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**BEFORE THE PUBLIC UTILITIES COMMISSION**
**OF THE STATE OF CALIFORNIA**

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| Order Instituting Rulemaking to Modernize the Electric Grid for a High Distributed Energy Resources Future. | Rulemaking 21-06-017 (Filed June 24, 2021) |

# OPENING COMMENTS OF TERAWATT INFRASTRUCTURE, INC. ON ASSIGNED COMMISSIONER'S AND ADMINISTRATIVE LAW JUDGE'S RULING REQUESTING COMMENT ON ASSIGNED COMMISSIONER'S PROPOSAL ON FLEXIBLE SERVICE CONNECTIONS

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# OPENING COMMENTS OF TERAWATT INFRASTRUCTURE, INC. ON THE ASSIGNED COMMISSIONER'S PROPOSAL ON FLEXIBLE SERVICE CONNECTIONS

On July 7, 2026, the California Public Utilities Commission (CPUC or the Commission) issued an Assigned Commissioner's and Administrative Law Judge's Ruling (Ruling) Requesting Comment on Assigned Commissioner's Proposal on Flexible Service Connections (Proposal).[1]

On July 9, 2026, the Public Advocates Office (Cal Advocates) served a request for a schedule extension. On July 13, 2026, the Assigned Administrative Law Judge issued an Email Ruling Granting Schedule Modification (Email Ruling), modifying the original date for filing initial comments on the Assigned Commissioner's Proposal and response to questions and direction in Sections 2 and 4 of the Ruling from July 21, 2026 to July 27, 2026.[2] The Email Ruling also modified the original date for reply comments on Sections 2 and 4 of the Ruling from July 28, 2026 to July 31, 2026.

In accordance with the Rules of Practice and Procedure of the Commission, Terawatt Infrastructure, Inc. (Terawatt) respectfully submits these Opening Comments in response to the Proposal.

Terawatt is a California-based company building a national network of purpose-built, high-powered charging infrastructure for light-, medium-, and heavy-duty fleets, and counts leading fleet operators among its customers. Terawatt owns, develops, operates, and maintains a growing number of planned and operating charging sites, with the overarching mission of accelerating the transition to zero-emission transportation. Terawatt's requests for energization or service upgrades are often subject to long wait times due to lack of sufficient distribution and sub-transmission capacity.

[1] Assigned Commissioner's and Administrative Law Judge's Ruling Requesting Comment on Assigned Commissioner's Proposal on Flexible Service Connections (July 7, 2026).
[2] Email Ruling Granting Schedule Modification (July 13, 2026).

## I. SUMMARY

Terawatt appreciates the Commission's continued work in this proceeding and the positive direction the Proposal takes toward advancing initiatives that use flexible service connections (FSCs) to provide customers with capacity and increase the utilization of grid infrastructure while improving affordability. Terawatt offers the comments below to ensure the framework address the needs of commercial EV fleet charging customers that are capable of managing their demand within a firm, utility-confirmed capacity allocation without requiring Variable or Dynamic Operating Envelopes.

Terawatt requests that the Commission:

- Adopt Limited Power as the default mitigation and finalize the Rule 2 “controlled load” redefinition (Sections 3, 4);
- Decline to mandate UL 3141 certification for dedicated-service customers (such as commercial EV fleet charging customers) on Limited Power/Static Operating Envelope arrangements, consistent with the Commission's findings in D.26-02-025 which highlight the success of current offerings (Section 4);
- Confirm self-managed Limited Power/Static Operating Envelopes qualify for durable, permanent non-bridging status, and extend the 45-day pilot election window (Section 6);
- Carve out commercial EV fleet charging customers from the proposed default enrollment in Real-Time Pricing rates, as dynamic pricing is operationally unworkable for these customers (Section 8); and
- Further evaluate mechanisms to prevent third-party vendor fees from eroding non-bridging savings (Section 6).

## II. RESPONSES TO RULING QUESTIONS

**Ruling Question 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).**

Terawatt's feedback on the Proposal is provided in the sections that follow, organized to mirror the Proposal's own section structure as directed by the Ruling. In summary, Terawatt supports the Proposal's overall direction but has two substantive concerns:

### Key Concerns

1. The Proposal's requirement that Limited Power arrangements use UL 3141-certified equipment imposes unnecessary cost and complexity on commercial EV fleet charging customers (Section 4); and

2. The proposed default enrollment of FSC customers on Real-Time Pricing rates should not extend to commercial fleet EV charging customers whose fixed operating schedules cannot respond to real-time price signals (Section 8).

**Ruling Question 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.**

The recommendations to adopt Limited Power as a default mitigation (Section 4, Recommendation 1) and to redefine "controlled load" under Rule 2 (Section 3, Recommendation 3) are both beneficial and readily implementable, since they build on control technology already deployed at the customer level. Terawatt views the UL 3141 certification requirement for the Limited Power mitigation as a major concern, for the reasons discussed below. Additionally, Terawatt recommends that Static Operating Envelopes also be evaluated and offered as a default mitigation to further advance the goals of the Proposal without creating undue burden on customers.

