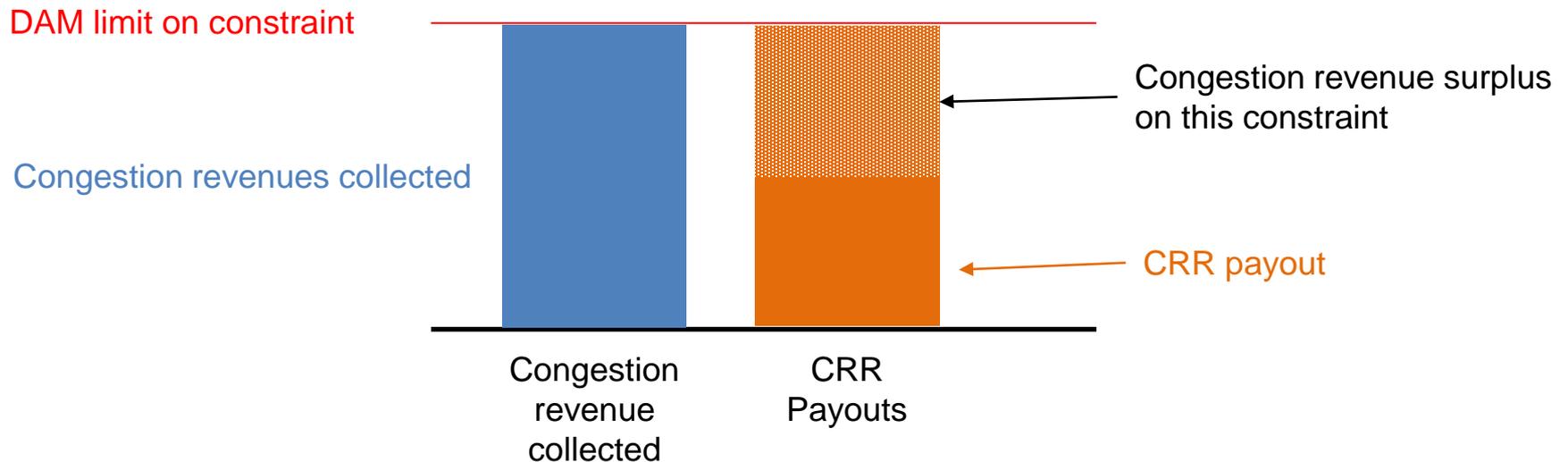
Proposal finds effective CRR flows on those constraints in that hour



Proposal scales back payment to those effective CRRs by allocating each CRR its portion of the shortfall



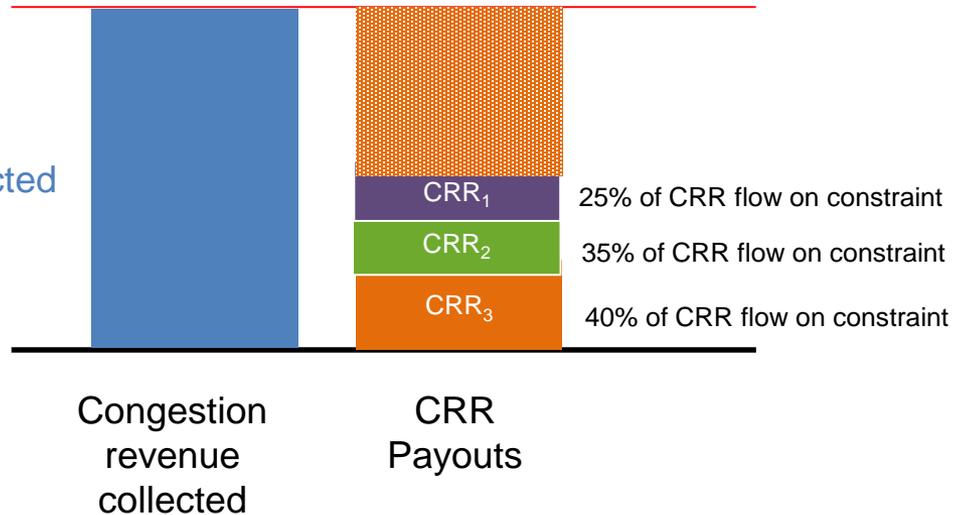
The day-ahead market will collect a surplus when day-ahead market settled flow is greater than congestion revenue rights settled flow on a constraint



