



March 16, 2023

The Honorable Eduardo Garcia
Chair, Assembly Utilities and Energy Committee
State Capitol, Room 408A
Sacramento, CA 95814

Re: AB 324 (Pacheco) – Oppose



Dear Assemblymember Garcia:

On behalf of the undersigned organizations, we write to express our opposition to AB 324 (Pacheco), which would distract the California Public Utilities Commission (“CPUC”) from safe and scalable pollution-reduction strategies and potentially burden utility customers with the costs of hydrogen whose production harms California’s vulnerable communities. The bill requires the CPUC to consider establishing renewable hydrogen procurement goals for the gas utilities. The bill’s definition of “renewable hydrogen” includes hydrogen produced through polluting processes.

A. Premature Hydrogen Procurement Targets Could Saddle Customers with Unreasonable Costs.

It would be premature to order the CPUC to consider hydrogen procurement targets before the expert agencies examine the safety, cost, feasibility and air quality impacts of injecting hydrogen into a gas system that was not designed for hydrogen. Last year, the Legislature ordered the California Air Resources Board, in consultation with the CPUC and California Energy Commission, to evaluate multiple issues by June 2024, including the costs associated with using green hydrogen in a variety of scenarios and the air pollution impacts of hydrogen end uses.¹ Until that analysis is complete, it would be inappropriate to presume that a hydrogen procurement target is part of a reasonable scenario for achieving California’s climate goals or consistent with California’s air quality goals.

A mandate to consider hydrogen procurement targets is also premature because the utilities do not know how extensively they would need to retrofit their pipeline systems to be able to safely handle even modest amounts of hydrogen.² Researchers at the University of California, Riverside have recommended further research on numerous safety and reliability issues before determining how much

¹ SB 1075 (Skinner 2022) § 2 (codified at Cal. Health and Safety Code § 38561.8(b)).

² Cal. Pub. Comm’n Proceeding A.20-11-004, Prepared Direct Test. of Kevin Woo et al. on Behalf of Southern Cal. Gas Co. et al., at 6-14 (Nov. 2020) (explained the need to study the compatibility of hydrogen blends with many components of the gas distribution system and potentially replace parts of it), https://www.socalgas.com/sites/default/files/2020-11/H2_Application-Chapter_4-Technical.pdf.

hydrogen can be safely injected into the gas system.³ For example, the report notes that hydrogen-induced embrittlement of certain metals results in “serious safety issues” and recommends addressing knowledge gaps in the embrittlement of the materials used in the California utilities’ infrastructure.⁴ In December 2022, the Commission ordered the gas utilities to propose hydrogen blending pilot projects that focus on the long-term safety of the California pipeline.⁵ At this stage, it would be unreasonable to assume that the gas utilities would be able to blend a meaningful amount of hydrogen into their gas without incurring inordinate costs to retrofit their infrastructure to accommodate hydrogen.

In addition to infrastructure costs, customers would also bear the cost of purchasing renewable hydrogen with little benefit. According to one recent study, transitioning from natural gas to a gas blend that contains just 20% green hydrogen would raise fuel prices by two to four times,⁶ and would only reduce the GHGs of gas-burning appliances by 7% at best.⁷ Hydrogen blending is a dead-end as a decarbonization strategy for household appliances because there is no feasible and cost-effective means of decarbonizing the other 93% of the energy in pipeline gas. Further, dozens of independent studies have found that hydrogen is too expensive and inefficient compared to clean alternatives (primarily heat pumps) to play a major role in heating buildings.⁸ Moreover, California should focus on deploying zero-emission appliances like electric heat pumps because household appliances that operate on a hydrogen gas blend will continue to emit lung-damaging nitrous oxides. A hydrogen procurement target could burden customers with massive costs and siphon resources away from zero-emission strategies that address California’s climate and air quality crises.

AB 324 does not contain sufficient consumer protections to prevent the Commission from adopting a hydrogen procurement target even if there are far more cost-effective options for reducing emissions from the appliances that currently rely on fossil gas. The Commission recently adopted a decision adopting biomethane targets pursuant to Senate Bill 1440 (Hueso 2018), which also required the Commission to find that the targets are a cost-effective means of achieving forecast reductions in short-lived climate pollutants and other greenhouse gases. The Commission adopted biomethane procurement targets without considering whether other strategies could achieve greater reductions at lower cost.⁹ The Legislature should not allow new procurement programs to repeat this failure and saddle customers with unnecessary costs when cheaper, cleaner alternatives are available.

