

February 27, 2026

WEM Governing Body

RE: Briefing on spotlight initiative – price formation enhancements

The California Energy Storage Alliance (CESA) appreciates the opportunity to share our thoughts on scarcity pricing. CESA’s comments address four topics: (1) undermining of the annual policy roadmap process, (2) scarcity pricing has been a shortcoming of CAISO’s market since MRTU go-live in 2009, (3) scarcity pricing is complementary to imbalance reserve design, and (4) ancillary services co-optimization across EDAM footprint is not required to implement scarcity pricing.

Undermining of annual policy roadmap

The discussion before the WEM Governing Body at the March 3, 2026 meeting regarding the “urgency (or lack thereof) of comprehensive scarcity pricing reform”, is similar to the discussion which occurred at the October 28, 2025, meeting. CAISO staff then held a two-day stakeholder meeting in November to launch development of a comprehensive scarcity pricing design. The *2026-2028 Final California ISO Policy Initiatives Roadmap* was published on December 12, 2025. The roadmap included a scarcity pricing & market power mitigation initiative with policy development from the start of the year through Q3 and a WEM Governing Body decision in Q4 2026. The CAISO Board of Governors and WEM Governing Body were briefed on the final roadmap during the joint general session on December 17, 2025. No modifications to the roadmap were requested. Absent a discussion at the Market Surveillance Committee meeting, no additional stakeholder meetings have occurred to move forward with a robust scarcity pricing design proposal since November. CESA recommends the scoping and prioritization of policy initiatives occur in the roadmap process so that stakeholders can then focus on completing market design proposals and then seeking WEM Governing Body approval.

Scarcity pricing has been a shortcoming of CAISO market since MRTU go-live in 2009

The CAISO market includes an ancillary services shortage pricing demand curve that increases the price of ancillary services in the event that available ancillary services requirements cannot be met. This has a limited effect on energy prices. A robust scarcity pricing design for energy results in energy prices gradually rising above the cost of the

marginal resource as the energy supply margin decreases. As demonstrated during the Summer 2020 events, the lack of scarcity pricing of energy sent incorrect price signals leading up to CAISO shedding load.

The *Market Enhancements for Summer 2021 Readiness* initiative considered but did not recommend system market power mitigation, deferring that until it could be coordinated together with a comprehensive scarcity pricing design. CAISO argued implementation of the two topics are linked because suppression of prices due to over-mitigation would be counterbalanced by a pricing mechanism that still allowed energy prices to reflect scarce supply. With FERC's removal of the WECC-wide \$1,000/MWh soft offer cap, it is imperative that CAISO develop a robust scarcity pricing mechanism for EDAM.

Scarcity pricing is complementary to imbalance reserve design

The design of imbalance reserves demonstrates the importance of real-time scarcity pricing. Imbalance reserves are not procured to cover 100% of uncertainty – it would be too expensive. The imbalance reserve up requirement is set to cover a maximum of 97.5% uncertainty and includes a demand curve to only procure imbalance reserve up if the day-ahead cost is less than the expected real-time benefit. But what if uncertainty materializes above 97.5%, or if, in hindsight, the imbalance reserve demand curve was too low? This is the purpose of a robust scarcity pricing design in the real-time market. As the real-time scarcity pricing design begins to gradually increase energy prices above the marginal resource, it signals to all supply and demand response resources that the market needs them. This includes supply across the WEIM/EDAM footprint and beyond – including those resources that do not have an energy award, imbalance reserve award, or reliability capacity award – that they should voluntarily offer into the CAISO operated market. Real-time scarcity pricing provides a backstop in the event extreme events occur beyond what was planned for day-ahead through imbalance reserve procurement.

Ancillary services co-optimization across EDAM footprint is not required to implement scarcity pricing

CESA supports the concept of “energy supply margin”. CESA previously used the term “latent reserves” which was defined as “unloaded supply and demand response resources that have voluntarily submitted offers into the market.” Latent reserves are equivalent to an energy supply margin. The energy supply margin does not include ancillary services bids, and it would be inappropriate to do so. The market design cannot relax ancillary services requirements and violate WECC/NERC reliability standards to implement scarcity pricing.

The energy supply margin is used to construct a market requirement which can be relaxed at a cost. This enables the co-optimization of the energy supply margin and energy bids in the market software which results in energy prices gradually increasing as the energy supply margin requirement is relaxed. The energy supply margin does not require a new product per se; however, the scarcity pricing design needs to establish how to “count” resources that can provide the energy supply margin. For example, should resources that can be started in 30 minutes or 60 minutes be included in the energy supply margin or should online resources count based upon their 30 minute or 60 minute ramp capability?

CESA will be available at the March 3, 2026, WEM Governing Body meeting to respond to any questions regarding these written comments.

Sincerely,



Scott Murtishaw
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