BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

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

CLEAN COALITION REPLY COMMENTS ON ASSIGNED COMMISSIONER'S RULING ISSUING QUESTIONS ON THE ELECTRIFICATION IMPACT STUDY PART 2 FINAL REPORTS

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I. INTRODUCTION

Pursuant to Rule 6.2 of the Rules of Practice and procedure of the California Public Utilities Commission ("the Commission"), the Clean Coalition respectfully submits these reply comments on the *Assigned Commissioner's Ruling Issuing Questions on the Electrification Impact Study* ("EIS") *Part 2 Final Reports*, issued at the Commission on May 8, 2026. Party comments make clear that the results of the EIS Part 2 studies are an important tool for policymakers. The studies demonstrate that distributed energy resources ("DER") and load flexibility can reduce distribution infrastructure costs and should inform the inputs, screens, and solution sets used in distribution planning. Cal Advocates and the utilities generally favor continuing to rely on the Integrated Energy Policy Report ("IEPR") load modifier framework and caution against changes to the Distribution Planning Process.[1] Other parties seek additional refinements, including consideration of specific DER strategies such as managed charging, bidirectional charging, distributed storage, and non-energy benefits such as resilience prior to including the results into the Distribution Planning Process.[2]

From Clean Coalition's perspective, the practical next step should be using the results of the Part 2 studies to identify constrained regions and feeders, substations, and priority communities, where DER supply and demand-side solutions can maximize ratepayer value and reduce net costs.[3] California will need to make strategic investments to catalyze electrification, especially in

[1] Parties opposing incorporation into the distribution planning process include Cal Advocates, San Diego Gas & Electric ("SDG&E"), Pacific Gas & Electric ("PG&E"), and Southern California Edison ("SCE").
[2] Parties that support incorporation or additional refinement include: CalCCA, Small Business Utility Advocates ("SBUA"), and Vehicle-Grid Integration Council ("VGIC").
[3] Environmental Defense Fund ("EDF") notes, "The EIS2 reports demonstrate that even with conservative assumptions, load flexibility can produce significant reductions in peak load. If appropriately targeted to constrained areas on the utilities' systems, this flexibility can provide meaningful benefits through deferred, mitigated, or

communities where adoption has lagged or grid constraints may impede progress. Those investments should be designed to reduce lifetime system costs, not simply to increase near-term DER adoption. Strategic electrification should therefore be paired with strategic flexibility, ensuring that new load is shaped, shifted, or locally served in the places where doing so can avoid unnecessary distribution and transmission costs. Achieving this balance is essential to prevent avoidable grid investments from undermining the affordability benefits of electrification. Because the value of DER flexibility varies by location, the Commission should require the IOUs to identify locations where targeted tariffs, solicitations, or incentive adders can capture distribution deferral value, avoided transmission costs, resilience, and other system benefits. Clean Coalition's reply comments focus on three related points:

- First, the Commission should reject the false binary between "direct investment-grade use" and "no formal planning use."
- Second, IEPR Load Modifiers are necessary but not sufficient to capture the locational value of DER flexibility.
- Third, the Commission should require the IOUs to begin identifying candidate target locations, informed by the EIS Part 2 results and validated through the DPP/DPEP, GNA, and DDOR, where DER portfolios could reduce or defer distribution upgrades or improve resilience.[4]

II. DESCRIPTION OF PARTY

The Clean Coalition is a nonprofit organization whose mission is to accelerate the transition to renewable energy and a modern grid through technical, policy, and project development expertise. The Clean Coalition drives policy innovation to remove barriers to procurement and interconnection of DER—such as local renewables, demand response, and energy storage—and we establish market mechanisms that realize the full potential of integrating these solutions for optimized economic, environmental, and resilience benefits. The Clean Coalition also

avoided grid upgrade needs." EDF Opening Comments on the Electrification Impact Study Part 2 Final Reports, at p. 2.

[4] This would not require the Commission to treat EIS Part 2 as an investment-grade project list; rather, it would ensure that the studies are used as a planning-grade screen to identify where locational tariffs, solicitations, incentive adders, flexible interconnection, and DERMS-enabled resources should be evaluated first.

collaborates with utilities, municipalities, property owners, and other stakeholders to create near-term deployment opportunities that prove the unparalleled benefits of local renewables and other DER.

