Angeles Link – Phase 1
Quarterly Report (Q4 2024)

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

Appendices

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PHASE 1

STUDIES CONSOLIDATED REPORT

SoCalGas

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ANGELES LINK

I. INTRODUCTION

A. Background

Angeles Link is envisioned as a non-discriminatory, open-access pipeline system dedicated to public use, transporting up to 1.5 million metric tons per year of clean renewable hydrogen[1] 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 December 2022, the California Public Utilities Commission (CPUC) authorized SoCalGas to record costs associated with conducting preliminary engineering, design, and environmental feasibility studies to evaluate a variety of topics, including supply, demand, end uses, pipeline configurations and storage solutions, and to analyze project alternatives. The CPUC's Decision emphasized the potential public interest benefits that Angeles Link could bring to the Los Angeles Basin and the State of California. The CPUC concluded that "the public interest is served if SoCalGas studies whether Angeles Link is feasible, cost-effective, and viable."[2] In Phase 1, SoCalGas conducted over a dozen studies confirming, in particular, Angeles Link's viability, feasibility, cost effectiveness, and potential public interest benefits to ratepayers and the broader community. SoCalGas also produced an Environmental and Social Justice (ESJ) Community Engagement Plan (ESJ Plan) and a Framework for Affordability Considerations (Affordability Framework) (collectively, the Phase 1 Studies).[3]

Through information developed during Phase 1, the vision for Angeles Link and its relationship to the State's commitments to reduce GHG emissions has come into greater focus. At the beginning of Phase 1, SoCalGas examined a broad range of possible configurations of a clean renewable hydrogen energy transport system into the Los Angeles Basin. A more specific project description was then developed, including a range for pipeline throughput, and a handful of potential directional routes were identified based on: (1) potential end use sectors (e.g., hard-to-electrify industries and heavy-duty transportation), (2) potential third-party hydrogen production locations in SoCalGas's service territory, and (3) insights gathered through coordination with the Alliance for Renewable Clean Hydrogen Energy Systems (ARCHES) and other stakeholders.

The CPUC's direction to SoCalGas to join the ARCHES[4] led to ARCHES including two pipeline segments of Angeles Link in its California Hydrogen Hub Application: one located in the San Joaquin Valley and one from Lancaster into the Los Angeles Basin. Available information and developments related to ARCHES informed or were incorporated into the Phase 1 Studies. For example, the Preliminary Routing/Configuration Analysis considered routes that include the two pipeline segments described above. Similarly, ARCHES's projections of the California Hydrogen Hub's substantial environmental benefits, including significant reductions in local

[1] 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." D.22-12-055, Decision Approving the Angeles Link Memorandum Account to Record Phase One Costs (Dec. 20, 2022) ("Decision") at 66 (Finding of Fact (FOF) 35).

[2] *Id.* at 68 (Conclusion of Law 4).

[3] In compliance with the Decision, SoCalGas made reports of the results and data of the Phase 1 Studies available to the public. The Decision recognized that sharing this information "should be beneficial to the development of the clean renewable hydrogen industry and thus serve the public interest." (Decision at 62.) The Phase 1 reports are available at https://www.socalgas.com/regulatory/angeleslink.

[4] The CPUC's decision ordered SoCalGas to undertake a stakeholder engagement process throughout Phase 1 and join ARCHES, a statewide public-private partnership in support of the State of California's Department of Energy (DOE) clean hydrogen hub application.

air pollution, the creation of an estimated 220,000 new jobs, and approximately $2.95 billion per year in economic value from better health and health cost savings,[5] are aligned with Angeles Link's public interest benefits described further below.

B. Purpose

The purpose of this consolidated report is to distill the Phase 1 Studies by providing an overview of what they collectively convey about Angeles Link. This report also discusses key findings developed during Phase 1 of Angeles Link that will guide future considerations and activities. The Phase 1 Studies collectively span over 2,500 pages and cover a wide range of topics, including safety requirements, demand estimates, production planning, economic analysis, environmental analysis, pipeline design, and stakeholder engagement. Given the extensive nature of these individual reports and plans, this consolidated report provides a summary of the critical insights and conclusions.

C. Key Findings

The Phase 1 Studies collectively establish that Angeles Link is technically feasible, viable, cost-effective, and could offer public interest benefits. The studies show that third parties could produce clean renewable hydrogen that meets the CPUC's clean renewable hydrogen production standards[6] and the projected demand to be served by Angeles Link over time (a throughput range of 0.5–1.5 million metric tons per year (MMTPY)[7]). The studies also confirm that SoCalGas could design, permit, construct, and operate a safe, reliable, and scalable pipeline system to connect clean renewable hydrogen producers to end users.

The Phase 1 Studies show that **Angeles Link can be safely designed, constructed, operated, and maintained;** and that its **routes can be designed to connect potential third-party hydrogen production areas with end users.**

Additionally, the studies demonstrate that **Angeles Link would offer a viable hydrogen delivery system,** also showing that clean renewable hydrogen transported via Angeles Link can be a competitive alternative to other potential decarbonization pathways. The studies indicate that **Angeles Link is the most feasible and cost-effective** hydrogen delivery option at scale across Central and Southern California compared to alternatives such as a localized hydrogen hub and trucking in terms of scalability, transport distances, and overall cost effectiveness.

The studies also demonstrate that Angeles Link, as envisioned, **could provide significant public interest benefits to ratepayers and the broader community.** For instance, Angeles Link could support significant decarbonization and air quality benefits, including the potential reduction of 4.5 to 9 million metric tons of carbon dioxide equivalent (CO_2e) per year (the equivalent of the annual greenhouse gas (GHG) emissions of removing approximately 725,000 to more than 1 million gasoline passenger vehicles off the roads per year), and approximately 5,200 tons per year of Nitrogen Oxide (NO_x) emissions by 2045. The studies also demonstrate that Angeles Link can potentially create nearly 53,000 direct construction-related jobs and nearly a total of 75,000 jobs when considering indirect and induced jobs. The work performed in Phase 1 also considers disadvantaged communities (DACs), provides a screening of potentially impacted disadvantaged communities, and includes a plan to guide future engagement in DACs.

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[5] State of California – Office of Governor Gavin Newsom, *California launches world-leading Hydrogen Hub* (July 17, 2024), *available at:* https://www.gov.ca.gov/2024/07/17/california-launches-world-leading-hydrogen-hub/.

[6] The Decision restricts the hydrogen transported via Angeles Link to "clean renewable hydrogen that is produced with a carbon intensity equal to or less than four kilograms of carbon dioxide-equivalent produced on a lifecycles basis per kilogram and does not use any fossil fuel in its production processes." (Decision at 42.)

[7] The units "metric tons" and "tonnes" are equivalent but different from "tons," i.e., "U.S. tons." One metric ton, or tonne, is equivalent to 1.10 ton, or U.S. ton.

The Phase 1 Studies' findings, based on information available and known at the time, support progressing to more detailed planning in Phase 2, including the selection of a preferred system route and front-end engineering design. These findings holistically demonstrate that Angeles Link is viable, technically feasible, and has the potential to be a cost-effective solution for delivering clean renewable hydrogen at scale and all the benefits that would entail, including significantly contributing to decarbonization efforts, enhancing air quality, and generating jobs.

D. Stakeholder Feedback

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 (PAG), composed of representatives from industry, labor, academia, tribal governments, and environmental organizations, and a Community Based Organization Stakeholder Group (CBOSG), 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. Ultimately, in Phase 1, SoCalGas held a total of 27 meetings and workshops with the 70 participating organizations from the PAG and CBOSG, as well as 32 one-on-one meetings with members to solicit their feedback on the Phase 1 feasibility studies and PAG and CBOSG process.

SoCalGas presented opportunities for the PAG and CBOSG to provide feedback at four key milestones in the course of conducting each study: (1) draft description of the scope of work, (2) draft technical approach, (3) preliminary findings and data, and (4) draft report.[8] These milestones were selected because they represented critical points at which relevant feedback could meaningfully influence the Phase 1 Studies.

Through this process, SoCalGas incorporated stakeholder input during the development and conduct of the work on the Phase 1 Studies. For example, in response to stakeholder feedback, a route variation was identified for further consideration that could potentially minimize impacts to DACs. Additionally, to address the concerns of community stakeholders, an ESJ Plan was developed that can be implemented in future phases of Angeles Link to engage DACs near potential preferred routes. SoCalGas also requested the Center for Hydrogen Safety[9] to conduct a third-party review of the draft Evaluation of Applicable Safety Requirements.

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

[9] The Center for Hydrogen Safety is a global non-profit organization dedicated to promoting hydrogen safety and best practices as an industry leader providing guidance, education, and collaboration to help realize the successful and transformative benefits of hydrogen. *(See* Center for Hydrogen Safety, *available at*: https://www.aiche.org/chs.*)* The Hydrogen Safety Panel, a part of the Center for Hydrogen Safety, was created to address concerns about hydrogen as a safe and sustainable energy carrier and its principal objective is to promote the safe operation, handling, and use of hydrogen and hydrogen systems. (*See* Center for Hydrogen Safety, *Hydrogen Safety Panel*, *available at:* https://www.aiche.org/chs/hydrogen-safety-panel; Hydrogen Tools, *Hydrogen Safety Panel, available at:* https://h2tools.org/hsp.*)*

II. KEY FINDINGS FROM PHASE 1 STUDIES

The Phase 1 Studies demonstrate that Angeles Link is viable and cost-effective, technically feasible, and could be beneficial to ratepayers and the broader community.

A. Angeles Link is Viable and Cost-Effective

As the CPUC's Decision recognizes, clean renewable hydrogen is one of the few viable carbon-free energy alternatives for the hard-to-electrify industry and the heavy-duty transportation sectors.[10] The Phase 1 Studies confirm that (1) there is sufficient potential market demand for clean renewable hydrogen to warrant a clean renewable hydrogen pipeline system to connect producers and end users; (2) there are potential sources of renewable energy and water supplies to enable third-party production of clean renewable hydrogen and serve the projected demand over time; and (3) pipeline transportation of hydrogen via Angeles Link could provide economies of scale that make clean renewable hydrogen a cost-effective decarbonization alternative for multiple categories of end users. Key findings evaluating and supporting commercial viability can be found in the Demand Study, Production Planning & Assessment, Water Resources Evaluation, High-Level Economic Analysis & Cost Effectiveness, and Project Options & Alternatives.

1. Sufficient Potential Market Demand for Clean Renewable Hydrogen

The Demand Study evaluated potential clean renewable hydrogen demand across the mobility, power generation, and industrial sectors within SoCalGas's service territory through 2045. The study projects demand growth, ranging from 1.9 MMTPY in the conservative scenario to 5.9 MMTPY in the ambitious scenario. Specifically, the mobility sector could require between 1.0 and 1.7 MMTPY, driven by heavy-duty vehicles due to the Advanced Clean Fleets regulation. The power generation sector could require between 0.7 and 2.7 MMTPY, driven by regulations like Senate Bill 100, which mandates that 100% of all retail electricity sales come from carbon-free sources by 2045. The industrial sector's demand is projected to range from 0.2 to 1.5 MMTPY. These projections estimate the potential market for clean renewable hydrogen, a portion[11] of which could be served by Angeles Link.

[10] Decision at 2.

[11] Angeles Link's projected throughput range is approximately 0.5 – 1.5 MMTPY.

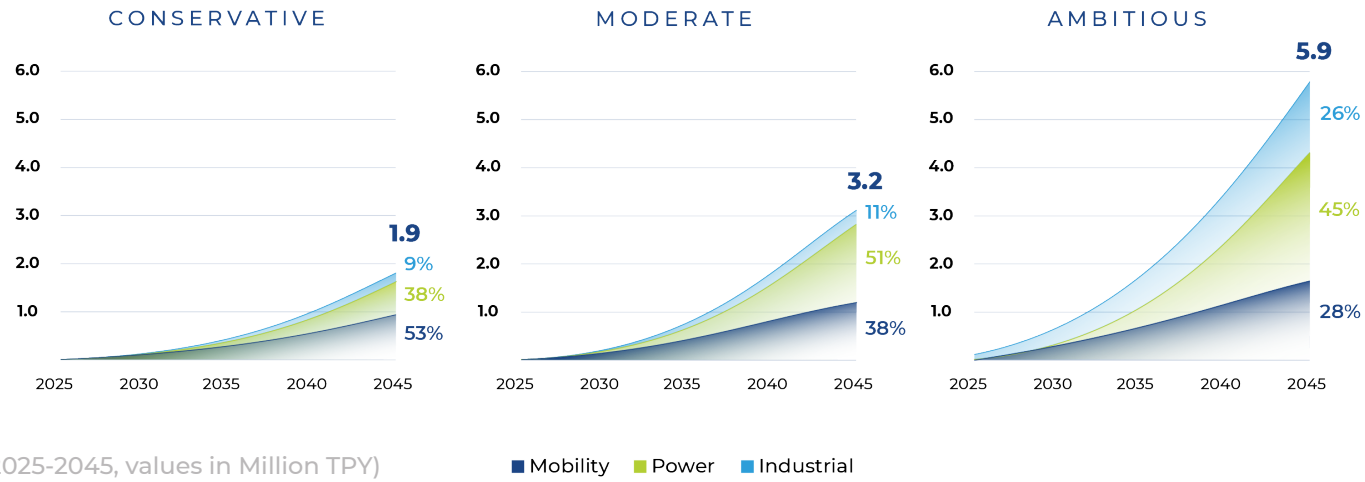


Figure 1. Clean Renewable Hydrogen Demand Forecast in SoCalGas's Service Territory, by Scenario[12]

2. Sufficient Potential Renewable Energy and Water Supplies to Support Clean Renewable Hydrogen Production by Third Parties

The Production Planning & Assessment Study assessed potential sources of clean renewable hydrogen production from renewable sources such as solar and wind, and identified three primary production areas within SoCalGas's service territory that could potentially produce between 0.5 to 1.5 MMTPY of clean renewable hydrogen by 2045: San Joaquin Valley, Lancaster, and Blythe. These locations could alone, or in some combination (depending on the throughput levels), meet the projected 0.5 – 1.5 MMTPY Angeles Link throughput range.

The study highlighted that solar power paired with electrolyzers is a preferred production method due to its maturity, cost-effectiveness, and the abundance of solar irradiance in SoCalGas's service territory. The assessment also noted that 2 million acres of land are potentially available for clean renewable hydrogen production, with only 12-15% of this land needed to meet anticipated maximum throughput scenarios.

The Water Resources Evaluation assessed the availability of water resources necessary for clean renewable hydrogen production and found that the water required to meet the potential demand for clean renewable hydrogen production within SoCalGas's service territory represents a small fraction (0.02-0.10%) of California's annual water usage. Multiple existing water supplies, such as surface water, treated wastewater, groundwater, and urban stormwater capture, could be utilized, and new supplies could be developed if necessary. Potential water supply sources were not considered to be available for third-party production at this feasibility stage if those water resources were: (1) fully allocated or planned for use in meeting existing or anticipated water needs for a given area; (2) part of existing or planned water recycling reuse projects; (3) part of sustainable management of local groundwater resources; or (4) already accounted for in long-term planning water management plans. The study also outlined potential water acquisition methods for third parties to pursue to address water needs for production, such as through exchange agreements, local water agencies (e.g., purchasing available supply), and water markets (e.g., adjudicated groundwater rights), or through land purchases with water rights.

Additionally, the Production Planning & Assessment Study found that various storage options, such as line pack (e.g., storage within the pipeline), construction of a parallel pipe in

[12] Angeles Link Phase 1 Demand Study at 8.

a portion or portions of the pipeline system (i.e., dual run), on-site storage at third-party clean renewable hydrogen production sites or end use locations, and/or dedicated above-ground or underground storage, could help to balance supply and demand.

3. Economies of Scale, Cost Effectiveness, and Viable Compared to Alternatives

The Project Options & Alternatives Study identified certain hydrogen delivery alternatives and non-hydrogen delivery alternatives based on the technical requirements provided in the Decision, geographic alignment with ARCHES's hydrogen infrastructure development within California, and a high-level alignment with Angeles Link's purpose and objectives. From the initial alternatives identified, the Project Options & Alternatives Study advanced certain hydrogen-delivery alternatives and non-hydrogen delivery alternatives to be evaluated for cost effectiveness and potential environmental impacts based on criteria described in the study. The criteria included evaluating several factors as applicable to certain alternatives, including alignment with state policy, distance or range of deliverability, reliability and resiliency, ease of implementation, scalability, technical maturity, and end-user requirements. The Project Options & Alternatives Study also incorporated findings from the High-Level Economic Analysis & Cost Effectiveness Study and the Environmental Analysis (discussed below) to evaluate each alternative's fulfillment of the purpose and objectives of Angeles Link. Figure 2 below demonstrates the six steps that informed the study's methodology.

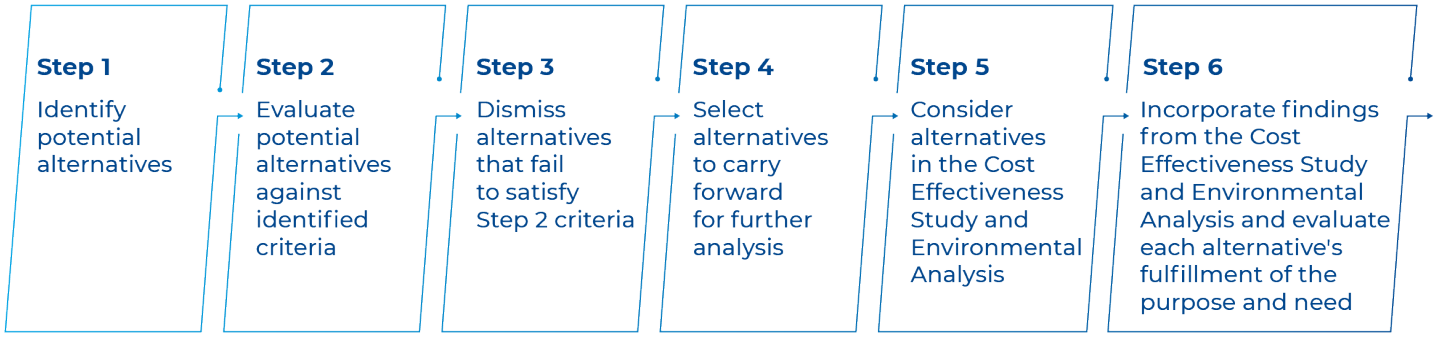


Figure 2. Overview of Six-Step Evaluation Process

As depicted in Figure 2, the High-Level Economic Analysis & Cost Effectiveness Study assessed Angeles Link's cost effectiveness as compared to those alternatives identified for further study in the Project Options & Alternatives Study based on available information. The cost effectiveness analysis demonstrated that among the hydrogen delivery alternatives, such as trucking and power transmission and distribution (T&D) with in-basin production,[13] clean renewable hydrogen transported via Angeles Link is the most cost-effective means to deliver hydrogen into the Los Angeles Basin at scale. Figure 3 from the evaluation, shown below, illustrates that Angeles Link can deliver clean renewable hydrogen at a cost that is lower than the next most cost-effective hydrogen delivery alternative, liquid hydrogen shipping, which has high inherent costs due to liquefaction. The third most competitive hydrogen delivery alternative, power T&D with in-basin production, has high inherent costs due to electric infrastructure and storage needs. Angeles Link was also found to be cost-effective for certain end uses when compared to non-hydrogen alternatives like electrification[14] and carbon capture and sequestration. In the mobility and power sectors, hydrogen delivered via Angeles Link was found to be competitive with electrification.

[13] The power T&D with in-basin production alternative assumes that hydrogen production would occur in-basin, and renewable energy for that production would be transmitted as electrons through multiple 500 kV AC electric power lines to the LA Basin.

[14] The electrification alternative is a non-hydrogen alternative where a combination of technology changes was analyzed to assess their ability to support growing electric demand.

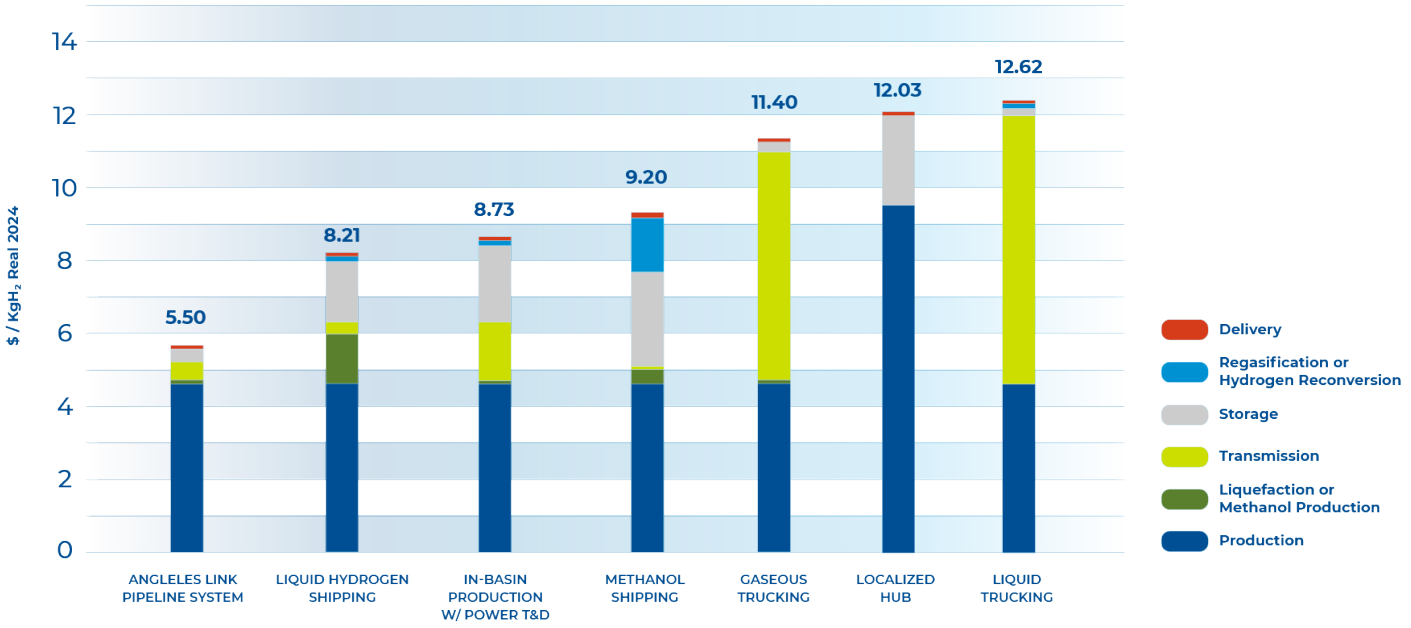


Figure 3. Cost Effectiveness of Angeles Link versus Hydrogen Delivery Alternative[15]

The Project Options & Alternatives concluded that (i) pipeline delivery of hydrogen, as proposed by Angeles Link, is the most feasible and cost-effective hydrogen delivery option at scale across Central and Southern California; and (ii) clean renewable hydrogen could be a viable alternative to other non-hydrogen decarbonization pathways, such as carbon capture and sequestration (CCS) and electrification. The study incorporated supporting analysis from the High-Level Economic Analysis & Cost Effectiveness Study. With respect to hydrogen delivery alternatives, the study identified economies of scale provided by a pipeline system that can transport clean renewable hydrogen over long distances to support meeting the projected clean renewable hydrogen demand in Central and Southern California. Those findings for the hydrogen delivery alternatives are summarized in Table 15 of the study, excerpted below. For example, due to the limitations to build dedicated renewable electricity resources within the Los Angeles Basin, clean renewable hydrogen production costs alone for the localized hub exceed the cost of other hydrogen delivery alternatives and have inherent limitations to scale. In addition, certain non-hydrogen delivery alternatives (e.g., CCS and electrification) are less viable and/or not cost-effective alternatives for a number of end users due to their higher costs and limited applicability in certain sectors. In contrast, Angeles Link can support up to 1.5 MMTPY of hydrogen and address sectors that are difficult to electrify.

Moreover, Angeles Link was found to be the most reliable and resilient hydrogen delivery alternative due to its less complex infrastructure requirements (as compared to in-basin production with power transmission) and its potential to integrate storage access via multiple routes. For example, in the power generation sector, hydrogen was shown to be more reliable, resilient, and well suited to address seasonal variability and multi-day intermittency due to its ability to be stored and used to generate firm dispatchable power when needed.

The Project Options & Alternatives Study also concluded that clean renewable hydrogen could work synergistically with electrification to support the State's decarbonization goals, providing additional benefits, such as the GHG and air quality benefits discussed below.

[15] Angeles Link Phase 1 High-Level Economic Analysis & Cost Effectiveness at 35.

This analysis shows that Angeles Link aligns with the California Air Resources Board (CARB) Scoping Plan, which analyzes a portfolio of pathways, including electrification and clean renewable hydrogen, to achieve the state's decarbonization goals.

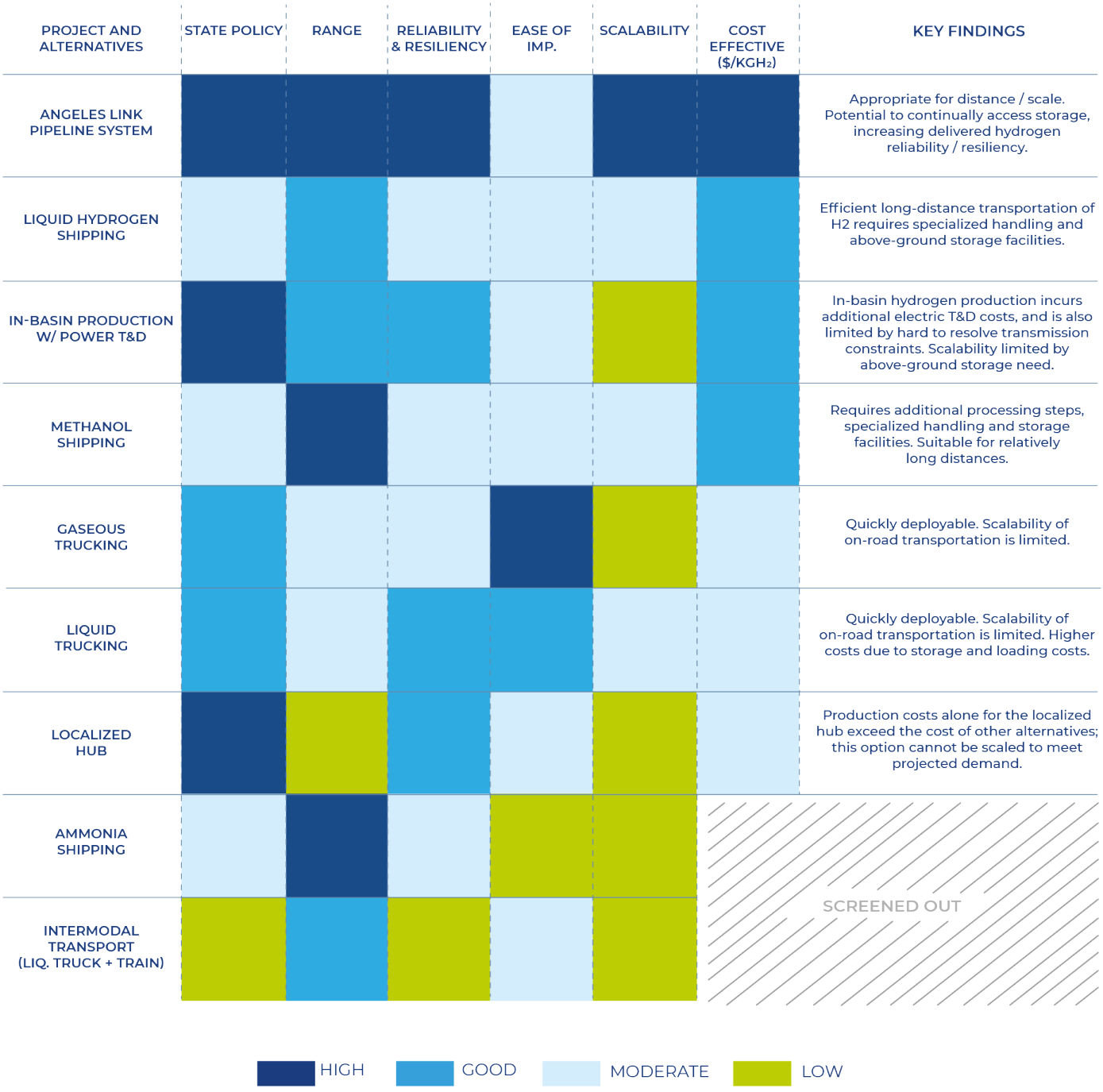


Figure 4. Hydrogen Delivery Alternatives Comparison[16]

B. Angeles Link is Technically Feasible and Can Be Designed and Implemented to Minimize Impacts

Angeles Link has been evaluated for its technical feasibility—i.e., whether it can be designed, constructed, and operated safely and reliably—with key findings from various studies

[16] Angeles Link Phase 1 Project Options & Alternatives at 102-104. Note: Ammonia shipping and intermodal transport were initially assessed to determine whether those alternatives would meet initial assessment criteria. Because it was determined that these alternatives would not meet the criteria, they were not carried forward for further analysis.

confirming that a hydrogen pipeline delivery system connecting producers and end users in Central and Southern California is feasible. The studies also highlight that Angeles Link can be designed and implemented in a way that minimizes environmental and social impacts, with considerations for safety, reliability, and communities throughout its development and operation.

