California ISO

# EDAM
## EXTENDED DAY-AHEAD MARKET

## DRAFT FINAL PROPOSAL:
# EDAM CONGESTION REVENUE ALLOCATION

April 16, 2025

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# I. Executive Summary

The Extended Day Ahead Market (EDAM) models all resources and the full capability of the transmission system within the participating balancing areas through the full network model (FNM), including associated resource and transmission system constraints. This robust modeling enables the market to optimally commit and dispatch a diverse resource fleet across an interconnected transmission system to serve demand within the market footprint consisting of multiple balancing areas. Modeled transmission constraints that become binding within the market may affect the congestion price component of the locational marginal prices (LMP) at locations across the market footprint reflecting modeled flow relationship between a change in supply or demand at a location and the change in flow on constraints.

Under the EDAM FERC-approved design, the market operator allocates congestion revenues – the difference of the price at LMPs and the amount of supply or demand between the pricing locations due to congestion on the system – to the EDAM balancing area in which the transmission constraint is located. The LMP-based market will identify the least cost dispatch across the entire interconnected EDAM footprint. Due to transmission limitations on the system, overall the total amounts paid to suppliers will be less than the total amounts paid by load on the system. Aside from accounting for marginal losses, the remaining amounts are congestion revenues to be allocated back to market participants. Because the entire EDAM area is not managed as a single balancing area or under one transmission tariff, the market operator must determine what amount of congestion revenue is to be allocated to each EDAM balancing area who then is responsible for allocating those revenues under their individual tariffs.

The fundamental principle under the EDAM design, as approved by FERC, is that congestion revenues associated with transmission constraints internal to the EDAM balancing area are allocated to that respective balancing area. Since the market optimization considers all demand and supply across the EDAM footprint, there will be internal transmission constraints in one balancing area that arise as a result of supply and demand requirements in another balancing area participating in the EDAM. Therefore, a transmission constraint in an EDAM balancing area can have effects on the congestion price component of the LMP at pricing locations in an adjacent EDAM balancing area as a result of parallel flows between interconnected transmission systems. Congestion revenue collected as a result of these cross-balancing area requirements are referred to as "congestion revenue associated with parallel flows." The current EDAM design allocates this congestion revenue to the EDAM balancing area where the constraint is located and that EDAM balancing area further sub-allocates the congestion revenue it receives pursuant to its tariff. This congestion allocation method recognizes that the balancing area where the internal transmission constraint is located bears the effects of that congestion and the reliability impacts associated with the constraint, and thus congestion revenues accruing across the interconnected EDAM footprint associated are allocated fully to the EDAM balancing area where the constraint is located. This is the same congestion revenue allocation method that is in effect in the Western Energy Imbalance Market (WEIM) today.

As part of PacifiCorp's pending proceeding at the Federal Energy Regulatory Commission (FERC) on revisions to its Open Access Transmission Tariff (OATT) implementing EDAM[1], commenters raised

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

concerns with the EDAM design for congestion revenue allocation among EDAM balancing areas and the ability an EDAM balancing area to provide a sufficient congestion hedge to transmission customers exercising their transmission rights. In its answer within the proceeding, the market operator committed to initiate an expedited stakeholder initiative[2] to evaluate potential transitional mechanisms for allocation of congestion revenues resulting from parallel flows in an EDAM balancing area as a result of the effects of supply and demand in an adjacent EDAM balancing area.

On March 17th, the ISO initiated the stakeholder process through the publication of an Issue Paper describing the current EDAM congestion revenue allocation method and introducing a potential transitional alternative for allocation of parallel flow congestion revenues.[3] The ISO further held a full-day workshop on March 24th and received stakeholder comments on April 7th. This Draft Final Proposal builds upon the options – the status quo and transitional alternative – described in the Issue Paper and discussed with stakeholders, providing a further refined proposal informed by the process to date.

Informed by the stakeholder comments received, the ISO proposes to allocate parallel flow congestion revenues to the EDAM balancing area where these revenues accrue associated with the exercise of long-term firm and monthly firm Point-to-Point (PTP) and Network Integration Transmission Service (NITS) rights based on submitted day-ahead balanced source and sink self-schedules. This allocation of parallel flow congestion revenues would enable the EDAM entity to further sub-allocate the congestion revenues received from the market operator to its transmission customers exercising their firm Point to Point (PTP) or Network Integrated Transmission Service (NITS) OATT transmission rights and provide those that use such rights a greater, more complete, protection from exposure to market congestion costs. Any remaining parallel flow congestion revenues that accrue in an EDAM balancing area as a result of a transmission constraint located in a neighboring EDAM balancing area will be allocated to the balancing area where the transmission constraint is located consistent with the current FERC-approved EDAM design.

This proposal for parallel flow congestion revenue allocation is an initial step toward continued evolution of the overall congestion revenue allocation design informed by market operational experience and stakeholder input. The proposal introduces a 3-year period across which the ISO will monitor and collect data to support future evolution of the congestion revenue design and share that information transparently with market participants on an ongoing basis. Within that period, the ISO will continue engaging with market participants to consider continued incremental near-term enhancements to the design that may be appropriate while also considering the long-term designs. By the end of the 3-year period, the ISO will have presented definitive findings and recommendations to the governing entity, including proposed further evolution to the design developed through the stakeholder initiative process. The ISO will initiate stakeholder working groups prior to the launch of EDAM to continue the stakeholder process of evaluating post go-live near-term enhancements and a long-term design.

The ISO will host an all-day stakeholder workshop on April 23rd to discuss the Draft Final Proposal and stakeholder comments are due on May 5th.

[2] CAISO Answer, FERC Docket No. ER25-951.

[3] Issue Paper: EDAM Congestion Revenue Allocation, CAISO (2025).

# II. 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, including a walk through a series of examples illustrating the application of the existing congestion revenue allocation design and the transitional alternative approach. Stakeholders submitted comments on April 7th which helped inform and shape this Draft Final Proposal, and are further summarized in section IV.

This Draft Final Proposal is shaped by stakeholder feedback during the workshops and written comments, seeking to be responsive to stakeholder input and concerns.

## 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.

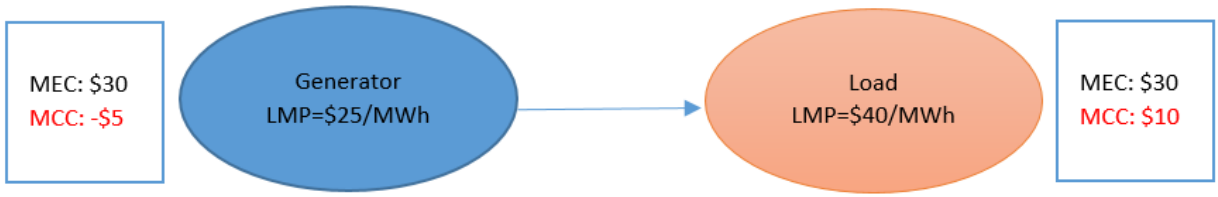



Figure 1: Congestion revenue accrual due to congestion on a system

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.[4] 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.

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.

[4] 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.