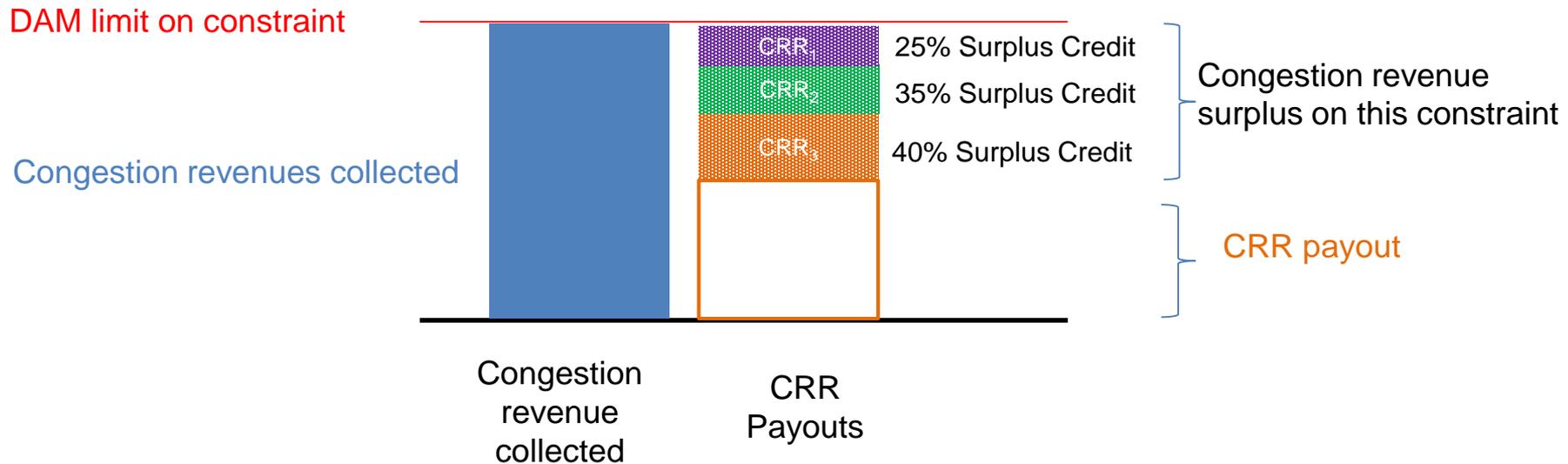
CRR 1B proposes to evaluate day-ahead constraints to determine if revenue was collected to payout CRR Notional Value (Surplus)

DAM limit on constraint

Congestion revenues collected



CRR 1B proposes to evaluate day-ahead constraints to determine if revenue was collected to payout CRR Notional Value (Surplus)

