

Comments on Demand and Distributed Energy Market Integration Track 1 Draft Final Proposal

Department of Market Monitoring

July 23, 2026

Summary

The Department of Market Monitoring (DMM) appreciates the opportunity to comment on the *Demand and Distributed Energy Market Integration: Track 1 Draft Final Proposal: End-Use Customer Exports in Performance Measurement* dated July 8, 2026.¹

DMM continues to conditionally support removing the lower limit for individual customers in demand response (DR) aggregations so that individual customers can better reflect their physical capability.² Individual customers with export capability – including those already participating in Net Energy Metering or Net Billing Tariff (NEM/NBT) programs – can provide *additional* load flexibility to the wholesale market if baseline methodologies accurately estimate counterfactual behavior.

While DMM supports more accurate modeling of DR resource aggregations, we reiterate previously stated concerns regarding DR performance, baseline accuracy, and the recommendation for improvements to baseline methodologies and more widespread adoption of control group baselines. We note that participation in NEM/NBT programs may reduce incentives to inflate baselines. However, baseline manipulation is not the primary concern with accurate assessment of DR performance. DMM recommends that the ISO prioritize baseline improvements and design changes that yield improved DR performance before changes that would increase the amount of registered DR capacity.

A key concern with allowing resources to participate in both wholesale DR programs and NEM/NBT programs is whether there is potential for double compensation. On this issue, DMM highlights an important distinction between compensating twice for the same product, and deriving compensation for *additional* production from multiple revenue streams. Additional flexibility from DR aggregations will be provided if the marginal revenue from all sources covers the marginal cost of providing the additional flexibility. This marginal revenue could derive from multiple sources such as a combination of NEM/NBT and wholesale market payments. When resource performance is calculated from an accurate baseline, this total marginal revenue represents compensation for additional production beyond what the resource was already doing, rather than paying twice for the same production.

DMM supports the ISO's proposal to collect additional resource meta data on the exporting customer accounts. DMM expects the ISO would monitor and report on the performance of DR aggregations that include exporting customer accounts. This additional data would facilitate such monitoring, while also

¹ *Demand and Distributed Energy Market Integration: Track 1 Draft Final Proposal: End-Use Customer Exports in Demand Response Performance Measurement*, California ISO, July 8, 2026: <https://stakeholdercenter.caiso.com/InitiativeDocuments/Draft-Final-Proposal-Demand-and-Distributed-Energy-Market-Integration-DDEMI-Track1-Jul-08-2026.pdf>

² *Comments on Demand and Distributed Energy Market Integration Track 1 Revise Straw Proposal*, Department of Market Monitoring, July 1, 2026: <https://www.caiso.com/documents/dmm-comments-on-demand-and-distributed-energy-market-integration-track-1-revised-straw-proposal-jul-01-2026.pdf>

supporting DMM's DR monitoring capabilities.

Comments

DMM conditionally supports allowing individual customer accounts in demand response aggregations to export to the distribution system to better reflect their capabilities

DMM supports the ISO's proposal to improve modeling of DR resources by recognizing that some customers are currently approved to export onto the distribution system from their utility distribution company (UDC).³ However, this support is conditional on the ISO prioritizing baseline improvements and design changes that yield improved DR performance before undertaking changes that would increase the amount of registered DR capacity, such as allowing exports of individual customer accounts to be considered in DR performance.

DMM also supports the clarification in the Draft Final Proposal of the definition of DR to ensure the rules and agreements for exporting resources do not allow customers to circumvent the interconnection queue process for generating technologies.

Allowing resources to participate in wholesale demand response programs while already participating in Net Energy Metering or Net Billing Tariff requires accurate baselines

The key concern with allowing resources to participate in both wholesale DR programs and NEM/NBT programs is whether there is potential for distortionary impacts on efficient market participation or double compensation. Key to determining the distortionary impacts of enrollment in both programs is whether participation in either program will incentivize the resource to behave uneconomically in the other program. Double compensation may occur if a resource is already modifying its behavior in response to one market's incentives, while also receiving compensation in another market for no additional value added to that market beyond what the resource was already doing.

NEM/NBT provides an incentive to shift loads throughout the day through a time-varying customer rate structure. The incentive is largely static across days and independent of grid conditions, such that the underlying load flexibility incentive does not change from day to day. In contrast, wholesale DR participation requires a price-quantity bid that reflects the marginal quantity and value of customer load flexibility. Wholesale DR participation is responsive to varying day-ahead and real-time grid conditions, with DR availability and performance being measured against a counterfactual baseline.

This baseline is intended to reflect the customer's expected load absent a wholesale market dispatch and is calculated using historical load behavior that already incorporates the customer's response to the underlying NEM/NBT rate structure. As a result, the capacity made available to the wholesale market should represent the *additional* load flexibility beyond that already induced by the NEM/NBT incentives. To the extent the baseline accurately estimates the counterfactual, wholesale compensation is intended to reflect incremental performance rather than behavior that would have occurred absent a wholesale market award.

Since estimating the additional load flexibility from wholesale market participation requires robust baselines, DMM continues recommend the ISO to improve baselines to capture the true counterfactual

³ *Ibid.*

response from DR customers.⁴ Current DR participation rules allow the scheduling coordinators to select their own baselines from more than 50 options, and all data to verify DR performance is self-reported. The current baseline selection and calculation processes leave room for inaccuracies, errors, and potential for manipulation.

DMM's leading recommendation for counterfactual estimation is the use of control group methodologies. DMM requests the ISO to improve baseline calculation methodologies in this stakeholder process, prioritizing these improvements over measures that would lead to additional registered DR capacity.