1. Comprehensive Safety Measures

The Evaluation of Applicable Safety Requirements demonstrated that there are limited regulatory differences between hydrogen and natural gas pipeline transportation, and SoCalGas's expertise in natural gas pipeline construction, operation, and maintenance can be leveraged to safely design, construct, operate, and maintain a hydrogen pipeline system. This includes adapting existing safety regulations and industry standards to suit the specific properties and characteristics of hydrogen and developing new standards and practices specific to the transport of hydrogen. As detailed in the evaluation, existing regulations (e.g., 49 CFR Part 192) and industry standards (e.g., ASME B31.12 and NFPA 2) can be leveraged to safely design, construct, operate, and maintain a hydrogen pipeline system. The evaluation identified safety requirements ranging from material selection, pipeline design, fire protection strategies, leak detection, and monitoring programs to emergency response procedures and public awareness plans. It also considered lessons learned from prior industry and third-party experience with hydrogen. The evaluation described SoCalGas's ability to adapt and expand its existing safety practices, including existing emergency response and public awareness plans and training for employees and contractors, to accommodate a pure clean renewable hydrogen pipeline system. The evaluation also detailed how safety considerations can be incorporated into Angeles Link's design (including the determination of preliminary pipeline sizing, compression requirements, and pipeline material selection) and, subsequently, how construction, operation, and maintenance requirements can be developed and implemented. Given the foundational nature of safety to Angeles Link, and in response to stakeholder feedback, SoCalGas requested a third-party review of the draft evaluation by the Hydrogen Safety Panel.[17] The Panel's recommendations, including identifying areas for further assessment as Angeles Link is advanced, were incorporated into the final evaluation, where appropriate.

2. Safe, Reliable, and Scalable Pipeline Design

The Pipeline Sizing & Design Criteria evaluated the potential range of pipeline size(s), materials, pressures, and maintenance operations required to safely design, construct, and maintain Angeles Link. The study identified a range of pipeline diameters and pressure profiles, as well as specifications for suitable equipment, logistics, and materials of construction. Multiple sizing options and both single and dual-run pipeline configurations were assessed to maintain functional flexibility to allow for fluctuating or growing demand. The system is expected to utilize pipelines with diameters ranging from 16 to 36 inches and, to maintain system efficiency and reliability at maximum throughput, two or three compressor stations may be required. These findings support that Angeles Link can be designed and developed as a safe, reliable, and scalable pipeline system capable of transporting clean renewable hydrogen from producers to end users. The study also explored a range of potential material specifications to address key aspects of physical pipeline properties, such as wall thickness and metallurgical composition, and considered maintenance practices to improve pipeline and equipment safety and longevity. As discussed in more detail in Production Planning & Assessment, the study highlighted that, as Angeles Link is further designed and developed, and in alignment with the development of system requirements, the role of storage to support regional hydrogen producers and end users over time should be considered.

[17] The Hydrogen Safety Panel was founded by the U.S. Department of Energy to develop and implement guidance, procedures, and best practices that would support safety in the operations, handling, and use of hydrogen and hydrogen systems.

3. Routing and Configuration, Including Minimizing DAC Impacts

The Preliminary Routing/Configuration Analysis identified several potential directional routes for the system, considering various factors such as engineering requirements and environmental and social impacts. The study examined existing pipeline corridors, rights-of-way, franchise rights, and designated federal energy corridors, as well as the need for new rights-of-way. Based on current information, the analysis identified four potential directional routes and, in response to stakeholder feedback, discussed a potential route variation that reduces traversing through DACs.[18] When combined, these initial route configurations traversed a total of approximately 1,300 miles, providing a wide range of options within which to narrow down the route for the Angeles Link system, which is anticipated to be approximately 450 miles.

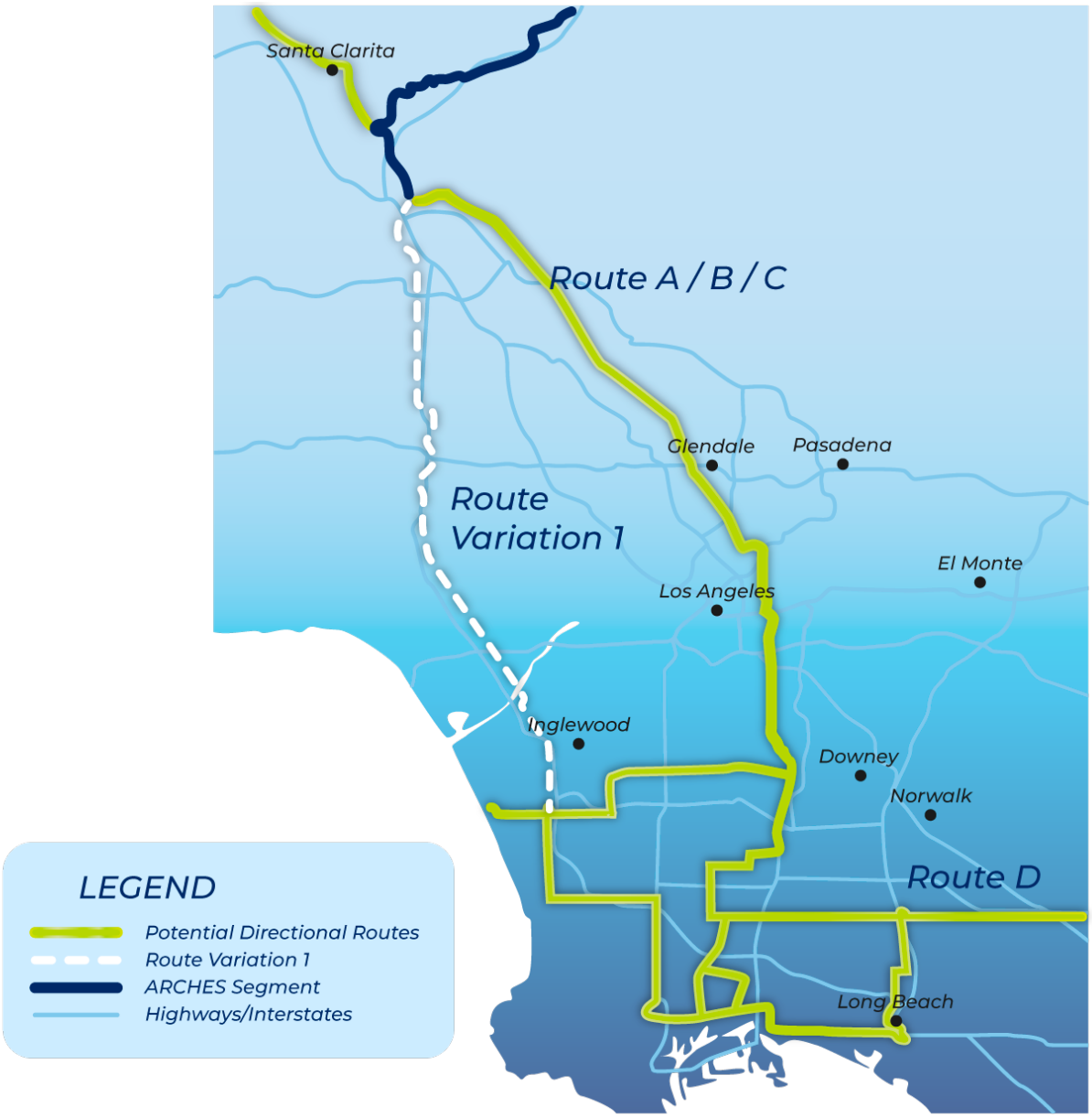


Figure 5. Illustration of Potential Directional Routes and Route Variation 1[19]

[18] Angeles Link Phase 1 Preliminary Routing/Configuration Analysis at 45-47. These potential directional routes reflect current understanding of various factors relevant to siting, including the locations of potential hydrogen producers and offtakers, and are subject to refinement in Phase 2 as additional information becomes available.

[19] Angeles Link Phase 1 Preliminary Routing/Configuration Analysis at 47.

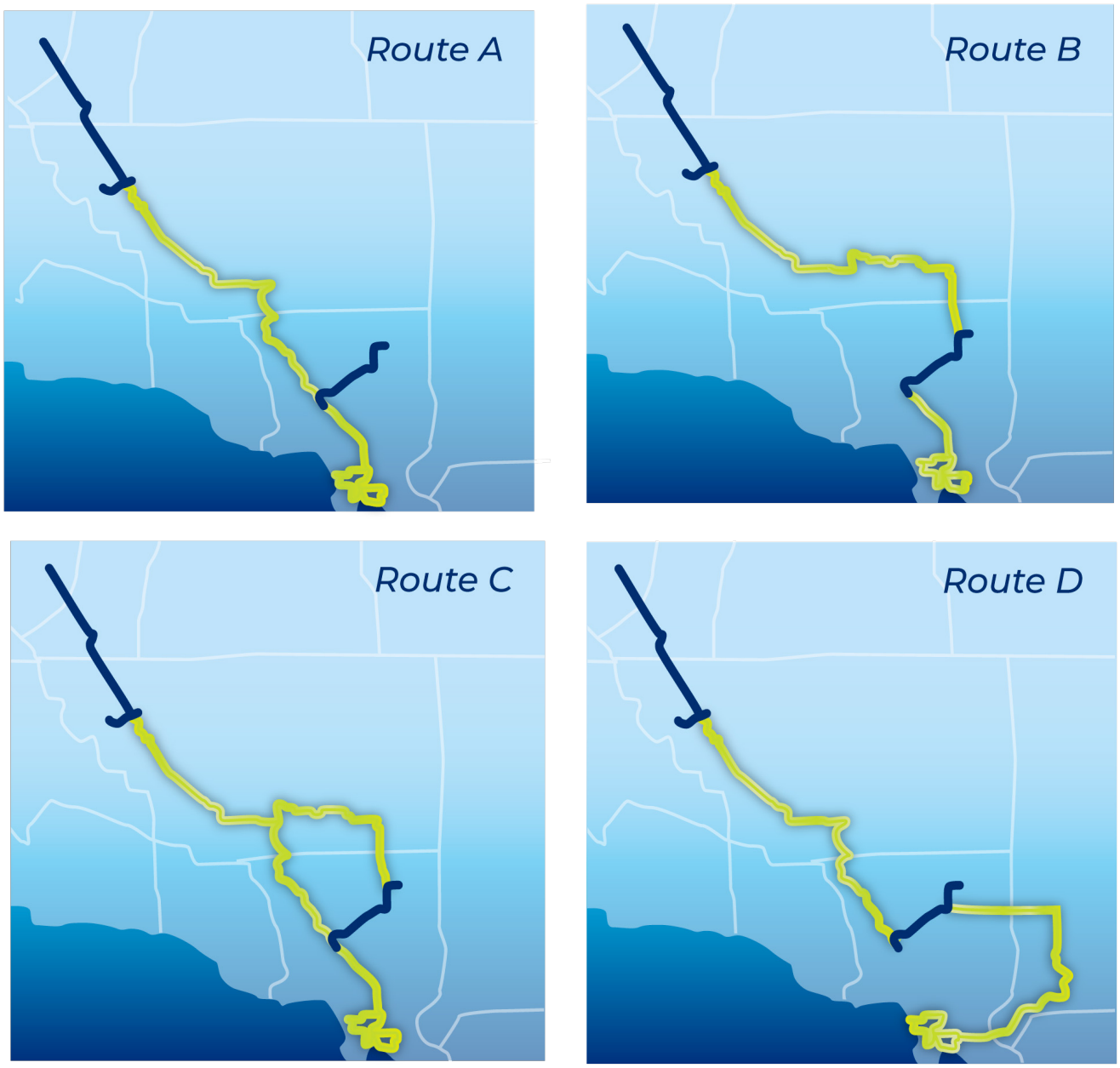


Figure 6. Potential Directional Routes[20]

4. Feasible Permitting Pathway

The High-Level Feasibility Assessment and Permitting Analysis evaluated the potential environmental and regulatory approvals required to construct Angeles Link. The study analyzed the 1,300 miles of conceptual pipeline routes considered in the Preliminary Routing/Configuration Analysis and included a high-level review of federal, state, and local jurisdictional lands and waters, military bases, existing transportation corridors, highway and railroad crossings, state and federally protected plants and wildlife, and land owned by special districts. Permitting is anticipated to involve multiple federal agencies like the Bureau of Land Management and U.S. Fish and Wildlife, and state agencies like the CPUC and California Department of Fish and Wildlife. The study found that permitting timelines potentially range from months to several years and suggested that timelines could be reduced if permit streamlining legislation is adopted.

[20] Angeles Link Phase 1 Preliminary Routing/Configuration Analysis at 46. These renderings illustrate potential directional routes for Angeles Link. The routing of the pipeline system will be optimized through further detailed siting analysis, considering environmental, social, and technical factors to minimize impacts and enhance operational efficiency.

5. Hydrogen Leakage Mitigation

The Hydrogen Leakage Assessment evaluated potential hydrogen leakage associated with general hydrogen infrastructure (compression and transmission, as well as third-party production and third-party storage), as well as potential leakage associated specifically with Angeles Link infrastructure (i.e., transmission of hydrogen via pipeline, including compression). The assessment included a preliminary high-level volumetric estimate of the potential for leakage associated with general hydrogen infrastructure to be between 1,200 metric tons per year (MT/yr) and 13,800 MT/yr. For leakage associated with Angeles Link infrastructure, the assessment estimated the potential to be between 850 MT/yr and 4,065 MT/yr for the throughput scenarios.[21] The study also highlighted mitigation measures in the design and engineering of new infrastructure, such as leak detection systems on compressors, leakage capture and return mechanisms, purge systems, and dry seals. The study identified specific leak detection and measurement methods with emerging tools and technologies. It found that operational and maintenance practices such as leak detection and repair programs using high-performance hydrogen gas sensors can further minimize leakage and, collectively with other mitigation measures, reduce potential leakage from Angeles Link by 90%.[22]

6. Minimizing Environmental Impacts

The Environmental Analysis evaluated the potential environmental impacts of Angeles Link as well as specified alternatives identified in the Project Options & Alternatives Study. The study demonstrated that while there will be potential construction, operation, and maintenance impacts associated with Angeles Link, including potential impacts related to air quality, GHG emissions, biological resources, cultural resources, energy, hazards, hydrology, and land use, many of these impacts can potentially be minimized or avoided through established best management practices and avoidance measures. The analysis also highlighted that undergrounding most of the infrastructure would minimize certain permanent impacts. As Angeles Link progresses, a proposed project and the project alternatives will be further evaluated in compliance with relevant laws and policies, including the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA).

7. Environmental and Social Justice

The ESJ Plan was developed in response to feedback to engage directly with DACs along potential preferred hydrogen pipeline corridors and solicit their input on Angeles Link. The ESJ Plan identified engagement approaches or mechanisms recommended by CBOSG members for SoCalGas to draw upon in Phase 2 to support ESJ stakeholder engagement efforts. The ESJ Plan also included an ESJ community screening assessment (ESJ Screening), which provided baseline DAC designation information and other demographic information for the potential directional routes evaluated in Phase 1. Additionally, the ESJ Plan discussed how Angeles Link supports applicable CPUC ESJ goals, including: enhancing public participation; increasing investment in clean energy resources to benefit ESJ communities; improving local air quality and public health; and promoting high-road career paths and economic opportunities for residents of ESJ communities.

[21] To prepare a preliminary high-level estimate of the potential for leakage associated with general hydrogen infrastructure, the leakage estimates provided in literature were compiled. For general infrastructure, which is composed of production, compression, storage, and transmission, the median and mean of the leakage estimates were calculated and determined to be 0.24% and 0.92%, respectively. For estimates of Angeles Link infrastructure, which include only the compression and transmission categories, the median and mean of the leakage estimates were calculated and determined to be 0.17% and 0.27%, respectively. This is compared to the EPA estimate of natural gas leakage rate of 2%-3%.

[22] The Angeles Link Phase 1 Hydrogen Leakage Assessment did not analyze hydrogen leakage associated with end users as information was not available.

C. Angeles Link Can Offer Public Interest Benefits

In the Decision, the CPUC acknowledged that Angeles Link could bring public interest benefits to the State because clean renewable hydrogen has the potential to decarbonize the State and the Los Angeles Basin's energy future and bring economic opportunities and new jobs to the region.[23] The Phase 1 Studies confirm that Angeles Link could offer environmental and other public interest benefits to ratepayers and communities. In particular, the findings from various studies demonstrate that Angeles Link can deliver substantial GHG reductions, improved air quality, and job creation.

1. Meaningful Greenhouse Gas Reductions

The GHG Emissions Evaluation demonstrated the potential GHG benefits that could be provided by Angeles Link. The analysis shows that in 2045, based on throughput scenarios, the Angeles Link system could result in a reduction of between 4.5 to 9 million metric tons of carbon dioxide equivalent (CO2e) per year. These reductions are primarily attributable to the mobility sector, followed by the power generation and hard-to-electrify industrial end user sectors. The GHG reductions are equivalent to removing approximately 725,000 and over 1 million gasoline passenger vehicles from the road, respectively, for the low and high throughput scenarios. While Angeles Link infrastructure would have associated emissions, the study highlights that they are small in comparison to the estimated GHG reductions associated with end users. In response to stakeholder feedback, the Study incorporated a preliminary high-level volumetric estimate of potential leakage and assessed its impact on projected GHG reductions. The Study concluded that the overall impact of potential leakage on estimated GHG reductions is likely to be less than 1 percent for Angeles Link infrastructure.

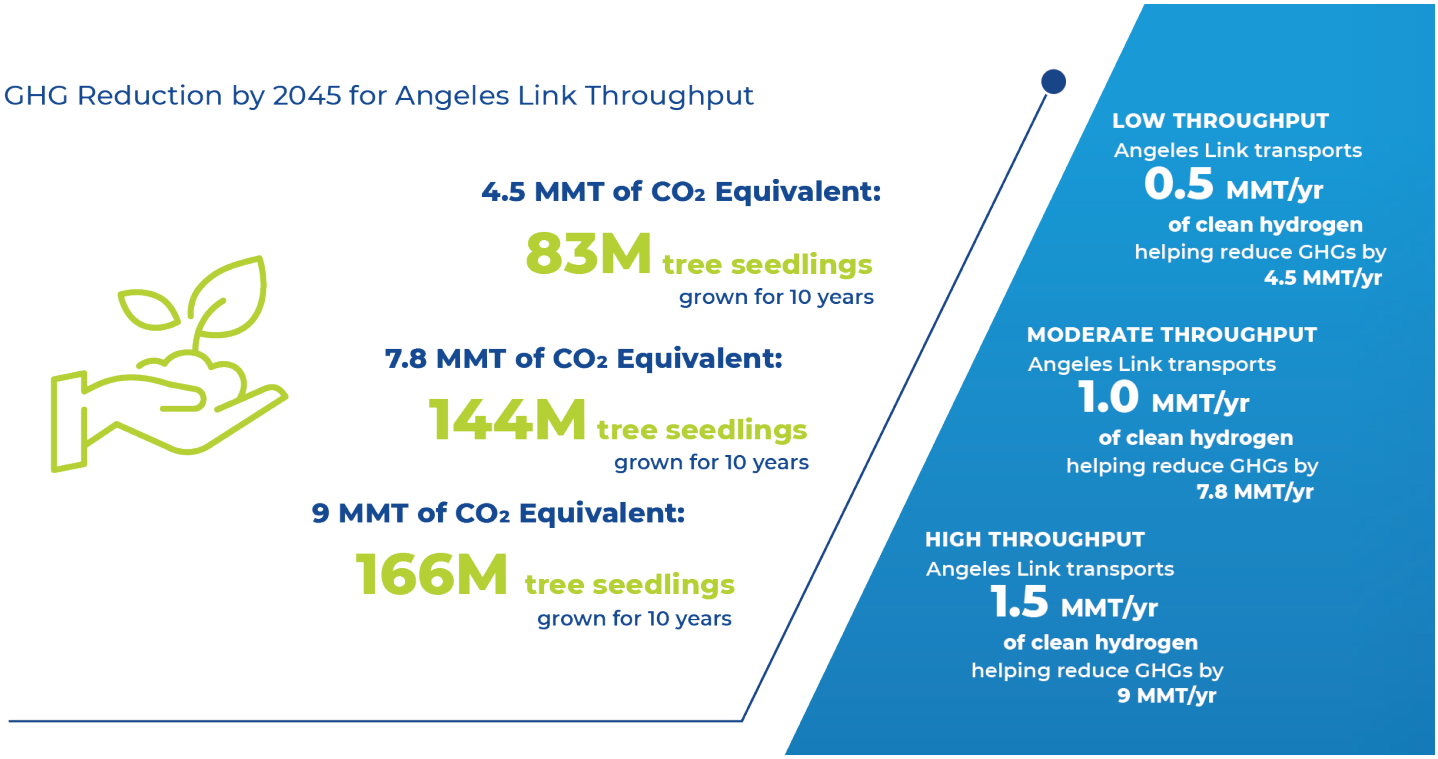


Figure 7. Visualizing the Impact: GHG Reductions Through Angeles Link[24]

[23] Decision at 61 (FOF 1). To request Commission authority to record costs for Phase 2 activities, the Final Decision requires SoCalGas to present findings related to public benefits including compliance with California environmental law and public policies, air quality emissions, workforce planning and training and plans for addressing and mitigating affordability concerns. Decision at 75-77 (Ordering Paragraph 6).

[24] Angeles Link Phase 1 GHG Emissions Evaluation at 1.10.

2. Air Quality and Community Benefits

The NOx and Air Emissions Assessment evaluated the potential NOx emissions reductions associated with Angeles Link. The analysis showed that in 2045 the Angeles Link system could result in a reduction of up to 5,200 tons per year of NOx emissions, primarily due to fuel displacement in the mobility sector. This value is equivalent to approximately 90% of the NOx reductions that the South Coast Air Quality Management District has proposed to be achieved by 2037 for total stationary (i.e., not mobile) commercial and large combustion source NOx control measures in their 2022 Air Quality Management Plan. The study also included a spatial evaluation of estimated NOx emissions reductions geographically and demonstrated that many of the potential air quality benefits will accrue in DAC communities.

3. Job Creation and Economic Growth

The Workforce Planning & Training Evaluation assessed the potential job creation and workforce development associated with Angeles Link. The study discussed how SoCalGas's existing workforce planning programs can be adapted to support hydrogen infrastructure, leveraging the company's longstanding experience in safely and reliably operating and maintaining a pipeline system. The evaluation also demonstrated that Angeles Link can create nearly 53,000 direct construction-related jobs at peak and a total of approximately 75,000 jobs at peak when considering indirect (i.e., jobs generated in related industries that support the project) and induced jobs that occur through wage earners spending income. Angeles Link workforce development can support the local economy while constructing, operating, and maintaining Angeles Link safely.

4. Affordability for Ratepayers Considered in Planning Process

The Affordability Framework described how Angeles Link's planning process has considered and identified opportunities to mitigate affordability concerns. The document described the CPUC's framework for evaluating affordability; discussed projected costs of decarbonization more broadly to provide context for the potential investment in Angeles Link; summarized the work SoCalGas has conducted to date on cost effectiveness as a building block to consider the affordability of Angeles Link and address stakeholder feedback about affordability concerns received to date; and identified potential strategies for addressing affordability in the development of Angeles Link during Phase 2 and beyond. As part of the efforts described in the framework, SoCalGas is considering affordability on both a system-wide basis and individual basis.

III. COORDINATION WITH AND SUPPORT OF ARCHES

Consistent with the Decision, SoCalGas joined ARCHES. The DOE and ARCHES recently signed a landmark $12.6 billion agreement to build a clean, renewable Hydrogen Hub in California (California H2Hub), including up to $1.2 billion in federal funding. This made the California H2Hub the first of seven Hydrogen Hubs in the country to sign a funding agreement with DOE. The California H2Hub will facilitate a network of clean renewable hydrogen production sites and end users connected by transmission systems. The California H2Hub aims to cut fossil fuel use throughout California, with the ultimate goal of decarbonizing public transportation, heavy-duty trucking, and port operations by 2 million metric tons per year—equivalent to the annual emissions of 445,000 gasoline-fueled cars. [25]

ARCHES's submission to DOE included two segments of Angeles Link as an integral part of the California H2Hub: one in the San Joaquin Valley and another extending from Lancaster to the Los Angeles Basin. These segments are part of the broader Angeles Link system, facilitating the transition to a hydrogen-based economy and California's sustainable future.

Just as the benefits of Angeles Link are anticipated to be substantial, so are the expected benefits of the California H2Hub. As Governor Gavin Newsom stated, "We're going to use clean, renewable hydrogen to power our ports and public transportation—getting people and goods where they need to go, just without the local air pollution."[26] ARCHES expects the California H2Hub will create an estimated 222,400 new jobs, including 130,000 in construction and 90,000 permanent jobs, and generate approximately $2.95 billion per year in economic value from better health and health cost savings. [27]

As stated in an ARCHES press release, "at least 40% of the benefits from [ARCHES] projects will flow to disadvantaged communities through community-directed investments, workforce training, and family-supporting jobs." [28]

[25] DOE, *California Hydrogen Hub (ARCHES) Fact Sheet, available at:* https://www.energy.gov/sites/default/files/2024-07/H2Hubs%20ARCHES_Award%20Fact%20Sheet.pdf.

[26] State of California – Office of Governor Gavin Newsom, *California launches world-leading Hydrogen Hub* (July 17, 2024), *available at:* https://www.gov.ca.gov/2024/07/17/california-launches-world-leading-hydrogen-hub/.

[27] *Id.*

[28] *Id.*

IV. STAKEHOLDER PROCESS

SoCalGas created a comprehensive stakeholder engagement process involving the PAG and the CBOSG. This process was continually refined based on feedback from participants to promote transparency and inclusivity.

1. Engagement with CPUC's Energy Division

SoCalGas engaged with (i) the CPUC's Energy Division to establish a stakeholder engagement framework that included the PAG and CBOSG and (ii) staff to devise a plan and set of procedures to compensate CBOs for their participation in the Phase 1 stakeholder engagement process. Throughout Phase 1, SoCalGas maintained regular scheduled touchpoints with staff to discuss and refine the stakeholder engagement process.

2. Meetings and Workshops

SoCalGas has collectively held 27 meetings and workshops, as well as 32 one-on-one meetings with PAG and CBOSG members. These sessions were designed to solicit input and foster meaningful dialogue about the Angeles Link Phase 1 activities.

3. Diverse Input Channels

Stakeholder input was received through various channels, including verbal comments during in-person and virtual meetings (both large meetings and one-on-ones), discussions at workshops, and written feedback via email. This multi-faceted approach was designed to allow all voices to be heard and considered.

4. Living Library

To facilitate access to information, SoCalGas created a "Living Library" that hosted a wide range of documents. This library included 75 informational documents (e.g., preliminary findings, draft feasibility studies, etc.), 27 presentations, 27 meeting recordings, 27 meeting transcripts from PAG/CBOSG quarterly meetings and workshops, 2 PAG/CBOSG rosters, and 65 comment letters received from stakeholders during Phase 1 activities. The library was accessible to all PAG and CBOSG participants on demand, promoting transparency and ease of engagement.

5. Milestones for Input

As described above, SoCalGas presented opportunities for the PAG and CBOSG to provide feedback at four key milestones.

V. STAKEHOLDER FEEDBACK

SoCalGas has addressed feedback from stakeholders and incorporated relevant and appropriate feedback into the planning for and execution of the Phase 1 Studies. Certain stakeholder feedback received will inform future phases of Angeles Link.[29] The following are select examples of the impacts of stakeholder feedback on various studies:

1. Third-Party Review of Evaluation of Applicable Safety Requirements

The evaluation underwent a third-party review by the Center for Hydrogen Safety's Hydrogen Safety Panel, and key feedback was incorporated.

2. Routing Analysis

The Preliminary Routing/Configuration Analysis added a route variation for consideration along with the four potential directional routes to minimize impacts to disadvantaged communities.

3. ESJ Plan

The ESJ Plan serves as a framework for engaging ESJ communities and identifies engagement mechanisms recommended by CBOSG members for SoCalGas to draw upon to support ESJ community stakeholder engagement efforts. The plan aims to engage communities living near potential preferred routes and create opportunities for community input.

4. GHG Evaluation

The study used the range of preliminary high-level volumetric estimates of the potential for leakage from the Hydrogen Leakage Assessment to predict a range of potential impacts to the estimated overall GHG reductions associated with each of general new hydrogen infrastructure and Angeles Link infrastructure. This analysis used the values provided in the study which are a summary of the ranges of estimated Global Warming Potential (GWP) 100 and GWP 20 for hydrogen available in the literature.

5. NOx and Air Emissions Assessment

The assessment refers to maps depicting potential NOx emission reductions geographically that are included in Appendix C of the NOx and Other Air Emissions Assessment.

6. Water Resources Evaluation

The study included a desktop analysis of potential GHG emissions associated with water treatment and conveyance to provide more information about the potential environmental impacts related to water use for third-party clean renewable hydrogen production.

7. Hydrogen Leakage Assessment

The study included preliminary high-level volumetric estimates of the potential for leakage based on the range of values available from the literature for both general hydrogen infrastructure and Angeles Link infrastructure.

[29] All feedback received is included, in its original form, in the quarterly reports, which also contain the responses to feedback and are submitted to the CPUC and published on SoCalGas's website. Certain comments identified in the quarterly reports were not incorporated into final studies due to reasons such as being out of scope, anticipated to be addressed in Phase 2, requiring third-party actions beyond SoCalGas's control, or raising issues better suited for third parties other than SoCalGas.

