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Joint Comments - FTM DERs in Californiaâ€™s Energy Future Workshop

Additional submitted attachment is included below.

July 29, 2026

California Energy Commission
Docket No. 22-OII-01
715 P Street
Sacramento, CA 95814

Re: Docket No. 22-OII-01: DERs in California's Energy Future Workshop

The Coalition for Community Solar Access, the Solar Energy Industries Association, the California Energy Storage Alliance, Californians for Local Affordable Solar & Storage, San Diego Community Power, and Vote Solar (collectively, the "Joint Commenters") appreciate the opportunity to submit written comments on the July 15, 2026 Distributed Energy Resources in California's Energy Future Workshop ("Workshop").

The Joint Commenters commend the California Energy Commission ("CEC") for convening a Workshop that brought together load serving entities ("LSEs"), developers, and the Commission's sister agencies to examine the role distributed renewable resources will play in meeting California's reliability and affordability objectives. These comments focus on one thread that ran throughout the day: the potential for front-of-the-meter ("FTM") distribution-connected solar and storage, including community solar plus storage, to serve load locally, and the absence of a defined regulatory framework to recognize that contribution. Below, we summarize the evidence presented on the scale of that potential and the demand for it among LSEs, describe a set of guardrails that would give planners confidence that these resources directly modify local loads, and recommend that the Commission use this proceeding to develop a set of recommended load modifier protocols for FTM Distributed Energy Resources ("DERs").

Substantial Load-Modifying Potential and Demonstrated LSE Interest

Presentations at the Workshop made clear that there is significant potential for cost-effective, load-modifying FTM DERs in California, along with demonstrated interest in this resource type from LSEs.

According to CCSA, the preliminary results of a study from Kevala Inc. examining the load modifier potential of 3-5 MW FTM DERs discharging during summer coincident peak hours in CAISO identify 9-15 GW of system potential across more than 3,000 IOU feeders. This represents up to 37% of the IOUs' combined summer peak load and a third or more of net peak load, illustrating the significant potential for FTM DER exports to load-match at the distribution level statewide.[1] While these results are still preliminary, and should be validated by further CEC review, they offer a compelling case for the direct load-serving potential that can be unlocked if a load modifier pathway can be enabled for FTM DERs.

While these Kevala estimates illustrate the scale of technical potential, a study conducted by Aurora Energy Research grounds that potential in what it could mean for California electric grid planning and affordability. Using a combination of capacity expansion, production cost, and power flow modeling, the Aurora study evaluated how adding over 5 GW of these projects would affect California's resource mix, grid operations, and ratepayer costs. The objective of the Aurora Study was to determine, from a grid planning perspective, whether FTM DERs deliver sufficient avoided-cost benefits to warrant additional reliability and grid services value. That objective was met.

Relying on IRP inputs and assumptions, the Aurora study analysis established a base case closely aligned with the 2023 PSP portfolio – both in resource types and quantities – ensuring methodological consistency with state planning. Additional scenarios incorporating FTM solar plus storage were then modeled to assess portfolio impacts and total system costs. The results showed that adding 5.4 GW of FTM solar-plus-storage DERs, sited in local reliability areas and dispatching during the net load peak, would displace the need for a similar quantity of utility-scale solar-plus-storage and result in avoided energy, avoided system capacity (resource adequacy), and transmission costs, thereby reducing total net ratepayer costs by $6.5 billion over 20 years.

This statewide potential is reinforced by demonstrated LSE interest in FTM DER procurement. The Southern California Public Power Authority ("SCPPA") noted that its members are targeting at least 180 MW of FTM solar and storage by 2030, a portion of which is already operational or grant-funded.[2] WestLight Energy discussed multiple FTM DER projects under development, but noted that long study timelines and their inability to claim any RA or other grid services value from projects under current state planning and procurement frameworks was holding back the market and associated benefits. As such they recommend that the CEC should use this proceeding to review a FTM DER load modifier pathway that might unlock system and local capacity value, distribution grid value, quicker speed-to-power benefits, and greater bill savings for all customers in their service territory.[3] Clean Power Alliance, in turn, noted that such a

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[1] Study results described on slide 4 of CCSA workshop slides, available starting at hour 04:41:25 of the Audio Transcript Recording. The next phase of the study will investigate the load modifier potential when load is aggregated across multiple feeders behind the same substation bus, which more accurately assesses the upper bound of load that can be served locally without curtailment or backflow onto the bulk power system. Results from that phase are expected to be submitted into the record once available.

