



California ISO

# EDAM Congestion Revenue Allocation Phase 2 – Stakeholder Working Group Meeting

May 11<sup>th</sup>, 2026

# Housekeeping



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Please engage in a respectful and professional manner. Introduce yourself and your organization when speaking. Follow the facilitator's guidance for speaking or asking questions.



Please keep comments brief and avoid repeating points already made to ensure everyone has an opportunity to participate in a robust discussion.



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You may also send questions via chat to all panelists.

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# Agenda

Time	Topic	Presenter
1:00 – 1:05 PM	Welcome	Christina Guimera
1:05 – 1:30 PM	Meeting objectives and introduction	Milos Bosanac
1:30 – 3:45	Design Concepts Discussion	Milos Bosanac & CAISO Team
3:45 – 4:00 PM	Next Steps	Christina Guimera

# Meeting Objectives

- Review stakeholder comments on design concepts introduced during April 17<sup>th</sup> stakeholder working group meeting.
- Discuss the design concepts at a more granular level and continue to shape feasibility of introduced concepts.
- Continue to receive stakeholder feedback and refine design concepts to establish structured and defined viable proposals.

## Overview of prior working group meeting – April 17th

- The working group meeting commenced evaluation of substantive design concepts for EDAM congestion revenue allocation.
- The Energy Authority (TEA) presented near-term/quick-wins design suggestions and a long-term concept.
- CAISO introduced three potential design concepts – spectrum of concepts – for discussion and consideration.
- Discussed approach for managing congestion underfunding risk.

## Stakeholder comment themes on April 17<sup>th</sup> working group meeting

- Received sixteen (16) sets of stakeholder comments to the prior workshop.
- Comment themes:
  - Broad support for design concept #3 which provides a common simultaneous feasibly test process for OATT rights and CRRs establishing congestion revenue entitlements.
  - Broad opposition/concerns with design concept #2 which creates a historical baseline for establishing different congestion revenue entitlements for rights within the baseline compared to those outside of the baseline.
  - Divided perspectives on concept #1 which introduces a design for allocating congestion revenues based on cleared balanced schedules.
  - Similarly divided perspectives on some of the design concept considerations introduced by The Energy Authority (TEA).
  - A couple stakeholders suggested slowing down to evaluate the practical effects of the Phase 1 design in operation as the EDAM launches.

## Overview of *Congestion Revenue Allocation* design in EDAM today

- In Phase 1 of the initiative, the ISO and stakeholders evaluated a design for parallel flow congestion revenue allocation among EDAM balancing areas.
- The Phase 1 design is transitional, and establishes:
  - Congestion revenue resulting from internal transmission constraints is allocated to the EDAM balancing area where the constraint is located
  - (New) Congestion revenue resulting from parallel flow associated with the exercise of eligible firm OATT transmission rights through a balanced self-schedule is allocated to the EDAM balancing area where the transmission rights are exercised
- The EDAM entity sub-allocates the congestion revenues under the terms established within their OATT.



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# The Energy Authority (TEA) – Design Concepts

# Overview of TEA suggested design concepts

- “Near-Term/Quick Wins” suggestions:
  - **PTP carve outs:** by allowing transmission customers to carve out PTP-rights from the market, the congestion revenues accrued and allocated in market would be to NITS customers. Removes self-schedule incentive.
  - **More complete hedge for 6NN OATT rights** – allows registration of secondary network transmission (6NN – network non-firm) transmission rights and when these are exercised through a self-schedule they receive also a more complete (parallel flow) congestion hedge applicable in Phase 1 of design.
  - **Other suggestions:** Enable broader intertie bidding at EDAM interties as a way of reducing self-scheduling and improving liquidity.
- Long-term suggestion – CRR-like product for EDAM BAAs
  - Financial entitlements paid/charged for holding transmission rights (not using the right).
  - Direct settlement of congestion revenues with right holder
  - Sync with seams transaction framework for EDAM with M+/RTOW.

## PTP Carve-Outs

- Takes users/schedulers not involved in local optimization out of the CRA equation.
- Supports RA and RSE contracting to sink LSEs.
- Real congestion impacts unchanged or better than Phase 1 CRA.

## Give Import 6-NN Tier One

- Allow EDAM LSEs to get CRN for any NT rights (7-FN or 6-NN) at intertie import points for Tier One reversal eligibility.

