

# Memorandum

**To:** ISO Board of Governors  
**From:** Neil Millar, Vice President, Transmission Planning and Infrastructure Development  
**Date:** May 14, 2025  
**Re:** **Decision on subscriber participating transmission owner market scheduling options**

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***This memorandum requires ISO Board of Governors action.***

## EXECUTIVE SUMMARY

Management requests the ISO Board of Governors' approval of a new enhancement to the subscriber participating transmission owner (Subscriber PTO) model, to be made available to subscribers. The enhancement addresses complexities and inefficiencies created by the Subscriber PTO model's current reliance on "existing contract rights" market software, which limits subscriber use of the transmission to self-schedules. It will enable the subscriber to economically bid, and enables other non-subscriber users to compete for use of the transmission by allowing the subscriber to release their transmission entitlement in exchange for receiving the financial congestion revenue rights. This option provides the subscribers the ability to maintain the rights they are entitled to while simplifying operations.

Management recommends the following motion:

***Moved, that the ISO Board of Governors approves the proposed subscriber participating transmission owner market scheduling options, as described in the memorandum dated May 14, 2025; and***

***Moved, that the ISO Board of Governors authorizes Management to make all necessary and appropriate filings with the Federal Energy Regulatory Commission to implement the proposal, including any filings that implement the overarching initiative policy but contain discrete revisions to incorporate Commission guidance in any initial ruling on the proposed tariff amendment.***

## DISCUSSION AND ANALYSIS

On March 12, 2024, the Federal Energy Regulatory Commission accepted the ISO's tariff amendment for the Subscriber PTO model, a new transmission development model.<sup>1</sup> This model establishes alternative opportunities for the construction of new transmission not addressed in the ISO's transmission plan in locations outside of the original ISO balancing authority area. Specifically, the Subscriber PTO model provides the ISO and interested project developers the option to develop and deliver resources that will satisfy state, municipal, county, or federal policy requirements or directives, including California's energy policy goals. The Subscriber PTO model enhances inter-regional transmission resilience, deliverability, and resource adequacy, while providing customers with the benefit of new transmission facilities under the operational control of the ISO. Under this model, subscribers of the capacity on the facilities owned by a Subscriber PTO pay the costs to construct these new transmission facilities, rather than incorporating the costs into the ISO's transmission access charge, which is funded by transmission ratepayers. The subscribers receive an entitlement and the Subscriber PTO may recover revenue for use by non-subscribers.<sup>2</sup>

Under the Subscriber PTO model, the developer will place the new transmission facilities under ISO operational control and connect generation to the ISO balancing authority area. This will occur without a decision to build the project through the ISO's transmission planning process.<sup>3</sup> In exchange, the subscribers who pay for use of the facilities receive scheduling priority and entitlement rights, which are existing transmission contracts for energy scheduled from that generator to internal ISO demand or ISO balancing authority area interconnection point, whichever is the exit point of the Subscriber PTO transmission facilities. The entitlement rights provide the subscriber with a higher scheduling priority than other self-schedules and economic energy bids that may seek to utilize the Subscriber PTO transmission facilities. In addition, these entitlement rights also provide the subscribers with a financial hedge against congestion and transmission charges between the generation and the interconnection point to the original ISO balancing authority area.<sup>4</sup>

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<sup>1</sup> The FERC order accepting the Subscriber PTO proposal is available on the ISO website at: <https://www.caiso.com/documents/mar12-2024-orderacceptingproposedtariffrevisions-subscriberparticipatingtransmissionownermodel-er23-2917.pdf>

<sup>2</sup> These and other features of the underlying Subscriber PTO model accepted by FERC are outside the scope of this stakeholder initiative.

<sup>3</sup> If the decisions were made through the transmission planning process, then the Subscriber PTO would have been eligible to be a PTO and have its transmission revenue requirement recovered through the ISO transmission access charge.

<sup>4</sup> The original balancing authority area footprint was established as of FERC approval of the Subscriber PTO amendment to the ISO tariff on March 12, 2024. The original footprint may change overtime with addition of transmission facilities or balancing authority areas. The scheduling priority and financial hedge provisions would be extended beyond the interconnection point if the subscriber has additional transmission rights under existing transmission contracts from the ISO balancing authority area interconnection point to their load aggregation point, but otherwise, the scheduling and financial rights end at the end of the Subscriber PTO transmission interconnection point to the ISO balancing authority area.

