



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

Order Instituting Rulemaking Regarding
Building Decarbonization.

Rulemaking 19-01-011
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**OPENING COMMENTS OF PACIFIC GAS AND ELECTRIC
COMPANY (U 39 M) ON PHASE 4 TRACK A PROPOSED
DECISION ESTABLISHING NEW ELECTRIC SERVICE LINE
UPSIZING RULES, MODIFYING ELECTRIC LINE
EXTENSION RULES AND REPORTING REQUIREMENTS,
AND IMPLEMENTING ASSEMBLY BILL 157**

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I. INTRODUCTION

Pacific Gas and Electric Company (PG&E) provides the following opening comments to the California Public Utilities Commission (Commission) on the Proposed Decision Establishing New Electric Service Line Upsizing Rules, Modifying Electric Line Extension Rules and Reporting Requirements, and Implementing Assembly Bill 157 (Proposed Decision) in Phase 4A of Rulemaking (R.) 19-01-011 (Building Decarbonization Proceeding), issued on March 26, 2025.

II. COMMENTS ON THE PROPOSED DECISION

A. The Testing and Evaluation of Meter Socket Adapters (MSAs) Should be Limited to Devices That Enable Electrification or Decarbonization

PG&E is a party to R.19-09-009 (Microgrid Proceeding), which, among other topics, has discussed isolating meter socket adapter (MSA) technologies.¹ In Q4 2024, PG&E submitted Advice Letter (AL) 7453-E with a proposed electric rule and tariffed forms that would govern the testing, evaluation and installation of customer-owned MSAs. As of the date of these comments, AL 7453-E remains pending before the Commission.² PG&E believes that these isolating MSAs can provide customers with resilience and affordability benefits, which is a goal of the Microgrids proceeding, and sees its proposed electric rule as standardizing the complete testing and evaluation process for this technology (as described in Resolution E-5194 and AL 6687-E) and the post-evaluation period where there is no current Commission direction describing this future state with certainty.

In parallel with its participation in the Microgrid Proceeding, PG&E also submitted a response to the Energy Division's Staff Proposal within this Building Decarbonization Proceeding (Staff Proposal). PG&E agrees with the Staff Proposal that MSAs may allow customers to "add PV, energy storage, or additional load without needing to alter the main

¹ R.19-09-009, Track 2.

² PG&E AL 7453-E, Filed December 11, 2024 and amended via supplemental AL 7553-E-A on March 27, 2025.

service panel.”³ PG&E is supportive of enabling MSAs that may help customers avoid a costly panel upgrade as part of their decarbonization journey. However, PG&E is generally opposed to expending resources on the testing and evaluation of MSAs that introduce added risk to the system (given that they are installed between PG&E’s electric meter and the customer’s meter socket) without delivering clear benefits that are aligned with the objectives of either the Microgrid or Decarbonization Proceedings.

The Proposed Decision specifically “decline[s] to narrow the eligibility of non-isolating devices eligible for the evaluation process to be limited to only devices that enable decarbonization”⁴ stating that it would “unnecessarily narrow the use cases.”⁵ PG&E strongly disagrees with this determination as it greatly expands the universe of devices eligible for ratepayer-funded testing and evaluation without interrogating the potential customer benefits a given device could even theoretically offer. Each evaluation means additional time, effort, and costs associated with testing and evaluating and then enabling the installation of technologies. PG&E does not seek to “narrow the use cases” of MSA technologies, but it does believe that device designers and manufacturers should have to articulate how their proposed device will deliver electrification/decarbonization benefits before ratepayer funds are spent to test and evaluate the device for broader grid deployment. As an example, it does not seem prudent to use customer funds to evaluate an MSA that acts as a surge protector when other downstream products exist that provide the same service. Additionally, other MSAs focus on Smart Metering, communication, and remote monitoring. These are services that, when conducted at or adjacent to the meter, PG&E strongly believes are the sole responsibility of the utility, making such

³ R.19-01-011 Phase 4A Staff Proposal, July 18, 2024, p.2.

⁴ Proposed Decision, pp. 44-45.

⁵ Proposed Decision, pp. 44-45 (“Similarly, while the Staff Proposal focused on the benefits of non-isolating MSAs for decarbonization purposes, we decline to narrow the eligibility of non-isolating devices eligible for the evaluation process to be limited to only devices that enable decarbonization. This would unnecessarily narrow the use cases for devices and may force the Commission to have to revisit this evaluation process in the future if other non-decarbonization use cases emerge as priorities.”).

