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Dana Papke Waters  
Staff Air Pollution Specialist  
California Air Resources Board  
P.O. Box 2815  
Sacramento, CA 95812-2815

**Subject: Comments on May 29, 2024, Zero-Emission Space and Water Heater Workshop**

Dear Ms. Waters:

SoCalGas appreciates the opportunity to provide comments on the California Air Resources Board's (CARB) May 29, 2024, Workshop on Zero-Emission Space and Water Heater Standards. SoCalGas supports CARB's efforts to achieve greenhouse gas (GHG) emissions reductions<sup>1</sup>, however SoCalGas and other stakeholders continue to have serious concerns regarding the feasibility and cost-effectiveness (CE) of zero-emission space and water heater standards.<sup>2</sup>

As such, SoCalGas's comments highlight the following: 1) The proposed standard effectively bans certain appliances covered by the federal Energy Policy and Conservation Act (EPCA); 2) Building retrofit cost assumptions should include engineering design and construction costs to more accurately reflect total costs of transitioning to zero emissions equipment; 3) CARB should holistically evaluate energy demand and grid readiness to better ensure reliability; 4) CARB's proposal should include exceptions when implementation is infeasible

**I. The proposed standard effectively bans certain appliances covered by the federal Energy Policy and Conservation Act.**

SoCalGas remains concerned that the proposed Rule effectively bans certain gas appliances covered by the federal Energy Policy and Conservation Act (EPCA), since the rule will eliminate the use of gas in subject appliances and require owners to convert to electric units. Here, similar to the Berkeley ordinance that the court determined was preempted by EPCA, the effect of the proposed rule is to reduce the quantity of gas consumed by EPCA-covered appliances to zero. *See California Restaurant Association v. City of Berkeley*, 89 F.4th 1094 (9th Cir. 2024).

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<sup>1</sup> <https://www.socalgas.com/sustainability/aspire2045>.

<sup>2</sup> Stakeholder Comments to CARB [https://ww2.arb.ca.gov/approved-comments?entity\\_id=35116](https://ww2.arb.ca.gov/approved-comments?entity_id=35116) & Stakeholder Comments to SCAQMD on PAR 1146.2 <https://www.aqmd.gov/home/rules-compliance/rules/scaqmd-rule-book/proposed-rules/rule-1146-2/comment-letters>

**II. Building retrofit cost assumptions should include engineering design and construction costs to more accurately reflect total costs of transitioning to zero emissions equipment.**

High-efficiency gas appliances offer a cost-effective way to reduce emissions without the hefty upfront expenses associated with currently available zero-emission systems. These appliances can seamlessly integrate into existing infrastructure, often serving as a direct replacement. Additionally, blending hydrogen with natural gas further reduces carbon emissions while leveraging the existing gas network. This approach provides a gradual cost-effective transition toward decarbonization. With the currently available technologies, these proposed amendments will necessitate fuel switching to meet zero emission limits. This transition will require new construction beyond the equipment location and additional electricity capacity both in front of and behind the meter. The significant costs and feasibility challenges of going entirely zero emissions is not cost-effective and goes against the State's focus on affordability.

As mentioned in our previously submitted letter, SoCalGas worked with outside contractors and Ramboll Consulting to determine space and water heater replacement options that are currently available to comply with proposed amendments to South Coast Air Quality Management District (SCAQMD) rule 1146.2 and performed cost effectiveness calculations for one of our larger office facilities. Although the facility already has an electric capacity large enough to accommodate heat pumps, our analysis found that replacing natural gas units with electric heat pumps would still be 10 times more expensive than like-for-like replacement (i.e., replacing a natural gas unit with a new natural gas unit). Many sites may have even higher costs as electric panel upgrades may be needed to facilitate the additional electric load for new appliances. BizFed's analysis from outside experts show that costs are at least 5 to 10 times more expensive than like-for-like replacement.<sup>3</sup>

Given this context, it is crucial for CARB to evaluate retrofit costs, including engineering design, at larger commercial and industrial facilities with multiple affected pieces of equipment, often spread across multiple buildings or structures on-site. Construction costs related to cutting concrete, asphalt, and trenching for new on-site electrical power distribution should also be factored in. Ignoring these aspects would significantly understate the cost-effectiveness of transitioning existing buildings to zero emissions space and water heating equipment.

**III. CARB should holistically evaluate energy demand and grid readiness to better ensure reliability.**

The widespread adoption of electric space and water heating systems across California would result in an increased demand for electricity that could potentially strain local electrical grids. Furthermore, statewide zero emission appliance standards are occurring in parallel with CARBs zero emission vehicle standards and numerous district zero emissions standards for stationary and mobile sources. The combined effect of these efforts will significantly increase electricity demand over a relatively short period of time. As the state implements various zero emissions standards, upgrading grid infrastructure becomes essential to handle the additional load required to support

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<sup>3</sup> BizFed comments at South Coast AQMD Governing Board meeting; Available: <https://www.aqmd.gov/home/news-events/webcast/live-webcast?ms=UeHiecmQEZc>

electrification. As such, CARB should holistically evaluate energy demand and grid readiness, collaborating with utilities and stakeholders, such as the California Independent System Operator and California Energy Commission, to ensure that the resulting increase in energy demand from electrification of both appliances and vehicles would not significantly impact grid reliability.

**IV. CARB’s proposal should include exceptions when implementation is infeasible.**

CARB should establish an exemption process to assist manufacturers, owners, operators, and all affected stakeholders who can reasonably demonstrate justified needs or emergencies that may call for a deviation from the regulatory timeline and requirements. In situations where retrofitting existing buildings with zero-emissions space and water heating equipment is impractical or financially infeasible, an exception should allow the use of readily available gas Ultra Low NOx heating equipment. For example, an exception may be appropriate in cases in which replacing a gas unit with a zero-emissions unit is:

- Greater than 20% more expensive to install than a gas unit;
- Unable to meet the building/home water heating demand;
- Commercially unavailable; or
- Unable to fit due to building space constraints.

SoCalGas respectfully recommends that CARB consider such a process and solicit public feedback on both the categories/scenarios in which an exemption or delay may be needed, as well as the criteria by which CARB would evaluate such requests.

**Conclusion**

SoCalGas appreciates the opportunity to provide comments and participate as a stakeholder regarding CARB’s Zero-Emission Space and Water Heater Standards. SoCalGas is committed to a decarbonized energy system that is affordable for all Californians. We look forward to continued engagement in CARB’s regulatory process.

Respectfully,

*/s/ Jessi Davis*

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