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COMMENTS OF THE CALIFORNIA SOLAR & STORAGE ASSOCIATION ON RULING REQUESTING COMMENT ON ASSIGNED COMMISSIONER'S PROPOSAL ON FLEXIBLE SERVICE CONNECTIONS

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The California Solar & Storage Association (CALSSA) hereby submits comments on the *Assigned Commissioner's and Administrative Law Judge's Ruling Requesting Comment on Assigned Commissioner's Proposal on Flexible Service Connections* (FSC Ruling), issued at the California Public Utilities Commission (Commission) on July 7, 2026. The FSC Ruling solicits stakeholder comment on the *Assigned Commissioner's Proposal* (Proposal), issued on the same day. On July 10, 2026, the Commission issued *Email Ruling Granting Schedule Modification,* granting an extension of the opening comment period to July 27, 2026.

CALSSA is a statewide trade association that represents 600 businesses building behind-the-meter and distributed solar and storage in California. In 2025, CALSSA member companies installed 995 MW of solar and 1 GW of storage. Some of CALSSA's member companies additionally develop large load projects, including data centers and electric vehicle charging stations, and are either actively integrating or have successfully integrated solar and storage to partially serve these large loads.

CALSSA supports the Commission's vision to use flexibility to affordably unlock grid capacity for load customers seeking energization. However, the Proposal itself is only focused on how the load customer's own flexibility can be leveraged to mitigate costly grid upgrades. Although flexible service connections are a step in the right direction, they have significant limitations that can only be addressed by leveraging the flexibility of nearby customers through virtual power plants (VPPs). The Proposal should recognize these limitations, the crucial value that VPPs provide, and clearly establish that thorough development of the VPP use cases will occur in Track 2 on DER orchestration.

These comments follow the structure of the questions posed in Section 2 of the FSC Ruling.

1. Please provide feedback on the Proposal itself, identifying any concerns with and/or support for the direction and background. Comments on the Proposal shall be provided within the same structure as the Proposal where possible (e.g., discussion of Operating Envelopes should come in Section 4 of party comments).

Section 1: Introduction

No feedback.

Section 2. The Affordability Opportunity: Reducing Customer and Ratepayer Costs Through Flexible Capacity Solutions

CALSSA supports the Commission's vision to use flexible connections to unlock capacity that increases grid utilization and improves ratepayer affordability.[1] CALSSA also agrees with the Commission's conclusion that flexible connections provide capacity quicker and cheaper than traditional infrastructure upgrades.[2] However, the Proposal limits itself to service flexibility, or in other words, envisioning that the only flexibility that a load customer can utilize to mitigate grid constraints is flexibility in their own service request. The Proposal leaves a significant amount of grid capacity on the table by ignoring the flexibility that other customers can provide, operating in concert with the new load.

For load growth to occur at a scale sufficient to achieve the state's electrification goals and substantially reduce rates, while also supporting anticipated data center and other large load customers, the state needs every ounce of load flexibility that it can obtain. New loads currently face a grid capacity shortage. In the absence of intelligent load shifting, the IOUs' Electrification Impact Studies have identified upwards of $47 billion in distribution upgrades needed by 2040. The additional costs of transmission upgrades have not been quantified but should be relevant when evaluating the benefits of these measures and cost avoidance.

Crucially, the Commission should not view load customers seeking energization in isolation. Depending on whether the grid constraint is feeder-level, substation-level, or spans

[1] Proposal, p. 3.
[2] Proposal, p. 9.

multiple substations, the load customer's profile interacts with the load profiles of thousands of other customers. Many of these other customers have flexibility through solar-charged batteries, controllable thermostats, and other devices. Aggregations of these surrounding customers through VPPs can mitigate the grid constraints that otherwise block the load customer.