[2] Figures summed from SCPPA workshop slides 5-8.

[3] WestLight CEC Workshop presentation

pathway would need to include a durable and predictable methodology, so that LSEs have certainty when accounting for the reliability value of FTM DERs.[4]

And there is an urgent need for new sources of solar and storage that can scale quickly and augment the state's utility-scale and behind-the-meter clean energy development efforts. The California Public Utilities Commission ("CPUC") warned in a recent IRP ruling proposing the 2026-27 Transmission Planning Process ("TPP") Portfolios that "the buildout of [utility-scale] solar, in particular, is so large that it calls into question whether it can feasibly be built in the quantities and timing identified in this round of IRP modeling."[5] Indeed, that Ruling, and subsequent Decision transmitting the TPP Portfolios to the CAISO, shows that California must add 4–7 GW of new solar capacity each year—more than twice today's build rate—by the end of the decade to achieve the state's climate and reliability goals. Similarly, the state's latest SB 100 interagency analysis shows a need for roughly 195 GW of new clean energy by 2045, including 5 GW per year of utility-scale solar for the next 20 years.[6] Meanwhile, CEC data presented at the Workshop demonstrates that there has been near-zero growth from FTM DERs in CAISO in recent years, which represents a market failure and an opportunity for California to increase our overall clean energy build rates while providing a suite of additional ratepayer benefits.[7]

In addition, FTM DERs can respond more effectively than utility scale resources to project-driven load growth that is reshaping reliability needs. The 2025 IEPR forecast shows that data centers, building electrification, EV charging, and other project-driven loads are increasingly defining the risk profile.[8] Future reliability needs therefore depend not only on aggregate statewide capacity, but also on where and when capacity is available. FTM DERs are uniquely suited to meet localized reliability needs.

There is compelling evidence that FTM DERs can scale quickly across the state and provide a suite of reliability and grid services value that will lower overall ratepayer bills, and that LSEs want to procure this resource type. What is missing is a regulatory pathway for FTM DERs to provide and monetize these benefits in a way that is visible and consistent in state planning and procurement frameworks. The CEC should use this OII to study the load modifier potential of FTM DERs in more detail, and to develop a set of guardrails that could be used to establish load modifier eligibility—guardrails that would provide certainty for LSEs and the joint agencies responsible for system planning.

Proposed Guardrails Align with CPUC Concerns

Throughout the Workshop there was widespread recognition of the potential for FTM DERs to provide more location-specific support for the distribution grid, and to unlock broader ratepayer

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[4] Workshop on DERs in California's Energy Future, Docket No. 22-OII-01 (July 15, 2026), Audio Transcript Recording available at recording, comments from CC Song (Clean Power Alliance) starting at hour 04:27:12.

[5] ALJ Ruling Seeking Comments on Electricity Portfolios for 2026-2027 Transmission Planning Process and Need for Additional Reliability Procurement, page 12.

[6] Draft 2025 SB 100 Joint Agency Report Draft Results - Reference Scenario Buildout, slide 29.

[7] CEC Staff Workshop Presentation, An Overview of FTM DERs in California, slides 15-16.

[8] 2025 Integrated Energy Policy Report dated July 2026, p. 10

savings if projects can be strategically located and operated to lower long-run, high-cost investments in resource adequacy, transmission, and distribution.[9] But presenters also emphasized that grid planners need certainty that FTM DERs will indeed serve load and perform when needed to provide those grid benefits.

In their presentation, the CPUC presented eight issues or questions, which were initially identified by the CPUC in Decision 20-06-031, that need to be answered before the CPUC could be reasonably assured that the capacity from behind-the-meter DERs was comparable to supply-side assets for resource adequacy.[10] The CPUC argued that many of these same points or questions would need to be considered or reasonably addressed to consider a load modifier pathway for FTM DERs.

Those eight attributes are as follows:

1. Forward determination of capacity associated with renewable production, consumption, charging, and export
2. RA requirements associated with customers providing capacity
3. Wholesale market participation including metering, dispatch control, and communication with CAISO
4. Cost for energy associated with consumption, charging, and export
5. Changes such that net energy metering (NEM) and self-generation incentive program (SGIP) resources are compensated for capacity, while discounting for their NEM and SGIP compensation as necessary to ensure that the resources do not receive compensation beyond their value
6. Load forecasting and adjustment for BTM resources
7. Interaction of such resources with existing BTM resources such as proxy DR
8. Deliverability determination

We agree that resources need to deliver power as promised, when promised, to provide reliability and system planning benefits. Since IRP portfolios and RA requirements are set incremental to the projected performance of load modifiers, each project must perform in line with its modeling assumptions. Significant deviations between modeled and actual performance can jeopardize reliability by undermining the planning assumptions used to set state reliability needs.

