BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Application of SOUTHERN CALIFORNIA GAS COMPANY (U 904 G) for Authority to Establish a Memorandum Account for the Angeles Link Project.	Application 22-02-007 (Filed February 17, 2022)

GREEN HYDROGEN COALITION COMMENTS ON THE PROPOSED DECISION APPROVING THE ANGELES LINK MEMORANDUM ACCOUNT TO RECORD PHASE ONE COSTS

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In accordance with the Rules of Practice and Procedure of the California Public Utilities Commission ("Commission"), the Green Hydrogen Coalition ("GHC") hereby submits these comments on the *Proposed Decision Approving the Angeles Link Memorandum Account to Record Phase One Costs* ("PD"), issued on November 7, 2022, by Administrative Law Judge ("ALJ") Lau.[1] This PD is written in response to Southern California Gas Company's ("SoCalGas") Application for Authority to Establish a Memorandum Account for the Angeles Link Project ("Application"),[2] which seeks to track the incremental costs associated with stakeholder engagement and engineering, design, and environmental work necessary to develop a first-of-its-kind potential project called the "Angeles Link" to deliver green hydrogen into the Los Angeles Basin ("LA Basin") and help the State achieve its critical greenhouse gas ("GHG") reduction targets and climate goals.

I. INTRODUCTION.

[1] See https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M498/K339/498339407.PDF

[2] See https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M451/K500/451500036.PDF

The GHC applauds the Commission's support of SoCalGas' vision for creating the United States' first and largest dedicated green hydrogen pipeline system to deliver green hydrogen at scale. As detailed by the Commission, the proposed Angeles Link green hydrogen system can drive deep decarbonization of dispatchable electric generation, hard-to-electrify industries, and heavy-duty transportation in the LA Basin.[3]

The GHC strongly believes this Application's approval is appropriate and aligns with both state and federal climate goals.[4] We believe SoCalGas is well-positioned to take a leading role in this effort focused on green hydrogen, but further exploration of Angeles Link cannot reasonably happen without the approval of the Application.

The GHC provides the following comments in response to the Commission's conditions in the PD for which costs of the activities recorded in the Angeles Link Memorandum Account may seek recovery.

II. THE GHC SUPPORTS MANY COMPONENTS OF THE INTERIM CLEAN HYDROGEN DEFINITION BUT BELIEVES IT IS OVERLY RESTRICTIVE TO REQUIRE NON-FOSSIL FUEL PROCESS ENERGY IN THE ELIGIBILITY CRITERIA.

a. Components of the Interim Clean Hydrogen Definition the GHC Supports.

The GHC commends the Commission for requiring the Angeles Link Project feasibility studies to allow transportation of only "clean hydrogen" for two main reasons: (1) it aligns with federal requirements that ensure that hydrogen is evaluated on a well-to-gate lifecycle basis, and (2) it restricts the production of hydrogen using fossil fuel-based feedstocks.

[3] Ibid. p. 2.

[4] See the Federal Infrastructure Investment and Jobs Act (IIJA) and Inflation Reduction Act (IRA). See CA Assembly Bill 157; See CA Assembly Bill 179; See CA Assembly Bill 209; See CA Senate Bill 1075.

First, the GHC appreciates the alignment with the federal legislation[5] that has introduced a "clean hydrogen" standard based on carbon intensity ("CI") for the purposes of incentivizing hydrogen production and encouraging the development of hydrogen hub projects nationwide. The GHC believes the creation of incentives that benefit incrementally lower CI targets will help create the momentum needed to get the clean hydrogen market off the ground and accelerate progress toward the Nation's emission reduction goals. Furthermore, the federal CI standard outlined in the Inflation Reduction Act ("IRA") for clean hydrogen production tax credit ("PTC") and other provisions employ a lifecycle-based approach,[6] which the GHC believes will better support sustainable reductions in GHG emissions as compared to a "point of production" definition in the Federal Infrastructure Investment and Jobs Act ("IIJA").[7]

Therefore, we support the Commission's adoption of the clean hydrogen standard of a well-to-gate lifecycle GHG emissions rate that is not greater than 4 kilograms of CO2e per kilogram of hydrogen produced since it remains consistent with the IRA standard for the hydrogen PTC. We believe the Commission's decision to align with the IRA hydrogen eligibility requirements will create continuity between state and federal goals and lay the groundwork for using hydrogen to reach national and state GHG reduction targets.

