California ISO

EDAM
EXTENDED DAY-AHEAD MARKET

REVISED DRAFT FINAL PROPOSAL:
EDAM CONGESTION REVENUE ALLOCATION

May 19, 2025

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Table of Contents

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I. Executive Summary

The Extended Day Ahead Market (EDAM) Congestion Revenue Allocation initiative evaluates narrow aspects of the method for allocation of congestion revenues resulting from transmission constraints across the EDAM footprint. Congestion revenues arise as a result of the difference between the Locational Marginal Price (LMP) that generation is paid and load is charged at their respective locations due to congestion on the grid. Under the EDAM FERC-approved design, the market operator allocates these congestion revenues to the EDAM balancing area where the transmission constraint is located. The EDAM balancing area then sub-allocates the received congestion revenues under the terms of its tariff. This is the same congestion revenue allocation method that is in effect today in the Western Energy Imbalance Market (WEIM).

In PacifiCorp's pending Federal Energy Regulatory Commission (FERC) proceeding on revisions to its Open Access Transmission Tariff (OATT) for EDAM implementation,[1] some customers raised concerns with the impacts of the EDAM design for congestion revenue allocation among EDAM balancing areas. Specifically, PacifiCorp customers raised concerns that under the current design an EDAM balancing area may not be allocated congestion revenues that accrue within its balancing area as a result of an external transmission constraint (constraint and congestion in a neighboring EDAM balancing area) termed as "congestion revenues associated with parallel flows." Since the EDAM balancing area is currently not allocated congestion revenues associated with parallel flows in its balancing area, it may limit the ability of the EDAM entity to support a greater, more complete, congestion hedge for OATT transmission customers exercising their transmission rights.

In its answer in that proceeding, the ISO committed to an expedited stakeholder process and immediately initiated stakeholder discussions through the publication of an Issue Paper on March 17th to consider the concerns expressed and evaluate potential transitional mechanisms for allocation of congestion revenues associated with parallel flows. Informed by stakeholder input during the associated workshop and written comments, the ISO published a Draft Final Proposal on April 16th identifying a discrete proposal to address the concerns raised by market participants.

This Revised Draft Final Proposal further refines the proposed design to support EDAM launch in 2026 informed by extensive stakeholder input. The proposed design seeks to address stakeholder concerns by allocating additional congestion revenue associated with parallel flows to the EDAM entity. This allocation enables the EDAM entity to, as provided in their OATT, sub-allocate and provide a greater congestion hedge for transmission customers exercising their OATT transmission rights.

The proposal also provides a roadmap to continued evaluation of near-term enhancements to the design that can be implemented within the first year, or soon thereafter, of EDAM launch. Moreover, this roadmap provides for continued engagement and anticipates development of a long-term design through stakeholder working groups set to launch prior to EDAM go-live in 2026.

Described more granularly, the elements of the Revised Draft Final Proposal are as follows:

- **Internal Congestion Revenue:** The EDAM balancing area will continue to be allocated internal congestion revenues collected from binding transmission constraints within its balancing area, consistent with the FERC-approved design.

[1] PacifiCorp Proposed OATT Amendment, FERC Docket No. ER25-951.

- **Parallel Flow Congestion Revenues:** The market operator will allocate congestion revenues associated with parallel flows to the EDAM balancing area where the congestion revenues are collected (not where the transmission constraint is located) in an amount commensurate to the parallel-flow related congestion costs of balanced self-schedules associated with eligible firm PTP and NITS OATT transmission rights defined by registered contract reference numbers (CRN) in the ISO Masterfile. These revenues are sub-allocated to transmission customers by the EDAM entity under the terms of its OATT.
- **Remaining Parallel Flow Congestion Revenues:** The market operator will allocate any remaining congestion revenues associated with parallel flows to the EDAM balancing area where the transmission constraint is located, similar to the currently FERC-approved design.

This narrowly-tailored design change appropriately addresses congestion revenues allocated associated with parallel flows to ensure a just and reasonable congestion revenue allocation for EDAM go-live. It is important to note that this proposal is not precisely mirrored for the CAISO balancing area since the CAISO does not offer firm PTP and NITS transmission. The CAISO administers congestion revenue rights (CRR) – financial rights – to hedge for congestion in the day-ahead market. Under this proposal the CAISO balancing area may not be allocated congestion revenues associated with parallel flows arising from constraints in a neighboring EDAM balancing area. However, the CAISO balancing area will collect residual congestion revenue associated with parallel flows stemming from a constraint within the CAISO because, after the market operator allocates congestion revenues based on registered balanced self-scheduled eligible firm PTP and NITS Open Access Transmission Tariff (OATT) transmission rights, it will allocate the remaining congestion revenue associated with parallel flow to the EDAM balancing area where the constraint is located. These are incremental congestion revenues to what the CAISO receives today, and will support funding of CRRs in the CAISO balancing area. Moreover, to further mitigate associated CRR funding risks, the CAISO will explore CRR modeling enhancement that consider transmission uses in neighboring EDAM areas, which can further improve the accuracy of CRR awards and reduce the risk of releasing CRRs that are predominantly impacted by parallel flow effects, thus reducing CRR under-funding risks.

This allocation of congestion revenues associated with parallel flows, as described above, would apply in the day-ahead market only. The method for allocation of congestion revenues in the WEIM, the real-time market, remains unaffected by this proposed design.

The ISO will also continue to pursue near-term enhancements to the design which can be implemented within, or soon after, the first year of EDAM operations. A key near-term enhancement garnered stakeholder support in the last round of comments as a way to provide additional flexibility and mitigate potential self-scheduling incentives. Through a second phase of stakeholder engagement under this initiative, the ISO will design and move to implement an enhancement to enable allocation of congestion revenue associated with parallel flow commensurate with economically bid cleared balanced market schedules associated with registered eligible firm PTP and NITS OATT transmission rights. In particular, the key elements of this near-term enhancement which builds on the current proposal would consist of:

- **Allocation of Congestion Associated with Parallel Flow:** Congestion revenues associated with parallel flow, will be allocated by the market operator to the EDAM balancing area where the congestion revenues are collected (not where the transmission constraint is located) for the exercise of eligible firm PTP and NITS OATT transmission rights for cleared balanced day-ahead

market schedules, *whether self-scheduled or economically bid*. This enhancement reduces or mitigates concerns with incentives to self-schedule in the day-ahead market.

- **CAISO Balancing Area**: For the CAISO balancing area, the market operator will enhance the CRR functionality to allocate to the CAISO balancing area congestion revenues associated with parallel flow, resulting from a binding constraint in a neighboring EDAM balancing area, based on the settlement of source/sink CRRs released in the annual and monthly allocation and auction processes.

The Revised Draft Final Proposal also further refines, based on stakeholder input, a plan for monitoring, reporting and continued stakeholder engagement, in the next phase of the initiative. This includes a subsequent phase to this initiative to consider near-term enhancements as described above that can be implemented within the first year of EDAM operations or soon thereafter.

The ISO will also launch stakeholder working groups prior to EDAM launch to review and refine guiding principles for a long-term design along with evaluation of a spectrum of long-term designs for congestion revenue allocation, including consideration of a form of financial rights. During this policy design period the ISO would provide updates on a quarterly basis to the governing entity on the status of the initiative and sharing available data by that point on congestion within the EDAM footprint. This engagement for longer-term design changes is expected to run across a 12-24 month period and at the end of this process, the ISO would present a formal design proposal to the governing entity, along with implementation status and timelines. The ISO will strive to implement the design by the third year of EDAM operations, recognizing that the ultimate implementation timeline depends upon the complexity of the proposed design.

Stakeholder comments on the Revised Draft Final Proposal will be due on June 2nd, and a workshop has been scheduled for May 27th to discuss and review the proposal. The final proposal will be presented at a joint special session ISO Board of Governors and WEM Governing Body meeting in June, on a date to be specified in the near future.

II. Summary of Proposal Changes from Draft Final Proposal to Revised Draft Final Proposal

This Revised Draft Final Proposal introduces refinements and clarifications to the Draft Final Proposal informed by stakeholder written comments submitted on May 5th. The refinements and clarifications to the proposal are the following:

- Additional discussion and description of the effects of the proposed design on CRRs administered within the CAISO balancing area, and further modeling enhancements considered as part of the annual and monthly CRR release processes. This element is further discussed in section VII.A(e).
- Refinements to the description of the process and timelines for continued design evolution through stakeholder engagement to evaluate near-term enhancements and a spectrum of long-term designs to congestion revenue allocation. These refinements are further described in section VII.B.
- Introduction of a near-term design enhancement for consideration and implementation under which an EDAM balancing area is allocated congestion revenue associated with parallel flows

based on cleared balanced market schedules when economically bid (or self scheduled), associated with eligible firm PTP and NITS OATT transmission rights. For the CAISO balancing area, this enhancement would enable allocation of congestion revenues associated with parallel flows for an external constraint based on CRRs. This enhancement is described in section VII.C.

III. Introduction

The EDAM design overlays an organized market structure with the OATT contract path based frameworks prevalent across the West. Similar to the WEIM today, participating balancing authority areas in EDAM retain key roles and functions: administration of their OATT, transmission planning, resource planning, and reliability management. The transmission service provider(s) within the balancing area continue to administer their OATT and continue to make sales of transmission service within their service territory, while the market seeks to optimize the resource and transmission capabilities of the grid to provide economic, reliability, and environmental benefits.

Under the EDAM design, all resources in the balancing area will submit schedules into the market whether economically bidding or self-scheduling generator output. Similarly, the full transmission system capability is modeled in the FNM, along with transmission constraints that are represented in the market. An important feature of the market is that it is able to reflect these transmission constraints and seek to commit and dispatch resources in such a way as to avoid or ameliorate congestion that may be otherwise created by these transmission constraints. To the extent an internal transmission constraint binds in an EDAM balancing area, any resulting congestion revenues are allocated by the market operator to the EDAM balancing area where the constraint is located. This allocation method recognizes that the balancing area where the constraint is located bears the effects of the constraint and it is thus equitable for the resulting congestion revenues to flow to that balancing area to offset the cost effects of the constraint.

As discussed further below, based on modeled flows and the relationship between supply produced or demand consumed at a location, the flow effects on a transmission constraint referred to as the "shift-factor relationship" between pricing locations in the market and associated transmission constraints, generation in one EDAM area may contribute flow on a transmission constraint in an adjacent EDAM area as a result of parallel flows across interconnected systems. Conversely, a binding transmission constraint in one area can have pricing effects on locations in neighboring EDAM areas. The EDAM design currently allocates congestion revenues associated with these parallel flows based on their contribution to the transmission constraint in the EDAM balancing authority area where the constraint is located rather than the balancing area in which the congestion revenue accrued and the congestion price impact is reflected. This design for the allocation of congestion revenues associated with internal transmission constraints is in effect today, and has been for the last decade, in the WEIM.

PacifiCorp, as the first WEIM entity to extend participation to EDAM starting in 2026, has made revisions to its OATT to support participation in EDAM and those revisions have been filed and are part of an ongoing proceeding at FERC. Commenters in the PacifiCorp OATT proceeding expressed concern with the EDAM design for congestion revenue allocation, in how the market operator allocates congestion

revenues between EDAM balancing areas and the ability of an EDAM entity to consequently provide a sufficient congestion hedge for transmission customers exercising their transmission rights.

As part of its answer in the proceeding, the ISO committed to launching an expedited stakeholder initiative to create broader understanding of the existing FERC-approved EDAM design to congestion revenue allocation, and to consider other potential transitional mechanisms for congestion revenue allocation to EDAM balancing area recognizing parallel flow impacts and the desire from transmission customers to receive a more complete congestion hedge through the EDAM entity OATTs.

The ISO published an issue paper on March 17th describing the current, FERC approved, design to EDAM congestion revenue allocation and introduced a transitional alternative approach as an alternative proposal to be considered in this stakeholder process that would enable the EDAM balancing area to allocate more congestion revenues to transmission customers exercising their firm PTP and NITS OATT transmission rights. The ISO subsequently held an all-day stakeholder workshop on March 24th to present these topics. Informed by stakeholder input during the workshop and written comments on the Issue Paper, the ISO published a Draft Final Proposal on April 16th and held an all-day stakeholder workshop on April 23rd to discuss the proposal.

This Revised Draft Final Proposal is shaped by stakeholder input to date, including stakeholder written comments submitted on May 5th on the Draft Final Proposal.

A. What is congestion revenue?

In organized markets, locational marginal pricing is a mechanism used to reflect the value of electricity at different nodal locations across the market footprint, be it at load or generation locations. The resulting Locational Marginal Prices (LMP) are comprised of three components:

- Marginal Energy Component (MEC) – represents the system-wide clearing energy price.
- Marginal Congestion Component (MCC) – represents the cost of congestion at a given location (e.g. a node in the transmission system) when transmission elements (constraints) are congested.
- Marginal Losses Component (MLC) – represents costs associated with transmission line losses.

The LMPs vary by location across the grid – at generator and load pricing locations – driven in large part by the MCC component dependent upon the congestion across the market footprint as represented by transmission constraints that may be binding in the market. In effect, the congestion price at a pricing location reflects the total impact of congestion from the various transmission constraint at that given location.

Figure 1 illustrates the concept of price differences driven by transmission constraints between two price locations, a generator and a load location, representing $15 per MWh in congestion revenue that is allocated under market settlement mechanisms.

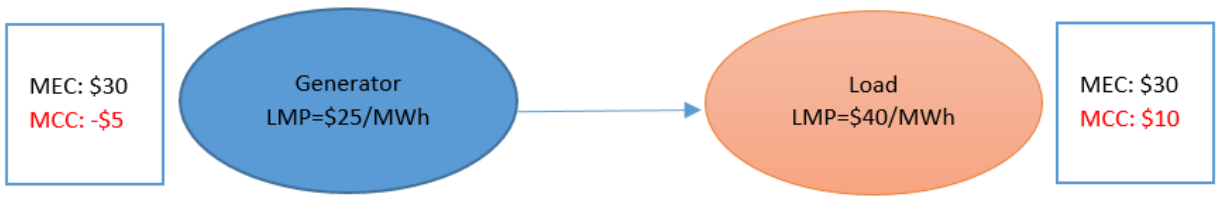


Figure 1: Congestion revenue accrual due to congestion on a system

Within a balancing area, there are many pricing locations representing load and generation, each one with its applicable LMP which includes a congestion component (MCC). Each of these locations can have a different LMP, even within the balancing area, driven by the extent of congestion experienced on binding transmission constraints on the grid.[2] Congestion revenues accrue when energy transactions are settled on the LMPs and there are price differences due to congestion (materializing in the MCC) between locations (e.g. between generation and load areas).

Similarly, within an integrated and interconnected market footprint, a transmission constraint in one balancing area can have a price effect at different pricing locations within a neighboring balancing area. The price impact reflects its contribution to congestion and is based on flow contributions from schedules at that location in relation to the constraint. Moreover, in an integrated market it is common that multiple transmission constraints across a larger and interconnected market footprint may be binding simultaneously, and thus the LMP MCC component at a particular pricing location may reflect the congestion cost associated with multiple transmission constraints based on flow contributions to that constraint. As a result, the LMP MCC can be decomposed into components reflecting the binding constraints based on the area in which the constraint is located. This decomposition approach has been used in the WEIM since its inception and enables the market operator to determine in which balancing area the congestion revenue is to be distributed.