The Commission may be using this Proposal, and Track 3 more broadly, to focus on advancing tariffs that would allow load customers seeking energization to accept scheduled curtailment. However, in the Proposal's discussion of the affordability opportunity, the Commission should acknowledge the limitations of placing the onus of flexibility on a single customer, like the possibility that the necessary curtailment would be too costly and prohibitive for the load customer to accept. Moreover, the Proposal should recognize that in such cases, other customers may be more flexible, and aggregations of these other customers are critical to unlocking the affordability opportunity more broadly.

The Commission does not need to fully address and explore VPPs in Track 3, but for clarity and completeness, CALSSA recommends that the Proposal state that Track 2 will be used to create VPP programs to unlock speed to power more broadly, and to make more proactive grid investments.

Section 3. Distribution Capacity Determination: Existing Infrastructure, Forecasting Practices, and Capacity Evaluation Methods

CALSSA appreciates the Commission's exploration of distribution grid infrastructure classes, like Mainline and Lateral. However, the Commission should also note that targeted DER activity below the substation can offset transmission constraints. CALSSA recognizes that the recent Electrification Impact Studies only evaluated distribution infrastructure costs. A full treatment of transmission costs and infrastructure classes may not be feasible in the Proposal, but the Commission should consider forecasting transmission costs due to load growth and how load flexibility and DERs can offset those transmission costs.

Section 4. Operating Envelopes and Dynamic Capacity Management

No feedback.

Section 5: Cybersecurity Considerations

No feedback.

Section 6. Bridging and Non-Bridging Approaches

No feedback.

Section 7. Competition and Market Access Considerations

No feedback.

Section 8. Real-Time Pricing and Economic Signals for Flexible Connection Customers

No feedback.

2. Section 9 of the Proposal includes a summary of the recommendations for Commission action. Please provide feedback on the recommendations, being as specific as possible regarding the pros and cons of the proposed recommendations, and on the feasibility of implementation.

a. Support with caveats for Recommendation #4 in Section 3 (requiring evaluation of flexible connection)

In Recommendation 3.4, the Commission proposes that before initiating a ratepayer-funded distribution upgrade, each IOU must evaluate whether a flexible connection solution enabled by PCS can be used as an alternative.[3] CALSSA supports creating a standardized process that bakes in alternative flexibility options as a first option before traditional grid upgrades. A standardized process that is clearly documented in a public IOU advice letter is crucial to establish certainty and predictability for customers. Similar to evaluating resource decisions against the loading order, CALSSA applauds the concept of a persistent screen that applies when a load-driven upgrade is required to first consider whether distributed solutions could provide the more cost-effective result.

However, this standardized evaluation process should apply to all distribution upgrades, not just those that are directly funded by ratepayers. The faster that beneficial load growth becomes operational the faster rates decrease. Even if a particular distribution upgrade would traditionally be paid by the load customer, offering flexible alternatives would still improve ratepayer affordability since they would operationalize the load much sooner than otherwise. The downward pressure on rates would be exerted much sooner.

The term "distribution upgrade" is not defined in the Proposal but has traditionally referred to an upgrade to distribution-level grid equipment that serves multiple customers.

[3] Proposal, p. 46.

Generally speaking, distribution upgrades caused by new load are paid by ratepayers, but this may not remain the case for some large load customers. The Commission is currently considering changes to large load rate design in R.26-04-009, and the cost responsibility for upgrades driven by large load customers may change. Retaining flexible connections for these large loads is crucial to creating a business environment that will continue to attract these large loads in the state and the associated downward pressure on rates that they can create. The Commission must design its flexible interconnection proposal in a manner where it will remain usable for large load customers.

b. Support with caveats for Recommendation #1 in Section 4 (Limited Power as default)

In Recommendation 4.1, the Commission proposes that the IOUs incorporate the Limited Power option as the default mitigation for distribution transformer or secondary conductor upgrades and that this option be evaluated before the upgrade design process is initiated. There are likely to be a number of cases where Limited Power is a sufficient, and given the simplicity of the approach, it is reasonable for Limited Power as the default. However, the Commission should expect Limited Power to be deployed almost always as a temporary, bridging approach.

