California ISO | WESTERN ENERGY MARKETS

Memorandum

To: ISO Board of Governors and Western Energy Markets Governing Body

From: Eric Hildebrandt, Executive Director, Market Monitoring

Date: July 8, 2026

Re: **Department of Market Monitoring update (congestion revenue rights enhancements)**

This memorandum does not require ISO Board of Governors or WEM Governing Body action.

EXECUTIVE SUMMARY

This memo provides comments by the Department of Market Monitoring (DMM) on the ISO's phase 1 proposal on congestion revenue rights enhancements. The only specific change being proposed at this time is "expanded ISO authority to model loop flow" which "will consist of targeted, manual adjustments to some high-market-impact constraints based on historical loop flow information."[1]

DMM does not expect that this proposal will have significant effects on reducing transmission ratepayer losses in the auction. Prior to incorporating any loop flows into the congestion revenue rights model, the ISO should conduct and provide significant analysis for review and discussion. If estimated loop flows are inaccurate or are simply combined with derate factors already used to reduce transmission available in the allocation and auction, these changes could have detrimental impacts, including a reduction in congestion revenue rights available to load serving entities in the allocation process. DMM has concerns that the ISO may not be able to carry out the analysis and review needed to effectively implement loop flow modeling in time for the 2027 annual auction.

The ISO plans to continue considering other options for improving the congestion revenue rights auction, including uniform bid and price floors for all possible source-to-sink paths. DMM does not support further consideration of uniform bid and price floors. A variety of significant theoretical and practical problems with this approach have been identified. DMM recommends that the ISO instead focus on other options that address the underlying flaws in the auction design.

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[1] *Congestion Revenue Rights Enhancements: Phase 1 Draft Final Proposal on Auction Efficiency and Revenue Adequacy*, California ISO, June 23, 2026, pp 4, 12: https://stakeholdercenter.caiso.com/InitiativeDocuments/Draft-Final-Proposal-Auction-Efficiency-Revenue-Adequacy-Congestion-Revenue-Rights-Enhancements-2026-06-23.pdf

If the ISO wants to continue exploring reserve prices, they should consider constraint-specific reserve prices. This approach would provide a much more efficient and accurate foundation for introducing reserve prices that reflect the actual value of every possible source-to-sink path. This approach would also not interfere with parties wanting to buy/sell hedges with each other at lower prices. DMM also continues to recommend the ISO seriously consider the willing seller auction design, along with any potential measures to provide additional liquidity that the ISO feels is necessary with the willing seller approach.

COMMENTS

Incorporating loop flows into congestion revenue rights model

DMM does not expect that this proposed change will have significant effects on transmission ratepayer losses in the auction. The ISO already includes uniform derate factors to all constraints in the model that significantly limit the amount of transmission capacity available in the allocation and auction.[2] The proposal does not indicate if the loop flow estimates would be applied in addition to these derate factors or in place of these derate factors. Simply combining estimated loop flows with these derate factors could even have detrimental impacts, including a reduction in congestion revenue rights available to load serving entities in the allocation.

The ISO would need to accurately model and predict loop flows in advance in order to incorporate these into the congestion revenue rights model. DMM is not aware of any extensive analysis performed by the ISO of actual loop flows and the ability to predict loop flows. Data reviewed by DMM suggest that loop flows may be difficult to accurately predict and represent in the level of granularity used in the congestion revenue rights model (i.e., 16-hour blocks by season and month). For instance, loop flows may vary significantly over the 16 peak hours, with loop flows during the peak solar hours being much different than during the peak net load hours (18-22). It is unclear how effectively the ISO will be able to incorporate these into the seasonal and monthly congestion revenue rights models.

DMM recommends that prior to incorporating any loop flows into the congestion revenue rights model, the ISO conduct and provide analysis to stakeholders for review and discussion. The ISO should also clarify if this loop flow modeling will be made in addition to or in place of derate factors that are already used in the allocation and auction models. DMM has concerns that the ISO may not be able to carry out analysis needed to effectively implement such modeling in time for the 2027 annual auction.