## Section 3. Distribution Capacity Determination, Forecasting Practices, and Capacity Evaluation Methods

### A. Support for Capacity Data Disclosure (Section 3 Recommendation 2)

Terawatt supports the recommendation directing large IOUs to record and provide service conductor capacity and demand load values to customers within 30 days of request. Terawatt further recommends that the Commission direct IOUs to provide this data proactively at the conclusion of the initial engineering study, rather than solely upon customer request, to reduce administrative delay for developers designing self-managed power control systems (PCS).

### B. Support for Rule 2 "Controlled Load" Definition Change (Section 3 Recommendation 3)

Terawatt strongly supports the proposed modification to Electric Rule 2, Section H.7, defining controlled load as the lesser of connected load, demand load, or secondary conductor rating. This change is critical for commercial EV fleet charging customers, who frequently install charging capacity in excess of their confirmed grid allocation and rely on energy management to operate within the available power limit. For example, a customer with a confirmed 5 MW of firm capacity may install 8 MW of charging hardware and use its own PCS with energy management capabilities to ensure demand never exceeds 5 MW.

## Section 4. Operating Envelopes and Dynamic Capacity Management

### A. Limited Power and Static Operating Envelope as Default Mitigation (Recommendation 1)

Terawatt supports directing the large IOUs to offer Limited Power as the default mitigation option before a capital-intensive upgrade, and recommends that the Commission make Static Operating Envelopes available as a default mitigation as well.

Terawatt piloted Southern California Edison Company's (SCE) Load Control Management System (LCMS) at two sites. This pilot experience confirms that a Static Operational Envelope is a workable operational model for commercial EV fleet charging customers. Terawatt recommends this tier also be evaluated and offered as a default mitigation option along with the Limited Power option. Doing so would balance the objective of increasing grid utilization at more locations without adding overly burdensome operational complexity that is characteristic of the Variable and Dynamic tiers.

In particularly constrained locations, a Static Operating Envelope paired with a battery energy storage system (BESS) or similar distributed energy resource (DER) can make a site viable where Limited Power would not. At one site, Terawatt was offered a Static Operating Envelope that, paired with a BESS, would have made the location viable for the target EV charging load.

Limited Power and Static Operating Envelopes (firm capacity), rather than the Variable or Dynamic Operating Envelopes (non-firm capacity) as defined in the Proposal, are particularly well suited to commercial EV fleet customers. Commercial fleet operations depend on predictable, fixed dispatch and route schedules; load limits that are subject to regular change introduce a degree of operational uncertainty that is difficult to reconcile. Furthermore, most of Terawatt's installations are newly built, requiring large investment decisions that cannot be justified by the uncertain potential of non-firm capacity.

Terawatt's preferred model for EV fleet customers is to install connected charging capacity in excess of the confirmed firm capacity and manage demand within that firm allocation using its own PCS with energy management. Due to load diversity across a fleet's vehicles and chargers, this self-managed approach does not require curtailing charging operations in the way a Variable or Dynamic Operating Envelope would, and Terawatt submits that it is therefore well suited to serve as a permanent, rather than temporary, arrangement for commercial EV fleet customers specifically.

### B. Concerns Regarding UL 3141 Requirements (Recommendation 1)

Section 9 directs the large IOUs to incorporate Limited Power "implemented by certified UL 3141 devices" as the default mitigation for distribution transformer or secondary conductor upgrades.

Terawatt opposes a blanket UL 3141 certification requirement for commercial EV fleet charging customers. Commercial EV fleet charging customers present materially lower risk than a shared secondary or residential deployment, and do not require certified control technology to reliably prevent distribution system impacts.

Terawatt's Existing Approach: Terawatt designs its charging depots to its confirmed service allocation of firm capacity. Where a site's connected charging load exceeds that allocation and a Static Operating Envelope is not available (for example, 8 MW of installed charging hardware behind a 5 MW confirmed service) the dedicated secondary service equipment, including the service bus bar and main protective device, is most often sized to the confirmed firm allocation rather than to the connected load.

On dedicated secondary service, this equipment itself functions as a passive physical limit: the site cannot draw more than the rated capacity of its own service equipment without tripping the customer's main protective device, regardless of how much connected equipment is installed behind it. No active control is required to prevent the site from exceeding its confirmed firm allocation in this configuration, and because the service is dedicated rather than shared, no other customer's service is placed at risk.

Where Terawatt takes service at the primary distribution level, or where hardware sizing alone does not provide sufficient margin, a self-managed PCS using Terawatt's energy management capabilities reliably keeps demand within the confirmed firm allocation.