Second, we support the Commission's added requirement that feasibility studies for the Angeles Link Project be restricted to the service of clean hydrogen that does not use any fossil fuel feedstock. By excluding hydrogen produced from fossil fuel feedstocks, the Commission is

[5] See IRA and CHPS.

[6] The Inflation Reduction determines hydrogen production incentive eligibility based on hydrogen that does not exceed four kilograms of carbon dioxide-equivalent produced on a lifecycle basis per kilogram of hydrogen produced.

[7] "Clean hydrogen" as provided in section 16166(b)(1)(B) means hydrogen produced with a carbon intensity equal to or less than 2 kilograms of carbon dioxide-equivalent produced at the site of production

creating the mechanisms to ensure the studies are consistent with California's ambitious energy and decarbonization goals.

b. The GHC Believes it is Overly Restrictive to Require Non-Fossil Fuel Process Energy in The Interim Definition Eligibility Criteria.

While the GHC supports many components of the interim definition, we do not support the non-fossil fuel requirement specific to the production process itself. We argue that the process energy carbon content will already be accounted for in the well-to-gate lifecycle assessment and, as a result, is a redundant and overly burdensome requirement that could hinder project deployment and be cost-prohibitive.

There are many pathways to produce hydrogen from renewable feedstocks, and all these pathways will require process energy. Requiring this process energy – whether electrical or thermal – to be 100% renewable may make certain beneficial applications difficult, if not impossible, to realize. For example, an electrolysis project co-located with an eligible wind or solar installation may still utilize grid power for station power or provide beneficial ancillary services to the grid. Allowing such projects to use grid power, even if not 100% renewable – so long as the cumulative amount still falls below the required 4 kilograms of CO2e per kilogram of hydrogen produced – would enable project innovation and the realization of system-level benefits.

Simply adopting a well-to-gate lifecycle assessment will categorically exclude hydrogen, even if produced from non-fossil fuel feedstock, from eligibility if its process energy emissions exceed the emissions threshold for "clean hydrogen." In other words, a well-to-gate lifecycle assessment will enable a consistent and comprehensive evaluation of diverse process energy designs and will ensure that process energy carbon content is taken into account for eligibility purposes. Thus, we

believe adopting *additional* restrictive requirements for process energy is unnecessary and should be excluded from the Commission's interim "clean hydrogen" definition.

Instead, we propose that the Commission adopts the following interim definition (*see below*) for clean hydrogen. This proposed definition encompasses critical components the GHC supports: (1) inclusion of a CI threshold, (2) adoption of a well-to-gate lifecycle assessment, (3) exclusion of fossil fuel feedstock, and (4) the removal of the non-fossil fuel process energy provision.

> *"Hydrogen which is produced through a process that results in a lifecycle (i.e., well-to-gate) GHG emissions rate of not greater than 4 kilograms of CO2e per kilogram of hydrogen produced and does not use fossil fuel as a feedstock."*

With the Commission's adoption of this proposed interim definition, the Commission can help set California up for integration with the federal clean hydrogen strategy, interstate connectivity, and regional market development.

III. THE COMMISSION SHOULD REQUIRE SOCALGAS TO PROVIDE RECOMMENDATIONS AROUND HOW ANGELES LINK WILL HELP INFORM THE COMMISSION'S EFFORTS IN LONG-TERM GAS PLANNING.

The findings from Angeles Link (*e.g., engineering impacts around design constraints and requirements, applicable safety and reliability requirements, and analysis of hydrogen storage options to facilitate system operability and reliability, etc.*) can help answer many questions posed in other Commission Rulemakings (*e.g., R. 20-01-007 Long-Term Gas Planning*). Furthermore, they can support the Commission's vision of how the gas pipeline network can safely evolve in line with the State's energy, climate, and decarbonization goals.

The findings from Angeles Link will be important for the Commission since it must determine the appropriate gas investments needed to build a zero-carbon, firm, and resilient gas system[8] on or before 2045. The findings can help solve many of these questions around the future of gas infrastructure and can guide the Commission's efforts to understand how zero-carbon alternatives can substitute for traditional fossil fuel infrastructure needs. They can also help develop strategies to maintain system safety while also transitioning the natural gas pipeline network to a clean hydrogen pipeline network, notably to support hard-to-abate sectors that require an alternative to electrification.