III. COMMENTS

A. The Commission should reject the false binary between "direct investment-grade use" and "no formal planning use"

Opening comments confirm the central issue identified by Clean Coalition: the EIS Part 2 studies show that demand flexibility and DER orchestration can materially reduce distribution infrastructure costs, but the investor-owned utilities ("IOUs") and Public Advocates Office ("Cal Advocates") do not go far enough in explaining how those findings should be translated into the Distribution Planning Process ("DPP"), Distribution Planning and Execution Process ("DPEP"), Grid Needs Assessment ("GNA"), and Distribution Deferral Opportunities Report ("DDOR").

Clean Coalition does not contend that EIS Part 2 should be used as a substitute for project-specific engineering analysis. Nor should the Commission approve or reject specific distribution projects based solely on EIS Part 2 scenario outputs. However, the IOUs and Cal Advocates present a false choice between treating EIS Part 2 as "investment grade" and treating it as merely exploratory. That framing would reduce the impact of the EIS Part 2 studies to an informational exercise, even though the studies were developed precisely because the Commission is seeking tangible ways to incorporate electrification impacts, demand flexibility, and DER coordination into distribution planning.

SCE states that the forecasted grid needs and mitigation projects identified in EIS Part 2 are "not investment grade" and therefore "will not" be incorporated into the annual DPEP.[5] But SCE also acknowledges that EIS Part 2 showed that coordinated deployment of demand flexibility and DERs could reduce localized peak demand and, in some cases, defer distribution infrastructure investments.[6] SDG&E similarly characterizes the Equity and Demand Flexibility scenarios as hypothetical sensitivities rather than actionable planning tools, while acknowledging that the Demand Flexibility scenario was designed to explore how load management could reduce infrastructure costs.[7] Cal Advocates likewise recommends that the Commission make no

[5] SCE Opening Comments on the Electrification Impact Study Part 2 Final Reports, at p. 1.
[6] *Ibid*, at p. 2.
[7] SDG&E Opening Comments on the Electrification Impact Study Part 2 Final Reports, at p. 4.

regulatory changes to DPEP as a direct result of EIS2 and not incorporate the Equity or Demand Flexibility scenarios into DPEP.[8]

These positions are correct only in the narrow sense that EIS Part 2 should not automatically determine individual investments. They are incorrect if used to avoid any formal planning obligation to evaluate the locational flexibility value that EIS Part 2 identifies. "Not investment grade" is not the same as "not planning grade." The EIS Part 2 studies create a foundation for DER orchestration and implementation of a distribution system operators ("DSO") framework, if the learnings are properly applied. ***Clean Coalition strongly believes that the Commission should require EIS Part 2 findings to be incorporated as a planning screen, valuation framework, and procurement trigger, even while requiring project-specific validation before any particular DER portfolio or wires project is approved.***

This distinction between investment grade and planning grade is essential. Clean Coalition's opening comments explained that the EIS Part 2 studies confirm that unmanaged electrification is expensive and managed electrification is materially cheaper.[9] PG&E estimates that enhanced orchestrated demand flexibility can reduce distribution infrastructure costs by approximately $1.8 billion; SCE estimates that demand flexibility scenarios reduce distribution costs by approximately $0.32 billion and $1.38 billion; and SDG&E estimates that demand flexibility reduces distribution costs by roughly $697 million. If these results are not incorporated into planning in a formal way, the Commission will have identified billions of dollars in potential ratepayer savings without creating a durable process for capturing those savings.

PG&E's comments point in the right direction. PG&E acknowledges that its Enhanced Demand Flexibility scenario identified that orchestration of demand flexibility assets can reduce identified projects, and that the GNA and Distribution Upgrade Project Report can provide a "practical bridge" for applying this framework by focusing flexibility analysis on circuits and substations where it is most likely to reduce capital costs, improve investment timing, and maximize ratepayer benefits.[10] **The Commission should build on that bridge and require all IOUs to identify the locations where DER flexibility could defer or avoid traditional**

[8] Cal Advocates Opening Comments on the Electrification Impact Study Part 2 Final Reports, at p. 2.
[9] Clean Coalition Opening Comments on the Electrification Impact Study Part 2 Final Reports, at p. 2.
[10] PG&E Opening Comments on the Electrification Impact Study Part 2 Final Reports, at p. 3.

infrastructure, quantify the local deferral value, and specify the performance characteristics needed from flexible resources.

