Submit comment on Final Discussion Paper

Initiative: Demand and distributed energy market integration

1. Please provide your feedback on the demand and distributed energy market integration final discussion paper.

The California Efficiency + Demand Management Council (Council) appreciates this opportunity to provide feedback on the Demand and Distributed Energy Market Integration (DDEMI) Final Discussion Paper (Discussion Paper). The Council greatly appreciates the effort put in by CAISO staff in moving this process forward, especially with regard to their level-setting sessions whereby they would provide background on specific issues or market products to ensure a baseline understanding among market participants.

Overall, the Discussion Paper accurately captures the DDEMI Working Group (Working Group) process, principle, and themes. The problem statements reflect the diverse priorities of the market participants. As discussed in greater detail below, the problem statement assessments are highly informative because they provide an indication of the CAISO's thinking regarding the overall feasibility of addressing each problem statement.

2. Please provide your feedback on the ISO assessment on the Distributed Energy Resource (DER) problem statement assessment.

The problem statement assessments were extremely useful from the perspective of a participant in the Working Group because it reflected the CAISO's own applied operational and market expertise, identified dependencies with Local Regulatory Authorities, and broader CAISO market impacts. From the Council's perspective, all of the information provided in these assessments was an important factor in selecting and sequencing its top five problem statements.

3. Please share your thoughts on how CAISO should prioritize or scope future policy development for this initiative. The ISO is interested in your top five problem statements and how they should be sequenced in the short-term (2026-2027), mid-term (2028-2030), and long-term (2030+), and to the extent possible, discuss any anticipated benefits to market efficiency or system reliability.

At a high level, the Council recommends that the CAISO address problem statements that have the greatest likelihood of success and deliver the most "bang for the buck". More specifically, the Council recommends the CAISO consider which problem statements to pursue based on the five qualitative criteria listed below (in no particular order).

1. Applicability: How many market participants are affected? All else being equal, the more market participants that would benefit by addressing a problem statement, the better.

2. Market Impacts: How much will the CAISO market benefit from this? Any investment of the CAISO's time and resources should result in more available resources and/or more efficient market operations, both of which will improve CAISO market efficiency.

3. Strategic: How does this support State goals? Ideally, any problem statements that are addressed should align with State policy goals to the greatest extent possible.

4. Regulatory Alignment: Does this require coordination with the CPUC? This criterion is less a requirement than a consideration in what time frame would be most appropriate to address the problem statement. For example, the Demand Response rulemaking is currently underway so to the extent that addressing a particular problem statement requires a related policy under CPUC jurisdiction, it might be most efficient for that problem statement to be addressed in the short term.

5. Feasibility: How feasible is this in terms of cost and regulatory hurdles? This criterion is highly important as well because the CAISO's time and resources are finite; selecting high feasibility problem statements will leave resources available to address other problem statements.

With these criteria as a general framework, the Council recommends the following problem statements be addressed:

Performance Evaluation Methodology

2) Existing PEMs, such as the commonly used 5-in-10 and 10-in-10 approaches, are not well suited for emerging DR participation (inclusive of all technology types such as Behind-the-meter batteries, aggregations, Electric Vehicle charging, etc.) whose frequent dispatching distorts baseline calculations. Short Term

Addressing this problem statement would impact any entity that provides DR in the CAISO market. By enabling DR to dispatch more frequently with less risk of depressed load impacts, the market efficiency would be improved. There are no clear statewide policies that would be directly supported by addressing this problem statement but coordination with the CPUC's DR rulemaking would be helpful to ensure baseline consistency across the retail and wholesale spaces. Implementation requirements would be low, according to the CAISO's assessment.

3) BTM device-level measurement is not recognized for use in developing baselines for PEM options. Performance evaluations depend on energy measurement (load and generation) and don't recognize non-energy metered technologies contributions to load reduction calculation equivalents. Medium Term

Addressing this problem statement would require also addressing Problem Statement 6 which states, "Requirement for registration of locations to be at the service account level prevents aggregators from developing resources at the level of the customer's device." If this combined problem statement was addressed, it would impact any entity that provides DR whose customers own multiple devices that are equipped with performance measurement technology. Market impacts could be substantial because, pending certain policies being adopted by the CPUC, it could enable all devices of each DR participant to provide DR, potentially through different programs and during different times of the day. This would support the California Energy Commission's (CEC) Load Shift Goal (LSG), and potentially Load Management Standards (LMS) goals and large-scale deployment of dynamic rates. Coordination with the CPUC would be necessary to achieve performance measurement at the device level to ensure consistency across the wholesale and retail markets. Implementation costs would be high but it would enable access to all DR participants' devices to provide load curtailment, regardless of time (i.e., slice) of day, DR provider, or DR program.

5) Requirement for control group end users to be registered in the Demand Response System limits use of non-participating end users within a control group and is in conflict with consumer data privacy rules. Short Term

Addressing this problem statement could impact all entities that provide DR in the CAISO market that would like to use control groups. More accurate performance measurement would improve market efficiency and overall confidence in the performance measurement process. There are no clear statewide policies that would be directly supported by addressing this problem statement but coordination with the CPUC's DR rulemaking could be supportive of universal control groups if this issue is included in the proceeding. The implementation requirements would not be small but the more accurate performance measurement would facilitate improved confidence in DR performance.

Economic Demand Response Participation

1) While PDR is the most compatible CAISO model for BTM-interconnected storage, because it is conceptualized as load curtailment, it does not include any measured export of energy from individual locations to measure performance of the resource via any of existing PEMs—including MGO—so that BTM storage aggregations cannot offer the full resource capability, and PDR performance is artificially capped at levels reflecting conservative estimates of site load, resulting in significant energy from BTM storage that is unused during events and unavailable to the CAISO market. Short Term

Addressing this problem statement would benefit all DR providers whose customers possess BTM energy storage, and release large amounts of additional capacity to the CAISO market by enabling export-capable BTM energy storage to augment the load curtailment capability of DR participants. This would directly support the LSG. Coordination with the CPUC's DR rulemaking would be necessary to develop a Qualifying Capacity counting methodology in order to bring this additional capacity to the market. The CAISO has indicated that implementation requirements would be relatively low.

Expanding Demand-Side Bidding Options

Electricity markets have yet to fully unlock the potential of demand-side resources, leaving price signals less effective, innovative load management strategies underutilized, and system efficiency gains unrealized. Demand-Side Bidding provides a pathway to expand participation, strengthen price responsiveness, and enable new approaches to load management, all while preserving market integrity and reliability. Medium Term

Addressing this problem statement could benefit the largest number of market participants because it could impact all load-serving entities (LSE), and DR providers that currently operate both inside and outside the CAISO market. If done correctly, large quantities of price response demand could moderate the daily load curve and free up dispatchable resources for ramping. This would support the LSG and Load Management Standards, and would align with the CPUC's policy of dynamic rate deployment. Deployment would require a substantial amount of effort but be worthwhile if the estimated benefits are substantial enough.