MSAs a poor fit for customer-owned infrastructure. In both cases, customer funds would be used to test and evaluate devices not tied to state or Commission objectives. Enabling decarbonization should explicitly include decarbonizing, and not simply showing customers their usage data.

There are two workstreams to consider in the MSA evaluation process: (1) initial testing and evaluation and (2) installation at scale. As defined by Resolution E-5194, PG&E and the other IOUs have an approximately 120-day process to evaluate devices.⁶ This process relies on using the same engineering teams and lab space as other strategic priorities, such as evaluating emerging technologies in PG&E's Applied Technical Services lab, improving PG&E advanced metering systems, and reviewing and approving distributed energy resource configurations for customer deployment. Each device evaluation costs several hundred thousand dollars and hundreds of hours of labor. As the device evaluation involves multiple internal teams, hiring a new dedicated engineer (or engineers) would not alleviate these resource pressures and would also forcibly increase total program costs, exacerbating the negative implications for customer affordability.

Once the devices are approved, the burdens imposed on ratepayers continue to mount as installations are performed by PG&E's Field Metering technicians, who serve customers in a wide range of capacities beyond these particular installations. The additional strain of new MSA installations threatens to overwhelm their capacity to efficiently and adequately serve customers in these other domains if some constraint on the entrance of new MSAs, like the one PG&E is proposing to ensure that only MSAs that serve electrification or decarbonization goals reach the point of installations by PG&E Field Metering technicians, is not imposed. Between 2023 and 2024, installations of MSAs grew tenfold and we anticipate installation to continue to grow in 2025 by 300 to 400 percent, to around 20,000 MSA installations. The Field Metering technicians who complete these installations receive special, and costly, training. Staffing to meet anticipated demand is a multiyear training effort. PG&E believes that focusing these staffing resources on

⁶ Resolution E-5194, p. 17.

those MSA installations tied to objectives in the Microgrid and/or Building Decarbonization Proceedings would deliver value for customers while maintaining other important metering work. The Staff Proposal itself explains the objective of expanding Resolution E-5194’s evaluation criteria to include non-isolating MSAs for “use cases, such as solar PV and building and transportation electrification” is to “add an important tool to the growing list of strategies for avoiding service upsizing.”⁷ Expanding eligibility of MSA devices for the testing and evaluation program to devices that do not serve this objective—or any other objective articulated in either the Microgrid or Decarbonization Proceedings—would require significant additional resource expenditure without clear association to any customer benefits.

B. The Proposed Reporting Requirements for MSA Testing and Evaluation Are Redundant with Other, Existing MSA Reporting Requirements

The Proposed Decision orders several new MSA reporting requirements for the IOUs, including a publicly accessible webpage (as described in Ordering Paragraph (OP) 20), quarterly reports of testing and evaluation efforts (OP 17), and the public posting of device evaluation reports (OP 19).⁸ PG&E supports increasing public access to MSA program information, but the reporting ordered by the Proposed Decision duplicates and contradicts other reporting requirements already described in Resolution E-5194 and AL 6687-E.

PG&E agrees that OP 20 could help provide market certainty to installers, device manufacturers, and customers, but cautions that OP 17 and OP 19 could require publicly sharing information that was provided in confidence to assist in product evaluation, the publication of which is prohibited by current and anticipated future confidentiality provisions and non-disclosure agreements. PG&E believes the requirements of OP 17 and OP 19 would discourage transparency from device manufacturers during the testing and evaluation process, creating additional safety risks and reducing the effectiveness of the testing and evaluation program overall. Though AL 6687-E, filed as required by OP 2 of Resolution E-5194, explains that “the

⁷ R.19-01-011 Phase 4A Staff Proposal, July 18, 2024, pp 2-3.

⁸ Proposed Decision, p. 50.

utility will not be liable for any disclosure of any material submitted by a party to the utility if that disclosure is ordered by the CPUC,”⁹ the knowledge that provided information would be publicly shared via these quarterly reports and final evaluations contradicts the confidential nature of information sharing described in AL 6687-E.¹⁰ This could discourage the complete transparency required from device developers to thoroughly assess a product’s safety as they seek to protect trade secrets. It is also feasible a device manufacturer may not want their competitors to know of their product pipeline and market release timing, which would be revealed if quarterly testing reports and final evaluation reports were required to be made public as described in OP 17 and OP 19 of the Proposed Decision.