PHASE 1 STAKEHOLDER ENGAGEMENT

Received
100+
COMMENT LETTERS
from PAG and CBOSG

Reviewed and responded to
1,000+
PAGES
of comments

FEASIBILITY STUDIES

Conducted
16
STUDIES
includes multiple feasibility studies, an Affordability Framework, and an ESJ plan

which collectively span
2,500+
PAGES
covering a wide range of topics

70 **PARTICIPATING ORGANIZATIONS**

PLANNING ADVISORY GROUP (PAG) offers technical advice and feedback
42 PAG

+

COMMUNITY BASED ORGANIZATION STAKEHOLDER GROUP (CBOSG) provides community feedback
28 CBOSG

TOP FIVE STAKEHOLDER PRIORITIES BASED ON FEEDBACK

- SAFETY
- HEALTH
- COST
- WORKFORCE DEVELOPMENT
- ROUTING / ENVIRONMENTAL

27 **TOTAL MEETINGS**

14 Quarterly Meetings
13 Workshops

VI. FUTURE CONSIDERATIONS

As described above, the Phase 1 Studies demonstrate that Angeles Link is technically feasible, viable and cost-effective. It could offer meaningful benefits to ratepayers and the broader community while supporting California's decarbonization goals. Building on the findings in the Phase 1 Studies, the next stage of Angeles Link would include the selection of a preferred route, the development of a 30% design (Front End Engineering Design (FEED)), and the execution of further technical, economic, and environmental analysis. Upon completion of Phase 2 activities, SoCalGas may apply to the CPUC for a Certificate of Public Convenience and Necessity (CPCN) and obtain other necessary permits for Angeles Link's construction and operation.

In addition, the Phase 1 Studies have identified several areas for further consideration and collaboration with stakeholders.

1. Enhanced Stakeholder Engagement

SoCalGas plans to enhance its stakeholder engagement efforts in Phase 2 by adding additional representation to its PAG from other sectors and regions and conducting both in-person and virtual meetings to solicit input from communities along preferred routes at key project milestones. These efforts aim to increase transparency and garner more community participation and input into the Angeles Link development process.

2. Demand Evaluation and Economic Analysis

Future phases will involve a geographic demand analysis focused on potential end users to help inform the preferred route with more precision and defined throughput. SoCalGas plans to utilize available information to build on the Demand Study, such as incorporating hydrogen pricing into the demand curve, assessing demand associated with potential market subsectors that were not specifically evaluated in Phase 1, and updating the demand forecast based on new market information. SoCalGas will also incorporate updated information from ARCHES on end users and demand as more information becomes available. Economic modeling will also be refined to account for expected future declines in hydrogen costs and increases in current fuel costs due to carbon pricing. An economic analysis will build upon Phase 1 results that estimated the levelized cost of clean renewable hydrogen delivered by Angeles Link, incorporating more detailed hydrogen market data and cost estimates from the preferred route.

3. Engineering and Safety Considerations

Future phases will refine assumptions regarding the design of the Angeles Link system. Detailed hydraulic modeling, including transient hydraulic analysis, will be conducted so that the pipeline system can be designed to accommodate dynamic flow conditions and maintain safety and efficiency while supporting energy system reliability and resiliency. As the development of Angeles Link progresses, SoCalGas will continue to incorporate safety considerations and requirements into the design basis, and will

leverage applicable safety specifications, standards, and plans. New hydrogen-specific specifications, standards, training, operator qualifications and plans and procedures will be developed, as appropriate.

4. Routing Optimization

The routing of the pipeline system will be optimized to minimize impacts and enhance operational efficiency. This will result in further detailed siting analysis, considering environmental, social, and technical factors of a preferred route and 30% engineering design. Future analysis will include a street-level alignment evaluation to refine the preferred route, taking into account stakeholder feedback and potential route variations (including by conducting a DAC analysis of the route variation identified in Phase 1). This iterative process will help design a pipeline route that meets current and future energy needs while minimizing environmental and community impacts.

5. Affordability

SoCalGas will explore recommendations from stakeholders and others on how to manage the costs of decarbonization projects like Angeles Link, including potential programs to promote affordability for its ratepayers. Future phases will involve monitoring and participating in legislative and regulatory proposals concerning affordability, as appropriate.

VII. CONCLUSION

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 can 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 for subsequent phases, positioning Angeles Link to substantially contribute to California's decarbonization efforts, progress the development of the California H2 Hub, enhance air quality, create jobs, and provide a safe, reliable, and cost-effective clean energy solution.

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 & Alternatives
Water Resources Evaluation
Workforce Planning & Training Evaluation

Appendix 2 - Phase 1 Stakeholder Engagement Summary (March 2023 - December 2024)

ANGELES LINK

Phase 1
Stakeholder Engagement Summary

March 2023 - December 2024

INTRODUCTION

On December 15, 2022, the California Public Utilities Commission (CPUC) adopted Decision 22-12-055 authorizing the establishment of SoCalGas's Angeles Link Memorandum Account (ALMA) to track costs for advancing the first phase of Angeles Link. SoCalGas aims to develop an open-access clean renewable hydrogen pipeline system to serve end users across Central and Southern California, including the Los Angeles Basin.

To provide technical advice and collaboration on Angeles Link design and development of Angeles Link, SoCalGas established a Planning Advisory Group (PAG). In addition, a Community-Based Organization Stakeholder Group (CBOSG) was also convened in parallel to the PAG to focus on local community issues and opportunities.

The **PAG** and **CBOSG** membership was extended to a wide range of organizations to promote a broad, diverse and representative group while also providing opportunities for all to be heard and actively participate in the meetings. Participating PAG organizations represented state-wide and industry sector memberships while the CBOSG focused on participation from the LA Basin region. SoCalGas plans to further expand PAG membership to include organizations from outside the Los Angeles Basin that represent communities and stakeholders near the proposed routes evaluated in Phase 2.

PARTICIPATING ORGANIZATIONS

70

42 ( ) X4 +

28 ( ) X2 +

PAG

CBOSG

ORGANIZATION CATEGORIES

Agencies	7	11	Environmental Justice
Economic & Community Development	9	3	Healthcare
Educational Institutions	4	2	Faith-Based
Energy & Water Focused	9	3	Tribal & Indigenous
Environmental Justice	7	2	Education & Youth
Industrial	9	9	Economic & Community Development
Ratepayers	1		

Shared **16** Feasibility Studies which collectively span 2,500 pages covering a wide range of topics.

FEEDBACK PROCESS

1. Scoping
2. Technical Approach
3. Preliminary Findings
4. Draft Studies

PAG

CBOSG

Quarterly Meetings were held throughout Phase 1 starting in March 2023. Workshops were held intermittently as new information became available. Additional workshops were requested by members to delve deeper into specific topics.

TOTAL MEETINGS 27

14

13

QUARTERLY MEETINGS 6 6

WORKSHOPS 7 6

COMBINED MEETINGS 2

TOTAL MEETING PARTICIPATION

IN PERSON 96 79

VIRTUAL 263 182

SOCALGAS PRESENTERS 42

22

GUEST SPEAKERS 2

20 5

Most meetings and workshops were held in a hybrid format, allowing both in-person and virtual participation. All formats featured presentations from various subject-matter experts across the Phase 1 studies.

MEMBER COMMENTS

Phase 1 Studies* Reviewed	16	
Total Number of Comment Letters Received		118
Total Number of Reports & Supporting Documents	79	
Total Number of Comment Pages Received		1,069

*which included multiple feasibility studies, an Affordability Framework, and an ESJ plan.

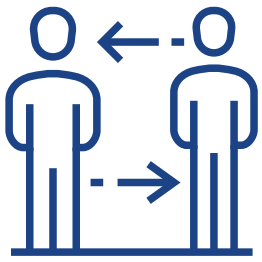
TOP 5 MOST COMMENTED REPORTS

1. Demand Study
2. Environmental & Social Justice Community Engagement Plan and Environmental & Social Justice Screening
3. Nitrogen Oxide (NOx) & Other Air Emissions Assessment
4. Production Planning & Assessment
5. Water Resources Evaluation

MEETING LOCATIONS

PAG

CBOSG



To fulfill the requests of CBOSG members, meetings were hosted in different locations to address accessibility concerns and encourage greater participation from members.

Appendix 3 - Attendee Lists for PAG and CBOSG Meeting (including those invited)

CBOSG December Q4 Invitee List

Organization	First Name	Last Name
Protect Playa Now	Faith	Myhra
Protect Playa Now	Kevin	Weir
Ballona Wetland Institute	Marcia	Hanscom
Ballona Wetland Institute	Marcia	Hanscom
California Greenworks	Jessy	Shelton
California Greenworks	Michael	Berns
Communities for a Better Environment	Theo	Caretto
Communities for a Better Environment	Roberto	Cabrales
Communities for a Better Environment	Ambar	Rivera
Communities for a Better Environment	Roselyn	Tovar
Breathe Southern California	Marc	Carrel
Breathe Southern California	Tigran	Agdaian
Nature for All	Belen	Bernal
Nature for All	Steven	Ochoa
Climate Action Campaign	Ayn	Craciun
Climate Action Campaign	Lexi	Hernandez
Vote Solar	Andrea	Leon-Grossmann
Food and Water Watch	Andrea	Vega
Food and Water Watch	Chirag	Bhakta
Defend Ballona Wetlands	Robert Roy	van de Hoek
Defend Ballona Wetlands	Jackson	Garland
Physicians for Social Responsibility - Los Angeles	Alex	Jasset
Go Green Initiative	Jill	Buck
Chinatown Service Center	Daisy	Ma
Chinatown Service Center	Kerry	Situ
Soledad Enrichment Action	Enrique	Aranda
Soledad Enrichment Action	Luis	Melliz
Soledad Enrichment Action	Nathan	Aranda
Communities for Responsible Community Development	Ricardo	Mendoza
Communities for Responsible Community Development	Kenta	Estrada-Darley
Watts/Century Latino Organization	Autumn	Ybarra
Little Tokyo Community Council	Kristin	Fukushima
Little Tokyo Community Council	Chris	Fukushima
Reimagine LA Foundation	Rashad	Trapp
Reimagine LA Foundation	Shawna	Andrews
Reimagine LA Foundation	Raul	Claros
Mexican American Opportunity Foundation	Ciriaco "Cid"	Pinedo
Watts Labor Community Action Committee	Timothy	Watkins
Watts Labor Community Action Committee	Thelmy	Alvarez
Watts Labor Community Action Committee	Ava	Post
Alma Family Services	Lourdes	Caracoza
Alma Family Services	Aida	Vega
Alma Family Services	Diego	Rodriguez
Southside Coalition of Community Health Centers	Andrea	Williams
Southside Coalition of Community Health Centers	Lucy	Castro

Greater Zion Church Family	Michael	Fisher
Greater Zion Church Family	Danny	Harrison
Greater Zion Church Family	Aquyla	Walker
Faith and Community Empowerment (FACE)	Hyepin	Im
YMCA of Greater Los Angeles	Gerry	Salcedo
Parents, Educators/Teachers, and Students in Action (PESA)	Seymour	Amster
Parents, Educators/Teachers, and Students in Action (PESA)	Ella	Cavlan
Parents, Educators/Teachers, and Students in Action (PESA)	Sydney	Rogers
Parents, Educators/Teachers, and Students in Action (PESA)	Ayasha	Johnson
Parents, Educators/Teachers, and Students in Action (PESA)	Araksya	Nordikyan
Parents, Educators/Teachers, and Students in Action (PESA)	Olivia	Fike
Los Angeles Indigenous People's Alliance	Luis R.	Pena
Los Angeles Indigenous People's Alliance	Jamie	Patino
California Native Vote Project	Rene	Williams
Comunidades Indigenas en Liderazgo (CIELO)	Odilia	Romero
LA Black Workers Center/ CARE at Work, UCLA Labor Center	Andrea	Slater

CBOSG December Meeting Attendees - December 17 - Hybrid

CBOSG				
Organization	**First Name**	**Last Name**	**In person**	**Zoom**
Ballona Wetlands Institute	Marcia	Hanscom		X
California Greenworks	Michael	Berns		X
Defend Ballona Wetlands	Robert 'Roy'	van de Hoek	X	
Food & Water Watch	Andrea	Vega		X
Food & Water Watch	Andrew	Pezullo		X
Los Angeles Indigenous Peoples Alliance	Luis R.	Pena		X
Mexican American Opportunity Foundation	Ciriaco	Pinedo		X
Protect Playa Now	Kevin	Weir		X
Protect Playa Now	Faith	Myhra		X
Reimagine LA	Rashad	Rucker-Trapp		X
Soledad Enrichment Action	Isaac	Galvan		X
Soledad Enrichment Action	Enrique	Aranda		X
Southside Coalition	Andrea	Williams	X	
YMCA LA	Gerry	Salcedo	X	
Little Tokyo LA	Kisa	Ito	X	
Breathe Southern California	Marc	Carrel	X	
Faith and Community Empowerment (FACE)	Hyepin	Im		X
Physicians for Social Responsibility - Los Angeles	Edgar	Barraza	X	
Reimagine LA	Raul	Claros		X
Coalition for Responsible Community Development (CRCD)	Ricardo	Mendoza		X
Non CBOSG				
California Public Utilities Commission	Sasha	Cole	X	
California Public Utilities Commission	Christopher	Arroyo	X	
Insignia Environmental	Armen	Keochekian	X	
Insignia Environmental	Julie	Roshala	X	
Insignia Environmental	Anniken	Lydon	X	
California Strategies	Marybel	Batjer	X	
TOTAL CBOs				**16**

PAG December Invitee List

Organization	First name	Last name
Agricultural Energy Consumers Association	Michael	Boccadoro
Air Products	JP	Gunn
Air Products	Lorraine	Paskett
Air Products	Seth	Hilton
Air Products	Miles	Heller
Air Products	Vince	Wiraatmadja
ARCHES	Angelina	Galiteva
ARCHES	Tyson	Eckerle
Bizfed	Sarah	Wiltfong
Bloom Energy	Christina	Tan
California Air Resources Board	Steve	Cliff
California Energy Commission	Rizaldo	Aldas
California Hydrogen Business Council	Katrina	Fritz
California Manufacturers and Technology Association	Lance	Hastings
California Manufacturers and Technology Association	Robert	Spiegel
California Public Utilities Commission	Arthur (Iain)	Fisher
California Public Utilities Commission	Christopher	Arroyo
California Public Utilities Commission	Christopher	Myers
California Public Utilities Commission	Matthew	Taul
California Public Utilities Commission	Jack	Chang
California Public Utilities Commission	Sasha	Cole
California Public Utilities Commission	Nick	Zanjani
California Public Utilities Commission	Nathaniel	Skinner
California Public Utilities Commission	Kaj	Peterson
California Public Utilities Commission	Benjamin	Tang
California Water Data Consortium	Deven	Upadhay
City of Burbank	Anthony	D'aquila
City of Long Beach - Long Beach Water	Diana	Tang
City of Long Beach - Utilities	Tony	Foster
City of Long Beach - Utilities	Dennis	Burke
City of Long Beach - Utilities	Heather	Hamilton
City of Long Beach*	Mario	Cordero
Clean Energy	Nora	Sheriff
Clean Energy Strategies representing the Utility Consumers' Acti	Tyson	Siegele
Communities for a Better Environment	Theo	Caretto
Communities for a Better Environment	Shara	Burwell
Communities for a Better Environment	Roberto	Cabrales
Communities for a Better Environment	Jay	Parepally
Communities for a Better Environment	Lauren	Gallagher
Earth Justice	Sara	Gersen
Energy Independence Now	Brian	Goldstein
Environmental Defense Fund	Joon Hun	Seong
Environmental Defense Fund	Michael	Colvin
Environmental Justice League	Russell	Lowery

Fernandeno Tataviam Band of Mission Indians	Ray	Salas
GoBiz	Deedee	Myers
Green Hydrogen Coalition	Hope	Fasching
Green Hygroden Coalition	Sergio	Dueñas
Green Hydrogen Coalition	Janice	Lin
Harbor Trucking Association	Karla	Sanchez
Harbor Trucking Association	Matthew	Schrap
Independent Energy Producers Association*	Jan	Smutny Jones
Independent Energy Producers Association*	Sara	Fitzsimon
International Longshore and Warehouse Union Local 13	Sal	DiConstanzo
International Longshore and Warehouse Union Local 13	Mark	Jurisic
International Longshore and Warehouse Union Local 13	Sophia	Dubrovich
LAWDP	Joseph	Ortiz
Local Union 250	Nathaniel	Williams
Local Union 250	Hector	Carbajal
Los Angeles Department of Water and Power	Aaron	Guthrey
Los Angeles Department of Water and Power	Marty	Adams
Los Angeles Department of Water and Power	Paul	Habib
Los Angeles Department of Water and Power	Nermina	Rucic
Los Angeles Department of Water and Power	Jesse	Vismonte
Los Angeles Department of Water and Power	Xinhe	Le
Los Angeles Department of Water and Power	Eric	Hill
Metropolitan Water District	Deven	Upadhyay
Natural Resources Defense Council	Pete	Budden
Pasadena Water & Power	Erik	Johnson
Port of Los Angeles	Mike	Galvin
Port of Los Angeles	Tim	DeMoss
Protect our Communities Foundation	Malinda	Dickenson
Reimagine LA	Rashad	Rucker-Trapp
Reimagine LA	Raul	Claros
Sierra Club	Monica	Embrey
Sierra Club	Julia	Dowell
Sierra Club	Teresa	Cheng
South Coast AQMD	Maryam	Hajbabaei
South Coast AQMD	Sam	Cao
South Coast AQMD	Aaron	Katzenstein
South Coast AQMD	Vasileios	Papapostolou
Southern CA Water Coalition	Charley	Wilson
Southern California Association of Governments	Kome	Ajise
Southern California Generation Coalition	Norman	Pedersen
Southern California Leadership Council	Richard	Lambros
Southern California Pipe Trades	Rodney	Cobos
Southern California Public Power Authority	Charles	Guss
The United Association	Aaron	Stockwell
UC Davis Insitute of Transportation Studies	Lukas	Wernert
UC Davis Sustainable Transportation Energy Pathways	Lew	Fulton
UCI Advanced Power and Energy Program	Jack	Brouwer

University of CA Riverside	Arun	Raju
UC Davis Sustainable Transportation Energy Pathways	Stefania	Mitova
Utility Reform Network (TURN)	Marcel	Hawiger
Utility Reform Network (TURN)	Marna	Paintsil Anning
Utility Workers Union of America 483	Ernest	Shaw
Utility Workers Union of America 483	Robin	Downs
Utility Workers Union of America 483	Anthony	Flores
Utility Workers Union of America Local 132	Joe	Moreno

PAG Q4 Meeting Attendees - December 17, 2024

PAG		
Organization	**First name**	**Last name**
Air Products	Miles	Heller
California Energy Commission	Rizaldo	Aldas
California Hydrogen Business Council	Katrina	Fritz
California Public Utilities Commission	Arthur (Iain)	Fisher
California Public Utilities Commission	Christopher	Arroyo
California Public Utilities Commission	Matthew	Taul
California Public Utilities Commission	Benjamin	Tang
City of Burbank	Matt	Ko
City of Long Beach - Utilities	Tony	Foster
Clean Energy Strategies representing the Utility Consumers' Action Network	Tyson	Siegele
Energy Independence Now	Brian	Goldstein
Environmental Defense Fund	Joon Hun	Seong
Environmental Defense Fund	Michael	Colvin
Green Hydrogen Coalition	Dhruv	Bhatnagar
Green Hydrogen Coalition	Tim	Kamermayer
Local Union 250	Nathaniel	Williams
Local Union 250	Hector	Carbajal
South Coast AQMD	Sam	Cao
Southern California Pipe Trades DC 16	William	Kunz
Non PAG		
Arellano Associates*	Chester	Britt
Arellano Associates*	Stevie	Espinoza
Arellano Associates*	Keven	Michel
Insignia Environmental	Anniken	Lydon
Insignia Environmental	Armen	Keochekian
Lee Andrews Group*	Alma	Marquez
Lee Andrews Group*	Keshanna	Wiley
Lee Andrews Group*	Isaac	Martinez
SoCalGas*	Maryam	Brown
SoCalGas*	Neil	Navin
SoCalGas*	Andy	Carrasco
SoCalGas*	Frank	Lopez
SoCalGas*	Amy	Kitson
SoCalGas*	Shirley	Arazi
SoCalGas*	Yuri	Freedman
SoCalGas*	Annie	Ng
SoCalGas*	Katrina	Regan

Appendix 4 - PAG and CBOSG Meeting Transcript

HEARD BEFORE SO CAL GAS

ANGELES LINK TEAM

In the Matter of the Meeting re:	)
	)
ANGELES LINK COMMUNITY BASED	)
HYBRID STAKEHOLDER MEETING	)
	)

CERTIFIED COPY

TRANSCRIPT OF PROCEEDINGS

Lynwood, California

Tuesday, December, 17, 2024

Transcribed by:
Stephanie Nelson,

Job No.:
52446LEE

HEARD BEFOR SO CAL GAS

ANGELES LINK TEAM

In the Matter of the Meeting re:)
)
ANGELES LINK COMMUNITY BASED)
HYBRID STAKEHOLDER MEETING)
)

TRANSCRIPT OF PROCEEDINGS, TAKEN AT LYNWOOD, CALIFORNIA, COMMENCING AT 10:00 A.M. AND CONCLUDING AT 1:37 P.M. ON TUESDAY, DECEMBER 17, 2024, REPORTED BY STEPHANIE NELSON, A HEARING REPORTER IN AND FOR THE STATE OF CALIFORNIA.

APPEARANCES:

FACILITATORS: CHESTER BRITT
ARELLANO ASSOCIATES
PAG LEAD
ALMA MARQUES
LEE ANDREWS GROUP
CBOSG LEAD

PRESENTERS: YURI FREEDMAN
SENIOR DIRECTOR
BUSINESS DEVELOPMENT

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10:00 A.m.

CHESTER BRITT: Let's get started. Today is a special day. It is the final meeting as part of our phase one Angeles Link activities. Today is a combined meeting with the Planning Advisory Group and the Community Based Organization Stakeholder Group. Typically we meet individually, but you guys are here together today, and it's a special day. I think we had one other meeting where we were joined together, so this should be a good meeting. We have lots to talk about. We have a full agenda. So I'm going to jump right into it.

My name is Chester Britt. I am the Executive Vice President of Arellano Associates. I've been the facilitator of the Planning Advisory Group for the last two years, and I am very happy to play that role and excited to be here today and have this be a successful meeting as well. I want to introduce Alma Marquez. She's my counterpart and has been working with me, and I'll let her introduced herself.

ALMA MARQUEZ: Good morning, everyone. It's a pleasure to be here. Welcome to the beautiful city of Lynwood, and I just want to give a shout out to he staff

for helping us set up this beautiful room for you all this morning. They're just a great team. And with that, I'm going to pass it back -- oh, Alma Marques with Lee Andrews Group, co-facilitator and have been the lead for CBOSG. Thank you to all the CBO folks that are here. I appreciate you taking the time to be here. Thank you.

CHESTER BRITT: Yeah. And I do want to echo what she said, it really is a tribute to you guys that we have so many people here today which should make it a really good meeting as well.

A little housekeeping items for you online and for those of you in the room, some of these should be very familiar. This meeting will be recorded, both video and audio, and the court reporter will be transcribing the meeting. Really, really important to please announce yourself before you speak. So, I know sometimes when it's your turn to speak, you just jump right into your comments, but if you could please state your name and your organization before you speak, that would be great. The Zoom microphones are muted by us to eliminate any background noise. When you raise your hand on Zoom and we call on you to speak, you will need to unmute yourself, we will do the same on our side. So please make sure to do that. In person, we have this little tradition that when you want to speak, you take your little name placard and

turn it on its end, and then I can see that you want to speak. It's a little glary today, so I don't see you, it's not that I'm ignoring you. Just wave your hand or get my attention so I can see what's going on. We want to make sure that everyone who wants to speak is able to do that. We also would encourage you to turn on your cameras so we can better engage with you. We do have PVs here in the room so people in the room can see the participants online, especially when it's your turn to speak. It'd be nice if you had it on the whole time, but if you need to have it off, that's fine. When you do speak, if you could turn it on, that would be really good. We also encourage you to use the Zoom chat. It's there for you to you use, and if you want to make a comment or ask a question, we always try to balance the in-person questions with the chat questions, make sure we go back and forth and, kind of, get all those done. And again, if you would like to speak, please raise your hand at the bottom of the Zoom feature. In person we have some wireless microphones. They should be scattered around. I see one there with a yellow cover on it, and there should be a couple others. We can pass those around. Make sure in-person you have one of those when you are speaking so the people online could have the benefit hearing your you as well.

We do have a full agenda, as I mentioned. I want

to thank Alma and her team for setting up the continental breakfast. We are going to have lunch, and then we are going to have a little reception afterwards. So we do have a full day. We also are going to have a safety moment and land acknowledgement, and we'll call -- we'll get some welcomes from our executives from SoCalGas, and then we'll dive right in to our agenda where we're going to talk about the Angeles Link phase one summary of studies, we'll have a member discussion following that, then we'll talk about a summary of the PAG and CBOSG process, we'll break for lunch, and then we'll come back and talk about the phase 2 updates and have a discussion about that, then we'll get into next steps, we'll have a roundtable discussion, we'll have some closing remarks from Neil, and then we'll begin our reception.

So I am now going to introduce Olga Quinones, she's the Media Relations and Strategic Engagement Project Manager with SocalGas, and she's going to do our safety moment today.

OLGA QUINONES: Good morning, everyone. And welcome to my hometown, the City of Lynwood. Seven easy holidays for safety driving. The holiday season is a time for celebration, but it also increases risk on the road, so here are seven safety tips for you while you drive this time of year. One, inspect your vehicle; two, to get

proper rest; three, don't drive distracted; four, drive the speed limit; five, practice defensive driving; six, travel early or during daylight hours; and finally, fuel up during the day. These tips will keep you safe and others on the road this holiday season.

CHESTER BRITT: All right. Thank you, Olga, for that. I'm now going to turn it over to Alma, if she can run over real quickly, and she is going to introduce our speaker for our land acknowledgment.

ALMA MARQUEZ: Yes. Good morning, actually Enrique Aranda with Soledad Enrichment Action is going to be leading us in the land acknowledgment, so we are going to give him a few minutes to settle himself and get ready to read it, and we'll hand over the mic.

CHESTER BRITT: Okay. If you want, we can do the roll call first, and then come back to land acknowledgment.

ALMA MARQUEZ: That would be great.

CHESTER BRITT: Okay. So I'm going to have -- we are going to do, because we have so many people in this meeting, instead of taking 45 minutes to do roll call like we typically do it, I am going to bring up the invitation list and I was making notes of who was here and person. I am going to write off everybody that I know RSVP'd and is here in person that I can see online. Afterwards, if I missed anyone, then please raise your hand and will let

you introduce yourself, but I apologize ahead of time for any butchering of names. No promises, but I will do my best. So, Miles Heller with Air Products; Rizaldo Aldas with California Energy Commission; Katrina Fritz with California Hydrogen Business Council; Benjamin Tang with California Public Utilities Commission; Christopher Arroyo with California Public Utilities Commission; Mathew Taul with California Public Utilities Commission; Anthony D'Aguila with the City of Burbank; Mathew Culajay with the City of Burbank; Tony Foster with the City of Long Beach Utilities; Erik Johnson with the City of Pasadena Water and Power; Tyson Siegele with Clean Energy Strategies; Brian Goldstein with Energy Independence Now; Michael Colvin with Environmental Defense Fund; Joon Hun Seong with Environmental Defense Fund; Tim Kamermayer with Green Hydrogen Coalition; Janice Lin with Green Hydrogen Coalition; Sara Fitzsimons with Independent Energy Producers Association; Sal DiCostanzo with International Longshore and Warehouse Union Local 13; Nathaniel Williams with Local Union 250; Hector Carbajal with Local Union 250; Julia Dowell with Sierra Club; Sam Cao with South Coast AQMD; Norman Peterson with Southern California Generation Coalition; William Kunz with Southern California Pipe Trades; Charles Wilson with Southern California Water Coalition; and Matt Ko with the City of

Burbank. Those were all the PAG members.

Now to the CBOSG. Lourdes Caracoza with Alma Family Services; Marcia Hanscon with Ballona Wetlands; Michael Berns with Defense Ballona Wetlands; Andrea Vega with Food & Water Watch; Andrew Pezzullo with Food & Water Watch; Kristin Fukushima with Little Tokyo Community Council; Luis Pena with Los Angeles Indigenous People's Alliance; Cid Pinedo with Mexican American Opportunity Foundation; Ella Cavlan with PESA, P-E-S-A; Kevin Weir with Protect Playa Now; Faith Myhra with Protect Playa Now; Rashad Rucker-trapp with Reimagine LA; Isaac Galvan with Soledad Enrichment Action; and Enrique Aranda with Soledad Enrichment Action; Andrea Williams with Southside Coalition; Andrea Slater with UCLA Labor Center; Gerry Salcedo with YMCA LA; Autumn Ybarra with Watts/Century Latino Organization; Kisa Ito with Little Tokyo LA; Marc Carrel with Breathe Southern California; and Edgar Barraza with Physicians for Social Responsibility Los Angeles.