The simplicity of the Limited Power approach is also why it will not suffice for many cases. The Limited Power approach generates a single constraint based on the most conservative estimate of grid capacity, and this number will be prohibitively restrictive for many load customers. The Static Operating Envelope option has similarly reached technological maturity and is already at the point of widespread feasibility. The Commission should require the IOUs to also automatically provide the customer with an evaluation of the Static Operating Envelope option and establish a timeline for when the IOUs will be prepared to automatically offer an evaluation of the Variable Operating Envelope as well. These should be standard offerings to customers as temporary pathways to speedier energization rather than something each customer needs to request if their full service request cannot be met without upgrades.

c. Support for Recommendation #2 in Section 4 (SCE and SDG&E to use PG&E's Flex Connect as model)

CALSSA supports the development of a Variable Operating Envelope program within SCE and SDG&E territories. The Variable Operating Envelope gives greater flexibility and thus there are significant affordability benefits that can be unlocked if it is operational in all three IOU territories. As the Commission described, both IOUs should already be close to deployment.

d. Feedback on Recommendation #4 in Section 4 (SCE and SDG&E to implement DERMS for EV charging)

In this recommendation, the Commission highlights the success of PG&E's ChargeBoost pilot, which allows residential EV customers to access Level 2 charging without main panel upgrades via the installation of a smart meter. The Commission recommends that SCE and SDG&E implement the same approach.[4] Although managed residential charging based on grid signals is a worthy investment, the Commission should observe that energy storage provides the most flexibility per asset of any DER type. The Commission includes a passing mention in Recommendation 4.5 of ensuring that more devices than EV charging can be locally controlled to ensure rapid response,[5] but this is insufficient given the promise of aggregating customer batteries. The Commission should have all the IOUs create local DER programs, including energy storage, that alleviate local congestion. Track 2 is likely a better place to have a complete discussion, but this recommendation should acknowledge that broader DER aggregations can unlock even more local capacity and that this will be pursued in Track 2.

e. Support for Recommendation #1 in Section 6 (establish option for durable flexible connections)

CALSSA supports the Commission's recommendation to have PG&E and SCE file an advice letter to describe an optional durable offering for each of its flexible connection offerings. There is no reason why any of these offerings must be temporary. If a customer who would need to pay for upgrades to operate at full capacity would rather run at limited capacity, the utility can take the planning of that upgrade off its books altogether.

There will be cases where only a bridging option works for customers. For example, if customers have limited load flexibility and can only tolerate load flexibility for a brief, interim period. All customers should be able to retain the ability to use a bridging option while the necessary upgrades are constructed.

f. Support for Recommendation #3 in Section 6 (formalization of PG&E Flex Connect)

In Recommendation 6.3, the Commission proposes making PG&E's Flex Connect program a tariffed offering and expanding it to load customers more broadly.[6] Creating a tariff

[4] Proposal, pp. 48-49.
[5] Proposal, p. 49.
[6] Proposal, p. 53.

for Flex Connect will provide certainty and predictability for customers. Additionally, CALSSA agrees with the Commission's intent to expand availability to load customers broadly.

However, some clarifications may need to be made to the Commission's characterization of Flex Connect. The Commission describes Flex Connect as a program PG&E has offered to its generation customers and implies that it has not already been successfully offered to load customers.[7] It is CALSSA's understanding that Flex Connect has already been offered to both generation and load customers, as well as EV charging station customers who are covered by Rule 29. Given the value provided by a Variable Operating Envelope, the Commission is right to scale Flex Connect to all load customers through a standardized tariff, but it should acknowledge that it has already been expanded to some generation and load customers.

g. Support for Recommendation #1 in Section 7 (interoperability and customer choice)