B. What are "parallel flows"?

Parallel flow (also known as "loop flow" or "unscheduled flow") refers to the flow of electricity along the natural paths of least resistance on the interconnected transmission grid and across different balancing areas. The generation in one area can contribute to congestion in a neighboring area and this contribution may be reflected in the MCC component of the LMP at load and generation pricing locations across different balancing areas.

Parallel flows exist today across all interconnected transmission systems and have created or contributed to operational challenges across the West. Transmission Service Providers and grid operators deploy different strategies for managing and mitigating the effects of parallel flows. These strategies may be through their Available Transmission Capability (ATC) methodologies that seek to account for uncertainty associated with parallel flows, through different scheduling procedures that may seek to reduce transmission schedules contributing to parallel flows at specific system locations or other approaches including closer study and coordination between neighboring balancing authority areas.

[2] The MLC (associated with transmission losses) can also be a driving factor for price differences in the LMP, but the MCC component is generally the most variable and fluctuating element of the LMP based on the congestion conditions on the system.

Figure 2 below attempts to illustrate the effects of parallel flows between neighboring balancing areas. In the illustration, a transmission constraint materializes in BAA-A across path A-B. As a result of the constraint, energy may flow from A-C or B-D creating congestion in the C-D direction, potentially creating or contributing to constraint Y. In the organized market context, for example, the LMP at locations C and D may reflect in the MCC a congestion price reflective of its flow contributions to constraint X in the adjacent balancing area.

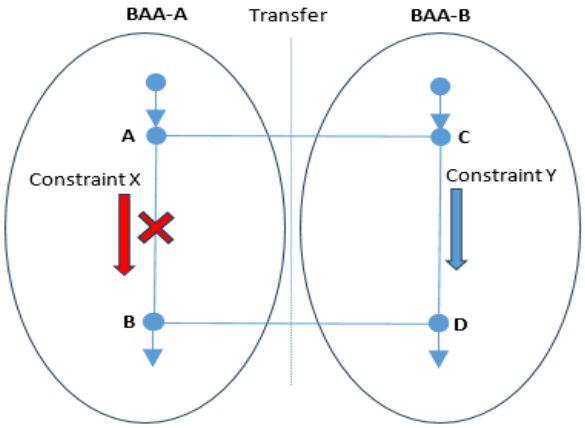


Figure 2: Parallel flow effects illustration between neighboring balancing areas.

In the context of the current EDAM congestion revenue allocation design, congestion revenues that may materialize associated with pricing locations C and D within BAA-B as a result of parallel flows in relation to constraint X would be allocated to BAA-A since constraint X is located in that area.

IV. Issue Statement & Objectives – Congestion Revenue Allocation & Parallel Flow

The EDAM design allocates congestion revenues associated with an internal transmission constraint to the balancing area where the constraint is located, including congestion revenues associated with parallel flows that may have accrued in an adjacent EDAM to the extent that the transmission constraint has a flow impact on schedules in the adjacent area. Thus, the balancing area in which the congestion price effects of parallel flows may have materialized as a result of a binding internal transmission constraint in an adjacent EDAM balancing area is not allocated the parallel flow congestion revenues under the current EDAM design. Instead, this congestion revenue is allocated to the balancing area where the constraint is located. This allocation method of congestion revenues associated with parallel flows may not provide sufficient revenues for the EDAM entity to sub-allocate under the terms of their OATT and provide congestion cost protection for transmission customers exercising their transmission rights.

It is also important to recognize the intent of the EDAM entities that will be joining the market in 2026, particularly as demonstrated through the PacifiCorp OATT revisions, is to sub-allocate received congestion revenues first to transmission customers exercising their eligible firm PTP and NITS OATT transmission rights through the submission of a balanced self-schedule in the market associated with

those transmission rights to support a level of congestion hedge. PacifiCorp is proposing to allocate any remaining congestion revenues to their measured demand (load + exports).

Issue Statement: The current EDAM design allocates congestion revenues to the balancing area in which the internal transmission constraint materialized, including congestion revenues resulting from parallel flow effects collected from an adjacent EDAM balancing area to the extent the use of its transmission system impacts congestion prices at locations in the neighboring area. The consideration under this initiative is whether and how the EDAM design should be modified regarding allocation of congestion revenue associated with parallel flows.

The initiative focuses narrowly on the allocation of parallel flow congestion revenues arising as a result of internal transmission constraints within an EDAM balancing area, and does not seek to address allocation of transfer revenues that may result from scheduling limit constraints at interties or transfer points between EDAM balancing areas.

In comments to the issue paper, some stakeholders indicated a desire to identify guiding objectives associated with this narrow initiative to help evaluate the effectiveness of any alternative designs in meeting those objectives. Recognizing the narrower scope of the expedited initiative, the objectives are described as follows:

- Establish a mechanism that will enable the market operator to distribute parallel flow congestion revenues to EDAM entities to support management of congestion cost exposure associated with exercise of firm PTP and NITS OATT transmission rights.
- Support market efficiency incentives.
- Minimize congestion cost shifts between EDAM balancing areas.
- Support mechanisms identified or established by prospective entities for allocation of congestion revenues received from the market operator under the terms of their OATT.
- Support timely implementation of EDAM in May 2026.

Some commenters also requested consideration of principles to support not only the later long-term design, but this expedited stakeholder initiative considering parallel flow congestion revenue allocation. To that end, some commenters pointed to the design principles developed to help guide EDAM policy design, particularly associated with congestion rent allocation.[3] The principle or objective identified as part of the *EDAM Common Design Principles & Concepts* document was "[t]o hold transmission customers harmless without creating new uplifts." In the document, this principle was primarily contextualized recognizing the need for the EDAM design to support fair and equitable congestion rent allocation between participating balancing areas which bring transmission capability to the market to support equitable energy transfers that benefit all participants. Further, the principle is contextualized as also supporting intra-day exercise of OATT transmission rights without creating new uplifts on OATT transmission customers while retaining current congestion allocation processes, namely those processes relying on the allocation of congestion rents to the EDAM entity who further then allocates these among their transmission customers under the terms of their OATTs. These entities have already had to establish sub-allocation mechanisms for distribution of congestion rents among their transmission customers as part of their participation in the WEIM.

[3] EDAM Common Design Principles & Concepts (2021).

These objectives, along with the congestion rent allocation principle noted above, will help evaluate the effectiveness of an identified proposal. Regarding principles for longer-term solutions, we will revisit these principles with stakeholders and consider what changes should be made as part of the forthcoming stakeholder processes evaluating near-term and long-term enhancements as described section VII.C.

V. Summary of Stakeholder Comments on Draft Final Proposal

Stakeholders submitted comments on the Draft Final Proposal on May 5th providing input and perspectives on the proposed parallel flow congestion revenue allocation design. Stakeholders submitted twenty-six sets of comments on the Draft Final Proposal.

A. Stakeholder comment themes

Stakeholder comments generally supported the direction of the Draft Final Proposal. A number of market participants noted outright support for the proposed allocation of parallel flow congestion revenues recognizing the continued intent to evaluate near-term enhancements upon EDAM launch and work collaboratively with stakeholders to establish a long-term design. Other parties noted the proposal moved further in the right direction, and suggested further enhancements or consideration in how to evolve the design. Some stakeholders opposed the proposal, suggesting instead extending the initiative timeline to evaluate a long-term design.

Beyond the general support across a spectrum of comments, stakeholder comments carried forward common themes that this Revised Draft Final Proposal seeks to address:

- *Further refinements to the commitment for continued evolution of the design toward a longer term solution.* Stakeholder comments continued to recognize the importance of refining and specifying how the ISO will work with stakeholders to consider a long-term design.
- *Reducing or mitigating self-schedule incentives.* Stakeholders continued to note the concern that the proposed design in the near term may incent self-scheduling by transmission customers in order to receive a congestion hedge, a "use it or lose it" concept to the exercise of transmission rights. In this context, stakeholders indicated broad support for an economic bidding enhancement to enable parallel flow congestion revenue allocation for balanced cleared market schedules based on economic bids (not only self-schedules).
- *Effect of the proposed design on CRRs in the CAISO balancing area.* A number of stakeholders raised concern with and sought more information on the effect of the proposal on CAISO balancing area CRRs and associated revenue sufficiency for CRRs.

This Revised Draft Final Proposal seeks to address, and refine where appropriate, the elements of the proposal to respond to key comments and concerns.

B. Overview of stakeholder comments

The substantive proposed design for how parallel flow congestion revenues are allocated and distributed by the market operator to EDAM entities was generally supported by stakeholder comments. Nevertheless, some stakeholders raised concerns that the proposal may incent self-scheduling and

suggested further enhancements to address this incentive. Others also took the opportunity to suggest additional enhancements briefly mentioned below.

Stakeholders commented on the transitional or evolutionary nature of the design beyond the launch of EDAM. Stakeholders largely supported the monitoring and transparency aspect that will inform design evolution, but were divided on the temporal aspect of the design. Some stakeholders noted that that it was important to continue to engage promptly to continue to evolve the design without establishing a sunset period, but maintain the ultimately approved design until it evolves further through stakeholder discussions. Other stakeholders, while not suggesting an explicit sunset period, did suggest the need for more refined and prompt timelines for evaluation of a long term design with some suggesting a twelve to eighteen month period and others requesting that the ISO establish more concrete timelines for consideration.

Stakeholders also suggested consideration of further enhancements. One such enhancement that was mentioned in the Draft Final Proposal and was widely supported in stakeholder comments was an enhancement to enable allocation of parallel flow congestion revenues based on economically bid balanced cleared schedules. Stakeholders saw this enhancement as providing additional flexibility and reducing or mitigating the incentive to solely self-schedule to obtain a congestion hedge associated with eligible firm PTP and NITS transmission rights. Informed by this input and broad support for the enhancement, the ISO indicating a commitment to evaluate and design the enhancement, and move toward implementation within or soon after the first year of EDAM as discussed in section VII.C of this proposal.

Some stakeholders suggested evaluation of a more direct settlement relationship of congestion revenues between the market operator and transmission customers (scheduling coordinators) rather than allocating revenues to the EDAM entity for sub-allocation. While this is out of scope of this narrow initiative, it is an item that could be considered as a future enhancement that would impact a number of aspects of settlement design, and stakeholders can consider introducing this suggestion as part of the annual policy roadmap process for prioritization.

Some stakeholders noted a desire to further understand the effects of the proposal on Congestion Revenue Rights (CRR) within the CAISO balancing area and potential effects on the ability to fund and pay out CRRs and associated under-funding concerns. The Department of Market Monitoring (DMM) in particular noted concern with CAISO not being able to retain some of the parallel flow congestion revenue materializing in the CAISO balancing area and a desire to further understand CRR settlements in the CAISO under EDAM. The DMM nevertheless recognized that this issue on CAISO settlement of CRRs in EDAM is separate from the scope of the proposal and these concerns more broadly exist whether or not the proposal is adopted. This Revised Draft Final proposal further discusses and describes the interaction with CRRs to provide additional clarity and consideration in this area under both the described proposal and a future near-term enhancement.

VI. Current EDAM Design for Congestion Revenue Allocation

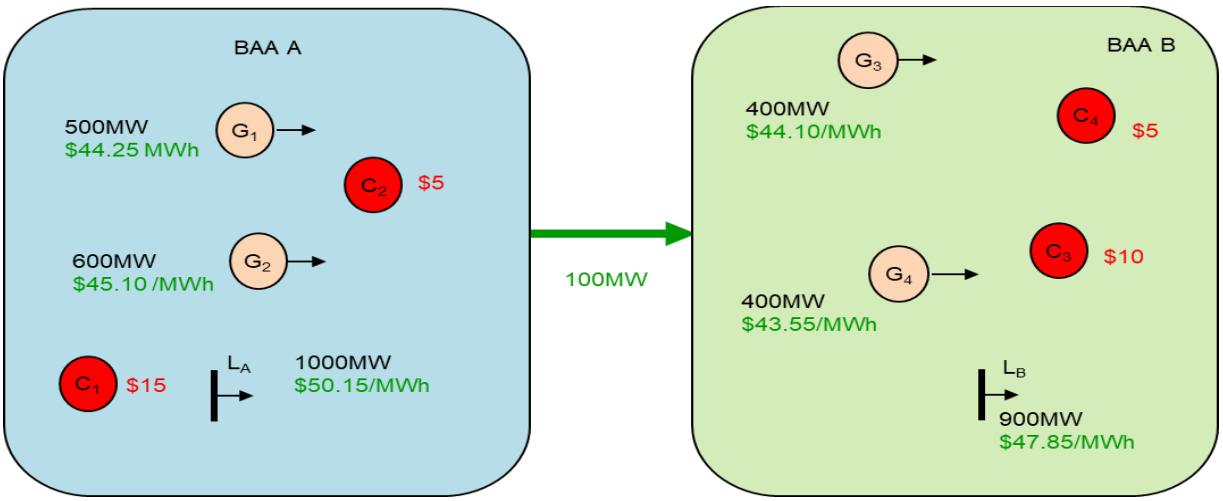
The current EDAM design allocates congestion revenues to the EDAM balancing authority area in which the internal transmission constraint materialized. This design follows cost-causation principles under which congestion revenues flow to the area where the constraint is binding since the balancing area

bears the costs and actions to manage the effects of that transmission constraint. Under this design, congestion revenues arising from parallel flows on an adjacent system – to the extent there is a congestion price impact associated with the constraint at a pricing location in that adjacent EDAM area – are allocated to the balancing area where the transmission constraint is located. This design is consistent with how WEIM congestion revenues are allocated today, and over the last decade, across WEIM balancing authority areas.

The market operator real-time and day-ahead markets, and by extension EDAM and WEIM, utilize the FNM to model and enforce all appropriate transmission system and resource constraints to optimally commit and dispatch resources to meet demand across the market footprint. The FNM provides the necessary information to determine and mitigate transmission congestion as well as calculate the relevant LMP at each pricing node location or aggregated pricing node location within the FNM. The LMP is calculated at each pricing node or aggregated pricing node location across the market footprint.

The MCC of the LMP at each pricing location is calculated based on a linear combination of the shadow prices of all binding constraints in the network, each multiplied by the corresponding power transfer distribution factor (PTDF) as determined by sensitivity analysis of the power flow solution within the minimum effectiveness threshold. This methodology is common to all LMP markets.