And that was the hardest part of my day right there. Did I miss anybody, either online or in person, that I did not read your name or I did not read it correctly?

If you could just grab the microphone just so people can hear you online. Good morning.

HYEPIN IM: Hyepin Im with Faith and Community

Empowerment.

CHESTER BRITT: All right. Thank you and I also see someone online, or two people, Marybel Batjer, if you could introduce yourself.

MARYBEL BATJER: Sorry, unmuting. Yes, Marybel Batjer, partner at California Strategies.

CHESTER BRITT: And I see Roy. You know, I must have just skipped over your name because you were on the list, Roy, but go ahead and introduce yourself. I apologized for that.

ROBERT ROY VAN DE HOEK: It's okay. Robert Van De Hoek, Roy nickname. I heard you say Defense Ballona Wetlands and I am with Defense Ballona Wetlands.

CHESTER BRITT: It was one of the line items, sorry about that. That was not intentional, I promise.

ROBERT ROY VAN DE HOEK: I understand. You're doing great. Happy holidays, everybody.

CHESTER BRITT: Happy holidays to you as well. Okay. Now were going to go back to --

FRANK LOPEZ: I think we also had Matt Schrap from Harbor Trucking Association just joined us and dropped in the chat. And just to clarify, Michael Berns California Greenlands. Did we get your organization wrong.

CHESTER BRITT: We got it right now. Thank you for that.

ALMA MARQUEZ: And Michael was here first today, so thank you, Michael, for being here on time.

CHESTER BRITT: The original OG. Yes.

Go ahead, Enrique.

ENRIQUE ARANDA: Thank you, Chester. Thank you, Alma. Good evening, friends and relatives. Blessings to all, and welcome to Lynnwood, California, where we like to call the heart of Southeast LA. I know Edith always reminds us of the importance of Southeast LA, and especially when it comes to regulatory agencies that hardly have a presence here. So thank you for facilitating this process and bringing this event, this important event to our communities.

As we begin this program, we must first of all acknowledge colonialism as an ongoing process. That just possesses an indigenous land, life and resources were ever recall home. We acknowledge that this land, and the land that you might live, work and raise families is on indigenous land that was stolen from its original caretakers. With gratitude and respect today we honor the indigenous people on this ancestral land we gather, of the diverse and vibrant communities of the Tongva, the Tataviam, the Serrano, the Quis, the Chumash people, who have cared for these lands and make their home here today. We honor and pay our deepest respects to their elders and

descendents, past, present and emerging as they continue their stewardship of these lands and waters for generations to come. We also acknowledge that colonization resulted in land seizures and disease and subjugation and slavery and relocation and broken promises, not to mention genocide and multigenerational trauma that continues to today. This acknowledgment today demonstrates our responsibility, a collective responsibility, and commitment to truth, to healing, to reconciliation and to elevating the stories the culture of community of the original caretakers of this region for whom we are grateful for the opportunity to live in and work on these ancestral lands. We celebrate the resilience of strength and the wavering spirit of indigenous peoples who are dedicated to creating collaborative accountable and respectful relations with indigenous nations and local tribal governments. Such as Fernandeno Tataviam Band of Mission Indians, the Gabrielino-Tongva Indians of California Tribal Council, the Gabrielino-Tongva San Gabriel Band of Mission Indians, and the Gabrieleño Band of Mission Indians – KIZH Nation, the San Manuel Band of Mission Indians, and lastly, the San Fernando Band of Mission Indians.

As we positioned ourselves as visitors and settlers, it is our responsibility to always honor

indigenous sovereignty, moving past just acknowledging that today, but by one day materializing to solidarity in our every day.

Thank you.

CHESTER BRITT: Thank you.

So now we're going to turn it over to Maryam Brown, the president of SoCalGas, and I just want to acknowledge the fact that she's come to different meetings throughout the two years that we have been facilitating these meetings, and what a pleasure it is to have her be able to speak to the group as the president and understanding what's going on from her perspective. So we are very excited to have her again today. I know she came to the original meeting at Alta City, and now the last meeting for part of phase one here tonight, or today. So I want to welcome Maryam and turn it over to her for her remarks.

MARYAM BROWN: Thank you very much, Chester. And, Enrique, thank you very much for that land acknowledgement. I really appreciate that and starting our day there.

I want to say good morning and welcome to everyone. It's incredible group of diverse stakeholders that are here today, and it's just so impressive, and I think that it's a big part why we view today so much as a

success. It's a successful day on the phase one report on Angeles Link being published last week on Friday, and I think it's a successful being on the heels of soon filing for the phase two application for Angeles Link. I asked to join this meeting, one, because it's the last of so many sessions were good work was done, but really the opportunity to thank you for everything it is that you have done to support the Angeles Link effort.

You know, when we started this stakeholder engagement endeavor, the original idea was quarterly meetings with the idea of a feedback loop and this effort has far, far exceeded that goal. And I think as we worked to be authentic in this first-of-it's-kind stakeholder engagement effort, the process of evolved to monthly meetings and in some circumstances, one-on-one meetings. In those meetings there was hours and hours of work to prepare for those meetings that we held, and hours and hours of thoughtful comments and feedback on the subject matters that were discussed in those meetings, and I think the results of it is that the work product in phase one was much improved because of that time and energy that you all put into Angeles Link phase one. And what I'll say for SoCalGas is our company grew from the experience of this stakeholder engagement process that we have been in. And, you know, I think my -- I think in one of the

previous PAG meetings that we had I noted that my parents are both Persian. There's a very famous poet in the Persian culture named Rumi, and he has a line that he says that I think is very fitting for how this has effected SoCalGas. It has to do with how humbling it is to take constructive criticism and make yourself better from it, and the line is "How I will you ever become a polished mirror if you hurt at every rub." I think what this process has done is it has polished this mirror for our company, and I want to thank you very much for the time that you put into this.

I often say that time is the only truly limited resource, and I think that time can be allocated in one of two ways: You can spend it or you can invest it. And, you know, the difference when you are investing it is when you are investing it, you have a vision for that time and what it's going to mean in the future. And I think that the work that we have done here on Angeles Link is about a shared investment -- an investment in a shared vision of a decarbonized California. And I would like to give you some examples of that investment and the difference that it has made. I have eight of them actually that I wanted to today. There are probably many many more, but these are the ones that were at the top of my list. I think that UCAN invested in Angeles Link by helping us to make

this stakeholder engagement process better. Early on, they asked that we provide PAG with the basis for the compensation structure for those that are engaging in this process, and they asked that we always include, as we have since then, a virtual option for attendance. And they also asked that we publish the information on our public web page to improve transparency. We did all of these things. UCAN also invest in Angeles Link with its emphasis on being realistic about demand projections. Comparative analysis we provide in the phase one reports I think is useful to many of our stakeholders, and I think that was an important investment.

Food and Water Watch also invest in Angeles Link with our enhanced safety analysis. Projects like Angeles Link cannot move forward unless there's confidence that the safety standards are at least, if not even more, strong than that of incumbent fuels.

The Longshoreman and UWUA invested in Angeles Link by helping with our understanding of the workforce implications a project of this nature.

EDF and NRDC invested in Angeles Link with our improved NOx emission reduction modeling. This will help us, the concentrated spacial understanding of NOx emissions, will help us in our understanding EJ impacts.

Food and Water Watch and CBE invested in Angeles

Link with our improved GHD analysis that account for the implications any possible leakage. And because with Angeles Link we are often talking about green hydrogen, water is the key. CBE invested in Angeles Link engines with our improved GHD analysis associated with water treatment and conveyance. It is a water wells to wheels GHD analysis if you're familiar with the -- with the GHD analysis parlay.

And lastly, I want to note that a lot of time has been spent trying to reduce reliance on Aliso Canyon. I think that time is invested in creating a real path to do so with Angeles Link. There is nothing wrong with spending time, and it is absolutely everyone's right. With the challenges we face, I think that investing time to help shape the future is much, much smarter, and that is what it is that we have done here with this effort. Angeles Link's goals are: Cleaning California's air, reducing the use of fossil fuels, and creating tens of thousands of jobs, union jobs. As I said at the outset, with the publication with the phase one report on Friday, and being on the brink of the phase two application, this is very much a successful day. And I am very hopeful that there will be a day where Angeles Link is successful, and if she is, she will have a thousand fathers as is the case with success, but to me the people in this room and on

this video will always be her original investors. So I want to thank you very much for that very sincerely, on behalf of SoCalGas. I look forward to the continuation of this journey with you, and appreciate the time. Chester.

CHESTER BRITT: Thank you so much, Maryam. I appreciate you being here today. It's a significant milestone and a very long journey.

We're going to not switch over to our main agenda focused on and Angeles Link phase one summary of studies. We've been going through this process for two years now and as Maryam mentioned, we've been having monthly meetings, and the reason for that is because there's a lot of work studies and we took four bites of the apple with each one of. We talked about the scoping, the technical approach, the preliminary findings and the draft reports, and today is kind of the culmination of that. We're going to hear in our presentations today, you know, where we ended up, what we found out, and I think it's significant to mark this as an opportunity for us to see all of our hard work that we all put in. As Maryam so eloquently mentioned, you know, we have taken a lot of input from you and SoCalGas has done a lot of internalizing of that input and figuring out how to incorporate that into the studies.

And, so I'm going to introduce Yuri Freedman, he is a senior director of business development. He's no

stranger to you. He's been making a lot of representations along with Amy Kitson, who's the Angeles Link Director of Engineering and Technology. So I'm going to turn it over to them for our first set of presentations.

YURI FREEDMAN: Thank you, Chester. Good morning, everybody, it's good to be here to see again all of you, both in the room and online. As Chester mentioned, I'm Yuri Freedman, Senior Director of Business Development of SoCalGas, and what I would like to do today is to provide a very brief, very high level overview, a recap, if you will, of sound status followed by Amy's presentation who will continue to provide this overview for other categories.

And the categories of studies that you see in front of you on the screen there are 16 studies, as you know. They fall into three broad categories. First category is what we call viability where we analyzed the fundamental equation of viability of Angeles Link as a project that has been envisioned. Then there's a technical section, and the third section is public interest. So I'm going to provide the condensed overview of the viability section, and with that, if you go to the next slide, again, recap of some of the key numbers. The total addressable market for clean renewable hydrogen, we

have identified in our analysis is in the range from 1.9 to 5.9 million tons per year. Angeles Link is a fraction of this. And Angeles Link is designed to transport between 0.5 and 1.5 tons per year of clean renewable hydrogen. We realized early on in the process that we spent a lot of time, but we, as we progressed, got better in explaining the difference between the total addressable market and the throughput of the project. We really appreciate the comments that you all -- many of you made to that effect. We also added, per your feedback, the third party studies, third-party forecast of demand which comes from the state itself, the state's agencies such as the Area Source Board, California Energy Commission, the academic community University of California Davis, and also large study was conducted by the National Patrol Council. So now we and you can put our results, our numbers, in the context of these studies.

Turning over to production, the big takeaways are that we are going to need tons of gigawatts of renewable electricity to produce the upper end of the range of Angeles Link throughput. As an example here, for 1.5 million tons per year of hydrogen, it would require just short of 40 gigawatts of solar capacity, which would take approximately 240,000 acres of land. That area is, while undoubtedly quite substantial, it represents about 12% of

identified land which could be used for construction of the solar facilities. So the visibility appears to be established. What we appreciate from your feedback we added material to the report that addressed your feedback on additional land constraints, because to be clear, there's significantly more work that needs to be done to analyze this issue deeper and ultimately that's what renewable hydrogen producers are doing today in real-time, identifying land positions and developing their project.

On the -- excuse me -- on the next slide there's is very brief overview of the key takeaways the analysis of project options and alternatives and high-level economics and cost-effectiveness. Having analyzed multiple options and alternatives, both alternatives that don't include hydrogen, such as the electrification, carbon caption sequestration and alternatives of hydrogen delivery that don't include pipelines, we have established that Angeles Link is the best suited and the least-cost option importantly to deliver clean renewable hydrogen at scale. This hydrogen deliver Angeles Link is a competitive and viable decarbonization pathway compared to electrification and carbon caption sequestration.

We have received a lot of stakeholder feedback which we really appreciate. What we do, we clarify that Angeles Link is meant to be scalable and serve demand as

it progresses, as it grows from 2030s to the higher long-term demand at 2045 and past 2045 as California is going to reach its carbon neutrality goal. There's no doubt that tracking would be useful for certain less-mile delivery solutions; however, pipelines allow for greater throughput volumes over long distances, and in that, they offer greater scale and lower cost which ultimately benefit the customers, consumers and increase the likelihood of adoption and affordability of clean renewable hydrogen.

Turning over to high-level economics and cost-effectiveness. Comparing the economics of the various pathways for, again, hydrogen and nonhydrogen solutions, we have established that Angeles Link offers the most cost effective solution to transport clean renewable hydrogen to serve Central and Southern California including the Los Angeles-based scale. We also found that is cost effective with electrification and carbon caption sequestration as an alternative pathway for dispensable power generation and transportation with an emphasis on medium and heavy-duty transport and certain hard-to-electrify industrial sectors.

Like in many other reports, we received various demands of stakeholder feedback, which we do appreciate; and what we do to reflect that, we, among other matters,

edit a section to assess an additional alternative which we have not analyzed before. That's high voltage direct current or HVDC transmission for in basic electricity transmission. We also updated key findings to identify hydrogen purification costs and explain storage assumptions as they progress over time, in line with demand and supply growth.

Let me stop here and turn it over to Amy who is going to provide an overview of the reports and technical section.

AMY KITSEN: Yes. Thank you, Yuri. I'm going to speak now to some of the findings and feedback from the environmental and engineering studies conducted in phase one. The GHD and air quality studies, as show on this slide, provide significant public interest benefits to rate pairs in the broader community. For instance, Angeles Link could support significant decarbonization and air quality benefits including the potential reduction of 4.5 to 9 million tons of carbon dioxide equivalent per year. The equivalent of approximately 725,000 to 1 million gasoline passenger vehicles off the road per year. And approximately 5200 tons per year of NOx emissions by 2045.

The GHD and NOx studies also received feedback from the stakeholder groups and that feedback was

incorporated in each of the studies as Maryam touched on. Here are a couple of those examples: The stakeholders indicated that hydrogen leakage should be considered in the GHD emission impact calculations. They requested that the volume of leakage estimates and associated impacts to climate change be discussed and the volumetric analysis be included in the leakage and GHD study. In response to stakeholder comments, the range of preliminary high-level volumetric estimates quantifying the potential for leakage provided in the leakage studies was used in the GHD study to predict a high-level range of potential impacts to the estimated overall GHD reductions associated with general new hydrogen infrastructure with Angeles Link infrastructure using the potential leakage values found during literature review. Stakeholders recommended that geographic depiction of the cumulative impact of NOx emissions be prepared that includes data from environmental justice screening tools. Stakeholders provided comments regarding the potential benefit of displacing fossil fuels using the hydrogen and reducing pollution in industrial and heavily trafficked areas, especially as it related to disadvantaged communities. They had a question of how the NOx will determine geographical impacts of disadvantaged communities. Stakeholders suggested that existing emissions levels in

the communities local to the proposed Angeles Link pipeline route to the proposed compressors to the proposed power generation units be examined. Given that many communities are already disproportionately burdened by pollution, an estimate of cumulative impacts of NOx was deemed to be important. In response to stakeholder input, Appendix C was added to the final NOx study. This appendix includes several maps that identify the projected NOx emissions reductions by zip code, and the environmental justice communities by census track. Both sets of maps include preliminary pipeline routing information identified in the routing analysis. Quality cumulative impact analysis is outside the scope of this excusability study, but will be considered as part of future analysis of Angeles Link during the sequel analysis.

Next slide. The workforce and planning training evaluation, as Maryam mentioned, discussed how SoCalGas' existing workforce planning program can be adopted to support hydrogen infrastructure leveraging the company's long-standing experience and safely and reliably operating and maintaining a pipeline system.

Stakeholders suggested inclusion of job estimates potentially created by Angeles Link. In response to this feedback, an employment impact analysis that estimates job

creation associated Angeles Link was conducted and provided in appendix A of the study. The evaluation also demonstrated that Angeles Link can create nearly 53,000 direct construction related jobs at peak and in total of approximately 75,000 jobs at peak when considering indirect and induced jobs that occur through wage earners spending more income. Angeles Link workforce development can support the local economy while constructing, operating and maintaining Angeles Link safely. The evaluation of applicable safety requirements demonstrated that there are minimal regulatory differences between hydrogen and natural gas pipeline transportation and that SoCalGas' expertise in natural gas pipeline construction, operation and maintenance can be leveraged to design -- safely design, construct, operate and maintain a hydrogen pipeline system. This includes adapting existing safety regulations and industry standards to address the unique properties of hydrogen as well as developing new company standards and practices tailored to hydrogen transport. The evaluation also highlighted the ability of existing regulations such as 49 CFR Part 192 and industry standards including ASME, E31 12 and NFPA 2 to support the safe design and operation of hydrogen pipelines. Key safety requirements identified include material selection, pipeline design, fire protection strategies, leak

detection, and monitoring programs, as well as emergency response procedures and public awareness initiatives. The evaluation also incorporated lessons learned from prior industry and third-party experiences with hydrogen pipelines. The evaluation described SoCalGas' ability to adapt and expand its existing safety practices including existing emergency response and public awareness plans and employee and contractor training. These practices will be expanded within the industry per safety management system framework to support the implementation of clean renewable hydrogen pipeline system; furthermore, the evaluation outlined how safety considerations can be considered in Angeles Link's design process including preliminary pipeline sizing, compression requirements and material selection. It also detailed how construction, operation and maintenance protocols can be developed and implemented to align with industry best practices and allow for safe and reliable hydrogen transportation.

Stakeholders requested as part of the study that SoCalGas engage with the Center for Hydrogen Safety for the idea of the study. As a reminder, the Center for Hydrogen Safety, or CHS, is a globally recognized nonprofit organization that promotes the safe use of hydrogen across industries including transportation, energy and industrial applications. It is a part of the

American Institute of Chemical Engineers and serves as a hub for sharing best practices, resources and expertise to advance hydrogen safety. The CHS panel or Hydrogen Safety Panel refers to the advisory committee of hydrogen experts assembled under the CHS framework. Engagement from this panel is endorsed by the Department of Energy and SoCalGas enlisted the expertise of the Hydrogen Safety Panel to review and provide comments on the draft evaluation of the applicable safety requirements. The Hydrogen Safety Panel identified key -- additional key hydrogen safety codes, and safety best practices and made other recommendations for information to consider in the planning of Angeles Link. Changes were made in the safety study in Section 6 Risk Management, Section 8 Specification Standards and Procedures Evaluation, and Section 11 Lessons Learned From the Feedback Hydrogen Safety Panel. A copy of the Hydrogen Safety Panel's feedback, along with SoCalGas' full response to the feedback, is included in the third quarterly report available on SoCalGas' website.

Now I will hand it over to Frank to talk about the environmental and social justice plan.

FRANK LOPEZ: Thank you, Amy. In addition to the studies highlighted by Yuri and Amy, we also conducted an ESJ screening to help us identify disadvantaged and environmental social justice communities located near

potential routs. We primarily relied on the state's CalEnviroScreen and the federal government's to climate and economic justice screening tool to identify disadvantaged communities. During the process, we received some valuable feedback from all of you on how to improve the screening. A couple of these examples include adding jurisdictional information to census tracks so you know what cities and counties they correspond to, adding the language that is spoken in the community's along potential routes so we know what language we may need to conduct future outreach in, and adding additional demographic and economic data from other industries, like the Community Development Index developed by the South LA All In initiative. Thank you to CRCD for bringing this to our attention. And finally, we overlayed this data with the potential routes, so you can see how those relate to each other. The data we assembled from this process was informative and helped inform our routing study, which Amy will speak about shortly. In addition to this screening, we also learned from you that we should rely solely on government mapping tools to inform our outreach efforts. We heard loud and clear from you that the communities we serve are more than just data on a map, and that we need to engage with communities more directly, which we intend to do so in the subsequent phase. While our outreach

efforts were limited to the PAG and CBOSG during this first phase, we decided to develop an ESJ plan with your help that outlines how we intend to engage with ESJ communities in phase two. We utilized your expertise to identify potential mechanisms we can use to broaden our awareness about our proposals and solicit input into our planning efforts. Our goal is to leverage the data we gathered from the ESJ screening to help us identify what communities we should be focusing on in phase two and leverage the ESJ plan to inform us on how to best engagement them. This includes more engagement with tribes and communities outside the LA area. We have incorporated your feedback into our phase two stakeholder engagement activities, which I will go over later today.

I want to thank all of you who contributed to our ESJ screening and plan. I think your feedback was pivotal in helping us acquire valuable insights about environmental social justice concerns associated with our project. Back to Amy.

AMY KITSEN: Thank you, Frank. I'm going to touch on routing. The preliminary routing and configuration analysis identified several preliminary routes for the system and considered various factors such as engineering requirements and environmental and social features. The study examined existing pipeline corridors, rights of way,

franchise rights, and designated federal energy corridors as well as the need for new rights of way. When combined, these initial route configurations transfers a total of approximately 1300 miles, overlaying ARCHES demand and production sights, shown above in the map, and providing a wide range of options within which to narrow down the route for the Angeles Link system, which is anticipated to be approximately 450 miles.

Next slide. These are the routes within the final report that were identified within the draft report issues earlier this year and presented at the PAG and CBOSG meetings in July. Preliminary pipeline segments were assembled over various configurations to meet the established criteria and four potential directional route configurations emerged. The four potential directional routes, titled A, B, C and D, are shown here. As Frank discussed, route variation 1 was also added after evaluating ESG screening information in response to stakeholder feedback as a variation for further evaluation in phase two as it has he potential to minimize route mileage traversing disadvantaged communities in the LA Basin. These four potential directional routes share the common characteristic of delivering up to 1.5 million metric tons per year of clean renewable hydrogen from third-party production locations in San Joaquin Valley and

Lancaster to Central and Southern California including the LA Basin while passing through the connection, collection and central zone in supporting connection between the two ARCHES segments. On average, they traverse approximately 450 miles.

Before we open it up to questions, I wanted to remind everyone that these findings, as well as findings for all phase one feasibility studies can be found on our website. Each study contains a section on stakeholder feedback and the changes to the studies that were made as a result to that feedback. In addition, a consolidated report was produced that provides a high-level summary of all of the studies in one place. Thank you for all of your engagement throughout phase one of Angeles Link.

CHESTER BRITT: All right. And there you have two years of work consolidated into thirty minutes of presentation. While we were making the presentation, there were a few people that joined, so I want to make sure we give you the opportunity to introduce yourself. So if you came while the presentation was going on, could you just raise your hand, and we'll pass the microphone to you in person. If there was anyone online that joined that wants to introduce themselves, raise your hand online as well.

ALMA MARQUEZ: And I believe it was Rashad and Ricardo

and Tony that walked in. Hand the mic to them. Thank you. Good morning everyone.

RASHAD RUCKER-TRAPP: Rashad Ruckertrap with -- Executive Director with Reimagine LA Foundation, and really happy to be here this morning. I apologize for being tardy.

CHESTER BRITT: No worries.

ALMA MARQUEZ: Again. Just kidding, Rashad. If we can hand it over to Ricardo.

RICARDO MENDOZA: Good morning, everyone, Ricardo Mendoza, Chief Business Development Officer with Coalition for Responsible Community Development, or CRCD, and thank you for holding us accountable, Alma.

ALMA MARQUEZ: No worries, Ricardo.

CHESTER BRITT: I think there's one more over here. Pass the microphone.

TONY FOSTER: Good morning, everyone. My name is Tony Foster. I'm a senior director of the Utility Business Services for the City of Long Beach's utility department. So I'm very excited to be here. I've been tracking this a long time, and our entire city is looking forward to this.

CHESTER BRITT: All right. Great. Thank you so --

ALMA MARQUEZ: And then we have one more over here. Good morning, everyone. Raul Claros, Chief Strategist for Reimagine LA Foundation.

CHESTER BRITT: Thank you so much. All right. I want to just reiterate a few points. As we've been going through this process with you, we have created what we call the Living Library, which has all of the documents as we've progressed through the studies. So I have mentioned earlier that the process that we've gone through, we use a four-step process for each of the studies. We talked about scoping, technical approach, the preliminary findings, and the draft findings. We have posted, as of Friday, the final reports for all of the work studies, so you should have access to that link. As part of that submittal, or dropping of all that information, is also the consolidated report, which today's presentation highlights some of that, but I think the consolidated report is more robust, has more detail in it than what was presented here today. Today's presentations was an overview of that. So you should have access to all that. If, for some reason, any of your links are not working or you're not able to access any of those files, you can always reach out to either us or Arellano Associates, Lee Andrews Group, or SoCalGas, your normal people like myself, Alma or Frank and will make sure that you have access to those individual studies, okay?

So I want to thank you --

FRANK LOPEZ: Can I add one more thing, too, Chester?

For those of you that haven't reviewed the final studies, if you go in there, during our presentation today we did highlight some of the changes with the feedback that we gotten, how we incorporated that into the studies, but if you want the full list of feedback that we incorporated into the study, each study has a chart at the beginning that summarizes all of those edits. Sp if you're interested in that, you can go to each study and find out more information about the feedback that we incorporated.

CHESTER BRITT: Yeah, that's really important. Thank you for that.

Okay. I want to -- do now is the time for member discussion on the presentation, any of the information you heard today. I want to just reiterate that, again, this is our last opportunity to be together as part of phase one, so if you have any lingering questions about any of the 16 work studies, any thoughts on the final report, if you had a chance to look at the consolidated reports since Friday, please, you know, provide that input and let us know what you think. We also want to make sure that our comments today are focused on Angeles Link. We know there's others things going on with SoCalGas, but today's meeting is focused on Angeles Link. We have a lot of executive staff for SoCalGas here and regular staff as well, technical staff, they'll be available for our

breaks, during lunch, at our reception if you have other questions not Angeles Link related, they'd be happy to talk to you about those things at that time.

So, again, if you are in-person and would like to speak, just turn your placard up on its end so that I know you're interested speaking. If you are online and would like to speak, too, you'll need to raise your hand so I can see that, and then we'll call on you individually and you'll be to join the group and ask your question. So, again, I'm going to apologize for the glare a little bit, so let me get my glasses on so I can see. Hyepin, I think you raised your hand first, so you're going to get the first opportunity. So if you could pass the microphone. And, again, for all the speakers, please introduce your name, your organization so the court reporter has access to then when she's recording the comment. There it is right there.

ALMA MARQUEZ: Right behind you.

CHESTER BRITT: I'm not sure you're on. There you go.

HYEPIN IM: Good to have friends.

CHESTER BRITT: State your name again.

HYEPIN IM: Again, good morning. Hyepin Im with Faith and Community Empowerment. It was really encouraging that you are actually formulating iterating the feedback you received and the actions that you are taking. Very

appreciative of that process. I just want to perhaps ask a question. In terms of the release of the report, I know that in the past, one of the recommendations was to make sure that you had a list of ethnic media, and I am just wondered if, when you release the report, if the ethnic media -- there was intentionality of sharing that with, those I guess, outlets. Partly because, again, I believe that many of the ethnic media, they are the ones that help bring news to the community. I'm not sure -- just like with any groups that are underserved, you kind of need a meeting before the meeting, so I don't know how many may have even -- -if you did release it, I don't know how many showed up, how many covered it, but I would like to recommend that perhaps there may be some intentionality also in cultivating also the ethnic media as potential partners along the way.

FRANK LOPEZ: Yeah, it's a great suggestion. Frank Lopez, Director of Regional Public Affairs. So when we say release the report, what we mean by that is essentially that we've posted the studies on our website, and I think we're distributed to the Angeles Link preceding service list. So we haven't really distributed very widely at this point, and we haven't given much thought about how to promote the studies once final. We've been primarily focused on just fulfilling our

obligations with this first phase, completing the PAG and CBOSG process, and then filing the phase two application. I think once we that, we'll have a discussion about how to share the results or findings more broadly. We'll make sure to include ethnic media as part of that discussions. So thank you for that recommendation.

HYEPIN IM: Thank you.

CHESTER BRITT: Thank you. Andrea Vega, I see your name placard up. If you could pass the microphone to Andrea, that would be great.

ANDREA VEGA: Hello. Andrea Vega on behalf of Food and Water Watch. The phase one and stakeholder process for the Angeles Link project is deeply flawed and has failed to meet the requirements outlined in the California Public Utilities Commissions decision document, SoCalGas's own application and the CPUC action plan. SoCalGas, has ignored key environmental and safety risk failing to implement hydrogen specific safety protocols as required. Public health impacts like NOx emissions have been inadequately assessed, putting vulnerable communities at risk. Water management concerns remain unresolved with no feasible plan for sourcing water for hydrogen production, violating the CPUC's requirements for comprehensive water analysis. The process has also violated equity and environmental justice principles delaying meaningful

engagement with EJ communities and perpetuating environmental injustices. Finally, the economic impacts and rate payer burden have been grossly underestimated with ratepayers funding projects that do not serve the public interest. Their public engagement has been superficial and disingenuous. SoCalGas has provided unreasonable short feedback, windows shared incomplete and inconsistent information and actively avoided discussing key issues like hydrogen blending, which directly contradicts their claim that the project focuses on hard -- to-electrify sectors. The voices of environmental justice communities and other critical stakeholders have been ignored, and the process has lacked the transparency and meaningful involvement that both the CPUC decision and SoCalGas' own application required. Because this process fails to meet regulatory standards and does not protect our communities, the organization -- my organization does not recognize this phase one process as legitimate. I also have in my hands a copy of a letter signed on behalf of Food and Water Watch, Protect Playa Now, Physicians for Social Responsibility Los Angeles and Communities for a Better Environment addressed to the Public Utilities Commission which outlines why our organizations are formally leaving this process. Therefore, Food and Water Watch is leaving the community based organization

stakeholder group and walking out of this meeting.