On the topic of device-specific reports, significant deliberation occurred in Track 2 of the Microgrid Proceeding, and the Commission concluded in Resolution E-5194: “We do not find it necessary for the Joint Utilities to submit a final evaluation report for every electrical isolation device that has been evaluated, as has been recommended by some parties.”¹¹ Accordingly, the IOUs committed to provide summaries and outcomes of technology evaluations to the Commission while maintaining confidential treatment of device manufacturer information where appropriate, as described in AL 6687-E. Specifically, device-specific technology evaluation reports will be “provided upon request to the Commission, and...where information and results may be considered proprietary and may, therefore, be submitted with a request for confidential treatment.”¹² This ensures the Commission has visibility into testing and evaluation while maintaining device manufacturers’ ability to protect confidential information. To the extent the Commission wants more visibility into the process prior to final outcomes, OP 17 should be replaced by language requiring the IOUs to submit a summary of currently underway device

⁹ Joint IOU AL 6687-E, p. 3. Available at: https://www.pge.com/tariffs/assets/pdf/adviceletter/ELEC_6687-E.pdf.

¹⁰ Joint IOU AL 6687-E, pp. 25-26.

¹¹ Resolution E-5194, p. 19.

¹² Joint IOU AL 6687-E, pp. 25-26.

evaluation efforts (that could be accompanied by a request for confidential treatment like that described in AL 6687-E) within 60 days' notice when requested by the Commission.

PG&E suggests limiting these market updates—in furtherance of efficiency and affordability without compromising market participants' confidentiality expectations—to focus on the new MSA-specific website described in Section 5.3.3 and OP 20 of the Proposed Decision. This page could include the list of approved devices, user-friendly descriptions of the processes for testing and evaluation, and enable customers to request MSA installations. An FAQ section targeting device manufacturers could highlight the types of tests conducted by PG&E, key considerations to keep in mind, and common areas of failure (to the extent they are discovered). Placing this information on a public website would increase access to key information (as new or potential market entrants may not subscribe to CPUC service lists) without forcing device manufacturers to publicly disclose confidential information.

C. Alternative Load Management Solutions Should be Explored that Would Not Promote the Use of 15-Minute Peak Data for National Electric Code 220.87 Calculations

PG&E does not promote the use of 15-minute peak data for the use in optional National Electric Code (NEC) 220.87 calculations which permit up to 80% usage of the main breaker rating (with no consideration of the local grid limits).¹³ Using this data for the calculations would harm the electric grid by removing load diversity, which is currently relied upon to avoid overloading of the unprotected secondary conductors (a safety risk) and the service transformers (an risk to reducing their lifespan due to overloading). PG&E recommends exploring alternative load management solutions that take into consideration the secondary and service conductor constraints and not simply the customer's panel/wire configurations.

D. Customers, Electricians, and Contractors Are Not in a Position to Gauge if a Customer Can Safely Add Load Based on Wire Size

PG&E does not promote or recommend that IOUs communicate about customer service wire size with the customer to increase load to the maximum of the service wire rating using

¹³ Proposed Decision, pp. 31-34.

NEC standards or including the service line capacity on the billing statement.¹⁴ This would introduce a safety hazard on the shared secondary conductors from potential overloading. Such a safety hazard could create unintended safety risks for those customers who presume their electrical system has capacity or excess capacity (measured as the difference in recorded cable amperage versus sum of breakers or panel amperage) and add or connect load without informing PG&E. Secondary conductor is not protected in the same way the NEC standards specify.

Moreover, the notion that, with the electric service line size information, a “customer, electrician, and/or contractor” could understand the existing capacity at a premise to be able to “gauge if the customer can safely add load thereby avoiding applying for a service line upsizing altogether” is false and does not comport with the reality of how the electric grid is designed. It is not possible to determine if a site has sufficient capacity from the size of the service wire alone. This is because of the shared constraints down the secondary and up to the service transformer, which could result in unintentional overloading of shared secondary conductor. Secondary conductor sizes are not known accurately across the system—neither individual service wire (from pole to house), or secondary conductor (from pole to pole, shared). This information is unavailable or inaccurate without going through the formal Service Planning & Design process which identifies and verifies these constraints. Thus, if PG&E is not made aware of the added load, as required by Electric Rule 3, it cannot find the instances of this overloading on the secondary network before the hazard occurs.¹⁵

The proposal to maximize load at the panel increases the incidents of this overloading and severe hazards significantly.

1. Proposed Solutions

In lieu of conventional upgrades, PG&E proposes a load management system that has the following capabilities for controlling flexible loads:

¹⁴ Proposed Decision, OP 11, pp. 123-124.

