

# Congestion Revenue Rights (CRRs): Overview and Introduction to Current Issues

Part 1: CRR Overview

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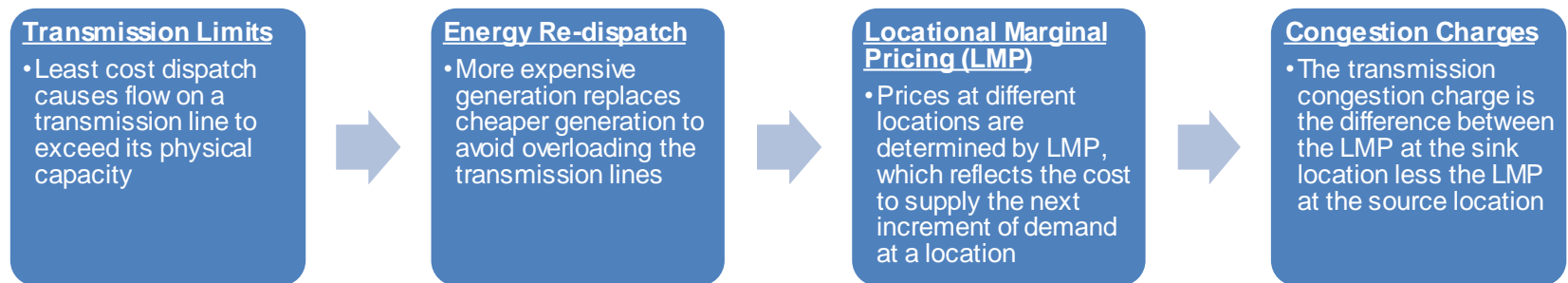
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# Agenda

- CRR Purpose and Intent
- CRR Attributes
- Acquisition Process
- CRR Settlement

# CRRs Purpose and Intent

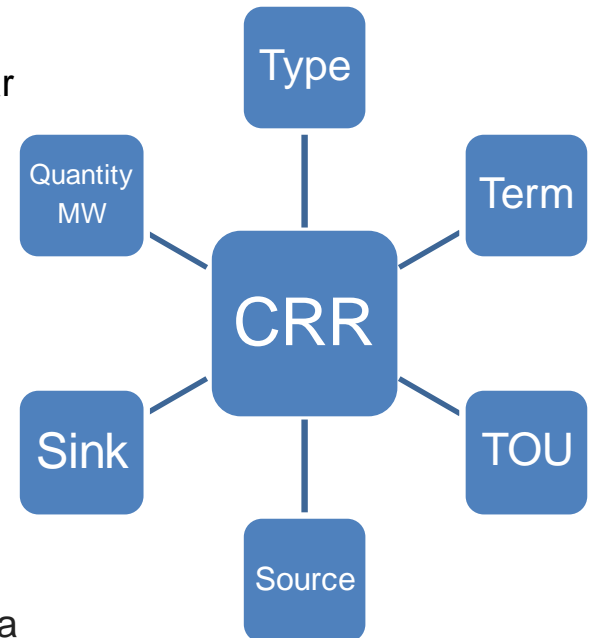
- Congestion occurs when there is insufficient available transmission capacity to accommodate all energy schedules simultaneously, resulting in price differences between locations on the grid



- CRRs are financial instruments that allow market participants to hedge against day-ahead congestion risk
- The CAISO pays CRR holders for their CRR entitlements only to the extent the CAISO CRR Balancing Account (CRR BA) collects sufficient revenue through day-ahead market congestion charges and CRR charges

# CRR Attributes

- CRR Type:
  - CRR Obligation
  - CRR Option (merchant transmission facility)
- CRR Term:
  - [Annual Process] Long-Term (10-year product for each calendar quarter)
  - [Annual Process] Seasonally (calendar quarter)
  - [Monthly Process] Monthly
  - Merchant Transmission up to 30 years
- CRR Time of Use (TOU):
  - On / Off peak
- Source and Sink:
  - Limitations depending on allocation vs auction
  - From a generator bus to either a load aggregation point (LAP), a trading hub, or an intertie (scheduling point)
  - From a trading hub to either a LAP or an intertie
  - From an intertie to either a LAP or a trading hub