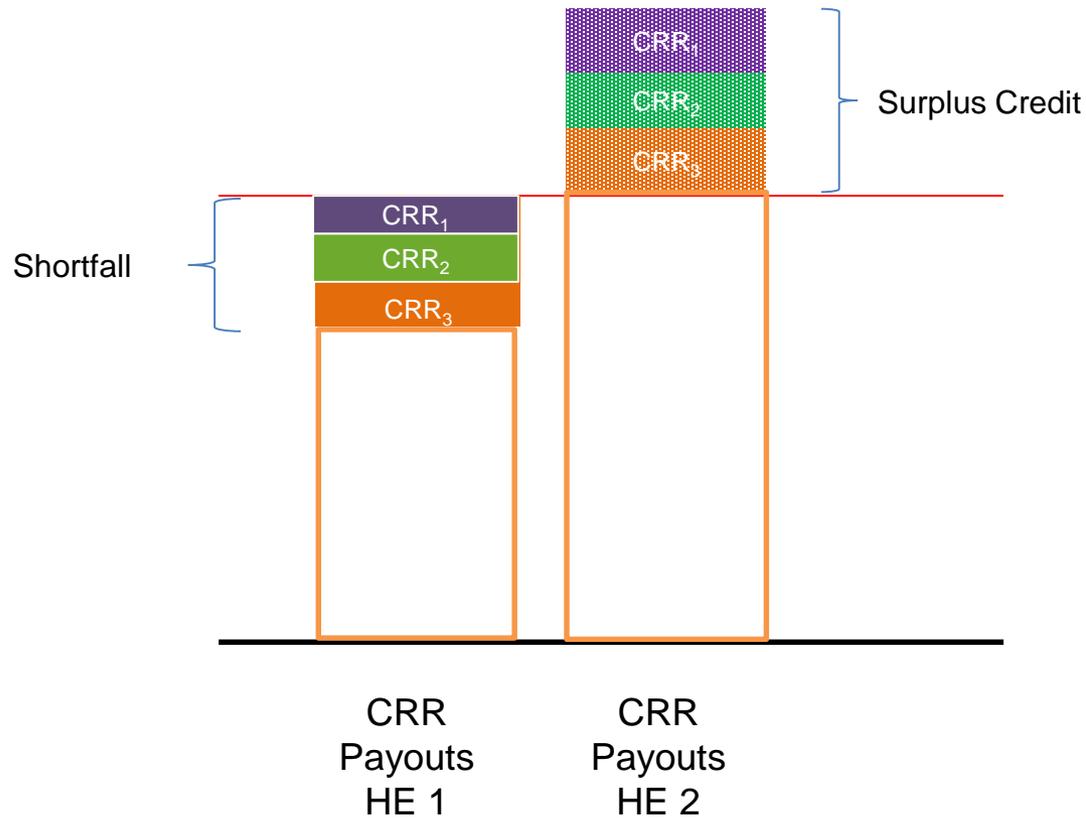


What are the **daily** settlement changes with Track 1B?

Daily Settlement

- Daily CRR Settlement value based on results of constraint-based calculations
 - Hourly offsets (deficits or surpluses) from available constraint-specific funds are used in calculating the daily settlement value (CC 6700)

Daily Netting of Surplus and Shortfalls up to Notional Value by CRR and Constraint