## Stakeholder feedback on TEA-introduced design concepts

- Out of 16 commenters, 7 did not comment on the TEA design concepts while 9 provided some level of comment (either some level of support or opposition).
- Entities that expressed some level of support noted:
  - General support for some of the concepts introduced and suggested ISO consider these as the Western grid evolves: PTP carve outs, broadening intertie bidding, enabling virtual bidding.
  - A couple commenters expressed support for the long-term concept, recognizing it as an evolutionary point.
- Entities that expressed opposition did so particularly for the near-term concepts on the grounds that these exacerbate congestion issues and inefficient incentives.

# CAISO perspective on the TEA-introduced design concepts

- Perspective on “near-term/quick value” design concepts:
  - PTP-carve out of transmission exacerbates congestion issues and congestion costs, not directly relevant to the scope of this initiative.
  - Extension of the Phase 1 design to “6NN” transmission rights exacerbates and perpetuates the self-schedule incentives and opens the door to a hedge for non-firm transmission rights.
  - Expansion of intertie bidding capability at EDAM entity interties and enabling virtual bidding is outside the scope of this effort and is slated for evaluation in other efforts.
- Perspective on the “long-term” design concept:
  - Similarities to the design *Concept #3* introduced by the ISO where OATT rights and CRRs would be eligible for financial entitlements based on rights held, subject to simultaneous feasibility tests that dictate the magnitude of entitlements.
  - The design should not be dependent upon completion of seams transaction frameworks for interaction between EDAM and other markets.



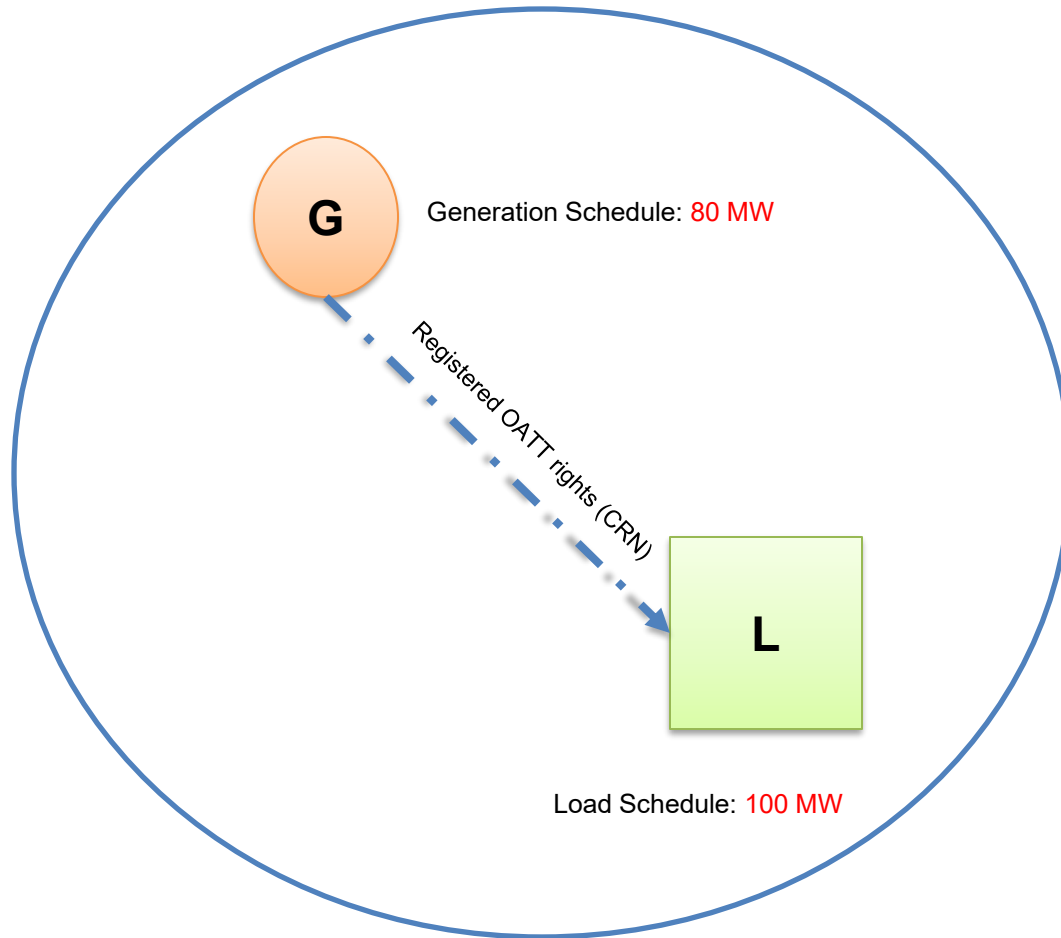
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CAISO Introduced Concept #1 – Allocation based on cleared balanced schedules

