UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

PacifiCorp	**)**	**Docket No. ER25-951-000**

MOTION FOR LEAVE TO FILE ANSWER AND ANSWER OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION TO COMMENTS, PROTESTS, AND ANSWER

The California Independent System Operator Corporation (CAISO)[1] answers comments, protests, and the answer filed in this proceeding[2] in

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[1] Capitalized terms not otherwise defined herein have the meanings set forth in Appendix A to the CAISO Tariff. The CAISO previously filed a doc-less motion to intervene in this proceeding on January 21, 2025.

[2] The following entities filed comments: the Alliance of Western Energy Consumers and the PacifiCorp Idaho Industrial Customers (together, AWEC-PIIC); Joint Commenters (consisting of Portland General Electric Company (PGE), Nevada Power Company and Sierra Pacific Power Company (together, NV Energy), and the Balancing Area of Northern California (BANC)); Pacific Gas and Electric Company (PG&E); and Public Interest Organizations (consisting of Natural Resources Defense Council, NW Energy Coalition, and Western Resource Advocates). Also, Southwest Power Pool, Inc. (SPP) filed limited comments. The CAISO filed its own comments as well.

The following entities filed protests: Arizona Public Service Company (APS); the Bonneville Power Administration (Bonneville); Calpine Corporation (Calpine); the City of Tacoma, Department of Public Utilities, Power Division (Tacoma); Powerex Corp (Powerex); the Public Power Council (PPC); Puget Sound Energy, Inc. (PSE); Salt River Project Agricultural Improvement and Power District (SRP); Shell Energy North America (US), L.P. (Shell Energy); Tri-State Generation and Transmission Association, Inc. (Tri-State); Utah Associated Municipal Power Systems (UAMPS); the Utah Division of Public Utilities (Utah DPU); the Utah Municipal Power Agency and Deseret Generation & Transmission Co-operative, Inc. d/b/a Deseret Power (Deseret) (together, UMPA-Deseret); the Western Power Trading Forum and the Northwest and Intermountain Power Producers Coalition (together, WPTF-NIPPC); WRAP Participating Entities (consisting of APS, Avista Corporation, Bonneville, Public Utility District No 1 of Chelan County, Clatskanie People's Utility District, Public Utility District No. 2 of Grant County, Powerex, PSE, SRP, Shell Energy, Tacoma, Department of Public Utilities, Power Division, and The Energy Authority); and the 704B Customers (consisting of Peppermill Casinos Inc., Smart Energy Alliance, Wynn Las Vegas, LLC, MGM Resorts International, and Caesars Entertainment Services, LLC). In addition, the Clean Energy Associations (consisting of the Interwest Energy Alliance, Renewable Northwest, and the American Clean Power Association) filed a limited protest.

Northwest Power Pool d/b/a Western Power Pool (WPP) filed a motion for leave to answer and answer to some of the comments and protests listed above. For the sake of simplicity, this Answer generally refers to all submittals in this proceeding as comments submitted by commenters.

response to the proposed revisions to PacifiCorp's Open Access Transmission Tariff (OATT) submitted in the proceeding on January 16, 2025 to facilitate PacifiCorp's participation in the CAISO's Extended Day-Ahead Market (EDAM) (PacifiCorp Revised OATT Filing).[3]

I. SUMMARY

The CAISO appreciates the significant interest of parties in the important step PacifiCorp is taking to allow customers in the West to realize the significant benefits of EDAM.[4] The Commission should recognize the widespread support for EDAM sincerely expressed by most parties submitting comments and protests in this proceeding.[5] Given this support, the Commission should not

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[3] The CAISO files this answer (Answer) pursuant to Rules 212 and 213 of the Commission's Rules of Practice and Procedure, 18 C.F.R. §§ 385.212, 385.213. For the reasons explained below in Section II of the Answer, the CAISO respectfully requests waiver of Rule 213(a)(2), 18 C.F.R. § 385.213(a)(2), to permit it to answer the protests and answer filed in this proceeding.

[4] Anticipated overall annual economic benefits of EDAM are projected to range from $100 million to more than $1 billion. *See Extended Day-Ahead Market: Feasibility Assessment Update from EIM Entities* (2019) (EIM Entities Study), available at http://www.caiso.com/InitiativeDocuments/Presentation-ExtendedDay-AheadMarketFeasibilityAssessmentUpdate-EIMEntities-Oct3-2019.pdf; *The State-Led Market Study* (July 30, 2021), available at https://static1.squarespace.com/static/59b97b188fd4d2645224448b/t/6148a012aa210300cbc4b863/1632149526416/Final+Roadmap+-+Technical+Report+210730.pdf; *CAISO EDAM Benefits Study: Estimating Savings for California and the West Under EDAM Market Scenarios* (Nov. 4, 2022) (CAISO EDAM Benefits Study), available at http://www.caiso.com/Documents/Presentation-CAISO-Extended-Day-Ahead-Market-Benefits-Study.pdf; *Brattle EDAM Simulations: PacifiCorp Results* (Apr. 2023) (Brattle EDAM Study), available at https://www.brattle.com/wp-content/uploads/2023/04/Brattle-EDAM-Simulations-PacifiCorp-Results.pdf. The CAISO EDAM Benefits Study quantified capacity savings of $652 million annually in addition to operational savings of $543 million. The EIM Entities Study quantified operational savings but did not attempt to quantify capacity savings. The Brattle EDAM Study quantified gross benefits of $810 million and net benefits of $438 million annually. *See also* NV Energy Day-Ahead Market Benefits Studies (Mar. 2024) (Brattle EDAM Study), available at https://www.brattle.com/wp-content/uploads/2024/03/NV-Energy-Day-Ahead-Market-Benefits-Studies.pdf (estimating annual economic benefits of $113 million for NV Energy market participation).

[5] *See, e.g.*, WPTF-NIPPC at 2; SRP at 1, 12; PG&E at 1; Public Interest Organizations at 1-2; UMPA-Deseret at 1, 3; Joint Commenters at 5-7; Clean Energy Associations at 2; WPP at 1-2; WRAP Participating Entities at 3.

delay or unreasonably condition PacifiCorp's significant milestone in making EDAM a reality. PacifiCorp has proposed revisions to its OATT that implement the CAISO Tariff as accepted by the Commission,[6] are consistent with or superior to the *pro forma* OATT, and should be accepted by the Commission so PacifiCorp can realize the benefits of EDAM for its customers.

The CAISO takes to heart the questions raised and concerns expressed by a number of commenters. The most significant substantive questions and concerns relate to congestion revenue cost allocation provisions in the CAISO Tariff previously approved by the Commission, which are beyond the scope of this proceeding. Although these CAISO Tariff provisions remain just and reasonable, the CAISO intends to initiate an expedited stakeholder process to address these concerns and, prior to EDAM implementation, it will either: (1) make a filing under section 205 of the Federal Power Act (FPA) to modify the EDAM congestion revenue allocation methodology on a transitional basis or (2) report back to the Commission that it is not making any modifications to the approved methodology. This stakeholder process should not delay acceptance of the PacifiCorp OATT amendments, which are just and reasonable and consistent with or superior to the *pro forma* OATT on their own.

The sole issue before the Commission in this proceeding is the justness and reasonableness of PacifiCorp's proposed OATT revisions to implement the Commission-approved EDAM framework. Issues and questions regarding the

[6] *See Cal. Indep. Sys. Operator Corp.*, 185 FERC ¶ 61,210 (2023) (EDAM Acceptance Order).

Commission-approved EDAM framework are beyond the scope of this proceeding. However, most commenters opposing the acceptance of the PacifiCorp filing ignore that (1) PacifiCorp can only sub-allocate the congestion revenues the CAISO allocates to it under the approved EDAM provisions of the CAISO Tariff, and (2) the justness and reasonableness of PacifiCorp's sub-allocation methodology is the only congestion revenue allocation issue appropriately before the Commission in this proceeding. These parties' objections and concerns regarding congestion revenue allocation primarily pertain to EDAM market design choices and settlement provisions the Commission has already found to be just and reasonable. That is not the issue in this proceeding.

Most of the commenters do not even attempt to show that PacifiCorp's two-tiered sub-allocation of the congestion revenues the CAISO allocates to it under EDAM is unjust and unreasonable. The few that do ignore that tier one of PacifiCorp's day-ahead congestion revenue sub-allocation provides a reasonable opportunity for transmission rights holders to hedge their exposure to congestion on the PacifiCorp system, and that the second tier allocates the residual congestion revenue to measured demand, which is the same methodology the Commission found to be just and reasonable in connection with PacifiCorp's participation in the Western Energy Imbalance Market (WEIM).[7] The two-step congestion revenue sub-allocation mechanism PacifiCorp developed in response

[7] The WEIM was formerly called the Energy Imbalance Market or EIM, and the CAISO Tariff references remain to the Energy Imbalance Market or EIM.

to stakeholder concerns provides a reasonable and workable tool for customers to hedge costs of congestion arising within either PacifiCorp balancing area.[8] Further, as the CAISO stated in its intervention and comments in this proceeding, PacifiCorp's sub-allocation proposal is consistent with the approved EDAM provisions of the CAISO Tariff. This PacifiCorp sub-allocation methodology can remain in place even if the CAISO were to modify the methodology by which it allocates congestion to PacifiCorp and other EDAM entities. Stated differently, PacifiCorp would not need to change its sub-allocation methodology in the event the CAISO were to change its allocation methodology. For this reason and the other reasons set forth herein, the Commission should accept PacifiCorp's proposed OATT changes.

EDAM builds upon the success of the WEIM and the history of the evolution of markets in the West. EDAM was developed through the dedicated and diligent efforts of interested stakeholders, and the Commission accepted it recognizing there were inherent differences from centralized day-ahead markets administered by regional transmission organizations (RTOs) and independent system operators (ISOs). In particular, EDAM will optimize transmission made available across a multiple balancing area footprint that includes individual transmission service providers who continue to manage and sell transmission

[8] PacifiCorp operates two balancing areas, PacifiCorp East (PACE) and PacifiCorp West (PACW). Transmittal letter for PacifiCorp Revised OATT Filing at 2-3. By balancing area, the CAISO means a balancing authority area (BAA) as defined in the North American Electric Reliability Corporation (NERC) Glossary of Terms Used in NERC Reliability Standards (NERC Glossary of Term), available at https://www.nerc.com/pa/Stand/Glossary%20of%20Terms/Glossary_of_Terms.pdf. The CAISO also uses the term balancing authority, consistent with the meaning in the NERC Glossary of Terms, when referring to the responsible entity that maintains balance within the balancing area.

service under their respective tariffs, not under one consolidated tariff. These differences drove certain market design choices, including the allocation of congestion revenue. In particular, the process and decisions leading to the CAISO Tariff allocation of congestion revenue to the impacted balancing area apply the same fundamental methodology utilized in the WEIM today and that will be utilized in EDAM.[9] This determination was not misguided.

Even though the Commission-approved EDAM design as embodied in the CAISO Tariff is not at issue in this proceeding, given the number and scope of intervenors' comments regarding the EDAM congestion revenue allocation framework, the CAISO is compelled to address such comments in this Answer. The CAISO believes the approved methodology for allocating congestion revenue under EDAM reasonably allocates congestion revenue to the area in which congestion has occurred. This approved EDAM approach is consistent with how the WEIM has been calculating congestion revenue for over a decade combined with allocation modifications to account separately for transfer revenue. This approach is consistent with cost causation; *i.e.*, entities that cause parallel flow that contributes to congestion in another participating balancing area are responsible for that cost. The EDAM design merely allocates costs to those schedules that create parallel flows and contribute to the congestion by charging them for the congestion impacts to which they are contributing.

[9] The primary changes were associated with the separate calculation and settlement of EDAM transfer revenue, which is explained further below in Section III.B of this Answer and in the Congestion Revenue Allocation Example contained in Attachment C to this Answer, which does not account for EDAM transfer revenue.

The improved optimization and dispatch of resources accomplished by this congestion management framework will provide substantial overall benefits to customers of participating balancing authorities. Accordingly, the CAISO believes it remains just and reasonable for EDAM to allocate the impacts of congestion to schedules outside of the balancing area where the constraint occurs that are contributing to the congestion. That being said, the CAISO recognizes it may be appropriate to mitigate these impacts as the West transitions to a market-based regime, especially during the early days of EDAM when there will be fewer participants (and hence fewer resources and less transmission) to address congestion. The CAISO will begin exploring such transitional mechanisms with stakeholders on an expedited basis, but emphasizes that such issues are not within the scope of the PacifiCorp OATT amendments.

The Commission should reject the various objections to the PacifiCorp Revised OATT Filing. They are neither legally nor factually sustainable. The concerns expressed have been exacerbated by inaccurate information about the nature and magnitude of congestion costs to be allocated to PacifiCorp transmission customers as a result of EDAM optimizing transactions in the broader EDAM market area. As explained in this Answer and the attached supporting declaration of Guillermo Bautista Alderete, the CAISO's Director of Market Performance and Advanced Analytics (Alderete Declaration),[10] the magnitude of cost impacts suggested by some does not reflect any reasonable

[10] Attachment A hereto.

scenario and misapplies real-time data provided by the CAISO Department of Market Monitoring (DMM) on congestion in the WEIM. The Alderete Declaration also explains why this speculation fails to acknowledge the significant beneficial effects EDAM would have on congestion management, including the ability to resolve congestion more effectively and reduce the frequency of binding transmission constraints.

The commenters also propose inappropriate and unjustifiable solutions to address their concerns, seemingly to persuade the Commission there is no alternative but to reject the PacifiCorp proposal, albeit without prejudice. As explained in the attached statement by Dr. Scott Harvey of FTI Consulting and a member of the CAISO's Market Surveillance Committee (Harvey Statement),[11] EDAM is founded on continued sales of firm transmission service by OATT transmission service providers, similar to the WEIM. Further, Dr. Harvey explains that, although stakeholders could consider enhancements, including transitional measures to mitigate congestion cost uncertainty raised by commenters, the EDAM design and the framework upon which it was developed represent a reasonable starting point for the extended day-ahead market, and nothing in the materials Powerex submitted changes this. He then confirms, using the same DMM real-time congestion data relied upon by several commenters, that Powerex's analysis significantly misstates the impact of WEIM congestion charges on PacificCorp power consumer costs and basically has no

[11] Attachment B hereto.

relevance to assessing the impact of EDAM dispatch and settlements on PacifiCorp customers.

The Commission should be wary of misinformation and efforts to delay or diminish the benefits of the EDAM design. Moreover, the Commission should not countenance arguments that go beyond the scope of this proceeding or constitute collateral attacks on the EDAM Acceptance Order.

Those opposing core elements of the EDAM design argue—without any support in the Commission's *pro forma* OATT or Commission precedent—that the Commission cannot require customers with firm point-to-point OATT transmission service to pay the costs of congestion associated with their transactions. They further argue that firm point-to-point customers must be fully hedged from all congestion costs attributable to their service under a market design that optimizes the cost of serving load and end-use customers. These arguments misrepresent Commission precedent, which makes clear that such a "perfect hedge" has been available only in very limited circumstances, typically to pre-OATT legacy contracts and ownership rights.

Some commenters claim each transmission customer can disregard the decision of the relevant balancing area to participate in an organized day-ahead market by granting individual transmission customers the unilateral right to "opt out" of that market. This claim is baseless. The approved EDAM design does not provide an individual transmission customer opt-out when a balancing area elects to participate in EDAM. Moreover, if the Commission were to establish such a right for OATT transmission customers in the context of EDAM, it would

create precedent undercutting all existing ISO/RTO markets that still incorporate point-to-point transmission service by allowing customers unilaterally to remove transmission capacity from market optimization. The Commission has not generally allowed individual *pro forma* OATT transmission customers to "opt out" of ISO/RTO markets. The "opt-out" for transmission customers proposed by the Southwest Power Pool, Inc. (SPP) and accepted by the Commission for Markets+ is a region-specific exception to this rule. The acceptance of this feature proposed for implementation in one market that has not begun operations does not require a Commission mandate of the same atypical feature in EDAM or in PacifiCorp's OATT. Moreover, providing such an "opt-out" would greatly exceed the transmission rights the *pro forma* OATT provides, the rights of OATT customers in ISO/RTO regions, and "front-run" any future seams agreement that may be negotiated.

The accepted EDAM design understandably does not include financial transmission rights like congestion revenue rights (CRRs) in the non-CAISO balancing areas participating in the day-ahead market. This element of EDAM is like the one other approved day-ahead market in the West that does not include financial transmission rights. As such, the provisions of the Commission's Order No. 681 governing markets that have transitioned to financial transmission rights do not apply to EDAM because EDAM (like Markets+), as accepted by the Commission, does not include financial transmission rights and participating balancing authorities retain physical transmission service rights under the *pro forma* OATT model.

The EDAM design does, however, provide tools for managing and hedging congestion costs. The Commission approved the allocation of congestion revenues to the responsible balancing area to determine how best to sub-allocate the congestion revenues to its customers. The Commission did so with full awareness that this congestion revenue allocation would not result in firm OATT customers being immune from congestion costs. The CAISO clearly stated in its EDAM filing accepted by the Commission that even balanced self-schedules using firm OATT rights would be subject to congestion and redispatch costs and would not receive the "perfect hedge" available to legacy contracts and ownership rights.[12]

Powerex and others claim firm OATT customers in PacifiCorp should retain all their physical scheduling rights while also receiving full or near-full financial hedges from congestion costs resulting from constraints in other balancing areas their parallel flows contribute to, all the while reaping the benefits of the reduced risk of curtailment that comes with EDAM. The Commission has consistently rejected arguments that customers should be able to "have their cake and eat it too" as part of the adoption of markets based on locational marginal pricing (LMP). Granting what these commenters seek would produce unjust and unreasonable congestion cost shifts to other entities in the West

[12] *See* CAISO transmittal letter for EDAM tariff amendment, Docket No. ER23-2686-000, at 130 (Aug. 22, 2023) (CAISO EDAM Tariff Filing) ("Unlike individual customer legacy contracts or ownership rights, balanced intra-day self-schedules using specific firm OATT transmission rights will not receive a perfect hedge and such schedules will be responsible for congestion or redispatch costs."); *see also* EDAM Acceptance Order at P 260. The CAISO submits by this Answer that its transmittal letter for the CAISO EDAM Tariff Filing was clear on these points.

without any consideration and evaluation of tradeoffs with all interested stakeholders.

As an example and as discussed in the Harvey Statement, financial transmission rights like CRRs by design must be subject to a simultaneous feasibility test. He notes that sales of *pro forma* OATT firm point-to-point and network integration service often exceed the transfer capability of the grid because contract path sales do not account for transmission constraints. As such, it is unlikely there could be a one-to-one correspondence between the level of firm OATT rights and the financial transmission rights available under a simultaneous feasibility test. Dr. Harvey explains that although such financial transmission rights theoretically could be developed, doing so would involve complex analysis and weighing of who appropriately bears the cost of such a major design change to EDAM, and there is no guarantee such a process would result in an approach that would provide commenters a full hedge to congestion based on their transmission reservation rights. There is no basis to delay the benefits of EDAM by mandating such a fundamental change in the approved design through this proceeding. Even absent financial transmission rights, as Dr. Harvey notes, the present starting point for initial implementation of EDAM remains reasonable.

Some commenters also suggest the Commission must compel PacifiCorp to support options that are discretionary under the CAISO Tariff. For example, the EDAM provisions of the CAISO Tariff allow for a transmission service provider to notify the CAISO if certain transmission rights are unavailable and

should be “carved out” from the market. Because carve-outs will introduce inefficiencies and deprive end-use customers of the overall benefits of the EDAM market design, the CAISO has explained to the Commission that such transmission service provider carve-outs should be rare and limited to unique circumstances, which is precisely what PacifiCorp has proposed. Those arguing that PacifiCorp must exercise its option to carve out transmission from EDAM for every transmission customer requesting such a carve-out ignore both the harm to overall market efficiency of such a practice and the Commission’s express finding that any carve-out of transmission rights from EDAM “would be contingent on the EDAM transmission service provider’s OATT provisions allowing for such carve-out.”[13] Similarly, enabling external intertie bidding is optional under EDAM, and PacifiCorp has reasonably chosen not to enable such intertie bidding when it initially joins EDAM beyond designated network resources as required by EDAM. In making this decision, PacifiCorp follows the path of all balancing areas in the WEIM in choosing not to enable such bidding.

Questions regarding how PacifiCorp’s OATT amendments implementing EDAM will impact parties participating in the Western Resource Adequacy Program (WRAP) or seeking to transact in SPP’s Markets+ do not justify any delay in accepting the PacifiCorp Revised OATT Filing or impairing the implementation of EDAM. The Commission has already found the EDAM

[13] EDAM Acceptance Order at P 314.

framework to be compatible with WRAP.[14] PacifiCorp has also proposed specific provisions reasonably designed to accommodate WRAP transactions.

Similarly, any issues regarding the interaction of organized wholesale day-ahead markets in the West should not delay acceptance of the PacifiCorp Revised OATT Filing as a key milestone towards implementation of EDAM. The Commission has long recognized that there is no single just and reasonable wholesale market design. The CAISO and SPP each elected to pursue certain different design elements in developing EDAM and Markets+. Where there are differences between the market designs of neighboring regions, longstanding Commission precedent supports the facilitation of transactions involving those regions through seams agreements. The Commission reaffirmed this principle in January when it accepted SPP's Markets+ filing and noted that seams issues with EDAM raised by some commenters will need to be addressed in future agreements. Consistent with the CAISO's decades of efforts of addressing seams issues with neighboring regions, the CAISO will address seams issues as necessary and appropriate to ensure reliability and efficient market outcomes after the market footprints are clarified and the details of the markets are refined, tested, and implemented consistent with the Commission's expectations established in its orders on EDAM and SPP's Markets+. Future seams discussions between the CAISO and SPP are no reason to delay or impair the scheduled launch of EDAM in 2026.

[14] *Id.* at P 313.

For the reasons explained in greater detail below, in the Alderete Declaration, the Harvey Statement, and the other materials submitted in support of this Answer, the Commission should find the PacifiCorp OATT amendments proposed in this proceeding are beneficial to end-use customers and therefore are both just and reasonable and consistent with or superior to the *pro forma* OATT.

Nevertheless, commenters have raised concerns regarding uncertainty over their exposure to congestion costs related to parallel flows as they transition to an LMP-based market, while still continuing to operate under disparate transmission tariffs.[15] Commenters also reference certain statements in materials the CAISO published in its EDAM stakeholder process. It is regrettable that any of these statements may have contributed to misunderstanding of the congestion revenue allocation under the CAISO Tariff, the impact this methodology would have on balancing areas joining EDAM, or their associated scheduling priority. The CAISO takes its stewardship role and these concerns seriously. It is critical moving forward that everyone clearly understands the CAISO Tariff allocation of congestion revenues among all participating balancing areas, particularly at the outset of EDAM when there is greater uncertainty how individual balancing areas may be impacted through their participation.

[15] The CAISO acknowledges commenters' concerns, while maintaining its position that they erroneously argue that firm point-to-point rights holders under PacifiCorp's OATT stand to incur significant congestion costs arising out of constraints on the CAISO system, while failing to recognize that the flow effects that contribute to congestion across balancing areas will diminish as EDAM expands and more transmission and resources are available to resolve congestion across the market area. *See* Alderete Declaration at 3-4 (confirming that new regional transmission facilities will be energized in the coming years, changing the flow patterns and relieving the flow effects that may be observed at the outset of EDAM).

Although the CAISO believes there is no credible risk of significant congestion exposure among participating balancing areas and transmission rights holders through the EDAM design and that certain commenters overstate the magnitude of the potential risk of congestion exposure based on flawed application of inappropriate data, the CAISO acknowledges there is stakeholder concern and uncertainty regarding the impacts of the approved EDAM congestion revenue allocation framework even though it is based on sound cost causation principles. For this reason, the CAISO will immediately initiate an expedited stakeholder process, prior to EDAM implementation, to consider concerns with the current design and the possibility of an alternative transitional approach that would adjust the congestion revenue related to parallel flows allocated among balancing areas participating in EDAM and mitigate the risk of cost uncertainty described by commenters. Such efforts are wholly consistent with the CAISO's history in the WEIM where the CAISO proposed enhancements to the approved and just and reasonable WEIM design both before and shortly after WEIM implementation.[16]

Simply put, the CAISO will work closely with stakeholders to assess these matters and consider all implications of the approved congestion revenue allocation design choices through this open, inclusive, and transparent

[16] In 2014, the Commission accepted the CAISO's proposed revisions to its Tariff to implement the WEIM design later that year. *See Cal. Indep. Sys. Operator Corp.*, 147 FERC ¶ 61,231, *order on reh'g, clarification, & compliance*, 149 FERC ¶ 61,058 (2014). Before the CAISO implemented the WEIM on November 1, 2024, it filed and the Commission accepted certain Tariff enhancements to the design. *See Cal. Indep. Sys. Operator Corp.*, 148 FERC ¶ 61,222 (2014). The CAISO also filed and the Commission accepted Tariff enhancements to the WEIM design based on experience with the initial implementation. *See Cal. Indep. Sys. Operator Corp.*, 150 FERC ¶ 61,185 (2015); *Cal. Indep. Sys. Operator Corp.*, 153 FERC ¶ 61,087 (2015).

engagement with stakeholders. The CAISO will also explore potential transitional measures to mitigate the congestion revenue allocation impacts during the formative years of EDAM. In this Answer, to assist commenters' understanding, the CAISO also clarifies the details of the approved EDAM congestion revenue allocation framework and provides an example of how it will work in practice.

Any changes to the approved EDAM congestion revenue allocation framework are appropriately addressed with stakeholders through a CAISO stakeholder process, not in a proceeding on a PacifiCorp OATT filing to implement EDAM.[17] To that end, the aforementioned stakeholder process will specifically consider whether to adopt a surgical modification to the CAISO Tariff's EDAM settlement of congestion revenue for constraints internal to a balancing area arising out of parallel flows, which it could implement as a transitional measure to adjust the allocation of congestion revenue to each participating balancing area by an amount equal to the congestion revenue collected from its contribution to the congestion in another participating balancing area.[18] Effectively, such a transitional adjustment mechanism could reallocate

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[17] The CAISO expects this stakeholder process will reassure commenters and customers of the overall benefits of EDAM with the current design choices and confirm both PacifiCorp and the CAISO are providing reasonable tools to allow individual parties to manage their risks and realize the expected benefits. The process can also explore potential transitional measures or settlement approaches that could be adopted to mitigate concerns about the potential for uncertainty over congestion costs related to parallel flow raised in this proceeding. The CAISO has consistently engaged in similar efforts to listen to stakeholder questions and pursue enhancements to the design of the WEIM for more than a decade. Those market enhancement efforts did not delay the acceptance of OATT amendments to facilitate participation in the WEIM, often not requiring any change to participant OATTs, and similarly should not result in delays here.

[18] This stakeholder process may also assess the feasibility of implementing financial rights, a design feature specifically excluded from EDAM, as a potential longer-term solution.

the congestion revenue associated with parallel flow congestion in another balancing area back to the balancing area commensurate with its contributions to the parallel flow, thus enabling that balancing area to sub-allocate the congestion revenue to its customers under its tariff.

There will be a limited number of participating balancing authorities in the early years of EDAM and, thus, less overall transfer capability and fewer resources available to help mitigate congestion. Thus, transitional measures to mitigate the impacts of congestion revenue allocation may be appropriate. The equities also must be balanced. Ultimately, the CAISO expects the footprint to expand, and with that expansion will come greater transmission and resource capabilities, which will facilitate enhanced congestion management. Comprehensively evaluating congestion revenue allocation-related matters and the extent and impacts of congestion will be possible only after EDAM implementation and after robust production data becomes available to assess the effectiveness of any implemented measures and the scope of any future measures.

If stakeholders support such a transitional measure as an accommodation of their concerns and the CAISO Board of Governors and the Western Energy Market (WEM) Governing Body authorize the modification, the CAISO would file that modification with the Commission for acceptance in a separate FPA section 205 filing. If the CAISO does not file a CAISO Tariff amendment, the CAISO commits to report to the Commission the result of the stakeholder process in advance of EDAM implementation.

Although the CAISO is using this Answer to respond to concerns beyond the scope of this proceeding, the CAISO urges the Commission not to lose sight of the central issue before it in the proceeding—whether PacifiCorp's proposed methodology for sub-allocating the congestion revenues the CAISO allocates to it under EDAM is just and reasonable. The CAISO again must stress that PacifiCorp's proposed two-tiered sub-allocation methodology can accommodate equally well either the existing congestion revenue allocation methodology under the CAISO Tariff or any revised congestion revenue allocation methodology the CAISO might adopt, because it is designed to sub-allocate all of the congestion revenue allocated by the CAISO. Accordingly, there is no reason for the Commission to reject PacifiCorp's sub-allocation proposal because the CAISO will consider with stakeholders whether to adjust the congestion revenue the CAISO allocates to PacifiCorp.

