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CALSSA comments on CEC load-shift goal workshop

Additional submitted attachment is included below.

CALIFORNIA SOLAR + STORAGE ASSOCIATION
smart local energy

July 9, 2025

California Energy Commission
Docket Unit, MS-4
715 P Street
Sacramento, CA 95814

Re: Docket No. 25-IEPR-05—Comments on CEC load-shift goal workshop

California Energy Commissioners and Staff:

The California Solar & Storage Association (CALSSA) appreciates the opportunity to provide comments in response to the IEPR Commissioner Workshop on California's Progress Toward the Load-Shift Goal, held on June 25.

CALSSA is an association of distributed clean energy providers across the state. Our members enable California utility customers to play an active role in energy generation and energy demand flexibility, including through innovative approaches to managing fleets of customer resources (virtual power plants, or VPPs) and managing premises energy use for optimized utility bill management. In particular, we have been closely involved in the development of the CEC's Demand Side Grid Support (DSGS) program, primarily its Incentive Option 3, the market-aware storage VPP pilot. CALSSA members represent a majority of the storage VPP aggregators active in Option 3, and a significant majority of the enrolled capacity.

CALSSA strongly supports the CEC's load-shift goal of 7 GW by 2030. The goal should be retained and increased. The CEC should focus greater attention on behind-the-meter (BTM) batteries to achieve greater load flexibility potential than projected in the Senate Bill 846 Load-Shift Goal Report issued in May 2023.

During the workshop, a staff presentation on the CEC's load flexibility analysis concluded that under business-as-usual conditions, there would be a 3 GW shortfall in reaching the 7 GW 2030 goal. CALSSA believes that there will be greater load-shifting from BTM batteries than projected: even without additional policy support, it could be greater than 2 GW by 2030. We also strongly believe that California should provide robust new strategies in the near term and longer term to increase demand flexibility and achieve an ambitious 2030 goal of greater than 7 GW.

Categorization should not create obstacles to demand-flexibility potential.

The Load-Shift Goal Report and the CEC's workshop presentation divide resources into three categories: load-modifying, resource planning and procurement, and incremental and emergency. Categorization can be useful for analytical purposes, but we must be mindful not to allow that categorization to create obstacles limiting the potential for demand flexibility. This

categorization treats some high-potential resources as incremental and emergency resources, which limits the measurement of their value.

Staff presentations at the workshop identify resource planning and procurement resources as market integrated, and incremental and emergency resources as out-of-market resources that are reserved for extreme emergencies. The categorization does not envision out-of-market resources that are available more frequently than during extreme emergencies. This is a gap that can and should be filled to increase load-flexibility potential for our state, which should be accounted for in the load-shift goal update and in policy making by the state's energy agencies and the Legislature.

DSGS's value should be more fully recognized.

The workshop discounted both the current-state demand-flexibility contribution of DSGS and the potential for the DSGS program design as a driver of future demand-flexibility potential.

First, the workshop slide ranking the 2024 load flexibility resources shows DSGS as the second-smallest resource in the ranking.[1] The presentation did not provide a complete picture of DSGS's growth trajectory to date or its current size.

In the workshop presentation on load-flexibility analysis, preliminary staff estimates of delivered DSGS capacity shown appear low compared with capacity enrolled in the program. The estimates provided in the workshop show DSGS performance of 46 MW in 2023 and 161 MW in 2024. The 2024 capacity is about 30% of enrolled capacity. Staff estimates have not yet been shared with the stakeholder community for review and input.

More important, the DSGS capacity estimates show the remarkable growth of DSGS: it grew 250% in one year.[2] Our understanding is that from 2024 to 2025, DSGS enrollment has grown by more than double, suggesting that capacity available in DSGS already likely exceeds that available from ELRP and POU DR programs—in other words, DSGS is a significant and meaningful component of the current load flexibility resource, much beyond what was shown in the workshop presentation.

The workshop presentation analyzing load flexibility assumed no continued extensions of either DSGS or ELRP beyond the current program end dates, meaning that no capacity projections were estimated for DSGS going forward. While we appreciate the difficulty of making projections with incomplete information about future program funding, we believe that providing an estimate of future DSGS capacity, assuming continued funding support, would be valuable for the Legislature, other policy makers, and stakeholders.

DSGS should be supported through additional funding. CALSSA and others are advocating for additional funding before the end of this year's legislative session.

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[1] Staff presentation, California's Progress Toward the 7GW Goal, Slide 10.

[2] This compares with only 10% growth in the Emergency Load Reduction Program in 2024 over 2023. Staff presentation, California's Progress Toward the 7GW Goal, Slide 9.

Second, DSGS can be a model for greater load-flexibility capacity.

DSGS originated in response to a need to shore up our grid's reliability in the wake of the 2020 and 2022 energy system emergencies. Since its inception, the CEC has conceptualized DSGS and the other components of the Strategic Reliability Reserve as an incremental layer on top of planning and procurement, which can be called on during extreme events.

DSGS has great potential, even in a limited role as an emergency reliability program, as shown by its growth trajectory since its inception in 2022, and especially since Option 3, the BTM battery VPP option, was established in the middle of the summer 2023 season. But the state can achieve greater demand flexibility by using Option 3 as a model for programs that are not "reserved" for emergencies, such as discussed below.

Greater load-flexibility capacity can be unlocked through an LSE load modification mechanism that is compatible with BTM storage in the NBT fleet.

The state can achieve greater peak demand reduction by using BTM batteries in ways that are similar to DSGS Option 3, but that go beyond the emergency reliability paradigm and instead are included in the resource planning paradigm. This should include allowing for more flexibility in the demand forecast and allowing demand-flexibility resources to provide capacity for resource adequacy (RA) value.