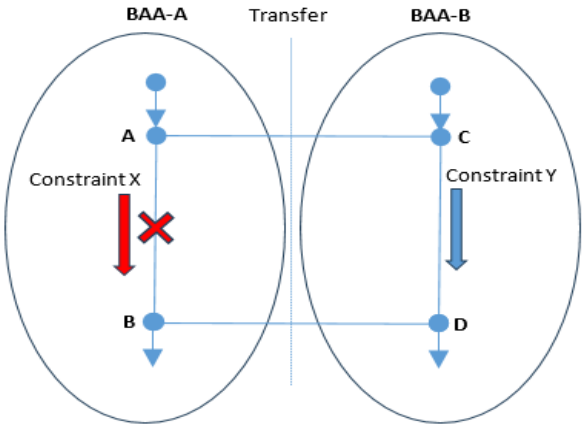



Figure 2: Parallel flow effects illustration between neighboring balancing areas.

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.

## III. 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 that may have accrued in an adjacent EDAM area due to parallel flows 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 associated with parallel flow congestion revenues may reduce the amount of congestion revenue available for the EDAM entity to provide their transmission customers protection against congestion costs when exercising their firm PTP or NITS OATT 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 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 adjacent area.

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.[5] 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.

These objectives, along with the congestion rent allocation principle noted above, will help evaluate the effectiveness of an identified proposal. The ISO invites stakeholders to further comment on these objectives as part of the written comments to this Draft Final 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(D).

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

# IV. Summary of Stakeholder Comments on Issue Paper

Stakeholders submitted comments to the March 17th issue paper and March 24th stakeholder workshop providing input and perspectives on the current FERC-approved EDAM design to congestion revenue allocation and the transitional alternative introduced for consideration which would enable a different congestion revenue allocation from the market operator to the EDAM entity. In turn, the EDAM entity could further sub-allocate these received congestion revenues to its transmission customers under the terms of their OATT providing the potential for a greater, more complete, congestion hedge protection from congestion cost exposure.

As an indication of the extensive stakeholder interest in this initiative, the ISO received twenty eight sets of stakeholder written comments. As can be expected with that volume of comments, stakeholder perspectives varied across the different policy aspects considered in the initiative. Overall, the majority of stakeholder comments viewed the introduction of the transitional alternative in the Issue Paper as a step in the right direction in addressing the narrow issue of parallel flow congestion revenue allocation by the market operator to EDAM entities (EDAM balancing areas) in order to support protection from congestion costs for transmission customers exercising firm OATT transmission rights. Some of those stakeholders supported the alternative as a reasonable transitional approach, while others support or neutrality on the approach was based on the recognition of the intent of the design being transitional or temporary. A few stakeholders opposed the transitional alternative, opting in turn to suggest "carve out" of transmission capability associated with transmission reservations from the EDAM to mitigate congestion risk or otherwise suggesting focus on development of a long-term design.

## A. Stakeholder comment themes

Stakeholder comments generally expressed a few themes:

- *Defining the transition to a long-term design* – a number of stakeholder comments expressed the need to continue the momentum and work on the topic in order to evaluate a long-term design beyond the transitional period, rather than putting the issue "on the shelf" after this expedited initiative. Other commenters suggested further defining the duration of the transition period in order to support stability and reliance on the design, but also provide notice that further changes may be made down the line and to create an impetus to establish a long-term design.
- *Allocation of congestion revenues beyond the exercise of OATT rights* – a number of commenters noted that the transitional alternative may allocate parallel flow congestion revenues to the EDAM balancing area where these accrue beyond what is necessary to support a greater, more complete, congestion hedge associated with the exercise of firm OATT transmission rights and that there may be an opportunity to more narrowly tailor the allocation to support OATT transmission rights.
- *Counter flow congestion allocation* – some stakeholders pointed out that under the transitional alternative there may be scenarios where a balancing area may be allocated costs where generation is providing the counter flow effect in relation to the direction of the transmission constraint. Stakeholders suggested addressing this scenario to avoid inequitable outcomes.

- *Self-scheduling incentives* – a number of stakeholders noted the potential incentive to self-schedule generation under the transitional alternative in order to ultimately receive a more complete congestion hedge associated with exercise of firm OATT transmission rights. While the magnitude of the incentive is not known, commenters recognized the potential effect on market efficiency at least at the onset of EDAM.

## B. Overview of stakeholder comments

The comment template for the Issue Paper requested stakeholder comment on the current design to parallel flow congestion revenue allocation in EDAM as approved by FERC. Overall, a number of stakeholders recognized the structure and rationale of the existing design, its deeming as just and reasonable by FERC, and being in application in the WEIM today. Nevertheless, stakeholders commenting on this element generally recognized – consistent with the framing of protests in the pending PacifiCorp OATT proceeding – its effects on congestion cost exposure on transmission customers exercising firm OATT transmission rights. These stakeholders pointed to the congestion cost exposure that OATT transmission customers may be exposed to under the existing EDAM design with limited ability to manage that exposure based on the parallel flow congestion revenues that the market operator allocates to the EDAM entity. Section V(A) of this document provides a more granular summary of the comments on this topic.

Another aspect of the Issue Paper comment template requested stakeholder comment on the transitional alternative for parallel flow congestion revenue allocation. As noted earlier, stakeholders generally expressed openness regarding the transitional alternative and cautionary support or expressing it as a step in the right direction to addressing concerns. These same stakeholders emphasized the transitional nature of the design, seeking additional emphasis on its temporary nature and a more defined plan for the transition. A few stakeholders opposed the transitional alternative primarily concerned with the speed of the initiative and suggesting carve-out of transmission rights from the EDAM as a solution to protect OATT customers from congestion costs, seeking re-focus toward evaluation of the long-term design. Section VI of this document provides a more granular summary of the comments on this topic.

A few stakeholders commented on the topic of whether the transitional alternative approach should apply in the day-ahead market only or extend into the real-time. The few stakeholders that commented on this topic expressed the perspective to apply this type of a new allocation method for parallel flow congestion revenues to the day-ahead market only and not extend it to real-time market (the WEIM). This element of the proposal is discussed in section VI(C) of this document.

Almost all commenters focused an aspect of their comments on the transitional aspect of the alternative for parallel flow congestion revenue allocation, as described in the Issue Paper, seeking a clearer definition to the duration of a transitional design. Commenters expressed several concerns, one of them being the temporal aspect for the duration of the transition period. Some stakeholders suggested a defined period for the transition so as to avoid the resulting solution identified through this initiative becoming an indefinite solution or the default long-term solution, but rather keeping emphasis on this policy topic through continued stakeholder discussions. Other commenters expressed a desire for a sunset period (*i.e.*, 3-years) after which the parallel flow congestion revenue design defaults back to the current EDAM design. Other commenters suggested a sunset period tied to a potentially more defined

action by the ISO – whether it is a board decision on the long-term solution or other meaningful action that creates the impetus for the ISO and stakeholders to develop a long-term, and durable, design. This element of the proposal is discussed in further detail in section VI(D) of this document.