II. MOTION FOR LEAVE TO FILE ANSWER TO PROTESTS AND ANSWER

Pursuant to Rules 212 and 213 of the Commission's Rules of Practice and Procedure,[19] the CAISO respectfully requests waiver of Rule 213(a)(2), 18 C.F.R. § 385.213(a)(2), to permit it to answer the protests and answer filed in the proceeding. Good cause for the waiver exists because this Answer will aid the Commission in understanding the issues in the proceeding, inform the Commission in the decision-making process, and help to ensure a complete and

[19] 18 C.F.R. §§ 385.212, 385.213.

accurate record in the case.[20]

III. ANSWER

A. The Commission Should Disregard All of Commenters' Arguments that Are Beyond the Scope of this Proceeding

This proceeding solely concerns whether the Commission should find PacifiCorp's proposed revisions to its OATT to allow it to participate in EDAM are just and reasonable under section 205 of the FPA. The CAISO submitted no revisions to its own Tariff in this proceeding. Nor is this a proceeding under section 206 of the FPA to determine whether any commenter has demonstrated existing provisions of the CAISO Tariff are unjust and unreasonable—including the provisions to implement the EDAM design the Commission accepted a little over a year ago in the EDAM Acceptance Order.

Several commenters in this proceeding nevertheless claim the CAISO's EDAM design is flawed or seek financial protection not contemplated by the EDAM design. For example, despite claiming it "is not challenging any element of CAISO's EDAM tariff" in this proceeding, Powerex argues "EDAM lacks the key elements of an ISO/RTO that provide important protections to transmission customers" and "PacifiCorp also cannot be permitted to use the limitations of EDAM to justify its inability to provide the core elements of firm transmission service to its customers."[21] In this regard, a week before it submitted its protest in this proceeding, Powerex posted on its website a paper entitled "PacifiCorp's

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[20] *See, e.g.*, *Equitrans, L.P.,* 134 FERC ¶ 61,250, at P 6 (2011); *Cal. Indep. Sys. Operator Corp*., 132 FERC ¶ 61,023, at P 16 (2010); *Xcel Energy Servs., Inc.,* 124 FERC ¶ 61,011, at P 20 (2008).

[21] Powerex at 7, 17-18.

Recent FERC Filing Reveals a Major EDAM Market Design Flaw" (Powerex Paper).[22] As its title suggests, the Powerex Paper contains Powerex arguments against the methodology for allocating congestion revenue under the EDAM design approved in the EDAM Acceptance Order.

Although Powerex chose not to cite or even mention the Powerex Paper in its sizeable protest,[23] there is significant overlap between the arguments in both.[24] Other commenters are more explicit in citing the Powerex Paper to expressly support their arguments that the EDAM design is flawed.[25] They also make arguments clearly influenced by the Powerex Paper without citing it.[26]

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[22] *See* https://powerex.com/sites/default/files/2025-02/PacifiCorp%E2%80%99s%20Recent%20FERC%20Filing%20Reveals%20a%20Major%20EDAM%20Market%20Design%20Flaw.pdf.

[23] Powerex made the largest submittal by far of any intervenor that responded to the PacifiCorp Revised OATT Filing.

[24] *E.g.*, *compare* Powerex at 6 (arguing that PacifiCorp's OATT revisions expose customers to "[n]ew frequent, large, and volatile hourly day-ahead congestion charges to schedules on firm transmission service, without an adequate financial hedge to manage these charges") *with* Powerex Paper at 19 (arguing that "[i]f PacifiCorp joins EDAM under its current design, PacifiCorp will now need to pay frequent, large and volatile congestion charges, which will go to California ISO customers"); *compare* Powerex, Attachment B (Testimony of Paul Gribik) at 15:5-6 *with* Powerex Paper at 12 (containing same information in graph prepared by PacifiCorp regarding flow-based congestion from PacifiCorp East to PacifiCorp West for January-September 2024); *compare* Attachment B to Powerex protest at 11:7-11 (arguing that "[a]ll other organized day-ahead markets [besides EDAM] with which I am familiar have included mechanisms to return the congestion charges collected by the market operator back to entities that hold transmission rights on the paths that experience congestion") *with* Powerex Paper at 7 (arguing that "EDAM is an aberration from the design of all other day-ahead organized markets, including Markets+, because it applies congestion charges in a manner that is not aligned with how it returns that congestion revenue back to participating entities").

[25] *See* UAMPS at 16, 19-21 (citing Powerex Paper to support arguments regarding purported flaws in "the CAISO's core EDAM congestion allocation framework" and "flaws in the CAISO's EDAM congestion management, revenue collection, and revenue allocation design") (some capitalized text in these quotations put into lower-case text); Shell Energy at 6-7 (citing Powerex Paper to support argument regarding purported "design flaw" in EDAM); AWEC-PIIC at 1-2 (citing Powerex Paper to support argument regarding purported "flaws in the design of the EDAM").

[26] *See* UMPA-Deseret at 14 ("These issues arise from a fundamental flaw in the EDAM's construction.").

All these arguments focused on the approved EDAM design are beyond the scope of this proceeding on the PacifiCorp Revised OATT Filing. Under well-established precedent, the Commission's only concern in addressing a tariff amendment filing under FPA section 205 is the tariff revisions before it, not any issues related to existing tariff language in another public utility's tariff unaffected by the filing. For this reason the Commission rejects arguments that go beyond the scope of the particular proceeding.[27] This has included, for example, the Commission's rejecting beyond-the-scope arguments regarding CAISO Tariff provisions raised by a commenter in the proceeding on revisions PacifiCorp proposed to its OATT to enable its participation in the WEIM:

> While Powerex attempts to conflate PacifiCorp's proposed EIM transmission usage charge, which was rejected in the June 19 Order, with CAISO's waiver of its wheeling access charge for EIM transfers [under the CAISO Tariff], the fact remains that CAISO's waiver of its wheeling access charge for EIM transfers was proposed in CAISO's EIM tariff filing and not PacifiCorp's EIM OATT Filing. . . . Powerex's arguments that CAISO's waiver of its wheeling access fee renders Attachment T of PacifiCorp's OATT discriminatory reflect an inappropriate attempt to use this proceeding as a vehicle to challenge CAISO's EIM tariff filing. . . . Accordingly, we reaffirm that Powerex's arguments concerning CAISO's waiver of its transmission access fee are beyond the scope of this proceeding.[28]

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[27] *See, e.g.*, *Sw. Power Pool, Inc.*, 160 FERC ¶ 61,087, at P 12 (2017); *Cal. Indep. Sys. Operator Corp.*, 154 FERC ¶ 61,169, at P 63 (2016); *PJM Interconnection, L.L.C.*, 144 FERC ¶ 61,191, at P 24 (2013). *Cal. Indep. Sys. Operator Corp.*, 143 FERC ¶ 61,276, at P 11 (2013); *ISO New Eng. Inc.*, 137 FERC ¶ 61,112, at P 17 (2011); *Midwest Indep. Transmission Sys. Operator, Inc.*, 116 FERC ¶ 61,306, at P 28 (2006). For similar reasons, the Commission should reject the request of AWEC-PIIC (at 4) that if the Commission accepts the PacifiCorp OATT revisions, it should "investigate the unjust allocation of congestion revenues within the CAISO EDAM tariff to find a methodology that is just and reasonable." If AWEC-PIIC is requesting that the Commission open a proceeding against the CAISO under section 206 of the FPA in that scenario, such a proceeding would be inappropriate given that the Commission would find the PacifiCorp OATT revisions to be just and reasonable in AWEC-PIIC's scenario and the proceeding in which the Commission would make that finding does not concern the CAISO Tariff.

[28] *PacifiCorp*, 149 FERC ¶ 61,057, at P 36 (2014).

For similar reasons, the Commission should reject commenters' arguments that do not solely concern the OATT revisions PacifiCorp filed in the instant proceeding to enable its participation in EDAM.

PacifiCorp's proposal for sub-allocating congestion revenue has to do only with the revenue the CAISO allocates to a PacifiCorp balancing area, under the allocation provisions in the CAISO Tariff approved in the EDAM Acceptance Order. In other words, it is the sub-allocation methodology under the PacifiCorp OATT—not the methodology used under the CAISO Tariff for making the allocations to a PacifiCorp balancing area in the first place—that is at issue here. Thus, commenters' suggestions that PacifiCorp should address all concerns the commenters have with the CAISO Tariff allocation methodology through the PacifiCorp OATT are misplaced. PacifiCorp has correctly and appropriately focused its OATT revisions on implementing the approved EDAM design. As explained in the CAISO's comments in this proceeding, the PacifiCorp OATT revisions—including the revisions to sub-allocate congestion revenues—are consistent with the EDAM requirements of the CAISO Tariff and are consistent with or superior to the Commission's *pro forma* OATT.[29]

B. The Commission Should Disregard All of Commenters' Arguments that Collaterally Attack the EDAM Acceptance Order

The fact commenters' arguments attacking the EDAM provisions in the CAISO Tariff are beyond the scope of the instant proceeding is itself sufficient reason for the Commission to disregard them. However, separately and

[29] CAISO comments at 7-11 and Attachment A.

additionally, the Commission should disregard their arguments insofar as they constitute impermissible collateral attacks on the findings in the EDAM Acceptance Order.

Under the Commission's longstanding precedent, "[a] collateral attack is an attack on a judgment in a proceeding other than a direct appeal and is generally prohibited."[30] In particular, "[c]ollateral attacks on final orders and relitigation of applicable precedents by parties that were active in the earlier cases thwart the finality and repose that are essential to administrative efficiency and are strongly discouraged."[31] The Commission has explained the rationale for the prohibition against impermissible collateral attacks:

> The basis for this position is not the doctrine of *res judicata*, collateral estoppel, *stare decisis*, or law of the case, but the fact that it is contrary to sound administrative practice and a waste of resources to relitigate issues in succeeding cases once those issues have been fully determined. Absent a showing of significant change in circumstances, the relitigation of an issue is simply not justified. Sound public policy reasons support the Commission's policy against relitigation of issues.[32]

As discussed below, commenters fail to show there have been any significant changes in circumstances since the Commission issued the EDAM Acceptance

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[30] *Louisville Gas & Elec. Co.*, 144 FERC ¶ 61,054, at P 12 (2013) (internal citation and quotation marks omitted).

[31] *Pac. Gas & Elec. Co.*, 181 FERC ¶ 61,040, at P 31 (2022) (quoting *San Diego Gas & Elec. Co.*, 134 FERC ¶ 61,229, at P 15 (2011)).

[32] *Alamito Co.*, 43 FERC ¶ 61,274, at 61,753 (1988) (footnote omitted) (*Alamito*). *See also Duke Energy Progress, LLC*, 184 FERC ¶ 61,098, at P 18 & n.30 (1923) (citing the same page of *Alamito* in finding that "[a]bsent a showing of significant changes in circumstances, which Duke has not made, such relitigation of an issue constitutes a collateral attack and is not justified").

Order only a little over a year ago, in December 2023, to overcome the prohibition against impermissible collateral attacks.[33]

The EDAM Acceptance Order approved almost all of the CAISO EDAM Tariff Filing, including the bulk of the CAISO Tariff revisions to implement the EDAM design.[34] The Commission found that, "[a]s demonstrated in CAISO's filing and as discussed in this order, DAME[35] and EDAM have the potential to yield significant benefits to the voluntary WEIM and EDAM participants."[36] Moreover, the Commission found "CAISO has demonstrated that its proposal presents a just and reasonable regional solution to expand the benefits of day-ahead market participation to existing WEIM participants and new entrants to both WEIM and EDAM," and "EDAM has the potential to optimize the use of existing transmission and resources across a larger footprint in the West, which will provide economic and reliability benefits to participants."[37] The Commission went on to state, "by leveraging a larger and more diverse set of resources across the Western Interconnection, we expect that DAME and EDAM will help

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33 *See* Section III.K of this Answer.

34 *See* CAISO comments at 3-5. The EDAM Acceptance Order also directed the CAISO to submit a compliance filing that included certain corrections and clarifications, which the Commission accepted in a subsequent order. *See Cal. Indep. Sys. Operator Corp.*, Commission letter order, Docket No. ER23-2686-001 (Apr. 30, 2024).

35 DAME stands for Day-Ahead Extended Market, which was an additional new component of the market design for which the Commission accepted CAISO Tariff revisions in the EDAM Acceptance Order.

36 EDAM Acceptance Order at P 42.

37 *Id.*

CAISO and other EDAM participants to manage the impacts of increasing variable energy resources and extreme weather events in the region."[38]

The EDAM Acceptance Order found the entirety of the CAISO's methodology for allocating congestion revenue—which commenters attack in the instant proceeding—is just and reasonable.[39] In particular, the Commission "accept[ed] CAISO's proposal to settle *intra*-BAA congestion revenue separately from *inter*-BAA transfer revenue because it enables allocation of transfer revenue rights to the holders that voluntarily made transmission available to the day-ahead market."[40] The Commission found "[c]ongestion revenue represents the cost to serve demand across just the internal BAA transmission system while inter-BAA transfer revenue represents the cost of serving demand across BAAs; it is thus necessary to keep those revenue streams separated."[41] The Commission specifically "agree[d] that CAISO's proposal to allocate congestion revenue to the BAA where the internal transmission constraint arises is reasonable."[42]

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38 *Id.* The only revisions to the CAISO Tariff the Commission did not accept in the EDAM Acceptance Order were those regarding the proposed EDAM access charge, which the Commission rejected without prejudice subject to the CAISO's submitting a future filing that provided additional support for its access charge proposal. *Id.* at PP 460-65. Issues involving the EDAM access charge are not relevant to this proceeding. Subsequently, the CAISO submitted and the Commission accepted an amendment to the CAISO Tariff with additional support for the EDAM access charge. *Cal. Indep. Sys. Operator Corp.*, 187 FERC ¶ 61,154 (2024). The Commission also recently accepted a CAISO Tariff amendment to implement the EDAM access charge framework in the CAISO balancing area. *See Cal. Indep. Sys. Operator Corp.*, 190 FERC ¶ 61,097 (2025).

39 EDAM Acceptance Order at P 434.

40 *Id.* (emphases in original).

41 *Id.*

42 *Id.*

In response to Powerex's protest in the EDAM proceeding, the Commission also found the allocation of congestion revenue within the balancing area where the internal constraint arises adheres to cost causation principles:

> With respect to Powerex's argument that assigning all congestion revenues at CAISO interties to CAISO ratepayers while evenly splitting transfer revenues at interties between WEIM entities favors California interests, we disagree. CAISO proposes to appropriately assign congestion revenues entirely within the BAA where the constraint is modeled, thus adhering to cost causation principles. As congestion revenues only account for congestion within each BAA, this methodology accurately assigns the revenue to the BAA where the congestion arose. We find that sharing the transfer revenues equally between the two EDAM Entities that made transmission available to facilitate the energy or capacity transfers is also a just and reasonable method of accounting for transfer revenue.[43]

In sum, the Commission has already found all the CAISO Tariff elements needed initially to develop and implement EDAM are just and reasonable. Furthermore, the time for requests for rehearing of the EDAM Acceptance Order has long since passed without anyone—including any commenters in the instant proceeding, many of whom took part in the EDAM proceeding—filing a request for rehearing.

Consistent with the prohibition against impermissible collateral attacks discussed above, the Commission should reject any comments that seek to re-litigate findings in the EDAM Acceptance Order. Although the PacifiCorp Revised OATT Filing follows the Commission-approved EDAM design, it does not open up that underlying design to re-litigation. Moreover, the CAISO Tariff provides a clear framework for PacifiCorp to address specific matters and does

[43] *Id.* at P 435.

not empower PacifiCorp to undermine the EDAM design accepted by the Commission.

C. The Commission Should Not Create New Benefits to Firm Transmission Customers That Have No Basis in the *Pro Forma* OATT or Precedent

Much of the opposition to the PacifiCorp Revised OATT Filing rests on the false claim that firm point-to-point (PTP) transmission service under the *pro forma* OATT comes with a guarantee that customers will not be required to pay congestion costs associated with their transactions even if their transmission service providers join a wholesale organized day-ahead market. For example, Powerex claims firm service customers are entitled to receive the economic value of the delivery path in which they have invested, including "being insulated from variable congestion charges."[44] Despite this being a fundamental premise of its arguments, Powerex provides no citation to any provisions of the *pro forma* OATT or Commission precedent supporting this claim. Other commenters make similar claims without any basis in the *pro forma* OATT or Commission precedent.[45]

Firm PTP service is based on a transmission service model that effectively ignores congestion. Firm PTP service customers have no reasonable expectations of "implicit rights" that have no basis in the language of the *pro forma* OATT. The Commission's Order No. 888, far from precluding congestion

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[44] Powerex at 6, 47. As explained below in this Section III.C of the Answer, the suggestion that firm point-to-point customers are investing in the transmission system is also inaccurate.

[45] *See, e.g.*, WRAP Participating Entities at 8 (alleging that firm OATT transmission service must be offered at a fixed price with only limited, well-defined variable charges).

pricing, encouraged ISOs to develop "transmission pricing proposals for addressing network congestion" that are consistent with its overall pricing policies.[46]

Congestion pricing is part of wholesale market designs based on locational marginal pricing that have repeatedly been shown to provide net benefits to end-use customers.[47] Among other things, wholesale markets provide the benefits of improved congestion management and more effective management of parallel flow.[48]

The Commission has found the overall benefits of organized wholesale markets justify certain efforts by customers to adapt to the new market design. For example, in accepting the transition of the then-Midwest Independent Transmission System Operator to markets based on locational marginal pricing, the Commission found:

> it would be inappropriate to offer financial guarantees with respect to congestion costs that require shifting uplift costs to others, but then let market participants with those guarantees retain benefits

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[46] *Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Servs. by Pub. Utils.; Recovery of Stranded Costs by Pub. Utils. & Transmitting Utils.*, Order No. 888, FERC Stats. & Regs. ¶ 31,036, at 31,732 (1996) (cross-referenced at 75 FERC ¶ 61,080) (Order No. 888). As the Commission noted in Order No. 888, the U.S. Department of Energy and other commenters also recommended the use of "location-specific spot pricing (a form of marginal cost) for operating and congestion costs." Order No. 888 at 31,735.

[47] *See, e.g.*, *Preventing Undue Discrimination & Preference in Transmission Serv.*, Order No. 890, 118 FERC ¶ 61,119, at P 625 (2007) (Order No. 890) (finding "LMP market designs can provide significant benefits to customers through more efficient use of the grid"); *Cal. Indep. Sys. Operator Corp.*, 120 FERC ¶ 61,023, at P 246 (2007) ("LMP will result in more efficient, least-cost dispatch, and signal where investment is needed in generation and/or transmission."); *Cal. Indep. Sys. Operator Corp.*, 116 FERC ¶ 61,274, at P 25 (2006) (September 2006 MRTU Order) (finding "the benefits to be gained from implementing LMP outweigh the concerns raised by its detractors").

[48] *Reg'l Transmission Orgs.*, Order No. 2000, FERC Stats. & Regs. ¶ 31,089, at 31,024 (1999) (cross-referenced at 89 FERC ¶ 61,285) (Order No. 2000).

> from the LMP energy markets (such as when they purchase from the spot market rather than operate a more expensive resource).[49]

Also, when NV Energy filed revisions to its OATT to participate in the WEIM, thereby allowing NV Energy to participate in the imbalance energy portion of the CAISO's LMP-based real-time electricity market, NV Energy proposed to revise its OATT to include a timeline of 57 minutes before the operating hour (T-57) for transmission customers to submit revised schedules, consistent with the timeline under the CAISO Tariff.[50] Powerex protested, *inter alia*, that the T-57 timeline violated the *pro forma* OATT as set forth in Order No. 888 and later revised in Order No. 764.[51] The Commission accepted NV Energy's proposal and rejected Powerex's arguments:

> We disagree with Powerex's contention that submitting adjusted schedules after T-57 will increase customers' exposure to charges for imbalance energy and therefore the scheduling timeline is prohibited by Order Nos. 888 and 764. The Commission has previously found CAISO's proposed timeline to comply with Order No. 764 was reasonable given CAISO's need to complete the market run prior to the WECC [Western Electricity Coordinating Council] e-tag deadline of 20-minutes before the operating interval and the general complexity of the CAISO and western markets. The Commission continues to find that the scheduling timelines are just and reasonable, given the complexities of the CAISO market, and are not prohibited by Order Nos. 764 and 888.[52]

These orders recognize changes in transmission service under the *pro forma* OATT will be required to capture the benefits of LMP-based markets like

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[49] *Midwest Indep. Transmission Sys. Operator, Inc.*, 109 FERC ¶ 61,157, at P 142 (2004).

[50] *Nev. Power Co.*, 151 FERC ¶ 61,131, at P 134 (2015).

[51] *See id.* at PP 145-50.

[52] *Id.* at P 163 (internal citation omitted). *See also Nev. Power Co.*, 153 FERC ¶ 61,306, at PP 39-40 (2015) (denying Powerex's request for rehearing on this issue).

EDAM for customers. PacifiCorp's proposal simply contemplates changes required for its participation in EDAM according to the Commission-accepted design. PacifiCorp is exercising its authority under section 205 of the FPA to change its rates to existing transmission customers where shown to be just and reasonable. Existing customers of PacifiCorp have no justifiable expectation that PacifiCorp can never seek to change their rates under section 205.

Charging congestion to transmission customers in balancing areas transitioning from a *pro forma* OATT model to wholesale market designs that provide overall benefits to customers is just and reasonable. For example, in approving revisions to the *pro forma* OATT to implement the WEIM, the Commission approved applying imbalance energy charges, including congestion charges, to deviations from firm transmission customers' schedules after T-55 (and before T-20) as "just and reasonable and not unduly discriminatory" and found those provisions "appropriately allocate[ ] the costs of imbalances to the customers causing such costs and [are] necessary to implement the EIM."[53]

Several commenters argue that individual transmission customers can choose completely to "opt out" of a Commission-approved wholesale market in which their balancing area elects to participate, *i.e.*, withdraw transmission capacity from consideration in that market.[54] For example, Powerex claims

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[53] *Nev. Power Co.*, 151 FERC ¶ 61,131, at P 162.

[54] To ensure there is no confusion, in this Answer the CAISO distinguishes between (1) the "opt-out" right sought by some commenters that would allow individual OATT customers to remove capacity from the markets for any reason and (2) the approved EDAM provisions of the CAISO Tariff that allow a transmission service provider to "carve out" transmission of certain transmission rights across particular frequently scheduled paths where the applicable transmission service provider determines such carve-outs are necessary. These carve-out provisions are discussed below in Section III.I of this Answer.

without any supporting citation, that individual firm OATT customers must have the "option to avoid participating in what, by design, is a voluntary regional market."[55] This argument ignores the fact that EDAM, as accepted by the Commission, is voluntary for each balancing area or transmission service provider but is not voluntary for individual transmission service customers.[56] The EDAM provisions of the CAISO Tariff as accepted by the Commission do not provide a right for individual transmission customers to opt out of the market. The CAISO was clear "the extended day-ahead market will settle all loads and resources in the day-ahead timeframe and all imbalances between day-ahead positions and the real-time market."[57] As explained in further detail below, the EDAM design does provide tools, including the submission of balanced self-schedules, to manage the costs of EDAM.

The CAISO recognizes that in its later order accepting the Markets+ design, the Commission authorized a mechanism proposed by SPP to allow transmission opt-outs subject to specified limitations.[58] However, that was SPP's own proposal for its own market design that the Commission found was just and reasonable. The EDAM Acceptance Order found it was just and reasonable to

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[55] Powerex at 7; *see also* Bonneville at 12 (claiming that "transmission customers may use their rights for the purpose of their choosing"); PSE at 6.

[56] *See, e.g.*, EDAM Acceptance Order at P 12 ("CAISO states that EDAM is not a new market; rather, it takes advantage of CAISO's existing day-ahead market by adding new procedures to accommodate the voluntary participation of other BAAs"); *id.* at P 220 ("We agree with CAISO that WEIM entities (i.e., balancing authorities participating in the WEIM) are the appropriate participants in EDAM because in many cases, the EDAM Entity will be the only or most significant transmission service provider in a BAA.").

[57] Transmittal letter for CAISO EDAM Tariff Filing at 13.

[58] *See Sw. Power Pool, Inc.*, 190 FERC ¶ 61,030, at PP 82, 85-89 (2025) (Markets+ Acceptance Order).

authorize the EDAM design as voluntary for each balancing area or transmission service provider. The Commission has long recognized that there is a range of just and reasonable wholesale market designs, and no ISO or RTO has to adopt the same market design as another ISO or RTO.[59]

Although the operators of some wholesale day-ahead markets, such as SPP's Markets+, have chosen to allow customers some rights to opt out of participation in their markets, the Commission's acceptance of that design choice is far from a guarantee that each point-to-point transmission customer in any balancing area with a day-ahead market can elect to wholly remove its transmission from that market. Indeed, state regulators and RTO market monitors have raised, and the Commission has acknowledged, concerns about potential gaming opportunities and market inefficiencies resulting from provisions limiting transmission availability to day-ahead markets.[60] The operators and designers of wholesale markets have the right to determine whether to offer individual customers a unilateral right to remove any transmission capacity rights under the *pro forma* OATT from the optimization of LMP-based markets.[61]

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[59] *See, e.g.*, *Midcontinent Indep. Transmission Sys. Operator, Inc.*, 162 FERC ¶ 61,176, at P 57 (2018) ("In its orders, the Commission has consistently rejected a one-size-fits-all approach in the various RTOs/ISOs due, in large part, to significant differences between each region and that there can be more than one just and reasonable rate."); *PJM Interconnection, LLC.,* 119 FERC ¶ 61,063, at P 39 (2007) (finding the "[t]he Commission has permitted different just and reasonable rate designs reflective of particular system characteristics and stakeholder input"); *Sw. Power Pool, Inc.*, 110 FERC ¶ 61,031, at P 22-23 (2005) (finding that differences between RTO regions may be warranted given the different circumstances of the markets); *Midwest Indep. Transmission Sys. Operator, Inc.*, 102 FERC ¶ 61,196, at P 43 (2003) (same).

[60] *See, e.g.*, Markets+ Acceptance Order, 190 FERC ¶ 61,030, at PP 87-88, 92 (discussing measures to mitigate "concerns raised by the SPP Market Monitor and the Markets+ State Committee on the opt-out provision creating opportunities to exercise market power"); *id.*, Concurrence of Commissioner Chang at PP 9-10.

[61] *See* request for clarification and rehearing of PacifiCorp, PGE, and NV Energy, Docket No. ER24-1658-004, at 1-3, 8-16, 18-19 (Feb. 18, 2025).

The arguments of those urging the Commission to mandate individual customer opt-outs as a matter of right could have unintended consequences. Other ISOs and RTOs such as PJM Interconnection, L.L.C. (PJM) and the Midcontinent Independent System Operator Corporation (MISO) have successful LMP-based day-ahead markets under a tariff structure that retains point-to-point transmission service. These ISOs and RTOs have not allowed individual OATT transmission customers to "opt out" of participating in the market. These ISOs and RTOs are subject to the same "consistent with or superior to" standard to support variations from the *pro forma* OATT that applies to PacifiCorp's OATT amendments in this proceeding. Any finding that the "consistent with or superior to" standard requires affording individual point-to-point customers the right to opt out of a market adopted by their transmission service provider at will, would create new precedent that could significantly undermine the efficiency of those existing ISO and RTO markets and create new opportunities for individual customers to remove transmission capacity from those markets regardless of the impacts on the overall efficiency of such markets.

The fact that EDAM retains multiple balancing areas rather than a single consolidated balancing area, which is different than what has been done in most current ISOs and RTOs, is not a reason to grant individual transmission customers the right unilaterally to remove their transmission capacity from the market. The EDAM design efficiently optimizes resources over a single expanded market area and each participating balancing area will benefit from the

diversity of resources available across the expanded market area.[62] As such, the EDAM market area is the equivalent of RTO and ISO balancing areas when looking at the benefits of LMP-based markets.

Powerex repeatedly refers to itself and other firm point-to-point transmission customers as "investing" in transmission service.[63] It claims this investment provides firm OATT customers with a form of ownership in the underlying transmission facilities, including the right to choose to withdraw capacity from the terms and conditions of wholesale markets adopted by their transmission service providers. These claims cannot be reconciled with the *pro forma* OATT. Transmission customers are not the equivalent of participating transmission owners.

A long-term firm point-to-point reservation under the *pro forma* OATT is a service right to use transmission capacity and to schedule transactions in accordance with the then-prevailing terms of the OATT, not an ownership right. Under the EDAM design and under the OATT amendments filed by PacifiCorp in this proceeding, the firm point-to-point right to schedule and right to curtailment priority if there are constraints on the system is retained.

Allowing a customer broad authority to dictate the terms on which it uses its transmission service rights has no basis in the *pro forma* OATT. Granting such attributes of ownership to customers would deprive transmission service providers of the ability to perform core functions. Under the terms of the OATT,

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62 *See* Harvey Statement at 2, 11.

63 *See, e.g.*, Powerex at 6, 13-14, 46, 47, 51-53, 57; *id.*, Attachment A (Testimony of Jeff Spires) at 17:1-27:7.

the transmission service provider must manage the use of its system by customers to ensure the reliability of the grid and provide open access for the benefits of all customers.

Conferring the "ownership" rights sought by Powerex to any party that reserves long-term point-to-point transmission service—including the unilateral ability to opt out or withdraw transmission capacity from wholesale markets adopted by its transmission service provider or overlay a different wholesale market design not adopted by the relevant transmission service provider—would undermine the ability of the transmission service provider to provide service in accordance with terms it establishes under the FPA. Such an opt-out right would impact the ability of the transmission service provider to maintain reliability in its own balancing area and could create unjustified cost shifts to other customers.