## Design Concept #1 – Congestion revenue arising from parallel flows is allocated based on cleared balanced schedules

- **Description:** Congestion revenues (including those arising from parallel flow) are allocated to the EDAM balancing area based on cleared balanced schedules associated with eligible firm OATT transmission rights in the EDAM balancing area.
  - For the CAISO balancing area, the allocation is based upon allocated and auctioned source/sink CRRs with an effect on transmission constraints in the EDAM footprint.
- This design concept was originally introduced last year in the Phase 1 initiative for consideration.
- Cleared balanced schedules associated with OATT rights – whether these arise from economic bids or self-schedules - would be eligible for parallel flow congestion revenue allocation.
- CAISO balancing area CRRs would be eligible for congestion revenue allocation associated with constraints across the EDAM footprint.
  - Commensurate with contribution of CRR to the EDAM footprint constraint

# Illustrative Example of Concept #1 – OATT Transmission Rights



- Generator (G) holds an 80 MW Firm OATT (PTP or NITS) reservation to serve Load (L).
- Based on its bids, G clears the market at 80 MW.
- Based on its bid in the market, L clears at 100 MW.
- The balanced portion of the schedules, associated with source/sink location of registered OATT rights, is 80 MW.
- Congestion hedge, including parallel flow component, provided for the balanced portion of 80 MW.

# Concept #1 – Overview of stakeholder comments

- Generally, stakeholders were divided on this conceptual design option.
- Commenters recognized the design as a potential bridge solution to a long-term design (Concept #3), and not a long-term solution itself.
- Those that *supported* the concept in some form noted (6 commenters):
  - Recognized it as a potential bridge solution if cannot adequately agree or design a long-term solution, but caution about significant efficiency impacts
- Those that *opposed* the concept noted (7 commenters):
  - Not feasible design for a common market footprint without a SFT
  - If cannot implement quickly, detracts time and implementation resources from a long-term design
  - It bases allocation on schedules and has significant incentive/efficiency impacts
  - Not an adequate solution, not consistent with design principles

# Concerns and potential mitigations of Concept #1 design

1. Design may not adequately limit self-scheduling incentive and may incent economic bidding at bid floor in order to improve likelihood of clearing market.
  - Potential mitigation measure:
    - Introduce requirement that economic bidding must be no lower than the Default Energy Bid (DEB) for the resource. This may disincentivize economic bidding at the bid floor.
    - May not be a sufficient measure to meaningfully reduce self-scheduling incentive
    - Increases implementation complexity to establish another eligibility factor by needing to evaluate the level of the economic bid
  
2. Implementation complexity of the design.
  - Requires software and system changes to recognize balanced schedules associated with registered eligible rights and CRRs application, and communication with settlement systems.
  - Dedicated staff time for implementation of concept #1 takes away from longer term design implementation.
  - Implementation timeline depends upon prioritization and final structure of design.



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CAISO Introduced Concept #2 – *Historical Baseline* establishes financial entitlements to congestion revenue

## Design Concept #2 – Historical baseline for congestion revenue entitlements associated with CRRs and OATT transmission rights

- **Description:** Establishes a historical baseline of congestion revenue entitlements for CRRs and eligible OATT transmission rights, as of a milestone date, accounting for parallel flows across interconnected systems.
  - Baseline entitlements seek to recognize historical uses of each other's system through parallel flows
- Rights within the Historical Baseline:
  - Financial congestion revenue entitlements are based on CRRs in the CAISO balancing area and eligible OATT transmission rights in the EDAM balancing areas held prior to a historical milestone pre-established date.
  - Establish eligibility for financial entitlements that include congestion revenues arising from parallel flow.
- Rights beyond/outside the historical baseline:
  - CRRs and eligible OATT transmission rights that arise after the baseline date may not be eligible for the same level of financial entitlement.
  - Eligible for congestion revenue arising from constraint in host EDAM balancing area, but may not be eligible for the parallel flow component.
  - Can consider potential structure of an enhancement to include a SFT to evaluate if rights beyond the historical baseline may be feasible and eligible for parallel flow congestion component as well.

