

**January 7, 2022**

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1001 “I” Street  
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**RE: Pacific Gas and Electric Comments on the Building Decarbonization Technical Workshop for the 2022 Scoping Plan Update**

Pacific Gas and Electric Company (PG&E) appreciates this opportunity to comment on the California Air Resources Board’s (CARB) Scoping Plan Update (SPU) Building Decarbonization Technical Workshop held on December 13, 2021. PG&E would like to thank CARB, the California Public Utilities Commission (CPUC), the California Energy Commission (CEC), and the panelists for participating in this discussion of the opportunities and challenges on the path to building decarbonization.

PG&E recognizes the important role that building electrification must play to meet California’s climate goals. PG&E efforts to decarbonize the building sector reflect the different needs of customers and communities such as incentives, technical support, and advocacy. Through its Codes & Standards Program, PG&E provides technical support and analysis to understand the potential impacts of new policies to state agencies and local jurisdictions preparing for workshops and rulemakings. The State of California and over 50 local jurisdictions are addressing decarbonization from a policy perspective through advancements in building codes and appliance standards. PG&E has provided written support for these state and local efforts where they are cost effective and reduce emissions for our customers.<sup>1</sup> PG&E’s innovative WatterSaver program<sup>2</sup> and the upcoming California Energy-Smart Homes Program (launching in 2022), will also incentivize low-carbon solutions in the building sector. These building electrification programs are complemented by a robust series of PG&E-led electric vehicle, demand response, and resiliency efforts, as well as state-wide programs like BUILD and TECH, further enabling our clean energy future.

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<sup>1</sup> PG&E Comments on 2022 Energy Code Pre-Rulemaking (Docket Number 19-BSTD-03)

<sup>2</sup> PG&E’s WatterSaver Program is a behind-the-meter thermal energy storage program with a goal of reducing peak load by using new heat pump water heaters and smart controls on existing electric resistance water heaters and heat pumps to shift load away from peak usage hours.

We applaud CARB for proposing bold steps through its Scoping Plan and State Implementation Plan to meet California’s aggressive climate goals. However, electrification of existing buildings comes with unique challenges. As Energy and Environmental Economics, Inc (E3) highlights in their report *The Challenge of Retail Gas in California’s Low-Carbon Future*, “unsustainable increases in gas rates and customer energy bills could be seen after 2030, negatively affecting customers who are least able to switch away from gas, including renters and low-income residents.”<sup>3</sup> It is because of these potential impacts to our most vulnerable customers that PG&E supports a comprehensive and targeted approach to building decarbonization, supplemented by additional funding and support for our most vulnerable communities. PG&E submits the following comments in response to the CARB Building Decarbonization workshop in order to ease the decarbonization transition burden.

### Prioritize Strategies that Promote Equity and Affordability

From an equity and affordability standpoint, PG&E urges CARB and other State Agencies to prioritize opportunities that achieve both building electrification and gas system cost reduction. When building electrification enables reduced or avoided gas system expenditure, *all* customers benefit - not only those living or working in the all-electric building. Piecemeal ordinances targeted at residential furnaces and water heaters, which some workshop speakers and the AB 3232 Assessment report<sup>4</sup> called out as “low-hanging fruit,” provide a familiar programmatic format but troubling consequences for energy affordability. Though customers able to replace individual appliances will see lower gas bills, those replacements do not lower the cost of the gas system; instead, remaining customers will absorb those costs. As E3 notes, “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.”<sup>5</sup> In order to maintain safety and reliability, the natural gas system comes with necessary operations and maintenance needs, the costs for which are approved by the CPUC in PG&E’s General Rate Case. PG&E strongly recommends strategies that focus on “win-win” outcomes: replacing gas appliances while promoting affordability and equity.

Geographically targeted (“zonal”) electrification and whole-building approaches are key strategies to enable an economic and fair transition. The gas system and its associated maintenance costs are mostly fixed, and do not change as customer demand for gas falls. Gas rates are likely to rise to unsustainable levels if those fixed costs are spread over a smaller base of gas customers. If instead a customer or subset of customers were to fully electrify, the infrastructure associated with that portion of the gas system could be retired or downrated, potentially leading to a more equitable decarbonization transition. If similar ordinances to proposed space and water heating appliances addressing other common natural gas end uses such

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<sup>3</sup> [The Challenge of Retail Gas in California’s Low-Carbon Future \(ethree.com\)](https://www.ethree.com)

<sup>4</sup> Available at <https://www.energy.ca.gov/publications/2021/california-building-decarbonization-assessment>

<sup>5</sup> [The Challenge of Retail Gas in California’s Low-Carbon Future \(ethree.com\)](https://www.ethree.com)

as cooking, laundry, and fireplaces are not anticipated, CARB and the CEC should work with the appropriate stakeholders to ensure that customers are supported with financial and educational resources that encourage them to fully electrify their homes or businesses.