For these reasons, the GHC asks the Commission to require SoCalGas to both identify and execute on opportunities to structure the Angeles Link feasibility studies in such a way that the findings help inform the transition away from traditional fossil fuel assets to clean hydrogen assets in line with California's energy, climate, and decarbonization goals.

IV. DISCUSSIONS OF THE COMMISSION'S JURISDICTIONAL AUTHORITY AROUND HYDROGEN SHOULD NOT BE INCLUDED IN THIS DECISION.

The GHC believes the following statement from the Conclusion of Law ("COL") number three in this PD should not be included in the final Decision:

> *"SoCalGas assumes all risks that costs recorded in the Angeles Link Memo Account authorized by today's decision are not recoverable if Commission jurisdiction cannot be established, regardless of whether SoCalGas has made a good faith effort in establishing the Project to serve as a public utility facility of a clean hydrogen delivery system serving the Los Angeles Basin."*

This COL should not be included based on two key reasons. First, the Commission determined that the issue of jurisdiction of hydrogen delivery services is out of scope and will not be addressed

[8] To be zero-carbon, this system must not include fossil fuel use.

as part of this Application.[9] Due to this exclusion, Parties to this proceeding could not litigate this issue and did not have an opportunity to gain needed clarity. Thus, the Commission's issuance of a COL related to uncertainty surrounding potential jurisdictional authority hinders this Project's legitimacy and investment certainty without providing appropriate avenues for public comment. This uncertainty may have the unintended consequence of hindering fundraising for needed financial support, ultimately delaying material progress. Given the state of climate change and the impending DOE H2Hub application deadline approaching, we must act expeditiously.

Second, the GHC notes that the Commission has approved cost recovery for other hydrogen-related research, development, and deployment ("RD&D") carried out by SoCalGas and other California Investor-Owned Utilities. The GHC argues that these RD&D efforts have the same mission as Angeles Link (*e.g., reduce GHG emissions, improve air quality, and increase safety and reliability*). Yet, there is no clear explanation as to why this Application (A.22-02-007) is treated differently. GHC submits that the efforts of Angeles Link should be held to the same standard as other RD&D efforts and should be given the same degree of certainty from the Commission. For the above reasons, the GHC asks that COL number three be removed from the final Decision.

V. THE REQUIREMENT FOR SOCALGAS TO PARTNER WITH THE STATE OF CALIFORNIA IN ITS APPLICATION FOR IIJA H2HUB FUNDING IS APPROPRIATE BUT SHOULD NOT DICTATE FUTURE PHASE APPROVALS.

The GHC applauds the Commission for requesting SoCalGas to partner with the State of California on its application for federal H2Hub funding provided through the IIJA. The Project will play a pivotal role in California's H2Hub development. While the GHC wholeheartedly supports this requirement, we caution that - if California is unsuccessful in securing IIJA H2Hub

[9] See Proposed Decision, p. 8

funding - the Commission's decision to approve future Angeles Link phases should not be impacted if SoCalGas satisfies all other requirements set forth.

The GHC has extensively modeled the critical drivers of mass-scale, low-cost green hydrogen hubs. We found that access to 100% hydrogen pipeline infrastructure is a decisive driver in achieving the development of such hubs.[10] Further, the ability to have open access to shared hydrogen pipeline infrastructure and the resulting low-cost scaled green hydrogen deliveries will be pivotal to unlocking massive conversion from economy-wide fossil fuel use to green hydrogen.

While the GHC is optimistic that California will be prosperous in its H2Hub application, we nevertheless recommend that the future of this Project should not rest on the results of the competitive H2Hub grant solicitation. Therefore, we ask that the Commission requires SoCalGas to work with the State on IIJA H2Hub activities while also being abundantly clear that future phases of Angeles Link are not tied to the State's ability to secure competitive federal dollars.

VI. CONCLUSION

GHC appreciates the opportunity to submit these comments and looks forward to collaborating with the Commission and stakeholders in this proceeding.

Respectfully submitted,

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[10] See https://www.ghcoalition.org/hybuild-la