## Concept #2 – Overview of stakeholder comments

- Commenters were also divided in their views on concept #2 but largely opposed the conceptual design of a historical baseline approach.
- Commenters supporting the design concept generally noted (3 commenters):
  - Design could be a viable near-term approach if done correctly, but not seen as long-term design solution
  - Could be a pragmatic middle ground, but risk of becoming obsolete and outdated quickly
- Commenters opposing the design concept generally noted (10 commenters):
  - Creates different treatment for transmission rights and could disadvantage clean generation deliveries, equity concerns
  - Impractical design, stale inputs, in a changing Western grid with changing flow patterns
  - High implementation complexity, detracts from long-term design

## More detailed design components – Concept #2

- Historical baseline milestone: *date of execution of EDAM Implementation Agreement*.
  - Eligible OATT transmission rights, CRR source/sink combinations, as of the date would be within the historical baseline.
- Unique modeling considerations for NITS transmission rights:
  - Modeling based on annual peak load for the year the milestone is established.
  - EDAM entity to identify the source/sink combinations associated with Firm NITS rights (designated network resources) for modeling associated with NITS load.
- Challenges and other considerations:
  - Unique considerations for how to transition EDAM entities already participating in the market to the historical baseline (compared to future EDAM entities)
  - Treatment of not-yet granted transmission rights dependent on transmission upgrades under way at time of historical baseline milestone date

# Illustrative Example – Concept #2 (Historical Baseline)

## Historical Baseline – Financial Entitlement

	MW	POR/Source	POD/Sink
Firm OATT 1	75	G1	L1
CRR 3	35	G3	L3

## Outside of Historical Baseline

	MW	POR/Source	POD/Sink
Firm OATT 2	10	G2	L2
CRR 4	20	G4	L4

### Note:

- Firm OATT 1 and CRR 3 congestion revenue entitlement extends to constraints within the broader EDAM market footprint.
- Firm OATT 2 and CRR 4 congestion revenue protection extends only to the EDAM BAA in which these rights are located.

### Historical Baseline

- Firm OATT 1 and CRR 3 are eligible for a more complete congestion revenue entitlement.
- Entitlement – from POR to POD – for revenues from internal constraint and parallel flow effects.

### Outside Historical Baseline

- Firm OATT 2 and CRR 4 are eligible for a more limited congestion revenue entitlement.
- Entitlement – from POR to POD – for revenues from internal BAA constraint only (not parallel flow component).

# Potential design variations in establishing a Historical Baseline

- Historical baseline based on: historical flows
  - Evaluate historical flow patterns between balancing areas and parallel flow contributions
  - These historical flows, based on impactful constraints, can establish a limit to allocation of parallel flow congestion revenues between balancing areas
  - Has to be determined on an individual basis with each new EDAM area entrant
- Historical baseline based on: a dollar limit for parallel flow congestion revenues
  - Negotiated limit, based on some historical effect metric, for congestion revenues associated with parallel flows in both directions
  - Requires negotiation on an individual basis between balancing areas with each new EDAM entity entering the market
  - Settlement occurs through the EDAM entity for parallel flow congestion revenues to redistribute under its tariff among its customers



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CAISO Introduced Concept #3 – Congestion revenue entitlements through a common simultaneous feasibility test (SFT)

## Design Concept #3 – Congestion revenue entitlements for CRRs and eligible OATT transmission rights subject to a common SFT

- **Description:** Application of a common SFT process for all eligible OATT transmission rights and CRRs to determine the allocation of congestion revenue entitlements.
- The common SFT process would be conducted on an annual basis and monthly basis, incorporating it with the current SFT process applicable in the CRR allocation process.
  - Annual SFT establishes annual congestion revenue entitlements
  - Monthly SFT establishes monthly congestion revenue entitlements, above the annual entitlements
- The SFT processes will evaluate the feasibility of flow across the broader EDAM footprint of the nominated rights, and its output would establish the level of congestion revenue entitlements for discrete rights based on the SFT results.
- Settlement considerations:
  - Allocation of congestion revenues could continue to the EDAM entity or could be directly allocated to scheduling coordinators associated with the eligible OATT rights nominated into the SFT process
  - Congestion revenues accruing above and beyond those associated with the nominated rights within the SFT process would be allocated to the EDAM entity to sub-allocate under the terms of their tariff

## Concept #3 – Overview of stakeholder comments

- Broad support across commenters for continued evaluation of concept #3 as the long-term design to congestion revenue allocation.
- Common SFT conceptual design seen as having the potential to equitably integrate OATT rights and CRRs in establishing a common allocation of congestion revenue entitlements.
- Commenters also noted that concept #3 avoids some of the concerns with a historical baseline as it provides for uniform treatment of OATT rights and CRRs.
- Other commenters noted that concept #3 most closely aligns with the established design principles.