Giving a customer the ability to remove transmission capacity to another market unilaterally would effectively allow another transmission service provider to manage utilization of transmission facilities owned or operated by the utility providing the transmission service to the customer without the consent of that utility. This can adversely impact the ability of the host transmission service provider to manage reliability within its balancing area. Such a customer opt-out ability could also mandate the enabling of dynamic capability of the transmission system that the host transmission provider may not have studied and that has no basis under the OATT or the customer's service agreement.

Such a customer opt-out right can also create unjustified cost shifts, limiting or eliminating the ability of the host transmission service provider to make

unscheduled firm transmission available for sale on a non-firm basis, deriving additional revenues by the transmission service provider that put downward pressure on rates and support recovery of costs of the system. Enabling unilateral opt-outs can affect the ability to sell non-firm transmission, placing unjustified cost shifts on the end-use customers who are ultimately responsible for paying the embedded costs of the transmission system. Moreover, it can place additional burden and costs on EDAM customers as reduced non-firm revenues may need to be recovered across the EDAM footprint through the EDAM access charge.

D. OATT Firm Transmission Customers Are Not Entitled to a Perfect Hedge from Congestion Costs under EDAM

Several commenters object that PacifiCorp is not providing OATT firm transmission customers a "perfect hedge" against congestion like that the CAISO accords to Transmission Ownership Rights (TORs) and Existing Transmission Contracts (ETCs), *i.e.*, legacy contracts that pre-dated CAISO market operations in 1998. For example, some commenters claim without supporting precedent that day-ahead organized markets must provide "a full 'source-to-sink' financial hedge."[64]

These commenters' arguments are a collateral attack on the Commission order accepting the CAISO EDAM Tariff Filing. In that filing, the CAISO made it clear that only balanced legacy contract or ownership right self-schedules

[64] WRAP Participating Entities at 13; *see also* WPTF-NIPPC at 2-3 (contending the PacifiCorp Revised OATT Filing should be rejected unless it provides a full congestion hedge to transmission customers that submit balanced self-schedules from congestion charges, such as by extending ETC and TOR treatment to balanced self-schedules).

associated with a contract reference number would receive the perfect hedge.[65] The CAISO highlighted the differences between such legacy contracts and ownership rights and schedules using firm OATT transmission service rights, explaining, "*Unlike individual customer legacy contracts or ownership rights*, balanced intra-day self-schedules using specific firm OATT transmission rights will not receive a perfect hedge and such schedules will be responsible for congestion or redispatch costs."[66] When explaining the CAISO was not proposing to extend CRRs to balancing areas participating in EDAM as part of its initial design, the CAISO further noted "using physical transmission rights to hedge the cost of congestion does not insulate transmission customers from all congestion costs."[67]

Indeed, the EDAM Acceptance Order expressly recognized the CAISO was providing "financial protection from congestion charges and losses" only for balanced self-schedules associated with TORs and legacy contracts—"transmission service rights not otherwise subject to an EDAM Entity's OATT."[68] Furthermore, the Commission noted the comments of PacifiCorp supporting the CAISO's proposal to make the "perfect hedge" available only to legacy contracts and TORs and not to OATT transmission customers.[69] In the EDAM Acceptance Order, the Commission found the entirety of "CAISO's proposed EDAM

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65 Transmittal Letter for CAISO EDAM Tariff Filing at 126.

66 *Id.* at 130 (emphasis added).

67 *Id.* at 197.

68 EDAM Acceptance Order at P 244.

69 *Id*. at P 260.

transmission framework is just and reasonable and not unduly discriminatory or preferential"—including "the treatment of legacy transmission rights," which the Commission correctly stated was uncontested by any commenters on the CAISO EDAM Tariff Filing.[70] No party filed a request for rehearing of the EDAM Acceptance Order.

Claims that congestion exposure is a new risk with EDAM that parties are now identifying as a result of the PacifiCorp OATT amendments ignore the clear evidence that the Commission already accepted this aspect of EDAM.[71] Under these circumstances, there is no merit to the arguments that EDAM contemplated a "perfect hedge" for OATT transmission customers or that PacifiCorp is somehow acting in a manner inconsistent with the approved EDAM design.

More generally, OATT transmission customers have no right to the "perfect hedge" accorded to certain legacy contracts and TORs in connection with the conversion to a market construct, nor do they have any right to be "carved out" of the market.[72] The Commission has approved a "perfect hedge" or market "carve-out" only in extremely limited circumstances, and it has not generically approved such mechanisms for OATT transmission customers seeking to avoid the switch to a market construct.

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70 *Id.* at P 307.

71 Indeed, Powerex expressly acknowledged the congestion exposure risk in its comments on the CAISO EDAM Tariff Filing. *See* Powerex comments in Docket No. ER23-2686-000, at 19-20 (Sept. 21, 2023).

72 Arguments related to carving transmission out of the market are further discussed below in section III.I of this Answer.

In the CAISO, the Commission approved a "perfect hedge" only for TORs, ETCs, and Converted Rights.[73] The Commission also approved the CAISO's proposal to honor all ETC scheduling rights, including the right to make schedule changes and adjust generation after the day-ahead market, if the ETC permits such changes.[74] Granting a "perfect hedge" to OATT customers in EDAM balancing areas would grant greater rights to these customers than the CAISO grants to non-legacy open access transmission customers on the CAISO system, thus raising potential issues of undue discrimination and undue preference. In approving the CAISO's Market Redesign and Technology Upgrade (MRTU) proposal, which included the perfect hedge for ETCs and TORs, the Commission rejected complaints that CRRs were an "imperfect hedge" for other customers in a market context.[75]

The Commission has recognized the distinction between legacy contracts and firm OATT service rights in other ISOs and RTOs. When MISO sought to expand its open access tariff to include energy markets, the Commission authorized MISO to carve out transmission capacity from the energy markets for

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[73] September 2006 MRTU Order, 116 FERC ¶ 61,274, at PP 931-46, 976 n.416, 1000 (2006). *See also Cal. Indep. Sys. Operator Corp.*, 110 FERC ¶ 61,113 (2005). The Commission also approved a "perfect hedge" for Converted Rights, *i.e.,* the transmission rights and facilities turned over to the CAISO's operational control after CAISO start-up; however, that treatment would only extend through December 31, 2010. September 2006 MRTU Order, 116 FERC ¶ 61,274, at PP 903 n.377, 947-51. Under section 4.3.16 of the CAISO Tariff, a recipient of transmission service under an ETC that chooses to become a Participating Transmission Owner and convert its rights to CAISO transmission service can agree to contract amendments with the Participating Transmission Owner which provides the transmission service under the ETC to transform those service rights to Converted Rights.

[74] September 2006 MRTU Order, 116 FERC ¶ 61,274, at PP 902-05. For ETCs that permit schedule changes after the close of the day-ahead market, the CAISO would reserve transmission capacity equal to the unscheduled ETC amount of transmission capacity for that scheduling point.

[75] *Id.* at P 731.

only the following three types of Grandfathered Agreements (GFAs):[76] (1) those GFAs for which the parties have explicitly provided that unilateral modification is subject to *Mobile-Sierra* protection; (2) those GFAs that are silent with respect to the standard of review governing unilateral modification; and (3) those GFAs providing for transmission service by an entity that is not a public utility.[77] Under the MISO approach accepted by the Commission, these carved-out GFAs would submit non-binding day-ahead schedules, but so long as their transactions were balanced in real-time, they would not have to pay any congestion or imbalance charges, *i.e.,* they had a "perfect hedge." However, the Commission did not permit MISO to "carve out" those GFAs that were subject to a just and reasonable standard.[78] The Commission approved the carved-out GFA treatment for use during a six-year transition period that lasted until February 1, 2008. The Commission accepted MISO's proposal to: (1) evaluate the impact that the optional treatments for GFAs have on the energy markets; and (2) make an FPA section 205 filing 12 months prior to February 1, 2008 that detailed a new proposal for the treatment of GFAs after the transition period concludes.[79] In

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[76] A GFA is defined by MISO as an individual agreement between a transmission owner and a customer for transmission service entered into before September 16, 1998.

[77] *See Midwest Indep. Transmission Sys. Operator, Inc.*, 108 FERC ¶ 61,236 (2004) (GFA Order), *order on reh'g*, 111 FERC ¶ 61,042, *order on reh'g*, 112 FERC ¶ 61,311 (2005), *aff'd sub nom. Wisc. Pub. Power, Inc. v. FERC*, 493 F.3d 239 (D.C. Cir. 2007).

[78] GFA Order, 108 FERC ¶ 61,236, at P 137. In order to balance concerns that "carving out" GFAs would lead to trapped costs and the concern that leaving GFAs intact would negatively impact reliability, the Commission found it was unjust and unreasonable to allow GFAs that are subject to a just and reasonable standard of review to remain outside the MISO energy markets. The Commission concluded including transactions under these contracts in the energy markets would better enable MISO to operate those markets reliably and would not contravene the contractual rights of the parties to the GFAs.

[79] *Id.* at P 268.

November 2007, the Commission accepted MISO's proposal to continue treating GFAs the same way after the transition period ended given the relatively small and gradually decreasing percentage of GFAs in its footprint and based on its analysis finding that such remaining GFAs did not significantly affect other transmission customers.[80]

In 2012 and 2013, the Commission accepted revisions to the SPP tariff[81] to address the treatment of GFAs in SPP's Integrated Marketplace, including GFA Carve Outs.[82] SPP proposed to accommodate existing GFAs by giving GFAs involving firm transmission service reservation transactions the same auction revenue right (ARR) nomination rights as other firm transmission reservations, and allowing market participants with GFAs to convert the ARRs associated with their transmission service to a transmission congestion right in the transmission congestion right (TCR) auction along with other market participants.[83] Thus, most GFA responsible entities were required to convert their physical firm GFA reservations into financial transmission rights just like other firm transmission customers and be subject to congestion and marginal loss charges, while some others were given the option to elect GFA Carve Out status for their agreements.[84] The Integrated Marketplace GFAs were not

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80 *Midwest Indep. Transmission Sys. Operator, Inc.*, 121 FERC ¶ 61,166 (2007).

81 *Sw. Power Pool, Inc.*, 141 FERC ¶ 61,048 (2012); *Sw. Power Pool, Inc.*, 144 FERC ¶ 61,255 (2013).

82 A GFA Carve Out refers to the "[r]emoval of the congestion and marginal loss charges for the amount of energy (MWh) actually transacted associated with GFAs." *Sw. Power Pool, Inc.*, 189 FERC ¶ 61,025 at P 1 n.7 (2024).

83 *Sw Power Pool, Inc.,* 141 FERC ¶ 61,048, at P 294.

84 GFA Carve Outs were not converted to financial transmission rights, and they were not charged for the costs of congestion and marginal losses in SPP's day-ahead market.

subject to a "carve-out"; instead, SPP accorded them treatment comparable to firm transmission service under the SPP tariff.[85]

A few parties objected to SPP's "carve-out" proposal arguing that, among other things, non-jurisdictional GFAs should be "carved out" of the market.[86] The Commission conditionally accepted SPP's proposal, and directed SPP to commence settlement negotiations with the protesting parties whose GFAs did not include a "carve-out" component.[87] After settlement negotiations, SPP filed an offer of settlement that provided:

> In order to qualify as a "Carved-Out GFA," the GFA must meet two criteria. First, the GFA is a "fixed rate" agreement, meaning that the agreement's rate terms are not subject to unilateral change by the party providing service under the agreement. Second, the GFA is "non-jurisdictional," meaning that the party providing service under the agreement is not a "public utility" within the meaning of the Federal Power Act.[88]

The Commission accepted the offer of settlement.[89] Thus, in SPP most GFA responsible entities were required to convert their physical firm GFA reservations into financial transmission rights just like other firm transmission customers, and they were required to be subject to congestion and marginal loss charges, while some others were given the option to elect GFA Carve Out status for their agreements.[90] Only GFA Carve Outs with fixed rates are not converted to

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85 *Id.*

86 *Id.* at PP 295-301.

87 *Id.* at PP 309-17. The Commission noted its prior decision MISO GFA decision regarding non-jurisdictional GFAs and GFAs subject to a just and reasonable standard. *Id.* at PP 313-15.

88 SPP filing of offer of settlement, Docket No. ER12-1179-000 (July 31, 2013), which the Commission approved in *Southwest Power Pool, Inc.*, 144 FERC ¶ 61,254 (2013).

89 *Sw. Power Pool, Inc.*,144 FERC ¶ 61,254.

90 *Id.* at P 4.

financial transmission rights and are not charged for the costs of congestion and marginal losses in SPP's day-ahead market [91]

As explained below,[92] wholesale electricity markets outside of ISO and RTO footprints in the West, like EDAM and SPP's Markets+, are not subject to the financial transmission right requirements of the Commission's long-term firm transmission rights rule, Order No. 681. To the extent the Commission looks to Order No. 681 for some guidance, however, it is important to note that FPA section 217 enacted in the Energy Policy Act of 2005 (EPAct 2005) does not entitle load-serving entities (LSEs) to have a complete hedge against congestion.[93] The Commission explained in Order No. 681 that it did not envision financial transmission rights, which apply in energy markets, to offer load-serving entities a "perfect hedge."[94]

Other organized day-ahead markets do assess congestion charges on PTP service or simply do not offer PTP service. For example, transmission customers taking firm PTP service under the New York Independent System Operator, Inc. (NYISO) OATT are obligated to pay a Transmission Usage Charge that the NYISO does not return to them.[95] The Transmission Usage Charge is composed of both the congestion price component and the marginal losses price

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91 *Id.*

92 *See* Section III.G of this Answer.

93 *Midcontinent Indep. Sys. Operator, Inc.,* 170 FERC ¶ 61,215, at P 59 (2020).

94 *Id.* (*citing Long-Term Firm Transmission Rights in Organized Elec. Mkts.*, Order No. 681, 116 FERC ¶ 61,077, at P 174 (Order No. 681)*, reh'g denied,* Order No. 681-A, 117 FERC ¶ 61,201 (2006) (Order No. 681-A), *reh'g denied,* Order No. 681-B, 126 FERC ¶ 61,254 (2009) (Order No. 681-B)).

95 NYISO OATT, sections 6.7.1.1 and 6.7.1.2.

component of the NYISO location-based marginal price (LBMP), with the congestion price component determined based on the difference in the market energy prices between the sink location and the source location of the transmission customer's transaction.[96] ISO New England Inc. (ISO-NE) does not even offer regional PTP service except for through and out or merchant transmission facility service.[97] Both the NYISO and ISO-NE make available financial transmission rights, but neither guarantees a full source-to-sink hedge as claimed by Powerex.

Both the PJM and MISO provide point-to-point transmission service of varying duration under their OATTs. Under their congestion management constructs, holders of certain longer-term firm point-to-point transmission service reservations (*i.e.*, at least one-year or for the entire period of the financial transmission right (FTR))—in other words, not all firm transmission service reservations—are eligible for an allocation of ARRs which may be converted to FTRs.[98] However, these do not confer a "perfect hedge" against all congestion like the "perfect hedge" that is conferred to GFAs and TORs. Further, the allocation of ARRs, which rights holders have the option to convert to FTRs, is dependent on the modeling of the transmission system and, as such, is adjusted based on application of a simultaneous feasibility test. Thus, there is no

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96 *N.Y. Indep. Sys. Operator, Inc.*, 158 FERC ¶ 61,081, at P 19 & n.20 (2017).

97 *See* https://www.iso-ne.com/static-assets/documents/2016/05/rto_bus_prac_sec_1.pdf. Powerex mentions neither the NYISO nor ISO-NE.

98 *See* PJM Manual 06: Financial Transmission Rights, at 9-10, 19-37 (Sept. 25, 2024), available at https://www.pjm.com/-/media/DotCom/documents/manuals/m06.pdf; MISO Manual No. 004, FTR and ARR Business Practice Manual, at 27-29 (July 2024), available at https://www.pjm.com/-/media/DotCom/documents/manuals/m06.pdf.

guarantee of a source-to-sink hedge for the entire MW quantity of a customer's transmission reservation. In addition, SPP's filing to implement the Markets+ tariff revisions explained that the Markets+ congestion management design would not provide a perfect hedge.[99]

These different approaches to the treatment of PTP service and congestion charges reflect the fact that the Commission does not impose a one-size-fits-all requirement on ISO/RTO market designs.[100] The Commission should find the same is true for the EDAM design's overlaying of the day-ahead market on participating balancing areas and transmission service provider OATTs, under the Commission's findings in the EDAM Acceptance Order. As noted in the Harvey Statement contained in Attachment B to this Answer, the WEIM and EDAM designs differ from ISO and RTO market designs because the WEIM and EDAM do not eliminate the sale of firm transmission service by transmission owners/balancing area operators.[101] The relationship between the EDAM design and PacifiCorp's proposed OATT revisions is consistent with that overlay.

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[99] SPP transmittal letter for Markets+ tariff amendment filing, Docket No. ER24-1658-000, at 29 (Mar. 29, 2024) (SPP Markets+ Tariff Filing) (explaining that market participants with firm transmission service will "not [receive] a perfect offset" for redispatch costs they will incur).

[100] *See, e.g.*, *Sw. Power Pool, Inc.,* 158 FERC ¶ 61,063, at P 13 (2017) (finding that "market rules need not be identical among the regions to be just and reasonable, and there can be more than one just and reasonable rate"); *PJM Interconnection, LLC.,* 119 FERC ¶ 61,063, at P 39 ("In application of these principles, the Commission has permitted different just and reasonable rate designs reflective of particular system characteristics and stakeholder input. In this regard, we have stated our deference to regional preferences a number of times, for instance in Order No. 2000, and in *PJM Interconnection L.L.C.*, 96 FERC ¶ 61,060, at 61,220 (2001), as well as in our approval of rate designs for different regional markets.").

[101] Harvey Statement at 3.

E. Although the Approved EDAM Design Does Not Include Financial Transmission Rights, Both EDAM and the PacifiCorp Revised OATT Filing Include Reasonable Tools to Hedge Congestion Costs

In the CAISO EDAM Tariff Filing accepted by the Commission, the CAISO clearly stated it was not proposing to extend CRRs to balancing areas outside of the CAISO balancing area participating in EDAM as part of its initial design.[102] The CAISO explained that, although physical transmission rights could hedge the cost of congestion, it would "not insulate transmission customers from all congestion costs."[103] The CAISO indicated it was (and still is) open to exploring the development of CRRs as a future EDAM market enhancement after Day One of the new markets:

> The CAISO will continue to discuss with stakeholders whether to make CRRs available across the EDAM area as a future design enhancement and how best to align CRRs with physical transmission rights secured under open access transmission tariffs. This effort will include assessing how to ensure the market adequately funds CRRs as well as their value as an effective tool for market participants to hedge the cost of congestion between individual sources and sinks.[104]

Notwithstanding the decision not to include CRRs in the initial EDAM design, both the EDAM provisions in the CAISO Tariff and the PacifiCorp OATT amendments proposed in this proceeding provide tools for customers—particularly load-serving entity customers—to manage their congestion exposure. The arguments of Powerex and others that these tools are inadequate are

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102 Transmittal letter for CAISO EDAM Tariff Filing at 192; *see also* EDAM Acceptance Order at P 260.

103 Transmittal letter for CAISO EDAM Tariff Filing at 192.

104 *Id.*

misplaced because firm OATT customers are not entitled to a guaranteed "perfect hedge" against all congestion costs under Commission precedent for the reasons explained above.[105]

1. The Commission Properly Found the CAISO's Congestion Revenue Allocation Methodology To Be Just and Reasonable

Under EDAM, the management of internal constraints will result in collection of congestion revenue that would be available to manage participants' exposure for using internal transmission purchased. For EDAM balancing areas, the congestion revenue is paid to the EDAM entity so that the EDAM entity can extend the congestion hedge to customers in its balancing areas pursuant to their OATTs.

The proposed congestion revenue allocation to balancing areas was a contested aspect of the EDAM design. After considering numerous comments on this aspect of the EDAM design, the Commission accepted the CAISO proposal to allocate congestion revenue to the balancing area where the constraint is located as just and reasonable.[106]

2. The PacifiCorp Proposal to Sub-Allocate Congestion Revenues within its Balancing Areas Is Just and Reasonable

Consistent with the Commission-approved EDAM allocation, which builds on the successful WEIM framework for allocating congestion costs, PacifiCorp can determine a reasonable sub-allocation for the congestion revenue within its

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105 *See* section III.D of this Answer.

106 EDAM Acceptance Order at PP 434-40.

balancing areas. Under the first step of PacifiCorp's proposed two-step process, the PacifiCorp EDAM entity will seek to reverse day-ahead congestion price differentials (positive or negative) arising from a PacifiCorp balancing area for balanced self-schedules (for both point-to-point and network customers) associated with the exercise of firm monthly and longer-term OATT rights.[107] The CAISO agrees this step-one reversal process should largely zero out day-ahead congestion exposure or congestion benefit resulting from constraints within a PacifiCorp balancing area associated with qualifying balanced self-schedules. The focus on balanced self-schedules is appropriate because it will provide tools for customers—particularly load-serving entity customers—to manage their congestion cost exposure and reduce costs to end-use customers. The CAISO worked with PacifiCorp to develop this option.

Under PacifiCorp's proposed step two, PacifiCorp will sub-allocate residual congestion revenue proportionally to load and exports not already included in the step-one sub-allocation for the applicable period.[108] This second step is essentially the same as a "measured demand" sub-allocation with adjustments designed to ensure that entities who received congestion revenue under step one did not also receive further revenue in step two. The step-two sub-allocation is consistent with Commission precedent accepting measured

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[107] *See* PacifiCorp Revised OATT Filing, Attachment B, at revised section 10.4.1 of Attachment T to the PacifiCorp OATT.

[108] *See id.*

demand as a just and reasonable cost allocation metric, including in the context of congestion revenues under the WEIM design.[109]

PacifiCorp's proposed sub-allocation methodology supports the exercise of transmission rights by its transmission customers and balances the allocation of congestion costs to load, *i.e.*, to the customers who have the long-term obligation to pay for the embedded costs of the transmission system through continuous use, with the exercise of transmission rights by entities exporting from or wheeling through the system. The PacifiCorp design protects load—and ultimately end-use customers—from the costs of congestion from constraints within a PacifiCorp balancing area through the balanced schedule tool.

Similarly, point-to-point transmission customers can exercise these transmission rights to support exports from or wheels through the PacifiCorp system and receive a congestion hedge associated with these schedules based on constraints on the PacifiCorp system, thus enabling continued ability to meet contractual bilateral energy arrangements as they may arise. The design further seeks to mitigate the congestion costs borne by load-serving entities located in PacifiCorp's balancing area by allocating remaining revenues through the second-tier allocation to measured demand, recognizing that load bears the primary risk of congestion costs on the system. As such, PacifiCorp will sub-allocate the congestion revenues it receives under the CAISO's approved EDAM

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[109] *See PacifiCorp,* 147 FERC ¶ 61,227, at P 184 ("The charges that CAISO will be assessing to PacifiCorp are an integral part of CAISO's security-constrained economic dispatch. Accordingly, it is reasonable for PacifiCorp to allocate the aforementioned charges on the same basis as CAISO, i.e., Measured Demand."), *order on reh'g & clarification*, 149 FERC ¶ 61,057 (2014), *order on reh'g*, 150 FERC ¶ 61,084 (2015).

tariff provisions through a sound design consistent with accepted cost causation principles. Also, as PacifiCorp explains, it developed the two-step sub-allocation methodology contained in its Revised OATT Filing in response to stakeholder feedback on its initial sub-allocation proposal.[110]

PacifiCorp does not receive a congestion revenue allocation that would fully hedge congestion costs resulting from parallel flows in the CAISO balancing area, but the CAISO Tariff provides additional tools to manage these congestion costs, and these tools are available to interested market participants.

3. Market Participants Concerned About Congestion Costs Resulting From Constraints on the CAISO System Have Opportunities To Obtain Congestion Revenue Rights On the CAISO Just Like Other Market Participants

Some commenters express concern about the allocation of congestion costs to PacifiCorp OATT customers resulting from constraints in the CAISO balancing area. As an initial matter, the Alderete Declaration contained in Attachment A to this Answer explains that claims of the magnitude of such congestion costs under EDAM based on WEIM congestion data, particularly data from January 2024, are overstated and misleading.[111]

Under the EDAM design, facilities in one EDAM balancing area can contribute to congestion that may materialize through transmission constraints in another EDAM balancing area, recognizing the impacts of parallel flows and the interconnected nature of the transmission grid across the EDAM footprint. Such

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110 *See* transmittal letter for PacifiCorp Revised OATT Filing at 19; *id.*, Exh. No. PAC-001 (Prepared Direct Testimony of Kristopher Bremer) at 14:21-15:10.

111 Alderete Declaration at 2-9.

contributions to congestion from flows and generation output in one area on the transmission constraints in another area are reflected in the congestion component of the LMP at specific pricing nodes. If schedules on the PacifiCorp system are contributing to congestion on the CAISO system based on binding transmission constraints, it is just and reasonable to allocate costs to PacifiCorp based on those schedules. PacifiCorp has proposed a just and reasonable approach to allow PacifiCorp transmission customers to hedge those potential congestion costs. To the extent customers desire hedging above and beyond that provided by PacifiCorp they can acquire CRRs on the CAISO system.

Specifically, CRRs are available for congestion on the CAISO system to provide additional protection for customers to hedge against congestion in the CAISO in addition to the congestion revenues PacifiCorp will be sub-allocating to them. There are also specific opportunities for load-serving entities outside the CAISO balancing area to obtain CRRs. The CAISO Tariff sets forth a process whereby an out-of-balancing authority area load-serving entity or "OBAALSE" can seek an allocation of CRRs.[112] These CRRs may be long-term, annual, or monthly, and they may be for the on-peak or off-peak hours.[113] Other customers, including non-load-serving entities like marketers, can obtain CRRs in the CAISO auction or in the secondary market and may already be acquiring such CRRs. Although some commenters argue that the ability to access CRRs on the CAISO is insufficient, they fail to explain why CRRs are a sufficient tool to hedge costs

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112 *See* CAISO Tariff section 36.9, *et seq.*

113 The CAISO allocates annual and long-term CRRs on a seasonal basis.

for congestion within the CAISO balancing area under the CAISO's existing market but are insufficient to hedge costs for congestion within the CAISO balancing area under EDAM.

Powerex argues that having to procure CRRs on the CAISO essentially results in customers having to pay twice for transmission. This argument lacks merit. Customers pay transmission charges to receive transmission service; they procure CRRs (*i.e.*, FTRs) to hedge against the congestion associated with such transmission service. Under the CAISO's current day-ahead market design, the Commission has accepted a model where non-LSE customers must pay for CRRs (FTRs) to obtain a congestion hedge in addition to paying for transmission service. This design does not result in customers impermissibly paying twice for transmission.[114] Similarly, in eastern ISOs and RTOs, not all customers receive FTR allocations or auction revenue rights, and some of these customers choose to pay for financial transmission rights to hedge their congestion cost exposure in addition to paying for transmission service.

Powerex also ignores that under EDAM, unlike an integrated RTO or ISO, each balancing authority is still maintaining and administering its own separate transmission service tariff and transmission rates. Stated differently, if a customer desires transmission service on both the CAISO and the system of a participating EDAM entity, it must separately acquire, and pay for, transmission service under each entity's tariff. Although PacifiCorp is providing a hedge for

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[114] *See, e.g.*, September 2006 MRTU Order, 116 FERC ¶ 61,274, at PP 898-99 (explaining that "'physical' rights to inject energy at a source and withdraw energy at a sink, through either submission of a self-schedule or a price bid," are "*[i]n addition to* . . . the opportunity to acquire financial transmission rights or CRRs") (emphasis added).

congestion costs incurred as a result of transmission constraints on its system, as well as congestion costs allocated to it for congestion occurring on the CAISO system (to which PacifiCorp schedules contributed), if customers want additional hedging they should procure CRRs on the CAISO system just like customers on the CAISO system would need to do to manage congestion exposure resulting from CAISO system constraints. By analogy, the fact a customer is paying for firm transmission in an external balancing area does not entitle it to firm transmission on the CAISO system.[115] Powerex and others commenters appear to be seeking additional hedges against congestion occurring on the CAISO system without having to procure CRRs on the CAISO system. This would accord them preferential treatment compared to other customers who must obtain CRRs on the CAISO to hedge against congestion on the CAISO system.

F. Any Financial Transmission Rights That Might Be Developed for EDAM in the Future Would Require Careful Design Considerations to Avoid Unjust Cost Shifts and Could Not Provide Current OATT Customers the Best of Both Physical and Financial Transmission Rights

Powerex and some other commenters seek to retain all the attributes of physical transmission rights under the *pro forma* OATT, and also obtain financial transmission rights that provide a congestion "perfect hedge" for the full capacity of those physical rights reservations, all while achieving the reduced risk of curtailments and benefits of market optimization under EDAM.[116] This package

[115] *See Cal. Indep. Sys. Operator Corp.*, 175 FERC ¶ 61,245, at P 146 (2021) (Transaction Priorities Order).

[116] *See, e.g.*, Powerex at 7-9, 25-36; Shell Energy at 6-7; WPTF-NIIPC at 3-4.

of “wants” is inconsistent with both the fundamentals of LMP-based market designs and Commission precedent.