Cal Advocates' emphasis on "real-world grid conditions" should support, not undermine, this approach. Cal Advocates argues that distribution planning should respond to real-world grid conditions, not artificially constructed scenarios.[11] Clean Coalition agrees that planning should be grounded in real-world grid conditions. However, real-world grid conditions include forecasted electrification load, emerging EV charging patterns, customer-sited batteries, managed charging capabilities, flexible interconnection, DERMS-enabled coordination, and local constraints on feeders, substations, and secondary systems. *Waiting until these conditions fully materialize before planning for them would repeat the same reactive approach that has contributed to energization delays, rising distribution costs, and missed opportunities for DER deferral.*

The purpose of planning is not merely to observe constraints after they occur. The purpose of planning is to anticipate foreseeable constraints and identify the lowest-cost, most beneficial way to meet them. EIS Part 2 provides a foundation for doing exactly that. The studies need not be treated as final project lists to be useful. ***They should instead be used to require a locational flexibility planning case that identifies where, when, and how DER portfolios can shape, shift, or locally serve new load before ratepayers are asked to fund traditional infrastructure upgrades.***

This is the practical application of Clean Coalition's Energy Tetris framework.[12] Electrification load, DER deployment, distribution constraints, and infrastructure investments should not be planned in separate silos. They must be fit together in the locations and hours where they interact. Clean Coalition's opening comments explain that Part 1 of Energy Tetris is location-aware electrification planning: new EV charging, building electrification, industrial load, and fleet load must be mapped to the circuits, substations, and secondary systems where constraints will arise. Part 2 is DER and flexibility integration: once the location and timing of grid needs are identified, IOUs should evaluate whether portfolios of DERs, managed charging, storage, flexible interconnection, dynamic pricing, Community Microgrids, and DERMS-enabled dispatch can avoid or defer traditional upgrades.

[11] Cal Advocates Opening Comments on the Electrification Impact Study Part 2 Final Reports, at p. 4.
[12] Clean Coalition Opening Comments on the Electrification Impact Study Part 2 Final Reports, at p. 3-4.

The IOUs and Cal Advocates do not go far enough because they stop at the threshold question of whether EIS Part 2 is investment grade. The Commission should instead ask the next question: what planning reforms are necessary to convert EIS Part 2's demonstrated flexibility value into real-world procurement, compensation, and deferral opportunities? Clean Coalition recommends that the Commission require each IOU to:

- Incorporate a Locational Flexibility Planning Case into the DPP/DPEP, GNA, and DDOR,
- Calculate local deferral value for identified constraints,
- Identify locations with elevated needs for energy resilience (e.g., load pockets, high fire threat districts, worst performing circuits, etc.…),
- Model achievable flexibility from managed charging, storage, flexible interconnection, virtual power plants ("VPPs"), Community Microgrids, and DERMS-dispatchable resources, and,
- Require DER portfolios to compete against traditional infrastructure where they can meet the same need with sufficient reliability, availability, and locational precision.

The IOUs' responses also fall short of the load flexibility planning concept already contemplated by the Commission. D.24-10-030 described a load flexibility DPP assessment intended to strategically incorporate load management and load flexibility techniques into distribution planning to improve utilization of distribution capacity and contain incremental build costs.[13] ***EIS Part 2 provides a foundation for that assessment, but only if its findings are used to identify candidate locations, quantify local flexibility needs, and evaluate DER portfolios as potential solutions.*** Treating EIS Part 2 as merely exploratory, or routing all flexibility through IEPR load modifiers, would not achieve the Commission's stated objective.

Without these requirements, EIS Part 2 risks becoming exactly what the Commission should avoid: a study that confirms the value of managed electrification but leaves the existing wires-first planning paradigm unchanged. The Commission should not permit that result. EIS Part 2 should be used to move DER flexibility from an after-the-fact sensitivity into core distribution planning. Properly valuing locational DER flexibility at the distribution level is also a necessary

[13] D. 24-10-030, at p.93.

step toward capturing upstream benefits, including reduced peak demand, avoided transmission costs, and lower reliance on future bulk-system upgrades.