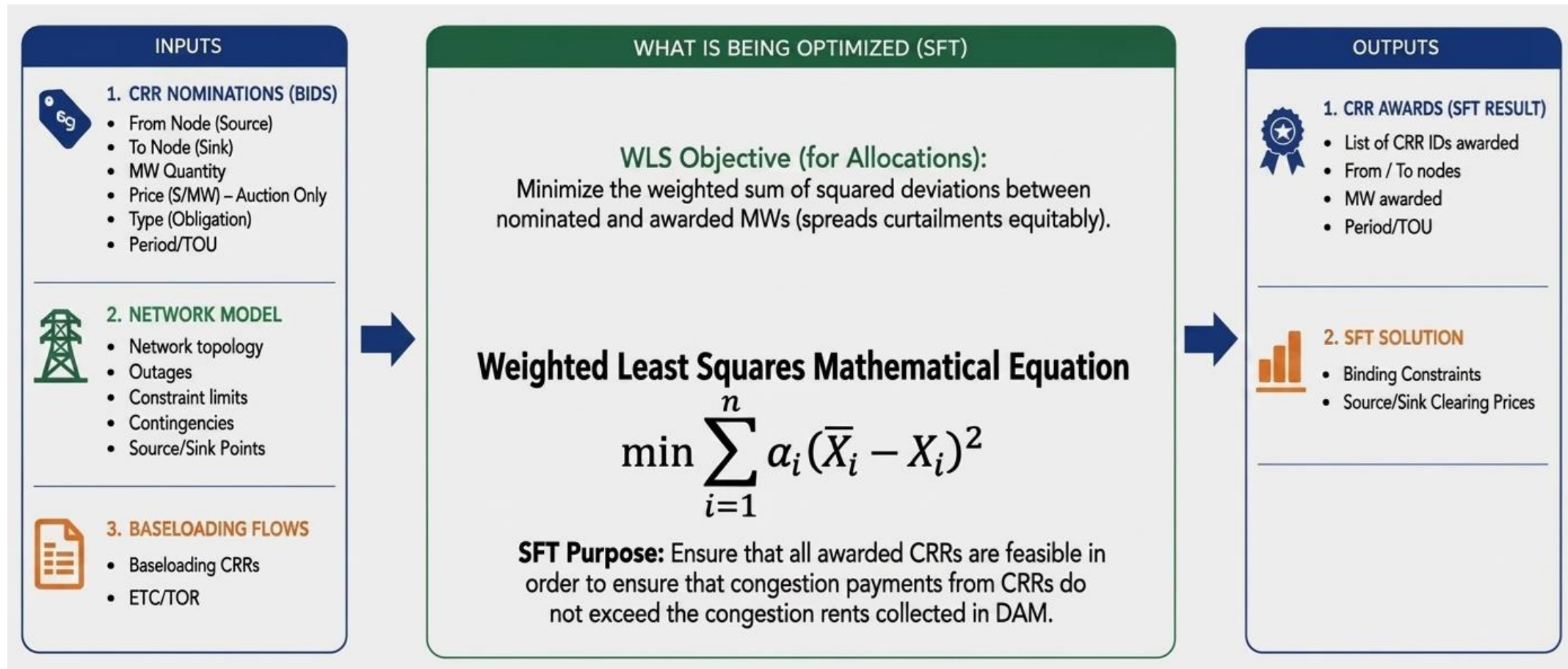
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# SFT Process Design Considerations

## Simultaneous Feasibility Test (SFT)

- The SFT is a technical power flow analysis used in power system engineering to verify that a set of modeled physical or market transactions can be implemented together without violating system constraints.
- SFT is an integral part of the CRR process and is executed on an annual and monthly basis.
- The main purpose for applying the SFT is to help ensure that the CRRs created through an allocation or auction process are economically feasible.