Some stakeholders mentioned in their comments potential alternate options for consideration. One of those was introduced by Pacific Gas & Electric (PG&E) framed as a hybrid approach suggesting that parallel flow congestion rents are shared 50/50 between the balancing area where the binding transmission constraint is located and the balancing area where these parallel flow congestion revenues are collected, and based on a schedule the allocation method gradually shift percentage shares until the method, by year 5 of EDAM, shifts allocation 100% to the balancing area where the transmission constraint is located. The ISO appreciates PG&E suggestion of the conceptual alternative. Such allocation of internal congestion revenues 50/50 between the balancing areas may limit the ability to provide a congestion hedge for firm OATT transmission customers based on how congestion revenues are allocated by the market operator to the EDAM entity to further sub-allocate, and further over time moves toward the status quo approach. Nevertheless, the proposal in this document seeks to take a more tailored approach to parallel flow congestion revenue allocation focused on the exercise of firm OATT rights which recognize the spirit of the PG&E-identified concept.

The Bay Area Municipal Transmission Group (BAMx) submitted comments with also a suggested potential option to parallel flow congestion revenue allocation. BAMx notes that the current EDAM design for congestion revenue allocates parallel flow congestion revenues entirely to the area where the constraint is located and that the transitional alternative introduced in the Issue Paper allocates all parallel flow congestion revenues entirely to the area where these accrue, both going too far in this respect at opposite extremes of the spectrum. BAMx then describes an option under which parallel flow congestion revenues associated with a transmission constraint are allocated to the balancing areas in proportion to the balancing area's contribution to the parallel flows, which would be seen as a more equitable allocation. The ISO also appreciates the BAMx suggestion. The challenges with this concept is the implementation complexity to establish such proportionality and allocation across an evolving, non-static, market footprint. Beyond that, the option may not provide confidence that sufficient parallel congestion revenues are allocated to enable the EDAM entity to sub-allocate and provide greater, more complete, congestion cost exposure protection ultimately to the firm OATT transmission customer. Nevertheless, the proposal introduced in this Draft Final Proposal seeks to find a more tailored approach to parallel flow congestion revenue allocation, which the BAMx proposal also tries to achieve.

Finally, a few stakeholders suggested consideration of the notion that the ISO should support a "carve-out" (or "opt out") of transmission capability from the EDAM for transmission customers to manage their exposure to congestion costs. In particular, Powerex, Salt River Project (SRP), Arizona Public Service (APS), and The Energy Authority (TEA) suggest that the removal of transmission capability associated with reserved OATT transmission rights from the EDAM optimization would allow transmission customers to more effectively manage congestion cost exposure as compared to the transitional alternative (or the current EDAM design). Some of these commenters also note that this carve out provision of transmission capability from the EDAM would allow these transmission customers to use this transmission then to participate in other markets in the West. The ISO appreciates the suggested concept, which was also raised in the PacifiCorp OATT proceeding at FERC. However, this consideration is beyond the scope the current initiative focused on the allocation of parallel flow congestion revenues.

The ISO appreciates the extensive stakeholder comments which shaped the structure of the proposal described in section VI of this document.

# V. 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.

## A. Summary of stakeholder comments

One of the areas that the market operator sought specific comments on the issue paper was regarding the existing, FERC-approved, design for congestion revenue allocation as described in the issue paper and further in sub-section B below. Stakeholder comments generally appreciated a better understanding of the existing design for congestion revenue allocation. Comments from several stakeholders recognized the rationale of the design of flowing the congestion revenues back to the balancing area where the constraint is located recognizing the role of the balancing area in managing the constraint and providing incentives to mitigate parallel flow effects on neighboring systems, while also recognizing the FERC-approved nature of the design. The majority of those same commenters that saw merit in this design also recognized the concerns expressed with parallel flow congestion revenue allocation and the desire to provide, as a transitional basis, an appropriate congestion revenue allocation associated with parallel flow effects to EDAM entities to support the ability to more readily protect or manage congestion cost exposure for OATT transmission rights holders.

Other commenters continued to express concerns with the current design to congestion revenue allocation. The commenters generally recognized the appropriate framing of the issue in the Issue Paper and echoed their concerns with the potential exposure to congestion costs associated with the exercise of OATT transmission rights that parties may not be exposed to today or otherwise may not be able to manage under the current design. They further emphasized that this congestion cost exposure cannot be adequately mitigated due to the associated uncertainty of the magnitude of congestion costs they may be exposed to. Some commenters utilized this opportunity to further raise concerns with the proposed PacifiCorp OATT allocation methodology of received congestion revenues, which is beyond the scope of this initiative.

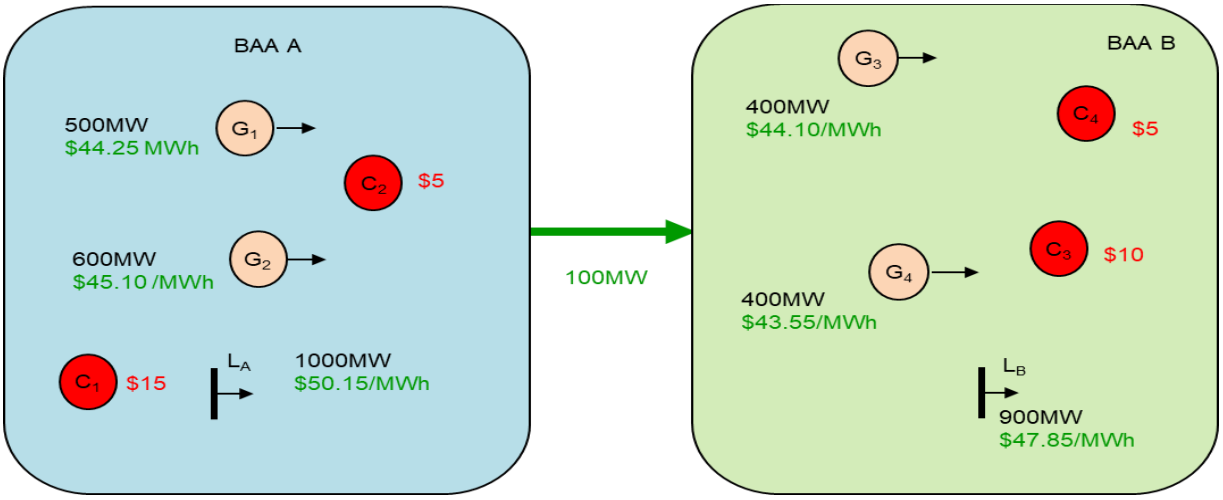
The ISO appreciates this input reinforcing the stakeholder interest and openness to re-evaluate how congestion revenues associated with parallel flow effects are distributed by the market operator between EDAM balancing areas.

## B. Description of current EDAM design

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.[6]




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 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

[6] *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).

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,[7] 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 |
| 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 |

[7] *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).

**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.[8]

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) | |
| 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) |

[8] *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)

| | | |
|---|---|---|
| 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.[9] 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.

## VI. Transitional Alternative to Congestion Revenue Allocation Introduced in the Issue Paper

In an effort to foster dialogue and consideration of a potential transitional mechanism for allocation of congestion revenues by the market operator among EDAM balancing areas that may enable EDAM entities to provide a more complete congestion hedge to their transmission customers exercising firm OATT transmission rights, the ISO introduced a potential transitional alternative approach to parallel flow congestion revenue allocation for further stakeholder consideration described in the Issue Paper.