The example below illustrates the methodology described above as applied in a multi-balancing area optimization under the approved EDAM design and currently in effect in the WEIM.[4]



In this example, the market optimizes generation bid in Balancing Authority Area A (BAA A) and Balancing Authority Area B (BAA B) to meet demand in BAA A and BAA B. During the market optimization, the market identified four transmission constraint that are binding at various levels. The generation and load have various power transfer distribution factors which indicate their effectiveness

[4] *See* CAISO Tariff, Appendix C as accepted by the DAME-EDAM Order (establishing the LMP as the total of the Marginal Energy Cost (MEC), plus Marginal Cost of Congestion (MCC), plus Marginal Cost of Losses (MCL) and, if applicable, the Marginal Greenhouse Gas (MCG) effective upon implementation of EDAM); *see also* Section 33.11.1.2 (day-ahead congestion revenue calculation effective upon implementation of EDAM), Section 33.11.3.9.3 (day-ahead congestion offset settlement effective upon implementation of EDAM); *compare* CAISO Tariff, Section 11.5.4.1.1 (currently effective real-time congestion offset in WEIM) and Section 11.5.4.1.2 (real-time congestion offset in WEIM effective upon implementation of EDAM).

in mitigating congestion at these constraint locations. The optimization determines the least cost solution given the transmission constraints in that generation in BAA A serves 1,000 MW of load within BAA A as well as 100 MWs of load in BAA B. The balance of BAA B demand is being served by internal generation within BAA B. Specifically, the market dispatches Generator 1 to 500 MW at $44.25/MWh, Generator 2 to 600 MW at $45.10/MWh, Generator 3 to 400 MW at $44.10/MWh and Generator 4 to 400 MW at $43.55/MWh to serve 1,000 MWs of BAA A Demand priced at $50.15/MWh and 900 MW of BAA B Demand priced at $47.85/MWh. This solutions results in the collection of $8,970 of congestion revenue across the market area (*i.e.*, the total congestion revenue = sum of (500MW X $44.25/MWh, 600 MW X $45.10, 400 MW X $44.10, 400MW X $43.55) – sum (1000 X $50.15, 900 X $47.85).

This example demonstrates the calculation of congestion revenue that will be applied in EDAM to generate congestion revenue across the market area, except for the power balance constraint that will separately account for EDAM transfer revenue when binding. EDAM transfer revenue is generated by differences in the MEC between balancing areas when the power balance constraint binds and not the MCC as described in this example. Each are separately calculated and distributed according to distinct ISO tariff settlement rules,[5] and because in this case we are focused on congestion internal to each balancing area, for simplicity, this example does not account for the power balance constraint binding so there is no MEC difference or corresponding EDAM transfer revenue settlement to be considered.

Tables 1 through 3 below provide details concerning the inputs to this congestion revenue calculation, specifically the power transfer distribution factors applied in the state estimator solution based upon a power flow analysis, LMP formulation and the congestion revenue calculation and settlement.

Table 1: Congestion Effectiveness

		BAA A			BAA B		
	Power Transfer Distribution Factor						
	Price	G1	G2	L1	G3	G4	L2
MEC	$ 40.00	100%	100%	100%	100%	100%	100%
C1	$ 15.00	15%	25%	50%	3%	2%	5%
C2	$ 5.00	30%	19%	40%	4%	4%	3%
C3	$ 10.00	2%	3%	4%	21%	25%	45%
C4	$ 5.00	6%	2%	5%	27%	11%	49%

Table 2: Locational Marginal Price and Marginal Cost of Congestion

		BAA A			BAA B		
	LMP Formulation						
	Price	G1	G2	L1	G3	G4	L2
MEC	$ 40.00	$ 40.00	$ 40.00	$ 40.00	$ 40.00	$ 40.00	$ 40.00
C1	$ 15.00	$ 2.25	$ 3.75	$ 7.50	$ 0.45	$ 0.30	$ 0.75
C2	$ 5.00	$ 1.50	$ 0.95	$ 2.00	$ 0.20	$ 0.20	$ 0.15

[5] *See* CAISO Tariff, Section 11.5.4.1.5 (real-time transfer revenue settlement in WEIM effective upon implementation of EDAM), Section 33.11.1.1.1 (day-ahead transfer revenue calculation effective upon implementation of EDAM), and Section 33.11.3.9.4 (day-ahead marginal energy offset settlement effective upon implementation of EDAM).

C3	$ 10.00	$ 0.20	$ 0.30	$ 0.40	$ 2.10	$ 2.50	$ 4.50
C4	$ 5.00	$ 0.30	$ 0.10	$ 0.25	$ 1.35	$ 0.55	$ 2.45
LMP		$ 44.25	$ 45.10	$ 50.15	$ 44.10	$ 43.55	$ 47.85

Table 3: Congestion Revenue Calculation and Settlement

BAA A	Schedule	LMP	MEC	MCC	STLMT Amount	MEC	MCC Collection
G1	500	$ 44.25	$ 40	$ 4.25	$ 22,125	$ 20,000	$ 2,125
G2	600	$ 45.10	$ 40	$ 5.10	$ 27,060	$ 24,000	$ 3,060
L1	-1000	$ 50.15	$ 40	$ 10.15	$(50,150)	$(40,000)	$(10,150)
TSR A-B	-100	$ 40.00	$ 40	$ -	$ (4,000)	$ (4,000)	$ -
BAA Neutrality					$ (4,965)	$ -	$ (4,965)
BAA B	Schedule	LMP	MEC	MCC	STLMT Amount	MEC	MCC Collection
G3	400	$ 44.10	$ 40	$ 4.10	$ 17,640	$ 16,000	$ 1,640
G4	400	$ 43.55	$ 40	$ 3.55	$ 17,420	$ 16,000	$ 1,420
L2	-900	$ 47.85	$ 40	$ 7.85	$(43,065.)	$(36,000)	$ (7,065)
TSR A-B	100	$ 40.00	$ 40	$ -	$ 4,000	$ 4,000	$ -
BAA B Neutrality					$ (4,005)	$ -	$ (4,005)

The next step in the market operator settlement process is to distribute the total calculated congestion revenue ($8,970) among the balancing areas that constitute the market area. The FERC-approved ISO tariff requires congestion revenue collected across the market area will be distributed to the balancing area in which the constraints materialize in proportion to the net schedule effectiveness to that constraint. For each settlement period, the market operator will calculate the contribution of each balancing area to the MCC at each resource location and intertie based on the location of the constraints in each balancing area, at each intertie.[6]

Table 4 completes this example and reflects the contribution of the constraints (using the PTSD factors) to the congestion revenue collected between BAA A and BAA B, which determines the congestion revenue distribution between BAA A and BAA B.

Table 4: Contribution to Marginal Cost of Congestion

MCC Contribution	G1	G2	L1	G3	G4	L2	Congestion Revenue BAA A	Congestion Revenue BAA B
Constraint 1	$1,125	$2,250	$(7,500)	$180	$ 120	$ (675)	$(4,500)	
Constraint 2	$ 750	$ 570	$(2,000)	$ 80	$ 80	$(135)	$ (655)	

[6] *See* CAISO Tariff Section 33.11.3.9.3 (day-ahead congestion offset settlement effective upon implementation of EDAM); and *compare* CAISO Tariff, Section 11.5.4.1.1 (currently effective real-time congestion offset in WEIM) and Section 11.5.4.1.2 (real-time congestion offset in WEIM effective upon implementation of EDAM)

Constraint 3	$ 100	$ 180	$ (400)	$840	$1,000	$(4,050)		$(2,330)
Constraint 4	$ 150	$ 60	$ (250)	$540	$ 220	$(2,205)		$(1,485)
						BAA Neutrality	$ (5,155)	$(3,815)
						BAA Offset	$ 5,155	$3,815

In the example above, the energy settlement generates $8,970 of congestion revenue across the market area, of which $4,965 is attributed to BAA A and $4,005 is attributed to BAA B. The final step is to distribute the congestion revenue collected across the market area to the balancing area in which the constraint materializes in proportion to the net schedule effectiveness to that constraint.[7] This step increases the congestion revenue distributed to BAA A by $190 to $5,155 because that is the balancing area responsible for managing the constraint and represents the congestion revenue associated with parallel flow effects and, at the same time, reduces the congestion revenue distributed to BAA B by $190 to $3,815 because that is the balancing area that contributed to the congestion in BAA A. This $190 congestion revenue adjustment, representative of parallel flow congestion revenue, from BAA B to BAA A represents about two percent of the total congestion revenue collected across the market area.

VII. Revised Draft Final Proposal for Parallel Flow Congestion Revenue Allocation

This Revised Draft Final Proposal retains the substantive description on the parallel flow congestion revenue allocation design as in the prior iteration of the Draft Final Proposal. However, the ISO takes the opportunity in the context of this proposal to provide additional information on how transmission rights are registered with the market operator, an assessment of the scope or potential of the self-scheduling incentive created by the proposal, and provides further discussion on the effects of the proposal on CRRs in the CAISO balancing area.

A. Proposal Description

This proposal describes the design for allocation of congestion revenues associated with parallel flowss at the launch of EDAM in 2026. This substantive design is unchanged from the Draft Final Proposal and allocates additional congestion revenues to the EDAM entity associated with an external transmission constraint (in neighboring EDAM area) which it does not receive under the current design to sub-allocate under the terms of its OATT and, if so provided, can support a greater congestion hedge for transmission customers exercising their eligible firm PTP and NITS transmission rights.

The proposal, supporting the launch of EDAM in 2026, can be summarized as follows:

- The EDAM balancing area will continue to be allocated internal congestion revenues collected from binding transmission constraints internal to its balancing area. This aspect remains consistent with the FERC-approved design and is not modified by this expedited initiative.

[7] *Id*.

- Congestion revenues associated with parallel flows accruing within an EDAM balancing area due to a binding transmission constraint within another EDAM balancing area will be allocated by the market operator to the EDAM balancing area where the congestion revenues are collected (not where the transmission constraint is located) as result of the exercise of eligible firm PTP and NITS transmission rights through a balanced self-schedule that refers to use of such rights. The eligible firm PTP and NITS transmission rights are established under the EDAM entity OATT, and consist of long-term firm and monthly firm PTP and NITS OATT transmission rights, including conditional firm transmission. These revenues will be further sub-allocated by the EDAM entity under the terms of its OATT.
- Remaining parallel flow congestion revenues, beyond those allocated as noted above based on the exercise of eligible firm PTP and NITS OATT transmission rights through a balanced source/sink self-schedule, which are collected in an EDAM balancing area as a result of a binding transmission constraint located in another EDAM balancing area, will be allocated by the market operator to that other EDAM balancing area where the transmission constraint is located.
- The CAISO balancing area does not offer firm PTP and NITS transmission service. Rather it offers a single type of transmission service (new firm use) and administers congestion revenue rights (CRR) – financial rights – to hedge congestion in the day-ahead market. Thus, under this proposal the CAISO balancing area may not be allocated congestion revenues associated with parallel flows at the onset of EDAM for constraints in a neighboring EDAM balancing area. However, the CAISO balancing area will collect congestion revenues associated with parallel flows materializing in a neighboring EDAM balancing areas as a result of a binding transmission constraint internal to the CAISO balancing area under this proposal since, after allocation based on self-scheduled exercise of eligible firm PTP and NITS transmission rights, remaining parallel flow congestion revenues are allocated to the EDAM balancing area where the constraint is located. These are incremental congestion revenues to what the CAISO receives today, and will support funding of CRRs in the CAISO balancing area. Moreover, to further mitigate associated CRR funding risks, the CAISO will consider CRR modeling enhancement that consider transmission uses in neighboring EDAM areas, which can further improve the accuracy of CRR awards and reduce the risk of allocating CRRs that are predominantly impacted by parallel flow effects, thus reducing CRR under-funding risks.

The Revised Draft Final Proposal is responsive to stakeholder comments tailoring the allocation of parallel flow congestion revenues based on the exercise of eligible firm PTP and NITS OATT transmission rights (through a balanced self-schedule), which would provide additional congestion revenues not received under the current (status quo) design for the EDAM entity to sub-allocate under their OATT. Any remaining parallel flow congestion revenue, accruing as a result of a transmission constraint in a neighboring EDAM balancing area, would be allocated to the area where the binding transmission constraint is located.

Transmission customers will register their firm PTP and NITS OATT transmission rights with the market operator identifying the characteristics of the rights from source to sink. These registered transmission rights will be associated with a Contract Reference Number (CRN) which, when included in the bid submission, associates that bid with existing OATT transmission rights. When the scheduling coordinator representing the transmission customer submits a self-schedule with a CRN at the source

location – whether a physical generator in an EDAM balancing area or an import location – the market will recognize that this source location is associated with registered transmission rights. Similarly when a self-schedule is submitted at the sink location – whether this is scheduling of the load within an EDAM balancing area or scheduling an export at a location – the market will recognize that the sink location is associated with a CRN representing those registered firm transmission rights.

The market operator will collect resulting congestion revenues associated with parallel flows for the balanced source/sink self-schedules associated with CRNs representing the exercise of eligible firm PTP and NITS transmission rights consistent with the EDAM entity OATT, and will allocate those parallel flow congestion revenues to the EDAM entity where the congestion revenues materialized. In turn, the EDAM entity will sub-allocate these congestion revenues under the terms of their OATT.

After congestion revenues associated with parallel flows have been allocated as described above to the balancing area where the congestion revenues are collected, any remaining parallel flow congestion revenues (whether positive or negative) will be allocated to the EDAM balancing area where that particular transmission constraint is located. The ISO expect there to be a sizable amount of remaining parallel flow congestion revenue to be allocated to the EDAM balancing area where the binding transmission constraint is located since this parallel flow congestion revenue can accrue as a result of other economically bid load and supply, exercise of short-term transmission rights (not within the definition of eligible rights) and day to day, hour to hour transactions otherwise not associated with self-schedules exercising eligible firm PTP and NITS transmission rights through a CRN.

Finally, it is important to note that congestion revenues accruing internal to an EDAM balancing area as a result of an internal transmission constraint are allocated fully to that balancing area, which is where the transmission constraint is located. This allocation remains unaffected by this proposal and is consistent with current FERC-approved design.

Turning to the objectives and EDAM design principles, the proposal largely aligns with the identified objectives and the associated principle described in section IV of this Revised Draft Final Proposal. The proposal allocates congestion revenues associated with parallel flows for the exercise of eligible firm PTP and NITS transmission rights based on balanced source/sink self-schedules to the EDAM balancing area where these congestion revenues accrued. Additionally, the EDAM entity is allocated internal congestion revenues materializing within its balancing area as a result of an internal transmission constraint. These congestion revenues can then be further sub-allocated by the EDAM entity to provide a greater, more complete, congestion hedge under the terms of their OATT to transmission customers exercising their eligible firm PTP and NITS transmission rights for congestion price effects of internal or external transmission constraints. This aligns with the first objective of managing the congestion cost exposure for transmission customers exercising their firm OATT transmission rights.

The second objective, which evaluates whether the design supports market efficiency incentives, may not fully align with the proposal as there may still be an incentive to self-schedule firm OATT transmission rights to hedge congestion cost exposure. However, as explained earlier, the level of incremental incentive to self-schedule is unclear as is the impact on market efficiency and this will be one of the elements monitored as the EDAM launches. Nevertheless, introduction of the future near-term enhancement design described later in this document seeks to mitigate any incentive to self-schedule to obtain a congestion hedge through enabling allocation of parallel flow congestion revenues

based on economically bid cleared market schedules associated with eligible firm PTP and NITS transmission rights.

