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SoCalGas Comments on the CEC Gas R&D Workshop

Additional submitted attachment is included below.



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Jonah Steinbeck, Director
California Energy Commission
Docket Unit, MS-4
Docket No. 23-ERDD-02
715 P Street
Sacramento, CA 95814-5512

Subject: Comments on the FY 2025-2026 CEC Gas R&D Research Initiatives

Dear Mr. Steinbeck,

Southern California Gas Company (SoCalGas) appreciates the opportunity to provide comments on the February 7, 2025 California Energy Commission (CEC) Fiscal Year (FY) 2025-2026 CEC Gas Research and Development (R&D) Initiatives Workshop.¹ SoCalGas appreciates the CEC for collaborating with and accepting feedback and input from the Investor-Owned Utilities (IOUs) throughout the development of the Gas R&D Initiatives process. CEC staff shared their draft initiatives with the other IOU/Gas R&D Administrators on two occasions prior to this public workshop, on August 12, 2024 and October 9, 2024. In addition, SoCalGas thanks the CEC for its participation in the recent SoCalGas webinar which featured the four leading gas R&D programs offered by SoCalGas, Pacific Gas & Electric Company (PG&E), Southwest Gas Corporation, and the CEC. SoCalGas staff values its work with the CEC on critical gas R&D programs to help advance California's decarbonization and carbon neutrality goals. SoCalGas looks forward to continuing our coordination with the CEC and the other IOUs.

SoCalGas' comments focus on the following: 1) Gas R&D initiatives should avoid duplication with other R&D efforts, 2) Gas R&D initiatives should consider regulatory updates regarding energy efficiency and emissions standards, and 3) Feedback on proposed Gas R&D initiatives.

¹ CEC Gas R&D Workshop, February 7, 2025, available at: <https://www.energy.ca.gov/event/workshop/2025-02/gas-rd-workshop>.

1) Gas R&D initiatives should avoid duplication with other R&D efforts.

The California Public Utilities Commission (CPUC) directed SoCalGas to collaborate and coordinate with the CEC and other California IOU Research Development and Demonstration (RD&D) Programs to ensure efficiencies, avoid duplication of efforts, develop complementary initiatives, and optimize research that can benefit California ratepayers.²

SoCalGas supports the initiatives the CEC has proposed and requests that the CEC assess gas system decommissioning research in coordination with Senate Bill (SB) 1221. There may be opportunities for combining the research dollars from CEC Gas R&D program with the work conducted in the SB 1221 pilot program, which will allow for a deeper understanding of outcomes from real world scenarios.

2) Gas R&D initiatives should consider regulatory updates regarding energy efficiency and emissions standards.

Since the last public CEC workshop on Gas R&D Initiative development held in September 2024, several issues have arisen that require the CEC's consideration. Earlier this month, to address the public's concerns with affordability and the lack of consumer choice, the South Coast Air Quality Management District (South Coast AQMD) announced a revised approach for its Proposed Amended Rules 1111 and 1121,³ which regulate emissions from natural gas furnaces and residential natural gas water heaters. South Coast AQMD's prior proposed rule concept required, by specified dates, zero-emission appliances in new buildings and when replacing appliances in existing buildings. The new rule concept appears to offer a manufacturer alternative compliance option that would set compliance goals for manufacturers to reduce the percentage of gas units over time by imposing a mitigation fee for all gas units sold, with the stated goal of addressing affordability concerns, grid reliability technology readiness, and consumer choice to purchase gas or electric units.⁴ In addition, U.S. Secretary of Energy Chris Wright recently issued a Secretarial Order promoting affordability and consumer choice in home appliances, which aims to avoid

² CPUC Resolution (Res.) G-3586 at Ordering Paragraph (OP) 5, subpart 6 states: Provide detail about how research projects supplement and coordinate with similar projects conducted by the CEC and the other IOUs, p. 26, available at: <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M461/K921/461921821.PDF>;

CPUC Res. G-3601 at OP 6, subpart h states: Demonstrate how SoCalGas coordinates in advance with other gas RD&D program administrators to ensure efficiencies, avoid duplication, and optimize research that benefits California ratepayers, p.43, available at:

<https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M521/K196/521196139.PDF>.

³ There is also active litigation challenging South Coast AQMD Rule 1146.2, which regulates small boilers, commercial water heaters, tankless water heaters, and pool heaters in new and existing buildings and requires a transition to zero-emissions appliances. *See Rinnai America Corp. v. South Coast Air Quality Management District*, 2:24-cv-10482-PA-PD in which ten parties allege the South Coast AQMD's rule is preempted by the Energy Policy Conservation Act (EPCA).

⁴ SCAQMD Working Group Meeting #8, released February 7, 2025, available at:

<https://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1111-and-1121-par-1111-and-1121-wgm8-february-2025.pdf?sfvrsn=16>.

regulating “products that consumers value out of the market.”⁵ These recent developments may take months or years to be resolved. Meanwhile, implications for the market remain unclear.