The potential alternative would allocate the congestion revenues associated with parallel flow schedules to the EDAM balancing area in which the congestion revenue accrued, not the neighboring EDAM balancing area where the transmission constraint is located. It is important to note, this alternative has no impact on how resources are dispatched or how the market solves congestion, but rather how collected congestion revenues are allocated via settlements among EDAM balancing areas. Described another way, when an internal transmission constraint is binding within an EDAM balancing area:

- Congestion revenues materializing within that EDAM balancing area would be allocated to that balancing area where the constraint is located, and
- Congestion revenues materializing as a result of parallel flows on an adjacent system related to the transmission constraint would be allocated to, and remain with, the balancing area in which the congestion revenue accrued (would not be allocated to the balancing area where the transmission constraint is located).

This alternative would effectively leave the congestion revenues within the balancing area in which these revenues were collected as a result of a transmission constraint, irrespective of the parallel flow impacts on the EDAM balancing area in which the constraint is located. Under this alternative, the market operator would continue to calculate total congestion revenue across the footprint consistent with the existing design. However, the congestion revenues would be allocated to EDAM balancing

[9] *Id*.

areas based on where these were collected and thus enable a more complete sub-allocation of congestion revenue from the EDAM balancing area to transmission customers exercising firm OATT transmission rights within their balancing area. It is worth noting here that this alternative methodology may increase or decrease the total congestion revenue available for sub-allocation to a balancing area because the current methodology is reciprocal among all balancing areas participating in EDAM; *i.e.*, congestion revenue collected from one balancing area due to its parallel flow impacts that otherwise would have been allocated to a balancing area where the constraint is located would no longer be included in that balancing area's congestion revenue allocation.

The Issue Paper also introduced consideration of the alternate approach application only in the day-ahead market and not extending this design to the real-time market in order to not affect changes to congestion revenue allocation across WEIM areas. The Issue Paper also recognized that congestion hedging mechanisms (protection from congestion costs) are traditionally provided in the day-ahead market across other organized markets and do not extend to the real-time market. The alternative approach, as described in the Issue Paper, was presented as transitional in nature to support the launch of EDAM and operational market data would support further evolution and evaluation of a spectrum of long-term congestion hedging designs.

For additional background and context on the alternative transitional approach, including example, please refer to the March 17th published Issue Paper.

### A. Summary of stakeholder comments on the transitional alternative

In addition to the summary of comments to the proposal presented in the Issue Paper summarized above, the following summarizes comments submitted regarding the transitional alternative specifically. Stakeholder comments on the Issue Paper predominantly express support and openness, but also caution, with aspects of the transitional alternative design. Some stakeholders expressed outright support for the transitional alternative recognizing its transitional (and temporary) nature, while others more tacitly acknowledged the alternative moving in the appropriate direction but expressing the need to define more clearly the transitional nature of the approach, what will be monitored, and establishing clear expectations of the timing of the alternative or the milestones that would guide its development in order to avoid this alternative design remaining as a default design approach for an indefinite period of time. On this front, some stakeholders suggested establishing clear timelines including consideration of a defined sunset period.

Some stakeholder comments opposed the transitional alternative, albeit for varied reasons. A stakeholder opposed the transitional alternative on the grounds that the current EDAM design has been deemed just and reasonable and has been approved by FERC. Other stakeholder comments opposed the alternative on the grounds of potential unintended consequences, suggesting instead that transmission customers be allowed to "carve out" transmission from the market to manage congestion risk exposure and that transmission capability be available for other markets to optimize. Some of these same stakeholder comments also suggested that the initiative take more time and be evaluated after FERC has issued a ruling on the PacifiCorp OATT filing, and at that time take the time necessary to establish a long-term design.

As noted earlier, while stakeholders were predominantly open to the transitional approach with the recognition that it is transitory in nature, they did note concerns with the design that would need to be

monitored or can potentially be addressed through further iterations. For example, some stakeholders acknowledged the potential of the alternative to incentivize self-scheduling in order for transmission customers to derive a greater, more complete, congestion hedge. An increased incentive to self-schedule could reduce market efficiency during the transitional period, albeit the magnitude of incremental self-scheduling practices is unclear at this stage. Some stakeholders pointed out that the transitional alternative, in certain situations, may allocate parallel flow congestion costs to the balancing area where generation is located providing counter flow effect in relation to the direction of the constraint. In some counter flow scenarios, the balancing area may bear the congestion costs associated with parallel flow congestion costs created by dispatch of generators in that balancing area that are providing counter flow effect to the direction of the transmission constraint located in another EDAM balancing area. Another key concern from stakeholders was that the transitional alternative may go beyond allocating parallel flow congestion revenues associated with the uses of OATT transmission rights by allocating all parallel flow congestion revenues to the area where these are collected rather than only for those identified schedules or uses of OATT transmission rights. These stakeholders emphasized the importance of the transitional nature of the design to limit these effects or otherwise consideration of intermediary alternatives that more equitably allocate these parallel flow congestion revenues among EDAM entities.

These stakeholder comments helped shape this Draft Final Proposal as the ISO sought to establish refinements to the parallel flow congestion revenue allocation design that would be responsive to the comments.

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

As described in the stakeholder comment summaries, stakeholders predominantly were open to or supported the direction of the initial alternative transitional approach presented in the Issue Paper where congestion revenues associated with parallel flow effects are allocated to the EDAM balancing area where the revenues are collected. Nevertheless, stakeholders expressed concerns with aspects of that initial alternative transitional approach which this proposal seeks to be responsive to in developing a more targeted and tailored design:

- **Allocation of congestion revenues beyond exercise of firm PTP and NITS OATT rights**: the Draft Final Proposal responds to concerns that the transitional alternative to parallel flow congestion revenue allocation introduced in the Issue Paper is overly broad and results in excessive transfer of congestion revenues from one balancing area to another as it allocates parallel flow congestion revenues beyond those associated with the exercise of eligible firm OATT transmission rights. The Draft Final Proposal is more tailored in allocating parallel flow congestion revenues associated with the exercise of eligible firm OATT transmission rights through balanced source/sink self-schedules to the EDAM entity to further sub-allocate under the terms of their OATT.

- **Counter flow scenario potential cost shifts**: the Draft Final Proposal responds to concerns that under the transitional alternative introduced in the Issue Paper, EDAM balancing areas may face unintended consequences in some instances by bearing net congestion costs (negative congestion revenue) resulting from a transmission constraint in a neighboring EDAM balancing

area. This could occur in situations where generation in the balancing area is dispatched to provide counter flow to the direction of the binding transmission constraint, which may result in negative parallel flow congestion revenue and which would then stay in that balancing area for sub-allocation under their OATT. The Draft Final Proposal avoids this potential cost shift to a balancing area whose generation is providing counter flow by allocating remaining parallel flow congestion revenues (positive or negative), after allocating parallel flow congestion revenues based on balanced self-schedules exercising firm eligible OATT transmission rights, to the EDAM balancing area where the constraint is located.