CHESTER BRITT: All right. Thank you for your comment. Marcia Hanscon, I think you're next. We're just waiting for the microphone for those of you online, and again, I don't see any hands raised online, so if you would like to speak, you'll need to raise your hand so I can acknowledge you. Pass the microphone to Marcia, she's next.

MARCIA HANSCON: Can you hear me?

CHESTER BRITT: We can hear you.

MARCIA HANSCON: Marcia Hanscon with the Ballona Wetlands Institute. Quick question, can we receive the summary slides that were here today because we didn't get anything in paper this time and usually we do. So --

FRANK LOPEZ: Absolutely. We always make the presentation materials available after the meeting as well. The court reporter --

MARCIA HANSCON: Thank you. I'm finally online so I could see some of them, but I see the first couple. But here's one of the things that's still troubling to me. When you got to the conclusions, as previously reported by your executives and also by some of the experts we've hear from, they're based on the possibility, but no evidence yet that hydrogen use eventually might to get to 100% hydrogen. Right now, however, and I think, Yuri, you said

for the foreseeable future, we don't know, it's kind of a question the use of hydrogen for powering electricity plants, and like the hydrogen house we saw in Downey, still requires 75% fossil gas, or methane, and being mixed with 30% hydrogen. And, you know, I've just seen numerous things over the last year or two about how all the scientists are saying that methane is such a bigger contributor to climate change impacts than we ever knew before, and so, you know, I keep hearing from the younger generations constantly in my ears "We are in a climate emergency." And Dr. Mark Jacobson from -- I keep seeing his things on Twitter and elsewhere about how every day -- he's from Stanford, I'm sure you know, and he keeps reporting how every day we're getting more and more genuine renewable energy from the sources we know are working in California and constantly expanding the amount of energy that is replacing -- renewable energy that's replacing fossil fuel use. An our fossil gas, the methane that SoCalGas has given us for so many decades, it is a fossil fuel and it is contributing to climate change. So, I guess, with all due respect to all the nice people here who I've have met and appreciate all the amazing amount of work you have done, how can these conclusions be, as have said, the conclusions seem to mean you're based on 100% hydrogen and that is not possible. So --

YURI FREEDMAN: Thank you, Marcia. Excellent question. As many others we have engaged on in these two years, I appreciate you bringing this up. So here's a couple facts to put the hydrogen into context. As I think most of you know, Los Angeles Department of Water and Power is on the path to start operations of the plant in Utah, intermountain power plant, next year. That plant, as you correctly said, is going to - - around the plant; however, by 2035, that plant is going to run pure 100% hydrogen. The Los Angeles Department of Water and Power is taking next steps with their, what they call, invasive plans beginning from Scattergood Power Plant which they are also going to transition to full 100% hydrogen combustion in 2035. Hydrogen combustion, pure hydrogen combustion, has been in dozens of plants. It's not technologically new and the equipment manufacturers stand behind their commitments to keep emissions of nitric oxide an acceptable level.

Now here's one more fact, and that's just hot off the press last week, as you may have seen, California energy commission just last week approved one $1.4 billion funding for 0 emissions building which reportedly concludes development of electric vehicles charging for the battery vehicles, but also building hydrogen fueling stations for -- especially for medium and heavy-duty

hydrogen fuel cell vehicles. This is, to be clear, 100% hydrogen. Electric fuel cell mobility runs on pure hydrogen today. It continue to do so tomorrow. So 300% hydrogen is a reality that comes in California at actually a rather rapid clip.

MARCIA HANSCON: To just to clarify, it works for automobiles and heavy trucks, but we still, from what I heard from the experts you have at ARCHES at UC Irvine and some of the other universities, they still don't know when, I mean I know you have a 2035 goal, but we don't know if we can get to that for the electricity plants. And I have to say, I believed Eric Garcetti, LA's mayor, when he said this was the end of natural gas in Los Angeles and you were going to phase out all those, you know, the gas and start using genuine renewables. And I you guys see this as a genuine renewable, but I don't see it when we're still using 70% methane. So I know you have a goal of that, but the experts seem to not be sure of that. So that's what troubles me.

YURI FREEDMAN: I appreciate the comment. And there are multiple scientists and technologies that the combustion of hydrogen is a reality today, scaling it up is what we are trying to enable. So I will turn the question a little bit around and say what we do know today is that we absolutely do need molecules to supplement

intermittent renewables. We know today that clean renewable hydrogen is the preeminent molecule to enable us to do that, and we know that the state of California is actually advancing adoption of clean hydrogen with multiple finding steps as does the federal government. We are doing our part connecting this supply of hydrogen which is coming with demand in power plants and refueling stations and other assets, but technical viability is not a question, which I think has been demonstrated amply, frankly worldwide. Again, we can take this conversation further offline. I'm happy to continue that.

CHESTER BRITT: Thank you, Martia. Joon, we're going to go to you next, and then we're going to go over to Roy online, and then we'll -- I know, we have some others that were here, but I think I was working my way around, going to go back online, and then I'm going to come over to this side. Go ahead, Joon.

JOON HUN SEONG: Hi, Joon Seong with Environmental Defense Fund. First of all, thank you so much for hosting this final round of discussions, and thank you so much for the summary presentations. I might be jumping the gun a little bit now because I know we're to talk about phase two process after lunch, but I think I heard the figure 1.5 millimetric tons. Is that a figure SoCalGas is going to move forward with with the expected throughput

for Angeles Link for the next steps of the process?

FRANK LOPEZ: Do you want to explain the range of throughput?

YURI FREEDMAN: I would refer it to the previous numbers. I know you've seen those, so the range we indicated in our view is the reasonable range of the project as been noted today. Based on the demand that we know today, the purpose of phase two, among other topics, is to understand this better because ultimately we're going to design the project with a certain throughput which has several dimensions to it, some are technical, some are market dimensions, and is important to understand. Our intent in exploring this up to date was to establish whether there's a technical visibility from various market and technical aspects, if that make sense.

CHESTER BRITT: Yuri, when we've said 1.5 to 1.5 throughput in the pipeline -- 0.5 to 1.5 I mean, is 1.5 considered the cap of what the pipeline is capable of delivering?

YURI FREEDMAN: It is not a cap. It is something which in our assessment based on what we know about other markets, if you look at the total addressable size of the markets, you can never expect that to be covered by one asset one pipeline, whether that's oil, gas, multiple assets that it takes. So we believe based on what we know

about other markets that that relationship between the market side, which at the upper end is about 6 million tons per year within the large pipeline given how much of this demand is concentrated to the Los Angeles area, we believe that 1.5 is a reasonable upper end, but it's not a technical cap that cannot be surpassed.

CHESTER BRITT: Okay. Great. We're going to go now to Roy online. Roy, if you can unmute yourself, we'll do the same, and you should be able to introduce yourself.

ROBERT ROY VAN DE HOEK: Hello, my name is Roy, Robert Van De Hoek and I'm with Defend Ballona Wetlands. Can you hear me okay? I'm keeping my Zoom -- my video off in order to hopefully make the audio better.

CHESTER BRITT: We can hear you perfectly.

ROBERT ROY VAN DE HOEK: Okay. Great. So thank you for the summaries. Happy holidays, again. I see festive lights of Christmas there behind you and around and it looks good. I wanted to ask a kind of a question about evaluating, now I'm not saying I'm a friend of diesel fuel or gasoline engines and that, but before we were using methane gas and now maybe hydrogen gas as generating --for generating, making electricity through generators that make electricity. I know Edison in the old days we say, we could call it old diesel and gasoline motors to run -- to generate -- run the generators to make the electricity

for Edison, and now as I understand it methane is used to make the electricity for generators with Edison. And the maybe green hydrogen is the next place to go. Diesel has now been made a lot cleaner so has some particulates, I guess, but were comparisons made? I know it's the competition from methane and green hydrogen if we were to go back to diesel or gasoline for running generators to make electricity, and then by the way Chevron used diesel motors and that too. Anyway, focused on Edison in particular is one of my particular thoughts. And then secondly -- can you hear me?

CHESTER BRITT: Yeah. We heard your question, Roy, but Yuri was starting answer it. Were you able to hear him?

ROBERT ROY VAN DE HOEK: Yes, I was. I had one secondary for the one speaker who spoke on the pipeline route. Should I say that at same time, or do that afterwards?

CHESTER BRITT: It's up to you.

ROBERT ROY VAN DE HOEK: Okay. Well, I'm curious about an explanation again about why they are running down the freeway pathways. Not that I'm opposed to that, but what is the -- were there economic reasons, health reasons, safety reasons to run it down the freeways and which freeway routes to use through the San Fernando

Valley whether it's the 405 freeway, the Interstate 5 freeway, it looks like maybe even the 210 Freeway has been considered as the routes to bring the gas into the Urban LA region. And there's a little zigzag in the line. There's Santa Clarita as it's coming down the highway 14 from the Mohave Desert. I was curious about why it does a little zigzag as it comes close to Interstate 5. Thank you.

YURI FREEDMAN: Thank you, Ray. Let me touch up on your first question. And, again, to the extent that I don't cover it fully, I'm happy to connect offline to continue the conversation because that's a deep and complex topic. But maybe in a nutshell, if we step back and ask ourselves how we are producing power generation, obviously coal is in the past. Liquid fuels were used at some point to make electric power. It largely moved from liquid to gaseous fuels except on occasions where it's physically impossible, for example Hawaii, but by large gasses have been found more effective and efficient way to make electric power and power plants. And that's why, of course, the large -- the capacity in California of the fossil fuel generation today is almost entirely based on natural gas -- and that's what Angeles Link aims to replace with clean renewable hydrogen. So, that's part of the answer. Maybe not a part as that clean fuels don't

really compete with each other as much as they complement each other because each of them uniquely feeds some, what we call, NU Sectors. For example, if we talk about some sectors such as aviation or others, oftentimes people talk about sustainable aviation fuels which renewable diesel will be a logical precursor. There are some sectors that call for little fuels and they use them as aviation today. And there are other sectors which historically have largely converted to gaseous fuels and that's what power generation where ultimately it's gas today, but is hydrogen tomorrow. I'm hoping that that high level answer makes sense. Again, happy to continue the conversation.

CHESTER BRITT: Amy, did you want to add anything?

AMY KITSEN: Yeah. So I'll -- thank you, Yuri. I'll touch on your question on routing, Roy. A bit of a reminder with the report because kind of where we are in phase one versus where we're going to be in phase two is in phase one we looked at a wide range of initial corridors that were identified. It was in that map of over 1300 miles, and then in phase two we're going to further refine that into, when you were talking about how the rout was jetting over at certain positions, that and a more detailed granular analysis will be done in phase two. The corridors as they are today leverage potential opportunities for routing that include energy corridors on

federal lands, federal interstate corridors, alternative fueling corridors in industrial areas with high demand to minimize the impacts to the community and the environment. Adding to your point about why we chose the ones we did coming into the LA Basin is coming into the LA Basin is constrained by geology including several mountain ranges, Sierra Madre Mountains, San Gabriel Mountains and Santa Rosa Mountains. Additionally, there are multiple national forest that surround the LA Basin. Given these features, there's a limitation of potential pathways to enter the basin and lands that surround it.

CHESTER BRITT: So safe to say there's a lot of work to do in phase two still to get to those detailed questions. All right. We're going to come back in the room --

7:

ROBERT ROY VAN DE HOEK: Thank you. I just wanted to say thank you for both of them answering the questions and didn't hear the bigger picture point of view liquid fuels, I'll say it because Freedman used the term "liquid fuels," but I'm referring to natural gas I know was getting used or methane gas was being used because it was considered cleaner, but is methane glass still cleaner, or some data on now that green diesel is out there and all the other suggestions, I'm still interested to hear more about that

at some point. Thank you.

YURI FREEDMAN: I'll say in two words, again, I think the scalability of hydrogen is what drives the interest of power generators in that particular fuel. Again, at some point Los Angeles Department of Water and Power as they keep releasing the materials that they've developed in the course of their analysis, they've looked at all the options. They left no stone unturned, and so they ended up with hydrogen because they thought more feasible, more cost efficient, more particularly appropriate option. But, again, that's something we can talk significantly more given the complexity of the issue, Roy.

CHESTER BRITT: All right. Thank you, Yuri. Raul, we're going to go over to you. If you can introduce yourself.

RAUL CLAROS: Raul Claros, Reimagine LA Foundation. As we're here in the holiday season, we're here at the end of the year, and we're reflecting, and I can't help but reflect on where we're at. When I was driving up here I was excited because we're wrapping up a lot of hard work. A lot of work that SoCalGas brought us all to the table, and I've said it before and I'll say it again, they didn't have to. These are tables that black, brown, indigenous folks where I grew up in South Central, Pico Union, West Lake, McArthur Park usually don't get invited to. So

first of all, thank you SoCalGas for your leadership. Thank you for, and to everyone that hung in, came to these meetings whether it was virtually sometimes, sometimes you didn't, but you're still here, right. And the fact that we made it this far is historical, and where we're going is what I was really excited to, and I'm still excited, to look forward to.

But I got to point out the pink elephant in the room. And I know the pink elephant just left, but this type of stunt is why we don't get invited to these types of tables. And then even when we do, a lot of people don't come back. So I'm glad this happened. I wish it would have happened sooner, because the overtaking of meetings that we had to put up with, and then at the end, for a tantrum, a tantrum to happen. Well, vaya con dios. God bless you. Keep it pushing. But I want to make sure that the focus here comes back to what we were brought here to do was problem solvers, solution based, have healthy debate, to be educated, each one teach one, and a whole lot of thing things that I put SoCalGas through, personally, through the ringer, you guys answered the bell. And I got to give you guys my hat, right, and we represent communities of color and historically disenfranchised areas, so those folks that just said that they and their people got up and left, is a very small

minority into who the people that the company of SoCalGas represents. So I just wanted to make sure -- hello? I just want to make sure that this thing is working, this thing is on the record, and that once again, we are here talking about the facts. The fact of the matter is we're not going to get it perfectly straight. But we're going to make progress and I think that's where we're at. And I'm looking forward to getting into phase two. I thank everyone that's put in the work to get us this far. Thank you.

CHESTER BRITT: Thank you for that comment, Raul. I'll just say as the facilitator that I've appreciated, we created some guiding principles at the very beginning of decorum and how we're going to treat each other, and i would say that the last two years these meetings have been very protective, we have had robust conversations, there have been challenges to some of the data, and that was the purpose of these meeting. I think Yuri and others who have presented have done a great job of listening to your comments, trying to answer questions. It's not always a perfect relationship of how that pressure comes together, but these meetings have been very protective. So I thank you for echoing that, and I would just acknowledge as a facilitator I feel like you guys, for the most part, have done your part to play that role and be respectful of

other people. So thank you for that.

Tim, we're going to go to you next. If you could grab the microphone and introduce yourself.

TIM KAMERMAYER: Thank you, Chester. You're doing a great job, by the way. Good morning, everyone. Tim Kamermayer, Director of Policy and Regulatory Affairs of Green Hydrogen Coalition. Little new to this, but GHC is not new to these discussions. While this is my first time, I know that Janice and GHC have been prominently trying to be a part of this and engaging in a way that I just want to express utter appreciation and gratitude I know that SoCalGas and leadership has really taken a lot of time to not only incorporate the feedback and guidance and really hear it out, but bring it into the actual documents. As the final summaries note, it's clear that you all have taken a thoughtful approach to listening to the feedback provided by this group and ensuring that it actually gets brought up, too.

With that, I also want to take a moment to thank Maryam for taking the time to be here in person. It is one thing to listen to it, to read a summary of it, to gain a recap and have meetings afterwards, it's another to be here for these direct real engaging communication, and I think it demonstrates how interested you are in not only getting this Angeles Link launched and really successful,

but doing it in a way that the community understands. It's not just for the benefit of a gas company, it's for the benefit of all the residence of Southern California. With that, the GHC, as you know, believes in clean renewable hydrogen delivered by the Angeles Link can provide a critical and cost-effective mechanism of both reliability and resilience for rate pairs across Southern California, particularly in long duration as noted and in ways of enabling repurposing of existing power line infrastructure. As the public advisory group continues into phase two, GHC would as that the taxpayer and environmental benefits that come from converting biomass to clean renewable hydrogen also be included. Obviously, this is a discussion we've asked a couple of times, and I know it's a little bit more ancillary benefit that may not seem as direct, but when you're talking about being able to address the fact that Los Angeles spends over $700 million per year processing solid waste for landfills this is an opportunity to use that pipeline to not just create real economic benefits as the studies have notes, but also address climate change in these indirect ways. Reducing landfills and being able to take some of that waste that is just sitting there and turn it into biogas is a really unique opportunity that I think the Angeles Link pipeline has a chance to cement. So GHC just thanks you for the

opportunity to be a part of this and looking forward to the discussions throughout phase two.

CHESTER BRITT: Thank you for that, Tim. You just pass the microphone, we're going to go all the way around.

HYEPIN IM: Again, Hyepin Im with Faith and Community Empowerment. So, I do appreciate Raul's comments. Good to see you. I want to acknowledge, as Raul said, SoCalGas doesn't have to. Community groups can be upset, but you don't have to. So, again, thank you for setting the table. As just a third-party and nonprofit whose core focus is not in this space, this is a lot of information, and so I'm kind of sad that left actually the table. Because I think whatever points that they raised, I would hope that we could all work together on it. So they did raise questions, and the one thing that I do remember about contamination of water. And, again, I don't know those questions are valid or invalid or inconsequential, I just don't know, but because they did raise the question, is there some kind of a way that you might be able to address it? At least for now on this one, the contamination of water, is that something that you could at least respond to at this moment? Whatever the other points, I don't know.

RAUL CLAROS: Can I interject real quick? So, I been, respectfully what I would say we should try to avoid

because we had to put up with that, what is it, two years? It was just the same questions, the same points, you know, those of us that attended multiple meetings we had to let that happen and all that. So, they chose their method, we got to respect it, I just really want to encourage this group to move forward.

FRANK LOPEZ: I'll just say, I don't recall specifically the question that they had. I'll reach out to Andrea and see if she's willing to provide us with a copy of the letter and we'll review her statements and her questions, and happy to discuss with her. I just don't recall specifically what she asked about.

RAUL CLAROS: I mean, she made comments about contamination of water is one thing that I did recall. She made out a few points. Again, I'm not the expert, so maybe these questions are irrelevant or inconsequential, I just don't know. And that's why I'm asking.

YURI FREEDMAN: I think it's an important question. I think water is obviously in California. I think it's an important question. I think the big finding among others we have established in phase one is that the water needs to address demand for clean renewable hydrogen is between 0.02 and 0.1% of total water use in California. Just to put in the context what the needs are today as what we use as a state. Now, that does not mean we should waste that

water. What it doesn't mean is that first, the amount of water that we need for the project is relatively small compared to overall grand scheme of things; and second, what it means is that that water purification is something which California has been doing for a long time. Of course the source is going to be protected and purified and used, and fortunately, water is such a small component of the cost of delivered hydrogen that if we find water and increasing its cost to a factor of zero actually it's not going to make it much more expensive. So we have looked at that and analyzed it, but again, the report is out there, and we would be been happy to continue engagement.

CHESTER BRITT: All right. Rashad, you're up.

RASHAD RUCKER-TRAPP: I just want to echo what my friend, Raul, said about this process and engagement. I, too, thank you guys, thank SoCalGas for setting this type of engagement in this process. It does not happen, it should happen more often, and I hope that going forward, this becomes an ongoing process where more and more and more community engagement continues to happen. And not only this project as we go into phase two, but into other projects to come. There are going to be much more innovative projects that I know the great people at SoCalGas are going to come up with, and we'll be going

through this process again. And I think that this was a good opportunity, not only to engage, but to also learn. I mean, this has been definitely a learning experience for me, personally. A lot of material that I'm still going through and still learning, and I'm excited to know what the future is going to look like for us as we talk about environmental changes and the concerns of an environment. We're not going to say that these things are always perfect. Innovation is never perfect, but they are going to happen, and the fact that we are engaged and involved is a huge win, not only for us around this table, but for the community as well. And so, again, I echo my friend's words in saying thank you to you guys. Disappointed that opposition did leave because we can always learn from them too, that is not always the best practice because, again, in order for innovation to work, we all have to engage with each other no matter how much we disagree, how much we may have a difference of opinion, whatever. We all should remain at the table, regardless. I even thank -- thank you guys because I know there is reservations about the project around the table, different concerns, but the fact that you're still sitting here and still engaging is a plus and a win for all of us. So thank you guys again. Thank you to all of my colleagues here at the table.

CHESTER BRITT: Thank you. If you could pass the

microphone to Enrique. And before you start, Enrique, I just want to do a time check. We're a little bit behind schedule now. We want to get to lunch, but we do want to take the questions of people who have not spoken, and then Tyson, you've raised your hand online so we're going to get to you as well. So we'll do that, and we'll break for lunch. Actually we have one more presentation then we'll break for lunch. Again, we're going to be here all day, we'll have the reception as well. The staff can answer your questions if we don't get to all of them during the actual member discussion.

ENRIQUE ARANDA: Thank you, Chester. I just want to echo the sentiments of my colleagues to my right, and I think one of the biggest takeaways from the last two years is that we didn't come here as friends. A lot of us came here with very opposed -- first of all, being very critical of any regulatory agency of any project of this magnitude, and of any public engagement mechanism because we were sceptical of how it's gone wrong in the past. I remember saying two years ago how we didn't want another scoping session where we have people color just agreeing with the agency and being brought in last minute. So with that challenge, and with Frank, I remember giving Frank and so many of you such a hard time, but we've gotten to a point where we -- one of the takeaways that is tangible is

that we have a public engagement mechanism that is robust; that has been inclusive, like it has been pointed out; and is really reflective of even where we are today. I grew up two blocks away from here, and I grew up in the middle of the crack pandemic. I grew up in Lynwood. Lynwood today we still have -- one of the biggest issues, of course, is still crime. I happen to work with Soledad Enrichment Action, one of the largest gang intervention agencies, and we are here as advocates for the environment because we also know that along with the lead and bullets, comes the lead in the air, stationary and mobile sources of pollution, that we know too well. We know why our children have asthma in my family. We know the 710 freeway in proximity of that. And that's why we are here today. So without preaching to the choir, it is important to point out where we are today and how we walk away today not a stranger, but as a coalition. We're not -- I remember somebody calling me a yes-man in one of the sessions I attended when I had COVID, and couldn't believe that because I've been critical of every institution. And we became activists out of self-preservation and that's why we've gotten into the work we do, and I look around the room and I see so many, from my brother here on the red road to Dr. Cid with MAOF, varying sizes of organizations that are advocates to improve the quality of

life for all California. So, I think if anything it around this festive time of Christmas and the holidays it's important to celebrate and be festive of walk away with today, it's really the culmination of such hard work. But also creating, again, public mechanism that can be an example for other public works projects. And we talked about the corridor where it failed, we talked about Prop EB and so many other labor projects that have gone wrong. But we are not there. So brother Raul, brother Rashad, I agree with you. I'll pass on the mic because it's very important to just recognize the staff and recognize the staff of SoCalGas being at a point where even though you have other staff, Andy, you brought in the experts. You brought in two public engagement firms that just wonders and really set an example for other public works projects going forward.

So thank you.

CHESTER BRITT: Thank you. Cid, you're up.

CIRIACO PINEDO: Thank you. Again, I'll echo what you've already heard, and thank you for leading those comments in the manner in which you did.

CHESTER BRITT: Cid, I'm sorry, could you say --

CIRIACO PINEDO: I'm sorry. Ciriaco Pinedo, Presidency of the Mexican American Opportunity Foundation. Thank you for the reminder. I think it's also important

to highlight that, and it was just said, we come into this with intention to cooperate, intent to cooperate. We know that whenever you engage in a large-scale project like this, there's going to be opposing views and comments, and that's okay. We welcome them. We can learn from them, but I also want to say that outside of these meetings, you have also been open and receptive comments and to feedback, and I've had them. I've shared them with Frank and Andy and whoever, and that for me also demonstrates your commitment of engaging the community. My concerns have always been the environmental impact, the routing and the cost. Those are the top three and extremely important because without fail, when things like this happen, and the community isn't engaged, it's underresourced communities that take on the brunt of the impact of these types of things. So we will hold you up accountable, we will remind you of what was said and what we talked about, and the fact that we can have and be engaged in a conversation like that I think is a testament to your commitment to truly be community engaged. And so, thank you, again, to everyone at the table that chose to participate, that chose to be engaged, even when we perhaps didn't want to or we had to bring up these difficult topics, you create a safe environment which allowed us to be brave then in our comments. And so,

please, please continue to do that, and continue to engage us so we have an opportunity to be open, honest and participate in a process that will ultimately impact our lives, our health and our wallets. So thank you.

CHESTER BRITT: Thank you, Cid. Ricardo, we're going to go to you next, and then go online.

RICARDO MENDOZA: Hey, everyone. Ricardo Mendoza again, with CRCD, Coalition for Responsible Community Development. I want to echo what's already been said. I want to reemphasize a few more things. One is any time we're going to have a shift or change in any type of energy, there's going to be concerns, and there's going to be issues. It speaks back to the issue of innovation, right? And it's a matter of being heard as a community. I want to commend SoCalGas and the entire team because you brought a broad spectrum of nonprofits that serve the region throughout. Voices that have concerns and issues on multiple fronts and you've done the best you can to adjust them so far, and we are pleased to have as many people here at the table as we do today.

I think on our end, we echo all the other comments. The only sentiment I haven't heard so far is projects will get built irregardless. We see that throughout the state, throughout the County. This process has been different because it's really incorporated public

comment through these convenings, and you also look at what does the workforce look like. And for us as an organization that's focused on workforce, that's been a critical issue and you've elevated that continuously. So we look forward to having that conversation. We're ending the year off with a great, I think, conclusion and paving a path for how we can continue this conversation moving. So thank you.

CHESTER BRITT: All right. Thank you. Tyson Siegele, we're going to go over to you next. If you could unmute yourself, we're going to unmute you as well. Tyson? It looks like you're turning your video on, thank you for that.

TYSON SIEGELE: Yes. Sorry, it was taking me a second to get everything unmuted and working. So my name is Tyson Siegele. As Chester mentioned in the beginning, I work for Clean Energy Strategies and in this particular form, I am speaking on behalf of The Utility Consumers Action Network. There were a couple things that have been said so far that I wanted to just provide the input from the Utility Consumers Action Network on -- UCAN for short. One of the things is a few people mentioned that SoCalGas did not have to do this process, did not have to bring us all to the table, and that's not true. SoCalGas was ordered by the Public Utilities Commission to convene

these meetings. And so I'd like to express my appreciation for the commission for its requirement that SoCalGas do this. Like folks have mentioned, this process has led to some interesting conversations, and it has allowed us to share our thoughts with SoCalGas. It's also been a little bit disappointing for UCAN. One of the things that was disappointing was the bifurcation of the Planning Advisory Group with a community -- from the community groups. And so when we have been providing our feedback, one of the things that would have been great is if all of the groups were able to meet together to be able to hear input from each other so that more technical organizations like UCAN would be able to hear the feedback provided by the communities and vice versa. The other couple of things that I want to mention before I get into my general thoughts on the process, one of the things that I am really concerned about is the comparisons that SoCalGas has been making between the baseline and where we're going from here. So SoCalGas has typically used as a baseline to make their hydrogen project look better than what it does is the current industry options that we have, diesel, methane etc. And then comparing the, for instance, the reductions NOx emissions based on using hydrogen instead of using methane. UCAN doesn't believe that that is an accurate depiction of the way that we can move

forward as a state, as the State of California. For instance, solar and wind do not emit NOx, hydrogen does when hydrogen is burned in order to produce electricity. Diesel is currently used in many medium and heavy-duty trucks in order to move things around the state. Some thing that we absolutely need, we have to have transportation. We can do that in a cleaner way with battery electric vehicles than we can with hydrogen vehicles. Hydrogen uses substantially more energy than producing electricity from battery and -- producing electricity from solar and wind, and then using that through battery electric vehicles. So, just from a high-level perspective, I don't want to get into the details that we and other stakeholders have provided in feedback to SoCalGas, but those are some very high-level considerations that SoCal -- that UCAN was disappointed that were not better included in the overall process. So, in terms of Planning Advisory Group process --

CHESTER BRITT: Tyson. I'm sorry. Frank was going to address one of your comments. I just want to make sure -- I wasn't sure of any other questions or thoughts you might have.

TYSON SIEGELE: Frank can go ahead and answer.

FRANK LOPEZ: Go ahead Tyson. Sorry to interrupt you, go ahead.