¹⁵ PG&E Electric Rule 3(C). Accessible at: https://www.pge.com/tariffs/assets/pdf/tariffbook/ELEC_RULES_3.pdf.

- Calculates the local grid limits (service wire, secondary conductor, and service transformer) in near real-time; and
- Communicates that limit to flexible loads (e.g. EV chargers, heat pumps, DERs, and EMS);

In addition, the secondary conductor and service wire sizes need to be inputted into the system to accurately manage to the constraints of the local grid. Such a system could be achieved with upgraded smart meters that can dynamically calculate local constraints and provide them to customer-owned flexible loads or energy management systems.

- PG&E is developing such a system as part of EPIC 4.02 and will propose a roll out of that system for Customer Electrification during the 2027-2030 GRC period. The system itself presents a significant cost savings to ratepayers given the deferral of the secondary wire, conductor, and service transformer upgrades. It also presents significant savings to the electrification customer while removing the need for an unnecessary/duplicative load management system (such as a CT clamp).
- A smart meter application could aid in the detection and mapping of secondary wire and secondary conductor sizes and ampacities, but this has yet to be fully tested/proven.

For loads that are uncontrolled, the use of the normal NEC 220 load calculations, not the optional 220.87 calculation, is recommended.

E. Adopting a 36-Month Extension for Projects under the Phase 3B Decision Will Create Uncertainty, Confusion, and Financial Burden

PG&E recommends against a 36-month extension for projects with contracts approved and fully paid before the Phase 3B decision’s implementation on July 1, 2024, extending the deadline for both energization and contract finalization to June 30, 2027.¹⁶ Such a change would introduce uncertainty, confusion, and unnecessary financial burden on the part of customers currently working on meeting the previously communicated July 1, 2025 energization date. In particular, such an extension would be unfair to customers who were attempting to meet the

¹⁶ Proposed Decision, OP 27, p. 129.

originally scheduled date. These customers invested extra financial and human resources to expedite the energization of their projects by the original date and could have saved this money or resources. Such a proposal would penalize these customers for attempting to follow the rules of the Phase 3B decision as compared to customers who would now have more time.

F. To Ensure Common Facility Cost Subsidies Are Appropriately Applied, The Final Decision Should Clarify: (1) The Definition Of “Electric Line Service” Facilities; And (2) The Application Of “Common Facility Cost Treatment”

PG&E recommends Section 4 of the Final Decision clarify: (1) the definition of “electric service line” facilities; and (2) the applicability of “common facility cost treatment” for service line upsizing consistent with the utilities’ Electric Rule 16 tariffs governing service extensions to ensure that service line upsizing cost subsidies are appropriately applied.¹⁷

1. Electric Line Service Facilities

PG&E’s Electric Rule 16 tariff defines service extensions as “the overhead and underground primary or secondary facilities (including but not limited to PG&E-owned Service Facilities and Applicant-owned service facilities) extending from the point of connection at the Distribution Line to the Service Delivery Point,” where the service delivery point is typically the electric meter on the customers’ premises.¹⁸

2. Common Facility Cost Treatment

PG&E recommends that the scope of common facility cost treatment for service line upsizing for building electrification should mirror the service upgrade cost treatment applied to support Plug-In Electric Vehicle (PEV) chargers as described by PG&E’s Electric Rule 16(E)(7) “Policy on Excess PEV Charging Costs.”¹⁹ In this case, any service line upsizing costs for

¹⁷ Proposed Decision, pp. 8-9.

¹⁸ PG&E’s Electric Rule 16, p. 25. Accessible at:
https://www.pge.com/tariffs/assets/pdf/tariffbook/ELEC_RULES_16.pdf.

¹⁹ PG&E’s Electric Rule 16, p. 20. Accessible at:
https://www.pge.com/tariffs/assets/pdf/tariffbook/ELEC_RULES_16.pdf.

building electrification in excess of the residential allowance (where “Excess Service” is defined in PG&E’s Electric Rule 16(E)(5)(b)) would be treated as common facility costs.²⁰

III. CONCLUSION

PG&E greatly appreciates the opportunity to comment on the Proposed Decision and looks forward to continuing to work with the Commission on reducing greenhouse gas emissions and maintaining stable rates for our customers.

Respectfully Submitted,

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²⁰ *Id.*

APPENDIX A
TO

OPENING COMMENTS OF PACIFIC GAS AND ELECTRIC COMPANY ON THE
PROPOSED DECISION

Proposed Revisions to Conclusions of Law and Ordering Paragraphs

Proposed additions are shown in blue underline while proposed deletions are shown in ~~red strikethrough~~. Where Conclusions of Law and Ordering Paragraphs are proposed to be added or removed entirely, renumbering of these items would be required.