To provide assurance that FTM DERs are a dependable resource type that can be counted on in planning, CCSA offered a proposed set of operational and programmatic requirements that could be established as pre-conditions for FTM DER load modifier status.[11] These requirements are above and beyond what is required for other types of already recognized load modifiers, and are offered to provide state energy planners with confidence that FTM DERs can be integrated into

[9] Workshop on DERs in California's Energy Future, Docket No. 22-OII-01 (July 15, 2026), Audio Transcript Recording available at recording, comments from CPUC President John Reynolds starting at minute 16:28

[10] CPUC Workshop presentation, slide 5

[11] Workshop on DERs in California's Energy Future, Docket No. 22-OII-01 (July 15, 2026), Audio Transcript Recording available at recording, comments from James McGarry (CCSA) starting at hour 04:45:24.

California's resource planning processes with the same level of rigor and reliability as traditional supply-side resources.

These proposed guardrails include:

1. Guaranteed dispatch/charging windows set based on grid needs
2. Flexibility for long-term contractual dispatch/charging windows to shift over time as peak hours and load requirements evolve
3. Telemetry to provide CAISO and utilities real-time operational visibility
4. Performance-based payments tied to metered output during defined windows
5. Clawbacks and penalties to mitigate DER system underperformance risk
6. Real-time controller rights enabling utility dispatch during high-load or emergency conditions
7. Exclusivity between load modifier and RA market participation to prevent double counting of reliability value

These commitments mean that FTM DERs can offer high levels of system value with dependability on par with RA resources. They offer a transparent, flexible, and enforceable pathway for accrediting the reliability value of FTM DERs in a manner that is suitable for distribution-connected resources that serve load directly without needing to rely on the transmission system during high net load periods. This approach recognizes the distinct physical and operational characteristics and benefits of distribution-connected resources while ensuring that they are dependable, measurable, and fully integrated into state reliability planning.

We also observe that these proposed guardrails align well with the eight attributes identified by the CPUC. The table below crosswalks the CPUC's eight attributes against CCSA's proposed guardrails. This overlap demonstrates that FTM DERs can meet the same standards of forward certainty, operational visibility, and verifiable performance that the CPUC identified as prerequisites for counting distributed capacity toward reliability needs. We also note that several of the attributes identified by the CPUC to ensure resource adequacy reflect complications specific to customer-sited, NEM/NBT- and SGIP-compensated resources; these are the questions of separating customer consumption from exports, avoiding duplicative compensation, and adjusting load forecasts for behind-the-meter behavior. FTM DERs are separately metered, export-only resources, so these issues are substantially simpler in this context, and in some cases do not arise at all. The remaining attributes — forward capacity determination, operational visibility and dispatch control, avoidance of double counting, and deliverability — can be addressed directly through load modifier protocols based on the guardrails proposed above.

#	Issue from D.20-06-031 (p. 32)	Disposition	How this is addressed for eligible FTM DERs	Relevant guardrail(s)
1	Forward determination of capacity associated with renewable production, consumption, charging, and export	**Addressed by guardrails**	Capacity contribution would be set ex ante by contractually guaranteed dispatch/charging windows. Unlike BTM resources, FTM DERs have no host load and are fully available to serve grid needs. Production, charging, and	Guaranteed dispatch/charging windows; window flexibility over time; telemetry; performance-based payments;