As discussed in the Harvey Statement contained in Attachment B to this Answer, the CAISO has not developed a CRR/financial transmission right design to allocate congestion rents within EDAM, and such a design would involve significant trade-offs and complex design considerations that could only be considered through an extensive stakeholder process. During past transitions from an OATT approach (except for pre-OATT legacy contracts) to a financial transmission right approach, physical transmission rights holders have not received full protection of their reservation rights. As Dr. Harvey explains, the award of financial transmission rights is subject to a simultaneous feasibility test which pro-rates the availability of financial transmission rights relative to the physical capability of the transmission system.[117]

Transmission outages and derates can lead to congestion rent shortfalls that must be funded under a CRR/financial transmission right design. Although certain elements of the EDAM design are unique, Dr. Harvey further explains how potential congestion cost uncertainty have been a major focus of the transition to LMP-based markets and financial transmission rights of various ISOs and RTOs. The potential for congestion cost uncertainty similarly would be an important issue for consideration in any stakeholder process addressing the design of CRRs or financial transmission rights that work under the Commission-

[117] Harvey Statement at 1-6.

approved EDAM design.[118] Dr. Harvey also notes it may be reasonable to develop arrangements for EDAM by which some portion of congestion rents associated with flows on congested monitored elements on other transmission systems would be allocated to the balancing area whose schedules create those flows, for allocation to native load and to firm transmission service rights holders as of some prior date.[119]

The Commission has recognized the design issues discussed by Dr. Harvey in the context of the transition to financial transmission rights for ISOs and RTOs. For example, as part of MISO's transition the Commission rejected the arguments of a group of transmission-dependent utilities seeking the types of full congestion hedge rights sought by Powerex and others herein, noting the potential for discriminatory uplift charges and the potential to undercut the benefits of LMP-based markets:

> [W]e do not agree with Midwest TDUs that it is necessary to guarantee that an exact amount of FTRs will be allocated for the life of the existing transmission service contract, and that otherwise the parties are subject to a regulatory taking and interference with investment-backed expectations. We believe that such a guarantee would be discriminatory unless all market participants in the Midwest ISO region could receive the same guarantee. Furthermore, if such a guarantee were offered to all market participants, it would work at cross-purposes with the regulatory reform that is underway. The purpose of open access, spot energy markets and price-based congestion management is to improve transmission access, increase the scope and efficiency of short-term purchases of power (daily, hourly) through competition, thereby reducing the costs of redispatch and improve the quality of transmission service by greatly reducing TLRs. The type of

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118 *Id.*

119 *Id.* at 2-3. Dr. Harvey also notes that as an alternative measure stakeholders may agree to make other ad hoc adjustments to the initial EDAM design, much as the CAISO proposes to consider through an expedited stakeholder process in Section III.Q of this Answer.

> guarantee that the Midwest TDUs request would go in the opposite direction: requiring the Commission and the Midwest ISO to develop elaborate pricing and financial settlement schemes that suppress market competition and shift uplift charges in complex ways around the system. This would be for two main reasons. First, the megawatts covered by financial hedges (FTRs) do not need to be in one-to-one correspondence to the megawatts covered in physical contracts for transmission service for there to be a full financial hedge. Awarding full FTR coverage would require uplift shifted to other market participants, and further, without additional market rules, it could allow some market participants with such full coverage to retain surplus FTR revenues even while others pay uplift to support the full coverage. For fairness, that surplus would have to be recovered by the Midwest ISO and returned to other parties being charged uplift. Second, it would be inappropriate to offer financial guarantees with respect to congestion costs that require shifting uplift costs to others, but then let market participants with those guarantees retain benefits from the LMP energy markets (such as when they purchase from the spot market rather than operate a more expensive resource).[120]

These same considerations would inform any stakeholder process to develop CRRs or any transitional measures for EDAM. For the reasons the Commission has explained, it would be inappropriate for firm point-to-point OATT customers to retain physical scheduling rights coupled with financial congestion cost guarantees and allow such customers also to benefit from the optimization and reduced transmission loading relief curtailments (TLRs) that will come with EDAM. For all these reasons, the Commission should reject the arguments of commenters seeking to get the "best of both worlds" and accept the PacifiCorp OATT amendments, while allowing the CAISO to explore these issues in a stakeholder process as discussed below in Section III.Q of this Answer.

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[120] *Midwest Indep. Transmission Sys. Operator, Inc.*, 109 FERC ¶ 61,157, at P 142.

G. Order No. 681 Does Not Require Establishing Financial Congestion Hedges in Wholesale Day-Ahead Markets Retaining Physical OATT Rights and Without Financial Transmission Rights Like EDAM and Markets+

Although commenters generally fail to cite precedent for most of their arguments claiming that firm OATT customers are entitled to a "perfect hedge" or a "near-perfect hedge" from congestion costs, many of them do cite the Commission's rule on *Long-Term Firm Transmission Rights in Organized Electricity Markets*, Order No. 681.[121] These arguments ignore the fact that requirements of Order No. 681 for establishing long-term congestion hedges do not apply to EDAM. In Order No. 681, the Commission was careful to "clarify the application of this Final Rule and ensure that the definition [of an organized electricity market] captures the transmission organizations with organized electricity markets using *LMP and FTRs* [financial transmission rights] to which Congress directed the Commission to apply this Final Rule to in section 1233(b) of EPAct 2005."[122] Although the CAISO is a transmission organization, EDAM is not an organized electricity market that uses both "LMP and FTRs." The Commission approved EDAM as a market design without financial transmission rights. Instead, balancing areas participating in EDAM retain physical firm transmission rights under the *pro forma* OATT. As such, EDAM is not subject to the requirements of Order No. 681 applicable to organized wholesale markets with financial transmission rights.

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121 *See, e.g.*, Powerex at 29-30; APS at 4-5; Shell Energy at 4-5; BPA at 28; Tri-State at 3-4.

122 Order No. 681 at P 30 (emphasis added).

A similar conclusion applies to Markets+. In supporting its design, SPP stated "[t]he lack of a singular transmission system operated by a single transmission provider under a unified OATT makes the establishment of a financial transmission congestion rights market infeasible."[123] SPP also stated that market participants with firm transmission service would not receive a perfect hedge.[124] Presumably due to the lack of financial transmission rights in Markets+, SPP did not attempt to explain how Markets+ complies with Order No. 681. Instead, SPP only mentions Order No. 681 in support of the general proposition that the Commission respects regional differences in market designs.[125]

Were the Commission to expand the application of the organized electric market requirements of Order No. 681 to cover day-ahead markets that retain physical transmission rights and lack financial transmission rights, it likely would delay the benefits to end-use customers of these day-ahead markets in the West considerably. As discussed above and in the Harvey Statement contained in Attachment B to this Answer, determining how to overlay financial transmission rights and related congestion hedges on a day-ahead market that retains physical transmission rights will be a complex and time-consuming process. The CAISO and stakeholders would need to develop such a design in the context of EDAM and not undo fundamental elements of the design on which participation

123 Transmittal letter for SPP Markets+ Tariff Filing at 10.

124 *See supra* section III.D of this Answer.

125 Transmittal letter for SPP Markets+ Tariff Filing at 82.

is predicated. Such a process would necessarily involve significant trade-offs.[126] As the Commission has recognized, such a design could not award financial transmission rights for the full capacity of firm physical OATT rights.[127]

Obtaining stakeholder input, finalizing such a design, and obtaining Commission approval would require considerable time, pushing back the date when customers in the West can start to enjoy the benefits of extending the CAISO's day-ahead market. The CAISO anticipates that a potential transitional measure of the type described in this Answer would not require nearly as much time as some of the measures described by Dr. Harvey and could be implemented prior to EDAM implementation.

Presumably, developing Order No. 681-compliant financial transmission rights for Markets+ would be equally complex. The CAISO notes many of the commenters arguing that the Commission should reject the PacifiCorp EDAM implementation OATT amendments due to lack of compliance with Order No. 681 are also strong proponents of Markets+ despite its lack of financial transmission rights that would comply with Order No. 681's requirements for organized electricity markets.

Even though the organized electricity market requirements for financial transmission rights of Order No. 681 do not apply to EDAM, the Commission's discussion of certain principles in Order No. 681 is instructive in this proceeding. Specifically, the Commission agreed with commenters that "the Commission

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126 Harvey Statement at 2-3, 9.

127 *Midwest Indep. Transmission Sys. Operator, Inc.*, 109 FERC ¶ 61,157, at P 142.

should not establish financial rights that offer some load serving entities a 'perfect hedge' financially that is superior to the physical rights that they held prior to the formation of the organized market."[128] Yet such a "perfect hedge" superior to physical rights is precisely the result many commenters are arguing PacifiCorp must provide in this proceeding.

H. Claims Constraints on the CAISO System Will Lead to Substantial Congestion Cost Uncertainties to PacifiCorp Customers Are Incorrect

Although congestion on the CAISO controlled grid could result in congestion costs in the broader EDAM footprint, the magnitude of cost impacts suggested by Powerex and others that make similar arguments does not reflect any reasonable scenario nor require the result they seek.[129] Powerex relies on real-time WEIM constraint data to speculate and extrapolate potential congestion impacts in EDAM. As explained in the Alderete Declaration contained in Attachment A to this Answer, this approach is misleading because it reflects ill-constructed assumptions and misuse of the real-time data regarding WEIM constraints and assumes conditions not reflecting the operations, capabilities, materiality, and implications of the day-ahead market optimization under EDAM.[130] Stated differently, Powerex's attempt to ascribe occurrences in the real-time WEIM to EDAM is not an "apples-to-apples" extension of the WEIM data. For example, Dr. Alderete explains that some of the data used as a

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[128] Order No. 681 at P 174.

[129] *See, e.g.*, Powerex at 6, 7-8, 21-22, 23, 26-27; *id.*, Attachment A (Testimony of Jeff Spires) at 3:9-16:23; Shell Energy at 6-7; AWEC-PIIC at 1-2.

[130] Alderete Declaration at 2-9.

reference in this approach is from a constraint applied exclusively in the real-time market and thus does not—and cannot—represent the potential impacts of congestion under EDAM.

Moreover, Powerex's speculation fails to acknowledge the broader effects a regional day-ahead market would have on congestion management through its extension under EDAM. An expanded day-ahead market will enable the CAISO to resolve congestion more effectively and reduce the frequency of binding transmission constraints. The following three key points demonstrate the weakness of Powerex's claims and the claims of others who rely on similar information to support their claims.

First, EDAM enables resource optimization across the broader transmission network of each participating balancing area and the EDAM footprint as a whole, particularly when compared to the WEIM today. In the WEIM today, only a limited amount of transmission capability is available for the real-time market optimization because of the submission of pre-determined base schedules. In contrast, EDAM, as designed, provides the full capability of each EDAM balancing authority's transmission system for the day-ahead market and real-time market optimization because the associated transmission rights are accounted for in the day-ahead market in the first instance, and the resulting day-ahead schedules will replace what otherwise would be a pre-determined base schedule in the WEIM.[131] The additional availability of the transmission system

[131] A "base schedule" in the WEIM accounts for OATT transmission schedules on the transmission system within a WEIM balancing area and is not available for optimization in the real-time market.

in EDAM supports access and deliverability of the wider resource fleet, increasing the dispatch capability of the same resources across a multi-balancing area market area, and supporting improved optimization and the lowest-cost solution to mitigate congestion in both the day-ahead and real-time markets. By optimizing more transmission and resources to resolve the underling flows contributing to congestion on the system, improved market operation will in turn avoid (or reduce) the impact of transmission constraints on balancing areas in the EDAM footprint, including the impact of CAISO constraints on other EDAM balancing areas and vice versa.

Second, EDAM enables broader resource participation in the market and moves away from fixed schedules (base scheduled) resources that are not responsive to market signals, nor settled or representative of a day-ahead market optimal solution. In the WEIM today, resources within a balancing area can be "base scheduled"—*i.e.*, can be fixed-schedule resources—that the market accepts without modification and that are not settled through the market. Base scheduled generation, beyond potentially contributing to congestion, is not available for market redispatch to avoid or mitigate congestion. In contrast, EDAM represents all resources in the market—whether self-scheduled or economically bid—which will respond to market price signals that can solve or ameliorate congestion through redispatch. Simply put, there will be more resources available in EDAM to mitigate congestion than are available in WEIM. With a broader resource pool available for market optimization, the day-ahead market will position the EDAM footprint to mitigate congestion more effectively.

In the real-time market, these same resources are available for potential redispatch to manage congestion that may materialize. Accordingly, this expanded resource pool helps to manage and reduce the impact transmission constraints in one balancing area will have on other balancing areas in a wider regional EDAM footprint.

Third, several planned interregional transmission upgrades, including those referenced by Powerex in its filing, will provide increased transmission capability across the EDAM footprint and reduce congestion while providing the transmission rights holders the scheduling and settlement protections under EDAM. These interregional transmission projects, including SunZia, TransWest Express, Greenlink, Southwest Intertie Project-North, Gateway, and Boardman to Hemingway, are in development and will become operational in the coming years. This will improve flow patterns across the EDAM footprint by increasing the transfer capability between participating EDAM balancing areas, providing additional pathways for flow and reducing system congestion across areas that otherwise may face constraints today. Having a broad and diverse resource fleet combined with the added transmission capability across multiple paths will enable EDAM to find low-cost market solutions and resolve or ameliorate congestion. These effects will, in turn, significantly reduce the impact transmission constraints in one balancing area may have on another balancing area in EDAM.

Accounting for these three key facts, the CAISO expects the benefits of EDAM will far outweigh any congestion costs to PacifiCorp OATT customers that might reasonably result from constraints on the CAISO system.

I. The Commission Should Reject Commenters' Arguments that PacifiCorp Should Be Required to Provide a "Carve-out" of Transmission Rights to Transmission Customers

Some commenters argue the Commission should require PacifiCorp to exercise its rights under the EDAM provisions of the CAISO Tariff to provide a "carve-out" of transmission rights upon request to a customer taking PacifiCorp transmission service.[132] The Commission should put PacifiCorp under no such obligation and should find PacifiCorp's OATT revisions addressing carve-outs are just and reasonable.

In the CAISO EDAM Tariff Filing, the CAISO explained the EDAM design allows for the physical carve-out of certain transmission rights across particular frequently scheduled paths only where the applicable transmission service provider determines such carve-outs are necessary in accordance with its tariff. If there is frequent use and exercise of particular transmission rights across discrete and specific paths or flowgates, the transmission service provider could request an adjustment to "carve out" the transmission right from the market under limited circumstances specified in the transmission service provider's tariff, which the CAISO would implement.[133] However, the CAISO also explained it expects

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[132] *See* Powerex at 18-19, 31; *id.*, Attachment B (Testimony of Dr. Paul Gribik) at 30:13-31:18; *id.*, Attachment C (Testimony of Kevin Wellenius) at 3:9-4:12; *id.*, Attachment E (Testimony of Joseph Gardner) at 22:3-10; Public Power Council at 13.

[133] Transmittal letter for CAISO EDAM Tariff Filing at 140-41.

such carve-outs will be rare, because the EDAM design depends heavily on making transmission capacity available to the market to reach efficient outcomes. More frequent carve-outs would create inefficiencies that would limit the benefits of EDAM to ratepayers.[134]

As the CAISO also explained in the proceeding on the CAISO EDAM Tariff Filing, use of this carve-out would be contrary to the objective of maximizing the transmission capacity available to the market and deprive all customers in the EDAM area of the benefits of market optimization. Accordingly, the CAISO strongly encouraged balancing areas participating in EDAM to limit the use of this carve-out approach. The option for the exercise of firm transmission rights to have a market clearing priority above cleared day-ahead transfer schedules in the real-time market is far preferable to the carve-out. This option ensures the day-ahead market will more fully account for all utilization of the transmission system and would be preferable to the carve-out approach. Informing the market of transmission utilization mitigates the need to designate transmission paths as carved out, and it will lead to more efficient market outcomes and enhanced reliability through collective awareness of operations within the EDAM area.[135]

The Commission, in accepting the CAISO Tariff provision regarding transmission service provider carve-outs, recognized the CAISO "expects that conditions warranting such a carve-out will be limited and that the transmission

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134 *Id.* at 16, 134-35, 141 n.264, 143 (citing CAISO Tariff section 33.18.3.3).

135 *See* CAISO answer to comments and protests regarding CAISO EDAM Tariff Filing, Docket No. ER23-2686-000, at 92 (Oct. 11, 2023) (CAISO EDAM Answer).

customer's option to exercise firm transmission rights at a higher market clearing priority above cleared day-ahead EDAM transfer schedules in real-time is a more efficient use of transmission capacity and should be implemented instead of carve-outs where possible."[136] The Commission found that any carve-out of transmission rights from EDAM "would be *contingent on* the EDAM transmission service provider's OATT provisions *allowing for* such carve-out."[137]

PacifiCorp likewise explained in its Revised OATT Filing that it "agrees with the CAISO that carve-outs should be very limited to protect against adverse impacts on the market, and PacifiCorp plans to use that authority judiciously."[138] Consistent with the design principles of EDAM, PacifiCorp proposes language in its OATT to exercise this carve-out option under CAISO Tariff section 33.18.3.3 only where necessary to maintain reliability of its balancing area or where necessary to effectuate contract rights in the unlikely event such rights are not addressed by the provisions of the CAISO Tariff or of the PacifiCorp OATT.[139] PacifiCorp expects the initial market carve-outs under the OATT provision to be for certain discrete transmission facilities owned by third parties, or by multiple parties, in the PacifiCorp balancing areas "for which including them in the market

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136 EDAM Acceptance Order at P 285.

137 *Id.* at P 314 (emphases added).

138 Transmittal letter for PacifiCorp Revised OATT Filing at 25.

139 *See* PacifiCorp Revised OATT Filing, Attachment B, at revised section 4.1.3.8 of Attachment T to the PacifiCorp OATT ("The PacifiCorp EDAM Entity reserves the right to hold back transmission facilities or capacity from the MO's [*i.e.*, CAISO's] use when the PacifiCorp EDAM Entity, in its sole discretion, deems such a hold back necessary to (a) maintain the reliability of the PacifiCorp BAAs or (b) give effect to any contract right, including EDAM Transmission Ownership Rights, that the PacifiCorp EDAM Entity determines is not adequately addressed by the rules of this Tariff and the [CAISO] Tariff for EDAM participation.").

would present costs and complications that would far exceed their utility to the market, or their inclusion could impact or degrade reliability."[140] The CAISO has confirmed PacifiCorp's proposed carve-out mechanism satisfies the requirements of the CAISO Tariff.[141]

The Commission should find PacifiCorp's requested authority to provide carve-outs only in limited circumstances (*e.g.*, to maintain the reliability of the PacifiCorp balancing areas or to effectuate contract rights) to be just and reasonable. Under court and Commission precedent, the Commission need only consider PacifiCorp's proposed OATT revisions on their own terms and not in comparison to any alternatives. "Pursuant to section 205 of the FPA, the Commission limits its evaluation of a utility's proposed tariff revisions to an inquiry into 'whether the rates proposed by a utility are reasonable—and not to extend to determining whether a proposed rate schedule is more or less reasonable to alternative rate designs.'"[142] Therefore, "[u]pon finding that [PacifiCorp]'s Proposal is just and reasonable, [the Commission] need not consider the merits of alternative proposals."[143] The Commission should find PacifiCorp's carve-out proposal is just and reasonable because it accords with

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140 Transmittal letter for PacifiCorp Revised OATT Filing at 25.

141 *See* CAISO comments at 9-10 and Attachment A, pp. 26-27.

142 *Cal. Indep. Sys. Operator Corp.*, 141 FERC ¶ 61,135, at P 44 n.43 (2012) (quoting *City of Bethany v. FERC*, 727 F.2d 1131, 1136 (D.C. Cir. 1984)). In that same order, the Commission also explained that the revisions proposed by the utility "need not be the only reasonable methodology" and that "even if an intervenor develops an alternative proposal, the Commission must accept a section 205 filing if it is just and reasonable, regardless of the merits of the alternative proposal." *Cal. Indep. Sys. Operator Corp.*, 141 FERC ¶ 61,135, at P 44 n.43 (citing federal court and Commission precedent).

143 *Id.* at P 44.

the limited transmission service provider discretion envisioned under the EDAM design and the EDAM Acceptance Order, and will avoid creating inefficiencies that would limit the benefits of EDAM to ratepayers.

In contrast, the Commission should disregard commenters' alternative proposal that PacifiCorp should instead be *obligated* to provide carve-outs any time a customer requests to remove capacity from the market. Their alternative proposal is inconsistent with the EDAM design, the affirmance of that design in the EDAM Acceptance Order, and the efficiency of EDAM, to the detriment of end-use customers benefitting from the EDAM market optimization. These commenters are essentially asking for a toll-free highway through the market in the PacifiCorp balancing areas after implementation of EDAM. Allowing such a radical step would constitute an end-run around future seams discussions that the Commission's EDAM Acceptance Order and recent order accepting SPP's Markets+ clearly recognized should occur after the market footprint has been defined.[144]

The transmission service provider is in the best position to establish whether and if to allow any carve-outs based on the rights and terms and conditions conferred under its OATT. Mandating that customers have a unilateral right to remove transmission from the market optimization where not supported by the transmission service provider would adversely affect the ability of the service provider to administer its OATT and manage grid reliability.

144 *See* EDAM Acceptance Order at P 512.

J. The Commission Should Reject Arguments that the PacifiCorp OATT Revisions Do Not Honor Intra-Day Schedules in Accordance with the *Pro Forma* OATT

Some commenters argue the PacifiCorp OATT revisions fail to honor intra-day schedules and thus violate the Commission's *pro forma* OATT.[145] The Commission should find those arguments to be both meritless and improper attempts to re-litigate issues already resolved by the Commission.

In the EDAM Acceptance Order, the Commission already rejected arguments that firm point-to-point transmission customers should have an ironclad right to schedule their firm OATT rights after the 10:00 a.m. scheduling deadline (*i.e.*, engage in intra-day scheduling) without any risk or potential market consequences. The deadline of 10:00 a.m. on the day prior to the operating day follows the firm deadline established in section 13.8 of the *pro forma* OATT, which provides, "Schedules for the Transmission Customer's Firm Point-To-Point Transmission Service must be submitted to the Transmission Provider no later than 10:00 a.m. of the day prior to commencement of such service."

In the EDAM Acceptance Order, the Commission "disagree[d] with commenters' arguments that under the EDAM transmission framework, firm transmission customers' intra-day schedule changes would have lower priority than they would under the *pro forma* OATT."[146] The Commission also found that "CAISO's proposed Tariff revisions in section 33.18.2.2.3 allow an EDAM Entity scheduling coordinator to instruct CAISO to afford intra-day self-schedules of firm

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145 *See* Powerex at 38-47; Public Power Council at 10-12; SRP at 10-12.

146 EDAM Acceptance Order at P 310.

transmission customers higher priority than EDAM day-ahead schedules."[147]

The Commission then went on to find:

> [S]ection 13.8 of the *pro forma* OATT requires schedules for firm point-to-point transmission service to be submitted to the transmission service provider no later than 10:00 a.m. of the day prior to service and provides that "schedules submitted after 10:00 a.m. will be accommodated, *if practicable*." Under CAISO's proposal, firm transmission customers are not required to submit their self-schedules any earlier than under the *pro forma* OATT, and EDAM will attempt to accommodate any intra-day schedule changes *if practicable*. Specifically, CAISO states that EDAM will attempt to accommodate any intra-day schedule changes via redispatch and if there is an infeasibility, CAISO will notify the EDAM Entity, which is then responsible for resolving the infeasibility through its OATT procedures.[148]

Thus, the Commission recognized in the EDAM Acceptance Order that EDAM will attempt to accommodate intra-day schedules but if that is not practicable, the firm point-to-point transmission customer bears the risk and potential market consequences if schedules submitted after the 10:00 a.m. scheduling deadline cannot be accommodated.

The EDAM design includes multiple provisions consistent with section 13.8 of the *pro forma* OATT to accommodate intra-day schedule changes, and the PacifiCorp Revised OATT Filing reflects those EDAM design elements.[149] As the Commission noted in the EDAM Acceptance Order,[150] CAISO Tariff section 33.18.2.2.3 affords discretion to EDAM transmission providers, consistent with

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147 *Id.*

148 *Id.* (emphases added).

149 The CAISO first presented the information about intra-day scheduling discussed in rest of this section of the Answer to the Commission at pages 129-30 of the transmittal letter for the CAISO EDAM Tariff Filing.

150 *See* EDAM Acceptance Order at P 310.

their OATTs and their roles as transmission providers and balancing authorities, to inform the CAISO of the priority to afford particular exercises of firm/conditional firm OATT rights in the real-time market across their own systems. As discussed below in Section III.L of this Answer, PacifiCorp has chosen to exercise its authority under CAISO Tariff section 33.18.2.2.3 to assign intra-day schedule changes that are part of a forward showing of a WRAP participant.

Absent EDAM transmission provider instructions supporting a different priority, the CAISO will afford the intra-day schedule submissions a priority in the real-time market higher than other real-time self-schedules and equal to cleared day-ahead self-schedules, including transfer schedules between balancing areas serving load. Thus, the real-time market will seek to accommodate these self-schedules and, if necessary, redispatch available supply across all balancing areas based on the transfer capability between balancing areas to support the exercise of the customer's rights. If there is insufficient redispatch capability in the real-time market, the market will manage all schedules through the market clearing process until the solution becomes infeasible and the power balance constraint is relaxed, ultimately affording transfers between balancing areas equal priority to demand within the balancing areas.[151]

If instructed by an EDAM transmission service provider such as PacifiCorp, the CAISO will afford balanced intra-day self-schedules or schedule changes associated with a contract reference number for balanced, specific firm

[151] *See* CAISO Tariff section 33.7.5 (establishing an equal priority between day-ahead transfers and demand within a balancing area and requiring coordination and communication concerning any curtailment of transfers between balancing areas to maintain reliability).

OATT transmission rights a priority in the real-time market higher than other real-time self-schedules and higher than cleared day-ahead self-schedules not based on specific firm OATT transmission rights, including transfer schedules between balancing areas serving load.[152] The higher priority for intra-day self-schedules using balanced, specific firm OATT transmission rights where instructed by EDAM transmission service providers, coupled with the redispatch process across a multi-balancing area market footprint, goes beyond the actions transmission service providers are obligated to undertake today under the *pro forma* OATT or may undertake within their balancing areas. Indeed, this higher priority for intra-day self-schedules goes even further than existing measures by leveraging the supply capabilities of multiple balancing areas to accommodate these real-time schedule changes by customers with OATT rights that submit such schedule changes after the 10:00 a.m. deadline.[153]

In other words, EDAM will afford even greater tools and flexibility than exists today to accommodate, if practicable, such post-deadline schedules seeking to use firm point-to-point service. This approach maintains confidence in EDAM transfers clearing the day-ahead market, which EDAM entities depend upon to serve load, while respecting the late exercise of transmission customer

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[152] *See* CAISO Tariff sections 33.18.2.2.3 and 33.18.3.1.

[153] As noted above, section 13.8 of the *pro forma* OATT provides that "[s]chedules submitted after 10:00 a.m. will be accommodated, if practicable." The Commission has recognized that section 13.8 gives transmission service providers flexibility to "accommodate" transmission service schedules submitted after 10:00 a.m. *See Integration of Variable Energy Res.*, 139 FERC ¶ 61,246, at P 136 (2012) ("The Commission recognizes that transmission providers have flexibility under [section 13.8 of] the *pro forma* OATT to award transmission service based on transmission capability that becomes available when firm transmission service is not scheduled by 10:00 am the day prior to operation."); *Allegheny Power Sys. Inc.*, 77 FERC ¶ 61,266, at 62,100 (1996) (finding that the "if practicable" language in section 13.8 "permits flexibility").

rights in the real-time market. In applying the priorities described above that may result from an infeasibility, the market will inform the balancing authority of the magnitude of the infeasibility and the affected schedules so the balancing authority may take appropriate action according to its balancing authority obligations and its OATT. Deference to the balancing authority to resolve infeasibilities in real-time based on information available through the real-time market is consistent with the practice today in the WEIM.[154]

In sum, the provisions of the CAISO Tariff and the PacifiCorp OATT regarding intra-day schedules will work in tandem and will honor such schedules in a manner consistent with precedent and in a manner that does not diminish intra-day scheduling opportunities under the *pro forma* OATT.

K. The Commission Should Reject Arguments Made in this Proceeding that Are Inconsistent with Its Previous Findings

Many of the arguments raised by commenters in this proceeding essentially re-package arguments the Commission rejected in prior proceedings involving the CAISO. The majority of those arguments are outright impermissible collateral attacks on previous Commission findings, and others are simply inconsistent with Commission precedent. In either case, the Commission should find them to be without merit.

As explained above,[155] the Commission found in the EDAM Acceptance Order that the CAISO's proposal to allocate congestion revenue within the

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[154] *See, e.g.*, CAISO Tariff sections 29.4(b), 29.7(g), and 29.34(o) (establishing responsibility of the balancing authority to manage conditions within its area based on information provided by the CAISO as the market operator of the WEIM).

[155] *See* Section III.B of this Answer.

balancing area where the internal transmission constraint arises adheres to cost causation principles and is just and reasonable.[156] The Commission also agreed with the CAISO it is necessary under the EDAM design to separate the revenue stream of inter-balancing area congestion revenue, which represents the cost to serve demand across just the internal balancing area transmission system, from the revenue stream of inter-balancing area transfer revenue, which represents the cost of serving demand across balancing areas.[157] In making those findings, the Commission expressly rejected Powerex's argument that the methodology for allocating congestion revenue within the balancing area where the internal constraint arises favors California interests.[158]

As further discussed above,[159] it is reasonable to allocate the congestion revenue to the balancing area where the internal transmission constraint materialized. The reasoning behind the Commission's acceptance of the congestion revenue allocation methodology is sound. Allocating congestion revenue solely within the balancing area where the internal constraint arises satisfies cost causation principles because it matches to some degree the burden imposed on the balancing area by the triggering of the constraint with the benefit of the congestion revenue.[160]

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156 EDAM Acceptance Order at PP 434-35.

