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SoCalGas Comments on Clean Hydrogen Program Draft Solicitation

Additional submitted attachment is included below.



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June 9, 2023

Claire Levesque
California Energy Commission
Docket Unit, MS-4
Docket No. 22-ERDD-03
715 P Street
Sacramento, CA 95814-5512

Subject: Comments on the Draft Large-Scale Centralized Hydrogen Production Solicitation Concept 22-ERDD-03

Dear Ms. Levesque:

Southern California Gas Company (SoCalGas) appreciates the opportunity to provide comments on the California Energy Commission (CEC) Clean Hydrogen Program Draft Solicitation Concept for Large-Scale Centralized Hydrogen Production released on May 18, 2023.

The Commission's efforts to promote clean hydrogen production, distribution and storage are foundational to unlocking pathways that can reduce the climate impact of sectors that pose unique decarbonization challenges, such as industry, electric generation, and medium- and heavy-duty transportation. There is broad consensus around the critical role that hydrogen will play in achieving the State's climate goals. For example, the Governor's Office of Business and Economic Development (GO-Biz), with support from hundreds of partners, launched the Alliance for Renewable Clean Hydrogen Energy Systems (ARCHES) in order to accelerate hydrogen's contribution to decarbonizing the economy in California and beyond.¹ Likewise, the State has committed to work with the private sector to spur construction of 200 hydrogen fueling stations by 2025, and similar commitments to a hydrogen future can be found in the CEC's Integrated

¹ GO-Biz press release, "California Launches Statewide Alliance to Establish Federally Co-Funded Hydrogen Hub," October 6, 2022, available at: <https://business.ca.gov/california-launches-statewide-alliance-to-establish-federally-co-founded-hydrogen-hub/>.

Energy Policy Report Update,² as well as the California Air Resources Board’s (CARB) Scoping Plan Update, which calls for “accelerating the transition from combustion of fossil fuels to hydrogen.”³

SoCalGas is aligned in its commitment to help decarbonize the State’s energy infrastructure system. In our ASPIRE 2045 strategy, SoCalGas announced its aim to achieve net zero greenhouse gas (GHG) emissions in our operations and delivery of energy by 2045. – which seeks to support California’s vision for a net zero emissions future.⁴ Clean hydrogen will serve as a crucial component to fulfill our ASPIRE 2045 strategy.

Connective infrastructure that transports clean hydrogen from producers to consumers is an indispensable element of the clean hydrogen future. SoCalGas commends the CEC for including distribution to diverse end users as a desired goal for this program.

SoCalGas appreciates the inclusion of multiple pathways to hydrogen production for the solicitation. We also agree that a technology-neutral approach to emissions reduction encourages innovation and avoids the risk that beneficial and desirable hydrogen production methods could be prematurely and unintentionally excluded by a narrow definition. The method parallels that used in CARB’s 2022 Scoping Plan Update, which takes the approach that the terms “renewable hydrogen” and “green hydrogen” are “interchangeable and are not limited to only electrolytic hydrogen produced from renewables.”⁵

It is in the public interest to reduce in carbon emissions from California sources as soon as possible. In order to facilitate near-term reductions and encourage market participation, we believe the most effective initial approach is to align the program’s threshold requirements with federal metrics for carbon intensity (CI)⁶ of clean hydrogen.⁷

To offer some additional process guidance, a few detailed comments of a more technical nature are provided below, as Appendix A.

² California Energy Commission (CEC), “The Role of Hydrogen in California’s Clean Energy Future,” Integrated Energy Policy Report Update 2022, p. 7, available at: <https://efiling.energy.ca.gov/GetDocument.aspx?tn=248976>.

³ California Air Resources Board (CARB), 2022 Scoping Plan Update, available at https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp_1.pdf, at p. 88. *See also, e.g.*, p.9 wherein CARB estimates the scale of the transition necessitating 1,700 times the amount of current hydrogen supply.

⁴ SoCalGas, *Aspire 2045 FAQs*, available at: <https://www.socalgas.com/sustainability/aspire-2045-faqs>.

⁵ *Supra*, CARB 2022 Scoping Plan Update. *See* footnote 56 at p. 26.

⁶ *See* “Carbon Intensity of Hydrogen Production”, U.S. Department of Energy, *U.S. National Clean Hydrogen Strategy & Roadmap*, released June 5, 2023, p.36, available at: <https://www.hydrogen.energy.gov/pdfs/us-national-clean-hydrogen-strategy-roadmap.pdf>.

⁷ The federal definition of clean hydrogen production is hydrogen produced with a CI equal to or less than 2 kilograms (kg.) of carbon dioxide equivalent (CO₂e) produced at the site of production per kg. of hydrogen produced. In addition, Section 45V of the Inflation Reduction Act (IRA) allows qualification for the Clean Hydrogen Production Tax Credit for projects with a CI at or equal to 4.0 kg. of CO₂e per kg. of hydrogen, measured from well to gate using the GREET model, and it applies a four-tiered incentive structure that increases the credit benefit by as much as five-fold for projects offering significantly lower emission levels.

SoCalGas remains strongly aligned with the CEC in its critical work in this area and will continue to collaborate with the CEC and stakeholders to establish California as a clean hydrogen leader to meet its zero-emissions goals. Thank you for considering our comments.

Respectfully,

/s/ Kevin Barker

Kevin Barker
Senior Manager
Energy and Environmental Policy

Appendix A

Section IV. A. Project Elements:

The draft includes a project requirement of 0.0 kg CO₂e per kg of H₂ produced. The section also suggests some Life Cycle Analysis (LCA) methodologies, such as Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET), may be used. We suggest clarifying whether this 0.0 kg figure represents process emissions or overall emissions for the entire project, and whether this represents net emissions. We further suggest that this figure may be difficult to achieve when including GREET or other LCA methodology, since that may include emissions from raw material processing, equipment manufacturing, construction, transportation, or other lifecycle emissions sources that may fall outside prospective project proponents' control thus impractical to be eliminated; fulfilling this goal may require carbon offsets which may not be within the scope of this project. Federal clean hydrogen targets, such as those defined in the Inflation Reduction Act for 45V production credits, may be a useful framework for evaluating project score.

Section IV. A. Project Elements:

The draft also includes a project requirement for the subject technology to be at technology Readiness Level (TRL) 8. We suggest defining this technology readiness level, either directly or specifying a definition such as U.S. Department of Energy (DOE) or National Aeronautics and Space Administration (NASA).

Section IV. Project Focus:

The project objectives include the following:

- 2. Demonstrate hydrogen storage on-site and delivery off-site.*
- 3. Meet demand for low-carbon fuels and contribute to the overall hydrogen economy in California through distribution networks.*

We suggest clarifying whether these objectives are part of the proponent's scope and if these mid-stream (transportation/storage) and downstream (end-use/off-take) will be evaluated as part of the project scoring. If these will be scored, it may be useful to include criteria, such as those based on California or federal hydrogen strategies/roadmaps.

Section III. B. 1. Eligible Project Costs:

This section provides fixed values for project costs for construction, engineering, equipment, etc. We suggest removing these not-to-exceed requirements. Since these may be first-of-a-kind projects, it may be difficult to anticipate project costs at the proposal stage. Various project proposals targeting diverse technological hydrogen production pathways may be able to achieve all other project objectives with different budget allocation between equipment and construction/engineering. We suggest reviewing each proposal's budget justification individually, based on technology approach.