Uniform bid/reserve price limits

The ISO's proposal indicates that it will continue considering other options for improving the congestion revenue rights auction, including uniform bid and price floors for all possible source-to-sink paths. Since the uniform minimum bid/reserve price approach was proposed by the ISO, a variety of theoretical and practical problems with this approach have been identified. The major problem with the uniform minimum

[2] All limits are already reduced to 65 percent in the annual process and 85 percent in the monthly process.

bid/reserve price approach is that, in practice, the value of all possible source-to-sink congestion revenue rights varies tremendously, so that any uniform bid/price limits selected will be significantly over or under estimate the actual value of most congestion revenue rights. The ISO has indicated that the sheer number of all possible source-to-sink pairs in the ISO market model would make setting different reserve prices for all source-to-sink pairs administratively infeasible.

Another concern raised in the stakeholder process is that placing minimum bid limits on source-to-sink paths could prevent transactions between willing counterparties offering to sell/buy congestion revenue rights at prices outside of these uniform bid limits.

If the ISO continues to consider uniform minimum bid/reserve prices, DMM and the ISO's Market Surveillance Committee (MSC) have suggested specific empirical analysis that should be done for this approach. While the MSC's approach would require re-running the congestion revenue rights auction model, DMM has suggested metrics that could easily be calculated to assess the potential impacts of this approach under different minimum bid/reserve prices.[3] However, DMM does not support further consideration of uniform bid and price floors. Instead, DMM recommends that the ISO focus future efforts on other options that address the underlying flaws in the auction design.

Options for addressing underlying flaws in auction design

If the ISO wants to continue exploring reserve prices, DMM recommends that the ISO consider *constraint-specific* reserve prices. As described in DMM's recent stakeholder comments, this approach would provide an efficient and accurate foundation for introducing reserve prices that reflect the actual value of every possible source-to-sink path.[4] This approach would ensure that all parties could ultimately purchase congestion revenue rights at prices that reflect the expected level of congestion payments from these rights, while also not interfering with parties willing to buy/sell hedges with each other at prices of their choosing. With this approach, financial entities and other participants could still seek to target the most profitable congestion revenue rights based on their expectations about future market and system conditions, and modeling differences between the auction model and the day-ahead transmission models.

DMM also continues to recommend the ISO seriously consider the willing seller auction design, along with any potential measures to provide additional liquidity that the ISO feels is necessary with the willing seller approach. In prior comments, DMM has outlined numerous measures that could be taken to address concerns about the willing seller

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[3] *Comments on Congestion Revenue Rights Enhancements - Straw Proposal on Auction Efficiency and Revenue Adequacy*, Department of Market Monitoring, June 16, 2026, p 3-4: https://www.caiso.com/documents/dmm-comments-on-congestion-revenue-rights-enhancements-straw-proposal-on-auction-efficiency-and-revenue-adequacy-jun-16-2026.pdf

[4] *Comments on Congestion Revenue Rights Enhancements Phase 1 Draft Final Proposal on Auction Efficiency and Revenue Adequacy*, Department of Market Monitoring, July 2, 2026: https://www.caiso.com/documents/dmm-comments-on-congestion-revenue-rights-enhancements-phase-1-draft-final-proposal-on-auction-efficiency-and-revenue-adequacy-jul-02-2026.pdf

approach.[5] These include (1) increasing congestion revenue rights allocated to load serving entities, so that these entities do not need to rely on the auction to hedge their energy procurement; (2) increasing information prior to the auction about congestion revenue rights parties who are interested in buying or selling; and (3) providing a backstop mechanism that ensures entities actually engaging in energy transactions could procure hedges at prices that reflect the cost and value of these hedges.

[5] *Comments on Congestion Revenue Rights Enhancements - Stakeholder Meeting Session #9*, Department of Market Monitoring, May 6, 2026: https://www.caiso.com/documents/dmm-comments-on-congestion-revenue-rights-enhancements-stakeholder-meeting-session-9-may-06-2026.pdf