157 *Id.* at P 434.

158 *Id.* at P 435.

159 *See* Section III.K of this Answer.

160 *See, e.g.*, *Cal. Indep. Sys. Operator Corp.*, 165 FERC ¶ 61,116, at P 48 (2018) ("The Commission has said that the principle of cost causation requires that all approved rates reflect to some degree the costs actually caused by the customer who must pay them. The Commission evaluates whether cost allocation is consistent with cost causation by comparing the costs

In any event, no party filed a request for rehearing of the EDAM Acceptance Order. Neither does Powerex nor any other commenter provide evidence in the instant proceeding that shows there have been any significant changes in circumstances since the Commission issued the EDAM Acceptance Order only a little over a year ago, in December 2023. Thus, no commenter produces the evidence necessary to overcome the prohibition against impermissible collateral attacks on prior Commission findings.[161]

For example, commenters provide no record evidence the CAISO ever stated parallel flows in the EDAM area on constraints in a balancing area outside the contract path (*e.g.*, constraints in the CAISO balancing area) could not result in the allocation of congestion revenues to that constrained balancing area, as opposed to allocating such congestion revenues to the non-constrained balancing area at the end of the contract path (*e.g.*, to a non-constrained

assessed against a party to the burdens imposed or the benefits drawn by that party. In reviewing these decisions, courts have never required a ratemaking agency to allocate costs with exacting precision. Rather, it is enough, given the standard of review under the Administrative Procedure Act, that the cost allocation mechanism not be arbitrary or capricious in light of the burdens imposed or benefits received.") (Internal quotation marks, brackets, and citations omitted.)). *See also Sw. Power Pool, Inc.*, 178 FERC ¶ 61,087, at P 30 n.42 (2022) ("Courts have held that the cost causation principle does not require costs to be allocated with exacting precision, but rather requires that costs be allocated in a manner 'roughly commensurate' with the benefits received."); *Midcontinent Indep. Sys. Operator, Inc.*, 181 FERC ¶ 61,219, at P 50 (2022) (finding that, in accordance with court and Commission precedent on the principle of cost causation, "cost allocation does not need to be undertaken with exacting precision in order to be roughly commensurate with benefits").

[161] *See supra* Section III.B of this Answer. Specifically, in order to permit re-litigation of a substantive ratemaking decision, "[t]here must be sufficient substance to the 'new' material so that there is a reasonable possibility [that] the Presiding Judge or the Commission would decide the substantive ratemaking principle should be changed. Absent such reasonable possibility, it is a waste of resources to relitigate the previously decided issue." *Minn. Power & Light Co.*, 13 FERC ¶ 63,014, at 65,030 (1980). *See also CNG Transmission Corp.*, 51 FERC ¶ 63,018 at 65,077-78 (1990).

PacifiCorp balancing area for an energy sale originating in the southwest).[162] Such parallel flows are a physical phenomenon universally known in the electric industry to be inherent in the nature of moving energy on a network of interconnected transmission lines.[163] The day-ahead market and real-time market, and by extension EDAM and the WEIM, utilize the full network model (FNM) to enforce all appropriate network and resource constraints—including those affected by parallel flows—to optimally dispatch resources to meet demand across the market area. The FNM provides the necessary information to determine and mitigate transmission congestion and to calculate the relevant LMP at each pricing node location or aggregated pricing location within the FNM that is attributable to the location of the source of the binding constraint. This decomposition is tied to the allocation of congestion revenue to the balancing area where the constraint is located.

Allocating congestion revenue under the EDAM design based on the parallel flows reflects not only the physical reality but also the allocation methodology the Commission approved—namely, "to the BAA where the internal transmission constraint arises."[164] The Congestion Revenue Calculation Example contained in Attachment C to this Answer illustrates how the CAISO will

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[162] Indeed, no commenter even cites the portions of the EDAM Final Proposal (see pages 6-7 and 111-14 therein) or the transmittal letter for the CAISO EDAM Tariff Filing (see pages 5 and 185-92 therein) that address the methodology for allocating congestion revenue under the EDAM design.

[163] *See, e.g.*, *Pub. Serv. Co. of Ind., Inc.*, 51 FERC ¶ 61,357, at 62,211 (1990) ("First, as we have noted in previous decisions, parallel path or loop flows are a physical phenomena inherent to the operation of an interconnected grid. Such flows arise because electric power flows according to the laws of physics and not the law of contracts.") (internal citation omitted).

[164] EDAM Acceptance Order at P 434.

allocate congestion revenue under the EDAM design. Although the CAISO firmly believes the Commission's acceptance of the EDAM congestion revenue allocation in the CAISO Tariff stands on its own, the CAISO provides this attached further example and explanation to address any possible confusion in this proceeding regarding the potential impact of that allocation methodology on PacifiCorp customers. The example presents the congestion revenue calculation and distribution under EDAM with two balancing areas participating in the day-ahead market based on the approved market design. This example illustrates the mechanics of the congestion revenue calculation between the two balancing areas. The example shows the bulk of the congestion revenue due to flow impacts on flowgates monitored in adjacent balancing areas is small relative to the total congestion revenue distributed to each balancing area.

Many of the comments in this proceeding are based on the erroneous premise that customers are entitled to a path through multiple balancing areas, including a PacifiCorp balancing area, in order to facilitate transactions in other balancing areas. In accepting revisions to the CAISO Tariff amendment to modify load, export, and wheeling through priorities in the day-ahead and real-time market optimization process, the Commission rejected arguments that having firm point-to-point transmission rights in one balancing area entitles transmission customers to firm rights in another balancing area—in that case, the CAISO system. The Commission found: "Firm transmission rights to the boundary of CAISO's system do not grant firm transmission rights across CAISO's system, which, as noted above, do not exist. We therefore are not

persuaded by protestors' arguments regarding the curtailment of firm point-to-point transmission."[165] The Commission reiterated the point elsewhere in the Transaction Priorities Order.[166] On rehearing of that Order, the Commission expressly found its *pro forma* OATT does not grant such an entitlement:

> [W]heeling through transactions do not have firm point-to-point service across the CAISO system, but rather only to the CAISO border. . . . Under the *pro forma* OATT, firm point-to-point transmission refers to firm transmission across the system at issue, not firm transmission to the border of the system, and no entity has firm transmission across the CAISO system.[167]

As discussed above, in the EDAM Acceptance Order the Commission rejected arguments that firm point-to-point transmission customers should have an ironclad right to engage in intra-day scheduling without any risk or potential market consequences. The Commission also found that transmission service under the EDAM design is consistent with section 13.8 of the *pro forma* OATT, which states "[s]chedules [for firm point-to-point transmission service] submitted after 10:00 a.m. will be accommodated, if practicable."[168] Additionally, the

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165 Transaction Priorities Order, 175 FERC ¶ 61,245, at P 146.

166 *Id.* at P 149 ("Further, as discussed elsewhere in this order, the firmness of transmission on external systems to the CAISO border does not determine priority to transmit power across the CAISO system."); *id.* at P 160 ("We find no merit in protests related to loop flows, stranded capacity, or conversion of all wheeling through transactions across the CAISO system into non-firm schedules because all such arguments erroneously rely on the assumption that firm transmission to the CAISO border should ensure firm transmission service across CAISO's system. As discussed above, we find no basis for endorsing such a policy.").

167 *Cal. Indep. Sys. Operator Corp.*, 178 FERC ¶ 61,180, at P 31 (2022). *See also id.* at P 59 ("Further, as stated in the [Transaction Priorities] Order, firm transmission to the CAISO border does not guarantee firm transmission through the CAISO system."); *id.* at P 65 ("As the [Transaction Priorities] Order explained, firm transmission to the boundary of the CAISO system does not grant firm transmission rights across the CAISO system, given that no such rights exist.").

168 *See supra* Section III.J of this Answer (discussing paragraph 310 of the EDAM Acceptance Order).

Commission "disagree[d] with concerns that under EDAM, firm point-to-point transmission service is being made less firm due to EDAM's treatment of intra-day schedule changes."[169]

The Commission should find no merit in commenters' repackaged arguments that seek to elevate the rights of firm point-to-point transmission customers to the detriment of end-users in the EDAM area. Those arguments are inconsistent with the Commission's previous findings regarding the rights of such customers.

L. The Commission Should Not Reject PacifiCorp's OATT Revisions Due to Speculative Comments About Possible Effects of PacifiCorp EDAM Participation on WRAP

Some commenters argue that PacifiCorp joining EDAM in the manner proposed in its OATT revisions will impair the success of WRAP.[170] Other commenters merely express concern about the possible impact of PacifiCorp joining EDAM on WRAP and request related clarifications it will not have negative effects.[171] The Commission should find none of these comments require it to reject or modify the PacifiCorp OATT revisions. The comments are all speculative and provide no evidence that PacifiCorp joining EDAM in the manner proposed in its OATT revisions will impair the success of WRAP.

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169 EDAM Acceptance Order at P 311.

170 *See* Powerex at 54-55; WRAP Participating Entities at 8-24. As the Commission explained in the EDAM Acceptance Order, WRAP is a voluntary resource adequacy planning and compliance framework administered by WPP and includes financially-binding capacity and transmission requirements for participating entities to meet their identified capacity needs. EDAM Acceptance Order at P 216 n.298.

171 *See* APS at 4; SPP at 4-5, 15-17; WPP at 6-12.

As PacifiCorp explains, the OATT revisions require the PacifiCorp EDAM entity to exercise its authority, under the CAISO Tariff, to provide instructions to the CAISO to assign a higher scheduling priority than cleared day-ahead schedules for long-term point-to-point wheeling through or export transactions from the PacifiCorp balancing areas that are part of a forward showing of a WRAP participant, such that intra-day self-schedules associated with such rights receive the higher scheduling priority in the real-time market. This mechanism will help WRAP participants ensure the transactions they are relying on to satisfy their forward showings will have a high confidence of physical delivery, even if scheduled after the close of the day-ahead market.[172] The CAISO worked closely with PacifiCorp to develop these OATT provisions and has confirmed they satisfy the applicable requirements of the CAISO Tariff.[173]

Furthermore, in the EDAM Acceptance Order the Commission considered comments expressing concerns about potential impacts of EDAM on WRAP. The Commission "agree[d] that CAISO's proposed framework is compatible with WRAP" and found that "the proposed EDAM provisions preserve the rights of firm transmission customers under an EDAM Entity's OATT and should therefore be compatible with WRAP participation."[174] The Commission also noted the CAISO's "commitment to continue working with stakeholders to ensure that EDAM is compatible with WRAP participation."[175] This stakeholder engagement

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172 Transmittal letter for PacifiCorp Revised OATT Filing at 23 (citing CAISO Tariff section 33.18.2.2.3 and revised section 4.1.6.3.1 of Attachment T to the PacifiCorp OATT).

173 CAISO comments at Attachment A, pp. 23-24.

174 EDAM Acceptance Order at P 313.

175 *Id.*

is ongoing and will include ensuring that PacifiCorp and other entities in the future joining EDAM do not negatively affect WRAP.

Many of the comments raising concerns about the impact on WRAP of PacifiCorp's participation in EDAM focus on concerns about congestion cost exposure and intra-day scheduling priorities. As explained at length above in this Answer, these concerns are misplaced.

The Commission should disregard commenters' suggestions that it should not permit PacifiCorp join EDAM in the manner proposed under its OATT amendments because the PacifiCorp balancing areas being subject to the Commission-approved EDAM design could require a modified approach to satisfying WRAP. That would be as inappropriate as preventing a utility from joining MISO because it could create implementation questions for an entity seeking to participate in the PJM capacity markets. Commenters' concerns ignore that PacifiCorp itself is a participant in WRAP and has a significant interest in ensuring that its OATT revisions allow for WRAP participation. Again, the CAISO will work with stakeholders—including PacifiCorp—to ensure that parties will continue to have reasonable opportunities to participate in WRAP when EDAM goes live.

M. The Questions Raised About the Impact of PacifiCorp's EDAM Participation on Markets+ Relate to Potential Future Seams Issues Appropriate for Discussion Between the CAISO and SPP

Powerex and some others suggest that the PacifiCorp OATT revisions could somehow have an adverse impact on participation in SPP's recently accepted Markets+.[176] Also, SPP states that while it "does not oppose PacifiCorp's participation in EDAM or most of its proposed OATT revisions to facilitate that participation, PacifiCorp's proposed treatment of firm transmission rights on its transmission system is unclear and could present seams issues that require resolution and clarification before implementation."[177] The questions raised by commenters about the impact of PacifiCorp's proposal on Markets+ are related to potential future seams issues, which are most appropriately addressed as part of potential seams agreements to be negotiated between the CAISO and SPP.

The Commission has long recognized there is no single acceptable approach to wholesale market designs. For example, in Order No. 681, the Commission found a flexible regional approach to long-term transmission rights because "there is no 'one-size-fits-all' long-term firm transmission right design that could be implemented in each of the various transmission organization

176 *See, e.g.*, Powerex at 55-57; PPC at 12; Tacoma at 8-9.

177 SPP at 1-2. *See also id.* at 4 (stating that "these comments should not be construed as opposition to either EDAM or PacifiCorp's decision to join it," and that the Commission should "carefully review PacifiCorp's proposal to ensure that the proposed OATT changes do not create unnecessary seams issues or uncertainty for customers using their contracted firm transmission service rights on the PacifiCorp system").

markets.[178] The Commission concluded such flexibility "appropriately recognize[s] regional differences" and "transmission organizations should have the flexibility to design long-term firm transmission rights that fit their prevailing market design."[179] Similarly, the Commission "has consistently rejected 'one-size-fits-all' approach to resource adequacy in various ISOs/RTOs due in large part to significant differences between regions and also due to the tenet that there can be more than one just and reasonable rate."[180] A significant recent example of the range of acceptable wholesale market designs is the Commission's acceptance of the Markets+ tariff revisions after it had already accepted CAISO Tariff revisions to implement the EDAM design.

Because there is a wide range of just and reasonable wholesale market designs, the Commission's policy is to address issues involving the intersection of market designs through seams agreements and other comparable agreements between market operators when specific seams issues emerge. Given EDAM and Markets+ have not yet gone live, any concerns about seams issues are premature.

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178 Order No. 681 at P 85.

179 *Id.* at PP 100-01.

180 *Calif. Indep. Sys. Operator Corp., Inc.,* 165 FERC ¶ 61,148, at P 76 (2018), *order on reh'g*, 169 FERC ¶ 61,045, at P 17 (2019). *See also Midcontinent Indep. Transmission Sys. Operator, Inc.*, 162 FERC ¶ 61,176, at P 57 ("In its orders, the Commission has consistently rejected a one-size-fits-all approach in the various RTOs/ISOs due, in large part, to significant differences between each region and that there can be more than one just and reasonable rate."); *Sw. Power Pool, Inc.,* 158 FERC ¶ 61,063, at P 13 (finding "market rules need not be identical among the regions to be just and reasonable, and there can be more than one just and reasonable rate"); *Sw. Power Pool, Inc.,* 149 FERC ¶ 61,113, at P 73 (2014) ("The Commission has accepted a range of approaches from RTOs."); *PJM Interconnection, LLC.,* 119 FERC ¶ 61,063, at P 39 (finding "[t]he Commission has permitted different just and reasonable rate designs reflective of particular system characteristics and stakeholder input").

The CAISO's view on handling potential seams issues has remained essentially unchanged since the proceeding on the CAISO Tariff revisions to implement EDAM, where some commenters suggested the Commission direct the CAISO to undertake seams resolution efforts, including the negotiation of seams agreements with the SPP. The CAISO explained in its EDAM Answer that, consistent with its long history of addressing seams issues with neighboring regions, the CAISO remains ready and willing to address seams issues as necessary and appropriate to ensure reliability and efficient market outcomes.[181]

The CAISO has stayed engaged in monitoring the Markets+ design and CAISO staff has engaged with SPP staff to compare elements of the respective designs and ensure common understanding of the respective market designs. As the respective designs are implemented, and as the market footprints are further defined to identify the topology areas of seams, the CAISO will be in a better position to evaluate the extent and nature of the seams arrangements and engage transparently in further discussions with SPP and interested stakeholders. The CAISO will continue to engage in the coordination discussions and is prepared to address identified seams issues at the appropriate time with input from EDAM entities and other stakeholders.[182]

In the EDAM Acceptance Order, the Commission agreed with the CAISO's suggested approach:

> We find that requests for CAISO to coordinate on seams with other Western entities are premature. It is unclear where seams will exist before EDAM and other potential Western markets and services go

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181 CAISO EDAM Answer at 134-35.

182 *Id.*

> live and, therefore, we decline to direct or require coordination at this time. Nevertheless, we acknowledge CAISO's commitment to continue coordination and discussion of potential seams issues with stakeholders and other entities.[183]

SPP has similarly informed the Commission of its intent to work with the CAISO and other interested parties in the West on seams issues:

> subsequent to approval of the Markets+ Tariff, and as part of its implementation of Markets+ and preparation for go-live, SPP plans to work with CAISO, and other parties in the West, as appropriate, on developing appropriate seams agreements to address coordination and communications, and to enable improved information exchange between market operators in the Western Interconnection.[184]

Less than two months ago, in the Markets+ Acceptance Order, the Commission found that the scope of any seams issues between Markets+ and other centrally cleared markets like EDAM is not yet known and that any potential future seams issues were no basis to delay finding that tariff filing just and reasonable:

> We decline to address seams in this proceeding. While borders between organized markets (and non-market areas) in the West are likely to arise, we disagree with commenters who argue that action is necessary at this time. Consistent with our experience in the Eastern Interconnection, we anticipate that seams between centrally cleared markets (*e.g.*, EDAM and Markets+) and between markets and non-market areas will necessitate agreements between parties that will address issues such as data sharing, congestion management, and transmission rights and use. However, we agree with SPP that the parties to or scope of the issues that will need to be addressed by such agreements are not yet fully known. We acknowledge SPP's commitment to continue to work on these issues with CAISO and other stakeholders.[185]

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183 EDAM Acceptance Order at P 512.

184 Transmittal letter for SPP Markets+ Tariff Filing at 55-56.

185 Markets+ Acceptance Order, 190 FERC ¶ 61,030, at P 386.

No commenter in this proceeding has identified any information that would alter the Commission's findings on seams between Markets+ and EDAM that would be a basis for rejecting or modifying the PacifiCorp Revised OATT Filing. The Commission should accept PacifiCorp's explanation that Commission directives to address seams issues are premature.[186] Similarly, Powerex's own witness seems to agree that joint operating agreements may resolve market coordination issues.[187] The CAISO looks forward to working with SPP and stakeholders to develop solutions to any seams issues after they may become clearer.

N. It Is Appropriate for PacifiCorp to Elect Not to Authorize External Intertie Bidding When it First Joins EDAM

EDAM allows non-resource-specific resources to bid economically at the CAISO interties, but it does not allow them to bid economically at the interties of other balancing authorities participating in EDAM unless authorized at the balancing area interties.[188] PacifiCorp proposes to exercise its discretion under the CAISO Tariff not to enable economic bidding at the interties between the PacifiCorp balancing areas and other balancing areas (*i.e.*, external intertie bidding) when it begins participating in EDAM, in order to ensure all of its core functions work as intended and it does not introduce complexities in

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186 "It simply is premature at this time to address any potential seams issues that could arise if and to the extent that both the EDAM and any competing neighboring markets reach commercial operation. Seams issues are complex and time-consuming, and they should be taken up only after such issues are proven to exist." Transmittal letter for PacifiCorp Revised OATT Filing at 26.

187 Powerex, Attachment B (Testimony of Paul Gribik) at 18:8-19:13 (discussing joint operating agreement between MISO and PJM to manage shared flowgates to address parallel flows between neighboring systems and thereby increase market efficiency).

188 See transmittal letter for CAISO EDAM Tariff Filing at 155-56, 159-60.

implementation. PacifiCorp also commits to monitor EDAM performance during its initial participation in the market, and to work with its stakeholders after go-live to assess intertie bidding and address any obstacles to activating it.[189]

Bonneville takes the position that PacifiCorp should implement external intertie bidding from the outset of its EDAM implementation. Bonneville states that "PacifiCorp should not have unilateral discretion in prohibiting external resource intertie bidding," because "PacifiCorp is choosing not to exercise flexibility within the CAISO tariff to implement EDAM in an unduly discriminatory manner."[190]

CAISO Tariff section 33.30.3 as approved in the EDAM Acceptance Order states in relevant part that external intertie bidding is not permitted "unless [it] has been enabled in accordance with Section 29.34(i)(2)." That existing CAISO Tariff section, in turn, permits external intertie bidding "if the EIM Entity supports economic bidding of EIM External Intertie transactions." The tariff language makes it clear that the default approach is not to permit external intertie bidding.

The Commission should find PacifiCorp's OATT revisions are an appropriate exercise of its discretion under the CAISO Tariff to choose whether to authorize external intertie bidding when it first joins EDAM. This aspect of the PacifiCorp Revised OATT Filing is consistent with Commission precedent on EDAM. In the EDAM Acceptance Order, the Commission "disagree[d] with

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189 Transmittal letter for PacifiCorp Revised OATT Filing at 24-25; *id.*, Attachment B, at revised section 4.4 of Attachment T to the PacifiCorp OATT; *id.*, Exh. No. PAC-002 (Prepared Direct Testimony of Michael G. Wilding) at 20:17-21:10.

190 Bonneville at 21-25.

suggestions that CAISO should have a mechanism to enable economic bidding at external interties within the Tariff, rather than *allowing economic bidding at interties to be enabled by the EDAM Entity* under section 29.34(i)(2) of the existing CAISO Tariff."[191]

It would be contrary to the plain meaning of these CAISO Tariff provisions for the Commission to find they require—rather than simply permit—PacifiCorp to enable external intertie bidding at EDAM start-up. Furthermore, although the CAISO Tariff provisions do not obligate it to do so, PacifiCorp has provided reasonable justification for its choice. Further support for the reasonableness of PacifiCorp's choice is the fact that no balancing authority participating in the WEIM has enabled external intertie bidding—including Bonneville. PacifiCorp also commits to revisiting the issue with stakeholders after EDAM start-up. Thus, PacifiCorp does not foreclose the possibility it may enable external intertie bidding in the future after discussing the matter with stakeholders and evaluating its initial experience with EDAM.

O. The Commission Should Accept the Balance of the PacifiCorp OATT Revisions Not Discussed in This Answer

Commenters raise issues regarding other revisions PacifiCorp proposes to its OATT, *e.g.*, they argue the Commission should reject the OATT revisions on the resource sufficiency evaluation (RSE).[192] As the CAISO explained in its comments, all of the PacifiCorp OATT revisions are consistent with or superior to the *pro forma* OATT and fulfill the applicable requirements for EDAM participation

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191 EDAM Acceptance Order at P 240 (emphasis added).

192 *See, e.g.*, Bonneville at 29-30; UAMPS at 21-27; UMPA-Deseret at 14-18.

specified in the CAISO Tariff.[193] This includes the revisions on the RSE and all other OATT revisions not specifically addressed in this Answer.

P. The CAISO Will Work to Address Concerns Raised by Transmission Service Providers Embedded in the Balancing Area of a Separate EDAM Entity

Deseret, in the UMPA-Deseret comments, raises several concerns related to Deseret's status as a transmission service provider embedded in the middle of the PacifiCorp East balancing area. Deseret takes the position that transmission customers should be able to settle with the CAISO directly instead of having to settle with PacifiCorp as a middleman.[194] Deseret also contends PacifiCorp's proposal unnecessarily creates a middleman for submission of outage data.[195] Lastly, Deseret argues PacifiCorp's proposal is not inclusive of third-party EDAM transmission service providers, and notes the CAISO and PacifiCorp have recently initiated discussions with Deseret to address its concerns.[196]

Consistent with Deseret's noting its ongoing discussions with the CAISO and PacifiCorp, the CAISO commits to work to address the questions and concerns of transmission service providers such as Deseret that are embedded in the balancing area of a separate EDAM entity. However, any such discussions with Deseret must be consistent with the requirements of the CAISO Tariff and the PacifiCorp OATT. The Commission has accepted the EDAM provisions of the CAISO Tariff, and the CAISO has confirmed that all of

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193 CAISO comments at 7-11 and Attachment A.

194 UMPA-Deseret at 18-20.

195 *Id.* at 20-22.

196 *Id.* at 2-3, 22-29.

PacifiCorp's OATT revisions—including the ones that Deseret cites in its comments— are consistent with the EDAM requirements of the CAISO Tariff and are consistent with or superior to the Commission's *pro forma* OATT.[197]

For example, the CAISO understands a transmission service provider may prefer a direct settlement relationship with the CAISO, but the CAISO Tariff currently only allows for a settlement relationship with the scheduling coordinator for the EDAM entity.[198] Similarly, outage information must be reported to the CAISO on a balancing-area-by-balancing-area level.

After EDAM implementation, the CAISO can consider alternative participation models for embedded transmission service providers such as Deseret. The WEIM sub-entity provisions in the CAISO Tariff are an example of the CAISO making similar accommodations for embedded utilities.[199]

The CAISO commits to work with non-EDAM entity transmission service providers such as Deseret on developing and executing the appropriate agreements with them prior to EDAM go-live. This process should not delay acceptance of the PacifiCorp OATT amendments in this proceeding.

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197 CAISO comments at 7-11 and Attachment A.

198 *See* CAISO Tariff sections 33.4.2 and 33.4.3.

199 *See Cal. Indep. Sys. Operator Corp.*, 178 FERC ¶ 61,237, at PP 11-12 and Appendix (2022) (accepting CAISO Tariff revisions to "enable qualified embedded utilities to establish a direct relationship with CAISO for scheduling and settlement purposes").

Q. The CAISO Will Discuss Concerns Raised by Stakeholders and Potential Enhancements to the EDAM Design with Its Stakeholders Through an Expedited Process

The CAISO understands some commenters believe that the EDAM design stakeholder materials may not have been as clear in some places regarding the intended design, especially when taken out of context as in their comments.[200] The CAISO takes its stewardship role seriously, particularly when there is so much interest in the outcome and so much time, effort, and energy spent developing a complete EDAM design.[201] Any confusion that may be lingering as a result is regrettable. In any event, with this Answer and through the

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[200] Generally these commenters suggest it was not until PacifiCorp submitted its testimony on this issue that they understood the approved CAISO Tariff rules concerning congestion revenue allocation among the balancing areas participating in EDAM and what impact that may have on participating balancing areas. *See* Powerex at 37-38; Shell Energy at 5-6; WPTF-NIPPC at 6-7, 14-15; Clean Energy Associations at 4-5, 9-10.

[201] For example, the CAISO presented a clear example during a technical workshop in the stakeholder process that showed the calculation and distribution of congestion revenue and illustrated how congestion revenue, separate from transfer revenue, would be allocated to the balancing area where the constraint is located. *See* Attachment D to this Answer (containing slides 98-103 from the slide presentation delivered at the technical workshop). The entire slide presentation from which the materials in Attachment D are drawn is available at https://stakeholdercenter.caiso.com/InitiativeDocuments/Presentation-ExtendedDay-AheadMarket-Sep7-8-2022.pdf. In addition, the EDAM Final Proposal included a lengthier discussion of congestion revenue allocation to internal constraints within a participating balancing area. *See, e.g.*, EDAM Final Proposal at 7 ("The proposal continues to allocate congestion revenue that accrues when internal transmission system constraints bind, including modeled intertie constraints, solely to the participating balancing areas where the constraint originated. This balancing area is ultimately responsible for responding to and resolving the constraint and should be allocated the associated revenue to offset the associated costs."); *id.* at 113 ("Similarly, this final proposal retains the proposal that congestion revenue accruing because of binding transmission constraints on the internal transmission network of the EDAM entity be fully allocated to the EDAM entity, including with the ISO."); *id.* at 118 ("This approach is consistent with the allocation of congestion revenues in the WEIM, where the full allocation is settled with the EDAM BAA. On the ISO system, congestion revenues accruing on the internal transmission system are allocated to fund congestion revenue rights, and sharing these revenues could lead to under collection and undermine the ISO's ability to fund these congestion revenue rights. More practically, if there is a binding internal transmission constraint, the market re-dispatches generation internal to the BAA to continue serving load and meeting the BAA's obligations. Sharing the accrued revenues with other entities would be inequitable in these circumstances. Stakeholders do not oppose this approach for allocating congestion revenue for purely internal constraints.").

stakeholder process described below, the CAISO reaffirms its commitment to work collaboratively with all stakeholders in a transparent and open manner to address these concerns and consider any appropriate, targeted, and transitional measures that equitably address the concerns and needs of all market participants.

As explained above, the Commission has already found the existing EDAM design under the CAISO Tariff is just and reasonable. The Commission should find the revisions PacifiCorp proposes to its OATT to implement the EDAM design in the PacifiCorp balancing areas in a manner consistent with the accepted CAISO Tariff to be just and reasonable, as well as consistent with or superior to the *pro forma* OATT.