The third objective seeks to minimize congestion cost shifts between EDAM balancing areas. The proposal aligns with this objective by allocating only the parallel flow congestion revenues for day-ahead exercise of eligible firm PTP and NITS transmission rights based on balanced source/sink self-schedules, but the remaining parallel flow congestion revenues are allocated to the balancing area where the transmission constraint is located. This avoids a balancing area facing unintended costs associated with counter flow scenarios as described above, and allocates these remaining revenues consistent with EDAM FERC-approved design (which is in effect in WEIM today).

The fourth objective is testing whether the design supports, and does not undermine, EDAM entity established allocation mechanisms. The proposal supports the EDAM entity OATT allocation mechanisms as it provides additional revenues – the parallel flow congestion revenue as described – which can then be sub-allocated under the EDAM entity OATT. The proposal does not dictate a different OATT sub-allocation mechanism. Finally, the proposed design is implementable by the ISO in time for EDAM launch in 2026 which is consistent with the objective of supporting timely EDAM implementation.

The proposed design to allocation of congestion revenue associated with parallel flows is also consistent with the congestion rent allocation principle as part of the *EDAM Common Design Principles & Concepts* document further described in section III of this Draft Final Proposal. Under the proposal, the EDAM entity will be allocated parallel flow congestion revenues associated with the exercise of firm PTP and NITS OATT transmission rights based on balanced source/sink self-schedules. Moreover, the EDAM entity is still allocated internal congestion revenues resulting from an internal transmission constraint. This will provide the EDAM entity with congestion revenues to be able to sub-allocate under the terms of their OATT to mitigate congestion cost exposure to its transmission customers.

a. Addressing incentives to self-schedule under the proposed design

A number of stakeholders commented and expressed concern that the proposed design may incent self-scheduling associated with eligible firm PTP and NITS OATT transmission rights (through the use of a CRN) to more readily obtain a congestion hedge through the EDAM entity OATT based on their sub-allocation mechanisms. The Market Surveillance Committee (MSC) also expressed the same concern and framing it as a "use it or lose" action, incenting transmission customers to use their transmission rights through self-schedules to obtain a congestion cost hedge rather than economically bid and derive the benefits of optimized dispatch.

It is important to contextualize self-scheduling activities within the EDAM design. Under the current design, certain transactions inherently are required to be self-scheduled:

- Self-schedule of wheel-through transactions. Due to limited economic bidding at the interties of EDAM balancing areas, transmission customers seeking to wheel through an EDAM balancing area must self-schedule the import transaction and self-schedule the export transaction. The congestion revenue allocation methodology does not affect this activity.
- Self-schedule of exports. Similarly, exports from an EDAM area to a non-EDAM area have to be self-scheduled. While the internal generator supporting an export could be self-scheduled or economically bid in the market, the transaction at the export location has to be self-scheduled.

The self-schedule incentive consideration should be more narrowly focused on designated network resources, under NITS service, serving load within the EDAM balancing area or relatedly potentially aspects of PTP service to the extent there are internal transactions or potentially associated with the internal generator with transmission service supporting an export. Any incentive to self-schedule must be balanced against the ability to economically bid and the benefits of optimized dispatch foregone through self scheduling. A NITS transmission customer (load serving entity) with a portfolio of designated network resources can derive significant benefit through economic bidding of their resource portfolio settled at the LMP, paid the congestion component, and on the load side could be allocated a share of congestion revenues under EDAM entity OATTs[8] to offset the congestion cost exposure load pays. Self-scheduling of the generation portfolio solely with the aim to limit its congestion cost exposure may undermine its ability to efficiently and cost effectively serve its load, but also overlooks inherently congestion revenues allocated by the EDAM entity under its OATT to load serving entities, including potentially transfer revenues, which offset the congestion cost exposure for a NITS customer (load serving entity). Similarly, for PTP transmission service, resources supporting exports could economically bid its output and self-schedule the export depending on the conditions on the grid. Self-scheduling the generator would limit the ability to be economically dispatched potentially foregoing a more cost effective way of meeting the contractual obligations supporting the export to another balancing area.

As a way to contextualize further the potential incentive to self-schedule to derive a congestion hedge, it may be helpful to look at the scope and magnitude of transmission rights within the PacifiCorp balancing areas that may potentially be exercised through balanced self-schedules considering the existing long-term firm PTP transmission reservations and the NITS long-term designated network resources dedicated to serving load within the balancing area. PacifiCorp, as the first WEIM entity which has maximized its participation of resources in the real-time market, will also be the first EDAM entity. PacifiCorp has publicly stated that the economic dispatch and commitment of resources that result from economic bidding in the market will create significant customer benefits. Additionally, PacifiCorp has stated that it believes the risk of congestion costs does not outweigh the benefits of economic bidding. With this context, it is assumed that PacifiCorp's market participation will not be driven solely by the ability to self-schedule the exercise of transmission rights to derive a congestion hedge. Thus, it is important to look with this context to what extent can the incentive to self-schedule to derive a congestion hedge drive other transmission customers, whether PTP or NITS, within the PacifiCorp balancing areas.

Focusing first on NITS transmission on the PacifiCorp system and the incentive for long-term designated network resources to self-schedule which are designated to serve load serving entities within the PacifiCorp balancing areas. The following data is based on the list of long-term designated network resources (with NITS service) in the PacifiCorp balancing areas publicly located on PacifiCorp's OASIS[9]:

	PacifiCorp Merchant (NITS)	**Other Load Serving Entities (NITS)**

[8] Under PacifiCorp's filed OATT revisions, Tier 2 allocation of congestion revenues is to measured demand.
[9] List of Designated Network Resources, PacifiCorp OASIS, April 2025.

Designated Network Resources	17,939 MW	867 MW – 1000 MW[10]
Percentage of total designations	95%	5%

PacifiCorp merchant, which serves its native load within the balancing areas, holds 95% of the total long-term designated network resources (17,939 MW) on PacifiCorp's system whose bidding and market participation practices would not be driven by an incentive to self-schedule to derive a congestion hedge. Some portion of the remaining 867-1000 MW may potentially consider self-scheduling driven by the desire to hedge congestion costs by the load serving entity, but this is speculative absent actual market conditions and experience, particularly recognizing that an allocation of congestion revenues inherently will be sub-allocated by PacifiCorp to load serving entities under its OATT terms.

On the PTP transmission side, based on public data posted on PacifiCorp's OASIS, in 2024 there were a total of 3609 MW of long-term PTP transmission reservations held among a number of transmission customers representing wheels through or exports from the PacifiCorp transmission system.[11] The extent of the aggregate reservations, based on 2024 data, can be summarized as follows:

	PacifiCorp Merchant	**Other Transmission Customers**
Long Term PTP reservations	1955 MW	1654 MW
Percentage of total	54%	46%

PacifiCorp merchant holds 1955 MW, which is safe to assume do not consist of wheel through rights. Though the nature of why and where (source/sink) PacifiCorp merchant holds these PTP rights is not publicly available, it is assumed that some of these transmission rights may be self-scheduled but some may also be made available to the market. For example, if PacifiCorp merchant uses certain PTP rights for exports of internal generation, it could consider economically bidding the generation supporting the export and self-scheduling the export at the appropriate location. There is no evidence or reason to assume its activity may be driven solely by the need to obtain a congestion hedge.

The remaining 1654 MW is a combination of wheels through and exports. The exercise of these rights are unaffected by this current initiative as wheels-through must be self-scheduled. There likely is some portion of these long-term firm PTP transmission rights associated with exports who may be driven by the incentive to self-schedule to fulfill contractual obligations and obtain a congestion hedge.

This review indicates, at least in the context of PacifiCorp participation in the EDAM, even if the congestion revenue allocation design created an incentive to self-schedule, the magnitude of self-scheduled firm PTP and NITS transmission rights would be comparatively small in the broader context of all the NITS transmission rights and the sizable magnitude of designated network resources. Similarly

[10] There are 867 MW of remaining designated resources with specific designated amounts, and a number of BPA designated resources with "varies" amounts indicating obligations under a load-following contract to public utilities, preference customers, located in PacifiCorp's balancing area. For purposes of the calculation the "varies" portion was estimated to bring the total amount to 1000 MW, and this portion could be somewhat smaller or somewhat larger but nevertheless comparatively within the identified range.

[11] 2024 Transmission Formula Annual Update (2024 Projection), Attachment 9a, PacifiCorp OASIS.

with regards to long-term firm PTP transmission rights, considering that wheels through have to be self-scheduled, the incremental incentive to self-schedule the internal resource supporting an export is relatively small.

b. Examples illustrating the Phase 1 proposal

Recognizing the complexity of the overall topic of congestion revenue accrual and allocation, the following illustrations are intended to help stakeholders visualize the concepts behind the proposal and understand the practical effects of the proposal under various scenarios for transmission customers exercising their eligible firm PTP and NITS transmission rights. The received parallel flow congestion revenues allocated to the EDAM entity would be sub-allocated by the EDAM entity under the terms of their OATT to support a greater, more complete, congestion hedge for transmission customers exercising these eligible transmission rights.

Figure 1 illustrates the conceptual application of the proposal when a transmission customer exercises firm OATT transmission rights from an import location to deliver supply to load within the EDAM balancing area. This example is generally representative of a load serving entity within an EDAM balancing area with eligible designated network resources, holding NITS transmission service rights registered with the market operator, and with an associated CRN representing the source and sink of transmission rights, namely from the import location to the internal load.

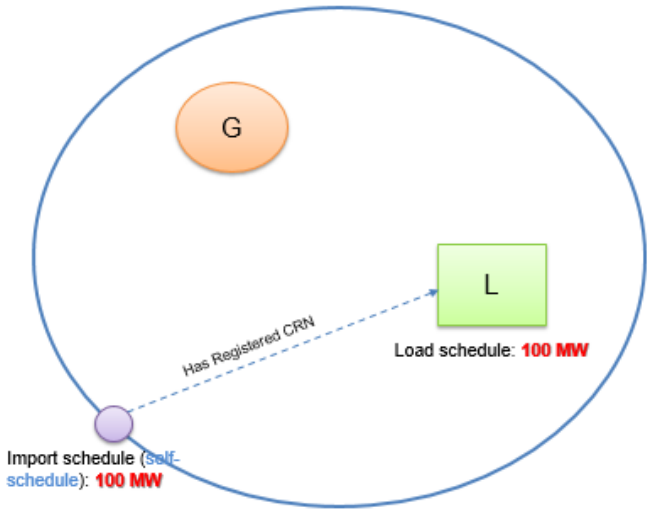


Figure 1: Illustrative example of balanced source and sink self-schedule exercise of transmission rights.

The scheduling coordinator representing the import supply submits a balanced self-schedule from source (import) to sink (load) associated with the registered firm NITS transmission rights that has an assigned CRN for the source and sink locations. The import will be paid the LMP for 100 MW at its location, which includes the marginal congestion component that may be reflective of the effects of one or more transmission constraints. The Load (L) will be charged for 100 MW at the LMP at its location which also may reflect the marginal congestion cost component affected by one or more transmission constraints. The market operator will allocate sufficient congestion revenues to the EDAM balancing area – for the balanced 100 MW self-schedule associated with the firm OATT transmission rights – to be

sub-allocated under the EDAM balancing area OATT to provide a greater, more complete, congestion hedge associated with price differences of the LMP at the import and load locations.

Figure 2 builds on the scenario in the example above, but with illustrative LMP values to reflect how parallel flow congestion revenue allocation would occur to the EDAM balancing area to enable the provision of a congestion revenue sub-allocation under the terms of the OATT.

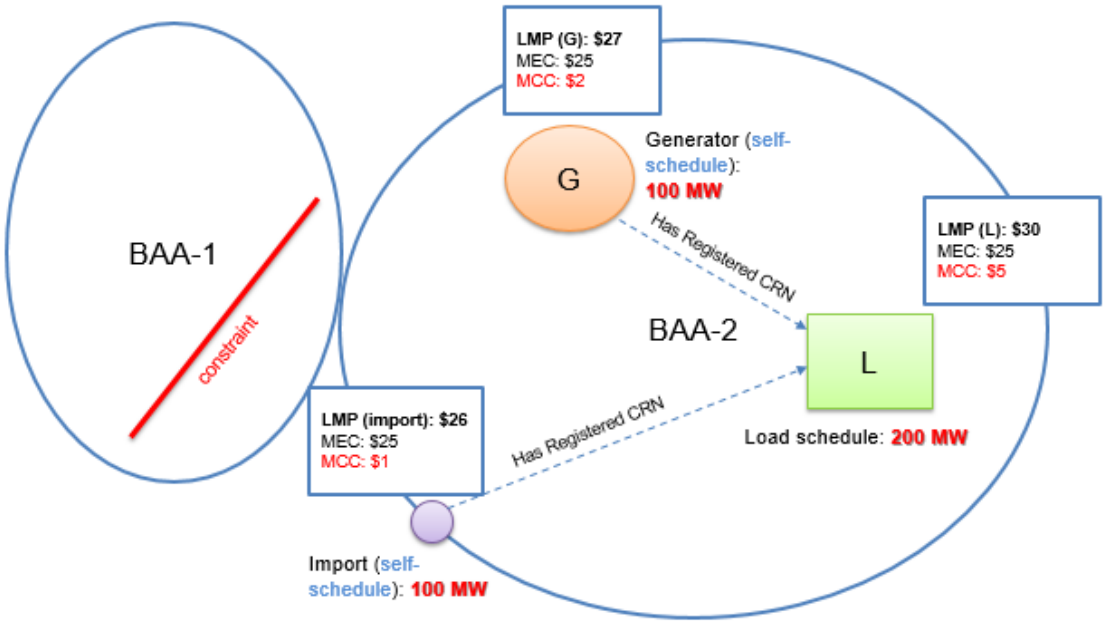


Figure 2: Example of exercise of firm OATT transmission rights through balanced source and sink self-schedules with LMPs.

The LMPs in EDAM BAA-2 are reflected at the respective import, generator (G), and load (L) locations. The MCC component of the LMPs are affected by a transmission constraint located in the adjoining BAA-1 due to the nature of the interconnected transmission system and parallel flow effects described earlier in this proposal. The import will be paid at the $26 LMP (total $2,600), while generator (G) will be paid the $27 LMP (total $2,700). The load (L) will be charged the $30 LMP (total $6,000 for 200 MW). Thus, in total the load serving entity (through a scheduling coordinator) was paid $5,300 for the generation ($2,700 for the import + $2,600 for the generator G energy) and was charged $6,000 at the load. The difference of $700 that the market operator collected as a result of the payments to the import and generator (G) and what it charged the load (L) is parallel flow congestion revenue driven by the MCC price difference in the LMPs resulting from the effects of the transmission constraint in the neighboring BAA-1 balancing area. The market operator allocates the $700 among EDAM balancing areas, and under the Draft Final Proposal will allocate the full $700 to the balancing area where these congestion revenues resulting from parallel flow effects were collected, *i.e.*, BAA-2. The BAA-2 entity then would further sub-allocate these to the transmission customers exercising their firm OATT transmission rights based on balanced source/sink self-schedules, for example to the load serving entity in this case as the NITS transmission customer. While the transmission customer did originally pay $700 more than it got paid, the $700 of congestion revenue that was allocated by the market operator back to the EDAM entity as congestion revenue and which is subsequently sub-allocated by the EDAM entity to the transmission customer offsets the congestion cost exposure.