# Simultaneous Feasibility Test (SFT) in the CRR Process



# SFT Modeling Considerations

- The concept of the SFT is to take the CRR Source(s) location, the CRR Sink(s) location and MW quantity(s) of the CRR nomination or CRR bid and apply these to the FNM as if they were Generator(s) and Load(s).
- When setting up the SFT the following inputs are used:
  - FNM topology (from which the shift factors are derived), including scheduled outages
  - Sources and Sinks (Trading Hubs, APNodes and their allocation factors)
  - Constraint limits
  - Modeling of ETC and TOR
- Constraints enforced in the CRR process should be consistent with those used in Integrated Forward Market (IFM), as much as possible, but due to timing differences and the use of a DC model in the CRR process there are some inherent differences.

**Include here:**  
FNM topology of  
entire EDAM  
footprint

**Include here:**  
Eligible OATT  
transmission rights

# SFT in the Annual CRR Allocation Process

- Approximately 4-5 months before the start of each year, the CRR annual process begins, which produces seasonal/TOU CRRs for the upcoming year
- Seasons are defined on a quarterly basis
  - Season 1 = Jan, Feb and Mar
  - Season 2 = Apr, May and June
  - Season 3 = Jul, Aug and Sep
  - Season 4 = Oct, Nov and Dec
- The FNM for the annual process includes sixty-five (65) percent of the transmission system capacity that is in service for the start of the annual CRR allocation and auction processes

# SFT in the Annual CRR Allocation Process (Cont.)

- **Tier 1/PNP (Priority Nomination Process)**

- The CRR source-sink allocated in the immediately previous annual CRR Allocation process.
- Up to 50% of Load Metric

- **Tier Long Term (LT)**

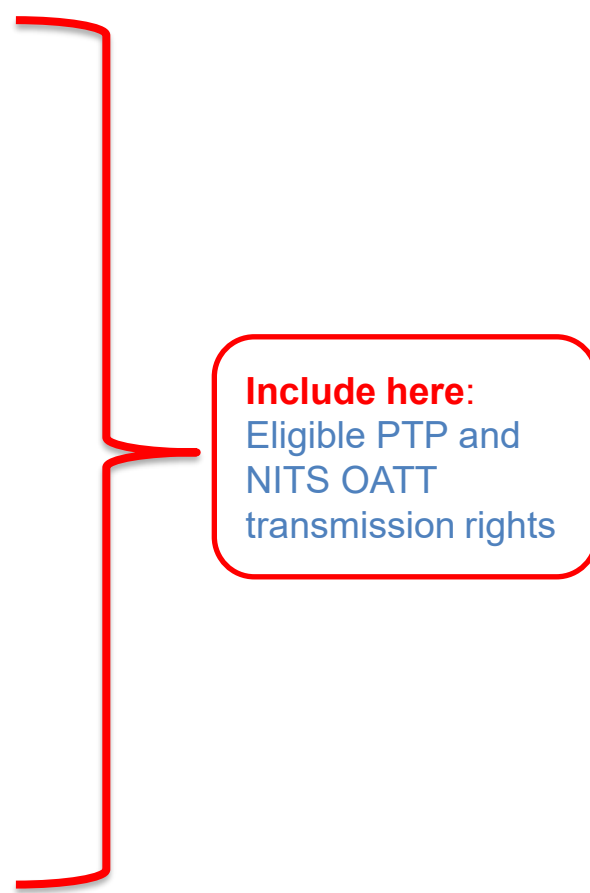
- The CRR source-sink pairs allocated in the immediately preceding PNP
- 

- **Tier 2**

- Tier 2 is limited to two thirds of its Seasonal CRR Eligible Quantity for each season, time of use and CRR sink, minus the quantity of CRRs allocated to that LSE in Tier 1 and Long-Term CRRs previously allocated.

- **Tier 3**

- Tier 3 is limited to 100% of its Seasonal CRR Eligible Quantity for each season, time of use and CRR sink, minus quantity of Tier 1 and Tier 2 allocated CRRs and Long-Term CRRs previously allocated.

