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Rajinder Sahota
Deputy Executive Officer for Climate and Research
California Air Resources Board
1001 I Street – P.O. Box 2815
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Subject: Comments on the July 27, 2023, Potential Amendments to the Cap-and-Trade Regulation Public Workshop

Dear Deputy Executive Officer Sahota:

The Southern California Gas Company (SoCalGas) appreciates the opportunity to provide comments on the California Air Resources Board's (CARB) July 27, 2023, Workshop on Potential Amendments to Cap-and-Trade (C&T) Regulation. We understand that, as part of the 2022 Scoping Plan Update, CARB is seeking opportunities to strengthen the program to meet Greenhouse Gas (GHG) reduction targets. CARB should continue to promote a stable Cap-and-Trade market that maintains affordability and encourages long-term investments in a robust clean fuels network. SoCalGas believes that a clean fuels network will be essential to achieve California's ambitious goal of carbon neutrality by 2045.

SoCalGas's comments highlight the following: 1.) SoCalGas supports the proposed 48% allowance reduction scenario and its alignment with the 2022 Scoping Plan Update; 2.) SoCalGas supports extending scenario models to 2045 to evaluate long-term emissions reduction and cost impacts; and 3.) SoCalGas believes allocated allowance distributions for natural gas suppliers (NGS) are key to achieving mid-century decarbonization and maintaining customer affordability.

1. SoCalGas supports the proposed 48% allowance reduction scenario and its alignment with the 2022 Scoping Plan Update

At the workshop, CARB outlined allowance budget scenarios evaluating attainment of 40%, 48%, and 55% below 1990 GHG emissions levels by 2030. Modeling multiple allowance budget scenarios allows consideration of the most cost-effective and feasible means to reach the State's Net-Zero GHG goals by 2045. SoCalGas particularly recognizes the value in the scenario scoped to attain 48% below 1990 GHG levels by 2030, which aligns with the adopted 2022 Scoping Plan Update. The 48% scenario maintains the necessary GHG emissions reductions while modeling the technologies necessary to attain those goals.

CARB also noted the Scoping Plan's incorporation of 20 million metric tons of carbon dioxide equivalent (MMT CO₂e) of mechanical carbon dioxide removal and a 462-fold increase in renewable hydrogen needed to obtain the 48% GHG emissions reduction goal in 2030 and the subsequent 85% goal by 2045. Attainment of these goals requires significant investments in energy infrastructure to support the production, use, and delivery of clean resources. For example, SoCalGas' Angeles Link project aspires to transport clean, renewable hydrogen to decarbonize hard-to-electrify sectors such as dispatchable electric generation, heavy-duty transportation, and commercial (e.g., high value manufacturing) and industrial processes.¹

Aligning Cap-and-Trade with the goals described in the 2022 Scoping Plan Update sends a clear signal to the market and facilitates synchronous policymaking. SoCalGas believes that these goals are achievable, in part through effective deployment of clean and renewable fuels, and carbon management projects.²

2. SoCalGas supports extending scenario models to 2045 to evaluate long-term emissions reduction and cost impacts

SoCalGas supports CARB's intent to model allowance budget scenarios from 2031 to 2045. This analysis would help covered institutions evaluate allocation allowance adjustment impacts on markets over a long period and foster effective compliance strategies. Inclusion of these scenarios would also provide much needed insight into the costs, resource requirements, and policy actions required for the State to obtain its GHG emissions reduction goals.

Since the Cap-and-Trade program was last updated, SoCalGas published the Clean Fuels Report in 2021³ and a subsequent Reliability Analysis in July 2023⁴. The Clean Fuels Report modeled multiple corner case scenarios for achieving carbon neutrality by 2045. The study applied varying degrees of clean fuels – hydrogen, renewable natural gas, synthetic natural gas, and biofuels – deployed across a suite of modeled scenarios. These scenarios ranged from “Resilient Electrification,” in which buildings are fully electrified but a portion of gas distribution system remains in place for system resilience, to scenarios with a high deployment of clean fuel use and carbon management strategies, such as carbon removal and carbon capture and sequestration. Each scenario within the Clean Fuels Report was evaluated against five criteria: 1.) System reliability and resiliency; 2.) Ability to serve as a replacement in hard-to-abate sectors; 3.) Customer conversion challenges; 4.) Technical maturity of technology; 5.) Affordability.

