



Angeles Link – Phase 1 Quarterly Report (Q4 2024)

For the period of October 1, 2024 through December 31, 2024

January 2025

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I. OVERVIEW OF ANGELES LINK PHASE 1

SoCalGas hereby submits this quarterly report for Angeles Link Phase 1 for the period of October 1, 2024 through December 31, 2024 (Q4 2024) pursuant to Ordering Paragraph (OP) 3(h) of the California Public Utilities Commission (Commission or CPUC) Angeles Link Decision 22-12-055 (D.22-12-055). This quarterly report is also served on the service list for the Angeles Link proceeding (A.22-02-007) and is publicly available at: [A.22-02-007 - Angeles Link Project Memorandum Account Application | SoCalGas](#).¹

Angeles Link is envisioned as a non-discriminatory, open-access pipeline system dedicated to public use, transporting up to 1.5 million metric tons of clean renewable hydrogen² from regional third-party production and storage sites to end users across Central and Southern California, including the Los Angeles Basin and the Ports of Los Angeles and Long Beach.

In Phase 1 of Angeles Link, SoCalGas conducted and completed over a dozen studies and an Environmental Social Justice (ESJ) Community Engagement Plan (ESJ Plan) and a Framework for Affordability Considerations (Affordability Framework) (collectively, the Phase 1 Studies), while also conducting significant stakeholder engagement. SoCalGas's Phase 1 feasibility studies include preliminary engineering, design, and environmental studies to evaluate a variety of topics, including supply, demand, end uses, pipeline configurations and storage solutions, and analysis of project alternatives.³ SoCalGas completed and released preliminary findings in Q1 - Q2 of 2024, draft feasibility studies in Q1 - Q3 of 2024, and issued the final feasibility studies in December 2024. As discussed in detail in SoCalGas's Phase 1 Studies Consolidated Report (see Appendix 1 – Phase 1 Studies Consolidated Report), the Phase 1 Studies collectively confirm Angeles Link's viability, feasibility, cost effectiveness, and potential public interest benefits to ratepayers and the broader community.

¹ SoCalGas is required to submit quarterly reports to the CPUC Deputy Executive Director for Energy and Climate Policy on the progress of the Angeles Link Phase 1 activities and to report any preliminary results and findings regarding the feasibility studies included in Phase 1. Documents were shared with the Planning Advisory Group (PAG) and Community-Based Organization Stakeholder Group (CBOSG) in the virtual Living Library and in compliance with the Decision, SoCalGas made reports of the results and data of the Phase 1 Studies available to the public. The Phase 1 reports are available at <https://www.socalgas.com/regulatory/angeleslink>

² D.22-12-055 defines clean renewable hydrogen as “hydrogen that does not exceed a standard of four kilograms of carbon dioxide-equivalent produced on a lifecycle basis per kilogram of hydrogen produced.” Decision at 66 (Finding of Fact 35).

³ The Phase 1 Studies include: Demand Study; Environmental Analysis; Environmental Social Justice (ESJ) Community Engagement Plan and ESJ Screening; Evaluation of Applicable Safety Requirements; Framework for Affordability Considerations; Greenhouse Gas (GHG) Emissions Evaluation; High-Level Economic Analysis & Cost Effectiveness; High-Level Feasibility Assessment and Permitting Analysis; Hydrogen Leakage Assessment; Nitrogen Oxides (NOx) and other Air Emissions Assessment; Pipeline Sizing & Design Criteria; Preliminary Routing/Configuration Analysis; Production Planning & Assessment; Project Options and Alternatives; Water Resource Evaluation; Workforce Planning & Training Evaluation.

II. COMPLETION OF ANGELES LINK PHASE 1 STUDIES AND FUTURE CONSIDERATIONS

On December 13, 2024, the Phase 1 Studies were published on the SoCalGas Regulatory webpage for Angeles Link and to the Living Library, and PAG and CBOSG members were notified via email. Those published documents include the Phase 1 Studies Consolidated Report (see Appendix 1), which provides an overview of what the Phase 1 Studies collectively convey about Angeles Link. As discussed in that overview, the Phase 1 Studies—conducted with the valuable perspectives and contributions of stakeholders—provide a comprehensive demonstration that Angeles Link warrants advancing to the next phase. The studies conclude that Angeles Link is viable and cost-effective, technically feasible, and could offer significant decarbonization and other public interest benefits to ratepayers and the broader community. Even more, the studies provide a comprehensive analysis that contributes to and advances the understanding of the role of clean renewable hydrogen in supporting decarbonization efforts.