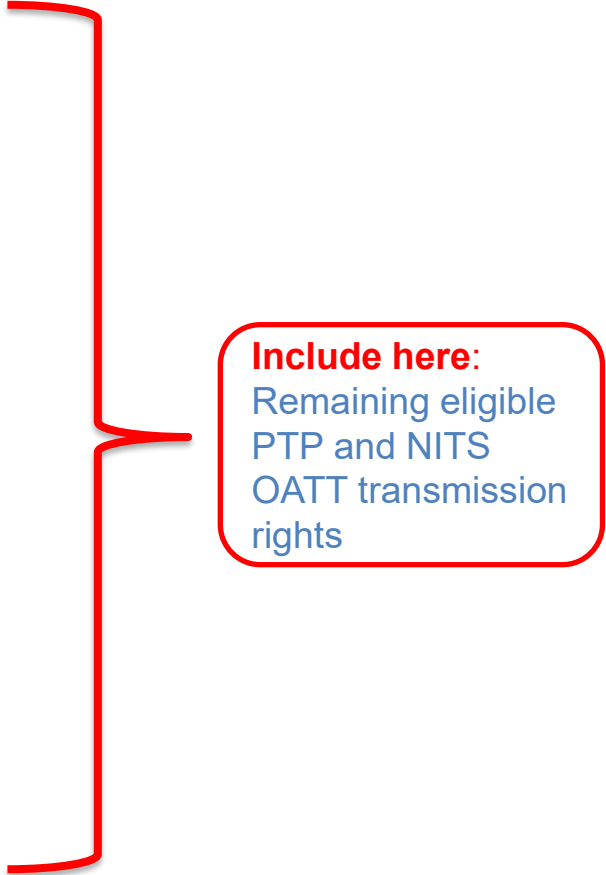


**Include here:**  
Eligible PTP and  
NITS OATT  
transmission rights

**Note:** The SFT of the Allocation Tiers are executed sequentially, meaning positions cleared in an earlier Tier are base loaded and not able to be reduced in subsequent Tiers

# SFT in the Monthly CRR Allocation Process

- Approximately 6 weeks before the start of each month, the CRR monthly process begins, which produces monthly/TOU CRRs for the upcoming month.
- **Tier 1**
  - Nominate up to 100% of the difference between its Monthly CRR Eligible Quantity and the total of any CRRs allocated in the annual process.
- **Tier 2**
  - Nominate up to 100% of the difference between its Monthly CRR Eligible Quantity and the total of any CRRs allocated in the annual process, minus the Monthly CRRs allocated in Tier 1.
- Adjustments made to the constraint limits used in the **monthly** SFT processes:
  - *Global De-rate Factor (GDF)* – This adjustment is reflected through the monitored facilities to account for unplanned outages and the impact on internal transmission elements
  - *Local De-Rate Factor (LDFR)* – This adjustment is reflected through the interface limits file to account for unplanned outages and is adjusted on an interface-by-interface basis.



**Include here:**  
Remaining eligible  
PTP and NITS  
OATT transmission  
rights

# Potential modeling approach for OATT transmission rights within the SFT

- Eligible OATT transmission rights:
  - Long-term and monthly firm PTP and NITS transmission rights
- Modeling PTP transmission rights:
  - From defined source to defined sink, for reserved MW, in annual and monthly SFT process
- Modeling NITS transmission rights:
  - Annual SFT:
    - Load modeled based on annual peak load forecast
    - EDAM entity nominates appropriate source (designated network resources) to sink NITS transmission rights up to the modeled load
  - Monthly SFT:
    - Load modeled based on monthly peak load forecast
    - EDAM entity nominates appropriate source (designated network resources) to sink NITS transmission rights up to the modeled load

# Managing Congestion Underfunding Risk

- Entitlements to congestion revenues, particularly under conceptual designs #2 and #3, may be affected by unplanned constraints/transmission outages that may materialize within the month (outside of what is captured in SFT).
- The market operator may not collect sufficient congestion revenues to fully pay out the entitlements in those circumstances.
- In those cases, the ISO as market operator would allocate only the collected congestion revenues.
- This is consistent with how congestion revenues are allocated within the CAISO balancing area for CRRs – only collected revenues are allocated and an entitlement does not establish a financial right to non-collected congestion revenues.
  - Consistent with the *CRR 1B Initiative* policy

## Next Steps

- Comments on today's presentation are due on **May 22, 2026**.
  - Comment template has been posted
- Next stakeholder working group is scheduled for **June 2<sup>nd</sup>, 2026**:
  - Review of stakeholder comments
  - Focused discussion on discrete design concept (one or two concepts) to define more granularly and improve viability
- Coming soon: new dedicated initiative page for the *EDAM Congestion Revenue Allocation Phase 2* initiative.
  - Currently, materials are found under the *EDAM* initiative policy page.