B. AB 324’s Definition of “Renewable Hydrogen” Includes Pollution-Intensive Fuels.

³ UC Riverside, Hydrogen Blending Impacts Study (2022) at 113-14, <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M493/K760/493760600.PDF>.

⁴ *Id.* at pp. 16, 113.

⁵ Decision 22-12-057, Decision Directing Biomethane Reporting and Directing Pilot Projects to Further Evaluate and Establish Pipeline Injection Standards for Clean Renewable Hydrogen (Dec. 19, 2022) at p. 62, <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M500/K055/500055657.PDF>.

⁶ Sara Baldwin, et al, Energy Innovation, Assessing the Viability of Hydrogen Proposals: Considerations for State Utility Regulators and Policymakers (March 2022) at 12, available at <https://energyinnovation.org/wpcontent/uploads/2022/04/Assessing-the-Viability-of-Hydrogen-Proposals.pdf>.

⁷ *Id.* at 8 (a gas blend that is 80% fossil gas and 20% green hydrogen by volume would only reduce climate pollution from the gas by 7%); A.20-11-004, Joint Application at 9 (stating intent to test blends up to 20%).

⁸ Jan Rosenow, *Is heating homes with hydrogen all but a pipe dream? An evidence review*, Joule (Oct. 19, 2022), <https://www.sciencedirect.com/science/article/abs/pii/S2542435122004160?via%3Dihub>.

⁹ Decision 22-02-025, Decision Implementing Senate Bill 1440 Biomethane Procurement Program (Feb. 24, 2022), <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M454/K335/454335009.PDF>.

If California wants to explore hydrogen as a potential tool to help meet our vital decarbonizing goals, policymakers must begin by demanding a transition to nonpolluting hydrogen production methods. For now, there is one established way to make hydrogen while emitting zero greenhouse gases or health-harming air pollution: using wind and solar energy to power a process called electrolysis, which splits hydrogen from water molecules.

AB 324 would inappropriately support emissions-intensive hydrogen production technologies, even though zero-emission options are available. For instance, AB 324 defines “renewable” hydrogen to include hydrogen produced through the steam methane reformation of digester gas, which is produced from manure lagoons at industrial dairies. First, steam methane reformation for hydrogen production already harms California’s communities. This hydrogen production is concentrated at oil refineries because refineries use hydrogen as a chemical feedstock and, consequently, fence-line communities bear the brunt of its health-harming air pollution, which is not abated by switching from fossil to biogenic methane. Further, creating a market for digester gas risks the unintended consequence of increasing pollution in some of California’s most vulnerable communities. Specifically, creating a market for digester gas encourages the dairy industry to forego sustainable manure management practices that would allow the industry to raise cattle without causing these methane emissions in the first place. The opportunity to sell biomethane also creates an incentive to consolidate operations into concentrated animal feeding operations (“CAFOs”) or further expand existing CAFOs because capital-intensive anaerobic digesters are only economic for CAFOs that produce and store large quantities of wet manure. Dairy CAFOs are the largest source of ozone-forming pollution in the Southern San Joaquin Valley, an area currently in extreme nonattainment with federal 8-hour ozone standards. The Legislature could exacerbate this environmental injustice if it defined “clean” hydrogen to include hydrogen produced from biomethane from CAFOs. Converting the digester gas into hydrogen through steam methane reformation would emit health-harming pollution in whatever community the hydrogen production facility is located.

AB 324 would also support the production of hydrogen through the gasification of forest biomass, even though this industrial process can increase climate pollution and other environmental harms. The technologies that convert forest biomass into hydrogen emit health-harming pollution, such as fine particulate matter. Relying on forest biomass is also a poor climate strategy because it can only theoretically be a carbon-neutral energy source over a timescale of many decades or more than a century, if the forests can regrow, and there is no reason to assume forests logged for hydrogen feedstocks will have the opportunity to regrow.

C. Conclusion

California must address its dependence on fossil gas through strategies that address both climate and health-harming pollution and that do not threaten energy affordability. We must oppose AB 324 because a hydrogen procurement standard could unreasonably drive up utility costs, while doing little to address the climate crisis and potentially exacerbating California’s air quality crisis. We appreciate the time the author’s office has taken to discuss these concerns.

Sincerely,

Sara Gersen
Senior Attorney
Earthjustice

Sakereh Carter
Senior Policy Advocate
Sierra Club CA

Jamie Katz
Staff Attorney
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Melissa Romero
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Shana Lazerow
Legal Director
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cc: The Honorable Blanca Pacheco
The Honorable Members of the Assembly Utilities & Energy Committee