Technology-Neutral Framework Adopted in the Commission's Standard Offer Decision: The approach described above is consistent with the technology-neutral framework the Commission adopted recently in D.26-02-025, establishing the Standard Offer for Flexible Service Connections in the Energization proceeding (R.24-01-018). The Commission found that "PG&E's experience demonstrates there is no need to dictate a specific method of load control or require equipment commissioning for the Standard Offer" and directed PG&E and SCE to "allow Standard Offer customers to choose their preferred method of load control".[3]

Terawatt requests that the Commission apply this same framework to this Proposal: certification should unlock an optional, expedited safe-harbor-style treatment, but should not be a mandatory precondition to offering or using Limited Power or Static Operating Envelopes as a mitigation.

Terawatt's experience with UL 3141 solutions: Based on Terawatt's experience in the LCMS pilot, because of the nascency of the standard, existing UL 3141 solutions are both extremely limited and significantly expensive. The market for UL 3141 certified solutions has not matured enough to justify exclusively requiring such solutions for firm tiers of FSCs.

The same benefits can be achieved at substantially lower cost and with greater accessibility through a customer-owned and self-managed PCS. Additionally, Limited Power arrangements

[3] D.26-02-025 at pages 46-47.

should be permitted to enforce load limits with programmable relays, as is commonly done for enforcing distributed energy resource (DER) non-export limits under Rule 21, or through other hardware that inherently limits load to the specified value.

Notably, UL 3141 does not certify a single, standardized device; it certifies a control system architecture that is unique to the specific equipment brand and configuration certified, meaning a certification obtained for one system does not necessarily transfer to another that may have a different topology or connection voltage. Requiring this certification as a pre-requisite for Limited Power or Static Operating Envelopes, rather than as an option, would impose this cost on customers without a corresponding benefit.

PG&E's Robust Track Record with Uncertified Management of Limited Load Arrangements: This position is further supported by the fact that PG&E has successfully operated its Load Limit Letter offering on an uncertified, self-managed basis for over 100 projects since July 2023 on an ad hoc basis.[4]

IOU Discretion Over Participation Provides Sufficient Safeguard: Any concern that an uncertified, self-managed approach might not perform reliably is addressed by the fact that the IOU retains control over the FSC process. In D.26-02-025, the Commission found that a static offering can be made safely without prescribing specific technical solutions, so long as the utility can screen participating customers and decline connections where warranted. As the Commission explained, "Parties do not agree that there is a need to impose specific technical solutions, and PG&E's LLL experience has shown that a static FSC offering can be safely made without requiring specific technical solutions, provided that the IOU is permitted to curate the population of participating customers and decline FSCs where grid conditions or customer characteristics pose heightened risk."[5] The IOU's authority to decline an FSC where grid conditions or customer characteristics warrant is a safeguard against unsuitable arrangements. A blanket certification requirement is therefore unnecessary, and it would foreclose lower-cost, self-managed enforcement of Limited Power and Static Operating Envelope arrangements that the utility remains free to approve or reject on a case-by-case basis.

Feasible Alternatives at the Customer End: Terawatt recommends that the Commission recognize alternative, lower cost means of enforcing a Limited Power setpoint, including:

1. Customer-managed PCS with energy management software;
2. Load-limiting relays configured with a fixed setpoint; and
3. Dedicated service equipment, including the bus bar and main protective device, sized to the confirmed firm allocation as a passive physical limit for permanent installations.

Each of these approaches can reliably enforce a Limited Power configuration consistent with the framework the Commission adopted in D.26-02-025.

[4] D.26-02-025 at p. 10.
[5] Ibid, at p. 49.

### C. Defer Certification Mandates for Static Operating Envelope Arrangements, Maintaining Status Quo

As noted above, Terawatt recommends the Commission make Static Operating Envelopes available as a default mitigation in addition to Limited Power. Terawatt encourages the Commission to defer any certification requirement for Static Operating Envelopes for the reasons discussed above: UL 3141 is not yet a full consensus standard, certified solutions are currently scarce, and the attendant cost and vendor lock-in concerns are significant. This point should be revisited as the market for certified systems matures to avoid a bottleneck in implementation as was observed for the Common Smart Inverter Profile (CSIP) addition to Rule 21 requirements for DERs.

An Alternative Approach for a Static Operating Envelope: An alternative to requiring a customer to invest in a certified UL 3141 PCS for a Static Operating Envelope is to shift enforcement of the load limit to the utility. The utility could accomplish the technical objectives of enforcing load limits by using programmed relays installed with the utility meter that are configured with the load limit schedule. The relay would trip the site offline whenever load exceeds the limit. Customers could then use their preferred energy management solution behind the utility meter to keep load within the limit. Because the utility could standardize this relay-based approach and repeat it across many customers, rather than each customer implementing its own bespoke solution, it would scale more readily, accelerating the connection of load to the grid and making Static Operating Envelopes more accessible instead of limiting customers to a narrow set of PCS options. The incremental cost of the programmable relays could be added to the site's energization costs.