In light of these recent developments and the growing acknowledgment about the need to address affordability, consumer choice, and grid reliability, it is in the public interest that the CEC consider R&D for ultra-low-NO_x gas appliance technologies so that this technology can be commercially ready in the event that the courts rule against Rule 1146.2 and find it illegal to allow only electric heating equipment for manufacture and sale in California. SoCalGas has begun conducting research on low temperature catalytic combustion, a promising technology that could have very low NO_x and CO emissions and is applicable for residential stovetops with ovens and for space and water heating. Additional research should be conducted in this area to help the technology reach commercialization.

3) Feedback on proposed Gas R&D Initiatives.

a. Scaling Technology Alternatives in California’s Gas Sector

During the Gas R&D workshop, the CEC specifically noted it is targeting low carbon fuels. These low carbon fuels include renewable natural gas (RNG) produced from waste as well as fuel-flexible generation technologies such as linear generators that can run on natural gas, RNG, ammonia, and hydrogen.⁶ SoCalGas supports this initiative and the technologies the CEC is targeting for scale up.

In addition, SoCalGas RD&D projects often support new technology startups or ventures that would be well positioned to leverage this kind of scale up funding program. For example, SoCalGas RD&D recently completed a demonstration of the H2 SilverSTARS system, which produced hydrogen from RNG to help fuel SunLine’s fleet of 17 hydrogen fuel cell electric buses. This technology could be well positioned to take advantage of CEC funds to support scaled manufacturing in California.⁷ In addition, CEC should investigate its authority to provide this funding in the form of a royalty agreement to recover funds from successful recipients. This type of contract structure would mitigate the risk of loss for ratepayer funds.

b. Geo-Networked Heat Pumps

Building and operating district heating systems driven by ground-source heat pumps is not a part of the gas system’s core mandate to deliver gas in a safe, reliable, affordable way.

⁵ Department of Energy Secretarial Order, “Unleashing the Golden Era of American Energy Dominance,” available at: <https://www.energy.gov/articles/secretary-wright-acts-unleash-golden-era-american-energy-dominance>.

⁶ CEC Gas R&D Workshop, February 7, 2025, presentation slide 30, available at: <https://efiling.energy.ca.gov/GetDocument.aspx?tn=261559&DocumentContentId=97965>.

⁷ SoCalGas Breaks Ground on First-of-its-kind Technology to Produce Clean Hydrogen for SunLine Transit Agency’s Hydrogen Fuel Cell Electric Buses, SoCalGas, September 30, 2021, available at: <https://newsroom.socalgas.com/press-release/socalgas-among-first-in-the-nation-to-test-hydrogen-blending-in-real-world>.

However, SoCalGas supports this initiative as an example of the role Gas R&D programs must play in an otherwise heavily regulated energy utility system. Gas R&D programs should act as incubators for innovative ideas, potential future utility applications or activities, and strategies aimed at affordably decarbonizing our gas infrastructure and delivering benefits to our ratepayers. These programs should focus on investigating, studying, and testing new approaches to provide valuable insights to our stakeholders and guide future investment decisions.

Geo-networked heat pumps are a promising decarbonization technology being studied across the United States. CEC should take note of other studies, pilots, and demonstrations being conducted. For example, National Grid said this month it has abandoned a planned geothermal system in Lowell, Massachusetts, due to higher-than-expected costs.⁸ CEC could benefit from understanding the lessons learned of that project and other studies to inform their Gas R&D research initiatives. Despite these efforts outside of California, SoCalGas agrees with CEC that “California -specific research [is] needed to assess, demonstrate potential of thermal energy networks.” California has a distinct set of climate zones, geological conditions, demographics, and economic constraints that must be considered in this research.

Conclusion

SoCalGas has a long history of developing promising technologies and advancing them to a level of readiness attuned for follow-on funding by the CEC.⁹ We look forward to future opportunities to collaborate with CEC to bring the next generation of technology to the market, technologies that will continue to minimize ratepayer bill impacts, improve worker and customer safety, and reduce GHG and local air quality emissions for all Californians. The proposed initiatives of the FY 2025-2026 CEC Gas R&D Program are critical areas of research that will play integral roles in helping to advance the State’s decarbonization and carbon neutrality goals. We appreciate the opportunity to provide feedback and look forward to continuing to collaborate with the CEC to shape these initiatives. Thank you for your consideration of our comments.

Respectfully,

/s/ Eric Coene

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⁸ Networked geothermal advocates optimistic despite Massachusetts setback, Canary Media, February 13, 2025, available at: <https://www.canarymedia.com/articles/geothermal/networked-geothermal-advocates-optimistic-despite-massachusetts-setback>.

⁹ *Ibid.*, SoCalGas.