The analysis found that the most feasible, reliable, and affordable pathways to decarbonization deployed renewable clean fuels to support and complement electrification. The results of the Clean

¹ Angeles Link could also significantly decrease demand for natural gas, diesel, and other fossil fuels in the LA Basin, helping to accelerate California and regional climate and clean air goals. Please see <https://www.socalgas.com/sustainability/hydrogen/angeles-link>.

² Clean fuels are gases like clean hydrogen, renewable natural gas (also referred to as biogas and RNG), synthetic natural gas (also referred to as syngas and SNG), and biofuels, the production and combustion of which can be carbon-neutral or even carbon negative.

³ https://www.socalgas.com/sites/default/files/2021-10/Roles_Clean_Fuels_Full_Report.pdf

⁴ <https://issuu.com/stfrd/docs/cleanfuelsreliabilityreportjuly23?fr=sNDA4OTYwNzQ4NTk>

Fuels Report were independently verified by researchers from UC Davis, UC Riverside, and Columbia University. Electrification combined with clean fuels and carbon management would:

- Support the reliability of the electric grid by providing flexible and dispatchable power at times when renewables are intermittent. The Reliability Analysis found that up to 10 gigawatts of clean renewable hydrogen generation will be needed for electric power generation as demand doubles. Clean renewable hydrogen could increase fuel-based generation capacity 35% by 2045.
- Aid resiliency to the energy system. Underground gas networks are less susceptible to extreme weather and can reinforce the electric network by providing zero emissions fuels to power generation facilities.
- Provide the most affordable pathway to decarbonization goals. California has a complex energy system with extensive reliability needs. By repurposing existing gas system infrastructure to deliver clean fuels, prudent investment can simultaneously augment reliability and reduce overall costs leveraging.⁵

While SoCalGas recognizes that CARB’s modeling exercises do not necessarily suggest continuance of Cap-and-Trade through 2045, the results may provide critical information for future discussions on the potential benefits of Cap-and-Trade post-2030 and affordability of economy-wide GHG emission reduction timelines. In modeling out to 2045, SoCalGas urges CARB staff to consider and incorporate reliability requirements, technology and project needs, and anticipated future policy or regulatory changes into modeled scenarios to ensure that cost containment and impacts to ratepayers are fully considered.

3. SoCalGas believes allocated allowance distributions for natural gas suppliers (NGS) are key to mid-century decarbonization and necessary to maintaining customer affordability

A rapid transition to net zero GHG emissions will likely impose additional costs to ratepayers. Maintaining a stable Cap-and-Trade market with current allowance distributions for utilities will be critical to boost long-term decarbonization investments and keep energy costs affordable for customers. The cost containment mechanism established through Cap-and-Trade enables SoCalGas to maintain affordability for customers through the California Climate Credit⁶ while also allowing much needed funding support for clean fuels programs.⁷ As California continues to move closer to 2045, maintaining consistent relief for customers is essential.

The Cap-and-Trade program can further bolster buildout of a robust clean fuels network necessary to support the State’s clean energy transition by maintaining the current allowance distribution for NGS and allowing for greater flexibility to deploy allowance consignment revenues to renewable energy investments. In addition, NGS allocated allowances will continue to benefit and protect ratepayers from potential future market volatility in energy procurement costs.

⁵ See Clean Fuel reports here: <https://www.socalgas.com/sustainability/clean-fuels>.

⁶ California Climate Credit distribution is determined by the California Public Utilities Commission; <https://www.cpuc.ca.gov/climatecredit/>

⁷ As directed per SB1477, CPUC Decision (D.) 20-12-031, D.22-02-025, and D.22-04-036.

Conclusion:

As CARB staff observed in the most recent workshop, California is attempting to transition a two-hundred-year-old energy paradigm to a new clean energy system in only 25 years. Clean molecules and clean electrons will play equally important roles in meeting energy demand in California's net zero-carbon future. A managed transition to decarbonization will include increased electrification complemented by a suite of decarbonized fuels and carbon management solutions. The most feasible, reliable, and affordable decarbonization pathway requires long-term investment in multiple new energy sources that work together synergistically. SoCalGas appreciates the opportunity to provide comments on the July 27 Workshop on Potential Amendments to Cap-and-Trade Regulation and looks forward to continued engagement in CARB's process as it advances.

Sincerely and respectfully,

/s/ Adam Jorge

Adam Jorge
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Southern California Gas Company