As SoCalGas moves forward, the findings from Phase 1 provide a solid foundation to advance, positioning Angeles Link to substantially contribute to California’s decarbonization efforts, support the development of the California Hydrogen Hub, enhance air quality, create jobs, and provide a safe, reliable, and cost-effective clean energy solution.

The Phase 1 Studies also identified key areas for future consideration including:

- **Demand Evaluation and Economic Analysis:** Geographic demand analysis focused on potential end users to help inform the preferred system route with more precision and defined throughput.
- **Engineering and Safety Considerations:** Refine assumptions regarding the design of the Angeles Link system by performing detailed hydraulic modeling and incorporating safety considerations and requirements.
- **Routing Optimization:** Detailed siting analysis, considering environmental, social, and technical factors of a preferred system route and 30% engineering design.
- **Affordability:** Explore recommendations from stakeholders and others on how to manage the costs of decarbonization projects like Angeles Link.

Future stakeholder engagement and community outreach is also contemplated and described in Section III below.

A. Summary of Phase 1 Stakeholder Engagement Activities

In accordance with the requirement to hold at least quarterly stakeholder meetings throughout Phase 1, SoCalGas coordinated with the CPUC to create a planning advisory group, composed of representatives from industry, labor, academia, tribal governments, and environmental organizations, and a community-based organization stakeholder group, composed of community-based organizations. Based on requests from the PAG and CBOSG for more frequent information sharing, SoCalGas added additional workshops in between quarterly meetings.

SoCalGas presented opportunities for the PAG and CBOSG to provide feedback at four key milestones in the course of conducting the Phase 1 studies: (1) draft description of the scope of

work, (2) draft technical approach, (3) preliminary findings and data, and (4) draft report.⁴ These milestones were selected because they represented critical points at which relevant feedback could meaningfully influence the Phase 1 Studies. SoCalGas incorporated stakeholder input during the development of the Phase 1 Studies, which was summarized in each final study. SoCalGas received more than 100 comment letters from the PAG and CBOSG and reviewed and responded to more than 1,000 pages of comments in prior quarterly reports.

Ultimately, SoCalGas held a total of 27 meetings and workshops with the 70 participating organizations from the PAG and CBOSG, as well as more than 30 one-on-one meetings with members to solicit their feedback on the Phase 1 feasibility studies and PAG and CBOSG process over the course of almost two years. Also, based on feedback from the CBOSG, SoCalGas expanded its outreach efforts to include informational briefings for tribal governments and stakeholders along portions of potential directional routes outside of the Los Angeles Basin, including the Central Valley, and developed an ESJ Plan to inform its stakeholder engagement activities in Phase 2. A summary of stakeholder engagement activities conducted in Phase 1 is provided in Appendix 2 – Phase 1 Stakeholder Engagement Summary (March 2023 – December 2024).

The valuable input of and collaboration by PAG and CBOSG members significantly improved the Phase 1 stakeholder engagement process and contributed to the robustness of the Phase 1 Studies.

- **Q4 2024 Stakeholder Engagement Activities**

During Q4 2024, SoCalGas hosted one joint meeting with the PAG and CBOSG on December 17, 2024, at Lynwood Bateman Hall in the City of Lynwood. Attendees participated in person or virtually via Zoom. Meeting materials are provided in the appendices. Topics addressed during the meeting included a safety moment; land acknowledgement and roll call; opening remarks by SoCalGas President Maryam Brown; a summary of the Phase 1 studies and how stakeholder feedback was incorporated; a lookback at the PAG and CBOSG process and enhancements adopted based on member feedback; a preview of Angeles Link Phase 2 activities, conceptual timeline, and next steps; an opportunity for PAG and CBOSG members to provide their organizational updates; and closing remarks by SoCalGas Chief Clean Fuels Officer Neil Navin. During the meeting, Protect Playa Now, Food & Water Watch, Communities for a Better Environment, and Physicians for Social Responsibility – Los Angeles announced they were withdrawing from the CBOSG and submitted a letter to the Commission about the stakeholder engagement process.