TYSON SIEGELE: No problem. So in terms of the Planning Advisory Group process, like I said, it has led to some interesting conversations. I appreciate that about the process. However, UCAN's high-level thoughts on the PAG process can be summarized as disappointment. Disappointment that SoCalGas has refused to use accurate inputs and reasonable assumptions for its calculations and forecasts. Disappointment in the minimal updates and revisions to SoCalGas' phase one reports after receiving UCAN's feedback and other PAG member's feedback. Disappointment with SoCalGas withholding data or papers and other important inputs that SoCalGas used as the basis for its phase one reports. For example SoCalGas -- I'm sorry, UCAN has asked for and has not received all of spreadsheets and work papers used for the phase one studies, and has not received computer modeling used for the studies, has not received SoCalGas' contracts with the Angeles Link's consultants that it has used, has not received recordings used as input for the studies. Now, UCAN was told that those recording don't existed, yet SoCalGas still claims those interviews as a basis for some of the conclusions that it makes in its final -- final report. Disappointment that SoCalGas has refused to commit to delivering clean hydrogen produced in a process adhering to the three pillars of clean hydrogen, which is

hydrogen that is produced using renewable electricity generation facilities that are close to the electrolyzer, and with renewable energy matched hourly. Those are the three pillars. The date on this is clear, without using the three pillars of hydrogen production, hydrogen will not be as clean as it could be. Numerous companies that are producing hydrogen and/or plan to produce hydrogen support the three pillars. UCAN find SoCalGas' continued opposition to three pillars extremely disappointing. Disappointment that SoCalGas gave PAG meeting that were -- sorry, scheduled PAG meetings that were suboptimal in terms of the amount of time between the release of the reports, draft reports, materials and when then the meeting is held. For example, today's meeting. Today we are meeting one business day after the release of the final reports. That's not enough time for us to review these reports in order to provide meaningful feedback to SoCalGas during these discussions. So because of these issues with the PAG process, UCAN anticipates that its review of the phase one application will take more time than if UCAN had been able to receive the data and work papers and if SoCalGas had responded to the feedback that UCAN has provided through the process. Having said that, we look forward to continued participation in the overall process, and we will continue to review SoCalGas' filings

within phase two. Thank you.

CHESTER BRITT: Thank you, Tyson. Frank, did you want to --

FRANK LOPEZ: Yes. But you know what -- first of all, thank you, Tyson. That was all valuable feedback. I'm going to be talking about the PAG and CBOSG process next, so I'll -- I'll just --

CHESTER BRITT: Include that in your remark. Okay. We're going to go to Katrina Fritz. You have your hand raised. If you could unmute yourself.

KATRINA FRITZ: Hi, everyone. I'd like to thank the SoCalGas team for including such a broad group of stakeholders in the community and project advisory teams. I would also say that as the largest hydrogen trade association in the country, we represent and include over 110 hydrogen stakeholders across industry as well as public agencies, community groups and tribal organizations. I also learned a great deal throughout the process and hope to be included in the phase two advisory process. The phase one analysis has established that there's tremendous long-term community benefits that can be released by Angeles Link, and the studies also demonstrate that there is a requirement to decarbonize the gas system alongside electrification, and that hydrogen is the best option to serve many end uses including

hard-to-electrify sectors consistent with global research and studies from academia, national labs and government agencies. I also encouraged SoCalGas to conduct further analysis in phase two on cost effectiveness and establish a more direct connection to the affordability discussion that is currently a top policy priority in California. Thank you.

CHESTER BRITT: Thank you, Katrina. And Marcia, we're going to end with your comment for this section, and then we're going to move on to the next presentation. So if you could make your comment. We can get your microphone --

RAUL CLAROS: What group was Tyson from? Because I don't think I've ever seen him at the meetings. I want to be clear what group that was. Did he say CPAK?

FRANK LOPEZ: He's with UCAN and actually he's been at -- he's been at every single meeting we've had, just he joins remotely.

RAUL CLAROS: Remotely.

CHESTER BRITT: He's part of the PAG.

RAUL CLAROS: UCAN is --

FRANK LOPEZ: He's part of the PAG and you're PAG with CBOSG. So different group.

RAUL CLAROS: Utility Consumers what?

CHESTER BRITT: Action Network.

RAUL CLAROS: Okay. UCAN. Thank you.

CHESTER BRITT: Thank you. Marcia?

7: Thank you so much. Marcia Hanscen with Ballona Wetlands Institute, and I think your question goes actually goes to what he said that it's been challenging that we've had the two different groups and we haven't always been together, so that may be part of why there are different perceptions. And I just want to say, I haven't seen meetings being taken over, not in the community -- what are we called? Community-Based Organizations Group. I haven't seen that. I did see some people stand up and say some things and then walk out, but that hasn't been done before, but I just like to suggest that we, you know, we have some real divisions in this country, and we need to not be having these divisions in my view. We need to be figuring out how we can work together, especially for the planet, which we all rely on. And I just want to say that I participate with Physicians for Social Responsibility, Communities for a Better Environment, Food and Water Watch on a state-wide environmental justice coalition called Last Chance Alliance, and they have been successful at persuading the legislature and the governor to require 3200ft setbacks buffers from oil wells in people's backyards. We're not going to have oil wells in people's backyards soon in California and that's a good

thing. And these environmental justice groups, I think we need to listen to, because they are environmental justice leaders. Katrina Fritz just mentioned a requirement to the decarbonize energy, and I think we need to figure out how to have common language here because fossil gas that is brought in by pipeline from other states to California to put in the ground at Aliso Canyon, Playa Del Ray and other places, fossil gas. That's what it is. I know a lot of people call it natural gas, like natural oil, but it is a fossil fuel. It is a carbon. If we're going to decarbonize, we need to get off of fossil gas. So, I know that's your name, SoCalGas, I've talked about changing that. But the point we need to figure out how to have the same language so we're not talking past each other and having things that are confusing to people, and that's maybe, from what I heard, maybe some of the frustration. Anyway, thank you for listening to people. Thank you for letting them speak because I do have a lot of respect for everybody in this room. That includes all my friends at SoCalGas that I've gotten to know.

CHESTER BRITT: Thank you so much, Marcia. We are -- ironically a lot of the comments are about our subject matter, which is a summary of the PAG and CBOSG process. Roy, I see your hand raised. We're going to take -- we; re going to go to this presentation with Frank, it's only

three slides. We'll pick up your comment and any others before we wrap up for lunch. So I'm not going to turn it over to Frank, he's the Regional Public Affairs Director for SoCalGas and he's going to make a presentation on the summary of the PAG and CBOSG process.

FRANK LOPEZ: Thank you, Chester. Those were really, really good comments and some great feedback, I really appreciate that. I want to spend the next couple of minutes just recapping and discussing the 20+ months that we spent together working on these phase one activities. I want to clarify a couple of things. So, Tyson is correct that we were directed by the Public Utilities Commission to put together a Planning Advisory Group, but that was our idea. We proposed to assemble a Planning Advisory Group to advise us through this process, so it's something that we actually included in our application. It was a good idea and proved to be very worthwhile. We were also directed to put together a Planning Advisory Group, we were not required to do a CBOSG. That something that we came up with, and we thought it was important to put together. I heard some really good feedback about the reasons why we should have combined the two. We chose to do them separately for different reasons, but it's something that we were going to include in our phase two outreach that I will speak to in a bit. And then we were

required to meet quarterly. We ended up meeting 27 times over a 20 month period. We ended up meeting, at some point, more than monthly. That's not taking into account the one-on-one meetings that we had. Nonetheless, this is all really, really helpful feedback. I'll kind of just go over really quickly, I want to acknowledge that this type of stakeholder engagement process that allows for diverse points at the beginning of the development process is really unprecedented for SoCalGas, and I think it might even be unprecedented for a California investor owned utility. We made a conscientious decision when we filed the application in phase one to create this stakeholder advisory group to advise us at every step of the way because we knew that stakeholder input early in the process was necessary if we were going to be successful in developing a large complex project like Angeles Link. I was personally involved in creating the PAG and CBOSG and having participated in dozens of advisory groups myself in my career, I knew this process was not going to be easy. Nothing worthwhile usually is. It wasn't going to be easy for us and I'm sure at times it hasn't been easy for some of you as well. I think we heard that in the critical feedback and we welcome that feedback. But I knew that in order to be successful, we were going to need help and that's why we went out and hired Arellano and Associates

and Lee Andrews Group to help us facilitate these advisory group. For those of you who are familiar with them, you know that they have a lot of experience facilitating these types of stakeholder engagement activities for other large public infrastructure type projects. We've never done anything like this so we really needed their help and we needed your help along the way. We had some challenges along the way. We had some critical feedback, and a lot of that was warranted, but I think what I'm proud of is we were really open to that feedback, and we were open to doing things differently even through the process in making things better. And I think with Arellano and Associates and Lee Andrews Group and with all of your help along the way I think we put into place a process that allowed for meaningful input.

On this slide here, I just want to start up the process and say that we didn't know where Angeles Link was going to start, but we knew where it was going to end up and that would be to serve hard-to-electrify sectors in Los Angeles. We got together at the beginning of this whole thing, we were thinking who should we invite to be a part of this process? We had some interveners that we wanted to join, but from the Community Based Organization stakeholder process, we wanted to really cast a wide net. I think at some point we ended up inviting over 200

organizations to participate. So we went far and wide trying to, you know, make sure we had some good geographic diversity, we were getting organizations from different sectors, different perspectives, and ultimately we ended up with 70 organizations participating in the PAG and the CBOSG combined. Forty on the Planning Advisory Group and twenty -- eight in the CBOSG. There's a complete list there -- I know it's small. We'll show the materials with you if you want to see everyone who joined, but we want to acknowledge that we need more feedback from communities from along the four potential routes. You notice this is a very LA centric advisory group. Especially on the CBOSG, I think we acknowledge that -- especially now that we have a better sense of where these potential routes could go, that we would want to expand membership to include organizations from the San Fernando Valley, Antelope Valley, the San Joaquin Valley, including more organizations -- more representatives from the tribes.

In terms of the process, next slide please, I mentioned earlier that when we first started this process, we intend to hold quarterly meeting. I think we proposed to do this phase one project in about 18 months. That have been total of five meetings. And the PAG and CBOSG, I know that -- just full transparency, this ended up being a lot more work than we expected. I think it was

definitely worthwhile. You know, we had some challenges and we learned a lot from you about how to improve our process and I kind of want to just highlight some of the things that we did differently that we learned for you when we started. We heard you loud and clear that you wanted more opportunities to receive and provide feedback. You wanted more flexibility on how to participate in these meetings. You wanted more representation from other organizations that you felt were not included in here, including include tribes. You wanted more notice and time to review and comment on materials. You wanted more meetings in non-SoCalGas facilities throughout the region, as much as we love the Energy Resource Center. We made these changes along the way, right. I'm going to highlight some of those changes. We created -- we had virtual meeting options. We love seeing you in person, and we want to thank all of you who take the time to commute out here and take time out of your day to here, we know that not everybody can, and so we wanted to make sure we had an option that folks could still continue to contribute virtually. We expanded membership. When we first started, we realized that even though we invited 200 organization, that there are folks that we might have missed and you had some really good suggestions on what folks to invite and we were open to extending additional

invitations to people. We wanted to make sure we were getting materials to you in advance so that you can review those materials and come prepared to provide feedback. And we extended of the comment period. We acknowledged that -- we did release a lot of the studies, especially on the back end and it was a lot of materials for folks to digest. We tried to stagger it, but nonetheless, it was still a lot of material, and so I want when a focus group freaked out and said, "Hey, we need more time to comment," we were happy to grant extensions to make sure to give people time to weigh in.

Those are just some of things that we changed, and I just want to close on this, by the number slide to really recap. I want to take a moment to just acknowledge the amount of time and effort that all of you put into this. This was a lot of work, not just for us, this was a lot of work for you too. We ended up meeting more than quarterly, as I mentioned, 27 times in total. I really want to thank the folks took opportunities to actually submit written comments to us. It was a lot of material to digest. I know sometimes it was very technical maternal. I want to let you know that we spent countless hours reviewing your materials. We had teams that we would meet and we read every single document that you submitted line by line. Sometimes more than once. And we

had a lot of healthy discussions about it, but all of you had some fantastic ideas, you had -- ultimately our work, our phase one studies benefited from your contributions. I'm sorry to hear that some of you may be disappointed, but I think ultimately we did the best that we could, you know, creating this new process for us and getting all of your information, reading all your materials and responding in a timely fashion. So thank you for all that.

In total, we ended up getting over a hundred comment letters that totaled more than a thousand pages of feedback, and we read every single one. So thank you for the folks who took time to submit those comments. We learned a lot of -- and incorporate this into the next phase when Shirley does the phase two overview after lunch. I'll make sure to kind of highlight what we're proposing first, our stakeholder engagement activities for phase two, and actually that included a lot of the feedback that you provided earlier, so I'm -- sounds like I might have gotten it right this time, but I do want to acknowledge participation. We were meeting with the team and I wanted to know who attended most of the meetings that we had. We had some perfect attendance from some folks and I just want to acknowledge -- we printed out through some certificates. It's a really small thing, but

look, we know that participating in this thing took time. So I just want to acknowledge the folks that really went above and beyond. I think we only had two people that did not miss one meeting, right? The person that didn't miss one meeting, made every single meeting and actually submitted comments on most of the studies, was Tyson. So I want to acknowledge Tyson. So, Tyson, thank you so much. I know you were disappointed, but I'm not disappointed in you. I appreciate all of your feedback. You're not here presently, so we're going to mail you your certificate. The other person that had, I'm going to say perfect attendance, but they one meeting, but not really because they attended virtually so technically they've made it to all meetings, and this person attended the most amount of meetings in person is Enrique from Soledad Enrichment. Thank you. We had a couple of folks who had near-perfect attendance. They only missed one meeting. I want to acknowledge those folks, too. The other one is Katrina Fritz from California Hydrogen Business Counsel. Thank you, Katrina, I think you only missed one meeting. I'm sad this person isn't here, because he also made it to almost all of the meetings and he had wonderful feedback, it's Norm Peterson from Southern California Generation Coalition. I felt like something was missing, and it was because Norm wasn't here. So sorry Norm, you couldn't

make it. And then a couple of CBOSG members who only missed one meeting. One was Roy Van De Hoek. Thank you, Roy for your near-perfect attendance. You can give Roy a round of applause. Rashad Rucker-Trapp from Reimagine LA, thank you so much. Michael. Michael Berns --

ALMA MARQUEZ: Rashad was late, but he was here.

FRANK LOPEZ: He was late, but he still made it so he gets credit. It wasn't a timely award, it was a participation award. Michael Berns, thank you for only missing one. Really appreciate that. And then of course, Marcia Hanscom. Really appreciate -- you attended a lot of them in person as well. I really appreaciate -- you had a far commute so I really appreciate that. All in there, this is an opportunity -- I did receive some feedback from you, but if you have additional feedback about the PAG and CBOSG process, things that you thought that worked well, things that you thought we could've done better. I've already heard some, but I'm open to other suggestions. Like I mentioned, I'm also going to go over our proposed stakeholder engagement for phase two a little bit later today, so you will have another opportunity later as well.

CHESTER BRITT: Great. We'll be passing out your certificates, and I'm assuming you will frame them in your house. We are a little bit behind schedule here, we have

lunch for you in person here, so we're going to take the time to left get our lunch. We want to try to get back here by 12:20, so maybe we can make it a working lunch, and we are going to have a reception afterwards. So if you are online, we're to reconvene at 12:20 to start the second half of our agenda. If you're here in person, go grab your food and we'll start in about 20 minutes from now. Thank you so much.

(A recess was taken after which the meeting continued as follows:)

CHESTER BRITT: Okay. We are going to turn it over to Shirley Arazi, the Angeles Link Director Regulatory and Policy. And she is going to actually make a presentation on the phase two update, which should be very interesting. So I'm going to turn it over to Shirley, and we'll --

SHIRLEY ARAZI: Thank you so much, really happy to be here today. Can you all hear me okay? Great. So we talked a lot about phase one and that whole process and kind of our conclusions from phase one studies and as Yuri, Amy, and Frank discussed, in phase one, SoCalGas conducted over a dozen studies to assess the feasibility of Angeles Link, focusing on demand, production, pipeline configurations, and an alternative to a hydrogen pipeline system. Now that we've reached the end of the feasibility phase, we have a better understanding of what Angeles Link

could be and a more specific product description has been developed. Based on where we are today, Angeles Link is envisioned as an open access pipeline system dedicated to public use for the transport of clean renewable hydrogen at scale. A nondiscriminatory open access pipeline system would be regulated by the California Public Utilities Commission and consistent with California hydrogen strategy encouraged continued investments in clean renewable hydrogen and development of the state's hydrogen economy. Particularly, via future producers and end-users who could take advantage of an open-access pipeline system. System would have regulatory oversight facilitating the delivery of large volumes of hydrogen over long distances. Angeles Link would connect third-party production sites to demand centers or end-users across Southern California including in the Los Angeles basin. Considering the estimated projections of demand for clean renewable hydrogen in our service territory, Angeles Link would serve a portion of that demand, and based on current projections, be sized to support annual throughput of up to 1.5 million metric tons per year, which will be further determined in phase two; have pipeline diameters of up to 36 inches; and operate at pressures ranging from approximately 200 to 1200 pounds per square inch. It would serve some of the most

hard-to-electrify sectors, such as power generation, medium and heavy-duty transportation, and high-heat manufacturing or industrial processes. These sectors make up over half of the total GHT emissions in California. As you may recall, two segments of Angeles Link are detailed in the Alliance For Renewable Clean Hydrogen Systems, or ARCHES, successful federal application with the Department of Energy, or DOE. Our pipeline system is expected to play an instrumental role in the California hub being operational around 2033. The two segments would be connected by broader Angeles Link system, which is expected to be 450 miles and constructed in stages with an aim for the hub segments to remain in alignment with the DOE and ARCHES expectations.

Let's go ahead and move on to the next slide. Of your writing there phase two application. You're already there, okay. Phase two application. So to reiterate, what you heard early this morning, phase one was all about figuring out whether Angeles Link is feasible. Based on the results of phase one, SoCalGas determined that Angeles Link is technically feasible, viable, cost effective, and could offer public-interest benefits. That is, Angeles Link is ready to move on to phase two. Phase two will build on this work and is anticipated to cost approximately 266 million of ONM, could examine

approximately 451 miles of pipeline and compression requirements. These activities will progress us to scope our option selection to then scope definition where pre-front and engine designed to project definition or feed; and include routing optimization via siting, technical and design work, environmental desktop review, and surveying, and other program design. To dig a little bit deeper on this work, SoCalGas proposes to build off the activities conducted during phase one to gather additional data, stakeholder input, and refine initial findings. For example, the siting analysis that will help SoCalGas identify a preferred system route for Angeles Link. And upon selection for that preferred system rout, SoCalGas will further advance engineering and operations evaluations and plans to 30% design including compression requirements.

The Angeles Link system evaluation will look at new available information concerning clean renewable hydrogen producers and users, technology developments, location specific details, and specific operability constraints including evolving information from the California Hub Network as it progresses. This work would include transient hydraulic modeling to evaluate pipeline system operations, design and capabilities under a variety of scenarios that considers things like scalability,

performance and reliability, building off of the feasibility analysis we did in the production and design studies. They phase two feed study will also look at environmental land right-of-way information and ultimately result in engineering being advance to define the scope and technical requirements of Angeles Link as well as a production of a more detailed cost estimate and a detailed project schedule. Advancing feed at our proposed schedule is necessary to align with ARCHES and DOE's timeline which envisions the hub to be operational by the end of 2033. The two segments of the Angeles Link in the San Joaquin Valley and Lancaster areas would need to meet that schedule. In phase two, we would also conduct activities in addition to the feed study that support further analysis of Angeles Link, and also have broader benefits that support the hub in California market development. Examples of this work would be in our development of an enterprise safety plan addressing hydrogen safety regulations, risk management, as well as economic analysis that would help inform a future proposal and potential future proposal for cost allocation and rate design including identifying the potential assets, anticipating operating lives, and variables such as material selection, end-user requirements and expected appreciation methodologies. These topics are important for us to

advance Angeles Link, but also bring a broader benefit to help answer some important questions for the industry and the state around hydrogen as one of the many decarbonization tools to solve multiple decarbonization pathways. We also intend to expand stakeholder and community engagement for phase two. Specifically we plan to engage with tribal communities and local communities near potential preferred routes. These include San Joaquin Valley, Antelope Valley, and in-line areas. We propose to expand PAG to include these stakeholders and hold a public meeting to solicit input from communities along potential routes. All of this work will take approximately 30 months to complete once we have received CPC approval. It's important to emphasize that phase two is not seeking procurement of materials, construction, permitting or completing California Environmental Quality Act, or CEQA, or National Environmental Policy Act, or NEPA, review. The goal of phase two is to identify the potential alignment that SoCalGas will pass through to the permitting process. In other words, phase two activities are expected to generate the deliverables and information necessary to advance the Angeles Link concept to be a defined proposed project scope, generate system design data in support of a potential future CBCN application and other lead permit applications.

For phase two, we plan to request authorization of a revenue requirement to be recovered in rates based on forecasted expenditures to complete these activities. This approach is anticipated to avoid approximately 30 million in accrued interest over the course of phase two. If phase two is approved as we proposed, an average residential monthly bill is expected to increase by about $0.35 per month over 36-month period. It's important to note that any decision on cost allocation for the ultimate project would be reserved by the commission for a future decision on any potential CPCN application that we may file. We still have a lot to determine in terms of ultimate customers and beneficiaries of the project and that's part of what we want to ascertain in phase two.

Next slide, please. This slide shows you a conceptual timeline about where we started on Angeles Link on the left, and where we are going towards the right. You can see the Angeles Link phases delineated at the top and the overlapping ARCHES and DOE timeline and the bottom. This is all based on current know information as we've received further updates on the hydrogen hub, we'll progress that through. The timeline depicts that we are rapidly approaching the end of phase one and we posted our final feasibility work last Friday. We plan to file our phase two application before the holidays. To best

position SoCalGas to meet the project development timeline as shown here and to advance the state's clean energy goals, phase two activities need to commence as soon as possible, as it will take around 30 months following a commission decision to complete. Once phase two is complete, we may choose to seek a CPCN as the next step. Angeles Link plays a critical part of the California hydrogen hub, so it is essential that we do the work to advance bringing the initial segments into operation and alignment with DOE and ARCHES timelines, which is around the 2033 which is the right hand side.

Next slide, please. Once we file the phase two application, it would go through CPUC review and follow a regulatory process for interested parties can regularly participate. Following the application, there's a 30-day protest or comment period, and then the assigned administrative law judge will set a prehearing conference to discuss the proposed scope and schedule. We are also recommending a public workshop and a process that would enable us to receive decision by the end of 2025. Although we are sunsetting phase one stakeholder engagement activities, we want to emphasize that stakeholder engagement remains a key component of the Angeles Link engagement process. Before we conclude for an overview of phase two, I will hand it over to Frank to

provide additional details on our stakeholder engagement proposal for the next phase.

FRANK LOPEZ: Thank you, Shirley. So I'll provide an overview of the stakeholder engagement activities that we are planning to propose as part of our phase two filing. Some of you may be wondering, "What about us? What does this mean for us?" So, we got a lot of value, as we mentioned earlier, from this year from this advisory group process, so we're going to continue with proposing a Planning Advisory Group in phase two. However, I think we heard pretty loud and clear from all of you that you didn't like the fact that we had two distinct groups, that we had a Planning Advisory Group and that we had a CBOSG. Originally with that idea, if you recall we invite over 200 entities, and we thought it'd be good to have a planning group that was more technical in nature and have a separate group that was more interested from the community-oriented issues associated with that. But I think we got a lot of feedback from you that you want to be the same room together, and there was actually a lot of really good debate and discussion when we would have those joint workshops. So, moving for phase two, we are not going to have two distinct groups, we are just going to have one Planning Advisory Group, but we are going to expand membership in that group. As you've seen from the

routing study, some of these potential routes they're up in the San Joaquin Valley, Antelope Valley, so we're going to be expanding membership to include more organizations for this Planning Advisory Group in phase two, and we're also going to be reaching out to tribes to have a bigger presence and bigger presentation from tribes in this process. We're going to continue to meet at least quarterly. That was the intention for phase one and we ended up meeting about monthly, so we're going to propose to meet quarterly. We're also going to try to tie the meetings to major projects and milestones. So when we hit a major milestone in phase two, we're going to try to have a meeting either before or soon after so that the information is fresh. All of the meetings will continue to be hybrid and I think the biggest difference between the stakeholder engagement activities in phase one and phase two is that we are going to be proposing to do public meetings as part of our phase two outreach activities, and do our stakeholder engagement activities. Not have them just be limited to our PAG and CBOSG, that was one of the messages that we received from many of you through this process is that you wanted us to go out and solicit input from communities themselves directly. So we are proposing to do more public engagement activities and public meetings, not just in Los Angeles, but throughout

potential routes as part of phase two.

In terms of how to stay engages, this is our final meeting, so we will be sunsetting the Planning Advisory Group and CBOSG, but there are a couple of ways that you can stay engaged. Three ways you can stay engaged phase two application process. The first one is that you can subscribe to the proceedings. So when we file our application some time this month, they'll be assigning a proceeding number, and we'll make sure to reach out to you and send you an e-mail in case you want to subscribe for those of you who follow City Council, it's a very similar processes. You subscribe, and as new information become available, they push that out. So you can track that progress. If you want to provide comments on the proceeding when we file it, there's a way of also submitting comments on the docket. So if you want to submit a letter, there's a QR code there for that as well. There's also a QR code for subscriptions. And then the final way is if you want to be party to the proceeding -- we have a lot of organizations here that were parties toe the proceedings of phase one. If you want to get more involved and engaged in that process, you can intervene and there's a QR code there that you can scan and it can walk you through the steps on how to do that. Of course, of any of you have questions on any of these, you can

always reach out to us and we can give you more information on how to engage and stay informed.

And then finally, I'll just mention that we're going to have our website up. So you heard earlier that we are going to be dissolving the Living Library. It will be up and available to all of you, up till December 27. So you have 10 more days to access information from the Living Library. All of the materials are still available there. After the 27th, we will dissolve that, but all of the information that is in the Living Library right now will actually be available in the quarterly reports. So when we present information here or in that quarter, it's all appended to the quarterly reports and all of the quarterly reports will remain on our Angeles Link website in addition to all the studies, the consolidated report, the affordability framework, and of course the phase two application will also be available on our website. If you click that QR code, it'll take you to the website and you'll have access to that information post Living Library. And I believe that's it.

CHESTER BRITT: All right. So do we have any questions, comments, clarifications about the phase two presentation? Anyone want to raise their placard, and I will call on you.

ALMA MARQUEZ: You have Michael over here. And we

have a microphone --

CHESTER BRITT: We'll start on the right and work our way around. So, we have two Michaels actually who raised their had, but we'll start here.

MICHAEL BERNS: Thank you, very much. Michael Berns with California Greenworks. I just wanted to know about the phase two process from the environmental justice perspective. It may not be appropriate during that phase, but at least getting the groundwork so that way when you do apply for the implementation and you've designed it, I'm just wondering for your community-based outreach and public outreach, do you guys have a methodology or process of analysis yet? How are you deciding?

FRANK LOPEZ: Well we have our ESJ plan that was developed in partnership with all of you, right, where you gave us mechanisms to go out and start doing outreach, how do we raise individual's awareness and inform individuals in communities about the project so they can engage in different ways to provide input. So we're going to be using that as our framework for our phase two process, that's why we did it. Once we get a decision, we're going to need a plan in place. That's not the only thing we're going to rely on, but it will serve as kind of a guiding document for our outreach efforts. And then we also have our ESJ screening as well, right, which helped identify

where the communities that are disadvantaged communities that live near or along potential routes, so that we know those are areas that we need to prioritize and make sure that we engage. So we'll make sure to have kind of a concerted effort just to focus on getting those communities to engage in the process during phase two. And that's why we don't want to limit ourselves to the PAG and CBOSG. This is really, really good feedback back, but once you start getting to that 30% design, we're going to need input from the communities themselves so we want to have those public meetings in the communities themselves that are open to the public.

MICHAEL BERNS: One thing that I think is missing from all the mechanisms, like CalEPA and EPA Justice 1, historical context of communities also. So I would suggest and recommend highly suggest and recommend that you guys look at that also because I think that is a huge concept of addressing environmental justice, looking at historical injustices in the community.

FRANK LOPEZ: Do you have suggestions on how we go about doing that? I mean, I know it's part of our public meetings we would make them open ended, too, where folks can bring up issues that are not necessarily rooted in data, but that have stories. But I'm open for suggestions on how to best do that work.

MICHAEL BERNS: So, like you said, one is listening to the community. And I another would be looking at city ordinances and redlining -- I'll do more research.

FRANK LOPEZ: You don't have to share it all right now. There will be a phase two and they'll be a PAG. One thing I did fail to mention, is that every organization that participated in phase one, will be invited to participate in phase two. So when we get to that point, helpfully we get a good outcome, we convene the group, we'll re invite you and we'll probably solicit input from the organizations on how to best go out and do those engagement opportunities. So you'll get another bite at the apple, Mike.

CHESTER BRITT: Alright. Michael, we're going to go over here now to you. There you go. Go ahead and introduce yourself.