In Recommendation 7.1, the Commission proposes that any customer participating in a flexible connection offering should retain the ability to participate in other programs (*e.g.* CCA, aggregator, or other utility programs) without being restricted by proprietary vendor arrangements. The Commission proposes a workshop and workshop report to discuss reasonable guardrails to ensure interoperability and customer choice.[8]

It is crucial that customers retain the ability to participate in multiple programs. In a modernized grid, grid needs will be many and continuously evolving. Limiting customers to providing only a single grid service would be contrary to affordability since it would fail to utilize all of the existing value on the grid. There may be cases where some grid services require a firm commitment that preclude certain other services, but these cases can be identified for stakeholder discussion, and it is probable that aggregators will have the tools and associated responsibility to ensure capacity delivery.

h. Feedback on Recommendation #1 in Section 8 (default enrollment in Real-Time Pricing)

The Proposal recommends that all customers using flexible service connections be enrolled in Real-Time Pricing (RTP). This is an unwarranted complication that should not be adopted.

[7] Proposal, p. 53.
[8] Proposal, pp. 54-55.

The presence of load controls does not indicate that customers will be willing to take the risks of dynamic pricing when those tariffs have had a rough start. As the Commission saw in the recent evaluation of PG&E's Hourly Flex Pricing pilot, performance in the pilot has thoroughly discouraging.[9] RTP is not ready for prime time.

Although the Proposal would allow customers to opt out of RTP, changing rates can be a slow and painful process. Utilities routinely take 3-6 months to process rate change requests. It would not build stability for utility management of RTP rates if customers are getting forced onto them and then opting out. This would cause friction for customers seeking to adopt flexible service connections.

3. Section 9 of the proposal summarizes recommendations for Commission action based on the stated goal of the proposal. Do parties find that any additional recommendations are warranted in support of this goal?

The Proposal's vision is to "use flexible connections to provide customers capacity in a manner that increases the utilization of existing grid infrastructure and provides more affordable options that will benefit ratepayers."[10] The Commission rightfully identifies flexibility as a major opportunity to increase ratepayer affordability. If done properly, load flexibility can unlock as much as $13.7 billion in distribution savings over the next five years.[11]

However, as currently conceptualized, the Proposal leaves a significant amount of load flexibility on the table. In its current form, the Proposal places the onus of flexibility solely on new load customers. Moreover, the Proposal is intrinsically passive since it only activates after insufficient grid capacity has become an issue for a specific load customer. The Proposal's vision is narrow – it looks at the load customer in isolation and only after a problem has been identified for the load customer.

The load customer is not alone. Depending on whether the constraint is feeder-level, substation-level, or spanning multiple substations, there could be thousands of other customers with load profiles that can interact with the profile of the load customer. Many of these customers can be flexible, whether that be through onsite batteries, controllable thermostats, vehicle charging controls, or other technologies. If these many customers agree to participate in a

[9] Christensen Associates, "Mid-Term Evaluation of PG&E's Hourly Flex Pricing and Vehicle Grid Integration Pilots," July 2026.
[10] Proposal, p. 3.
[11] Gridlab and Kevala, *California Load Management Standard Avoided Distribution Grid Upgrade Study*, August 2025.

targeted VPP, they become a source of grid capacity that can alleviate grid constraints without requiring the load customer to curtail.

This is especially valuable for large loads like data centers, whose "cost to curtail" is often significantly higher than that of placing flexible resources at customer sites, along with front of the meter energy storage, at nearby grid nodes that are topologically relevant to the new load. Allowing a large load customer to incorporate these external sites into a VPP, potentially alongside its own on-site flexibility resources, will maximize the cost savings that flexible operating envelopes can provide. Fundamentally, this expanded option is no different than the Commission's existing proposal; it simply widens the operating envelopes to encompass load behind specific distribution nodes, rather than load behind one specific meter.

