BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

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Order Instituting Rulemaking Regarding Building Decarbonization.

Rulemaking 19-01-011
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PENINSULA CLEAN ENERGY AUTHORITY COMMENTS ON PROPOSED PHASE 4 TRACK A DECISION ESTABLISHING NEW ELECTRIC SERVICE LINE UPSIZING RULES, MODIFYING ELECTRIC LINE EXTENSION RULES AND REPORTING REQUIREMENTS, AND IMPLEMENTING ASSEMBLY BILL 157a

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I. Introduction

Peninsula Clean Energy Authority ("PCE") supports several measures in the Proposed *Phase 4 Track A Decision Establishing New Electric Service Line Upsizing Rules, Modifying Electric Line Extension Rules and Reporting Requirements, and Implementing Assembly Bill 157a* ("Proposed Decision") that facilitate right-sizing building electrification to avoid costly and time-consuming unnecessary electric service upsizing, which can pose significant barriers to electrification.[1] In PCE's experience with whole-home electrification, use of technologies sized to specifically meet the needs of customers can eliminate the need for service upsizing and avoid costly distribution upgrades. This approach avoids the use of default devices that are likely oversized for the customer's need. If pursued across the entire state, right-sizing building electrification could save tens of billions of dollars for ratepayers.

II. Peninsula Clean Energy has demonstrated considerable success with a right-sizing design approach to building electrification.

PCE strongly endorses the Commission's interest in the right-sizing of building and transportation electrification as the first-order strategy to meet customer needs in order to affordably decarbonize. In PCE's right-sizing design approach, projects first optimize existing infrastructure to deliver the customer's desired services within utility constraints on both sides of the customer meter. Building electrification projects can use cost-effective behind-the-meter ("BTM") load management equipment, which interfaces with the utility meter, to deliver customer needs without exceeding service line constraints. This right-sizing building electrification approach avoids the costs associated with upgrading service lines. Service line and

[1] See Proposed Decision, Findings of Fact 1 and 2.

distribution upgrades are deployed only if customer electrification needs cannot be met within those constraints. Thus, right-sizing building electrification is similar to the Loading Order principles already used in California's electricity procurement, but applied to the electrification of customer's homes and businesses. Right-sizing can avoid costs and delays for unnecessary service upsizing, thereby accelerating decarbonization projects while also minimizing costs borne by the ratepayers.

PCE is already implementing right-sizing to avoid unnecessary infrastructure spending in its whole home electrification programs. PCE recently concluded a whole home electrification pilot to replace the household gas appliances for nine single family homes with existing service panels ranging from 100A to 200A. By using a combination of right-sizing devices and techniques to manage loads within the constraints of the existing BTM infrastructure, none of the projects required electric service upsizing.[2] Similarly, PCE field-tested several 120V heat-pump water heaters ("HPWH") in single-family homes throughout San Mateo County and found high levels of customer satisfaction with the lower current devices.

PCE has also found that rightsizing transportation electrification projects can meet customer needs without in front of the meter upsizing. PCE's EV Ready PCE conducted an analysis of the driving habits of households in San Mateo, Santa Clara, and Fresno counties that found that nearly all household daily commute needs could be met with Level 1 EV chargers, without the higher cost and charging currents drawn by level 2 chargers.[3] Other studies have

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[2] Peninsula Clean Energy (2024) "Case Study of Whole Home Electrification at Nine Low-Income Homes in San Mateo County," available at https://www.peninsulacleanenergy.com/wp-content/uploads/2025/03/Whole-Home-Case-Studies-Nov-2024.pdf. Although two of the projects required panel upgrades to replace outdated systems, none of the homes required new utility service lines.

[3] Peninsula Clean Energy, "Commute and multi-family EV Charging Needs Analysis: Level 1 or Level 2 Power Managed Charging Meets the Daily Needs of 94+% of Drivers," https://www.peninsulacleanenergy.com/wp-content/uploads/2021/09/Determining-the-Appropriate-Level-of-Power-Sharing-for-EV-Charging-in-Multifamily-Properties.pdf

reached similar conclusions.[4] In a survey of 1,400 local EV owners, PCE found that over 80% of those who charge with Level 1 equipment at home say that it meets their needs either all of the time or most of the time.