B. IEPR Load Modifiers are necessary but not sufficient to capture the locational value of DER flexibility

The IOUs and Cal Advocates also place excessive weight on the California Energy Commission's ("CEC") IEPR forecast as the appropriate mechanism for incorporating DERs and demand flexibility into distribution planning. Clean Coalition agrees that the IEPR should account for DER adoption, building electrification, transportation electrification, energy efficiency, storage, and demand flexibility to the extent those resources affect system-level and utility-level load forecasts. **However, the existence of an IEPR load modifier does not eliminate the need for locational flexibility analysis in the DPP/DPEP, GNA, and DDOR.**

PG&E states that the IEPR remains the "most appropriate and authoritative vehicle" for incorporating load flexibility into the distribution planning forecast, including through load flexibility modifiers.[14] PG&E also states that flexibility assumptions would be embedded within the Base scenario and standard planning processes as they are incorporated through IEPR. SDG&E similarly states that the best way for future Demand Flexibility impacts to be included in planning is through the IEPR load forecast, with demand response treated as another load modifier similar to energy efficiency.[15] SCE also identifies forecasting enhancements, including potential integration into IEPR load modifiers, as a pathway for incorporating demand flexibility.[16]

That approach is necessary but not sufficient. IEPR load modifiers can help estimate how DERs and flexible load affect aggregate demand, but they do not determine whether a specific portfolio of flexible resources can defer a specific distribution upgrade. Distribution constraints are inherently locational and temporal.[17] A circuit, substation bank, service transformer, or secondary network may be constrained during a specific set of hours even if system-level load is reduced. Conversely, flexible resources may have less marginal system-wide benefits at times

[14] PG&E Opening Comments on the Electrification Impact Study Part 2 Final Reports, at p. 1.
[15] SDG&E Opening Comments on the Electrification Impact Study Part 2 Final Reports, at p. 3.
[16] SCE Opening Comments on the Electrification Impact Study Part 2 Final Reports, at p. 2.
[17] The IEPR also does not inform investments that need to be made to improve grid resilience. Energy resilience is assessed based on local grid architecture/conditions and prioritized and valued by community needs.

while providing high value if they reduce load at the precise location and time where a distribution asset is overloaded.

Treating DER flexibility only as an IEPR load modifier risks averaging away its highest-value attributes. In practice, the IEPR forecast is disaggregated across the distribution system through utility planning processes. That "peanut butter" approach may be appropriate for developing a baseline forecast, but it is not adequate for valuing DERs as alternatives to specific infrastructure investments. A system-average load modifier does not answer the questions that matter for distribution deferral: where is the constraint, when does it occur, how many kilowatts or kilowatt-hours of flexible capacity are needed, how long must the resource perform, how often will it be dispatched, what level of availability is required, and what compensation would be cost-effective relative to the avoided upgrade?

Nor is locational flexibility analysis double counting. Double counting would occur if the same flexible resource were counted twice for the same planning need. Clean Coalition is not recommending that outcome. Rather, the Commission should distinguish between two different uses of DER flexibility. First, forecasted DER adoption and generalized load flexibility should be reflected in the IEPR and baseline DPP/DPEP forecasts to avoid overstating expected load. Second, incremental, targeted, and performance-based DER flexibility should be evaluated as a solution to identified local constraints where it can defer or avoid a specific traditional upgrade. The first use is forecasting, while the second is procurement and solutions oriented. These are complementary, not duplicative purposes.

This distinction is central to Clean Coalition's Energy Tetris framework.[18] The point is not merely to subtract DERs from load on a system-average basis. The point is to fit electrification load, DER deployment, local grid constraints, and infrastructure investments together in the locations and hours where they interact. IEPR can help identify the size and shape of the pieces, but the DPP/DPEP, GNA, and DDOR must determine where those pieces fit together on the distribution grid.

The Commission should therefore reject the claim that IEPR load modifiers are sufficient to capture the planning value of DER flexibility. The IOUs should be required to use IEPR-informed forecasts as a starting point, then conduct locational flexibility analysis for identified

[18] https://clean-coalition.org/news/energy-tetris-part-2-a-practical-blueprint-for-integrated-grid-planning-in-california/

constraints. For each candidate constraint, the IOU should identify whether targeted DER portfolios — **including managed charging, distributed storage, flexible interconnection, VPP aggregations, local solar+storage, Community Microgrids and DERMS-dispatchable resources** — can meet the local need with sufficient reliability, availability, and operational control. Only then can the Commission ensure that DER flexibility is not merely averaged into a forecast, but actually used to reduce avoidable distribution infrastructure costs.

IV. CONCLUSION

Clean Coalition appreciates the opportunity to submit these reply comments. We urge the Commission to reject the false binary between direct "investment-grade use" and "no formal planning use." EIS Part 2 should be used to move DER flexibility from an after-the-fact sensitivity into core distribution planning. At a minimum, the Commission should require the IOUs to identify candidate target locations, informed by EIS Part 2 and validated through the DPP/DPEP, GNA, and DDOR, where targeted DER portfolios can be evaluated for distribution deferral, resilience, and other system benefits.

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