Figure 3 below seeks to utilize the more complex example previously illustrated in the Issue Paper to convey this proposal (which is the same as described in the Draft Final Proposal). This example illustrates a scenario where a transmission customer with firm PTP transmission rights seeks to wheel through an EDAM area or otherwise export from an internal generator to a non-EDAM balancing area. The example serves as a reminder of how those parallel flow congestion revenues and internal congestion revenues are allocated based on the location of the transmission constraint and the associated exercise of firm OATT transmission rights.

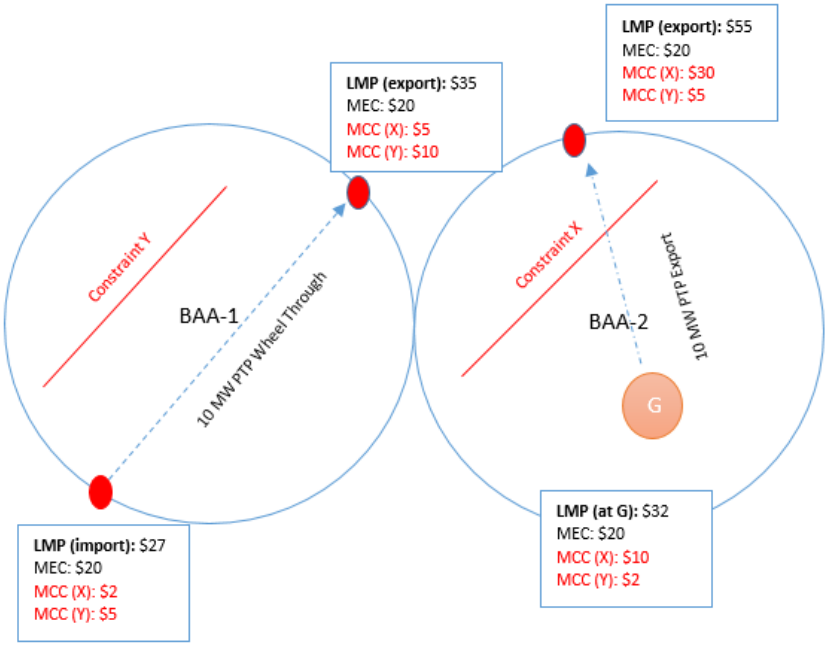


Figure 3: Example of internal congestion revenue and parallel flow congestion revenue allocation associated with exercise of firm OATT transmission rights.

For purposes of this illustrative example, we will assume that the LMP price difference at the different locations is driven by the respective effects of the binding transmission constraints – constraint Y located in BAA-1 which has an effect on the MCC of the LMP at locations in BAA-1 and BAA-2, and constraint X which is located in BAA-2 and has an effect on the MCC of the LMP at locations in BAA-2 and BAA-1.

Turning first to the wheel-through scenario in BAA-1 where a transmission customer holds 10 MW of firm PTP transmission rights from an import to an export location. Under the EDAM design, wheel through transactions through an EDAM area (from non-EDAM area to non-EDAM area) have to be self-scheduled at the source (import) and sink (export) locations. Thus, the scheduling coordinator for the transmission customer would submit a self-schedule at the import location in BAA-1, which has a $27 LMP with an MCC component of $7 ($2 associated with constraint X and $5 associated with constraint Y). The scheduling coordinator would also submit a self-schedule at the export location for the same amount (10 MW to be balanced) in BAA-1 which has a $35 LMP with a MCC component of $15 ($5 associated with constraint X and $10 associated with constraint Y). The scheduling coordinator would be paid $270 for the import ($27 LMP for 10 MW) and would be charged $350 at export location ($35 LMP for 10 MW). The net difference of $80 that the scheduling coordinator representing the

transmission customer paid is collected as congestion revenue by the market operator and distributed between EDAM balancing areas as this is representative of the $8 LMP difference driven by the impacts of the transmission constraints on the MCC. Under the Draft Final Proposal, the market operator would allocate the $80 of congestion revenue to BAA-1 since the cleared market schedules at the source and sink location are a balanced 10 MW and these schedules are associated with eligible firm OATT PTP transmission rights that the transmission customer has registered with the market operator and has an associated CRN for the source/sink locations. The $80 is representative of the congestion revenue resulting from the constraint internal to BAA-1 (constraint Y) and the parallel flow congestion revenue resulting in BAA-1 from constraint X located in BAA-2, all associated with the registered firm OATT transmission rights. In turn, BAA-1 would then sub-allocate the $80 to the transmission customer to offset the congestion cost exposure.

Turning to the activities in BAA-2 where the transmission customer holds 10 MW of firm PTP rights to export from the generator (G) to an export location on the BAA-2 system. The generator would submit a balanced self-schedule at the source (G) location and the export location for 10 MW and associated with source/sink registered (with CRN) transmission firm PTP transmission rights. The scheduling coordinator would be paid for the generator (G) output at the $32 LMP (total $320 for 10 MW), while the scheduling coordinator would be charged the $55 LMP at the export location ($550 for 10 MW). The resulting difference between the $550 charge and the $320 payment results in $230 of congestion revenue collected by the market operator for distribution between the EDAM balancing areas. The $230 of congestion revenue represents the congestion revenue associated with congestion effects of the internal constraint in BAA-2 and the congestion revenue associated with parallel flow effects as a result of the effects of constraint Y located in BAA-1. Under the proposal, the $230 of congestion revenue would be allocated to the EDAM balancing are where the congestion revenue is accrued (collected) which is BAA-2 associated with that exercise of firm OATT transmission rights. In turn, BAA-2 would sub-allocate those revenues under the terms of its OATT to the transmission customer to offset the congestion cost exposure.

To the extent that there were additional parallel flow congestion revenues that were collected within BAA-1 as a result of constraint X in BAA-2, beyond what was allocated to support the exercise of firm PTP transmission rights to support the wheel-through balanced self-schedule, those remaining parallel flow congestion revenues would be allocated to area where the constraint is located, which is BAA-2. Conversely, to the extent there were additional parallel flow congestion revenues that were collected within BAA-2 as a result of constraint Y in BAA-1, beyond what was allocated to support the exercise of firm PTP transmission rights to support the export balanced self schedule, those remaining parallel flow congestion revenues would be allocated to the area where the constraint is located, which is BAA-1.

Appendix 1 of this Revised Draft Final Proposal contains two more comprehensive examples building off the examples discuss with stakeholders and illustrated in the Issue Paper to convey the effects of the proposal. These are the same examples as shared in the Draft Final Proposal and discussed at the April 23rd stakeholder workshop.

c. Eligible firm PTP and NITS transmission rights

As described earlier, the eligible transmission rights for the congestion revenue allocation associated with parallel flows when exercised through a balanced source/sink self-schedule consist of long term firm and monthly firm PTP and NITS OATT transmission rights, including conditional firm, consistent with

the OATT revisions of EDAM entities. These transmission rights will be registered with the market operator, indicating the relevant information (i.e., source/sink, duration, MW) supporting the exercise of those transmission rights. Once registered, the transmission rights will be assigned a CRN which can be utilized as an identifier when submitting a self-schedule to denote the exercise of registered transmission rights.

PTP transmission rights have specific source and sink associations as part of the transmission reservation. To exercise those transmission rights, the scheduling coordinator for the transmission customer would submit a self-schedule at the source and sink locations with a CRN (whether wheel through or export for example) and the market operator would allocate parallel flow congestion revenues associated with the cleared balanced schedule to the EDAM entity to sub-allocate under the terms of their OATT.

The NITS transmission rights may be, depending on the different practices across transmission providers in the West, more nuanced in how they are established and the associated source and sink locations for the transmission reservation. Some NITS transmission rights, for example, for designated network resource may be associated with one specific source or in some circumstances may be associated with multiple resources. Similarly, depending on the structure of loads within the balancing area the sink may be a specific load or multiple load locations, or an aggregation. The Masterfile registration process can map the NITS transmission rights in these situations, properly reflecting the nature of the transmission rights that a transmission provider confers under their OATT. Once the NITS transmission rights are registered and obtain a CRN, these can be exercised in the same way as PTP rights – through a balanced source/sink self-schedule.

d. Application in the Day-Ahead Market

The proposal of the described parallel flow congestion revenue allocation mechanism proposes application to the day-ahead market only, and not the real-time market. The EDAM is a voluntary day ahead market where WEIM entities can extend participation to EDAM or remain and participate only in WEIM. Applying this proposal to the real-time market would affect the allocation of congestion revenue between WEIM-only participants. Additionally, extending the proposal would be impractical as the WEIM is a different market where transmission rights are not registered or reflected in the same manner as in EDAM. The WEIM also allows base scheduling of generation which is not settled through the market and this would limit the ability to effectively apply the proposed design. Moreover, a key driver for this initiative is application of congestion revenues in the EDAM and day-ahead context, to support derivation of a more complete congestion hedge as provided under the EDAM entity OATT. Traditional organized market designs provide a congestion hedge only in the day-ahead market and not the real-time market. In the WEIM, congestion revenue allocation would remain as it is today with congestion revenues flowing to the balancing area where the transmission constraint is located.

e. Effect of proposal on CRRs in the CAISO balancing area

The CAISO balancing area does not offer PTP or NITS transmission service products under its tariff. Rather, it offers a single type of transmission service (new firm use) and enables allocation and auction of CRRs based on specific source/sink locations on the CAISO system to manage congestion price exposure observed in the day-ahead market. Currently, the CRR financial rights mechanism is only a feature within the CAISO balancing area and not the wider EDAM footprint. CRRs are allocated to load serving entities through an annual and monthly allocation processes and can be further acquired

through annual and monthly auction processes by other types of market participants. The CRR allocation and auction processes include a simultaneous feasibility test to ensure CRR that are released are feasible and are funded relative to the expected network topology and capacity. CRRs are settled at each constraint where CRR source and sink balanced schedules have a contribution to that constraint. The CRR constraint settlement is based upon the amount of congestion revenue collected from the product of the CAISO day ahead energy and imbalance reserve awards contribution and the relevant constraint shadow price.

Since the CAISO balancing area does not offer comparable PTP and NITS transmission products, under this proposal the CAISO balancing area may not be allocated parallel flow congestion revenues at the launch of EDAM associated with parallel flow effects of constraints in a neighboring area. This design element, or asymmetry, will be rectified and eliminated under the near term design and implementation enhancement that the ISO is committed to evaluating and undertaking as a year one enhancement. It will not be available at the outset of EDAM because it requires further consideration with stakeholders and additional system changes. Nonetheless, it is important to proceed with EDAM implementation to capture the benefits for all customers sooner rather than later.

However, there are several mitigating factors that limit the effects of this temporary asymmetry on the CAISO balancing area. First, the ISO is in the process of evaluating CRR modeling through the annual and monthly processes to improve accuracy and awards of CRRs in the CAISO balancing area. Considering the introduction of EDAM and the associated effects of schedules and flows on CAISO system constraints, the CRR release processes will have to consider, among other things, how to account for firm OATT transmission rights across neighboring EDAM balancing areas to support and ensure that the CAISO releases feasible CRR awards at locations impacted by use of OATT transmission rights and overall schedules across these areas. As the ISO undertakes this modeling review effort as part of the CRR release process, it will engage and discuss with stakeholders modeling assumptions and implications through the annual and monthly CRR release processes.

Second, with the introduction of the EDAM and as part of this proposed design, the CAISO will be allocated additional congestion revenues which it does not receive today and these can support continued payout and revenue sufficiency for funding CRRs. Today, pre-EDAM, the CAISO balancing area may be affected by parallel flow effects from neighboring balancing areas which are not part of the market footprint. These parallel flow effects can affect congestion on the CAISO system and resulting impacts on congestion prices, along with the payout of CRRs. However, today, the CAISO balancing area does not receive supporting congestion revenues from these neighboring areas to account for these congestion price effects. In EDAM, as a balancing area joins the day-ahead market, and as described in this proposal, to the extent a transmission constraint within the CAISO balancing area is affected by schedules in a neighboring EDAM balancing area, a portion of the parallel flow congestion revenues materializing in the neighboring EDAM balancing area will be allocated to the CAISO (the remaining parallel flow congestion revenues after allocating revenues for balanced self-schedules exercising eligible firm PTP and NITS transmission rights). These additional congestion revenues will flow to the CAISO CRR balancing account which helps fund CRR settlement, putting downward pressure and reducing CRR underfunding risk.

It is important to acknowledge that the modeling enhancements and CRR accuracy improvements are driven by movement to the EDAM, and not driven by this narrowly tailored initiative. Even under the existing, FERC-approved, design for congestion revenue allocation there is a need and opportunity to model neighboring EDAM balancing area conditions in allocating CRRs in the CAISO balancing area and

discuss the settlement of CRRs in EDAM. Thus, this element of continued CRR modeling enhancements is seen as a related, but a different scope item unique to the CAISO balancing area, which will be further discussed leading up to the release of annual CRRs through existing release forums.

B. Continued design evolution: near-term and long-term EDAM congestion revenue design

The EDAM establishes a unique market structure where participating balancing areas and transmission providers continue to retain the administration of their OATTs, continue to sell transmission service under their OATTs, and manage the reliability function for the balancing area. The EDAM, as well as the WEIM, does not stop or otherwise preclude the sale of transmission service nor does it mandate differentiation of transmission rights pre and post EDAM participation.

OATT transmission service is generally awarded without fully accounting for parallel flow effects on adjoining systems. In evaluating a request for OATT transmission service, a transmission provider will evaluate the transmission capability on its own transmission system in determining whether the request for OATT service can be accommodated without necessarily directly considering the effects of that request or resulting flow effects on the neighboring system or the availability of transmission capability on the neighboring system. Similarly, the neighboring transmission provider may make sales of OATT transmission on its system without considering the parallel flow effects on its neighboring system. Simultaneous utilization of the reserved OATT transmission rights can contribute to the overload of transmission constraints across the interconnected systems in part based on parallel flow effects. Nevertheless, transmission providers across the West have developed different strategies for managing and mitigating the risk of resulting infeasibilities including adjustments to the Available Transfer Capability (ATC) calculations, coordination on evaluation of some long-term requests depending on the interconnected nature of systems, reliance on curtailments of transmission service, redispatch procedures, or other actions that provide the necessary loading relief to resolve the constraint.

As currently designed, the EDAM intentionally does not include a congestion revenue rights (CRR) or financial transmission rights (FTR) design outside of the CAISO. Introduction of such designs across other markets has traditionally been accompanied by the conversion of firm transmission service to these rights for those who have paid the embedded costs of the transmission system. This was also accompanied by stopping further sales of transmission service by individual transmission providers, introduction of a simultaneous feasibility assessment and consolidation of the transmission sales administration function to the market operator along with the establishment of a market-wide transmission usage charge. The EDAM does not make such changes, but as noted earlier, transmission providers and balancing authorities continue to retain their reliability functions and administer sale of transmission service under their respective OATTs. Operations of the EDAM can establish market operational experience for participants and illuminate the effects of continued OATT sales on the market and the effect of the market on OATT sales, all which will help inform evolution of the EDAM design and future consideration of different congestion revenue allocation or congestion hedging market mechanisms.