MICHAEL COLVIN: Michael Colvin with Environmental Defense Fund. Shirley and Frank, thank you for the really thoughtful presentation. I think I'm directing this to what Shirley had up and I do have a couple of follow-ups with Frank as well. Shirley, as you're framing the scope for phase two, and I know that the application is probably all but finalized at this point. I know you guys have been working hard. I know how complicated it is to put these things together. I would encourage you to ask a

couple of more micro questions that may be there but just weren't outlined in your presentation. The first one is why does the -- the form for the PEC -- obviously SoCalGas is a regulated entity. Why should SoCalGas be one, as a regulated entity, do Angeles Link as a regulated line of business? I think that's a really fundamental question because you're talking about leveraging the power of the pipeline that you have and doing this in a new -- you're talking about opening up a new line of business. I think the commission would very naturally ask some people could do this as an affiliate, why are we doing this as a regulated line of business? And I think there may be an answer there, but I don't think it is presented in those list of bullets that you have right now, and I think just saying and justifying, "Here's why we're doing this," and then not talking about the CPCN process that would come at phase three. I'm not talking about the individual justification of an individual line. I'm talking more about the macro question. Phase one, what the commission basically said by granting a memorandum account was a very threshold, "We don't know if we have regulatory jurisdiction yet. We don't know if this is the right thing for you to do yet. We don't presume any of that." Shareholders are still at risk for all of this and by making additional progress, you're saying, "Look, we think

there is a role for Southern California Gas Company as a regulated business is going to make forward," and I think that's a question that needs to be answered and given a lot of thought to. You've probably already thought about that, but I just didn't see it in your list?

SHIRLEY ARAZI: Michael, you're definitely spot on and we definitely address this topic in the application, so you'll get to see it.

MICHAEL COLVIN: So excited.

SHIRLEY ARAZI: So I'll just back up to say, you know, from our perspective, the CPC has jurisdiction. We believe that a public utility model is the most effective way of really doing this at the scale that we're talking about. And, you now, as far as being able to do an open access pipeline system, which I talked about a little bit, but that does get to the fact that we're also a regulated utility model with regular reporting and transparency and all those types of things are important to us. So we do believe that just that regulatory model is really the best way to help bring this market to where it needs to be for California, but also the commission, oversight, transparency, consumer protection, all of those things come with it being at the utility --

FRANK LOPEZ: Yeah, if I can add to that, too. There are three reasons, at least for me. One is scale. In

order for California to reach its decarbonization goals, hydrogen playing a key role, we're really going to need to produce hydrogen at scale. I think that's a unique strength for us. And also our talents. We have a lot of wealth of expertise and world-class workforce that we know that can do this work and do it well. And finally, one of the reasons why we think regulated utility like this should do this is because of process. This meeting is a demonstration of that, right? We have an open process, not just through this, but through the regulatory process where folks can have an open process, make our case, have an opportunity to weigh in. And I think for those three reasons it makes sense for us to do it.

MICHAEL COLVIN: Sure. And to be clear, I'm not asking you to answer these questions right now. I just wanted to make sure the answers are teed up in the application. I think it's sort of a cornerstone. I understand fully that you think the commission has jurisdiction, I've read the PU code pretty closely, I think it does also. But we've also filed some motions of the PUC to say, "Hey, do you? Do you not?" We're asking these questions and they very specifically sidestep them a couple of different times. And that's fine that they haven't had to reach those yet, but they're probably going to have to reach them in this phase two application. I

think the more we put those front and center and figure out does the commission actually have the jurisdiction to do this? If not, do we need to go to the legislature and get them the jurisdiction? Is that appropriate or is that not? And there are nonregulated entities in California who are providing hydrogen pipeline service. Not at the scale that Frank just mentioned. Not at the scale that I think is being proposed with Angeles Link, but they are out there and they are not regulated entities. So we need to reconcile that of why should SoCalGas be the one to do that and not an affiliate. So I just want to make certain that from that first order of magnitude we're thinking that through.

The other -- I apologize, Chester, I see that you're trying to move this along --

CHESTER BRITT: That's okay. I thought you were finished, but go ahead.

MICHAEL COLVIN: Two other brief observations that I want to go through. Again, on Shirley's schedule, the proposed schedule for the regulatory proceeding, I have been doing commission work for a long time, so have a lot of people in this room, I think that schedule is highly unrealistic and ambitious. I love ambition. I love moving things fast. I want things to move fast. I'm not going to be the one trying to slow stuff down. I think

there's a 0% chance that you will get a decision done by Q4 of 2025. So I just want to make certain that we recognize that going into it. As you are updating your final things, I don't want you not passing the laugh test by an ALJ or by anyone else, and you might want to revise that schedule to realize that every commission decision is by statute is an 18-month proceeding.

The third kind of bigger issue and this is going into Frank's point on the role of the PAG, the role of the community-based organizations. I think the power of the PAG has been, since we had the phase one decision, but before we launched into phase two, is amazing dialogue. We are going to be going into this really understanding with all the caveats what your studies did, why making sure the scope of those studies were accurate, it's been extraordinarily productive. It's a little bit different in a proceeding to have that kind of dialogue because you're almost forced into litigation mode. And so thinking through what is the role of a PAG or a community based organization as sort of a parallel track versus people who are parties to the proceeding, are those settlement conversations, are those other things? I think you might want to think that through of what does that look like and how does that fit into sort of proceeding world versus post phase two when you want to continue to

have the informal learning and dialogue. I just want you to recognize that there is, by definition, harder information flow once a proceeding is up and running, and so we want to make certain that we're hitting those boxes in the right way so we can continue the dialogue. And I didn't hear you say some of that. I think you've probably already thought of it. I just want to make certain it's being flagged. I have some other nuance points that I'll save for an e-mail later, but I just --

FRANK LOPEZ: We're here. You took the time to travel down here, you might as well. If you want to share, by all means. These are all really good questions though.

MICHAEL COLVIN: I tried for you. I know my chicken. The last micro question that I'll make the observation on, Shirley, I think the numbers you quoted on the bill impact, $0.50ish per month, I think that's spreading the cost --

SHIRLEY ARAZI: $0.35. It's $0.35.

MICHAEL COLVIN: I apologize. I rounded up, I apologize. The $0.35 per month, I'm almost certain that that is spread out across all the core and non-core customers, and I think there is a fundamental question of, when you look at the end uses for Angeles Link, they are almost all concentrated on core customer end uses. And so we should think through is it reasonable to spread that

cost to both core and non-core, customers, and if so, why? I want to see the pipe decarbonized. I want to see emissions reduced. I want to see hydrogen succeed. I am not saying this from a place of antagonism, but I want to make sure we are thinking through the ratemaking principle that if you use it, you pay for it. If you don't use it, you don't pay for it. Right now as you are framing Angeles Link, it is not a frame for residential and other core customer end uses. They might have the benefit of it, saying, "Hey, look, we are all benefiting from a decarbonized pipe," but I don't think we have made that case yet. That might be what this part of the processing is all for, but I would encourage you on the front end to do the calculation to say, "If we are limiting the cost of this to just non-core customers, the monthly bill impacted for them= would be something far north of $0.35 monthly. So that way the commission can just start off by understanding, "Wait a second. In order for us to be able to do this, we're going to have to think through the limited number of customers who are going to be able to take advantage of this," even from a phase two perspective, might be limited in there might be benefit it doing the cost share in this way, and just understanding the initialization of those costs. I think that we might want to then have, during preceding, a conversation of

what is appropriate for core customers to be paying and not paying for. We'll have that conversation, but I think we should present the information both ways.

SHIRLEY ARAZI: Thank you for your comments. I want to clarify one point, just to make sure it's clear. When we're usually discussing an average bill, the $0.35 that we talked about, that is just for the residential customer. So non-core has a pretty wide use of usage depending on what type of non-core. It is kind of difficult to do an average monthly bill for a non-core customer. So the way we usually present it, there is going to be a detailed rate schedules that you get to see the application is the $0.35 is for the residential customer. But the way that we have proposed to do the phase two work, and, again, I want to emphasize that the ultimate cost allocation of Angeles Link itself is going to be something in the future. Absolutely. But the way we see Angeles Link as a project is really the broad benefits that you kind of alluded to. So, based on those broad benefits, we felt like the -- it's called equal cents per therm cost allocation methodology. This is a similar methodology that we used for other types of programs like Yoruba, SGIP. It's like public goods related programs. And the reason we thought this was a good one would be it is more in alignment with gas

consumption, and it does end up resulting in lower residential bill impacts comparatively. So, like, it's probably more like 60/40 where the non-core would pay the higher amount, but I understand what you're saying about end use and those are the types of things that we're hoping to determine little bit more in the next phase for the ultimate project itself.

MICHAEL COLVIN: Sure. Excited to have that conversation. I think it is -- if I were advising decision-maker at the PVC or when I go to advocate before the PVC, because we're intending to be a party to this, spoiler alert. I think there is a question on that kind of basic ratemaking of is reasonable to do this work, and is it reasonable for all customers to pay for this on a nonbypassible basis? Is it reasonable to pay for this in another creative way? Or do we limit it to nonresidential, non-core customers because they are the ones most prime to be able to benefit from it on a direct basis. And then if there's a missing money component, and do we try to figure out how to recover that from customers like a public goods charge or something else.

So, I'm very open to having the conversation about how the recovery occurs, but I want to make certain that we're going into it eyes wide open because if we try to peanut butter it across all customers, it sure doesn't

look like that much money, but I think it puts us into an awkward place where we're saying that customers are paying for something that they're not going to receive a direct benefit from, and that might not be where we want to start.

SHIRLEY ARAZI: Thank you.

MICHAEL COLVIN: I'll hand the mic over to somebody else.

FRANK LOPEZ: Hey, by the way, can I ask you a follow up question just on -- so you're talking about the constraints of doing outreach when you're in litigation and a proceeding, and that's a real thing. And the phase one, as you know, really constrained our ability to do outreach outside of this PAG and CBOSG process. But assuming that it does take a year or 18 months, we have a lot of momentum here. We did a really good job. Folks feel more knowledgeable about the project, and we want to socialize more of that information to communities and not necessary wait until we get a decision, right, two years from now to go out and do that. Do you have any suggestions? You don't have to answer this now, but thinking through since you're giving us some homework, give you some homework. How can we go out and do some of this work?

7: So there's a couple of things that can be done.

One is, since you said you wanted to be doing thee as publicly noticed meetings, just include in your schedule that we are going to be requesting to host publicly noticed meetings, and get them noticed on the Commissioner's daily calendar and everything else. Just do them as all-party meetings, that way, anyone that wants to show up can. Then you are fine. You might not be able to have more of that frank conversation of more frank conversation of individual party one-on-ones. And then you might have to say, "Look this more of a settlement conversation now, or now this is something else," but if you're just looking to do a quarterly update meeting, fill that into your procedural schedule and ALJ with either say "yes. This is a workshop. Go for it," or this is something where we don't need the decision-makers to be in attendance or we don't need everybody else, and so you can do it in whatever cadence you want, that's fine. But I just want to recognize that part of the power that this PAG has, and I would assume that the community-based organizations have had some very frank conversation exchange because were not in litigation mode. Once you are in litigation mode, then if you want to have some of that, then you might have to save, "Well, look, we're in settlement mode. We're in something else." You just kind of have to check some boxes. I see the regulatory folks

getting what I'm trying to say.

SHIRLEY ARAZI: Absolutely. And we've been struggling with that too because, as you know, when we're in a regulatory proceeding it is a very different form, and we don't want to lose the momentum that we've had with these groups as well, but --

MICHAEL COLVIN: And note that I'm not trying to stifle it in any way, I just want to make certain that we are minding our Ps and Qs, so that way --

SHIRLEY ARAZI: Absolutely. Yeah. And the intent, too, just to clarify is that we would commence PAG following a phase two decision. So during the regulatory process, we won't be having a formal PAG set up, it would be following the commission decision for a lot of the reasons you stated.

CHESTER BRITT: All right, thank you, Michael. We're going to go online to was becoming more. Online to a few people that have had their hands raised for a while, and then we'll come back into the room again. We're going to start with Lain Fisher.

LAIN FISHER: Hi there, this is Lain Fisher, Public Advocates Office. I think Michael just raised most of my points, frankly. So thanks, Michael, for doing my job for me. I really appreciate that. But I actually just heard two contradictory things there, so can you clarify that

for me? Are you going to having meetings during the commission preceding process with the public or not? That just wasn't clear because I just heard two things from you. One was saying -- please help clarify that.

SHIRLEY ARAZI: That's a really good question. So we are proposing a public workshop during phase two that be part of the formal proceeding, but we are not planning on conducting PAG meetings specifically during the regulatory process. We would restart that up again after phase two is approved.

LAIN FISHER: And the community meetings.

FRANK LOPEZ: We would not be holding any community public meetings while this thing is being litigated, just the public workshop will be the opportunity. We will notice it far and wide.

LAIN FISHER: As currently designed, there's going to be a 12- to 18-month hiatus on public outreach. That's the implication.

FRANK LOPEZ: Yes. In this capacity in holding formal meetings. Obviously, you know, we're a service provider, and if someone reaches out to inquire about it, we will share information about our proposal.

7: Okay. Thanks for that. I have one more. My other comment would be to reiterate Michael's comments regarding the timeline that I think 12 months is going to

be absolutely infeasible and really should consider extending it by at least another 6. Other than that, that's my comments. Thanks.

CHESTER BRITT: All right. Thank you. Roy, we're going to go to you next. If you could unmute yourself and introduce yourself before you make your comment.

ROBERT ROY VAN DE HOEK: Hello. Yes. Can you hear me okay?

CHESTER BRITT: Yes, we can.

ROBERT ROY VAN DE HOEK: Okay. This is Roy, Robert Van De Hoek, Defend Ballona Wetlands. I put a lot of comments in the chat. One of the things I was thinking about when you mentioned you've done a lot of good work, and you have in reading all the written comments, you might want to consider -- I think you should consider all the public comments that we've done orally because they've been transcribed by a court reporter, and you can address those questions. That's how I do most of my questions rather than putting in written comments, for example. Also -- well I'm going to keep it short because we want to keep going here, and I'm just going to say see all, my chat. I spent a little time putting that up there.

I want to say thank you to Alma. She has been very positive in helping me to be involved, and I appreciate the Andrews Group. I want to say happy

holidays again, and thanks to all of you for being involved. I look forward to the next phase. Yeah. I'll keep it short like that. Thanks.

FRANK LOPEZ: Thanks, Roy. This is Frank. I will say we actually do reference the transcription quite a bit. Obviously we're here in the meetings, and we do have the benefit of hearing them directly from you and others. And then we get the written comments, we review those line-by-line, and then we also go back to the transcript to clarify things and look at the materials. So we do make use of the transcripts.

ALMA MARQUEZ: Thank you, Roy. I really appreciate your engagement throughout these two years. Isaac is here, and he's called you and reminded you about every meeting, so he wants to say thank you for your attendance and listening to him when he calls. Thank you.

CHESTER BRITT: Thank you for attending. All right. We have Hyepin who was in person, but now she's online. That was a trick. You can unmute yourself, and we should be able to hear you.

HYEPIN IM: Can hear me?

CHESTER BRITT: Yes, we can.

HYEPIN IM: I do also want to say thank you to Lee Andrews Group for continuing reminders of meetings. So, that's that. But I just want to go back on the outreach.

As a member who works in the Asian-American community, a lot of times when data is seen, because there's over 50 groups and 100 languages under the API umbrella, and when it's not disaggregated, it actually masks the suffering of many of the subgroups. Again, I'm not as familiar with some of the tools that you'll be using to protect the underserved communities that are going to be impacted, but I want to advocate and raise awareness that when you are looking at some of those data points, particularly with the AANHPI group, that you also consider looking at disaggregated data as well.

FRANK LOPEZ: Okay. Thank you for that comment. Do you have any tips on terms of the type of data, disaggregated data that you would like us to look at, and if you want to share that, you can.

HYEPIN IM: Well, just a couple of examples that I want to highlight, for example, the housing data. In aggregate you'll see that Asians are wide adjacent to wide homeownership. This data is maybe four years old, but you'll see that Asian data 61% to 66% wide homeownership rate, where with black and brown it's like 42 or 48. But when you disaggregated, for example, you'll see that Korean and black homeownership rate is the same, and there's seven other subgroups below the black and Korean homeownership rate and 12 under the Hispanic homeownership

rate. So, I'm just giving that as an example. Even with the Federal Reserve Bank, this one you don't even have to disaggregate, they looked at the financial conditions of businesses by ethnicity, and they're actually -- Asians had the largest share of the worst category. Even the next category Asians had the largest share. So, again, I think the model minority myth definitely hurts and robs the Asian community of needed investment, attention/solidarity with other communities of color. So, and also I know that President Biden has put an executive order that requires federal agencies to disaggregate API data as well. I'm just giving some examples that when you looked a little closer, it tells a completely different story. If and when you need to come, I'd be happy to try to be a resource as well.

CHESTER BRITT: Thank you. We're going to come back in the room now. We'll go over to Tim.

TIM KAMERMAYER: Thank you. Appreciate it. Just two comment --

CHESTER BRITT: If you could -- I'm sorry. Introduce yourself for the court reporter.

TIM KAMERMAYER: Tim Kamer, Director or Regulatory Affairs for Green Hydrogen Coalition, GHC. Just two quick points. One, I want toto follow up on Michael Colvin's point about jurisdiction and a possible legislative

vehicle. I think he's right in saying that the PUC does have jurisdiction and it's not an issue; however, an off chance that a legislative vehicle is necessary, I just want to encourage you all to really start planning and preparing for that as soon as possible because the amount of effort it takes to get something passed in the legislature these days, it's tremendous. And that's because it requires a lot of coordination, a lot of collaboration with a diverse set of stakeholders, many of which are in this room or were in this room earlier today. So that type of legislative lift is one that probably needs to get started sooner than later, and not one that comes at the end of the clock. I know the GHC would be very interested in assisting however we can, and others would be, too. But I just want to encourage you to try and get in front of that if you think you need it.

The second thing, highlighting the positive momentum, Frank, that you specifically talked about, and then hearing about this 12- to 18-month hiatus, I guess you can speak to is there anything that you guys view that the stakeholders can best do to prepare during this hiatus or is there something we can provide in the interim while you're waiting for this decision. I know there's the public workshop that you all plan on doing during it, but is there anything else that you might want to see from the

stakeholders here that would support or just help throughout this process?

FRANK LOPEZ: So while we are constrained in the type of outreach that we can do, all of you are not. So I would hope -- all of you are here representing organization, and you want to share it with the people that you serve all the great work that you did. If want to share information about your experience, obviously you want to share information about the studies themselves and all of those materials, I think that would be helpful because that will help us, kind of, amplify the voice and this process and reach more people while we get a decision. So, yes. Socializing the studies themselves would be helpful.

CHESTER BRITT: All right. Michael, did you still have your placard up? Introduce yourself, please.

MICHAEL BERNS: Michael Berns with California Greenworks. This is just a quick, I guess, when you asked what data. Sort of what you did just now, ask the community. So when you go into the communities, ask as much as you can, what data do you want, and get very different perspectives if you can, and then go from there. Also probably a transparent open library like how you have now. But really, it's just listening to the community in and of itself.

CHESTER BRITT: Thank you. All right. We're going to keep going now. We're almost through our agenda, but we're going to go to the next topic which is next steps.

FRANK LOPEZ: Yeah. Just to wrap things up here, in terms of next steps, this will be our final meeting. We're going to send you an e-mail communication when we file our phase two application so you know that's taking place. We're also going to do a quarterly report for Q4. So hopefully that will go out when you get another communication then. And then we'll follow up with you when we get a decision from the PUC phase two application. That might take some time, but when we do, we'll be sure to follow up with you at that time. You have all of our contact information so if you need to get hold of us for anything, please reach out. I think with that, we'll turn it over to --

CHESTER BRITT: We're going to turn it over to Alma. We're going to do a roundtable discussion.

ALMA MARQUEZ: As we move forward with today's agenda, we're almost close to the end, just want to give a shout out to our caterer who's actually local to Lynwood, Carrera Cuisine, and staff. I think they did a great job trying to feed all of us today. So thank you for that.

So to wrap up with the roundtable, we really want to hear from you all on what you'll be up to, what you're

doing and your perspective organizations for the next 12 to 18 months so that we can be involved. You all having each other's contact information that we sent with the summary reports. So you have each other's information for those who gave your permission to share your e-mail with the rest of the group because you all have been a part of this process for the past 20 months or so, and we want to make sure that you all stay in touch with yourselves if you so choose to. So with that, we just ant to go ahead and pass it around the table and have anyone share what their organization is doing, and we can stay in touch, basically, since as Frank said, we can't technically reach out to you, but that way we know what you're all up to in the next 20+ years. So with that, if you want to just move your card -- name tag sideways, so we can start going around or I could maybe just start with Marcia because I know you're not shy. And share what you or your organization will be up to, and if you'd like to invite anyone to a gala that's coming up, this is a free space to share that.

MARCIA HANSCON: Great. Thank you. Marcia Hanscon, Ballona Wetlands Institute. First, great to be with you all. And if you haven't been to the Ballona Wetlands Ecological Reserve, which is the only state ecological reserve in all of Los Angeles County. We'd love for you

to come and check it out. So be in touch with me and we'll figure out a way to get you to have some time in nature because that's important for all of us. And, of course, we're going to continue to try and stop a very misguided 9-year project that would bring bulldozers in and start everything over at Ballona. That's not a good idea in our view. I know Neil and I don't always agree on that, and also I can't wait for Maryam Brown to also include the Playa Del Ray gas facility when she talks about Aliso Canyon not being needed in the future for fossil gas storage. Playa Del Ray really -- when it was first opened, to give a little history, that gas storage was the first one. There weren't a lot of people living around it. There weren't schools, churches, an ecological reserve, and now there is. We'd love to see, you know, one day maybe we can figure out a way to get your gas storage somewhere else until we're not using it. Playa Del Ray really needs to close down too, or just stop injecting the gas and let the animals be without it, and all of the people that live around it.

So that's a lot of the work we do is that, and teaching people about how wonderful a place with 7 endangered species, and two more on the way; U.S. Fish and Wildlife Service just said this week that the Monarch butterfly should be put on the endangered species list;

and last month, the Fish and Game Commission said that the burrowing owls should be put on the endangered species list for the state and we have those at Ballona. So it's important for us to respect and be with and honor the other species that we live with on this planet in our view, and I hope that we can impart that to all of you as well.

ALMA MARQUEZ: Okay. Thank you, Marcia. Tony?

TONY FOSTER: You know, I don't really have any prepared comments, but I just can say that Long Beach utilities, which includes our municipal gas, is a little tiny spec in the sea of SoCal service, and we really just want to be cooperative and collaborative as this comes to the court and all their wish list, as was his city's climate action plan. I just want to note that we stand willing and ready to do whatever we can to further the decarbonization efforts, and we're very excited about the future. That's it.

ALMA MARQUEZ: Thank you. Michael?

MICHAEL COLVIN: Michael Colvin with EDF. When you ask what are we going to be up to, obviously be a party to this proceeding. We're excited for that. But I guess I focus on the five words that I think about every day when I do advocacy whether it be in formal or informal areas. I think about equitable access to an affordable clean and

safe energy system and trying to figure out what's the right balance between what's affordable, what's clean, what's safe and how do we ensure everybody has access to that because that's not necessarily the case. And so whenever you have trade-offs between major important concepts like that, that's when you need good policy, good advocacy. The sweet spot we try to live in. And so I'm going to be asking over the next year how is this affordable, how is this clean, how is this safe.

ALMA MARQUEZ: And we're listening, Michael, thank you for that. Joon?

JOON HUN SEONG: At the risk of being redundant, our bread and butter, as you can probably guess, is getting involved in these types of regulatory proceedings trying to find practical and natural solutions. I think for that sometimes we agree, sometimes we disagree, but dialogue is obviously important. Both of us are based in San Francisco, so if you're ever up, hit us up. Thank you.

ALMA MARQUEZ: Okay. So Joon is inviting us to San Francisco. Thank you for the invite, Joon. We will be there. Darian? I'm sorry if I mispronounced your name.

DREW PENAGRA: No worries. Drew. Drew Penagra with Green Hydrogen Coalition. I'll let Tim cover some of the more policy work, but speaking to some of the more technical initiatives, for the coming year we're working

on biomass to clean hydrogen effort evaluating the potential for converting biomass and organic waste to clean hydrogen in the area as a potential -- from existing sources otherwise going to landfills and not composted. That's one big effort we have going on, and potentially that could be a feedstock for the energy pipeline. So just doing a technical study on that. We're also working on some potential electrolytic hydrogen, clean hydrogen, understanding the tariff and energy costs protective cost around electrolytic clean hydrogen production, also very relevant to the Angeles Link effort, and continuing work on highlighting the potential for clean and green hydrogen within the state and the economic value and the technical potential for its production.

ALMA MARQUEZ: Thank you. Luis. We missed you, Luis.

LUIS PENA: Thank you. Luis Pena with the Los Angeles Indigenous Peoples Alliance. Wasn't really prepared for this question. Right now, what comes to my top is that we're working on developing a network of communities and youth groups where we can implement some of our curriculums, likes rights of passage curriculums, and since we work with youth, and even in my full-time work we work with youth. Badly needed because there's a lot of different confusing messages that they're receiving especially through social media. So we're just seeing how

we can impact that in a healthy way. And also working with a few different community gardens. I think it's important that communities have access to a healthy way of letting go of -- destressifying. Many times growing and planting and working with the land is very healing. But also, at the same time, learning how to learn some self sustainable practices where we can get away from all the technical -- this technical life that we are surrounded by, kind of, get back to nature. We have a few other things going. Working with fellowships and trying to -- just bring up the capacity of community. I wouldn't say organizing per se, but community involvement within an indigenous world view framework and see what creative things we can come up with.

ALMA MARQUEZ: Well it sounds like you were prepared for the question, Luis. You did a good job. Thank you. Michael?

MICHAEL BERNS: Michael Berns California Green Works. I guess I'm in the main or biggest projects that'll be taking up my time. We have a green infrastructure program that we're doing a feasibility study this upcoming year along the Ballona Creek and the West Adams Channel. Sort of like a community green bell with a lot of water quality and quantity benefits. Planting more trees in LA County, the newest, I guess, urban canopy that we've added to has

been the City of Carson. We're also implementing a number of our curriculum courses in classrooms including a media and information literacy course because social media is bad for information. And then community cleanups. If anybody needs a community cleanup in their neighborhood, we'd be more than happy to stop on by. Thanks.

ALMA MARQUEZ: Thank you, Michael. Enrique?

ENRIQUE ARANDA: Thank you, Alma. Happy holidays to everyone. On behalf of Soledad Enrichment Action, I think we walk away today with a very defined coalition. We're actually working with Reimagine LA, with CRCD in doing a capacitor analysis of opportunity youth, matching them with job creation, matching them with job creating, matching them with project labor agreements, green jobs in particular. With that said, we're looking at more involvement with ARCHES and the overall new hydrogen economy.

ALMA MARQUEZ: Thank you, Enrique. Rashad?

RASHAD RUCKER-TRAPP: Definitely with that as well as Reimagine LA, we're closing up the year with our toy drives. We've actually been on a blitz this year doing multiple -- throughout the different parts of the city. Our last one is actually going to be on the 21st where we're actually going to hit multiple spots, sort of like they Santa tour, throughout the East Los Angeles area just

distributing toys to different communities throughout East LA area. Looking forward to next year as we continue the work of some of our annual programs, such as our first cleanup which we like to do along the Martin Luther King corridor. So I definitely would like to make new connections with my friend over at California Greenwork. And then also just continuing great work of, not only advocacy of bringing organizations together, which is something with Reimagine LA we take enjoy and pride ourselves of doing, especially in the neighborhoods that we work in. So, once again, we thank you guys for this opportunity and space, and look forward to continuing the great work, not only on this project, but many more to come.

ALMA MARQUEZ: Thank you, Rashad. Tim?

TIM KAMERMAYER: Thank you again. Tim Kamermayer with Hydrogen Coalition. I got to say as a top line, Drew probably covered everything in a much better way than I'm going to do, so I'm going to try to add to it while still being articulate. I think that there are certain initiatives that GHC has really focused on this year. One, as Drew has noted, the biomass to hydrogen. We've been working on a study with some of our partners that really lays out some of the unique benefits and opportunities for biomass literally in Los Angeles. The

report is going to show how a lot of how our has been in LA and studies they've done, which I think can really help this group during phase two if you think about some of the other ancillary benefits that are going to be brought to the table. Additionally, from a policy making standpoint, GHC views itself as an educational nonprofit really focused on advocacy around clean renewable hydrogen. So our focus this year, as you're probably aware, there's 36 new legislatures in the California Legislature. Thirty-six new spots and those are 36 new opportunities to kind of break down the myths of renewable hydrogen. We talk a lot about affordability, and I think with most of us in this room understand you have to look at affordability, not just as the status quo, but in the long term. Because if you're just looking at it in the near term, it's not always going to pencil out, there probably is a cheaper resource available. But when you're talking about reaching the state's 2045, 2050 decarbonization goals, it's going to take planning and preparation that economically does make sense when you get to later on down the road, and so some of that return on investment, you know, GHC's really going to be working on explaining what seems maybe less affordable in the now becomes a lot more affordable if you build the foundation and bring it to scale. Scale green hydrogen really has an opportunity not

just for long duration storage, not just for addressing landfills, but also providing displaceable firm capacity in a way that if we're going to get to those 2045 goals, we really need to address that last 10- to 15%. It's easy to address climate change when you're picking the low hanging fruit, but once you start trying to get to the very top of it, it requires a lot of resources and a lot of tools. So I think our efforts this year are going to be not only breaking down some of those myths, educating about the powers of renewable hydrogen, but also working on a legislative side that creates a better, I would say, framework and regulatory certainty so that as y'all are doing your stuff in the commission, there's being that, kind of, assistance on our side as well.