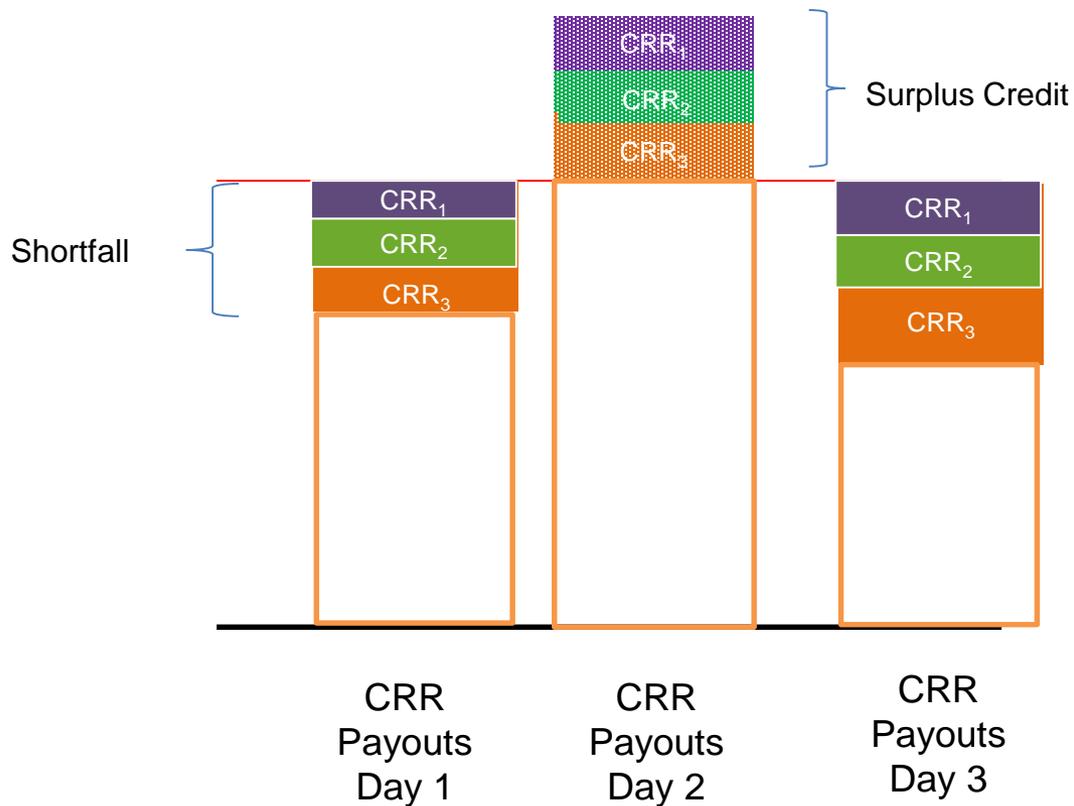


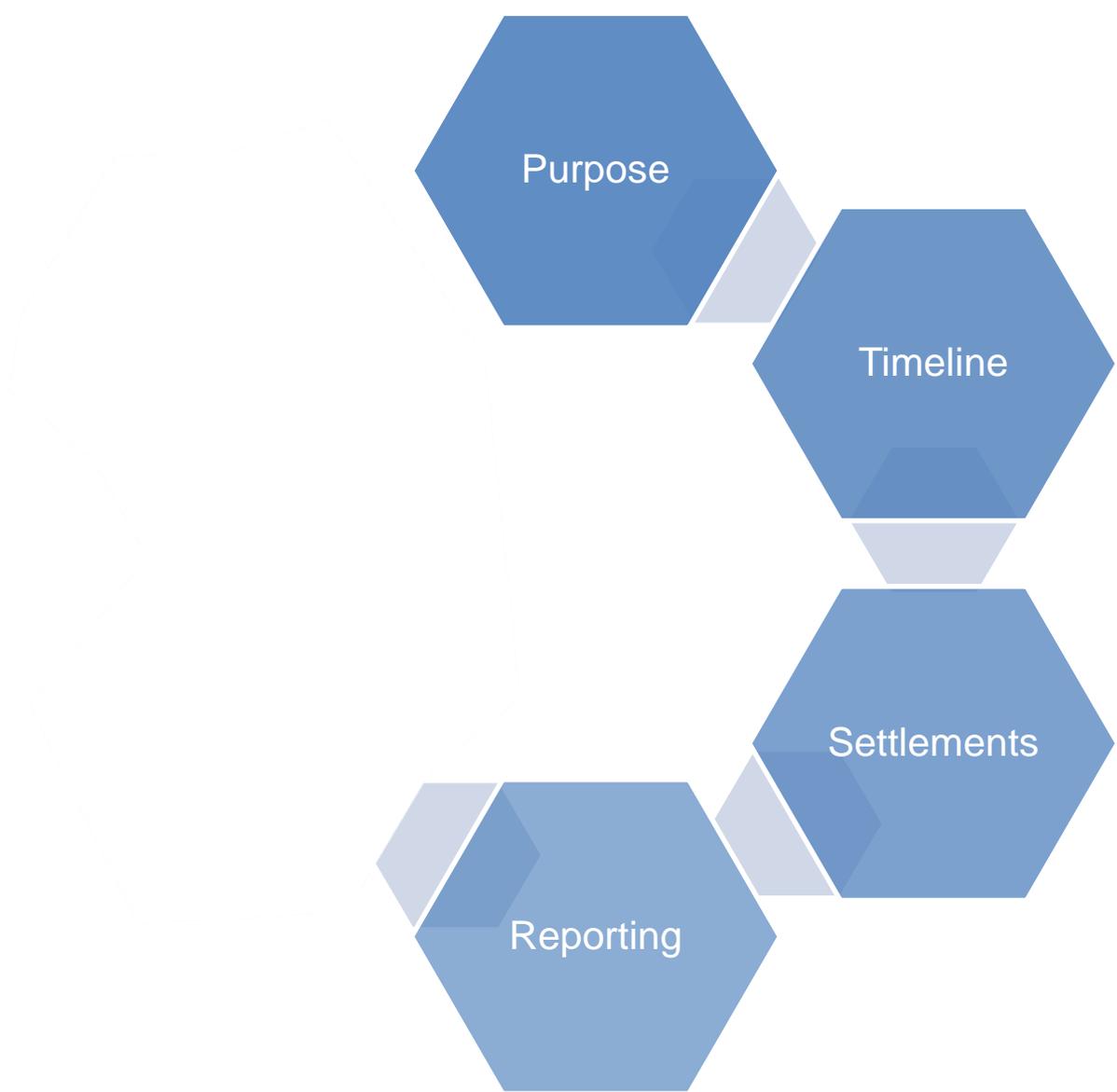
What are the **monthly** settlement changes with Track 1B?