A key aspect raised by a number of stakeholder comments was a concern that EDAM entities may continue to make OATT transmission sales after joining EDAM creating an impetus for promptly transitioning to a long-term design or considering other sunset provisions or narrower measures. Their

concern is that these continued sales of eligible firm PTP and NITS transmission rights could continue to exacerbate parallel flow congestion pricing impacts without consequence and lead to establishment of an ongoing congestion hedge. The ISO recognizes that it will be important in the next stage of the stakeholder process to consider a long-term design to evaluate treatment of continued sales of OATT transmission rights, their treatment for purposes of congestion revenue allocation, and their effect on parallel flows as part of a spectrum of options. Nevertheless, it is important to contextualize this risk in the broader realities of the Western transmission systems which are substantially if not already fully subscribed, based on existing transmission ratings, for long-term firm OATT transmission (whether PTP or NITS) mitigating some of the ongoing effect of continued OATT sales post-EDAM participation. Additionally, while there is no West-wide simultaneous feasibility evaluation, as noted earlier transmission providers across the West have established limits on sales of long-term firm transmission service through their ATC methodologies which apply margins for reliability and uncertainty, including for loop flow effects. This mitigates somewhat the risk that for long-term firm transmission products, which under the phased proposal would be eligible for congestion revenue allocation, neighboring transmission providers would be selling the transmission capability up to the full rating of a line. Finally, the consideration of the effect of new OATT sales on loop flow, contributions to congestion, and congestion revenue allocation is not only a consideration for the EDAM entities providing sales of transmission service under the OATT but also for the CAISO balancing area. As loads in the West continue to grow, EDAM entities may make continued OATT sales depending on availability of transmission products, and the CAISO may experience increased utilization through new firm use across its system due to load growth – all which may have parallel flow effects and can contribute to congestion on the neighboring grids.

The ISO and market participants will continue to work together, through stakeholder working groups, to evaluate and consider a spectrum of potential near-term enhancements and long-term congestion revenue allocation or congestion hedging mechanisms that could be considered after the launch of EDAM. Under traditional organized market CRR and FTR designs, the allocation of financial hedging mechanisms includes consideration of the simultaneous feasibility of all the awarded transmission rights flowing and if these cannot be accommodated simultaneously, there are reductions to the allocation such that the amount a financial hedge mechanism provided may be less than the amount of transmission rights held. Those types of financial rights designs are on one end of the spectrum, take time and significant complexity to develop.

These types of enhancements across a spectrum of incremental improvements can be considered as near-term enhancements or as part of a long-term evolution to the design, informed by stakeholder input, market data and market experience. Efforts associated with these considerations will be ongoing, along with data monitoring and transparent sharing of information.

a. Data monitoring and transparency

Informed by stakeholder input, the ISO continues to believe it is important to monitor the effects of the proposed design. In particular, the ISO would monitor the following information:

- Identification of the binding transmission constraints, and their frequency, in each EDAM balancing area.
- Effects of binding transmission constraints on congestion prices within the EDAM balancing area in which the constraint is located and in neighboring EDAM balancing areas.

- Allocation of congestion revenues among EDAM balancing areas resulting from these constraints.
- Magnitude and frequency of self-schedules across EDAM balancing areas, including self-schedules exercising firm OATT transmission rights (associated with use of CRN).

As the data and information is collected during EDAM operations, the ISO will transparently share the information described above to support evaluation of near-term and long-term incremental design enhancements through the following methods:

- EDAM operational reports which focus on a range of aspects during the first year of EDAM operations.
- Sharing of data during the quarterly Market Planning and Performance Forum (MPPF) which provides information on a range of topics, including ongoing EDAM operations.

Independent from the ISO data, monitoring and reporting, the ISO Department of Market Monitoring (DMM) will produce data and information on EDAM operations. As with the data and reporting produced for the WEIM, the DMM will monitor aspects of EDAM congestion that will be part of their quarterly and annual reports providing further transparency to congestion related information.

In comments to the Draft Final Proposal, stakeholders supported the identified monitoring categories and the forums through which these results will be provided transparently. As the information is collected with the launch of EDAM, there may be additional data or information that may provide value and there will be opportunities to identify additional data elements for consideration.

b. Evaluation of near-term enhancements and a long-term design for congestion revenue allocation

The proposed design for parallel flow congestion revenue allocation will establish a baseline design to build upon through continued stakeholder engagement on further near-term enhancements and a long-term design, with opportunity to consider a spectrum of design alternatives. The ISO is committed to continued robust engagement on the evolution of the congestion revenue allocation design. To that end, the ISO will continue to engage stakeholders and re-initiate working groups on this topic prior to EDAM launch in May of 2026. This will allow the stakeholder community to come together to re-initiate discussions in considering near-term enhancements, particularly an enhancement that enables parallel flow congestion revenue allocation based on economic bidding and eliminates the CAISO balancing area asymmetry as described earlier, and considers a spectrum of long-term designs including review of EDAM principles and consideration of any new or additional principles guiding the establishment of a long-term design.

To support continued incremental evolution including near-term and long-term enhancements, the ISO proposes the following activities and timelines to continue engagement and evaluation of near-term enhancements and a long-term design informed by stakeholder input:

- Stakeholder working groups launch in 2026, prior to EDAM go-live. The working groups would commence with consideration of the near-term enhancements and focus on long-term design principles based on existing EDAM principles on the topic and any additional or different principles that may be identified. The working groups would then shift toward consideration of a

spectrum of potential design options and careful consideration of these, which can be informed by market operational experience and data monitoring described earlier.

- The stakeholder process would be conducted over a 12-24 month period allowing room for evaluation of different designs and complexity based on the level of consensus development. At the conclusion of this stakeholder process, the ISO would present a proposal to the governing entity for consideration. During the stakeholder process, the ISO will provide quarterly updates to the governing entity on the status of the initiative, implementation timelines associated with relevant designs considered, and reporting on data monitoring described earlier on congestion patterns across the EDAM footprint.
- The resulting proposal and the tariff revisions would be filed with FERC for approval, and the ISO would strive to implement the design by the third year of EDAM operations (2029) considering the structure and complexity of the chosen design.

The more detailed description of the stakeholder engagement timelines is intended to provide stakeholders with confidence that the ISO and the stakeholder community will engage promptly in an open and transparent stakeholder process in evaluating a long-term design informed, in part, by EDAM operational experience.

C. Near-term enhancement consideration: supporting economic bidding

The ISO is committed to continuing to pursue and evaluate the development and implementation of enhancements to the design proposed in this document which could be implemented in the in the first year, or soon thereafter, of EDAM operations (2027). In comments to the Draft Final Proposal, market participants expressed sizable support for an enhancement that would provide additional flexibility and mitigate potential self-scheduling incentives by enabling allocation of congestion revenue associated with parallel flow based on cleared balance day-ahead market schedules, whether these were self-scheduled or economically bid associated with eligible firm PTP and NITS transmission rights. This concept was introduced by the ISO in the Draft Final Proposal and garnered sizable stakeholder support. Beyond the added flexibility and the potential to mitigate or reduce self-scheduling incentives, this design also provides the ability for the CAISO balancing area to retain parallel flow congestion revenues associated with a constraint in a neighboring EDAM balancing area, thus eliminating the asymmetry that may exist under the broader current proposal.

Implementation of this type of design requires additional systems and functionality changes that would not be ready by EDAM launch in 2026, while also requiring additional vetting with stakeholders on the structure of the design. The ISO commits to evaluate this design and move toward implementation pending further vetting and stakeholder feedback on this design through the stakeholder process.

a. Design description

The near-term enhancement design can be summarized as follows:

- Parallel flow congestion revenues accruing within an EDAM balancing area due to a binding transmission constraint in another EDAM balancing area, will be allocated by the market operator to the EDAM balancing area where the congestion revenues are collected (not where the transmission constraint is located) for the exercise of eligible firm PTP and NITS transmission rights for cleared balanced day-ahead market schedules, whether self-scheduled or

economically bid. This enhancement reduces or mitigates concerns with incentives to self-schedule in the day-ahead market.

- For the CAISO balancing area, since it does not offer PTP and NITS service, the market operator will leverage the Congestion Revenue Rights (CRR) functionality to allocate congestion revenues associated with parallel flows to the CAISO balancing area, resulting from a binding transmission constraint in a neighboring EDAM balancing area, based on the settlement of source/sink CRRs released in the annual and monthly, allocation and auction processes.

This near-term enhancement enables parallel flow congestion revenue allocation based on economically bid balanced cleared market schedules associated with eligible firm PTP and NITS transmission rights, including Conditional Firm transmission, consistent with the baseline proposal in this Revised Draft Final Proposal. This enhancement, introduced initially within the Draft Final Proposal as a possible future enhancement, was widely supported in the written stakeholder comments and it is thus described in more detail how it could be structured to help frame understanding of the potential design and set the stage for forthcoming continued discussions on the near-term design as described earlier.

Under this enhancement, the market operator will allocate parallel flow congestion revenues based on balanced cleared schedules between the source/sink locations. For example, in the context of load service and NITS transmission, designated network resources could economically bid their output and economically bid their load, and for the balanced cleared day-ahead portion of the schedules the market operator would allocate congestion revenues associated with parallel flows to the EDAM entity to sub-allocate to the transmission customer under the terms of their OATT. Remaining parallel flow congestion revenues that may accrue would be allocated to the EDAM balancing area where the transmission constraint is located.

The proposed enhancement would also apply to scheduling associated with Transmission Ownership Rights/Existing Transmission Contracts (TOR/ETC) – legacy transmission contracts – which could also submit day-ahead economic bids at source/sink locations associated with those transmission rights, and would enable allocation of associated parallel flow congestion revenues to these directly from the market operator. The application of the enhancement to TORs/ETCs would further improve market efficiency by supporting economic bidding.

b. Comparability for CAISO Balancing Area and CRRs

Within the CAISO balancing area, CRRs are allocated and auctioned off in annual and monthly increments as financial instrument which allow holders of these instruments to receive payment, or potentially charges, based on congestion revenues/rents generated (positive or negative) as a result of transmission constraints on the transmission system. CRRs are congestion cost hedge mechanism available in the day-ahead market within the CAISO balancing area. With *CRR 1B enhancements* a few years ago, the CRRs allocated within the CAISO balancing area reflect transmission constraints across the wider market footprint which, with the introduction of EDAM in 2026, will expand beyond the CAISO balancing area. At that point, transmission constraints in the broader EDAM market footprint can affect congestion prices in the CAISO balancing area and these constraints will also be modeled within the CRR allocation process. The introduction of EDAM can improve modeling of transmission constraints across participating balancing areas and consequently will also further inform the CRR modeling and allocation process within the CAISO balancing area, including allocation of congestion revenues that the CAISO does not receive today which can further support allocation within the CAISO and CRR revenue sufficiency.

An important consideration as part of the enhancement is symmetry and comparability between the allocation of parallel flow congestion revenues for balanced cleared schedules associated with eligible firm PTP and NITS transmission rights in EDAM balancing areas and allocation with the CAISO balancing area which does not offer PTP and NITS transmission products. As the CAISO balancing area does not offer these types of OATT transmission products, the comparable element is the CAISO balancing area allocation of CRRs in annual and monthly increments.

Under this enhancement, to ensure symmetry and comparability in allocations, the CAISO balancing area would retain parallel flow congestion revenues resulting from a transmission constraint in a neighboring EDAM balancing area with effectiveness on CAISO day ahead energy and imbalance reserve schedules in order to sufficiently provide the necessary congestion hedge for annual and monthly CRRs affected by the binding transmission constraint. Remaining parallel flow congestion revenues which accrue in the CAISO balancing area, beyond what is needed to provide and support funding of CRRs affected by the constraint, will be allocated to the EDAM balancing area where the transmission constraint is located.

The ISO seeks feedback from stakeholders on the further described enhancement that can be considered with stakeholders as a near-term enhancement supported by technology infrastructure for implementation.

VIII. Stakeholder Process and Decisional Classification

A. Stakeholder engagement

This stakeholder initiative will follow an expedited schedule informed by stakeholder participation in workshop discussions as well as written stakeholder comments. The publication of this issue paper on March 17th represented the start of the initiative. The Draft Final Proposal published on April 16th introduced a formal proposal for stakeholder input and feedback. This Revised Draft Final Proposal provides further incremental refinements and enhancements to the proposal informed by stakeholder comments.

The following represent the target upcoming milestones:

- March 17th – Publication of *EDAM Congestion Revenue Allocation* issue paper.
- March 24th – Stakeholder workshop on published Issue Paper.
- April 7th – Stakeholder comments deadline for Issue Paper and workshop.
- April 14th – Publication of Draft Final Proposal on *EDAM Congestion Revenue Allocation.*
- April 23rd – Stakeholder workshops to discuss the Draft Final Proposal.
- May 5th – Stakeholder comments deadline for the Draft Final Proposal and associated workshops.
- May 19th – Publication of Revised Draft Final Proposal informed by stakeholder comments.
- May 27th – Stakeholder workshop on Revised Draft Final Proposal.
- June 2nd – Stakeholder comments on Revised Draft Final Proposal.
- June 6th – Publication of Final Proposal.
- June TBD – Presentation for decision to ISO Board of Governors and WEM Governing Body.

A. Decisional classification

This initiative considers possible solutions to concerns with the EDAM design for congestion revenue allocation between EDAM balancing areas. ISO staff believes that any proposed tariff changes that emerge from this stakeholder process will be subject to the joint authority of the Board of Governors and the WEM Governing Body.

The Board and the WEM Governing Body have joint authority over any

> proposal to change or establish a tariff rule applicable to the WEIM/EDAM Entity balancing authority areas, WEIM/EDAM Entities, or other market participants within the WEIM/EDAM Entity balancing authority areas, in their capacity as participants in the WEIM/EDAM. The WEM Governing Body will also have joint authority with the Board of Governors to approve or reject a proposal to change or establish any tariff rule for the day-ahead or real-time markets that directly establishes or changes the formation of any locational marginal price(s) for a product that is common to the overall WEIM or EDAM markets. The scope of this joint authority excludes, without limitation, any other proposals to change or establish tariff rule(s) applicable only to the CAISO balancing authority area or to the CAISO-controlled grid. Note: For the avoidance of any doubt, that the joint authority definition is not intended to cover balancing authority-specific measures, such as any parameters or constraints, the CAISO may use to ensure reliable operation within its balancing authority area.

Charter for WEM Governance § 2.2.1. Any tariff changes that are proposed as a result of this process would be "applicable to WEIM/EDAM Entity balancing authority areas, WEIM/EDAM Entities, or other market participants within WEIM/EDAM Entity balancing authority areas, in their capacity as participants in WEIM/EDAM." We do not expect they would be applicable "only to … the CAISO-controlled grid." Accordingly, these proposed changes to implement these enhancements should fall within the scope of joint authority.

This proposed classification may evolve as this process develops. Stakeholders are encouraged to submit a response in their written comments to the proposed classification as described above.