The CAISO also recognizes the bulk of concerns raised in this proceeding pertain to the implications of the Commission-approved EDAM approach to congestion revenue allocation related to parallel flow impacts among participating EDAM balancing areas. Commenters' concern focuses on uncertainty over their exposure to congestion costs arising out of parallel flows across other balancing areas. As explained above, there is no merit to arguments commenters had a reasonable expectation from the proceeding leading to the EDAM Acceptance Order that under the EDAM design, holders of firm OATT transmission rights would receive a "perfect hedge" and not be allocated any congestion costs caused by the use of their transmission. The CAISO takes to heart the uncertainty expressed by some, specifically over the cross-balancing area congestion implications of the CAISO Tariff design; however, this should not

prevent the West from moving forward with EDAM and realizing the significant cost savings for all participating balancing areas.

EDAM does not create the uncertainty regarding the cross-balancing area flows; they are endemic to all LMP-based markets and issues regarding them inevitably have been raised when regions transition to LMP markets. Likewise, parallel flows are also not a phenomena created by EDAM—they are endemic to all interconnected transmission systems that are managed under differing transmission tariffs, scheduling practices, and operational and planning regimes. The Western Interconnection has experienced parallel flow implications for years, and the balancing authorities therein have had to address congestion implications of parallel flows through their individual balancing area operations and unscheduled flow mitigation procedures administered for qualified paths in the Western Interconnection. Further, the implications from parallel flow will change as the Western Interconnection transforms its mix of resources, considers transmission development implications, and moves to day-ahead organized markets. The associated parallel flow and how it should be addressed, both within and outside of the market area, is simply a part of this ongoing transformational and evolutionary process.

Markets+ will inevitably have to deal with these same critical congestion revenue questions presented by commenters, particularly if transmission service rights have to be pro-rated due to congestion based on actual experience. The Commission should not be persuaded that forcing EDAM entities to adopt elements of the Markets+ approach is any more just and reasonable, or that the

different market design path followed by Markets+ somehow makes the EDAM approach unjust and unreasonable. Indeed, not everyone necessarily agrees with the Market + approach. Only experience with each market will provide the opportunity for all stakeholders to observe what the impacts of cross-balancing area flows may be for them, make adjustments to their practices over time, and consider any enhancements that equitably consider the costs and benefits for all those participating in a day-ahead market or real-time market.

The CAISO takes seriously questions and concerns that commenters have raised about the Commission-approved EDAM congestion revenue allocation methodology, as well as its responsibility as an ISO and market operator to provide viable, equitable, and lasting solutions for all those that participate in the markets it operates. Accordingly, the CAISO will immediately commence an expedited stakeholder effort to address concerns regarding the uncertainty over congestion cost implications from flows in other balancing areas. The CAISO will engage with all interested stakeholders concerning its allocation of congestion revenue among balancing areas participating in EDAM, including considering any potential transitional measures that might ease the uncertainty regarding the incurrence of costs under the EDAM design.

As discussed above, the CAISO has a Commission-approved mechanism in its Tariff for allocating congestion revenues related to parallel flows among the balancing areas participating in EDAM,[202] and the stakeholder initiative will focus

[202] *See* CAISO Tariff, Appendix C as accepted by the EDAM Acceptance 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

on this specific aspect of the CAISO Tariff, not on other aspects of the EDAM design. It is important to consider carefully possible transitional options that might appropriately address concerns (and are implementable in a timely manner) without creating new problems. If the expedited review with stakeholders yields agreed-upon changes, the CAISO will prepare any revisions to the CAISO Tariff needed to implement such an addition to the EDAM design.[203]

As with most of the numerous enhancements to the WEIM implemented over the years, the CAISO expects any change in the EDAM congestion revenue allocation methodology would not require PacifiCorp to change its sub-allocation approach. Again, PacifiCorp is merely re-allocating to its customers the dollars the CAISO allocates to PacifiCorp.[204] Specifically, the PacifiCorp OATT references the CAISO charge codes for allocating to each participating balancing authority the day-ahead and real-time congestion revenue. Any adjustment to

(MCG) effective upon implementation of EDAM); *see also* CAISO Tariff sections 33.11.1.2 (day-ahead congestion revenue calculation effective upon implementation of EDAM) and 33.11.3.9.3 (day-ahead congestion offset settlement effective upon implementation of EDAM); *compare* CAISO Tariff sections 11.5.4.1.1 (currently effective real-time congestion offset in WEIM) and 11.5.4.1.2 (real-time congestion offset in WEIM effective upon implementation of EDAM).

[203] Even without a transitional mechanism, the EDAM design is just and reasonable pursuant to the findings in the EDAM Acceptance Order. If a transitional mechanism were to be added, it would merely enhance the existing just and reasonable EDAM provisions of the CAISO Tariff. *See, e.g.*, *Cal. Indep. Sys. Operator Corp.*, 175 FERC ¶ 61,096, at P 27 (2021) ("[W]e believe the revision to the EIM base schedule timeline is just and reasonable because it allows EIM participants to submit more timely and accurate base schedules closer to the operating hour, which is an improvement over the current Tariff rules."); *Cal. Indep. Sys. Operator Corp.*, 175 FERC ¶ 61,160, at P 17 (2021) ("In particular, we find that CAISO's proposed Tariff revisions are just and reasonable measures that should improve CAISO's ability to manage potentially tight system conditions and constitute improvements for each of the specified areas that can be reasonably implemented in time for summer 2021.").

[204] *See* PacifiCorp Revised OATT Filing, Attachment B, at revised sections 10.4, 10.4.1, and 11.5.2 of Attachment T to the PacifiCorp OATT.

the CAISO allocation of congestion revenue would be limited to a settlement configuration change in these same CAISO charge codes, which would then flow through the PacifiCorp sub-allocation methodology without any change to the PacifiCorp OATT being required.

Although any changes to the EDAM provisions of the CAISO Tariff must be vetted through the CAISO stakeholder process and approved by the CAISO Board of Governors and the WEM Governing Body, there may be potential limited changes to the EDAM provisions in the CAISO Tariff that may be possible effectively to adjust the allocation of congestion revenue from flows caused by one participating balancing area on another. The planned stakeholder process will consider whether to adopt a surgical modification to the CAISO's settlement calculation of congestion revenue that would adjust the allocation of congestion revenue related to parallel flow to each participating balancing area by an amount equal to the congestion revenue collected due to its contribution to the congestion in another participating balancing area.[205] Evaluation of this proposal will be critical so that this or any other possible measure does not impose undue costs on other participating balancing areas. If stakeholders support such a change, the CAISO would present that transitional modification to the Commission for acceptance in a separate FPA section 205 filing.

[205] This stakeholder process may also assess the feasibility of implementing financial rights, a design feature specifically excluded from EDAM, as a potential longer-term solution. However, financial rights involve considerations that are much wider-reaching than an adjustment to the calculation of congestion revenue otherwise allocated to a participating balancing area as provided by the CAISO Tariff today.

Over the longer term, the CAISO may also introduce for consideration CRR/financial transmission right functionality to the EDAM design. In the proceeding on the revisions to the CAISO Tariff to implement the EDAM design, the CAISO explained it did not propose to extend the use of CRRs to balancing areas participating in EDAM as part of its initial design. As discussed in the Harvey Statement contained in Attachment B to this Answer, adopting financial rights in EDAM is not impossible, but it requires careful consideration because the EDAM design accounts for optimization across a multi-balancing area footprint within which transmission service providers continue to sell firm rights on their transmission systems.[206]

In upcoming years, as EDAM evolves, the EDAM stakeholder community can continue to discuss whether to transition to financial rights across the EDAM area. As we move through these discussions in the future, stakeholders will have to consider how best to align financial rights with physical transmission rights secured under OATTs.[207] Specifically, this exercise would require application of a simultaneous feasibility test and consideration of how to account for continued transmission sales under participant OATTs as part of the EDAM framework.[208] This evaluation may only be possible after EDAM has been in place for sufficient time so stakeholders have ample experience and opportunity to evaluate the implications of the congestion management approach from their perspective.

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206 Harvey Statement at 2-3.

207 Transmittal letter for CAISO EDAM Tariff Filing at 196-97.

208 *See* Harvey Statement at 1, 6.

In any event, the Commission should not reject the PacifiCorp OATT amendments submitted in this proceeding—even without prejudice—due to commenters' concerns about the CAISO Tariff's congestion revenue allocation methodology. Moreover, the Commission should not reject or modify PacifiCorp's OATT amendments in the instant proceeding because the CAISO might, in a stakeholder process, modify the methodology by which EDAM allocates congestion revenue to balancing areas. PacifiCorp's sub-allocation proposal is equally workable with the existing congestion revenue allocation methodology under the CAISO Tariff and with any new methodology the CAISO might adopt to adjust its direct allocation of congestion revenue to PacifiCorp. PacifiCorp has provided a just and reasonable two-tiered approach that, regardless of how the CAISO assigns congestion rents to participating balancing areas, will allocate rents to customers in a manner consistent with cost causation principles. The Commission need not delay a decision on the PacifiCorp Revised OATT Filing until completion of the CAISO stakeholder process because, regardless of what comes out of that process, PacifiCorp's OATT amendments reasonably sub-allocate whatever congestion rents the CAISO allocates to PacifiCorp under the EDAM provisions of the CAISO Tariff.

For all the reasons specified in this Answer and the PacifiCorp Revised OATT Filing, the Commission should accept PacifiCorp's OATT amendments without modification or condition.

IV. CONCLUSION

For the foregoing reasons, the Commission should accept the PacifiCorp Revised OATT Filing, without modification or condition, in an order issued by May 16, 2025, as requested by PacifiCorp.

Respectfully submitted,

/s/ John C. Anders

Sean A. Atkins
Bradley R. Miliauskas
Davis Wright Tremaine LLP
1301 K Street, NW
Suite 500 East
Washington, DC 20005
Tel: (202) 973-4200
seanatkins@dwt.com
bradleymiliauskas@dwt.com

Roger E. Collanton
General Counsel
John C. Anders
Deputy General Counsel
Anthony J. Ivancovich
Deputy General Counsel
Tel: (916) 608-7287
rcollanton@caiso.com
janders@caiso.com
aivancovich@caiso.com

Counsel for the California Independent System Operator Corporation

Dated: March 7, 2025

Attachment A

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

PacifiCorp	**)**	**Docket No. ER25-951-000**

DECLARATION OF GUILLERMO BAUTISTA ALDERETE ON BEHALF OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

I, Guillermo Bautista Alderete, state as follows:

I. Introduction and Summary

1. My name is Guillermo Bautista Alderete. I am employed as Director of Market Performance and Advanced Analytics for the California Independent System Operator Corporation (CAISO). My business address is 250 Outcropping Way, Folsom, CA 95630.

2. I have a bachelor's degree in Electrical Engineering from the Institute of Technology in Mexico, a master's degree in Electrical Engineering with specialization in the Operations of Power Systems from the Polytechnic Institute of Technology in Mexico, and a Doctor of Philosophy in Electrical and Computer Engineering with an emphasis in Financial Transmission Rights and competition in electricity markets from the University of Waterloo, Canada.

3. I began working at the CAISO in May 2007 and have worked in a variety of technical capacities in the divisions of Operations, Technology, Market Infrastructure and Development, and Market Quality and Renewable Integration. In 2011, I became the manager of the then-newly created Market Validation and Quality Analysis team in the Division of Market Infrastructure and Development, with primary responsibility for market solution quality review, price validation, and root cause analysis of anomalous market outcomes. In 2015, I became the Manager of Market Analysis and assumed the responsibility of managing an additional team responsible for market analysis and development, whose primary role is to provide analytical support to policy initiatives and monitoring and reporting of the CAISO's markets. In 2016, I became the Director for Market Analysis and Forecasting, where I oversaw the functions of market validation, analysis, and short-term forecasting. In 2024, I became the Director of Market Performance and Advanced analytics, which is the position I currently hold.

4. In this Declaration I explain the analysis I performed to assess the correctness of the claims provided by Powerex Corp (Powerex) and others that make similar claims. In sum, these claims rely on real-time Western Energy Imbalance Market (WEIM) constraint data to speculate on and extrapolate potential congestion impacts in the Extended Day-Ahead Market (EDAM). This approach is misleading because this ill-constructed assumption and misuse of the real-time data on WEIM constraints and

conditions are not reflective of the materiality and implications of the day-ahead market operation under EDAM. Moreover, in this speculation, Powerex fails to acknowledge the broader effects of a regional day-ahead market would have on congestion management through its extension under EDAM. An expanded day-ahead market will provide the ability to more effectively resolve congestion and reduce the frequency of binding transmission constraints.

II. Powerex and Others Inappropriately Use WEIM Constraint Data to Infer Unsubstantiated Conclusions as to EDAM and Impacts of CAISO Constraints on Other EDAM Balancing Areas

5. Some of the WEIM congestion data used as a reference is from a constraint applied exclusively in the real-time market, which is not applied in the current day-ahead market nor will it be applied in EDAM. This flow-based internal CAISO constraint, which is identified as 6110_COI_S_N, is applied only in real-time to help manage parallel flows in the CAISO system caused by transactions scheduled outside the CAISO system and was developed, adopted, and applied according to existing transmission ownership agreements and path operations of the California-Oregon Intertie (COI). Thus, that congestion does not represent the potential impacts in EDAM.

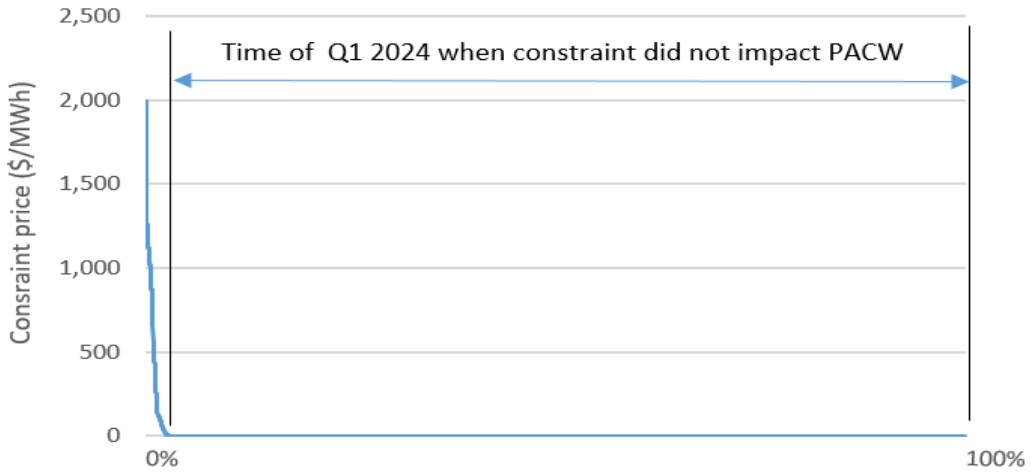
6. With EDAM, all transmission within a participating balancing area is available for optimization, whereas in the WEIM it is only a fraction of full transmission capability that is available for optimization. With additional and full

transmission system optimization, constraints in the CAISO balancing area and other EDAM balancing areas will likely have more limited impacts because of the enhanced ability to deliver and redispatch additional generation to manage the impact of congestion. All resources in EDAM balancing areas will be available for market commitment and dispatch, and there are no base schedules as in the WEIM. The additional generation scheduled by the market will allow more effective and economic congestion management across the footprint constraints in the CAISO or any other balancing area.

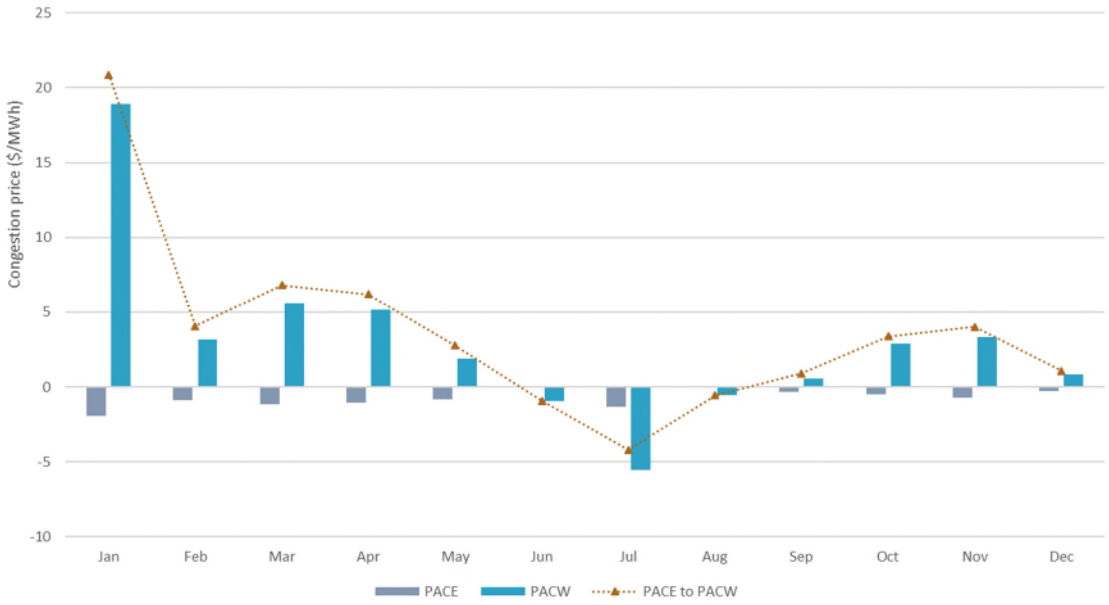
7. In the Testimony of Jeff Spires on behalf of Powerex, Q1 2024 CAISO congestion data is used to create a distorted argument and draw conclusions based on ill-defined analysis. The results from Q1 2024 are characterized to be representative overall congestion in the CAISO system, which are then extrapolated to assume that the same conditions will apply in EDAM. This is an erroneous conclusion. The Q1 2024 congestion data is far from being a typical or representative reference for either EDAM or any other time period even in real-time.

8. More specifically, January 2024 was an outlier in the congestion pattern due to an unprecedented cold snap that impacted the Pacific Northwest, resulting in extreme congestion on the 6110_COI_S_N constraint. In fact, this extreme congestion mainly occurred during the Martin Luther King, Jr. holiday period

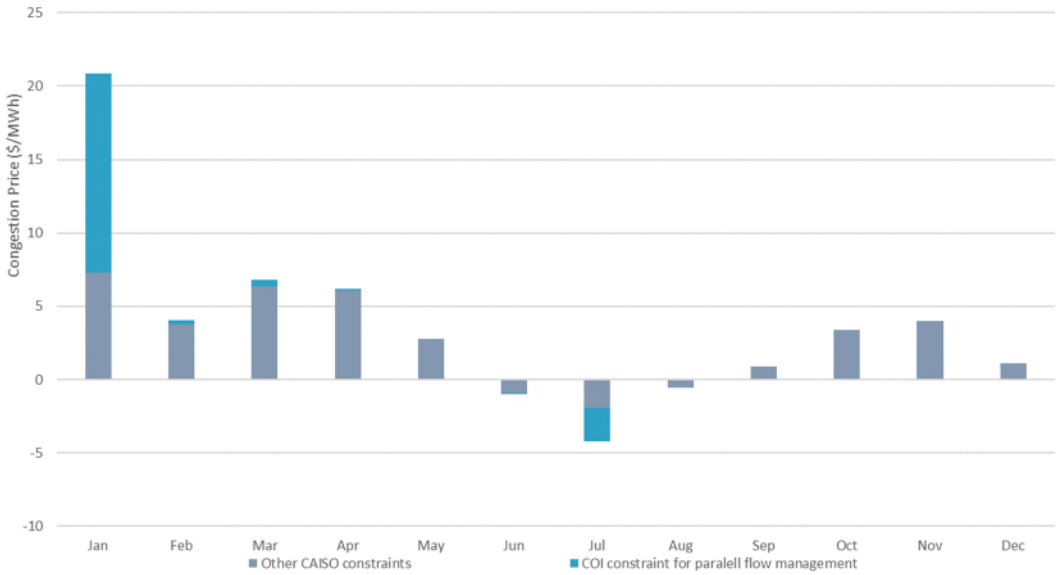
and has not materialized since to the level experienced in that time frame. The following graph shows that this specific constraint impacted the PacifiCorp East (PACE) and PacifiCorp West (PACW) balancing areas just 2.85% of the time in Q1 2024. This constraint impacted PACE prices just 0.88% of the time in Q1 2024.



9. Powerex's analysis uses simple averages over the quarter, which obscures the dynamics of outlier congestion. The following graph demonstrates how atypical the congestion was in January and how using Q1 2024 averages would provide a misleading characterization of congestion throughout the year.



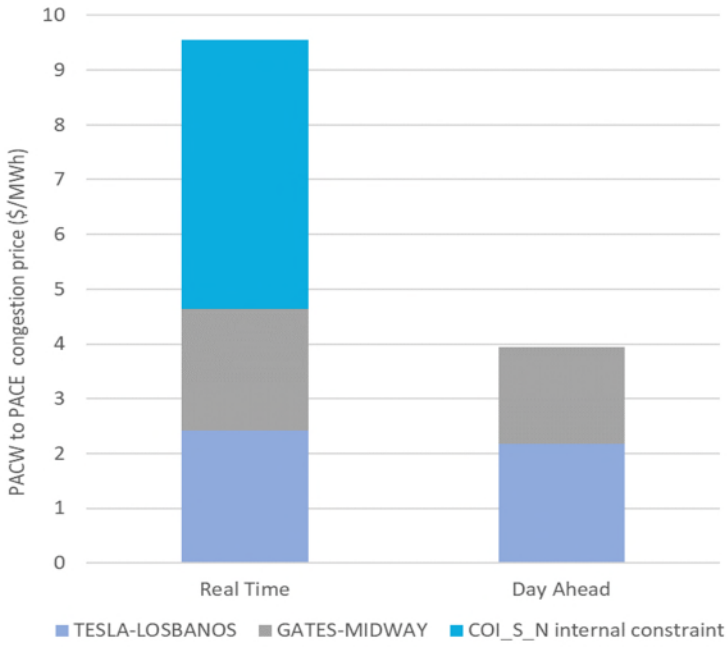
10. When averaged with other constraints, this outlier event will skew and obscure the actual dynamics observed in real-time. Overall, the distorted view of prices based on averages fails to reveal the true effect of this constraint and how it is not expected to be a typical condition in the CAISO system throughout the year. *The following graph shows that the actual contribution of this constraint (which bound less than 3% of the time in Q1 2024) to overall prices in PACE and PACW was 65% of the total congestion on CAISO internal constraints in January.* The graph also illustrates how lower the level of congestion materializes throughout the year, even during summer peak conditions, as well as the change in pattern in summer months when power change directions and prices in PACW and PACE are reduced due to congestion.



11. The supporting Powerex testimony goes a step farther by using this outlier congestion to claim that PACE and PACW would be exposed to substantial congestion charges in EDAM. This conclusion is unsubstantiated. The extreme congestion observed in January 2024 from the COI constraint is a constraint only in real-time that will not be enforced in EDAM, and even then such congestion may only occur intermittently in real-time. The underlying constraint on the COI is applied only in real-time to help manage parallel flows in the CAISO system caused by transactions scheduled outside the CAISO system. Due to physical laws, a portion of these external transactions flow through the CAISO system as parallel flows, creating internal congestion. Although the congestion on the COI nomogram is caused by transactions outside the CAISO system, it is the CAISO balancing area that must manage it using CAISO resources, and it is the CAISO load that bears the burden of the congestion costs. Under EDAM, the ability to manage this type of

congestion in real-time will improve as the parallel flows on the CAISO system's transmission capacity will become more transparent through the EDAM congestion management process.

12. The Powerex analysis focuses on the impact of CAISO constraints on PACE and PACW, with special emphasis on the top three constraints (6110_COI_S_N, Tesla-LosBanos, and Gates-Midway), as these are responsible for the majority of the congestion. These three constraints are used to highlight the significant congestion contribution from the CAISO system in real-time and to suggest that congestion will likely be similar in the day-ahead market. However, as explained above, that real-time congestion is generally not reflective of day-ahead congestion, since real-time congestion management has more limited flexibility compared with day-ahead congestion management. *Using the same construct for both real-time and day-ahead, the following chart compares the day-ahead congestion with real-time congestion for the top three constraints analyzed by Powerex and shows that real-time congestion is significantly higher than day-ahead congestion.* Again, this illustrates that real-time congestion information does not project day-ahead congestion.



13. This concludes my Declaration.

Pursuant to 18 C.F.R. Section 385.2005(b)(3), I verify that the foregoing Declaration is true and correct to the best of my knowledge, information, and belief.

/s/ Guillermo Bautista Alderete
Guillermo Bautista Alderete

Executed this 7th day of March, 2025 at Folsom, California.

Attachment B

Statement of Dr. Scott Harvey, FTI Consulting
and
Member of the Market Surveillance Committee

March 6, 2025

I have reviewed the protest submitted by Powerex and offer this statement to the California ISO for submission into the record in FERC Docket No. ER25-951. My statement provides a general overview of important respects in which the EDAM design for recovery of embedded transmission costs differs from those in eastern ISOs, the issues involved in converting firm transmission service and native load transmission entitlements into financial transmission rights, and how other markets have addressed pricing of parallel flows on congested transmission elements in other balancing areas. I also explain that, while the Extended Day-Ahead Market (EDAM) currently does not include a congestion revenue or financial transmission right (CRR/FTR) design, it could include such a design in the future, provided that the same considerations are addressed, including rules governing the continued sale of firm transmission rights and the application of some form of a simultaneous feasibility test.

In addition, my statement supports the understanding that parallel flows and the associated congestion pricing results are common across LMP market design, and that the approach in the WEIM today, and that will be extended to EDAM, is consistent with other market designs. If the EDAM congestion charges attributable to the parallel flows on adjacent balancing areas of existing firm transmission service and dispatch of balancing area generation to meet balancing area load prove to be material over time, the EDAM participants may choose to develop a more elaborate congestion rent allocation design that includes flow entitlements on neighboring systems, either as a transitional measure or as part of a long-term design, or may agree to make other ad hoc interim adjustments to the initial EDAM design

Moreover, Powerex's analysis of DMM real-time congestion data significantly misstates the impact of WEIM congestion charges on the cost of meeting PacifiCorp load. In fact, Powerex's analysis has basically no bearing on assessing the impact of EDAM dispatch and settlements on PacifiCorp customers. Overall, nothing in the Powerex submission changes my opinion that the CAISO's congestion revenue methodology embedded in the EDAM design remains a reasonable starting point.

Overview of Financial Rights in Organized Markets, Including EDAM

EDAM currently does not include a CRR/FTR design. A CRR/FTR design could be implemented to allocate transmission congestion rents within EDAM; however, such a design could not follow exactly the designs of ISO/RTOs in other regions because of

unique and fundamental elements of EDAM and the Western Energy Imbalance Market (WEIM). In particular, the continued sale of firm transmission service by transmission owners to recover their embedded cost of transmission is foundational to the EDAM/WEIM framework and fundamentally different from the embedded cost recovery designs in eastern ISO/RTOs.

The award of CRR/FTRs by ISO/RTOs is subject to a simultaneous feasibility test. There is no market experience with a design in which CRR/FTRs can be awarded arbitrarily in combination with both past and current sales of firm service by individual transmission owners, as Powerex appears to suggest should be the policy in EDAM. Any transition to a CRR/FTR design would require a process that reviews past and current firm transmission service sales in combination with native load transmission entitlements and enforces some form of a simultaneous feasibility test to limit the award of CRR/FTRs. In addition, firm service is subject to curtailment in the event of transmission outages. Any transition to a CRR/FTR type design would require development of a design to fund congestion rent shortfalls due to transmission outages and derates and include a mechanism to allocate or otherwise eliminate these shortfalls.

Further, an entitlement to financial protection from congestion created on adjacent systems is not automatic but is a matter of joint congestion management design and agreement regarding entitlements. Firm transmission that creates flows on congested monitored elements on adjacent systems is normally subject to curtailment. No agreement or arrangement regarding entitlement to off contract path flows without curtailment has been developed among EDAM participants and would have to be in place before FTRs/CRRs hedging congestion charges attributable to flows on transmission constraints in other balancing areas could be awarded.

The EDAM can proceed without the implementation of a full financial transmission right design. The Commission-approved tariff includes an approach that transfers congestion revenues to the participating areas that bear the burden of congestion on monitored elements in their area or on transfer or path limits into their balancing area. It remains reasonable to move forward with EDAM and capture the benefits from the EDAM market design and to evaluate CRR/FTRs as an enhancement after operational experience is available and a process for defining CRR/FTR entitlements is agreed upon. Proceeding this way would support an informed process for considering the associated arrangements and ensuring that any market design enhancements remain fair and equitable.

It would also be reasonable for EDAM participants to agree to interim arrangements through which some portion of congestion rents associated with flows on congested monitored elements on other transmission systems would be allocated to the balancing

area whose schedules create those flows, for allocation to native load and to firm transmission service rights holders for existing rights holdings as of some prior date, as a transitional measure. But such arrangements should be carefully considered among the EDAM participants and agreed upon as to flow entitlements for transmission rights as of a specific date. The sales of additional firm transmission rights over time should not provide a mechanism for ever increasing flow entitlements on transmission constraints in other balancing areas.

In any case, the CAISO should monitor and make transparent to EDAM participants and potential participants the congestion management settlement impacts of the initial EDAM design and after a period of actual experience with the new market design, participants could consider whether additional measures are needed to equitably assign congestion revenues.