## Section 6. Bridging and Non-Bridging Approaches

### A. Clarify That Durable Non-Bridging Solutions Include Self-Managed Limited Power and Static Operating Envelopes (Recommendation 1)

Terawatt supports the Proposal's creation of "durable non-bridging solutions," under which a customer agrees to forgo an upgrade in exchange for immediate energization under an FSC. Terawatt requests that the Commission clarify whether a customer relying solely on a self-managed, customer-owned Limited Power or Static Operating Envelope configuration qualifies for durable non-bridging treatment, or whether this pathway is limited to customers using utility-interoperable Variable or Dynamic Operating Envelope configurations.

### B. Extend Election Window for Existing Pilot Customers (Recommendation 2)

Terawatt supports the Proposal's clarification that existing bridging customers may elect to convert to a durable non-bridging arrangement. However, the proposed 45-day election window may be too short for customers to complete internal technical and financial review. Terawatt requests that the Commission extend this election window to 90 days, or alternatively, allow for an extension upon a customer's good-faith request to the IOU.

### C. The Commission Should Further Evaluate Mechanisms to Offset Third-Party Vendor Costs

The Proposal acknowledges concerns that fees charged by manufacturers or service providers for access to customer-owned equipment enabling a durable non-bridging solution could counterbalance ratepayer savings from avoided upgrades or promote vendor lock-in, noting that an incentive or rebate structure tied to avoided upgrade costs is one possible approach. Other potential mechanisms could include a customer allowance value associated with the incremental load, or a jointly funded customer/utility storage arrangement. Terawatt encourages the Commission to evaluate mechanisms to ensure that ratepayer and customer savings from durable non-bridging solutions are not eroded by third-party vendor costs through the workshop process described in Section 7 of the Proposal.

### Section 7. Competition and Market Access Considerations

Terawatt supports efforts to prevent proprietary vendor arrangements from restricting customer choice, and the recommendation to address these issues through an Energy Division workshop.

### Section 8. Real-Time Pricing and Economic Signals for FSC Customers

Terawatt requests that commercial EV fleet charging customers be carved out of the proposed default enrollment in Real-Time Pricing (RTP) rates. Dynamic and real-time pricing structures are not well suited to commercial fleet charging operations, which run on fixed dispatch and route schedules that leave limited practical ability to shift charging load in response to real-time price signals. RTP rates would introduce cost uncertainty inconsistent with current fleet rate structures and ultimately, significantly slow EV adoption in the commercial fleet market.

### Ruling Question 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?

Apart from the modifications recommended above, Terawatt has no additional recommendations at this time.

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

With respect to the Tier 2 FSC Implementation AL, Terawatt recommends that the IOUs be required to specifically describe:

1. The technical criteria a customer's control equipment must meet to qualify for a Limited Power or Static Operating Envelope arrangement, independent of any specific certification standard, and

2. The process by which a customer may demonstrate that its control technology reliably enforces the applicable setpoint, consistent with the framework in D.26-02-025.

Terawatt does not have a specific recommendation on consolidating Advice Letters at this time.

**Ruling Question 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?**

For Limited Power arrangements specifically, Terawatt recommends that IOUs track and report the type of control technology deployed (e.g., UL 3141-certified device, programmable relay, customer self-managed PCS with energy management software, or bus-bar-level equipment), the associated customer cost by technology type, and the incidence of any protective equipment trips or unplanned isolation events. This data would allow the Commission to evaluate whether certification requirements produce measurable reliability benefits proportionate to their cost.

**Ruling Question 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?**

Terawatt does not have a specific recommendation on this question at this time.

**Ruling Question 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.**

**a. For SDG&E to implement this proposal, what, if any, modifications to the requirements directed in D.26-02-025 should the Commission consider?** Terawatt supports the recommendation to extend the static FSC offering requirement to SDG&E. Terawatt recommends that any modifications adopted for SDG&E preserve the same self-managed Limited Power, Static Operating Envelope, and Rule 2 controlled-load flexibility requested above, to ensure consistency across IOU service territories.

**Ruling Question 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?**

Terawatt recommends that any interoperability or data-sharing safeguards distinguish between customers relying on third-party vendor- or aggregator-controlled devices and customers using self-owned, self-managed control technology, since the latter does not raise the same proprietary-access concerns the question is directed at.

**Ruling Question 9: Are there any safety concerns that should be highlighted?**

Terawatt is not aware of safety concerns that should be highlighted.

## III. CONCLUSION

Terawatt thanks the Commission for the opportunity to provide these comments and for its continued engagement on FSC issues.

Respectfully submitted,

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