Appendix 1 – Additional Examples Illustrating the Proposal

This appendix is intended to provide continuity in examples with the more complex illustrative examples presented in the Issue Paper and stakeholder workshop in order to convey the evolution and effect of the proposal as described in section VII of this document. Within the Issue Paper, the ISO presented two illustrative multi-Balancing Authority Area examples: Predominant Flow example and Counter flow example. These examples demonstrate the distribution of internal physical congestion and parallel flow physical congestion to EDAM BAAs, including the CAISO BAA, based on the current FERC-approved EDAM design, the transitional alternative introduced in the Issue Paper, and the approach described in this Revised Draft Final Proposal.

As described in section VII of this Revised Draft Final Proposal, the proposal is to identify the congestion revenue associated with exercised monthly and long-term firm OATT rights via balanced source/sink self-schedules with associated contract reference number (CRN). The market operator would distribute the balanced CRN Congestion revenue, associated with balanced source/sink self-schedules, including congestion revenue associated with parallel flows, to the EDAM Entity of the BAA where the self-schedule are awarded. The proposal would retain the EDAM filed tariff congestion revenue distribution for the portion of congestion revenue collected through the settlement of non-CRN self-schedules and economic market schedules. Thus, parallel flow congestion revenues beyond what is associated with balanced source/sink self-schedules exercising the firm OATT transmission rights (which are allocated to the balancing area where these are revenues are collected) would be allocated to the balancing area where the transmission constraint is located.

The following discussion will provide a comparison of the congestion distribution under the current EDAM design, the transitional alternative introduced in the Issue Paper, and the proposed refined design described in this Revised Draft Final Proposal.

1. **Predominant Flow Example**

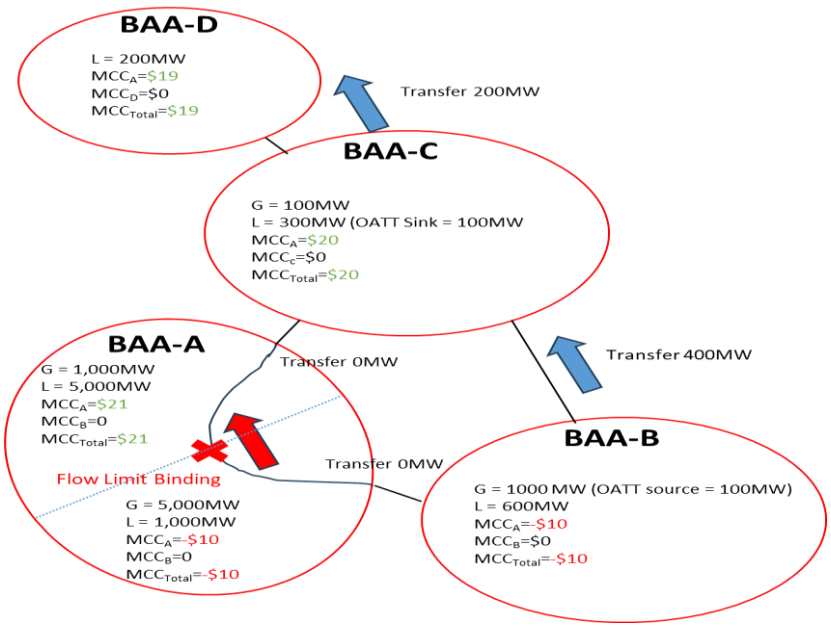


Figure 1: Predominant Flow Solution when BAA A has Binding Constraint South to North

In the predominant flow example, an internal constraint within BAA A is binding from South to North that impacts the energy schedules as well the marginal cost of congestion component (MCC) of locational marginal prices (LMP) associated with energy schedules. In this example, Generation in BAA A, BAA B, and BAA C was scheduled to serve load in BAA A, BAA B, BAA C, and BAA D with the overall flow of energy schedules is from South to North (Figure 1).

In BAA A, 6,000 MWs of internal generation has been dispatched to serve the 6,000 MWs of internal load. Of the 6,000 MWs supply dispatch, 1,000 MWs of generation south of the constraint served 1,000 MWs of load south of the constraint. An additional, 4,000 MWs of supply south of the constraint was dispatched to serve 4,000 MWs of BAA A load north of the constraint. The remaining 1,000 MW of BAA A load north of the constraint was served by generation north of the constraint.

In BAA B, 1,000 MWs of internal generation, including 100 MWs of OATT self-schedules, was dispatched to serve 600 MWs of internal load as well as 400 MWs of export transfer out of BAA B to BAA C, including a 100 MWs TC self-scheduled OATT Transfer.

In BAA C, 100 MWs of internal generation was dispatched to meet 100 MWs of internal load while the remaining 200 MWs load was served through the transfer of energy from BAA B to BAA C, including 100 MWs of OATT self-schedules. The remaining 200 MWs of transfer energy from BAA B was subsequently transfer from BAA C to BAA D to serve 200 MWs of load in BAA D.

In the predominant flow example, the Marginal Energy Cost (MEC) is equal across the footprint and priced at $20. However, powerflow congestion assessment indicates that all energy schedules in EDAM BAAs external to BAA A have an effectiveness contribution on the binding constraint in BAA A. Depending upon effectiveness of the schedule on the constraint and relationship to the constraint, contributing or resolving the congestion, the subsequent impact on the MCC component of the nodal LMPs varies. In short, supply and demand south of the constraint has a negative MCC price, $(10), while the supply and load north of the binding constraint has a MCC, $21, $20, and $19 for BAA A, BAAC, and BAA D, respectively. Table 1 represents a summary of the dispatches and corresponding prices.

Table 1: Predominant flow awards and prices

		MW	LMP	MEC	MCC_A	MCC_B	MCC_C	MCC_D
BAA A	G_N	1,000	$41.00	$20.00	*$ 21.00*	$ -	$ -	$ -
	L_N	(5,000)	$41.00	$20.00	*$ 21.00*	$ -	$ -	$ -
	G_S	5,000	$10.00	$20.00	*$(10.00)*	$ -	$ -	$ -
	L_N	(1,000)	$10.00	$20.00	*$(10.00)*	$ -	$ -	$ -
	T_{AB}	-	$20.00	$20.00	$ -	$ -	$ -	$ -
	T_{AC}	-	$20.00	$20.00	$ -	$ -	$ -	$ -
BAA B	G_{OATT}	100	$10.00	$20.00	*$(10.00)*	$ -	$ -	$ -
	G	900	$10.00	$20.00	*$(10.00)*	$ -	$ -	$ -
	L	(600)	$10.00	$20.00	*$(10.00)*	$ -	$ -	$ -
	T_{AB}	-	$20.00	$20.00	$ -	$ -	$ -	$ -
	$T_{BC(OATT)}$	(100)	$20.00	$20.00	$ -	$ -	$ -	$ -
	T_{BC}	(300)	$20.00	$20.00	$ -	$ -	$ -	$ -

BAA C	G	100	$40.00	$20.00	*$20.00*	$ -	$ -	$ -
	L_{OATT}	(100)	$40.00	$20.00	*$20.00*	$ -	$ -	$ -
	L	(200)	$40.00	$20.00	*$20.00*	$ -	$ -	$ -
	T_{AC}	-	$20.00	$20.00	$ -	$ -	$ -	$ -
	$T_{BC(OATT)}$	100	$20.00	$20.00	$ -	$ -	$ -	$ -
	T_{BC}	300	$20.00	$20.00	$ -	$ -	$ -	$ -
	T_{CD}	(200)	$20.00	$20.00	$ -	$ -	$ -	$ -

BAA D	G	-	$39.00	$20.00	*$19.00*	$ -	$ -	$ -
	L	(200)	$39.00	$20.00	*$19.00*	$ -	$ -	$ -
	T_{CD}	200	$20.00	$20.00	$ -	$ -	$ -	$ -

Table 2 provides a summary of the settlement of the market schedules including 100 MWs of exercised firm OATT transmission right as CRN self-schedules. Based upon the market settlement, BAA A net MCC settlement is $(124,000) where BAA A generation receive payments $91,000 while BAA A load is charged $(215,000). For BAA B, the net settlement is $(4,000) where BAA B generation receive payments $10,000, BAA B load is charged $(6,000), and BAA B net transfer settlement is a charge of $(8,000). For BAA C, the net settlement is $(4,000) where BAA C generation receive payments $4,000, BAA C load is charged $(12,000), and BAA C net transfer settlement charge of $4,000. Finally, BAA D's net settlement is $(3,800) where BAA D generation, which was not dispatched, receives a payment of $0, BAA D load is charged $(7,800), and BAA D net transfer settlement is $4,000.

Overall, the market footprint net settlement is an over-collection in congestion revenue of $(135,800). In tables Table 3, Table 4, and Table 5, the ISO will compare the congestion revenue distribution under EDAM current design, transitional alternative introduced in the Issue Paper, and the design in this Revised Draft Final Proposal issue paper respectively.

Table 2: Predominant flow settlement

		LMP	MEC	MCC_A	MCC_B	MCC_C	MCC_D
BAA A	G_N	**$41,000**	**$20,000**	*$21,000*	$ -	$ -	$ -
	L_N	**$(205,000)**	**$(100,000)**	*$(105,000)*	$ -	$ -	$ -
	G_S	**$50,000**	**$100,000**	*$(50,000)*	$ -	$ -	$ -
	L_N	**$(10,000)**	**$(20,000)**	*$10,000*	$ -	$ -	$ -
	T_{AB}	**$ -**	**$ -**	$ -	$ -	$ -	$ -
	T_{AC}	**$ -**	**$ -**	$ -	$ -	$ -	$ -
BAA A STLMT		**$(124,000)**	**$ -**	*$(124,000)*	$ -	$ -	$ -

BAA B	G_{OATT}	**$1,000**	**$2,000**	*$ (1,000)*	$ -	$ -	$ -
	G	**$9,000**	**$18,000**	*$(9,000)*	$ -	$ -	$ -
	L	**$(6,000)**	**$(12,000)**	*$ 6,000*	$ -	$ -	$ -
	T_{AB}	**$ -**	**$ -**	$ -	$ -	$ -	$ -
	$T_{BC(OATT)}$	**$(2,000)**	**$(2,000)**	$ -	$ -	$ -	$ -
	T_{BC}	**$(6,000)**	**$(6,000)**	$ -	$ -	$ -	$ -

BAA B STLMT		**$(4,000)**	**$ -**	*$(4,000)*	*$ -*	*$ -*	*$ -*

BAA C	G	**$4,000**	**$2,000**	*$2,000*	*$ -*	*$ -*	*$ -*
	L_{OATT}	**$(4,000)**	**$(2,000)**	*$(2,000)*	*$ -*	*$ -*	*$ -*
	L	**$(8,000)**	**$(4,000)**	*$(4,000)*	*$ -*	*$ -*	*$ -*
	T_{AC}	**$ -**	**$ -**	*$ -*	*$ -*	*$ -*	*$ -*
	$T_{BC(OATT)}$	**$2,000**	**$2,000**	*$ -*	*$ -*	*$ -*	*$ -*
	T_{BC}	**$6,000**	**$6,000**	*$ -*	*$ -*	*$ -*	*$ -*
	T_{CD}	**$(4,000)**	**$(4,000)**	*$ -*	*$ -*	*$ -*	*$ -*
BAA C STLMT		**$(4,000)**	**$ -**	*$ (4,000)*	*$ -*	*$ -*	*$ -*

BAA D	G	**$ -**	**$ -**	*$ -*	*$ -*	*$ -*	*$ -*
	L	**$(7,800)**	**$(4,000)**	*$(3,800)*	*$ -*	*$ -*	*$ -*
	T_{CD}	**$4,000**	**$4,000**	*$ -*	*$ -*	*$ -*	*$ -*
BAA D STLMT		**$(3,800)**	**$ -**	*$(3,800)*	*$ -*	*$ -*	*$ -*

In the EDAM current FERC-approved design, the congestion revenue is allocated to the BAA where the constraint is modeled (Table 3).

Table 3: Current Marginal Cost of Congestion distribution of predominant flow

MCC OFFSET	**MCC_T**	**MCC_A OFFSET by Breakdown**	**MCC_B OFFSET by Breakdown**	**MCC_C OFFSET by Breakdown**	**MCC_D OFFSET by Breakdown**
BAA_A MCC Total	**$(124,000)**	$(124,000)	$ -	$ -	$ -
BAA_B MCC Total	**$(4,000)**	$(4,000)	$ -	$ -	$ -
BAA_C MCC Total	**$(4,000)**	$(4,000)	$ -	$ -	$ -
BAA_D MCC Total	**$(3,800)**	$(3,800)	$ -	$ -	$ -
Overall STLMT	**($135,800)**	**($135,800)**	**$ -**	**$ -**	**$ -**
Congestion Allocation	**$135,800**	**$135,800**	**$ -**	**$ -**	**$ -**

The transitional alternative introduced in the Issue Paper allocates congestion revenue/rents to the BAA where the congestion was collected or paid (Table 4). Internal congestion revenue as a result of an internal transmission constraint already stays within the BAA, but the transitional alternative considered also keeping all the parallel flow congestion revenues in the BAA irrespective of the location of the transmission constraint.

Table 4: Transitional approach (Issue Paper) for predominant flow of Marginal Cost of Congestion distribution

MCC OFFSET	**MCC_T**	**MCC_A OFFSET by Breakdown**	**MCC_B OFFSET by Breakdown**	**MCC_C OFFSET by Breakdown**	**MCC_D OFFSET by Breakdown**
BAA_A MCC Total	**$(124,000)**	$(124,000)	$ -	$ -	$ -

BAA_B MCC Total	**$(4,000)**	$ -	$(4,000)	$ -	$ -
BAA_C MCC Total	**$(4,000)**	$ -	$ -	$(4,000)	$ -
BAA_D MCC Total	**$(3,800)**	$ -	$ -	$ -	$(3,800)
Overall STLMT		**$(124,000)**	**$(4,000)**	**$(4,000)**	**$(3,800)**
Congestion Allocation		**$124,000**	**$4,000**	**$4,000**	**$3,800**

Under the design of this Revised Draft Final Proposal, the congestion revenue associated to balanced OATT self-schedules in BAA B and BAA C is allocated to the EDAM Entity of the BAA where OATT rights are exercised. The EDAM Entity will consider this congestion revenue when providing the further sub-allocation under the terms of its OATT effectively providing a greater congestion hedge to transmission customer exercising the firm OATT transmission rights (Table 5). For BAA B, ISO will allocate the $1,000 of congestion revenue to the EDAM entity associated with the 100 MW OATT CRN self-schedule where the transmission customer exercised their rights from the generator to the transfer location. For BAA C, ISO will allocate the $2,000 of congestion revenue to the EDAM entity associated with the 100 MW OATT CRN self-schedule where the transmission customer exercised their rights from the transfer location to BAA C load. The remaining congestion revenue is distributed to the BAA where the constraint is modeled.