PCE's has also utilized right-sizing in multi-family projects. PCE's EV Ready program has an average install cost of about $2,500 per outlet when installing Level 1 charging at multi-family housing, roughly five times less expensive than the cost of installing a Level 2 charger through the CALeVIP program.[5] PCE recently completed a what may be the largest multi-family EV charging project in California, providing power-managed charging for all 90 residential units without needing an electric utility service upsizing.[6] PCE is working on a second project that will result in 144 charging outlets at a new construction multi-family property. Right-sizing the EV charging significantly reduced the utility service request for this new construction project, thereby avoiding upstream grid impacts, the cost of which would be borne by ratepayers.

PCE's experience in building and transportation electrification demonstrates that right-sizing can avoid costs and delays for unnecessary service upsizing, thereby accelerating decarbonization projects while also minimizing costs borne by the ratepayers.

III. The Commission should require IOUs to provide information on the barriers to providing customer peak load data that are critical to right-sizing efforts.

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[4] Recurrent Energy, "Events Range Study by State Finds and Overlooked Stat," (February 27, 2024) https://www.recurrentauto.com/research/ev-range-by-state.

[5] Center for Sustainable Energy (2024). CALeVIP Rebate Statistics. Data last updated 3/3/2025. https://calevip.org/rebate-statistics

[6] J.Dow "How One Condo Complex Installed EV Charging for Just $405 per Parking Spot." Electrek, December 4, 2024, https://electrek.co/2024/12/04/how-one-condo-complex-installed-ev-charging-for-just-405-per-parking-spot/ (accessed April 14, 2025)

PCE agrees that the Commission should continue investigate the barriers to providing these data and work towards solutions that will make these data readily available to customers.[7] Right-sizing critically relies upon data for both the customer's current peak demand and the capacity of existing service line capacity to understand how much new load the project can create without requiring front of the meter utility-service upsizing. As the Staff Proposal noted, sharing historical peak demand and peak consumption data with the customer in 15-minute intervals would make it considerably easier for contractors to calculate existing loads using NEC 220.87. The Proposed Decision lays out the hardware and software constraints Pacific Gas and Electric Company ("PG&E") and Southern California Edison ("SCE") assert prevent them from providing these data to all customers. These distribution utilities do not systematically collect and record the capacity of electrical service lines, nor do they consistently record 15-minute data. In light of these constraints, the Proposed Decision's request for additional information on the barriers should provide the foundation for removing this barrier in the most cost-effective and efficient manner possible. As these actions are carried out, PCE urges the Commission to continue to explore more concrete right-sizing and infrastructure optimization policy in this proceeding in the near future.

IV. The Commission should require distribution utilities to quickly evaluate and approve a wider range of devices and greater customer and contractor education about these devices.

PCE agrees that IOUs should use existing processes to evaluate new devices that interface directly with the utility meter, such as non-isolating meter socket adapters, where such

approval is necessary, and that the IOUs should be permitted to receive cost recovery for this work. These devices are crucial to keeping customer loads within the constraints of the service line and panel sizes. Most devices that can help customers avoid electric service and panel upsizing are installed behind the utility meter and therefore do not require utility approvals. While the Commission should work to reduce the number of devices requiring IOU approval, for those devices that require utility approval, the IOUs should make all efforts to approve them quickly. As the range of non-isolating devices available in the market grows, it is important that those customer devices that need it have a path for IOU approval so that they can be quickly be deployed as a key tool in the right-sizing toolbox.

Similarly, PCE supports efforts to improve education and communication about all these approaches to customers and contractors. PCE applauds the Proposed Decision's direction to TECH and Energy Division staff to develop resources on technologies and strategies to avoid unnecessary service upsizing. Distribution utilities should also make this information available on their websites and supply it to all service line upgrade applications. As the concept of right-sizing gains currency, it is important to educate customers and contractors on various technologies, approaches, and their benefits in order for these policies to deliver rate payer savings.