NEM/NBT revenues and wholesale market revenues combine to achieve the total marginal revenue needed to support the export of additional energy above a customer's baseline

Conditional on well-functioning baselines, DR resources could provide energy bids to the wholesale market beyond the regular customer behavior induced by the NEM/NBT rate structure. This additional export resulting from wholesale market participation would result in both NEM/NBT and wholesale payments. However, this additional load flexibility bid into the wholesale market is additional energy that would not have otherwise been available because the marginal cost to the customer exceeds the marginal benefit of the NEM/NBT incentive alone. Wholesale market participation and payments provide the additional incentives for load flexibility beyond that already incentivized by the NEM/NBT rate structure. The combined revenue streams of the NEM/NBT and wholesale market create the total marginal revenue needed to incentivize the additional load flexibility.

Suppose a customer typically exports one kWh at a NEM/NBT credit of \$100/MWh (\$.10/kWh) but is willing to export a second kWh if compensated at a total \$190/MWh. The first kWh is the customer's regular behavior and is incentivized and compensated through NEM/NBT at \$100/MWh. The second kWh represents additional load flexibility that may be available to the wholesale market if the customer were compensated above the NEM/NBT incentive. If that second kWh were scheduled in the wholesale market, the customer continues to receive the underlying NEM/NBT compensation of \$100/MWh but requires an additional \$90/MWh to justify providing the incremental kWh. This incremental cost of \$90/MWh for one kWh is the efficient price-quantity bid that should be submitted to the wholesale market.⁵

The above example demonstrates how the NEM/NBT revenues and wholesale market revenues combine to achieve the total marginal revenue needed to support the export of energy above a customer's baseline. Therefore, to the extent that baseline methodologies accurately estimate the counterfactual, wholesale market bids reflect the resource's marginal cost beyond expected additional NEM/NBT compensation. Allowing participation in the wholesale market may provide efficient access to additional load flexibility beyond that already induced by the NEM/NBT rate structure, but requires accurate baseline calculation to ensure the performance of the DR aggregation is measured accurately.

⁴ *Comments on Demand and Distributed Energy Market Integration Working Group*, Department of Market Monitoring, November 6, 2025: <https://www.caiso.com/documents/dmm-comments-on-demand-and-distributed-energy-market-integration-working-group-nov-06-2025.pdf>

⁵ This incentive structure and bidding outcome is similar to production tax credits or Renewable Energy Credits under a Renewable Portfolio Standard for variable energy resources. The external payment from the credits is internalized into the wholesale market bids by the resource to reveal the marginal cost of the energy bid.

NEM/NBT incentives may mitigate some baseline manipulation incentives; however, baseline manipulation is not the primary source of DR performance and performance measurement concerns

DMM has previously recommended the ISO consider enhancements to the counterfactual of existing baselines, and recommends the ISO continue to monitor resource behavior if the straw proposal in Track 1 is implemented. DMM will also continue to monitor performance and behavior of DR resources.

With current baselines, during tight grid conditions in 2024, DR resources met their schedules (performed) on average 81 percent and 54 percent of the time for utility and third-party DR, respectively.⁶ The ability for customers to export to the distribution system may result in additional DR capacity, however improved performance is unclear when resources will have the capability to indicate greater availability through export. Resources currently have exporting technologies, and resource performance is relatively low. As a result, DMM continues to recommend the ISO improve the baseline calculation methodologies.

DMM has also raised concerns with potential baseline manipulation, such as a resource inflating its baseline to improve measured dispatch performance. This incentive may be partially mitigated for resources that include NEM/NBT customers. Increasing the baseline would require the resource to forego regular revenues available through the NEM/NBT rate structure in order to increase future wholesale DR availability.

While the longstanding concerns regarding baseline accuracy and potential manipulation remain, DMM notes that resource adequacy capacity sales historically provide the majority of revenue for many DR resources. As a result, it is incumbent upon the local regulatory authorities to ensure the qualifying capacity (QC) valuation of DR resources reflects the capability of those resources to provide load flexibility that is *additional* to the flexibility already induced by the underlying NEM/NBT rate structure. If QC valuations appropriately reflect incremental capability and baseline methodologies accurately estimate the counterfactual, the risk of compensating resources for non-incremental flexibility will be reduced and wholesale market incentives will remain aligned with efficient market participation.

DMM supports the ISO proposal to collect additional data on exporting customers to improve the monitoring capabilities of demand response aggregations and the supporting portfolio

In the Draft Final Proposal, the ISO proposes to enhance the Demand Response Registration System (DRRS). The DRRS would be enhanced to include attributes identifying customer service accounts who possess behind-the-meter export capabilities, and include the level of export authorized to the customer under their interconnection agreement. DMM continues to support the ISO's proposal to collect the exporting customers' interconnection information on their ability and magnitude of export capabilities.⁷ This additional data will enhance the ISO and DMM's monitoring capabilities for demand response resource aggregations.

⁶ *Demand response issues and performance 2024*, Department of Market Monitoring, March 14, 2025: <https://www.caiso.com/documents/demand-response-issues-and-performance-2024-mar-14-2025.pdf>

⁷ *Comments on Demand and Distributed Energy Market Integration Track 1 Revise Straw Proposal*, Department of Market Monitoring, July 1, 2026: <https://www.caiso.com/documents/dmm-comments-on-demand-and-distributed-energy-market-integration-track-1-revised-straw-proposal-jul-01-2026.pdf>