Table 5: Revised Draft Final Proposal – refined design

MCC OFFSET	**MCC_T**	**MCC_A OFFSET by Breakdown**	**MCC_B OFFSET by Breakdown**	**MCC_C OFFSET by Breakdown**	**MCC_D OFFSET by Breakdown**
BAA_A MCC Total	**$(124,000)**	$(124,000)	$ -	$ -	$ -
BAA_B MCC Total	**$(4,000)**	$(3,000)	($1,000)	$ -	$ -
BAA_C MCC Total	**$(4,000)**	$(4,000)	$ -	($2,000)	$ -
BAA_D MCC Total	**$(3,800)**	$(3,800)	$ -	$ -	$ -
Overall STLMT	**($135,800)**	**($132,800)**	**($1,000)**	**($2,000)**	**$ -**
Congestion Allocation	**$135,800**	**$132,800**	**$1,000**	**$2,000**	**$ -**

Example 2 – Counter Flow Scenario

Similar to the predominant flow example, in the counter flow example, the market awards energy schedules for generation in BAA A, BAA B, and BAA C to meet load needs in BAA A, BAA b, BAA C, and BAA D. The market is performing congestion management on a binding constraint in BAA A from south to north direction for physical flow. However, the difference between the predominant flow and the counter flow example is the market solution economically schedules generation in BAA C to meet demand needs on BAA B and BAA D (See Figure 5). The energy flow from North the South for energy schedules between BAA C to BAA B. In other words, the energy is scheduled to flow in counter flow direction relative to the flow of the binding constraint.

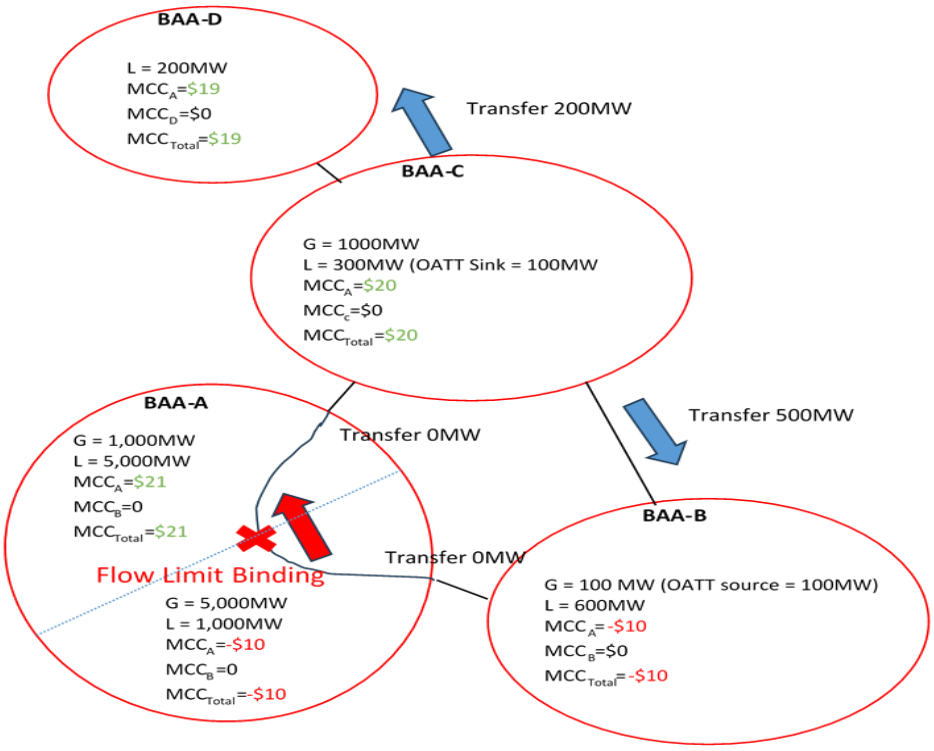


Figure 2: Counter Flow Solution when BAA A has Binding Constraint South to North

In BAA A, 6,000 MWs of internal generation has been dispatched to serve the 6,000 MWs of internal load. Of the 6,000 MWs supply dispatch, 1,000 MWs of generation south of the constraint served 1,000 MWs of load south of the constraint. An additional, 4,000 MWs of supply south of the constraint was dispatched to serve 4,000 MWs of BAA A load north of the constraint. The remaining 1,000 MW of BAA A load north of the constraint was served by generation north of the constraint.

In BAA B, 100 MWs of OATT self-schedules was dispatched to serve 100 MWs of OATT load in BAA C with a 500 MWs net import transfer from BAA C to BAA B. The 500 MWs net import transfer is comprised of a 600 MWs economic transfer from BAA C to BAA B and a 100 MWs self-schedule OATT Transfer from BAA B to BAA C.

In BAA C, 1,000 MWs of internal generation was dispatched to meet 200 MWs of internal load, 800 MWs to serve 600 MWs of BAA B load as well as 200 MWs of BAA D load. The remaining 100 MWs of BAA C load is being served by 100 MWs OATT import transfer from BAA B. This dispatch creates a 500 MWs net transfer from BAA c to BAA B as well as a 200 MWs Transfer from BAA C to BAA D to serve BAA D load.

Similar to the predominant flow example, the MEC across all four BAAs is $20. However, powerflow congestion assessment indicates that all energy schedules in EDAM BAAs external to BAA A have an effectiveness contribution on the binding constraint in BAA A. Depending upon effectiveness of the schedule on the constraint and relationship to the constraint, contributing or resolving the congestion, the subsequent impact on the MCC component of the nodal LMPs varies. In short, supply and demand south of the constraint has a negative MCC price, $(10), while the supply and load north of the binding constraint has a MCC, $21, $20, and $19 for BAA A, BAAC, and BAA D, respectively. The respective energy schedule and prices can be observed in Table 6.

Table 6: Counter flow awards and prices

		MW	LMP	MEC	MCC_A	MCC_B	MCC_C	MCC_D
BAA A	G_N	1,000	$41.00	$20.00	*$ 21.00*	$ -	$ -	$ -
	L_N	(5,000)	$41.00	$20.00	*$ 21.00*	$ -	$ -	$ -
	G_S	5,000	$10.00	$20.00	*$(10.00)*	$ -	$ -	$ -
	L_N	(1,000)	$10.00	$20.00	*$(10.00)*	$ -	$ -	$ -
	T_{AB}	-	$20.00	$20.00	$ -	$ -	$ -	$ -
	T_{AC}	-	$20.00	$20.00	$ -	$ -	$ -	$ -
BAA B	G_{OATT}	100	$10.00	$20.00	*$(10.00)*	$ -	$ -	$ -
	G	0	$10.00	$20.00	*$(10.00)*	$ -	$ -	$ -
	L	(600)	$10.00	$20.00	*$(10.00)*	$ -	$ -	$ -
	T_{AB}	-	$20.00	$20.00	$ -	$ -	$ -	$ -
	$T_{BC(OATT)}$	(100)	$20.00	$20.00	$ -	$ -	$ -	$ -
	T_{BC}	600	$20.00	$20.00	$ -	$ -	$ -	$ -
BAA C	G	1,000	$40.00	$20.00	*$20.00*	$ -	$ -	$ -
	L_{OATT}	(100)	$40.00	$20.00	*$20.00*	$ -	$ -	$ -
	L	(200)	$40.00	$20.00	*$20.00*	$ -	$ -	$ -
	T_{AC}	-	$20.00	$20.00	$ -	$ -	$ -	$ -
	$T_{BC(OATT)}$	100	$20.00	$20.00	$ -	$ -	$ -	$ -
	T_{BC}	(600)	$20.00	$20.00	$ -	$ -	$ -	$ -
	T_{CD}	(200)	$20.00	$20.00	$ -	$ -	$ -	$ -
BAA D	G	-	$39.00	$20.00	*$19.00*	$ -	$ -	$ -
	L	(200)	$39.00	$20.00	*$19.00*	$ -	$ -	$ -
	T_{CD}	200	$20.00	$20.00	$ -	$ -	$ -	$ -

Table 6 provides a summary of the settlement of market schedules including a 100 MWS of exercise OATT transmission rights as CRN self-schedules. Based upon the market settlement, BAA A net MCC settlement is $(124,000) where BAA A generation receive payments $91,000 while BAA A load is charged $(215,000). For BAA B, the net settlement is $5,000 where BAA B generation receive payments $1,000, BAA B load is charged $(6,000), and BAA B net transfer settlement is a charge of $10,000. For BAA C, the net settlement is $14,000 where BAA C generation receive payments $40,000, BAA C load is charged $(12,000), and BAA C net transfer settlement charge of ($14,000). Finally, BAA D's net settlement is $(3,800) where BAA D generation, which was not dispatched, receives a payment of $0, BAA D load is charged $(7,800), and BAA D net transfer settlement is $4,000.

Overall, the market footprint net settlement results in an over collection of congestion revenue of $108,800. In tables Table 11, Table 12, and Table 13, the ISO will compare the congestion revenue distribution under EDAM current FERC-approved design, the transitional alternative introduced in the Issue Paper, and the refined design described in this Revised Draft Final Proposal.

Table 7: Counter flow settlement

		LMP	MEC	MCC_A	MCC_B	MCC_C	MCC_D
BAA A	G_N	**$41,000**	**$20,000**	*$21,000*	$ -	$ -	$ -
	L_N	**$(205,000)**	**$(100,000)**	*$(105,000)*	$ -	$ -	$ -
	G_S	**$50,000**	**$100,000**	*$(50,000)*	$ -	$ -	$ -
	L_N	**$(10,000)**	**$(20,000)**	*$10,000*	$ -	$ -	$ -
	T_{AB}	**$ -**	**$ -**	*$ -*	$ -	$ -	$ -
	T_{AC}	**$ -**	**$ -**	*$ -*	$ -	$ -	$ -
BAA A STLMT		**$(124,000)**	**$ -**	*$(124,000)*	$ -	$ -	$ -

BAA B	G_{OATT}	**$1,000**	**$2,000**	*$ (1,000)*	$ -	$ -	$ -
	G	**$ -**	**$ -**	*$ -*	$ -	$ -	$ -
	L	**$(6,000)**	**$(12,000)**	*$ 6,000*	$ -	$ -	$ -
	T_{AB}	**$ -**	**$ -**	*$ -*	$ -	$ -	$ -
	$T_{BC(OATT)}$	**$(2,000)**	**$(2,000)**	*$ -*	$ -	$ -	$ -
	T_{BC}	**$12,000**	**$12,000**	*$ -*	$ -	$ -	$ -
BAA B STLMT		**$5,000**	**$ -**	*$5,000*	$ -	$ -	$ -

BAA C	G	**$40,000**	**$20,000**	*$20,000*	$ -	$ -	$ -
	L_{OATT}	**$(4,000)**	**$(2,000)**	*$(2,000)*	$ -	$ -	$ -
	L	**$(8,000)**	**$(4,000)**	*$(4,000)*	$ -	$ -	$ -
	T_{AC}	**$ -**	**$ -**	*$ -*	$ -	$ -	$ -
	$T_{BC(OATT)}$	**$2,000**	**$2,000**	*$ -*	$ -	$ -	$ -
	T_{BC}	**$(12,000)**	**$(12,000)**	*$ -*	$ -	$ -	$ -
	T_{CD}	**$(4,000)**	**$(4,000)**	*$ -*	$ -	$ -	$ -
BAA C STLMT		**$14,000**	**$ -**	*$ 14,000*	$ -	$ -	$ -

BAA D	G	**$ -**	**$ -**	*$ -*	$ -	$ -	$ -
	L	**$(7,800)**	**$(4,000)**	*$(3,800)*	$ -	$ -	$ -
	T_{CD}	**$4,000**	**$4,000**	*$ -*	$ -	$ -	$ -
BAA D STLMT		**$(3,800)**	**$ -**	*$(3,800)*	$ -	$ -	$ -

In the ISO tariff filed mechanism, the congestion revenue is allocated to the BAA where the constraint is modeled (Table 8).

Table 8: Current Marginal Cost of Congestion distribution of counterflow

MCC OFFSET	**MCC_T**	**MCC_A OFFSET by Breakdown**	**MCC_B OFFSET by Breakdown**	**MCC_C OFFSET by Breakdown**	**MCC_D OFFSET by Breakdown**
BAA_A MCC Total	**$(124,000)**	$(124,000)	$ -	$ -	$ -
BAA_B MCC Total	**$5,000**	$5,000	$ -	$ -	$ -
BAA_C MCC Total	**$14,000**	$14,000	$ -	$ -	$ -
BAA_D MCC Total	**$(3,800)**	$(3,800)	$ -	$ -	$ -

Overall STLMT	**$(108,800)**	**$(108,800)**	**$ -**	**$ -**	**$ -**
Congestion Allocation	**$108,800**	**$108,800**	**$ -**	**$ -**	**$ -**

The issue paper transitional mechanism allocates congestion revenue/rents to the BAA where the congestion was collected or paid (Table 9).

Table 9: Issue Paper transitional alternative approach of Marginal Cost of Congestion distribution for counter flow

MCC OFFSET	**MCC_T**	**MCC_A OFFSET by Breakdown**	**MCC_B OFFSET by Breakdown**	**MCC_C OFFSET by Breakdown**	**MCC_D OFFSET by Breakdown**
BAA_A MCC Total	**$(124,000)**	$(124,000)	$ -	$ -	$ -
BAA_B MCC Total	**$5,000**	$ -	$5,000	$ -	$ -
BAA_C MCC Total	**$14,000**	$ -	$ -	$14,000	$ -
BAA_D MCC Total	**$(3,800)**	$ -	$ -	$ -	$(3,800)
Overall STLMT	**$(108,800)**	**$(124,000)**	$5,000	$14,000	$(3,800)
Congestion Allocation	**$108,800**	**$124,000**	**$(5,000)**	**$(14,000)**	**$3,800**

In the refined transitional mechanism, the congestion revenue associated to balanced OATT self-schedules in BAA B and BAA C is allocated to the EDAM Entity of the BAA where OATT rights are exercised. The EDAM Entity will consider this congestion revenue when providing the hedge to transmission customer who exercised its transmission rights (Table 10). For BAA B, ISO will allocate the $1,000 of congestion revenue to the EDAM entity associated with the 100 MW OATT CRN self-schedule where the transmission customer exercised their rights from the generator to the transfer location. For BAA C, ISO will allocate the $2,000 of congestion revenue to the EDAM entity associated with the 100 MW OATT CRN self-schedule where the transmission customer exercised their rights from the transfer location to BAA C load. The remaining congestion revenue is distributed to the BAA where the constraint is modeled.

Table 10: Revised Draft Final Proposal refined design

MCC OFFSET	**MCC_T**	**MCC_A OFFSET by Breakdown**	**MCC_B OFFSET by Breakdown**	**MCC_C OFFSET by Breakdown**	**MCC_D OFFSET by Breakdown**
BAA_A MCC Total	**$(124,000)**	$(124,000)	$ -	$ -	$ -
BAA_B MCC Total	**$5,000**	$6,000	$ (1,000)	$ -	$ -
BAA_C MCC Total	**$14,000**	$16,000	$ -	$(2,000)	$ -
BAA_D MCC Total	**$(3,800)**	$(3,800)	$ -	$ -	$ -
Overall STLMT	**$(108,800)**	**$(108,800)**	**$(1,000)**	**$(2,000)**	**$ -**
Congestion Allocation	**$108,800**	**$105,800**	**$1,000**	**$2,000**	**$ -**