Under the existing approved design of the Subscriber PTO model, subscribers of the capacity on facilities owned by a Subscriber PTO will receive both a scheduling priority and a financial hedge against congestion and transmission access charges over the Subscriber PTO facilities up to the point of interconnection between the Subscriber PTO transmission line and the original ISO balancing authority area. These subscriber rights are eligible for treatment as existing transmission contracts under the ISO tariff, defined by the entitlement rights and modeled as an encumbrance using the existing transmission contract model between a specified source location(s) and sink location(s) associated with a specific contract reference number.

### *Current Implementation Issues*

The ISO has identified certain implementation complexities in honoring the subscribers' rights by treating subscribed capacity as an encumbrance or existing right through the use of existing contract rights. Reliance on self-schedules becomes inefficient under certain scenarios for non-contiguous portions of the ISO balancing authority area because both an import and export schedule must be submitted to differentiate between the Subscriber PTO facility use and use of the existing ISO controlled grid (the subscriber has high priority scheduling rights on the Subscriber PTO facilities, but does not have high priority scheduling rights on the existing ISO transmission facilities). These complexities include the requirement to submit an export schedule at the sink location where the Subscriber PTO transmission system terminates and potentially require the subscriber to import the energy back into the existing original ISO balancing authority area to serve ISO demand that is located beyond the terminus of the Subscriber PTOs transmission. This creates the need for the scheduling coordinators of the Subscriber PTO generation to create export schedules for the generation out and then have to submit corresponding import schedules back into the ISO balancing authority area to serve demand internally within the ISO balancing authority area. Besides being burdensome, this self-scheduling requirement precludes the generation from bidding economically in the ISO market as the resource must become a price taker. It also raises an implementation obligation of having to nominate resource adequacy on a generation resource that is expected to export out, which although workable is an unconventional setup within the ISO market.<sup>5</sup> The current model remains workable but creates these inefficiencies.

For other existing non-participating transmission owners that have transmission rights that are part of the ISO controlled grid today, the ISO has allowed those parties, through operating agreements, to convert all or a portion of their transmission rights to congestion revenue rights options. This allows the non-participating transmission owners within the ISO balancing authority area to convert transmission that would

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<sup>5</sup> The ISO anticipates clarifying that load serving entities will have access to the maximum import capability associated with their subscriber rights until the load serving entities no longer need the allocation; *i.e.*, until the delivery network upgrades are completed. ISO tariff, Appendix DD 8.9.1(b).

otherwise not be available to the market to be released on a periodic basis in advance of the trade month, which makes more transmission available for market use. In return, the party gets the congestion revenue associated with the transmission rights or existing contract rights that were released in the day-ahead market.

Similar to what has been done for other transmission owners that are not participating transmission owners, the ISO believes applying this concept to a subscriber could mitigate the inefficiencies discussed above by providing the congestion revenue rights options that allow the subscriber to have one transaction from source to demand sink in the ISO balancing authority area. In addition, the requirement to import/export creates challenges if the adjacent balancing authority area were to join the extended day-ahead market (EDAM), because the subscriber would be unable to submit an import schedule or bid at an EDAM transfer point in the same manner it does today, and would have to rely on the market to optimally dispatch energy to counter flow to effectuate a transfer in the import direction.

The ISO proposes an option for the subscriber to forego the scheduling priority and congestion hedging benefits of exercising their rights through the submission of a self-schedule, and instead receive congestion revenue rights options. This opportunity will allow the subscriber to bid economically and compete with non-subscriber resources, thus increasing efficiency and avoiding the import-export challenges because the rights would no longer be encumbered by the subscriber. This opportunity also entails certain downsides for the subscriber. While the subscriber that relinquishes its existing contract rights for congestion revenue rights would get congestion revenue to the extent the Subscriber PTO line is congested, they only get the payments for congestion associated with the day-ahead market and not the real-time market, absent a significant overhaul of the ISO's congestion revenue rights product. In addition, the subscriber is giving up their priority scheduling right in both the day-ahead and real-time market, and the congestion hedge in real-time. In either option, however, the subscriber is not charged for the transmission usage on the Subscriber PTO facilities.