# CRR Acquisition: Allocation vs Auction

## Allocation

Open to Load Serving Entities (LSE)

CRRs are awarded at no cost

LSE requested CRRs are limited to the eligible quantity (EQ) based on its forecasted load

CAISO runs the Simultaneous Feasibility Test (SFT) to determine the maximum quantity of CRRs considering the feasibility of transmission network

## Auction

Open to all market participants

Payments/charges are settled for the awarded CRRs at the cleared prices

Participants are required to post credit to cover the potential financial risks associated with acquiring CRRs

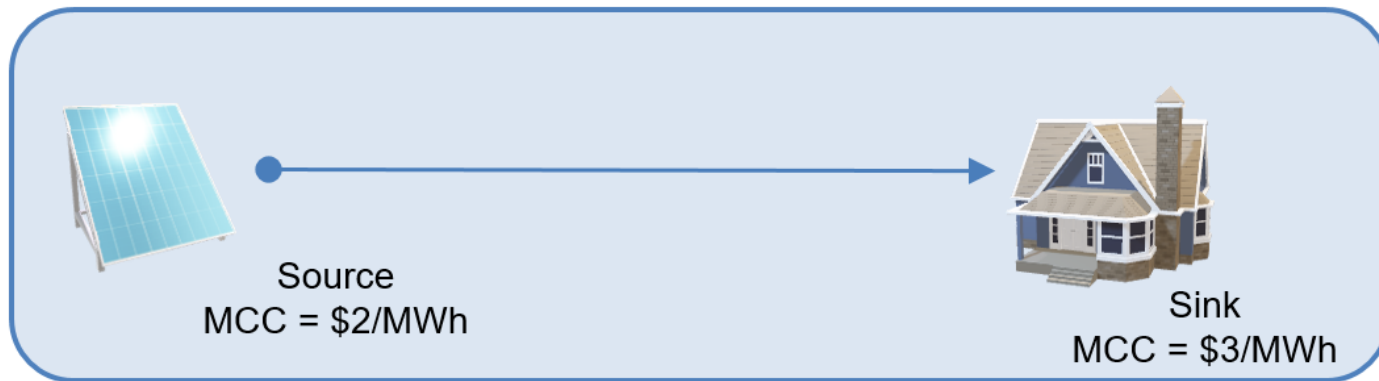
CRRs are cleared based on bids subject to the SFT

# CRR Acquisition: Annual and Monthly Processes

CRR Process		
Type	Process	Description
Annual (65% Grid Availability)	Tier 1 (PNP Tier)	Priority Nomination Process (PNP) – priority opportunity to renew CRRs received in last year's annual allocation process  Limited to minimum of 66.7% of CRR SEQ or previous years default LAP awards
	Tier LT	Restricted to Tier 1 (PNP Tier) awards
	Tier 2	Up to 66.7% of CRR Seasonal EQ (SEQ)
	Tier 3	Up to 100% of SEQ
	Auction	Any participant may bid from any biddable source to any biddable sink
Monthly (100% Grid Availability)	Tier 1	Up to 100% of CRR Monthly EQ (MEQ) less annual awards
	Tier 2	Up to 100% of CRR MEQ less annual awards and monthly T1 awards
	Auction	Any participant may bid from any biddable source to any biddable sink

# CRR Settlement

- CRR Holder Revenue = sink MCC – source MCC
  - When source MCC < sink MCC = CAISO CRR BA pays CRR Holder
  - When source MCC > sink MCC = CRR Holder pays CAISO CRR BA



- Example CRR Revenue and Congestion Charge = \$1/MWh

# CRR Settlement Offsets

- Awarded CRR payout may differ from actual congestion charges collected
  - Generation may vary hourly within a CRRs term while CRR quantity remains flat
  - Actual flows may differ from the CRR model
- CRR holders share the under collected amount in pro-rata share to their CRR holding
- Reduction of CRR payouts calculated on a constraint-by-constraint basis