Revised Conclusion of Law 25:

25. It is reasonable to extend the safety evaluation process outlined in Resolution E-5194 to include non-isolating devices that enable decarbonization and help avoid unnecessary service upsizing; and it is also reasonable to allow PG&E, SCE, and SDG&E to use the existing \$3 million funding authorized in D.21-01-018 to evaluate non-isolating devices, ~~especially those that enable decarbonization and help avoid unnecessary service upsizing.~~

Removed Conclusion of Law 29:

~~29. It is reasonable to require electric utilities to provide regular progress reports on evaluation activities, requiring quarterly reporting during the early years of the evaluation process (2025-2026).~~

Revised Conclusion of Law 31:

31. It is reasonable to accept the findings of Resolution E-5194, which found submission of device evaluation reports unnecessary, and (a) extend the reporting requirements established in Resolution E-5194 to non-isolating devices; (b) require PG&E, SCE, and SDG&E to confidentially provide updates to the Commission, upon request, of all testing and evaluation activities. ~~file final evaluation reports for all outcomes of the evaluation process, including devices that are approved, not approved, or for which evaluation has ceased; and (c) require utilities and suppliers to submit these reports within 60 days of the conclusion of the evaluation process.~~

Revised Ordering Paragraph 13:

13. Resolution E-5194 is modified and expanded to include evaluation of customer-owned devices that interface with utility equipment, do not have grid isolation capabilities, and require explicit utility approval (“non-isolating devices”). Such non-isolating devices ~~include, but are not limited to,~~ meter socket adapters with distributed energy resource capabilities or those which enable meter panel upgrade avoidance. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company shall evaluate and approve non-isolating devices for safety and compatibility in the same manner as isolating devices. All

reporting, safety evaluations, technology review, and other requirements and applicable processes described in Resolution E-5194 shall apply to isolating and non-isolating devices.

Revised Ordering Paragraph 14:

14. Decision (D.) 21-01-018 is modified, and the funding it previously authorized is extended to apply to non-isolating devices in addition to isolating devices. Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) are authorized to ~~(a)~~ use the existing \$3 million in funding approved in D.21-01-018 to conduct safety and reliability evaluations of these non-isolating devices, ~~and (b) prioritize safety evaluations for non-isolating devices that directly enable decarbonization and facilitate electrification efforts.~~ All directions in D.21-01-018 allowing PG&E, SCE, and SDG&E to submit Tier 2 ALs requesting additional funding for safety evaluations shall continue to apply.

Removed Ordering Paragraph 17:

~~17. Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) shall submit Tier 1 Advice Letters to report on their progress in evaluating non-isolating devices, including activities completed in the prior reporting period and anticipated activities for the next reporting period, as outlined in Section 5.3.3. For 2025 and 2026, PG&E, SCE, and SDG&E shall submit these Tier 1 Advice Letters on a quarterly basis, with the first report due on July 15, 2025, covering the first two quarters of 2025. Beginning January 15, 2027, PG&E, SCE, and SDG&E shall transition to annual reporting, continuing until all approved evaluation funds are expended.~~

Removed Ordering Paragraph 19:

~~19. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company shall each submit an informational report, jointly with suppliers, to the service lists in this proceeding and Rulemaking 19-09-009, and to the California Public Utilities Commission's Energy Division at energydivisioncentralfiles@cpuc.ca.gov that includes the final evaluation report following the process outlined in Resolution E-5194 for all isolating and non-isolating devices that have been either approved for deployment, not approved, or for which evaluation has ceased, as described in Section 5.3.3 of this decision. Each informational filing shall be submitted no later than 60 days after the evaluation process for the device has concluded.~~

Revised Ordering Paragraph 21:

21. Within 180 days of the issuance of this decision, Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company shall file a Tier 1 Advice Letter outlining compliance with the website requirements detailed in Section 5.4.3. Each of these utilities shall maintain a dedicated public webpage listing all devices approved for utility use through the Resolution E-5194 safety evaluation process. This public webpage information shall be freely accessible without access restrictions, login credentials, or other barriers. [This website shall be considered a resource for \(1\) device manufacturers to understand the testing and](#)

evaluation process, including anonymized lessons learned from failed and successful device evaluations (2) installers to understand how to request MSA installations and (3) customers to understand MSAs and the utilities' role in installing them.