The ISO proposes to provide the subscriber the opportunity to exchange their existing transmission contract rights under the current model for congestion revenue rights options. The subscriber may also not make this election and retain their existing contract rights under the existing Subscriber PTO model. The congestion revenue rights options would be granted solely for the Subscriber PTO transmission path, and would terminate at the interconnection point of the Subscriber PTO transmission path with the current ISO balancing authority area. Instead of being hedged for congestion under the current Subscriber PTO model, they would be charged and paid for congestion on the Subscriber PTO line. This offers the subscribers an ability to exchange their existing transmission contract rights for congestion revenue rights options, similar to the process allowed pursuant to a few specific existing arrangements with third party transmission owners in the ISO balancing area and would be more efficient and suitable than requiring the subscribers to participate in the merchant

congestion revenue rights allocation process. The existing transmission contract to congestion revenue rights option conversion process does modify the ability of the subscribers to submit economic bids versus self-scheduling thereby allowing the market to make more economic decisions.

The advantage of using existing transmission contracts is priority scheduling in the day-ahead and real-time markets; a hedge on congestion in both the day-ahead and real-time markets and waiver of the transmission access charge for use of the Subscriber PTO transmission, because the subscriber has already paid to develop such transmission. When using the existing transmission contracts option, the subscriber is a price-taker and in some instances, the subscriber may need to use a balanced import and an export to self-schedule their subscriber rights. Whereas the subscriber's advantage of converting their existing contract right to congestion revenue rights options is that they can bid into the market, but the congestion is hedged solely in the day-ahead market and grants them the similar transmission access charge waiver.

## **POSITIONS OF THE PARTIES**

Three parties supported the proposal and two opposed it. The two parties opposing the proposal are opposing the non-subscriber usage payment that was not an element of this initiative and was approved by FERC in the original proceeding. The parties in opposition also raised concerns with the payment of non-subscriber usage under specific scenarios, while at least one party opposed the entire non-subscriber usage payment mechanism because the subscribers would now have an allocation of revenue associated with the congestion revenue rights.

### *Non-Subscriber Usage Rate Concerns*

Two stakeholders raised concerns regarding the non-subscriber usage payment that FERC approved in the underlying Subscriber PTO proceeding, though it was not an element of this initiative.<sup>6</sup> In that proceeding, FERC approved that the Subscriber PTO could establish a non-subscriber usage rate no greater than the wheeling access charge and that rate would apply to both imports and exports solely on the Subscriber PTO transmission system. The concern raised in this initiative is largely with respect to the non-subscriber usage rate being assessed to imports that are not subscribers of the transmission. These stakeholders are concerned that non-subscriber imports will result in payments to the Subscriber PTO that draw on money collected through the transmission access charge, and therefore amounts to pay the non-subscriber usage payment could reduce the revenue available for the other participating transmission owners.

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<sup>6</sup> Id. at 1

Because there is not any empirical data as to the amount of non-subscriber usage and therefore the payment amount to the Subscriber PTO, the ISO is proposing that for a two-year period commencing upon the final commercial operation date of the last generating units connected to the first Subscriber PTOs transmission system,<sup>7</sup> the non-subscriber usage charge for imports would be calculated but not paid to the Subscriber PTO. The two-year period will allow the ISO time to gather data and determine whether the amount of non-subscriber usage is cause for significant concern. If this is a significant concern, the two-year period provides the ISO sufficient time to conduct a stakeholder process to adjust the non-subscriber usage payment. After the two-year period, this provision will either sunset and the non-subscriber usage payment attributed to imports will resume or will be changed according to the outcome of the stakeholder process.

Because the Subscriber PTO model is so new, the ISO does not know if the concerns expressed will rise to the level of concern articulated by stakeholders. Therefore, the ISO agreed in the final stakeholder proposal to publish an annual report of the total non-subscriber usage payments. If there are substantial inequities, the ISO will initiate a stakeholder process to address any issues that arise. In recent discussions with the concerned stakeholders, the ISO believes this two-year monitoring and reporting period will alleviate stakeholder concerns and allow us to address the issue if necessary based on market data.

## **CONCLUSION**

Management recommends approval of the additional option for subscribers to relinquish their subscriber rights for congestion revenue rights. To the extent the subscriber relinquishes such rights, then the congestion revenue rights option available to the subscriber will allow it to economically bid in the market, avoid the complexities of scheduling imports and exports at the end of the Subscriber PTO line and be compensated for congestion using congestion revenue rights which otherwise would have been hedged only when scheduling their transmission right using balanced source and sink.

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<sup>7</sup> This is the first time a non-subscriber schedule could be accepted at a Subscriber PTO scheduling point.