Monthly Settlement - at end of each month

- Daily surplus and deficits per constraint are settled (CC 6701)
- Residual funds allocated to measured demand (New CC 6706)

Monthly Netting of Surplus and Shortfalls up to Notional Value by CRR and Constraint





What are the reporting changes?

- **Customer Market Results Interface (CMRI)**
 - CRR Revenue Adjustments
 - Daily report posted to Post-Market menu
 - Will provide hourly data related to CRRs and transmission constraints

- **Open Access Same-time Information System (OASIS)**
 - CRR Aggregated Revenue Adjustments
 - Daily report posted to Congestion Revenue Rights menu
 - Will provide hourly notional values and offset values aggregated over all CRR IDs

CMRI: CRR Revenue Adjustments

Day-Ahead Real-Time **Post-Market** Default Bids Convergence Bidding Forecast Reference LSE Energy Imbalance Market Phase Shifter Gas Burn

Start Date: 10/30/2018 End Date: 10/30/2018

Day-Ahead Ancillary Services

Trade Date ↑ SC ID

No Data found

Report Generated: 10/30/2018

Confirmed Dispatch Notice (CDN)

CRN

Expected Energy Allocation Details

Expected Energy

ISO Commitment Cost Details

Non-Dispatchable Time Ranges

Resource Level Movement

Regulation Pay for Performance

Resource: Schedule Type: [ALL]

Resource Type: [ALL]

Results

Duration	Resource Type	Product	Schedule Type	HE01 [MW]	HE02 [MW]	HE03 [MW]	HE04 [MW]	HE05 [MW]	HE06 [MW]	HE07 [MW]

CRR Revenue Adjustments will be added to this menu

Expected data elements:

- Trade Date
- Business Associate ID
- CRR ID
- CRR Type
- Hedge Type
- Transmission Constraint
- Contingency Case
- Interval Start Time
- Interval End Time
- Notional Revenue
- Offset Revenue
- CRR Clawback Revenue
- Circular Scheduling Revenue

OASIS: CRR Aggregated Revenue Adjustments



ATLAS REFERENCE REPORT DEFINITION PRICES TRANSMISSION SYSTEM DEMAND ENERGY ANCILLARY SERVICES CONGESTION REVENUE RIGHTS PUBLIC BIDS

CRR Clearing Prices

CRR Inventory

Welcome to the California ISO Open Access Same-time Information System (OASIS) site. On OASIS you will find real-time data related to the ISO transmission system and its Market, such as system demand forecasts, transmission outage and capacity status, market prices and market result data.

Expected data elements:

- Trade Date
- Interval Start
- Interval End
- Transmission Constraint ID
- Contingency Case
- Total Notional Value
- Total Offset Value





Which Business Practice Manuals are changing?

- Congestion Revenue Rights
- Market Instruments
- Market Operations
- Settlements & Billing
 - CG CC 6700 CRR Hourly Settlement
 - CG CC 6790 CRR Balancing Account
 - CG CC 6706 Monthly CRRBA Clearing
 - CG CC 6703 CB CRR Adjustment Settlement
 - CG CC 6701 Monthly CRR True-Up
 - CB CC 4562 GMC CRR Services Charge



Market simulation activities: 11/5/18 – 11/28/18

- Unstructured scenarios
- Validate anticipated settlement outcome





California ISO

Questions?

REFERENCE MATERIAL

Reference Material

- Business Requirements Specification:
 - <http://www.caiso.com/Documents/BusinessRequirementSpecification-CongestionRevenueRightsAuctionEfficiency1B.pdf>
- Oct 1, 2018 Tariff Amendment:
 - <http://www.caiso.com/Documents/Oct1-2018-TariffAmendment-CRRAuctionEfficiencyTrack1BModification-ER19-26.pdf>
- Settlements technical documentation (drafts):
 - <http://www.caiso.com/Pages/documentsbygroup.aspx?GroupID=9179434F-281A-4AA8-B367-8F400BFC0E31>
- Stakeholder Initiative Page:
 - <http://www.caiso.com/informed/Pages/StakeholderProcesses/CongestionRevenueRightsAuctionEfficiency.aspx>