



**Comments on the California Energy Storage Alliance (CESA) on the
Energy Storage and Distributed Energy Resources Phase 3 (“ESDER 3”)
Draft Final Proposal**

Submitted by	Organization	Date Submitted
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CESA Comments:

Please find CESA responses to the questions posed in the CAISO’s Comments Response Template.

About CESA:

CESA is an industry advocacy association focused on grid-connected energy storage. CESA’s mission is to make energy storage a mainstream resource that accelerates the adoption of renewable energy and promotes a cleaner, more efficient, reliable, affordable, and secure electric power system. The CAISO’s ESDER initiative specifically addressed market participation pathways for energy storage in select applications and is a core priority of CESA’s.

CESA is a 501(c)(6) non-profit that represents over 70 member-companies and leaders in the energy storage industry.¹ www.storagealliance.org.

¹ 8minutenergy Renewables, Able Grid Energy Solutions, Advanced Microgrid Solutions, AltaGas Services, Amber Kinetics, American Honda Motor Company, Inc., Axiom Exergy, Brenmiller Energy, Bright Energy Storage Technologies, Brookfield Renewables, Carbon Solutions Group, Centrica Business Solutions, Consolidated Edison Development, Inc., Customized Energy Solutions, Dimension Renewable Energy, Doosan GridTech, Eagle Crest Energy Company, East Penn Manufacturing Company, Ecoult, EDF Renewable Energy, ElectrIQ Power, eMotorWerks, Inc., Enel, Energport, ENGIE, E.ON Climate & Renewables North America, esVolta, Fluence Energy, GAF, General Electric Company, Greensmith Energy, Ingersoll Rand, Innovation Core SEI, Inc. (A Sumitomo Electric Company), Iteros, Johnson Controls, Lendlease Energy Development, LG Chem Power, Inc., Lockheed Martin Advanced Energy Storage LLC, LS Power Development, LLC, Magnum CAES, Mercedes-Benz Energy, NantEnergy, National Grid, NEC Energy Solutions, Inc., NextEra Energy Resources, NEXTracker, NGK Insulators, Ltd., NRG Energy, Inc., Parker Hannifin Corporation, Pintail Power, Primus Power, Range Energy Storage Systems, Recurrent Energy, Renewable Energy Systems (RES), Sempra Renewables, Sharp Electronics Corporation, SNC Lavalin, Southwest Generation, Sovereign Energy, Stem, STOREME, Inc., Sunrun, Swell Energy, True North Venture Partners, Viridity Energy, VRB Energy, Wellhead Electric, and Younicos. The views expressed in these Comments are those of CESA, and do not necessarily reflect the views of all of the individual CESA member companies. (<http://storagealliance.org>).

CESA Responses to the Comments Response Template:

1. Bidding and real-time dispatch options for Demand Response

Please state your organization's position as described in the Draft Final Proposal: (Support, support with caveats or oppose)

CESA Comments: No comments or position on this matter at this time.

2. Removal of the single load serving entity aggregation requirement and the application of a default load adjustment

Please state your organization's position as described in the Draft Final Proposal: (Support, support with caveats or oppose)

CESA Comments: CESA supports. It is reasonable to adjust this aspect of demand response rules so that customer DR is not 'stranded'.

3. Load shift product for behind the meter storage

Please state your organization's position as described in the Draft Final Proposal: (Support, support with caveats or oppose)

CESA Comments: CESA supports with caveats at this time.

CESA appreciates the CAISO's development of this important market participation avenue. CESA appreciates and recognizes the CAISO's thoughtful adoption of a 'middle ground baseline' for PDR-LSR. Overall, CESA appreciates the collaborative process and creativity displayed by the CAISO in developing this first-of-its kind product. The product's design supports the capture of negatively-priced energy for useful purposes, e.g. for later use which seems reasonable and prudent at this time, given the general goals of renewables integration, reduced energy use on peak, etc..

While CESA for now supports the current product design, CESA also strongly recommends near-term consideration and development of a 'true average baseline approach'.² While CESA appreciates the CAISO's consideration of evolving baselines towards a more 'middle ground' concept, CESA developed and explained the concept of the 'true average baseline approach' in comments submitted in April in response to the ESDER Technical Working Group meeting held on March 29, 2018.

² This "true average approach" baseline would be calculated based on the average energy use of the applicable period, rather than through the adjusted average where certain periods are not factored in or where storage discharging activities (in the case of the load shift baseline) are excluded from baseline formulas.