The greatest affordability savings are achieved by orchestrating many customers together. Not only does this maximize the load flexibility that could be provided, but it allows flexible interconnection programs to leverage devices that are already installed at customer sites – by far the cheapest resource that is available for utilities to leverage. The Commission must create a clear path for aggregations of nearby resources to be orchestrated to mitigate capacity issues facing a load customer. For data centers, this is an immediate and urgent issue. Additionally, the Commission should do more to envision how better grid planning can prevent these load bottlenecks from occurring in the first place.

Specifically, the Commission should adopt two additional recommendations. The Commission should fully address these recommendations in Track 2 on DER orchestration and keep Track 3 focused on flexibility of the load customer alone. However, given the broader commentary that the Proposal in Track 3 is making about the promise of flexible connections to enable the interconnection of new load, CALSSA recommends modifying the Proposal to address the limitations of flexible service connections, discuss the important role that VPPs will play in enabling new load, and state that the following two recommendations are critical complementary pieces that will be taken up in Track 2:

a. Additional recommendation #1: in Track 2, adopt expedited path for large loads to bring their own VPP capacity

The Commission should state that it will in Track 2 ensure an expedited pathway for the IOUs to develop a framework that would allow large loads to bring their own VPP capacity. This is particularly pressing for data centers, which need all the grid capacity they can obtain, including utility service, onsite power, and as much VPP capacity as they can secure. Data center

development is on an urgent timeline that demands energization within the next two to three years. Building out the DERs that comprise the VPP will demand at least a full year. This means that stakeholders have about 6-12 months to agree on the VPP framework. Further delay risks jeopardizing the viability of these data center projects and any corresponding investments that have already been made. Other states, like New Jersey and New York, are already taking action to create programs that would allow data centers to bring their own VPP capacity.[12]

The viability of these data center projects requires an immediate path for quick progress. Consequently, the IOUs should be allowed to develop and operate their own interim VPP programs for large loads while a standardized tariff is developed. The IOUs should be authorized to request additional funding needed to operationalize and grow these interim programs. PG&E energized many load customers through Flex Connect even though no standardized tariff existed. The Commission should encourage PG&E and other interested IOUs to do the same here with VPPs for large loads.

b. Additional recommendation #2: in Track 2, establish working group for earlier integration of VPPs into grid planning

The Commission should state that it will in Track 2 establish a working group to develop a framework that would allow the IOUs to integrate VPPs earlier in grid planning to proactively prepare regions of load growth. The IOUs already have enough information to understand the areas of their grid that are expected to have load growth in the future. Proactive siting of orchestrated fleets of DERs in these load pockets is a modern solution that prepares the IOUs with flexible distribution capacity and allows them to shape load profiles of entire regions in advance.

Ultimately, the most efficient solution would be to move from a system of bilateral transactions between utilities and large loads to a marketplace where the IOUs can bring areas of load growth, and for the right price, DER aggregators can bring fleets of flexible capacity. A series of issues needs to be resolved before this marketplace can work at scale, including capacity valuation, performance guarantees from DER aggregators, timing of marketplace open/close, methods for determining areas of load growth, granularity of orchestration signals, and avoiding double compensation. All these issues can be successfully worked out. For

[12] For New Jersey, see Page 8 here: https://pub.njleg.state.nj.us/Bills/2026/A1000/796_R4.PDF. For New York, see: https://www.governor.ny.gov/executive-order/no-62-establishing-temporary-moratorium-data-centers-new-york-while-state-develops.

example, in the United Kingdom, all six DSOs have successfully been contracting with providers for flexibility since 2017.[13] A working group in Track 2, followed by a working group report, is the right next step to comprehensively address this critical path.

4. **For the proposed Advice Letters what, if any, additional implementation or program design elements should be addressed each Advice Letter. Do parties have recommendations on how to consolidate advice letters or make the process more efficient?**

   No response.