- **Defining the incremental evolution of design**: the Issue Paper identified that transitional design would be transitional in nature to the establishment of a long-term design. Stakeholders identified the need to further define this temporal or transitional nature to ensure that this policy continues to evolve. This Draft Final Proposal further defines the transitional and evolutionary nature of the proposed congestion revenue allocation design. The Draft Final Proposal includes a description of the information that will be collected and activities that will be monitored, how the ISO will share and provide transparency into the collected data, and a timeline associated with the evaluation of post-launch near-term enhancements and long term congestion revenue allocation and congestion hedging designs as part of the incremental design evolution.

The following sub-sections describe the Draft Final Proposal which seeks to balance the drivers and objects and leverages aspects of the existing, FERC-approved, EDAM design for congestion revenue allocation and the transitional alternative introduced in the Issue paper, being responsive to the identified stakeholder concerns in comments.

## A. Description of the Draft Final Proposal

The Draft Final Proposal seeks to introduce a balanced and equitable approach to parallel flow congestion revenue allocation recognizing the initiative objectives and the drivers behind the expedited initiative associated with allocation of parallel flow congestion revenues by the market operator. The approach enables EDAM entities to provide a greater, more complete, congestion hedge to transmission customers exercising their eligible firm PTP and NITS OATT transmission rights under the terms of the OATT.

The proposal recognizes the evolutionary nature of the design and the continued pursuit of incremental enhancements working toward a long-term design that would be informed by market operational experience and continued stakeholder discussions as described in subsection D.

**The Draft Final Proposal is as follows:**

- Parallel flow congestion revenues collected in an EDAM balancing area, as result of a binding transmission constraint in a neighboring balancing area, will be allocated by the market operator to the EDAM balancing area where these congestion revenues are collected for the exercise of eligible firm PTP and NITS OATT transmission rights through the submission of day-ahead balanced source/sink self-schedules. The EDAM entity can further sub-allocate these parallel

flow congestion revenues under the terms of its OATT to provider a greater, more complete, congestion hedge to its transmission customers exercising eligible firm OATT transmission rights.

- The eligible firm OATT transmission rights are long-term firm and monthly firm Point-to-Point (PTP) and Network Integration Transmission Service (NITS) rights.
- Remaining day-ahead parallel flow congestion revenues collected (positive or negative) in an EDAM balancing area as a result of a transmission constraint in a neighboring balancing area will be allocated to the EDAM balancing area in which the transmission constraint is located (modeled). This aspect of the design mitigates the concerns expressed by stakeholders that, under the transitional alternative described in the Issue Paper, balancing areas may be exposed to congestion costs (negative congestion revenues) associated with parallel flow effects when generation in the balancing area provides counter flow benefit to the direction of the transmission constraint located in a neighboring balancing area. It also addresses concerns expressed the transitional alternative described in the issue paper would have extended beyond the exercise of firm PTP and NITS OATT rights.
- Congestion revenues that accrue internal to the balancing area where the transmission constraint is located continue to remain allocated that balancing area where the constraint is located consistent with the FERC-approved EDAM framework.
- This proposal supports timely EDAM implementation in May 2026.

The Draft Final Proposal is responsive to stakeholder comments tailoring the allocation of parallel flow congestion revenues by the market operator to the EDAM entity to support the exercise of firm PTP NITS OATT transmission rights and provision of a greater, more complete, protection against congestion cost exposure when exercising of those transmission rights. The proposed design leverages elements of the transitional alternative introduced in the Issue Paper and retains aspects of the current, FERC-approved, design to congestion revenue allocation; *i.e.*, it is incremental to the underlying congestion revenue allocation methodology. As some stakeholders commented, the current EDAM design encompasses one end of the spectrum by allocating all parallel flow congestion revenues to the EDAM balancing area where the transmission constraint is located. On the other hand, the transitional alternative introduced in the Issue Paper can be considered to be at the other end of the spectrum by allocating all parallel flow congestion revenues to the EDAM balancing area where these revenues are collected (not based on location of constraint) which can provide more revenues to the EDAM balancing area than necessary to support a greater, more complete, congestion hedge to transmission customers exercising firm OATT transmission rights. Thus, the Draft Final Proposal provides a more tailored solution by providing sufficient parallel flow congestion revenues to the EDAM entity to enable a congestion hedge for self-scheduled exercise of firm OATT rights, while remaining parallel flow congestion revenues are allocated to the EDAM balancing area where the transmission constraint is located consistent with the current FERC-approved EDAM design.

Consistent with the existing EDAM design, transmission customers will register their firm PTP and NITS transmission rights with the market operator identifying the nature 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 long-term firm or

monthly firm OATT 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 firm OATT transmission rights.

The market operator will collect resulting parallel flow congestion revenues for the balanced source/sink self-schedules associated with CRNs representing the exercise of firm OATT transmission rights (long-term firm and monthly firm PTP and NITS) and will allocate those 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. Under the PacifiCorp proposed two-tier allocation process, the revenues would in turn be sub-allocated to transmission customers exercising their long-term firm and monthly firm PTP and NITS rights through balanced source/sink self-schedules.

After parallel flow congestion revenues have been allocated as described above to the balancing area where the congestion revenues are collected for balanced source/sink self-schedules exercising the eligible firm OATT transmission rights, any remaining parallel flow congestion revenues (whether positive or negative) associated with transmission constraints located in neighboring balancing areas will be allocated to the EDAM balancing area where that particular transmission constraint is located. This aspect of the proposal addresses concerns expressed in stakeholder comments that under the transitional alternative described in the Issue Paper a balancing area may bear the parallel flow congestion costs (negative congestion revenue) if generation in that balancing area is dispatched to provide counter flow to the direction of the transmission constraint located in the neighboring area as illustrated in the Issue Paper example.[10] This Draft Final Proposal allocates any remaining parallel flow congestion revenues (positive or negative) to the EDAM balancing area where the transmission constraint is located. Thus, the generation in the balancing area dispatched to provide counter flow will be paid the LMP at its location, and the resulting parallel flow congestion revenues (negative or positive) will not be borne by that balancing area but will rather be allocated to the EDAM area where the transmission constraint is located, which has been the practice in the WEIM today and is consistent with the FERC-approved EDAM design. This allocation method addresses the concerns expressed that an EDAM balancing area sourcing generation to provide counter flow to the direction of the transmission constraint may be allocated the parallel flow congestion costs resulting from a constraint located in a neighboring balancing area.

Finally, it is important to note that congestion revenues accruing internal to an EDAM balancing area as a result of an internal transmission constraint remain with that balancing area since the transmission constraint is located within that balancing area. This allocation remains unaffected by this Draft Final Proposal.