			export would be fully telemetered, and forecast contributions can be trued up annually against metered performance	penalties for non-compliance
2	RA requirements associated with customers providing capacity	**Moot for FTM DERs**	N/A — FTM DERs have no host customer, so there is no customer RA obligation to disentangle from the capacity the resource provides.	None required
3	Wholesale market participation including metering, dispatch control, and communication with CAISO	**Addressed by guardrails**	Fully responsive to wholesale market signals: Wholesale energy market impacts would be guided by the guaranteed charging/dispatch windows. Telemetry and real-time controller rights provide operational visibility and control, and exclusivity with RA counting prevents double counting of reliability value	Guaranteed dispatch/charging windows; telemetry; real-time controller rights; exclusivity between load modifier status and RA market participation
4	Cost for energy associated with consumption, charging, and export	**Addressed by guardrails**	Charging energy is a project cost settled at applicable rates under program, tariff, or PPA terms. FTM DERs are located on the utility side of the meter, so there is no retail-rate netting of consumption, charging, or export	All guardrails enforceable through program, tariff, or PPA contract terms
5	Changes such that NEM and SGIP resources are compensated for capacity, while discounting for their NEM and SGIP compensation as necessary to ensure that the resources do not receive compensation beyond their value	**Moot for FTM DERs**	N/A — FTM DERs are categorically ineligible for NEM and SGIP, so there is no incentive stream to discount. Compensation is a single contracted, performance-based payment stream; exclusivity between load modifier status and RA market participation prevents double counting of reliability value.	Performance-based payments; exclusivity between load modifier and RA market participation
6	Load forecasting and adjustment for BTM resources	**Addressed by guardrails**	Metered performance data and telemetry allow the CEC to verify and true up load modifier contributions in the forecast over time	Telemetry
7	Interaction of such resources with existing BTM resources such as proxy DR	**Moot for FTM DERs**	N/A — FTM DERs have no host customer to enroll in proxy DR or any other BTM program, so double counting with BTM programs is impossible. Exclusivity further precludes overlap with RA-counted resources.	Exclusivity between load modifier and RA market participation
8	Deliverability determination	**Addressed by guardrails**	Deliverability is ensured by design: the guaranteed DER dispatch windows can be set based on system needs, or adjusted over time by the procuring LSE to coincide with those hours when there are peak loads on the	Guaranteed DER dispatch/charging windows; window flexibility over time; telemetry

			distribution feeder or at the nearest substation, ensuring that the output is deliverable to local loads. Rule 21/WDAT assessments further confirm that exports can be accommodated on the distribution system with no adverse impact to the transmission system. The CEC's load modifier protocols could also include locational parameters validating that a project's full output can serve local load, if such an approach is found necessary through independent CEC review.	

The Path Forward

The record developed at the Workshop points toward a clear next step. The technical potential for FTM DERs to serve load locally is substantial, the system and affordability benefits of doing so are quantifiable, and LSEs across both the IOU and POU sectors have signaled concrete interest in procuring this resource type. The CPUC has identified the questions that must be answered before distributed capacity can be relied upon in planning, and the guardrails described above demonstrate that those questions are answerable for FTM DERs. What remains is for the CEC to convert this shared understanding into a defined regulatory pathway that may seamlessly integrate with existing California system planning protocol..

The Joint Commenters accordingly recommend that the CEC use this proceeding to study the load modifier potential of FTM DERs in greater detail and propose a set of load modifier protocols for this resource type. Specifically, we recommend that the CEC:

- **Direct staff to further evaluate the load-serving potential of FTM DERs.** Preliminary feeder-level analysis from Kevala indicates widespread potential for FTM DERs to serve distribution-connected load during net peak hours without back-feeding onto the transmission system. The CEC should independently validate this analysis to establish a technically grounded assessment of the load modifier potential of FTM DERs, and to confirm that FTM DER exports modify local load in the same fundamental way as behind-the-meter DER exports.
- **Develop a set of recommended load modifier protocols governing eligibility, performance, and verification.** CEC Staff should review the eight attributes described by the CPUC and the load modifier guardrails recommended herein and propose a set of draft load modifier protocols that could be used to establish the conditions under which FTM DER exports should be treated as load modifiers. These protocols should include upfront criteria under which a project's guaranteed dispatch profile is deemed deliverable to local load. The protocols should also specify how qualifying capacity would be

reflected in the IEPR demand forecast and trued up against metered performance over time.

- **Commit to a public, transparent process for developing these protocols**. The questions raised here are technical, consequential, and benefit from the input of the parties who will be building, procuring, and planning around these resources. The CEC should commit to developing its analysis through a noticed public process in this docket, including staff workshops, published draft criteria, and opportunity for written comment before load modifier recommendations are finalized.

The Joint Commenters appreciate the Commission's leadership in convening the Workshop and welcome the opportunity to support this effort. We are prepared to provide additional information that may help to advance these efforts, and to participate in any staff workshops, working groups, or comment rounds the Commission convenes on these questions.

Respectfully,

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