5. **Many of the Proposal's recommendations are premised on the goal of affordability and ratepayer savings from greater capacity utilization, speed to power, and deferral or avoidance of upgrade capital expenditure. To realize these goals, quantification of ratepayer costs and benefits will be necessary. For each recommendation how should the IOUs measure, track and report key costs and benefit metrics?**

Every instance where a customer chooses a flexible service connection over a traditional grid upgrade results in ratepayer savings. The customer pays for their own PCS equipment. The only costs incurred by ratepayers is the overhead for the IOUs to administer the flexible service connection program, like costs to modify the online portal and automate the calculations needed to evaluate grid capacity and generate load profiles. The costs of traditional grid upgrades that would otherwise occur should dwarf the administrative overhead of the flexible service connection program. However, to be exact, the Commission could have the IOUs track the administrative costs related to flexible service connections.

Regarding benefits, the IOUs should submit quarterly reports that include the number of load customers that have chosen to use flexible connections, broken down by the type of flexible connection the load customer selected (*e.g.* Limited Power, Static Operating Envelope, Variable Operating Envelope, etc.). Additionally, for each load customer that chose to use flexible connections, the IOU should report the amount of capacity that the flexible connection addressed and a rough estimate of what a traditional grid upgrade would have cost.

More generally, quantification of ratepayer costs and benefits requires the Commission to approve a methodology for long-term scenario comparison. This method needs to be usable without requiring the utility to undergo the whole process of designing each upgrade. This

[13] https://www.energynetworks.org/industry/flexibility-services.

estimation methodology does not need to be accurate on a per-upgrade basis but needs to be reasonably accurate on average. Therefore, the Commission should require the IOUs to calculate the average upgrade cost per kilowatt of distribution capacity with benchmarks for types of grid assets. The IOUs may use the last five years of data to calculate this value, although they should be allowed to propose a different time window that is reasonable. The Commission should hold a workshop where the IOUs present the method and resultant value.

6. **How should IOUs ensure the existence of bridging solutions, non-bridging solutions, or the change from a bridging solution to a non-bridging solution are timely communicated with the California Energy Commission for forecasting purposes?**

The IOUs should submit biannual reports to the California Energy Commission (CEC). The reports in answer to Question 5 above may be sufficient for forwarding to the CEC.

7. **The proposal recommends the Commission direct SDG&E to stand up a static FSC offering that is aligned with the requirements directed in D.26-02-025 for PG&E and SCE. For SDG&E to implement this proposal, what, if any, modifications to the requirements directed in D.26-02-025 should the Commission consider?**

No answer.

8. **What hardware, software, or data sharing safeguards may be needed to ensure that customers can obtain a flexible connection without being restricted by proprietary arrangements?**

No answer.

9. **Are there any safety concerns that should be highlighted?**

No answer.

10. Conclusion

The Commission's vision is on the right track. DERs hold significant promise to create the load flexibility that is needed to execute load growth while decreasing rates. The Proposal takes a step in the right direction by advancing tariffs that would allow load customers to adopt curtailment schedules to mitigate the need for costly grid upgrades. Some load customers will be able to combine these load curtailment schedules with onsite solar and storage to defer grid upgrades for some years.

However, the true power of DERs lies in what they can achieve when they are aggregated together. On its own, the Proposal is insufficient to accommodate the load growth that the state

needs and achieve the ratepayer savings that are desperately needed. Curtailment will be prohibitively costly for many load customers. Even for those loads that have some flexibility, many will need to additionally leverage VPPs of nearby resources to come online without triggering traditional grid upgrades. Proactive siting of DERs is additionally needed to optimize savings across the grid.

The Commission may use the Proposal to focus on a singular tool in the DER affordability toolbox, but if so, the Proposal should address its limitations and the other tools that are needed to fully unlock affordability. The Proposal does not need to thoroughly explore VPPs, but it should mention the interplay between flexible service connections and VPPs, and the concrete next steps that are planned in Track 2 to unlock the value that VPPs can provide.

CALSSA appreciates the Commission's hard work to advance a high DER future and looks forward to future collaboration.

Respectfully submitted,

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