Without the true-average baseline approach, CESA believes participation in this helpful PDR-LSR product may be limited, since the baseline approach may leave available capacity ‘on the table’, reducing market efficiency. The shift to a 15-minute interval-based baseline calculation, as opposed to the previous hourly baseline, provides an additional basis for moving to the true-average baseline approach insofar as the 15-minute interval approach will yield more precisely measured ‘typical use’ than the broader hourly measurement of current practice.

CESA believes a true-average baseline approach is beneficial for market participation and can be implemented with appropriate safeguards. Historically, two factors led in part to baselines that may be overly conservative and are thus leaving ‘capacity on the table’. These two factors were i) concerns of gaming the baseline and ii) concerns of inappropriate payments for resource responses (e.g. energy dispatches) that were not truly in response to market needs. CESA agrees that these are both crucial considerations and strongly recommends that any baseline solutions satisfactorily address these concerns. Per CESA’s past comments, CESA believes these concerns can be sufficiently addressed via the true-average baseline.³

CESA recommends that ESDER 3 direct a subsequent ESDER 4 or other stakeholder initiative to, reasonably quickly, evaluate and consider implementation of a true-average baseline approach. Alternatively, the Draft Straw Proposal could be revised to consider and potentially implement a true-average baseline. CESA appreciates the CAISO’s consideration and looks forward to working with the CAISO.

³ The true-average baseline approach still serves the goal of identifying typical use and ensuring resources are not compensated for wholesale purposes for regular typical, a.k.a. regular retail, operations.

The true-average approach also renders a more accurate response for the CAISO system, improving system operations and efficiency. When dispatched off of a ‘true average’, a resource can ‘move’ in accordance with the dispatch need, rather than moving *more than* the scheduled dispatch. Imagine a load-shift resource with a true average typical use of 100 kW for the applicable period that is given a schedule to increase load by 200 kW for the period. If the baseline, due to ‘conservatism’ overstates this baseline to be 175 kW, the resource must then direct its storage device to increase its charging to 375 kW, rather than to 300 kW, as CESA understands it. This shows how the CAISO system sees an excessive (and uncompensated) dispatch of 75 kW. This unpaid excess compensation may be unreasonable, costly, and may sew system inefficiency.

Concerns about baseline gaming are already addressed through the extensive baseline averaging approach. Additional factors such as weather, seasonal changes, and customer demand changes are unpredictable and could ‘swamp’ any micro-baselines management approaches so the possibility of intentionally and materially gaming the baseline appear to be *de minimus*.

Finally, in some instances, the extent to which typical use of an MGO resource is already reflected in scheduled and cleared load can vary. While the typical-use approach rightly assumes that the typical use amount is appropriately factored into Day-Ahead schedules (LSE schedules plus virtual demand) or real-time forecasts (ISO forecast of ISO demand), some load schedules may be inaccurate in some intervals. It thus follows that the regular retail charging as well as the incremental energy storage charging in a load shift product may be completely unaccounted for in the load schedules. This is undoubtedly true on the first day of operations from a behind the meter energy storage system. Even after periods of dispatches, the timeliness and accuracy by which the effects of the retail (typical) energy storage charging are ‘fed’ into the load schedules remains unclear. This conclusion highlights how a ‘true average’ baseline is reasonable.

4. Measurement of behind the meter electric vehicle supply equipment (EVSE) load curtailment

Please state your organization's position as described in the Draft Final Proposal: (Support, support with caveats or oppose)

If you replied supports with caveats or opposes, please further explain your position and include examples:

CESA Comments: CESA supports.

CESA believes this important participation model for electric vehicles can be implemented at this time with the safeguards discussed by CAISO. CESA again appreciates the CAISO thoughtful consideration of stakeholder comments and believes this participation model fits well with larger energy and transformation priorities happening coincidentally in the CAISO's Balancing Authority Area and beyond.

In ESDER 3 discussion, some hypothetical scenarios were contemplated in order to evaluate if the overall load reduction goals of the EVSE load curtailment would consistently be achieved. The CAISO highlighted how its provisions and controls satisfactorily address any such concerns. For instance, the CAISO has sufficient authority through its oversight of Schedule Coordinator Metered Entities (SCME) and control over the Business Practice Manual to ensure that this new enhancement to the PDR participation model has similar integrity to CAISO-integrated demand response, including that which participates as MGO. The CAISO should thus approve and implement this important ESDER 3 enhancement.

5. Additional comments

Please offer any other feedback your organization would like to provide on the Draft Final Proposal

CESA Comments: Thank you to CAISO staff for all of their hard and smart work on ESDER 3!