It is important to acknowledge stakeholder comments expressing concern regarding the incentive to self-schedule generation in order to receive a greater, more complete, congestion hedge under the EDAM entity OATT sub-allocation mechanism. A number of commenters expressed concern that broad self-scheduling, in order to receive that congestion hedge, could have important impacts on market efficiency. Some commenters even referred to this as the "use it or lose it" incentive where transmission customers can exercise their transmission rights through self-scheduling and receive a congestion hedge in day-ahead, or lose that hedge. While that incentive may indeed exist, the

[10] Issue Paper: EDAM Congestion Revenue Allocation, Appendix Example 2.

magnitude of incremental self-scheduling is uncertain and will be ascertained through market operations. The use of self-schedules, as certain transactions have to be self-scheduled in EDAM irrespective of how congestion revenues are allocated, must also be contextualized. Transactions wheeling through an EDAM balancing area have to be self-scheduled at the source (import) and sink (export) locations since EDAM entities at the onset are not enabling economic intertie bidding at their interties. Similarly, exports out of an EDAM balancing area are also self-scheduled. While the generator supporting that export could economically bid (or self-schedule) at its physical location and be paid the LMP, the export (sink) has to be self-scheduled to a non-EDAM balancing area. Thus, the focus should be limited to the potential increased incentive to self-schedule internal generation and internal load in order to obtain a congestion hedge and the incentive to also obtain the higher market clearing scheduling priority applied to a self-schedule. These incentives must also be balanced against the economic displacement benefits that would be foregone through self-scheduling. In other words, the incentive to self-schedule is counterbalanced by the ability to economically bid the internal generation and secure the economic benefits of dispatch or economic displacement of serving load more efficiently and the load being economically bid having the ability to secure a more competitive or efficient price. These incentives will only become clear with actual market operations when internal generators and internal load within EDAM balancing area will evaluate different strategies for market participation and the associated tradeoffs. As described further in subsection D, the ISO will monitor the self-scheduling frequency in the market and this information will help also inform further incremental evolution in the design to establish appropriate incentives.

Turning to the objectives and EDAM design principles, the proposal largely aligns with the identified objectives and associated principle described in section III of this Draft Final Proposal. The proposal allocates parallel flow congestion revenues associated with the exercise of firm OATT transmission rights based on balanced source/sink self-schedules, resulting from a transmission constraint located in a neighboring EDAM balancing area, 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 to provide a greater, more complete, congestion hedge under the terms of their OATT to transmission customers exercising their firm OATT 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 nor is the impact on market efficiency and this will be one of the elements monitored as the EDAM launches.

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 firm PTP and NITS OATT 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 more 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 May 2026 which is consistent with the objective of supporting timely EDAM implementation.

The proposed design to parallel flow congestion revenue allocation 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 PTP and NITS OATT to mitigate congestion cost exposure and provide a more complete congestion hedge for the exercise of OATT transmission rights and congestion costs that may arise as a result of internal transmission constraints or transmission constraints in neighboring balancing areas.

## B. Examples illustrating the Draft Final 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 long-term firm or monthly firm OATT 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 their firm OATT transmission rights.

Figure 1 illustrates the conceptual application of the Draft Final 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.

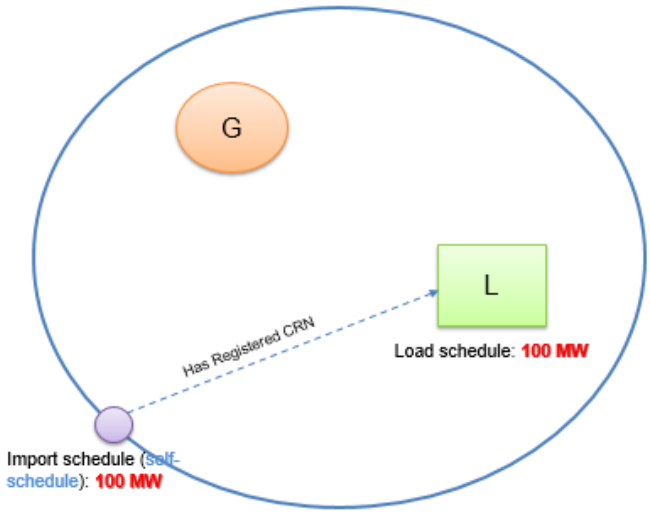



Figure 1: Illustrative example of balanced source and sink self-schedule exercise of transmission rights.

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.

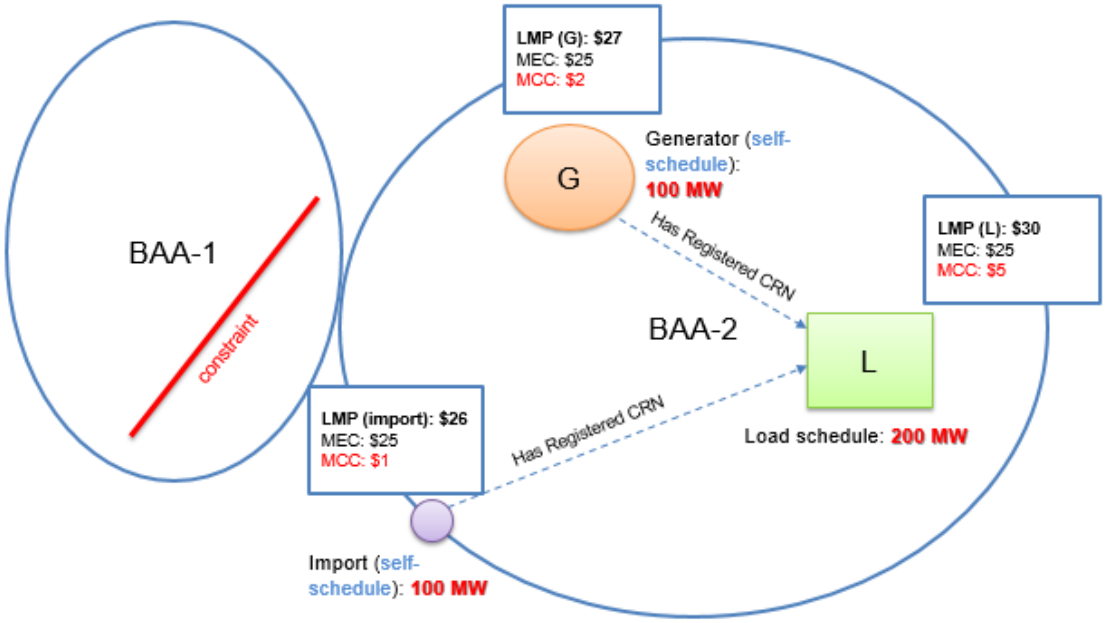



Figure 2: Example of exercise of firm OATT transmission rights through balanced source and sink self-schedules with LMPs.

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 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.

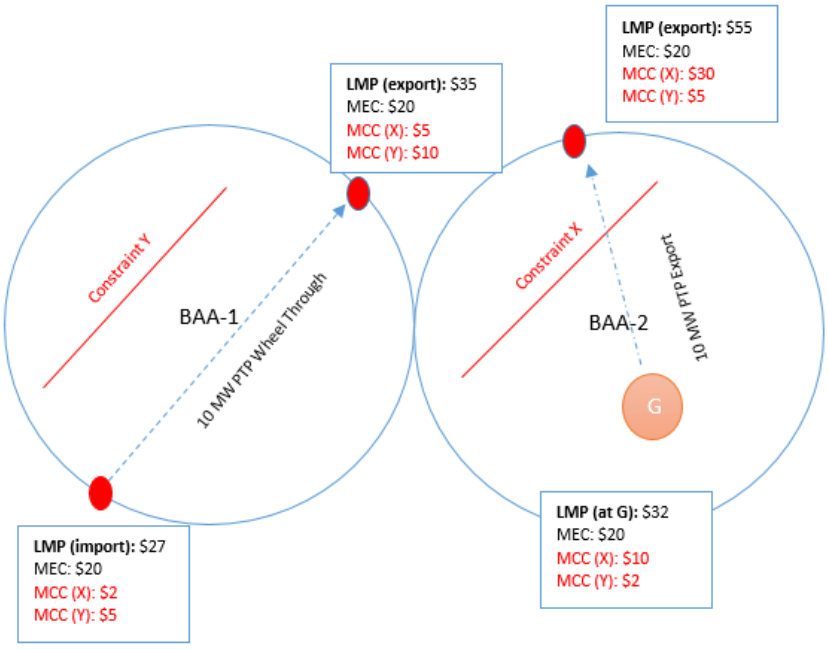



Figure 3: Example of internal congestion revenue and parallel flow congestion revenue allocation associated with exercise of firm OATT transmission rights.