Embedded Cost Recovery and Firm Transmission Service

A noteworthy omission in comments discussing CRR/FTRs in other LMP based markets is the fact that the introduction of financial rights has always been accompanied by the elimination of sales of firm transmission service by individual transmission owners, with their embedded transmission costs recovered by other means. The WEIM and EDAM designs do not eliminate the sale of firm transmission service by transmission owners/balancing area operators. This is an important and explicit part of the overall market design, which allows transmission owners that have built transmission to support sales of wholesale transmission service, as well as to support wholesale power sales, to continue to recover a portion of their embedded costs from sales of transmission service. This element of the WEIM/EDAM design is unique among North American ISO/RTOs, but the problem of avoiding costs shifts with the introduction of an LMP based spot market is not unique.

For example, in the New York Power Pool in the late 1990s, much of the high voltage transmission network was owned by the New York Power Authority, which recovered most of the embedded cost of its transmission system from sales of firm transmission service to other New York transmission owners. There could be no NYISO without the participation of NYPA, and NYPA could not reasonably be expected to join NYISO if there was no means to recover the embedded cost of its transmission.

The solution to this problem was the development of the NTAC charge, which is recovered from all NYISO transmission customers.[1] This charge was intended to recover the NYPA embedded transmission costs that had historically been recovered from sales of transmission service.[2] While the WEIM/EDAM design might take a similar

[1] See NYISO OATT section 2.7.2.4.

[2] See NYISO OATT Attachment H, sections 14.2 and 14.3.

approach to ensure the ability of particular transmission owners to recover the embedded cost of their transmission investment, there would first need to be more experience with the operation of EDAM and agreement among EDAM and WEIM participants.

Similarly, with the westward expansion of PJM in 2004 some of the transmission owners that would be joining PJM recovered a portion of their transmission cost of service through the sale of firm transmission service on transactions flowing between MISO and PJM. This transmission service would no longer be purchased with the utilities joining PJM. The Commission authorized compensation to these transmission owners through the SECA charges. History has shown that this design did not work well and had unintended consequences.[3]

Another example of embedded cost recovery were the MVP transmission projects in MISO. Susan Pope (the WEM Governing Body market expert) and I were asked by MISO to advise the impacted state regulators in working out an agreement on how the cost of these transmission investments would be recovered. It was not reasonable to expect that Iowa, North Dakota and Montana rate payers would solely bear the cost of transmission built to export wind power to power consumers to the east. The MISO state regulators developed a design which they largely agreed fairly allocated these transmission costs to market participants across the footprint (but there were still disagreements that the Commission had to resolve). The Iowa, North Dakota and Montana utilities did not have to build the transmission then recover the costs from only their rate payers.[4]

The point is that the potential for cost shifts with respect to recovery of embedded transmission costs motivated the WEIM/EDAM transmission design are not unique and these issues have had to be addressed in other markets as well.

FTRs, CRRs/TCCs Must be Simultaneously Feasible

A core element of CRR/FTR design is the simultaneous feasibility test. CRR/FTRs are not magic, the payments to financial rights holders are intended to be funded by the collection of congestion rents through locational marginal pricing. The concept of

[3] See Dockets ER05-6, EL04-135, EL02-111, EL03-212 and the Commission's November 18, 2004 order, 109 FERC ¶ 61,168.

[4] See MISO's July 15, 2010 filing in Docket ER10-1791 and the December 16, 2010 FERC order.

financial transmission rights developed by William Hogan rests on revenue adequacy theorems based on simultaneous feasibility tests for obligations[5] and for options.[6]

While ISO/RTOs take existing firm transmission service whose term has not yet expired into account in awarding CRR/FTRs, they do not automatically award financial rights for all prior firm transmission service. Prior to ISO/RTO formation, sales of firm transmission service by transmission owners in combination with use of transmission to meet native load often exceed the transfer capability of the grid. Firm service would generally be available despite exceeding the transfer capability of the transmission system because not all transmission customers would use their firm transmission service every day. In addition, transmission owners often find it economic to support the sale of infeasible transmission service with out of merit dispatch.

One reason that FTRs are different from firm transmission service with respect to simultaneous feasibility and revenue adequacy is because payments are made to FTR holders whether or not the holder schedules use of their firm transmission. ISO/RTOs can similarly support the transmission flows associated with infeasible CRR/FTRs through out of merit dispatch, but this results in congestion rent shortfalls that must be allocated to someone. If firm transmission service sold by EDAM participants were to be awarded CRR/FTRs, the awards would need to be based on the application of some form of a simultaneous feasibility test.

For example, in NYISO the grandfathered rights and existing transmission entitlements for native load, called ETCNL in the NYISO tariff, are subjected to a simultaneous feasibility test, and reduction, each time a capability period auction is settled as described in section 19.8.2 of attachment M of the NYISO OATT. This reduction process is necessary because the transfer capability needed to support existing firm transmission service and native load entitlements exceeded the actual transfer capability of the transmission system.

Similarly, in MISO it was necessary to award counterflow FTRs to some transmission owners to enable some existing OATT firm service to be allocated FTRs that would be feasible in combination with FTR entitlements for native load. The counterflow FTRs essentially replaced the transmission service provider's former obligation to redispatch generation to accommodate the OATT service it had sold. Dr. Gribik and Mr. Gardner note the development of the FTR allocation design by MISO, but omit reference to the lengthy process that was required to reach agreement. Susan Pope, the WEM Governing Body market expert, alone made more than 20 presentations to MISO

[5] William W. Hogan, "Contract Networks for Electric Power Transmission," Journal of Regulatory Economics, September 1992, Volume 4 #3.

[6] Scott M. Harvey, William W. Hogan, and Susan L. Pope, "Transmission Capacity Reservations and Transmission Congestion Contracts," June 6, 1996, Revised March 8, 1997.

stakeholders over the January 2002 to September 2003 as part of this process. This included one joint presentation with Carl Monroe (November 22, 2002), and many with Richard Doying. The process of reaching agreement on FTR allocation was neither simple nor short, even after agreement on an LMP market with FTRs had been reached at the end of 2001. And that was in a design which eliminated prospective sales of firm service by individual transmission owners.

Based on outcomes in other markets, it is likely that not all of the firm transmission service sold by transmission owners in EDAM would satisfy the simultaneous feasibility test. Hence, any design that coupled the award of CRRs funded by WEIM/EDAM congestion rents to the sale of firm transmission service by individual transmission owners would require development of rules for limiting those sales with some form of simultaneous feasibility test. The current EDAM design allocates congestion rent shortfalls due to infeasible sales of firm transmission service to the responsible balancing area, which is reasonable and consistent with cost causation. There is no basis for asserting that all of the firm transmission service sold by each EDAM participant, in the past and in the future, as well as transmission owners entitlements to use of their transmission system to meet native load, could be arbitrarily converted into FTRs/CRRs without giving rise to large congestion rent shortfalls.

Firm Transmission, CRR/FTRs and Transmission Outages

The Powerex discussion of firm transmission rights slides over the fact that firm transmission service can be materially curtailed if there are transmission outages. A key factor during the January 2024 period analyzed by Powerex was the outage of the Nevada Oregon Border (NOB) transmission intertie. Had CRR/FTRs been awarded for firm transmission service for south to north flows on NOB, there would have been substantial congestion rent shortfalls when NOB was not available. Hence, converting firm transmission service sold by individual transmission owners into CRRs would also require agreement on who would be responsible for funding payments for financial transmission rights when congestion rents are reduced by transmission outages. The shortfall could be allocated to the transmission owner responsible for the outage as is the case in the NYISO. It could be eliminated by reducing CRR payments to CRRs made infeasible by the outage as is the case in the CAISO today, or it might be addressed in other ways, but it has to be addressed.

Powerex acknowledges the need to address congestion rent shortfalls stating:

> The Commission had recognized that the total congestion charges collected by a market operator in the day-ahead market, based on the actual availability of transmission facilities, may be insufficient to fund payment of the congestion price differentials on the full quantity of FTRs that were issued, as this quantity is based

> on expected future availability of transmission facilities. In such circumstances, the Commission has accepted mechanisms that apply prorate reductions on these payouts. In this manner, financial transmission rights are conditioned on the actual capacity that is available in the day-ahead market, just as occurs under the OATT framework.[7]

But Powerex does not propose a specific process for allocating congestion rent shortfalls and WEIM and EDAM participants have not agreed on such a process. Sales of firm transmission service cannot be used to assign CRR/FTRs without an agreed upon process for addressing congestion rent shortfalls. The period on which Powerex focuses, January 2024, is the very period in which congestion rent collections would have been materially reduced by transmission outages. The Powerex discussion also ignores the likelihood that the sum of the firm transmission service individually sold by transmission owners will be infeasible and produce congestion rent shortfalls even when there are no transmission outages. Moving forward with EDAM and considering CRR/FTRs as a potential enhancement based on operational experience, or considering other interim adjustments to the congestion rent allocation design relating to parallel flows would be consistent with the underlying EDAM market design.

Accounting for Parallel Flows

The firm transmission service sold by one transmission owner has the potential to cause power flows on adjacent systems that can create overloads on transmission elements in those neighboring transmission systems. Parallel flow is inherent in the contract path transmission service reservation approach in the west today, and there are unscheduled flow mitigation procedures for applying transmission loading relief when this is the case. Unscheduled flow mitigation is not an ideal method for managing congestion. These procedures are imprecise and unlikely to curtail the least valuable transactions, and may not be effective in terms of congestion management for a variety of reasons that have been extensively discussed. LMPs provide transparent pricing of the congestion impacts of WEIM and EDAM market schedules on flowgates in adjacent balancing areas but they do not create the flow impacts. The EDAM and WEIM dispatch may, however, create the potential for increased parallel flows impacts, just as the western expansion of PJM created the potential for increased flow impacts on adjacent systems.

Back in 1999 in research supported by several eastern ISO/RTOs William Hogan worked out a conceptual approach to coordinated redispatch among RTO/ISOs to

[7] Protest of Powerex Corp, pp. 30-31.

manage congestion on adjacent systems.[8] With the expansion west of PJM and real-time dispatch replacing transmission schedules in MISO and western PJM, the use of the NERC tagging system for transactions between balancing areas to manage parallel flows no longer worked. Instead, it was necessary to identify flows associated with the overall economic dispatch. This led to the practical implementation of market to market joint congestion management by PJM and MISO, along with market to non-market coordination with adjacent utilities, accompanied by the definition of flow entitlements. The PJM and MISO real-time dispatches each take account of the impact of their market dispatch on market to market constraints in adjacent markets. These flows on binding transmission constraints in adjacent areas are reflected in prices just as is the case in the WEIM. PJM and MISO take account of these parallel flows and flow entitlements in applying the simultaneous feasibility test to the award of FTRs.

The WEIM achieves such a joint congestion management across the footprint through the submission of bids and offers by resources, and the real-time dispatch by the CAISO. The current WEIM design provides participants with a flow entitlement on neighboring systems corresponding to their base schedules. That is, in the WEIM there is no real-time congestion charge for parallel flow congestion impacts consistent with their base schedules. However, WEIM entities pay congestion charges for any flows on congestion transmission elements associated with real-time schedules in excess of their base schedules.

The WEIM utilizes the full network model to enforce all appropriate network and resource constraints to optimally dispatch resources to meet demand across the market area as well as enforcing transfer limits and some path limits. The LMP is calculated at each pricing node or aggregated pricing node location in the market area. The marginal congestion component 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, as determined by sensitivity analysis on the power flow solution, within the minimum effectiveness threshold. The WEIM design therefore appropriately accounts for the contribution from flow impacts on modeled constraints in each balancing area through the marginal congestion component.

The current EDAM design does not include flow entitlements for EDAM participants on congested interfaces within other balancing areas. Subject to the creditworthiness and other administrative requirements, any entity including EDAM participants, could,

[8] Michael D. Cadwalader, Scott M. Harvey, William W. Hogan and Susan L. Pope, "Market Coordination of Transmission Loading Relief Across Multiple Regions," November 18, 1998 (revised December 1998).

however, acquire CRRs to hedge exposure on the CAISO system caused by flow effects from its schedules on the CAISO transmission system.

Such hedging mechanisms do not exist in other balancing areas participating in the EDAM, but the EDAM congestion rent allocation design could also be extended to include flow entitlements across other balancing areas as part of the design, if these historical flows are in fact material with respect to the historical transmission usage of some EDAM participants. This could be accounted for perhaps through the allocation of transitional flow entitlements based on historical base schedules or other measures that could be discussed as the EDAM footprint evolves. Similarly, interim flow entitlements could be agreed upon among early EDAM adopters if they have concerns with the actual magnitude of the flow impacts, with these interim flow entitlements potentially based on historical flows associated with existing WEIM base schedules or some other simplified interim measure. In any event, such changes would need to be discussed among EDAM participants to determine what arrangement, if any, would be agreeable and workable. Having more information about the flow effects of EDAM schedules on path and other constraints enforced in EDAM will support these considerations.

EDAM Scheduling Requirements

Powerex witnesses argue that requiring firm transmission customers to submit schedules in the day-ahead market in accord with the 10am day-ahead market deadline somehow deprives them of their firm transmission service. This is misleading—all the transmission customers have to do to reserve their firm service is to submit a self-schedule in the day-ahead market. In the wind farm example of Mr. Wellenius,[9] if the firm transmission customer wants to schedule use of 500MW of transfer capability day-ahead from windfarm A, it can do so prior to 10 a.m. If the firm transmission rights customer does not use that transfer capability in real-time, because the resource is dispatched down, has an outage, or because of any other factor, it would buy back its day-ahead market schedule at the real-time price.

One thing a firm service customer cannot do under EDAM is withhold its transmission without scheduling it in the day-ahead market, so as to exercise transmission market power. Nor can the firm transmission customer wait until real-time when other transmission customers have scheduled financially binding transactions in the day-ahead market and then submit schedules that would make those financially binding schedules infeasible, but not be assigned the associated costs. The Powerex approach would create uplift costs caused by the firm transmission customer's actions that Powerex would have EDAM assign to other transmission customers.

[9] Testimony of Mr. Wellenius, Powerex Protest, p. 9 and 15.

Mr. Wellenius states “I am not aware of any stakeholder arguing for a right to simply withhold transmission capacity absent an intention by the transmission customer that reserved it to use that capacity.”[10] As noted above, any transmission customer that intends to use transmission capacity can simply schedule that use in EDAM. Fully utilizing the transmission grid with financially binding schedules in the day-ahead market is fundamental to realizing the full benefits of the transmission system and realizing the gains from implementing a regional western day-ahead market.

If a firm transmission customer chooses not to schedule transmission usage in the day-ahead market, my understanding of the EDAM/PacifiCorp tariff is that a firm transmission customer could submit price taking schedules in real-time that would displace other customers with higher offer prices. However, in the EDAM design the late scheduling transmission customer would bear the costs of displacing day-ahead market schedules if the transmission system had been fully scheduled in the day-ahead market. If there was no dispatch flexibility in real-time, the cost of trying to belatedly schedule in real-time might be extremely high. That is a good thing from the standpoint of both economics and reliability.

The intended operation of EDAM at a high level is that participants must show sufficient generation and firm transmission entitlements to meet their load and provide imbalance reserves in order to pass the EDAM resource sufficiency test. For the EDAM participants that pass the resource sufficiency test, the EDAM market engine then optimizes the scheduling of generation and use of EDAM transmission to meet EDAM load at least cost, while scheduling imbalance reserves to cover real-time net load uncertainty. These day-ahead market EDAM schedules would be operationally feasible and financially binding, like the schedules in other successful ISO/RTOs like PJM, NYISO and MISO.

However, in the Powerex world, EDAM day-ahead market schedules would not necessarily be operationally feasible in real-time operation because a firm transmission rights holder that did not schedule transmission use in the EDAM market could claim use of transmission in real-time, despite that transfer capability being fully scheduled in the day-ahead market, thereby rendering day-ahead market schedules operationally infeasible. The ability of firm transmission rights holders to act in this manner would mean that EDAM day-ahead market schedules might or might not be operationally feasible in real-time. This would only be a matter of inflated consumer costs on normal days, but it could pose serious reliability problems on days with stressed system conditions in real-time. It can be challenging for EDAM/WEIM system operators to maintain reliability in real-time when there are changes in real-time conditions relative to those expected day-ahead, such as net load forecast error or forced transmission

[10] Id. at p. 4.

outages, perhaps due to fires that started after the EDAM market cleared. At least in the EDAM market design the operators would start from operationally feasible day-ahead market schedules to meet expected load and would only need to manage real-time operational surprises.

In the Powerex world, however, the operators could start in a hole, perhaps a very deep hole, because Powerex or some other firm transmission owner did not schedule its planned real-time transmission use day-ahead and when that transmission use is belatedly scheduled in real-time, day-ahead market schedules would not be operationally feasible. Moreover, when operators find out about Powerex's mischievous late scheduling in real-time it could be too late to commit units that would be needed to meet real-time load but were not scheduled in EDAM because transmission appeared to be available. Similarly, cascade hydro that could have been scheduled to meet load in the day-ahead time frame might not be available when Powerex surprises the system operator with its real-time transmission schedules. Hence, the Powerex design would likely force changes in the EDAM design to withhold transmission from the EDAM day-ahead market in order to maintain real-time reliability, just as Mr. Wellenius admits should not happen.

EDAM is Appropriately Premised on the Proven WEIM Design

Several Powerex witnesses refer to elements of the Markets+ design as an option for EDAM. It needs to be kept in mind that the Markets+ design has not been implemented and remains untested. We know the EDAM design will be able to reliably dispatch the EDAM resources to meet EDAM load at least cost in the day-ahead time frame, providing operationally feasible day-ahead market schedules to support reliable real-time operation without withholding supply, without creating artificial uplift costs and without enabling gaming. It is based on the successful design and operation of the WEIM, and we know the EDAM day-ahead market schedules will operate efficiently in combination with the WEIM real-time market because EDAM was designed with WEIM in mind.

Market simulation for EDAM will soon commence and the process of assessing the potential for material cost shifts will begin. Stakeholders may desire to commence consideration of EDAM market design enhancements and transitional measures sooner, but there is no reason to delay implementation and the opportunity to gain operational experience and capture the benefits of the EDAM market. As all other organized markets have evolved since their startup, all participants and stakeholders will gain the necessary operational experience and understanding for proper and informed consideration of EDAM market design enhancements and transitional measures. In the meantime, the EDAM design and the framework upon which it was developed

represents a reasonable starting point and nothing in the materials Powerex submitted changes this.

Powerex Analysis of DMM Real-Time WEIM congestion data

In his testimony Mr. Spires notes that during 1Q January 2024 there was substantial south to north congestion in the WECC including flows on binding constraints in the CAISO. Most of this congestion was concentrated on a few days, January 11-19, during the extreme cold event.

During this period, FMM market prices incented PacifiCorp to meet its load with high cost resources in the Pac West balancing area, rather than with somewhat lower cost resources in Pac East balancing area. This redispatch and associated pricing reduced flows on the constraints in the CAISO, making more transfer capability available for more imports of much low cost power supported by CAISO generation or flowing through the CAISO from the Southwest. This was the efficient, reliability supporting outcome and a benefit of the regional WEIM dispatch.

This congestion pattern in which flows from Pac East to Pac West cause increased congestion, as was the case in January 2024, is not always the case. When congestion is north to south, which is often the case in spring and summer months, these flows relieve congestion and would reduce the cost of meeting PacifiCorp West generation with PacifiCorp generation.[11] To illustrate this, suppose that PacifiCorp East generation had a -$5/MWh impact on south to north congestion in California, the cost to PacifiCorp of meeting PacifiCorp West load with PacifiCorp East generation having a $30/MWh incremental cost would be a net cost of only $25/MWh.

More fundamentally, the Powerex analysis of congestion charges on parallel flows does not measure the impact of EDAM congestion on PacifiCorp West customers even in hours in which congestion is south to north, such as in the high solar output hours referred to by Powerex. To illustrate this consider a summer month in which there might be south to north congestion during the day, and north to south congestion in the late afternoon and evening as solar output in California declines. Even in the hours in which there is south to north congestion on constraints in the CAISO, the net impact of the EDAM dispatch and settlements on PacifiCorp West customers could be to materially reduce power costs.

Suppose for example that the incremental cost of PacifiCorp East generation is $30/MWh, and dispatching this generation to meet PacifiCorp West load would have a

[11] See for example, California ISO, Department of Market Monitoring, Q3 2024 Report on Market Issues and Performance table 4.2 p. 50, Q3 2023 table B.13 p. 137, Q3 2022 table 1.4 p. 40.

positive $5/MWh congestion impact on constraints within the CAISO that are binding because of south to north solar flows. Hence, the cost of meeting PacifiCorp West load with PacifiCorp East generation would be $35/MWh. However, the reason that there is south to north congestion in this scenario is that low cost solar output has reduced the incremental cost of power in the CAISO to a very low level relative to power costs in the Pacific Northwest. Suppose that the spot price of power in the CAISO is $1/MWh, and there is $20/MWh of congestion on south to north exports of power from the CAISO to PacifiCorp west.[12] The price of power in PacifiCorp West would be $21, which would be $9 less than the cost of meeting load with PacifiCorp East generation even with no congestion charges. Hence, there would have been a congestion charge on PacifiCorp East generation dispatched to meet PacifiCorp West load, but PacifiCorp West load is still far better off with the EDAM market.

To extend the example, as the sun goes down there would no longer be south to north congestion, and there might be north to south congestion. With north to south congestion, EDAM congestion pricing would reduce the cost of meeting PacifiCorp West load with PacifiCorp East generation.

Overall, the Powerex congestion analysis basically has no bearing on an assessment of the EDAM benefits to PacifiCorp load. An accurate assessment of these benefits, and of the impacts of various congestion rent allocation designs, would require examining actual flow impacts, prices and costs during EDAM testing and then operation.

In addition, the real-time south to north congestion in the CAISO cited by Mr. Spires in his testimony includes $4.92/MWh on constraint 6110 COI S-N which I understand is a constraint that the CAISO enforces at the request of the COI owners to limit real-time flows to the path limit.[13] Other than this, in 1Q 2024 there was about $5/MWh of real-time south to north congestion impacting the pricing of PacifiCorp East to PacifiCorp West transfers due to parallel flows on the CAISO and BPA COI constraints.

Overall, the difference in prices between Pac West and Pac East was around $94/MWh in January 2024.[14] The congestion was much smaller in other months of the first quarter 2024 so the average difference in prices over the quarter based on the DMM price data was $36.978/MWh. Only $13.17/MWh of this difference was due to internal congestion within either PacifiCorp or within other balancing areas, and only about

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[12] The much higher assumed congestion on CAISO flows than on PacifiCorp East flows is because the CAISO flows would presumably have a larger shift factor on the internal CAISO constraints. The constraints are binding, however, precisely because CAISO generation is so much cheaper than generation to the north.

[13] Alderete Declaration at 3.

[14] California ISO, Department of Market Monitoring, Q1 2024 Report on Market Issues and Performance, October 11, 2024, table 2.3 page 105.

$5/MWh of this was due to congestion in the CAISO or BPA. The rest of the price difference was due mostly to PacifiCorp transfer limits and some to the cost of marginal losses. Table 2.8 on page 111 in the DMM Q1 2024 report shows that transfer limit congestion increased the cost of meeting PacifiCorp West load by $24.15/MWh while export constraints reduced the cost by $.29/MWh over the quarter. Clearly the impact of congestion on PacifiCorp West transfer limits was far greater than the impact of congestion on California ISO internal constraints.[15] This shows how the Powerex calculations also misstate the relative importance of congestion on constraints in the CAISO and BPA, relative to overall congestion impacting PacifiCorp West, which was mostly transfer limit congestion whose congestion rents would have flowed to PacifiCorp.

[15] California ISO, Department of Market Monitoring, Q1 2024 Report on Market Issues and Performance, October 11, 2024, table 2.8 on page 111.

Appendix 1 to Attachment B

Curriculum Vitae – Dr. Scott Harvey

Scott M. Harvey

Consultant

scott.harvey@fticonsulting.com

200 State Street
9th Floor
Boston, MA 02109
Tel: (617) 747-1864
Fax: (617) 576-3524

Education

Ph.D. in Economics, University of California, Berkeley

B.A. in Economics, University of Illinois-Champaign-Urbana

Dr. Scott Harvey has consulted on competition and market design in the electric power industry; gas pipeline rate and pricing issues; contract and transfer pricing; private antitrust litigation; and numerous mergers and acquisitions, particularly in the oil, gas pipeline and electric utility industries.

PROFESSIONAL EXPERIENCE

FTI Consulting, Consultant, Boston, MA, 2011 to present

LECG, Director, Cambridge, MA, 1998 to March 2011

Putnam, Hayes & Bartlett, Inc., Director, 1987–1998

Bureau of Economics, US Federal Trade Commission, 1977–1987

CONSULTING EXPERIENCE

Electric Utility

- Assisted with development of the market design and pool-based open access transmission tariffs of the Member Systems of the New York Power Pool and the PJM Supporting Companies for the markets implemented by PJM in 1998 and New York in 1999, based on locational marginal pricing (LMP) and financial transmission rights.
- Worked with a coalition supporting the development of an LMP-based congestion management system in NEPOOL to reform NEPOOL's congestion management system.
- Assisted ISO New England with the development and implementation of a multi-settlement system for energy and ancillary services and a congestion management system based on LMP and financial transmission rights, implemented in 2003.
- Tested the pricing software of the NYISO prior to startup. After startup responsible for identification and correction of erroneous prices in NYISO settlements through mid 2008.
- Assisted Midwest ISO with the development of its LMP-based long-term congestion management system that began operation in 2005.
- Beginning in August 2004, began assisting the California ISO with the development and implementation of the LMP-based MRTU market design that began operation in April 2009.
- Assisted California ISO with analysis track testing of its MRTU pricing and dispatch software and developed price validation tools for use by the California ISO.
- Member MISO Market Advisory Committee, 2008-2013
- Member California ISO Market Surveillance Committee April 1, 2011-.
- Worked with New York ISO, MISO and California ISO on inter-control area coordination, transaction scheduling, and pricing.

- Worked with groups opposing creation of barriers to the entry of new generators in NEPOOL and California.
- Advised RTOs and market participants on transmission expansion processes and cost allocation in competitive electricity markets.
- Analyzed the potential for, and evidence of, the exercise of market power in deregulated electric generation markets.
- Analyzed the performance and competitive effects of market power mitigation policies for electricity generation assets.
- Assisted RTOs with the analysis and development of credit policies for virtual trading and financial transmission rights.
- Assisted RTOs with the analysis of market performance, resource adequacy issues and alternative resource adequacy designs;
- Assisted RTOs with analysis of Clean Power Plan market and reliability impacts;
- Assisted the MISO and California ISO with the development of their ramp capability dispatch designs implemented in 2016.

Gas

- Analyzed the competitive forces affecting gas pipeline rates, both in the context of pipeline pricing strategies and in the context of FERC review of gas pipeline rates.
- Analyzed the competitive and price effects of price fixing agreements in the natural gas pipeline industry.
- Analyzed the actual and potential value of firm pipeline transmission capacity.
- Analyzed the competitive effects of actual and proposed acquisitions in the gas pipeline industry.
- Analyzed the accuracy of gas price indices.

Oil Industry

- Analyzed the competitive effects of actual or proposed acquisitions and joint ventures in the oil terminaling and marketing, oil refining and oil pipeline industries, including the Amoco-BP merger; the Texaco-Shell joint venture; the proposed Phillips-Conoco and Philips-Ultramar joint ventures; Sun Cos acquisition of Chevron's Philadelphia refinery and Atlantic Refining Co.; Williams Cos acquisition of the Oklahoma Mississippi River System and Marathon's acquisition of Rock Island Refining.
- Developed economic principles for the allocation of joint costs in the oil and gas producing industry.
- Developed estimates of the market price for ANS type crude oil processed at refineries operated by ANS producers.
- Estimated the pass-through of crude oil price increases into refined product prices.

Other Antitrust and Merger Consulting Experience

- Analyzed the competitive effects of actual or proposed acquisitions and joint ventures in the

float glass; residential and commercial roofing; electrical equipment; industrial controls; and chemical industries.

- Analyzed the competitive effects of partial equity interests and joint ventures in a variety of industries.
- Estimated the magnitude of alleged price fixing overcharges in a variety of industries.

GOVERNMENT EXPERIENCE

- Analyzed the competitive impact of many oil industry mergers and acquisitions, including Mobil Corporation's proposed acquisition of Marathon Oil; Gulf Oil's proposed acquisition of Cities Service Company; Texaco's acquisition of Getty Oil; and Chevron's acquisition of Gulf Oil.
- Analyzed the competitive impact of gas pipeline mergers and acquisitions including Internorth's acquisition of HNG; Midcon's acquisition of United Gas Pipe Line; and Occidental Petroleum's acquisition of Midcon.
- Participated in non-public investigations of predatory pricing, non-price predation, price fixing, monopolization and sham litigation in a variety of industries.
- Served as an economic advisor to FTC Commissioner Azcuenaga.