Currently, LSEs can get RA credit for demand reduction from a VPP or DER program that reduces their peak demand on a systematic basis, with that generally meaning a weekday daily load shift during the peak period or Availability Assessment Hours.

For net billing tariff (NBT) assets, this daily cycling with concentrated discharge of the batteries negatively impacts the customer bill savings, as the discharged capacity is not available to be used to offset load during other hours in the on-peak TOU window. This operating mode leads to hundreds of dollars of lost opportunity costs, effectively wiping out the RA value that a CCA or other LSE could get from the program's operation.

Reducing RA obligations is extremely important, especially because the capacity market has been so constrained in recent years. To make this a more usable and useful approach, the CEC should enable a more dynamic dispatch logic that more directly linked to the grid peak hours and days, in a way that is still systematic and reliable, so that LSEs can confidently include it in their load forecasts on an upfront basis.

For example, a market-aware dispatch trigger could be linked to a threshold strike price in the relevant zonal LMP—using DSGS Option 3 as a model—or another grid stress proxy, to mimic the conditions under which RA is being called on, prudently drawing on the flexibility of the batteries when conditions warrant. There could be a maximum number of dispatches that strikes a balance between, on the one hand, meeting grid needs and the need for systematic planning within the load forecasting process, and on the other hand, reducing the impact on customer bills. This would better unlock the potential of this load-shifting capacity and enable a synergy between customer DER operation and grid value.

Such an approach is needed in part because BTM energy storage currently has no viable path for participation in the CAISO market. The PDR participation model does not provide credit for energy exports, and there is no RA credit available for resources participating through the DERP model. This means neither model provides enough value to justify the costs of market participation. The modified PDR proposal is a partial solution that would better allow for net exporting DER fleets including both BTM batteries and load-control DERs, but that would only work for aggregations that have a positive net load, and would not unlock the potential for BTM storage aggregations. Stakeholders are presently engaged in a working group process at the CAISO and are seeking to enable exported energy to be counted in PDR resources, but we do not yet know the result of that effort.

Unless and until this and other wholesale market challenges can be overcome, a more flexible and dynamic approach for load modification is needed, to make it feasible for NBT-paired BTM batteries to participate as RA resources and help address the statewide need for capacity.

Approaches from other jurisdictions provide valuable lessons for California policy making.

California was an early leader in recognizing the value of demand-side resources to reduce system peaks and create a more responsive and dynamic grid. Through the paradigm of demand response, California brought to bear a substantial energy resource. The potential for demand flexibility has grown far beyond that traditional paradigm, yet many of California's policies for demand flexibility are still based in the paradigm of demand response, which creates limitations on the potential flexibility we can bring to bear. For example, BTM batteries are greatly limited in the amount of capacity they can provide in market-integrated demand response programs, which limit response to premises load and do not count energy exports.

California can learn much from other approaches to load flexibility. The presentations during the workshop are a useful beginning. CALSSA encourages the CEC to continue to investigate alternative approaches from jurisdictions that have more fully incorporated demand flexibility into energy system planning and operation.

Dynamic pricing is a valuable demand-flexibility tool but is not a silver bullet.

CALSSA and members believe that dynamic pricing is an important element of a demand-flexibility portfolio. However, we must avoid undue optimism about the impact of dynamic rates, because they may not achieve the level of uptake needed to meet ambitious goals.

The current structure of the subscription element of dynamic pricing in California is unlikely to appeal to customers considering investments in batteries as a load-shifting technology. Other jurisdictions with dynamic pricing, such as the United Kingdom, take a different approach that has shown to be more attractive.

The state also needs to be mindful that dynamic pricing poses challenges for project development and resource deployment. As pointed out during the workshop, there is a need to balance precision with workability. Revenue certainty is a requirement for project development, especially to secure financing. This means that California should continue to

develop pathways for demand flexibility separate from dynamic rates, as well as ensure that dynamic pricing approaches maintain some level of predictability.

Market barriers include barriers to battery deployment.

This past winter, CEC staff solicited stakeholder input on barriers to achieving the load shift goal, as well as solutions and strategies. CALSSA provided input in response to the CEC's questions. Our input included not only policy barriers for DSGS and market-integrated demand response programs, which were identified in the workshop's staff presentation, but also barriers to deployment of BTM batteries.

Customer battery deployment is growing quickly, and California already has approximately 2 GW of deployed BTM battery storage. That said, deployment barriers create obstacles to greater growth and are a serious drag on the potential for load-shifting from BTM batteries.

CALSSA provided the following brief summary of barriers to deployment.

Interconnection barriers include (1) the common need to upgrade the main electric panel when adding a battery, which adds costs and delays, and which can be prohibitive because of rules that require panels to be moved, and (2) onerous and slow utility testing requirements for batteries that already have certification from recognized laboratories.

Permitting barriers include jurisdictions (1) using slow manual review processes, which may be done by staff that are inexpert in solar and storage systems and which are often out of compliance with state law, and (2) charging additional fees for storage systems installed with solar. These add both costs and delays that discourage deployment.

Fire department review of battery installations poses additional barriers and is a growing problem. (1) Additional fire permits are often required, greatly increasing time delays and costs. (2) Fire officials not respecting UL 9540A testing (allowing for reduced distance between ESS units) means that *some* customers may not be able to install storage systems of the size they need or may not be able to install a battery at all. This disproportionately impacts smaller homes.

CALSSA applauds the CEC for its work to develop the load-shift goal and to assess the progress toward meeting it. We believe that ambitious goals are necessary to spur policies that will enable us to meet our climate and clean energy goals. We look forward to continuing to participate in these efforts, both in policy discussions and on the ground as clean energy businesses that put demand flexibility into action every day.

Sincerely,

/s/ Kate Unger
Kate Unger
Senior Policy Advisor
California Solar & Storage Association