V. Common facility treatment for under-resourced customers who cannot electrify without the utility-service upsizing will be critical for electrification efforts under various programs.

Peninsula Clean Energy supports subsidizing under-resourced customers for service line upgrades resulting from their participation in electrification programs. As the Proposed Decision

notes, service line upsizing should be avoided unless necessary and when reasonable right-sizing options have been exhausted,[8] but many under-resourced households will nonetheless require utility service line upsizing to electrify all of their gas appliances. Providing common facility cost treatment to these customers will help ensure equitable access to electrification to these households that also represent some of the best opportunities for decarbonization. PCE offers three specific comments on this program. PCE supports:

- deferring the definition of "under-resourced" to the electrification programs serving these customers,
- clarifying that the service line capacity eligibility requirements do not apply to multi-family properties to allow these customers to be eligible for cost relief, and
- clarifying that service line upsizing support is capped at $10,000 (allowing customers or program administrators to find other funding for the additional expense) rather than excluding otherwise eligible customers when service line upgrade costs exceed $10,000.

First, PCE applauds the Commission for deferring the definition of low-income or under-resourced to the programs in which the customers are participating. Local program definitions are typically tailored to the communities they serve, especially the cost-of-living in the community. As a Community Choice Aggregator local government agency serving a wide variety of communities, PCE is keenly aware that what is under-resourced in a high cost-of-living community may be quite different in a lower cost-of-living community. As the Commission has observed in developing community level metrics of affordability in the affordability proceeding (R.18-07-006), single statewide metrics can obscure important

[8] Proposed Decision, at 17.

differences between communities. Critically, the Proposed Decision's approach ensures that program eligibility overlaps with the common facility treatment. This should ensure that participants who are eligible for programs for under-resourced households are not inadvertently barred from electrification because they do not qualify for service line upsizing subsidies if they are not eligible under a different statewide standard.

Second, the final decision should clarify that multi-family projects are not subject to the same capacity amperage criteria to determine eligibility as those imposed on single-family and small business customers,[9] because these multi-family projects may be barred from receiving cost relief. As the Proposed Decision notes, "a large proportion of under-resourced customers live in multifamily housing, and the barriers to electrifying larger properties that rely on multiple funding sources for upgrades are greater than for single-family projects."[10] However, the Proposed Decision also only extends eligibility for common facility treatment to premises with an existing service line of less than 100A capacity needing upsizing to no more than 200A.[11] While these criteria are reasonable for single family premises, these conditions are too low for many multi-family premises and would preclude them from participation. Often, electric utility service is delivered to several multi-family residential units from a central electrical room on the multi-family property that is also the point of interconnection with a single electric utility service line. The capacity of the electric utility service lines needs to be large enough to serve several units, and therefore are typically much larger than those for single-family residences. These limitations on existing and new service lines would bar a substantial fraction of multi-family households from benefiting from a program that is intended to serve such under-resourced

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9 Proposed Decision, at 15; *see also* OP 4.
10 Proposed Decision, at 18.
11 Proposed Decision, Ordering Paragraph 4.

households. Therefore, PCE recommends a clarification that these capacity criteria for existing and new electric utility services do not apply to multi-family properties.

Third, the Proposed Decision should clarify that single family home projects are eligible to receive cost relief up to $10,000 per service line, as suggested in Ordering Paragraph 2, rather than barred from eligibility entirely if upgrade costs exceed $10,000. This approach would allow customers, or the administrators of the electrification programs, to find additional funds to finance whatever difference remains above $10,000, potentially allowing more under-resourced households to be eligible. In contrast, a bar on eligibility may render many otherwise highly beneficial projects infeasible.

VI. Conclusion

PCE applauds the Commission's efforts to develop right-sizing electrification policies. The Commission, utilities, CCAs, and other stakeholders must focus their building electrification efforts on making full use of existing infrastructure first to meet customer needs before pursuing upsizing to service lines and other distribution infrastructure. We look forward to sharing our experiences from our own efforts at right-sizing in future phases of this proceeding to reduce ratepayer costs and to accelerate the transition to a decarbonized future.

Respectfully submitted,

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