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 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 Draft Final Proposal.

### C. Application in the Day-Ahead Market

The market operator proposes the application of the described parallel flow congestion revenue allocation mechanism 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, consideration of a more complete congestion hedge. 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.

Some stakeholder comments sought to provide a perspective on this point in the context of the transitional alternative, and those that commented on this topic supported or otherwise found it appropriate to apply the alternative transitional design in day-ahead and not the real-time market so as to not disrupt at this time the allocation of congestion revenues in the WEIM. This proposal is consistent with that stakeholder sentiment.

### D. Future evolution of the design

The proposal for parallel flow congestion revenue allocation as described in prior sections of this Draft Final Proposal is an initial step towards future evolution of the overall congestion revenue allocation design. The EDAM has 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 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 on its system, 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 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, and transmission providers across the West have developed different strategies for managing resulting infeasibilities including adjustments to the Available Transfer Capability (ATC) calculations, reliance on curtailments of transmission service, redispatch procedures, or other actions that provide the necessary loading relief to resolve the constraint. Separate from this initiative, the ISO will continue to support and engage in opportunities to improve the coordination of assessment of transmission service and loading relief processes.

As currently designed, the EDAM intentionally does not include a congestion revenue rights (CRR) or financial transmission rights (FTR) design. 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 of 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, can 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.

The Draft Final Proposal recognizes that it takes an initial, refined, step in response to stakeholder feedback and that continued evolution informed by EDAM operational experience may be warranted. It represents only an initial step primarily because individual EDAM transmission providers continue to make sales of transmission service under their OATTs, which is not anticipated to change without extensive consideration. In other words, transmission owners will continue to sell transmission service rights that have parallel flow effects on other neighboring systems within the EDAM footprint without, for example, an accompanying simultaneous feasibility test while providing congestion cost protections associated with those parallel flow effects.

The ISO and market participants will continue to work together, through stakeholder working groups, to evaluate and consider a spectrum of potential additional 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.

There may be other designs along a spectrum of options that could be achieved incrementally, but do not go as far as full migration toward financial rights. Potential concepts that could be considered across this spectrum of designs can include, for example:

- Enhancements to support allocation of parallel flow congestion revenues to the EDAM entity based on economically bid balanced source/sink cleared schedules. This could further enhance the congestion hedge ultimately provided through the EDAM entity OATT for transmission customers with firm OATT transmission rights that economically bid at source/sink locations associated with their transmission rights, reducing the incentive to self-schedule to obtain a congestion hedge and supporting market efficiency.
- Establishment of flow entitlements between EDAM balancing areas for parallel flows associated with particular transmission constraints. These entitlements could be based on historical flow effects, market operational experience, established rights as of a certain date or other determinants. Once granted, these flow entitlements could permit some amount of parallel flow congestion revenue allocation between the areas up to an established point, some amount of supported parallel flow.

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 and informed by information that will become available as described below.

Stakeholder comments to the Issue Paper recognized the importance of retaining and highlighting the transitional or evolutionary nature of the congestion revenue allocation design as the ISO moves forward. An important theme from stakeholder comments was the suggestion to more granularly define the information or data that would be monitored during a transitional period. Some stakeholders also suggested identifying how this information will be shared publicly. Another theme from stakeholder comments was a desire to support continued discussions on a potential long-term design

once the EDAM launches through working groups or other forums in order to ensure that the effort remains prioritized. A sizable amount of comments focused on the duration of the ultimate transitional design and the transition period in order to provide confidence that the topic will be prioritized for discussion but also to provide certainty of design duration. Some stakeholders suggested more explicitly defining how long a transitional design would be in place and potential associated triggers for substantive milestones in a timely way. Other stakeholders suggested defining the transition period for 3-years (or another timeframe) at which point a decision would be made on the long term design and implementation, or potentially defining a 3-year sunset period and defaulting back to the current EDAM design for congestion revenue allocation if a long-term approach is not established by that time. A few stakeholders suggested not focusing on a transitional design, but moving directly to the evaluation of a long-term design. The ISO appreciates these stakeholder comments which have informed further framing of the incremental evolution of the design.

In support of the Draft Final Proposal, and informed by stakeholder input, the ISO continues to believe it important to monitor the effects of the proposed design as described in this Draft Final Proposal. 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.

To support continued incremental evolution including near-term and long-term enhancements or structures, the ISO proposes a 3-year period across which the ISO and stakeholders will evaluate the collected market operational data and information. The structure of the 3-year period is described as follows:

- Monitoring and data collection, as described above, during the first 1-2 years of EDAM operations. It will be important to collect data as additional entities gradually join the EDAM to

better understand the effects and patterns of congestion effects along the footprint with each new entrant.

- The ISO will commence stakeholder working groups ahead of EDAM launch, as part of a formal phase of the stakeholder initiative, to commence consideration of potential near-term enhancements and long-term designs and evaluate the data and information gathered as the EDAM launches. These working group discussions would also consider objectives and principles for establishment of a long-term design. This initiative would seek to develop a recommendation for ISO Board of Governors and WEM Governing Body by the end of year 2 of EDAM operations. Under this framing, the ISO and market participants could identify potential near-term enhancements that could potentially be implemented within the first year of EDAM operations, while continuing to consider longer-term structural approaches.
- By the end of year 3 of EDAM operations, and depending on the nature of the developed and approved policy design following this initiative, the ISO will evaluate the implementation requirements for further enhancements and present definitive findings and recommendations to the governing entity based on the totality of the information at that time, including any proposed further enhancements to the design supported by stakeholders through the initiative process. To the extent possible, the ISO could commence implementation of any approved additional measures by the end of year 3. Implementation timing and feasibility will be informed by the features of the policy design, and these aspects will be discussed throughout the policy development process and working group discussion with stakeholders.

The ISO appreciates the thoughtful stakeholder input on this topic and requests additional comments based on the described incremental evolution activities, milestones and timelines for further evolution of the proposed design enhancement.

### E. Effect on Congestion Revenue Rights (CRR) in CAISO Balancing Area

Congestion revenue rights (CRR) are a financial instrument which allow holders of these instruments to receive payment, or charges, based on congestion revenues generated (positive or negative) as a result of transmission constraints on the transmission system. 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 allocation process and can be further acquired through an annual and monthly auction process by other types of market participants. CRRs are paid out based on the congestion revenue constraint contributions to the MCC difference in LMPs at the source and sink locations associated with those CRRs. The congestion revenue constraint contribution is the product of the effectiveness of source and sink locations on a constraint and the congestion revenue collected or paid at that constraint.