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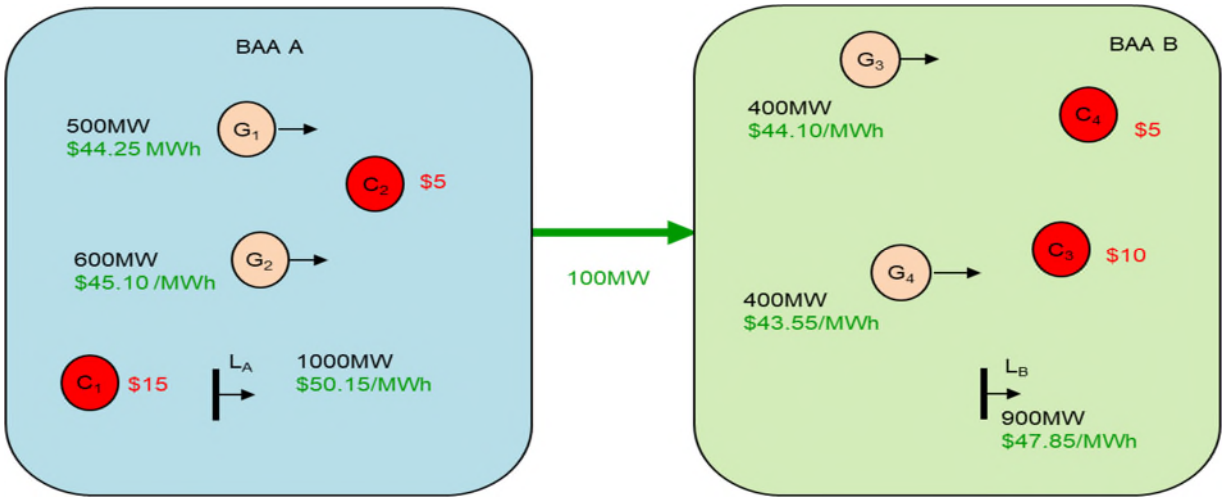
Attachment C

Congestion Revenue Calculation Example

The day-ahead market and real-time market, and by extension the Extended Day-Ahead Market (EDAM) and the Western Energy Imbalance Market (WEIM), utilize the full network model (FNM) to enforce all appropriate network and resource constraints to optimally dispatch resources to meet demand across the market area. The FNM provides the necessary information to determine and mitigate transmission congestion as well as calculate the relevant locational marginal price (LMP) at each pricing node location or aggregated pricing location within the FNM. The LMP is calculated at each pricing node or aggregated pricing node location in the market area. The marginal congestion component (MCC) 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 on the power flow solution, within the minimum effectiveness threshold. This methodology is common to all LMP markets, and the following example illustrates this methodology as applied in a multi-balancing area optimization pursuant to the CAISO Tariff rules that will be effective upon EDAM implementation.[1]



In this example, the market optimizes generation bid in Balancing Authority Area A (BAA A) and Balancing Authority Area B (BAA B) to demand in BAA A and BAA B. During the market optimization, the market identified four constraints that are binding at various levels. The

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

generation and load have various power transfer distribution factors which indicate their effectiveness in mitigating congestion at these constraint locations. The optimization determines that least-cost solution given the constraints is 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. Specifically, the market dispatches Generator 1 to 500 MW at $44.25/MWh, Generator 2 to 600 MW at $45.10/MWh, Generator 3 to 400 MW at $44.10/MWh and Generator 4 to 400 MW at $43.55/MWh to serve 1,000 MW 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 CAISO Tariff settlement rules,[2] and because in this case the CAISO is 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, the 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%

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

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

Table 3: Congestion Revenue Calculation and Settlement

BAA A	Schedule	LMP	MEC	MCC	STLMT Amount	MEC	MCC Collection
G1	500	$ 44.25	$ 40.00	$ 4.25	$ 22,125.00	$ 20,000.00	$ 2,125.00
G2	600	$ 45.10	$ 40.00	$ 5.10	$ 27,060.00	$ 24,000.00	$ 3,060.00
L1	-1000	$ 50.15	$ 40.00	$ 10.15	$(50,150.00)	$(40,000.00)	$(10,150.00)
TSR A-B	-100	$ 40.00	$ 40.00	$ -	$ (4,000.00)	$ (4,000.00)	$ -
BAA Neutrality					$ (4,965.00)	$ -	$ (4,965.00)
BAA B	Schedule	LMP	MEC	MCC	STLMT Amount	MEC	MCC Collection
G3	400	$ 44.10	$ 40.00	$ 4.10	$ 17,640.00	$ 16,000.00	$ 1,640.00
G4	400	$ 43.55	$ 40.00	$ 3.55	$ 17,420.00	$ 16,000.00	$ 1,420.00
L2	-900	$ 47.85	$ 40.00	$ 7.85	$(43,065.00)	$(36,000.00)	$ (7,065.00)
TSR A-B	100	$ 40.00	$ 40.00	$ -	$ 4,000.00	$ 4,000.00	$ -
BAA B Neutrality					$ (4,005.00)	$ -	$ (4,005.00)

The next step in the CAISO settlement process is to distribute the total calculated congestion revenue ($8,970) among the balancing areas that constitute the market area. The Commission-approved CAISO Tariff requires congestion revenue collected across the market area to 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 CAISO 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.[3]

[3] *See* CAISO Tariff section 33.11.3.9.3 (day-ahead congestion offset settlement effective upon implementation of EDAM); *compare* CAISO Tariff sections 11.5.4.1.1 (currently effective real-time

Table 4 completes this example and reflects the contribution of the constraints (using the PTDF) 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)
						BAA Offset	$ 5,155	$3,815

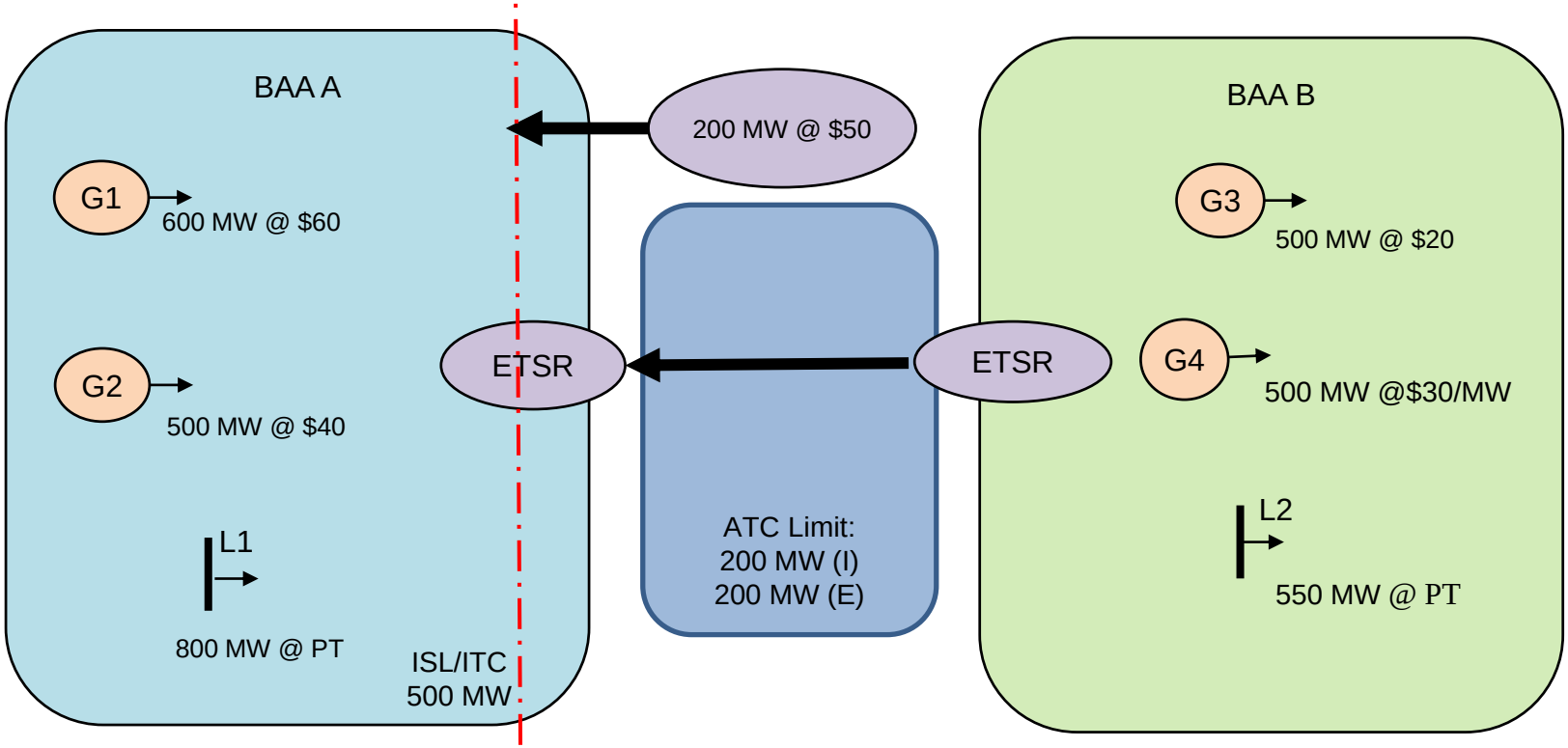
In the example above, the energy settlement generates $8,970 of congestion revenue across the market area, of which $4,965 is attributed to BAA A and $4,005 is attributed to BAA B. The final step is to distribute the congestion revenue collected across the market area to the balancing area in which the constraint materializes in proportion to the net schedule effectiveness to that constraint.[4] 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, 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 from BAA B to BAA A represents about two percent of the total congestion revenue collected across the market area.

congestion offset in WEIM) and 11.5.4.1.2 (real-time congestion offset in WEIM effective upon implementation of EDAM)

4 *Id*.

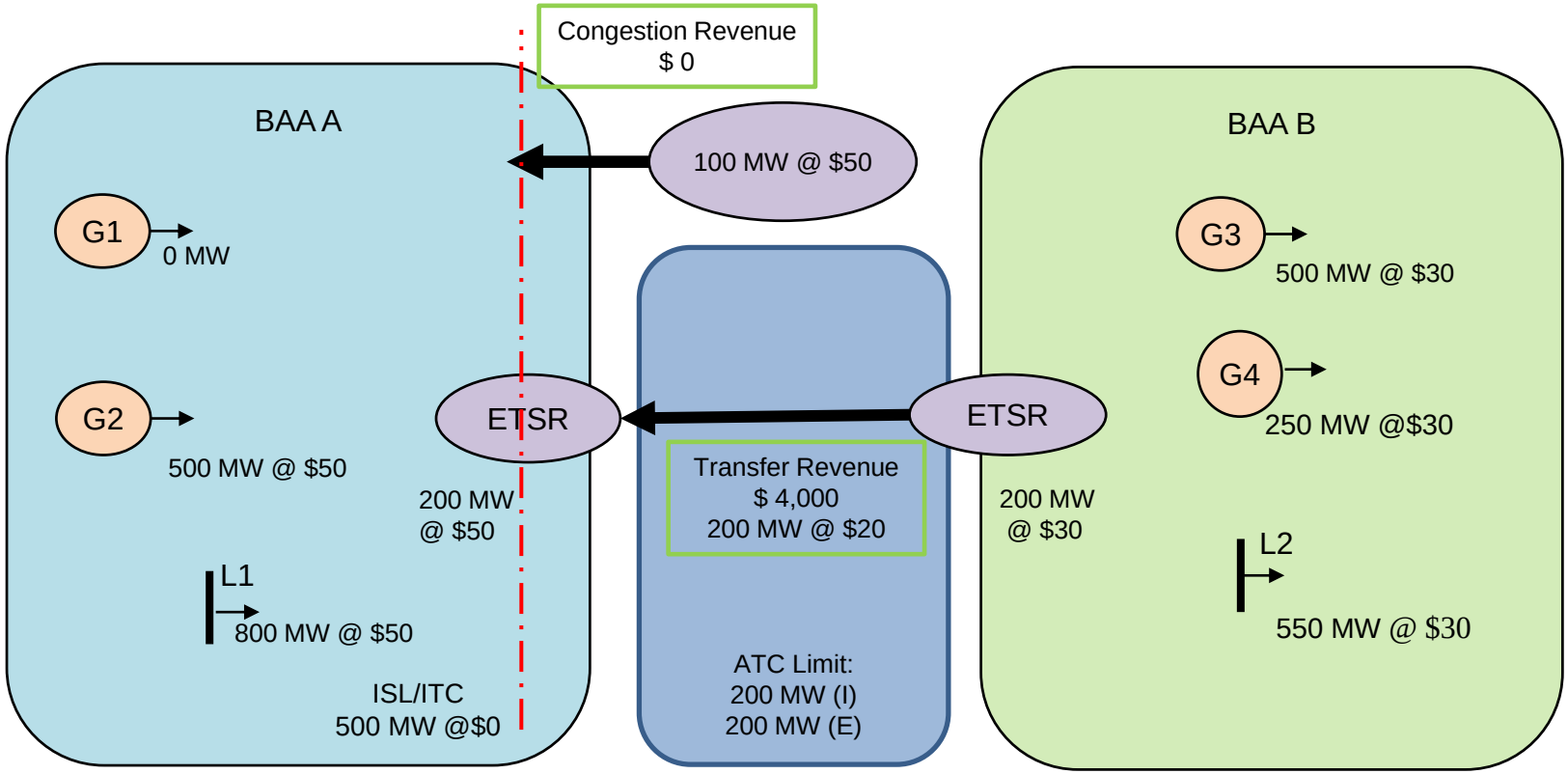
Attachment D

IFM Bid Data – Transfer Scheduling Limit binding



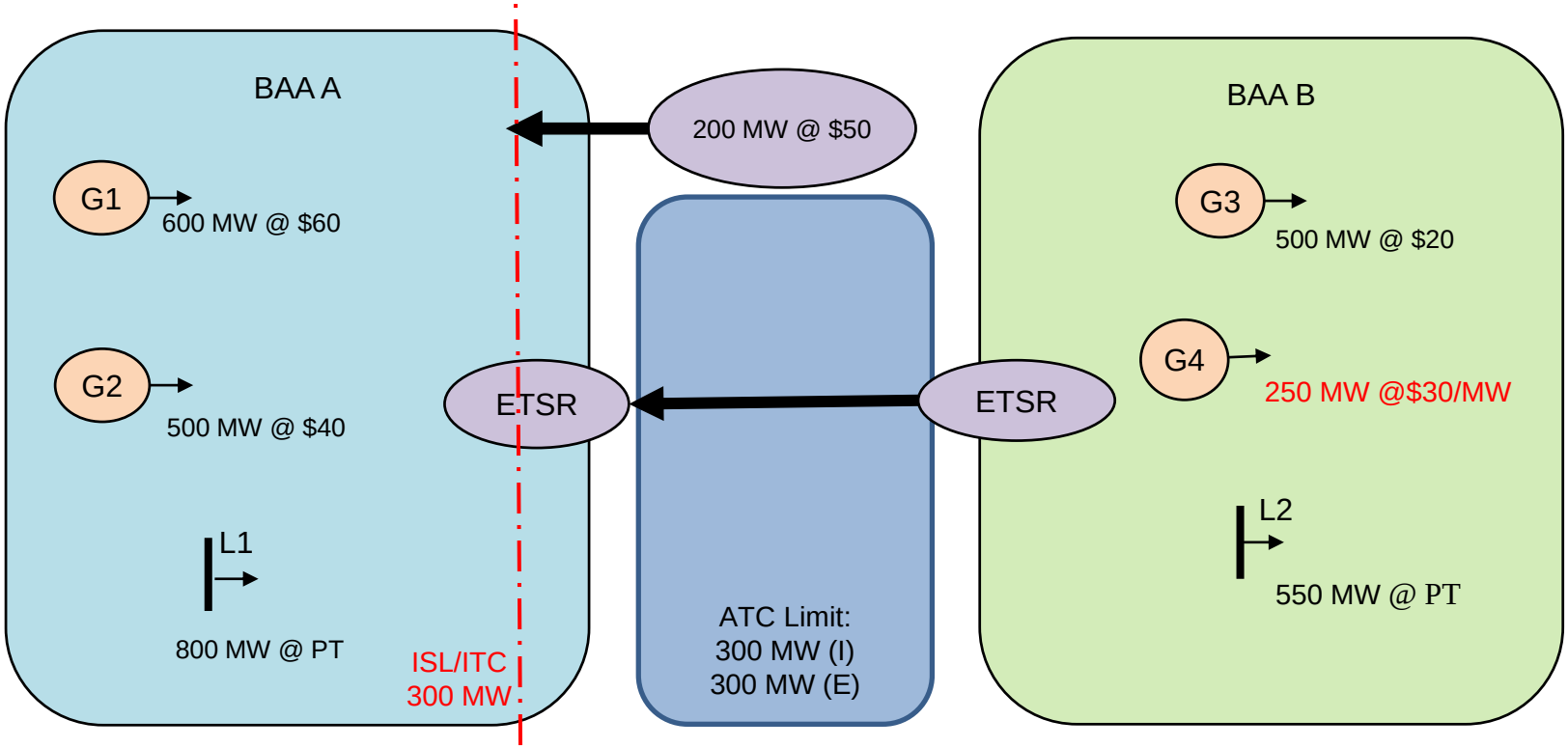
- Transfer Available Transmission Capacity limit is 200 MWs
- Intertie Scheduling Limit/Intertie Transmission Limit is 500 MWs

Transfer Revenue vs Congestion Revenue – Transfer Binding



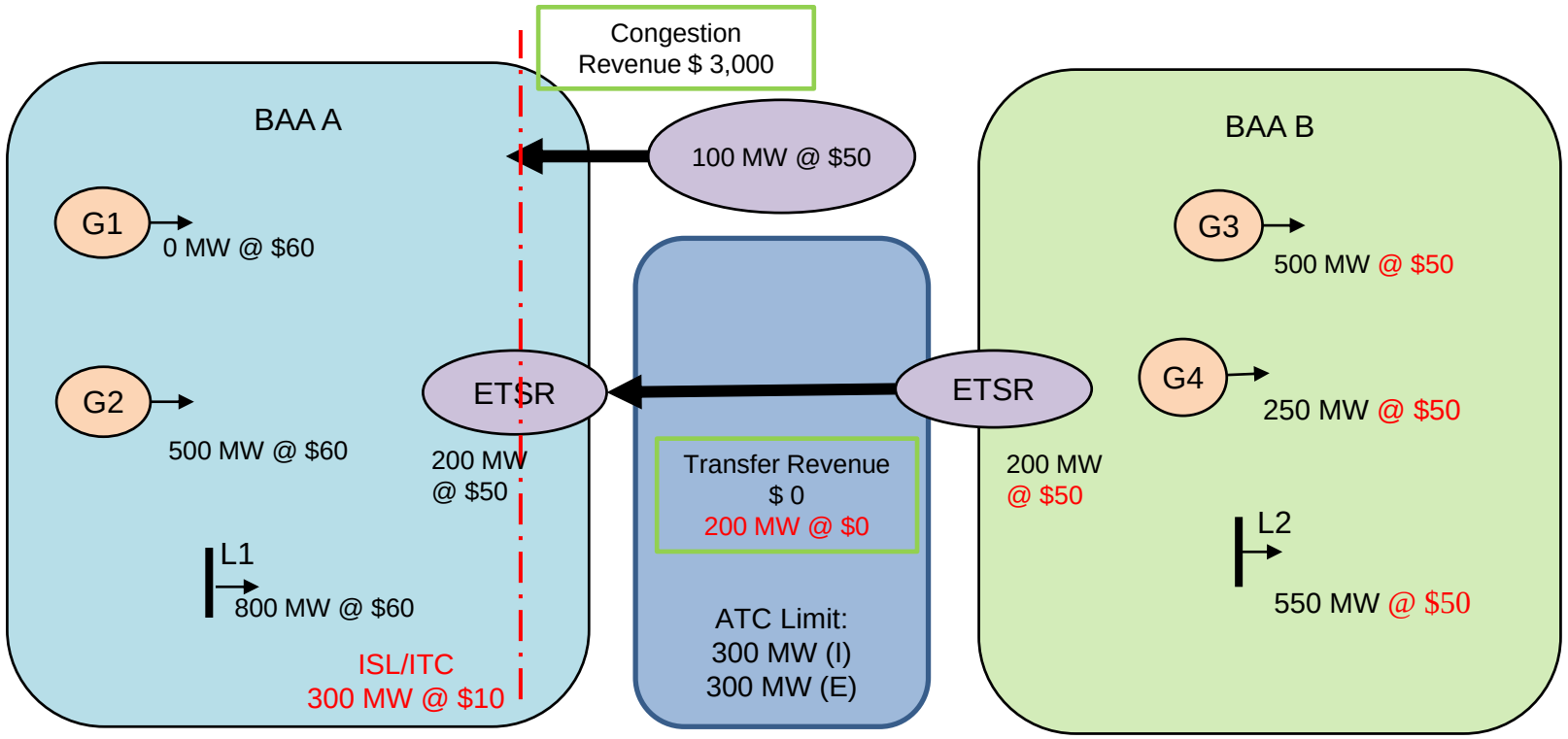
- Transfer Revenue is shared 50:50 between BAA A and BAA B at $2,000 each
- Congestion Revenue is $0 allocated to BAA A. ITC not binding

IFM Bid Data - Intertie Constraint (ITC) Binding



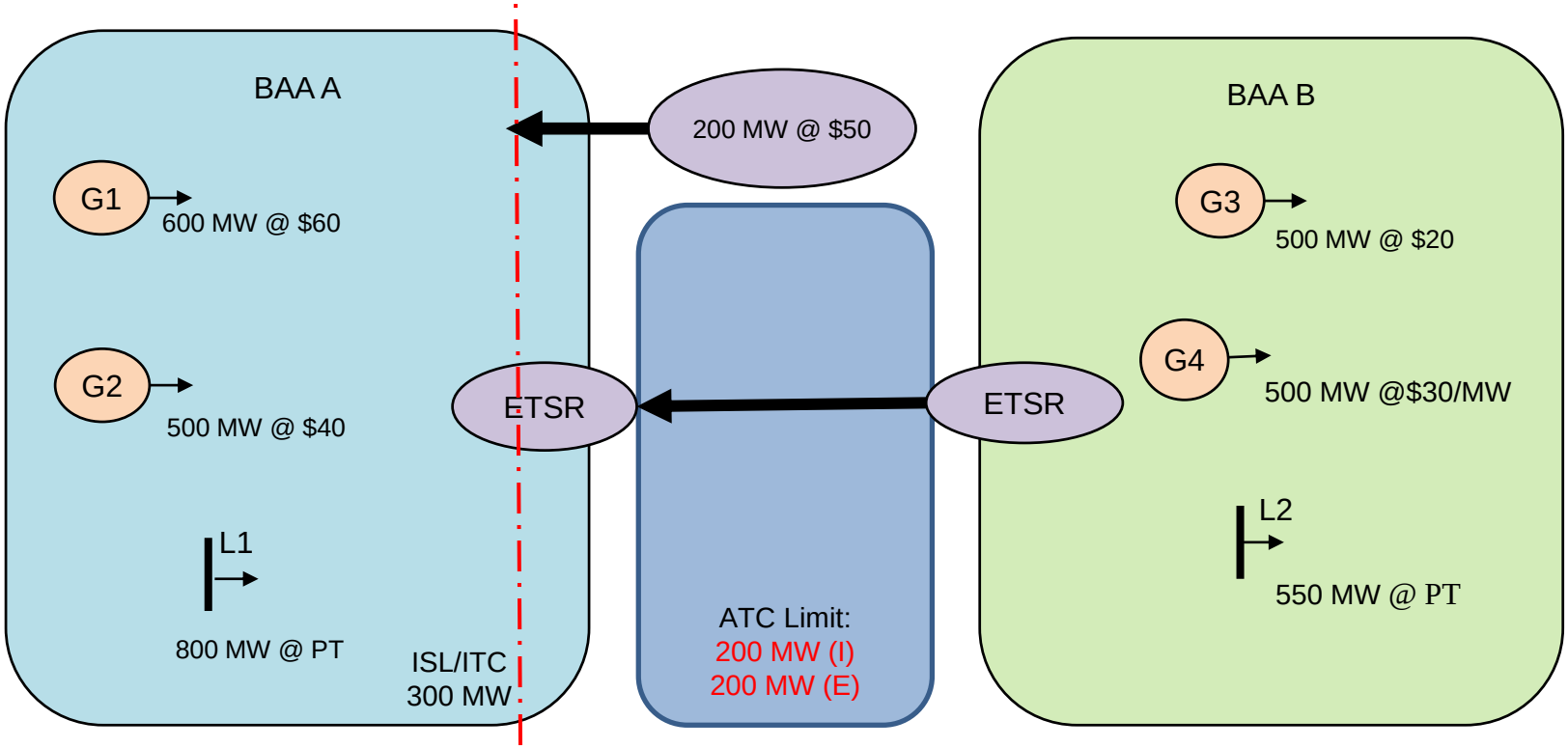
- Transfer Available Transmission Capacity limit is 300 MWs
- Intertie Scheduling Limit/Intertie Transmission Limit is 300 MWs

Transfer Revenue vs Congestion Revenue - ITC Binding



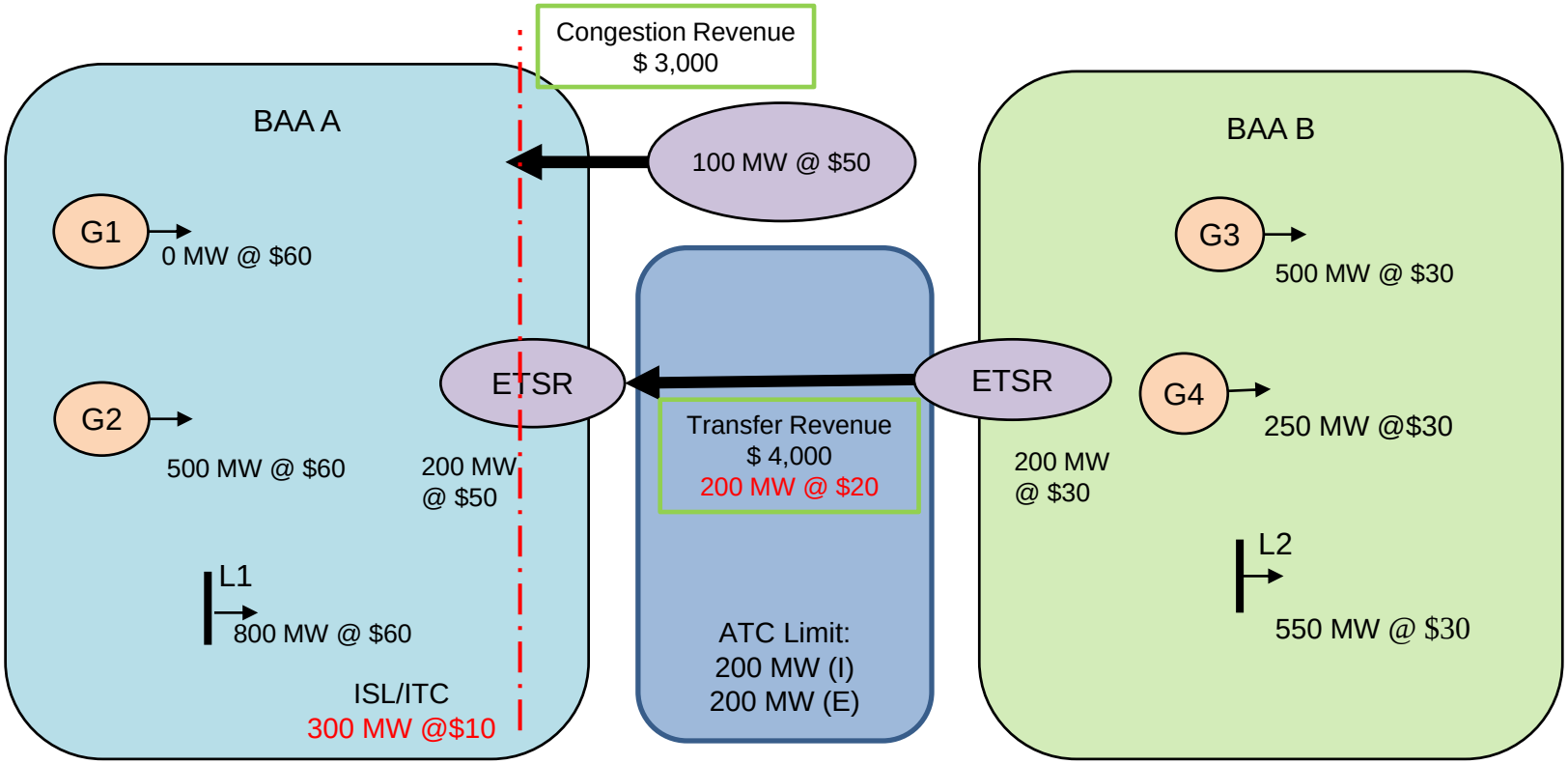
- Transfer Revenue is shared 50:50 between BAA A and BAA B at $0 each
- Congestion Revenue is $3,000 allocated to BAA A

IFM Bid Data - Both Binding



- Transfer Available Transmission Capacity limit is 200 MWs
- Intertie Scheduling Limit/Intertie Transmission Limit is 300 MWs

Transfer Revenue vs Congestion Revenue – Both Binding



- Transfer Revenue is shared 50:50 between BAA A and BAA B at $2,000 each
- Congestion Revenue is $3,000 allocated to BAA A

CERTIFICATE OF SERVICE

I certify that I have served the foregoing document upon the parties listed on the official service list in the above-captioned proceeding, in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2010).

Dated at Washington, D.C. this 7th day of March, 2025.

/s/ Daniel Klein
Daniel Klein
Davis Wright Tremaine LLP