III. ANGELES LINK PHASE 2

On December 20, 2024, SoCalGas filed its Application (A.24-12-011) for Authorization to Implement Revenue Requirement for Costs to Enable Commencement of Phase 2 Activities for Angeles Link. Building on the findings in the Phase 1 Studies, in Phase 2, SoCalGas intends to (i) identify a preferred system route; (ii) conduct refined and additional analyses (including refined system design, safety, environmental, and related work) to advance Angeles Link to a 30% engineering design; (iii) develop a Class 3 estimate; (iv) conduct programmatic activities (e.g.,

⁴ SoCalGas also provided opportunities for the PAG and CBOSG to provide feedback on drafts of the ESJ Plan and the Affordability Framework.

project governance, workforce, training and risk management plans, affordability considerations and economic analyses); and (v) continue engaging with stakeholders and communities.

SoCalGas plans to continue its stakeholder engagement efforts in Phase 2 and conduct both in-person and virtual meetings to solicit input from communities along the four potential directional routes and one route variation identified in Phase 1. SoCalGas plans to hold public meetings to solicit input from potentially impacted communities. Additionally, public officials along the potential directional routes may inquire about Angeles Link and want to provide input on Phase 2 activities. This engagement will enable communities to provide feedback on route selection and community benefits. These efforts aim to increase transparency and garner more community participation and input into the Angeles Link development process.

Following completion of Phase 2 activities, SoCalGas may apply to the Commission for a Certificate of Public Convenience and Necessity (CPCN) and obtain other necessary permits and approvals for Angeles Link's construction and operation.

IV. ALLIANCE FOR RENEWABLE CLEAN HYDROGEN ENERGY SYSTEMS (ARCHES)

ARCHES is California's public-private partnership formed to create a sustainable statewide clean renewable hydrogen hub in California (California Hydrogen Hub) and is leading the California initiative to accelerate clean renewable hydrogen projects. Consistent with D.22-12-055, SoCalGas joined ARCHES in 2022 and ARCHES' submission to DOE included Angeles Link, detailing its San Joaquin Valley and Lancaster pipeline segments as a critical part of the California Hydrogen Hub given these segments are envisioned to be operational by the end of 2033 to provide necessary connections between producers and end users. In October 2023, the DOE announced that ARCHES was one of seven hydrogen hubs selected to receive up to \$1.2 billion in federal funding.⁵ On July 17, 2024, ARCHES and the DOE announced the signing of a formal \$12.6 billion cooperative agreement, including up to \$1.2 billion from the DOE and \$11.4 billion in public and private funds, to support development of a network of clean renewable hydrogen production sites, transporters, and end users that incorporates multiple facilities in California, with the goal of significantly decarbonizing the transportation, industrial, and electric generation sectors in the state, including public transportation, heavy duty trucking, and port operations in the Los Angeles Basin.

ARCHES has designated SoCalGas a network partner for purposes of the California Hydrogen Hub. SoCalGas will continue to coordinate with ARCHES to share updates and information with respect to the development of Angeles Link and other projects within the CA Hydrogen Hub network.

V. SUMMARY OF APPENDICES

This section provides a summary of the appendices contained within the Q4 2024 quarterly report.

⁵ California wins up to \$1.2 billion from feds for hydrogen: <https://archesh2.org/california-wins-up-to-1-2-billion-from-feds-for-hydrogen/>

Angeles Link Phase 1: Quarterly Report for Q4 2024

- **Appendix 1 – Phase 1 Studies Consolidated Report:** Appendix 1 includes the Phase 1 studies consolidated report which provides an overview of Phase 1 of Angeles Link.
- **Appendix 2 – Phase 1 Stakeholder Engagement Summary (March 2023 – December 2024):** Appendix 2 includes a summary of the stakeholder engagement during Phase 1 of Angeles Link.
- **Appendix 3 – Attendee Lists for PAG and CBOSG Meeting:** Appendix 3 includes a complete list of meeting participants as well as those invited who did not attend.
- **Appendix 4 – PAG and CBOSG Meeting Transcript:** Appendix 4 includes certified court reporter transcript capturing verbal feedback and meeting discussions from the PAG and CBOSG meeting held during the fourth quarter.
- **Appendix 5 – PAG and CBOSG Meeting Materials:** Materials shared at the PAG and CBOSG meeting held during the fourth quarter are provided in Appendix 5.
- **Appendix 6 – Summary of PAG and CBOSG Meeting:** A summary of the PAG and CBOSG stakeholder meeting is provided in Appendix 6.