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RE: Pacific Gas and Electric Company Comments on the California Air Resources Board’s Zero-Emission Space and Water Heater Standards Workshop

Pacific Gas and Electric Company (PG&E) appreciates this opportunity to comment on the California Air Resources Board’s (CARB) *Public Workshop on Zero-Emission Space and Water Heater Standards* (Workshop) held on February 28, 2024. PG&E would like to thank CARB for its continued efforts to reduce greenhouse gas emissions (GHGs), nitrogen oxides (NO_x), and improve indoor and outdoor air quality for all Californians.

As California’s largest energy provider, PG&E embraces our foundational role in transitioning the State to a decarbonized and more climate-resilient economy. In June 2022, PG&E issued a Climate Strategy Report establishing our commitment to achieve a net zero energy system in 2040—five years ahead of California’s carbon neutrality goal established in Executive Order B-55-18—and to become climate and nature positive by 2050.¹ PG&E offers the following comments to facilitate CARB’s development of robust zero-emission appliance standards which support both PG&E’s and the State’s goals.

I. Regulatory Concepts

a) Statewide Rule as Described in 2022 SIP Strategy Measure

PG&E recognizes the vital role that building electrification must play to meet California’s climate goals and supports CARB’s efforts to reduce building emissions as described in the State Implementation Plan (SIP). However, the inability to provide comprehensive decarbonization solutions (i.e., whole-building or “zonal” electrification) to customers presents a key challenge in long-term gas rate affordability. Gas system and associated maintenance costs are by and large fixed, and do not change as customer demand for gas declines. Fixed gas system costs coupled with fewer gas customers prompts the fixed costs to be “divvied” among a smaller group, or base of customers, which results in higher prices for those customers remaining on the gas system.

¹ PG&E’s full Climate Strategy Report is available online here: [PG&E Climate Strategy Report \(pge.com\)](https://www.pge.com).

Without a proportional reduction in gas infrastructure, customers' gas rates are likely to rise at a rate that substantially outpaces inflation.

On the other hand, when building electrification enables reduced or altogether avoids gas system expenditures—such as when entire neighborhoods are electrified – all customers benefit, not only those who are living or working in the all-electric building. As E3 notes in their report *The Challenge of Retail Gas in California's Low-Carbon Future*, “A managed gas transition would likely require some amount of targeted or zonal electrification, to enable a reduction in the gas distribution infrastructure. Without a managed gas transition and without any effort to target electrification, it would be difficult to reduce the size or scale of gas system investments and costs.”² Accordingly, piecemeal ordinances or regulations targeted to residential furnaces and water heaters provide a familiar programmatic format but have troubling consequences for energy affordability.

PG&E urges CARB and other state agencies to prioritize policy mechanisms that achieve both building-emissions reductions through electrification *and* gas system costs reduction through segmented retirement of the gas system, instead of attempting electrification through an appliance-by-appliance approach. Reductions in both emissions and gas system costs could be accomplished through the expansion of appliance-based regulations to all gas appliances in a building or by using zonal electrification as a tool to electrify whole communities and allow the retirement of associated gas infrastructure assets. For example, although cooktops, dryers, or decorative fireplaces use less natural gas than furnaces or water heaters, their continued use in parallel with an overall decline in gas system throughput will not facilitate a reduction in the maintenance costs associated with the existing natural gas system. Decommissioning the natural gas system in parallel with decreasing throughput is the only way to keep prices affordable for all customers.

The State should further ensure that the regulations consider specific impacts for both low-income customers and in areas where whole-building electrification is infeasible. In particular, substantial non-ratepayer funding may be necessary to ensure that customers located in traditionally underserved communities are able to electrify their gas appliances. Additionally, further research and rate reform may be necessary (for example, smaller footprint heat pump water heaters for apartments) for customers or areas where there are technical limitations on electrification.

b) Statewide Rule Based on Bay Area and South Coast Measures

PG&E supports the Bay Area and South Coast measures as a regulatory concept. Based on our involvement in the Bay Area Air Quality Management District's (BAAQMD) Implementation Working Group, we understand that efforts have been made to phase in the BAAQMD rule requirements based on technology readiness. Using the BAAQMD and South Coast measures as a regulatory concept attempts to catalyze the replacement of multiple natural gas end-uses while working under existing market constraints. Market readiness is a critical part of policy

² Aas, Dan, Amber Mahone, Zack Subin, Michael Mac Kinnon, Blake Lane, and Snuller Price. 2020. [The Challenge of Retail Gas in California's Low-Carbon Future: Technology Options, Customer Costs and Public Health Benefits of Reducing Natural Gas Use](#). California Energy Commission. Publication Number: CEC-500-2019-055-F.

implementation for zero-emission appliances. PG&E emphasizes the importance of a holistic policy approach to building electrification that targets *all* natural gas end-uses to enable reduced or avoided gas system expenditures. If implemented at the State level, the BAAQMD and South Coast regulatory concepts should be expanded to cover cooking, laundry, and fireplaces and promote whole-building electrification.

II. Guiding Questions

For the Cost Analysis section of the report, PG&E wishes to note that we have an Electric Home rate (E-ELEC) that should also be factored into the cost analysis.³ PG&E has no additional data to provide at this time for the Technology, Building Readiness, and Equity Analysis sections of the report and looks forward to working with CARB to ensure a coordinated implementation of any zero-emission appliance standard.

III. Overall Questions for the Public

Question 6: For affordability case studies, what specific case studies should staff analyze, such as renter impacts, small business impacts, or others?

PG&E encourages CARB to investigate how multi-unit property owners can be inspired or compelled to make efficiency upgrades alongside HVAC replacements in an effort to assist tenants with potential energy bill increases. The Investor-Owned Utilities offer energy efficiency programs to support qualifying projects, but participation is voluntary, and landlords may choose not to enroll. Particularly, as the HVAC in homes and small and medium businesses are switched to electric, building envelope improvements assure that preventable air leakage does not create an undue burden for tenants who may ultimately bear the costs of higher bills. Although low-income and priority community customers may be the most vulnerable, many renting populations may be exposed to negative impacts. Moreover, building retrofits should not be employed as a building-owner tactic for coerced removal or eviction. Tenant protections that ensure electrification-related upgrades can be completed without involuntary tenant removal is essential in avoiding unintended consequences of a well-meaning decarbonization policy.

PG&E appreciates the opportunity to provide these comments on the Workshop and looks forward to continued collaboration with CARB staff on the forthcoming Zero-Emission Appliance Standard rulemaking. Please feel free to contact me if you have any questions or wish to discuss these comments in greater detail.

Sincerely,

/s/

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State Agency Relations

³ More information on the [Electric Home Rate Plan \(E-ELEC\)](#) can be found on the PG&E website (pge.com).