### State and Regional Agencies Should Adopt a Phased-In Approach Targeting Areas of Strategic Zonal Electrification

PG&E has developed an internal Gas Asset Analysis Tool to identify locations where “zonal electrification,” or strategic de-commissioning of the natural gas system may reduce gas system costs. The tool aims to synthesize various system conditions and asset characteristics—such as, but not limited to, age of assets, risks, number of customers, and system throughput—to provide insight about locations that may warrant further engineering and/or costing review for zonal electrification. In order to help with systems-level planning, a version of this tool is in use with select jurisdictions in PG&E’s service area under a non-disclosure agreement. Working collaboratively with CARB staff under a similar non-disclosure agreement, PG&E could work to identify areas of “zonal electrification” potential. In order to maintain equitable rates for all customers, these high potential zones may be targeted first by building decarbonization initiatives, while harder to electrify and/or most costly to electrify zones are considered in a later phase.

### Partner with ESJ Communities to Identify Resources to Alleviate the Cost Burden for Underserved Communities

PG&E would also like to stress the importance of working with environmental and social justice (ESJ) organizations to provide additional support, education, and incentives for affected low-income customers. PG&E has found engagement with ESJ communities to be of critical importance in early electrification pilots, such as the CPUC’s San Joaquin Valley Disadvantaged Communities Pilot. Various stakeholders have also pointed to the fact that low-income customers may be less able to afford the transition to high efficiency heat pumps for space and water heating, as these technologies may still carry a price premium. Additional thought is needed on how to best transition underserved communities. At this time electric rates that are designed specifically for customers operating all-electric buildings have not yet been implemented. While upcoming rate modifications (such as PG&E’s E-ELEC or a proposed increase in electricity baseline for customers with heat pump water heaters) may help mitigate some costs for customers seeking to electrify their homes and businesses, near term cost-effectiveness may be challenging—especially for customers without solar photovoltaics. Incentive programs and market transformation efforts aimed at reducing the cost of purchasing, installing, and servicing heat pumps are also just beginning, and may not be fully accessible to the communities most needing electrification. PG&E believes it is essential to focus not only on a rapid transition so that these customers are not “left behind,” but also on a sensible approach that reflects market and regulatory realities.

## Address Affordability Obstacles Foundational to Accelerated Electrification

To advance electrification, electricity must be an attractive fuel. Achieving California policy goals depends on stable, affordable, and easy to understand electric rates for all customers. As noted by the Natural Resources Defense Council during the workshop, electric rates are currently covering many costs that could be reconsidered moving forward. PG&E supports additional discussion on exploring other funding mechanisms to cover programs and costs currently included in electric rates, but which provide broader societal benefits.

Strategic zonal and whole-building electrification approaches such as those mentioned above will also lead to greater predictability and efficiency for utility planners and customers, which could potentially reduce costs by minimizing the need for potential future upgrades as additional appliances or homes in an area are electrified. Zonal or community-level electrification could also be aligned with roll out of other programs such as communal EV charging, again streamlining work in specific areas.

PG&E also supports comments made during the workshop that customers looking to electrify may benefit from careful design and selection of appliances and equipment on the customer's side of the meter, which would mitigate the need to upgrade an existing panel. When a customer replaces an existing panel with one of greater capacity, this often leads to the utility having to increase its service facilities (i.e., the service cable that connects the customer to the distribution system). In this case, if PG&E determines that an existing service facility requires upgrade, facilities are replaced under the provisions of Rule 16 at cost to the customer.<sup>6</sup> The design, installation, maintenance, and operation of the customer's equipment, including determination of the panel size is the responsibility of the customer. Customers could potentially reduce overall electrification costs if they can access alternative, cost-effective options, to panel upgrades.

### Conclusion

PG&E appreciates the opportunity to provide these comments on the Building Decarbonization Workshop. We look forward to continuing the discussion across agencies on these critical topics to achieve affordable, equitable and efficient building decarbonization.

Please feel free to contact me if you have any questions or concerns.

Sincerely,

/s/

Fariya Ali

Air & Climate Policy Manager, PG&E

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<sup>6</sup> Electric Rule 16.F.1, "Service Reinforcement"