The introduction of EDAM, and the associated modeling of transmission constraints across neighboring EDAM balancing areas participating in the day-ahead market, will improve awareness and visibility of parallel flow effects of CAISO balancing area schedules associated with transmission constraints binding on neighboring EDAM balancing area transmission systems, and vice versa. The EDAM will better inform how the ISO accounts for parallel flow effects on the CAISO system, associated with transmission constraints in a neighboring EDAM balancing area, in the CRR process.

This Draft Final Proposal does not introduce changes to CRR related processes currently in place within the CAISO balancing area. With EDAM launch, transmission constraints in neighboring EDAM balancing

areas may affect the MCC of LMPs as different locations within the CAISO balancing area. CRR holders on the CAISO system are able to effectively hedge the congestion cost exposure between two locations on the CAISO grid from congestion cost differences associated with a transmission constraint within the CAISO system or the parallel flow effects on the LMP stemming from a transmission constraint located in a neighboring EDAM balancing area.

In addition, this proposal does not impact the mechanism for determining how CRR holders will be paid. The CAISO CRR balancing account today is funded from the congestion revenue collected in the settlement of ancillary services, imbalance reserve, and energy (except for amounts related to the exercise of balanced contract rights of transmission owner rights (TOR) and existing contract right (ETC)). As is the case today and at the launch of the EDAM, in settling CRRs the ISO will continue to collect congestion revenues related to all constraints across the EDAM market footprint with contributions to the marginal cost of congestion were the CRRs are held. However, in calculating the congestion revenue collected from ancillary services, imbalance reserve, and energy, under this Draft Final Proposal, the ISO will not include the congestion revenues associated with the exercise of Firm PTP and NITS OATT services through balanced self-schedules in other EDAM balancing areas.

As noted and consistent with the transitional and evolutionary nature of the design, the ISO will monitor this aspect and the effects of parallel flow congestion revenues across the market footprint, which will grow gradually, and will consider near-term and long-term enhancements to further evolve the design and provide equitable allocation of congestion revenues among participating EDAM balancing areas.

# 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. This Draft Final Proposal introduces a formal proposal for stakeholder input and feedback. The goal is to present a proposal that may emerge from the stakeholder process during the May 2025 joint session of the ISO Board of Governors and the Western Energy Markets (WEM) Governing Body.

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 12th – publication of Final Proposal informed by workshops and stakeholder feedback.
- May 20-22nd – Presentation for decision to ISO Board of Governors and WEM Governing Body.

## B. 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 Draft Final 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 Draft Final 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 Draft Final Proposal.

As described in section VII of this 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 Draft Final Proposal.

1. **Predominant Flow Example**

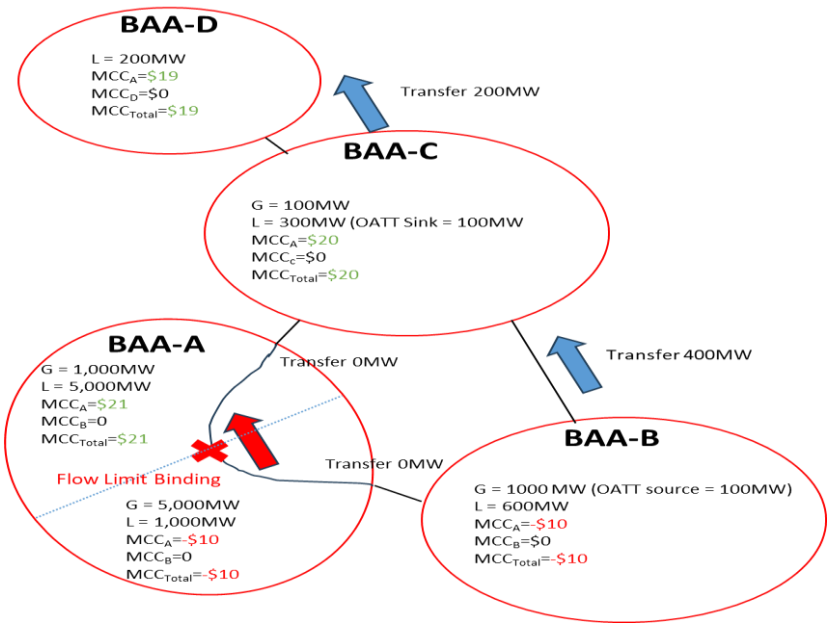


**Figure 1: Predominant Flow Solution when BAA A has Binding Constraint South to North**

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 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 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: 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.

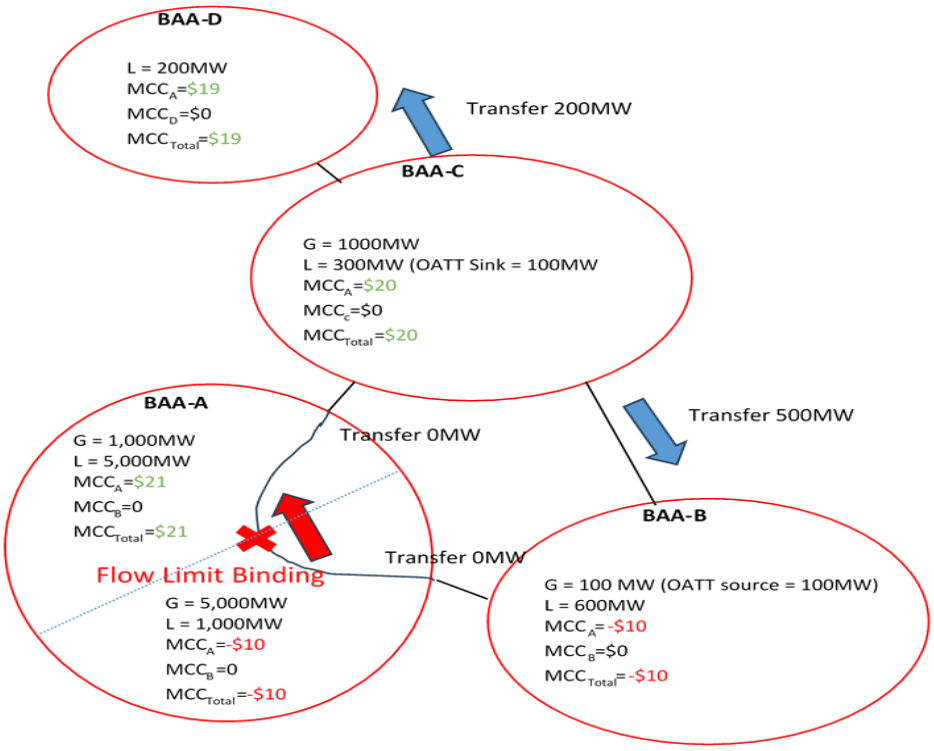



**Figure 2: Counter Flow Solution when BAA A has Binding Constraint South to North**

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 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: 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** | **$2,000** | **$ -** |