ALMA MARQUEZ: Thank you, Tim. Just to keep us going with the agenda, if folk that are joining through Zoom could just put in the chat anything that you want to highlight, what you have going on in your organization, that would be very helpful. And with that, we're going to go ahead and send it over to -- I'm sorry. We have a question from Tyson.

CHESTER BRITT: We're going to unmute Tyson and let him ask his question.

TYSON SIEGELE: Hi, Tyson Siegele. Today I am representing the Utilities Consumers Action Network. I

appreciate the opportunity to share what we're working on. Sort of like what Michael and Joon said, we at the Utilities Consumers Action Network represent communities and customers at the commission, and so we have numerous proceedings that we work on. We're going to be participating in phase two. What we really have been seeing recently is that cost-effective and clean are often times going hand-in-hand and we really see -- all of our analysis has pointed in the direction of electrification or most, if not all, end uses as the most cost-effective way to decarbonize. We are, of course, going to continue to complete additional analyses, calculations and advocate for customers. We are really concerned about the cost of electricity, the cost of gas in California right now. SDG&E, SoCalGas' sister company is charging 2.2 times more for electricity than Sacramento customers are charging. So that's one of the things that we are hoping to address in the upcoming coming year. Making sure that all customers in California, all energy customers in California have reasonable rates. So, thank you.

CHESTER BRITT: Thank you. All right. We are now almost done. I'm going to pass it over to Neil. He's the Chief Clean Fields Officer for SoCalGas, and he should be familiar to you. He's visited many of our meetings and made many presentations and answered questions, but we're

going to turn it over to him to give us some closing remarks.

NEIL NAVIN: Okay. Great. Thanks very much, everybody. I'm just going to go through a few things here, and mostly it's to thank you. As it's been mentioned, we've spent 18+ months together going through multiple meetings. Many of you, again, have been at each and every one of these meetings. I've had an opportunity to speak to most of you. We've spent over 100 hours together talking through these issues, and if you multiply that by the numbers of people in the room and online, that's a great deal of collaboration and collaborating time to think about the issues and think about them from perspectives. We produced over 3200 pages of reports. We've had seven quarterly reports that, again, not only detail the work we've done, abut it memorialized the comments that you made and these efforts. We appreciate the advocacy that you've undertaken for your community as you've sat in these meetings, and it's important, especially as Michael reminds us, we need to ask questions of the community as we think about the way we start to deliver energy in the future. We believe firmly that Angeles Link has the potential to be the cornerstone for Southern California's clean energy economy to decarbonize those parts of the economy that are most difficult, and I

think we mentioned earlier on that all of the low-hanging fruit is already been decarbonized. And it's time now to concentrate on those things that are a little more difficult.

I'll close out with a few more statements including one more quote from Rumi, who's a Persian poet many of you know. Rumi said, "Trade expectations for appreciation and the world changes." And I think we all came into this process with certain expectations. We exchanged frank and direct views of our perspective, but I think we really have started to change the conversation about energy. So I am really confident that this last 18+ months has helped the company, SoCalGas, think about the work we do in a different way. And we remain committed to taking SoCalGas towards a decarbonized future along with significant electrification in the economy, but using Angeles Link as a way to help southern and central California decarbonize those hardest-to-electrify and hardest to abate parts of the economy. Again, I want to thank you for your time. These have been long meeting, but I personally have gained from this, and I know that all of the folks on my team and my boss, Maryam Brown, have gained significantly from the input you've provided. Again, thank you to our coordinators. You guys have done a great job, both of you. And I wish you well for the

holidays and a safe 2025.

FRANK LOPEZ: Thank you, Neil. If you don't mind, I'll piggyback off your comments. I also want to thank all of you for taking the time to participate in this process with us over the last 20 months. Most of you here today and those of you online you tend to interact with all of us up here, but I want to acknowledge the dozens of people behind the scenes who made this entire phase one process possible. On Chester and Alma's team several folks that are back there that you see at meetings they do a great job. Thank you for doing a fantastic job of facilitating these meetings and making everyone not want to fall asleep. And then to the SoCalGas family, too. We have dozens of people who never get to be up here but do tremendous work to do all of the studies work, to review all of the materials to prepare us for these presentations. So thank you to the SoCalGas family who help support this as well.

CHESTER BRITT: All right. Now comes the party, right? So Alma, if you want to explain what we're going to be doing.

ALMA MARQUEZ: Yes. We have a mini reception for those who are able to stay back and speak to our amazing subject matter experts that are here as Frank mentioned that made all the presentations possible. We have some

homemade flan and cake in the back. Unfortunately, SoCalGas could not pay for libations because they are a public utility commission, so they are not able to. Just think in your mind that you're having -- instead of horchata, it's horchata and rum, and water is something else. Just kidding. Thank you all again for being here with us and to the City of Lynwood for providing us this space. Apologies for the heater. I hear it clonked out a bit earlier today, so it's a 1950s building, so we have to bear with it. Thank you again for your time, and I hope some of you are able to stay back and hang out with us. Thank you.

CHESTER BRITT: At the very end it disconnects after we give them all the credit. I just want to say thank you. I've been a part of all the meetings, and as a facilitator you never know what kind of reception you're going to get, how they're going to treat you, if you're going to follow the rules or not, and you guys have been nothing but gracious to us. We have, I'll speak for Alma and I, have had the great privilege of being part of these two groups and doing this process with you guys. And so I just want to give you guys credit for, again, being respectful of each other and having the conversations we needed to have. Let's enjoy ourselves. Let's enjoy the holidays. You guys be safe with your families and friends

and this concludes our phase one meetings. Again, thank you for being here in person. Those of you who are online, we are going to miss you in saying goodbye to you in this celebration, but we thank you for participating online as well. Thank you very much.

(The meeting concluded at 1:37 p.m.)

REPORTER'S CERTIFICATION.

I, Stephanie Nelson, a Hearing Reporter of the State of California, do hereby certify:

That the foregoing proceedings were taken before me at the time and place herein set forth; that a record of the proceedings was made by me, which was thereafter transcribed under my direction; that the foregoing transcript is a true record of the testimony given.

I further certify I am neither financially interested in the action nor a relative or employee of any attorney or party to this action.

Dated: December 24, 2024

Hearing Reporter

Q

Appendix 5 - PAG and CBOSG Meeting Materials

DECEMBER MEETING AGENDA
10:00 AM – 2:00 PM

- Arrival and Continental Breakfast
- SoCalGas Safety Moment, Land Acknowledgement, & Roll Call
- SoCalGas Executive Welcome
- Angeles Link Phase 1 Summary of Studies
    - Member Discussion
- Summary of PAG & CBOSG Process
    - Member Discussion
- Lunch
- Angeles Link Phase 2 Update
    - Member Discussion
- Next Steps
- Roundtable Discussion
- Closing Executive Remarks
- Adjourn/Reception

December 17, 2024
10:00 a.m. – 2:00 p.m.

ANGELES LINK

Community Based Organization Stakeholder Group (CBOSG) & Planning Advisory Group (PAG)

December Meeting

Warm welcome to our participants!
We will be starting at 10:00 a.m.
to make sure everyone is present.

SoCalGas

WELCOME FROM OUR FACILITATOR

ANGELES LINK

CHESTER BRITT
Executive Vice President
Arellano Associates
PAG Lead

ALMA MARQUEZ
Vice President Gov. Relations
Lee Andrews Group
CBOSG Lead

SoCalGas

HOUSEKEEPING

This meeting will be recorded (video and audio), and a court reporter will be transcribing the meeting. Please announce yourself before you speak

Zoom microphones are muted by the host to eliminate background noise. You will need to unmute your microphone when called on to speak. *For both in-person and on-line participants please speak directly into the microphone to ensure everyone can hear*

We encourage you to turn on your cameras so we can better engage with you

Please feel free to use the Zoom chat to provide input and ask questions throughout the meeting

If you would like to speak, please use the "Raise Hand" button at the bottom of the Zoom screen

Wireless microphones will be passed to those speakers attending in person

ANGELES LINK

SoCalGas

AGENDA

- Arrival and Continental Breakfast
- SoCalGas Safety Moment, Land Acknowledgement & Roll Call
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  - Member Discussion
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  - Member Discussion
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- Roundtable Discussion
- Closing Executive Remarks
- Reception

SOCALGAS SAFETY MOMENT

ANGELES LINK

OLGA QUINONES
Media Relations and Strategic Engagement Project Manager
SoCalGas

SoCalGas

ANGELES LINK

LAND ACKNOWLEDGEMENT & ROLL CALL

SoCalGas

SOCALGAS EXECUTIVE WELCOME

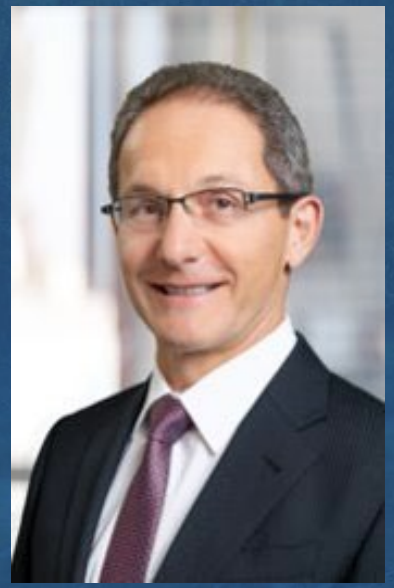
ANGELES LINK

MARYAM BROWN
President
SoCalGas

SoCalGas

ANGELES LINK PHASE 1 SUMMARY OF STUDIES

ANGELES LINK



YURI FREEDMAN
Senior Director
Business Development

AMY KITSON
Angeles Link Director
Engineering & Technology

SoCalGas

PHASE 1 STUDIES

16 studies

VIABILITY

1. Demand
2. Production
3. Water
4. Options and Alternatives
5. Cost Effectiveness

TECHNICAL

6. Safety
7. Sizing and Design
8. Routing/Configuration
9. Leakage
10. Permitting
11. Environmental

PUBLIC INTEREST

12. GHG
13. NOx
14. Workforce
15. Affordability Framework
16. ESJ Plan

ANGELES LINK

SoCalGas

VIABILITY

Demand - Takeaways

Total Addressable Market (TAM) is projected to be between

1.9 - 5.9 MMT/year

for clean renewable hydrogen

Angeles Link is designed to transport between

0.5 & 1.5 MMT/year of the TAM

Demand - Feedback

Added Section 5 to compare SoCalGas's forecasts with key studies, including

CARB, CEC, UC Davis, and the National Petroleum Council.

Section 6 clarifies that Angeles Link's throughput is a subset of the

Total Addressable Market.

Production - Takeaways

1.5 MMT/year of clean renewable hydrogen throughput requires

~39 GW

of solar capacity and

~240,000 acres of land

Hydrogen production represents

~12% (240,000 acres)

of the total land area

identified within the target production areas

Production - Feedback

Footnote was added to address stakeholder feedback on additional land constraints for hydrogen production.

VIABILITY

Project Options & Alternatives - Takeaways

Angeles Link emerged as the **best suited and least cost option** to deliver clean, renewable hydrogen at scale.
Clean, renewable hydrogen delivered by Angeles Link is a **competitive and viable decarbonization pathway** compared to electrification and CCS.

Project Options & Alternatives - Feedback

In response to stakeholder feedback, the study clarified in the that Angeles Link is intended to be **scalable** and serve both the lower, near-term demand in the 2030s and higher, long-term demand post 2045. While trucking may be used for certain last mile delivery solutions, pipelines allow for **greater throughput volumes over longer distances** offering economies of scale and lower costs which increase the likelihood for adoption.

High Level Economics & Cost Effectiveness - Takeaways

Angeles Link **offers the most cost-effective solution to transport clean renewable hydrogen** to serve Central and Southern California, including the L.A. Basin, at scale.

Found to be **cost effective** relative to electrification and CCS as alternative decarbonization pathways for certain hard-to-electrify industrial sectors, dispatchable power generation, and medium- and heavy-duty transportation.

High Level Economics & Cost Effectiveness - Feedback

Added **Section 7.5.2** to assess using **High Voltage Direct Current (HVDC)** for in-basin electricity transmission.

Updated **Key Findings** to clarify hydrogen purification costs and explain storage assumptions from early demand to market maturity.

GHG AND AIR QUALITY

GHG - Takeaways

Mobility, power generation, and hard-to-electrify industrial sector GHG emissions are **significantly reduced by approximately:**

4.5-9.0 MMT/yr

when fossil fuels are replaced by clean renewable hydrogen.

The equivalent of the annual GHG emissions of removing approximately

725,000 – 1,000,000

gasoline passenger vehicles off the road per year

GHG - Feedback

- Estimated GHG emissions reductions account for hydrogen leakage using volumetric estimates
- Applied a range of estimated Global Warming Potential values

NOx - Takeaways

Meaningful improvement in regional air quality due to

~3,800-5,200 TPY

of avoided NOx emissions in addition to reductions of diesel particulates.

NOx - Feedback

Prepared maps geographically depicting anticipated NOx emission reductions

ANGELES LINK

SoCalGas

SAFETY AND WORKFORCE

Hydrogen Safety Panel
peer-reviewed study identified

Safety Requirements

ranging from material selection and pipeline design to monitoring and emergency response protocols, which forms a comprehensive framework to mitigate risks associated with hydrogen transport.

Construction could create

75,000 jobs

direct, indirect & induced

and existing workforce capable of safely operating infrastructure with training.

53,000

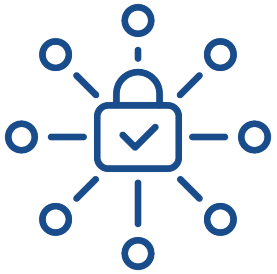
direct construction jobs

23,000

Diverse Bus Enterprise Jobs

Safety Management System

Incorporating hydrogen into existing framework for managing safety holistically through the integration of various safety management activities.



Enterprise Risk Management

Expand systemic approach that is comprehensive and iterative in nature, and designed to identify, manage, and reduce risks and help prevent or mitigate safety incidents, to employees, contractors, or the public

Applicable Safety Regulations, Codes, & Best Practices

- Leverage existing requirements, modify, and create new safety practices according to the unique physical and chemical properties of hydrogen.
- Incorporate and continue collaboration with the Center for Hydrogen Safety and the Hydrogen Safety Panel's expertise.

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ESJ PLAN AND SCREENING

ESJ Plan - Takeaways

2 CBOSG breakout sessions
(September 2023 and July 2024)

held to inform development of Angeles Link

Developed in response to stakeholder feedback
Provides a framework for engaging **ESJ Communities**.

Includes mechanisms SoCalGas may leverage to build relationships with important stakeholders and ESJ communities

ESJ Plan - Feedback

- Engagement Mechanisms vs. Strategies
- Revision to ESJ Plan Goals
- PAG/CBOSG membership roster added
- Clarified federally recognized tribes and tribal organizations to be engaged in Phase 2
- Emphasized education and direct community engagement

ESJ Screening - Takeaways

ESJ Screening intended to assist SoCalGas in identifying DACs/ESJ communities along preferred routes

Provides community profile; census tract statistics; disadvantaged communities; socioeconomic conditions; public services; and minority/ethnicity/languages spoken

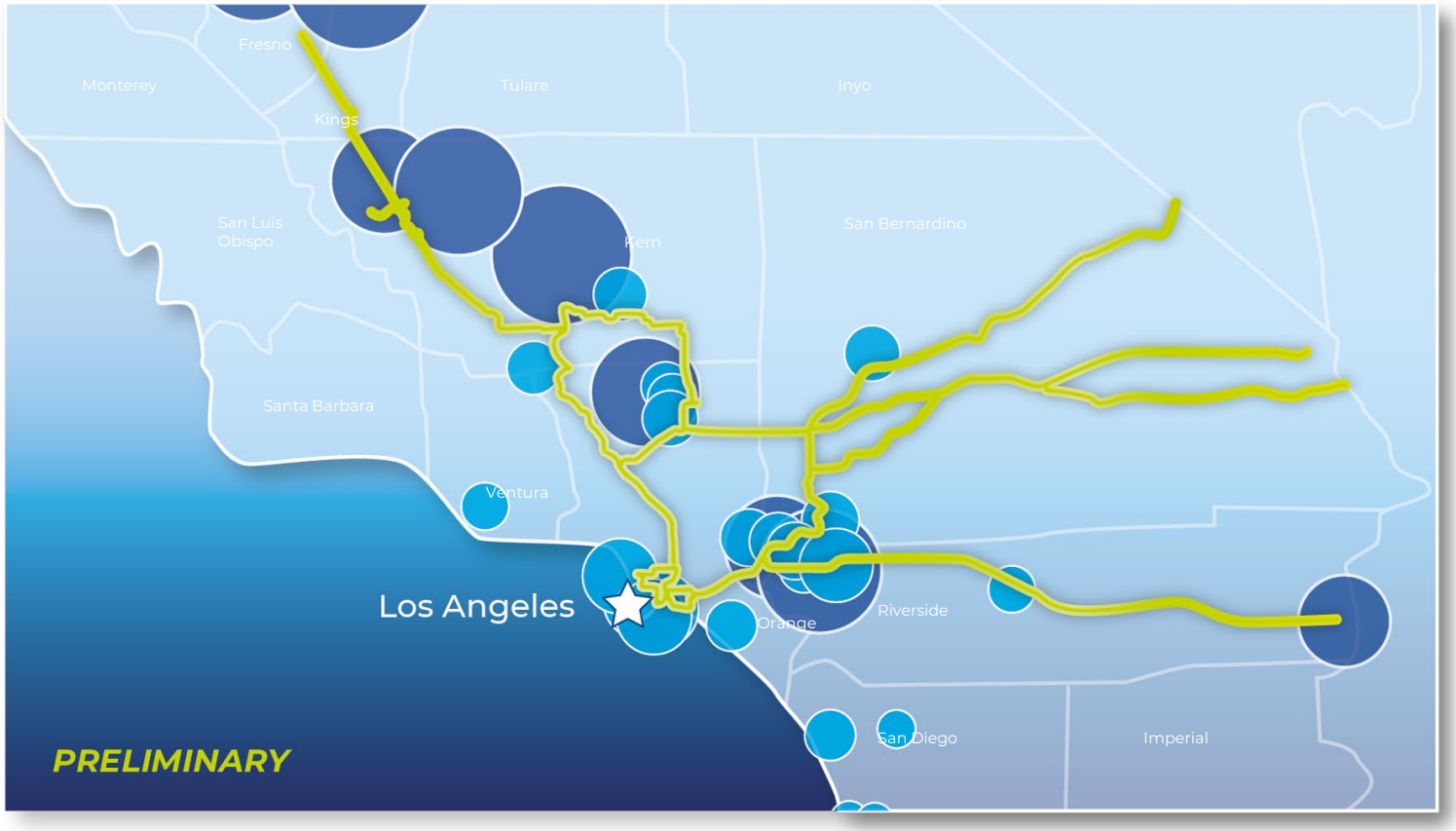
To be leveraged in **Phase 2** to support stakeholder engagement efforts

ESJ Screening - Feedback

- City information added to CalEnviroScreen census tract tables
- Languages spoken in areas crossed by evaluated segments added
- Data from the Community Development Index Tool (CRCD and USC) added for all relevant census tracts
- Justification for indicator data used added
- CalEnviroScreen overall percentile and pollution burden percentile added to DAC designation data tables
- Addition of overview map of evaluated conceptual pipeline route segments

ARCHES & ANGELES LINK: AN INTEGRATED NETWORK

1,300 MILES OF POTENTIAL ROUTE CONFIGURATIONS STUDIED



- When combined, initial route configurations studied traversed approx. 1,300 miles
- Angeles Link is anticipated to be approximately 450 miles

ARCHES Production and Offtake sites are from the ARCHES Fact Sheet, October 2023

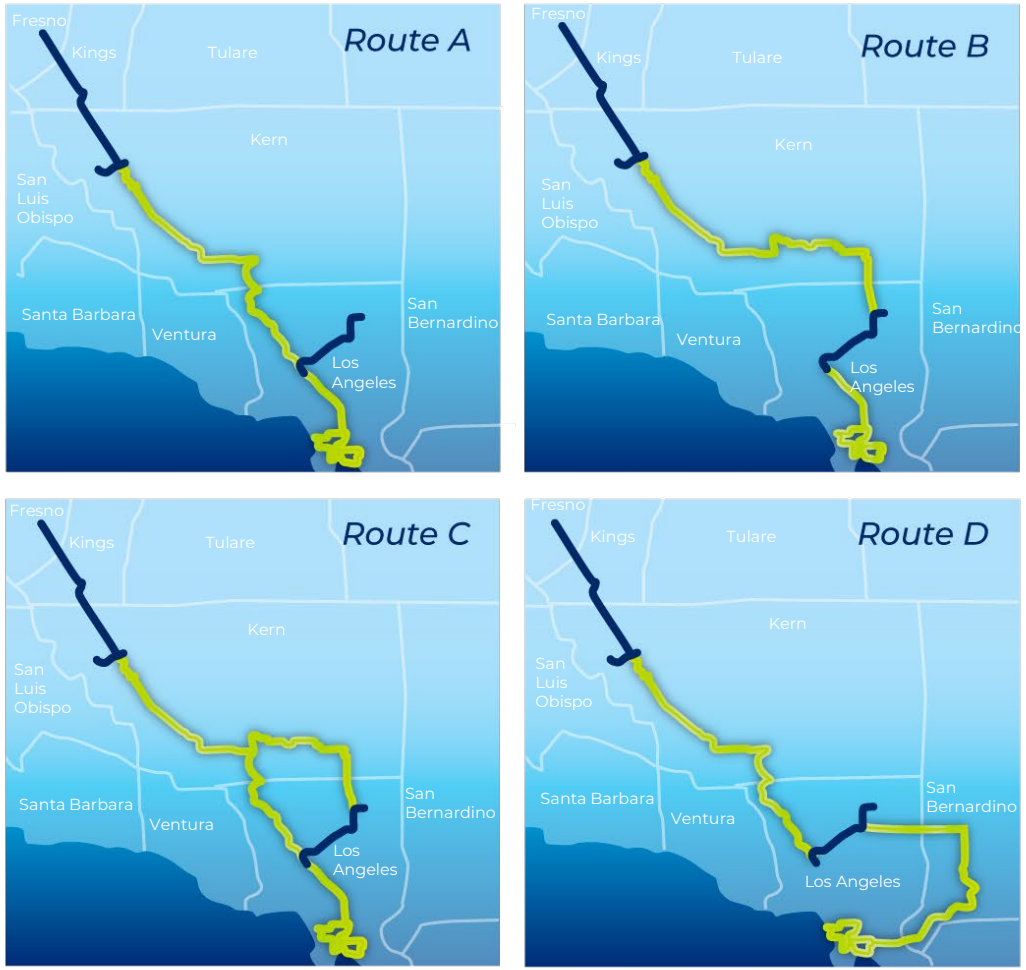
- ARCHES Offtake Sites
- ARCHES Production Sites

These renderings illustrate conceptual preferred route options for Angeles Link. The routing of the pipeline system will be optimized through further detailed siting analysis, considering environmental, social, and technical factors to minimize impacts and enhance operational efficiency.

ANGELES LINK

ANGELES LINK POTENTIAL DIRECTIONAL ROUTES

Four potential directional routes and 1 route variation identified



Potential directional routes are subject to change and will be further analyzed (e.g., for hydraulics, engineering, production, demand, etc.).

ANGELES LINK

MEMBER DISCUSSION: ANGELES LINK PHASE 1 SUMMARY OF STUDIES

- Please announce your name and speak directly into the microphone
- Be concise and focus on discussion topics
- Verbal comments are not the only way to provide input, feel free to type a chat

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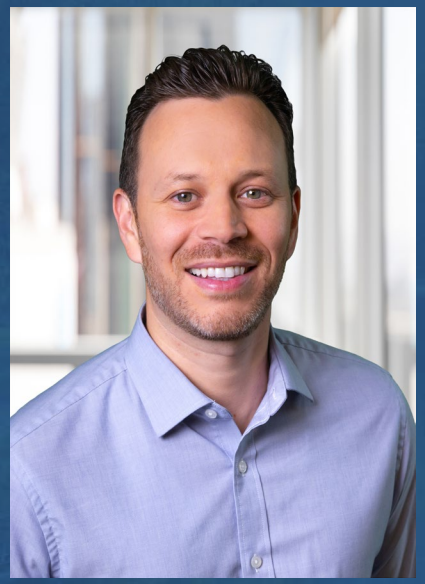
SUMMARY OF PAG & CBOSG PROCESS

ANGELES LINK



FRANK LOPEZ
Regional Public Affairs Director
SoCalGas

SoCalGas

PAG/CBOSG Participating Organizations

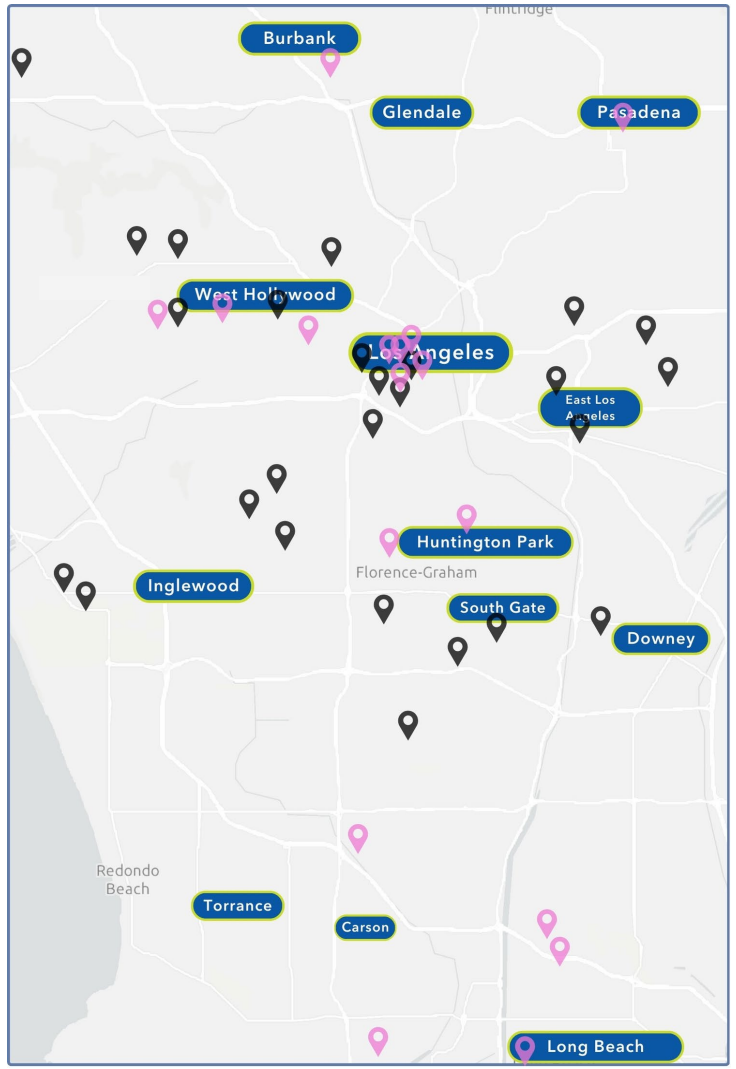
This slide highlights the organizations comprising the PAG and CBOSG, along with a map pinpointing the locations of their headquarters across Los Angeles County.

PLANNING ADVISORY GROUP

- Agricultural Energy Consumers Association*
- Air Products*
- ARCHES
- Bizfed
- Bloom Energy*
- California Air Resources Board*
- California Energy Commission*
- California Hydrogen Business Council*
- California Manufacturers and Technology Association*
- California Water Data Consortium*
- City of Burbank
- City of Long Beach - Long Beach Water
- City of Long Beach - Utilities
- Clean Energy
- Clean Energy Strategies representing the Utility Coalition*
- Communities for a Better Environment
- Earth Justice*
- Energy Independence Now
- Environmental Defense Fund*
- Environmental Justice League*
- Fernandeno Tataviam Band of Mission Indians*
- GoBiz*
- Green Hydrogen Coalition*
- Harbor Trucking Association
- Independent Energy Producers Association*
- International Longshore and Warehouse Union Local*
- Local Union 250
- Los Angeles Department of Water and Power
- Metropolitan Water District*
- Natural Resources Defense Council*
- Pasadena Water & Power
- Port of Los Angeles*
- Protect Our Communities Foundation*
- Reimagine LA
- Sierra Club
- South Coast AQMD*
- Southern California Water Coalition
- Southern California Association of Governments
- Southern California Generation Coalition
- Southern California Leadership Council
- Southern California Pipe Trades
- Southern California Public Power Authority*
- The United Association*
- UC Davis Institute of Transportation Studies*
- UC Davis Sustainable Transportation Energy Pathways*
- UCI Advanced Power and Energy Program*
- University of California, Riverside*
- Utility Reform Network (TURN)*
- Utility Workers Union of America 483
- Utility Workers Union of America Local 132*

COMMUNITY-BASED ORGANIZATION STAKEHOLDER GROUP

- Alma Family Services
- Ballona Wetland Institute
- Breathe Southern California
- California Greenworks
- California Native Vote Project
- Chinatown Service Center
- Climate Action Campaign
- Coalition for Responsible Community Development (CRCD)
- Communities for a Better Environment
- Comunidades Indigenas en Liderazgo (CIELO)
- Defend Ballona Wetlands
- Faith and Community Empowerment (FACE)
- Food and Water Watch
- Go Green Initiative
- Greater Zion Church Family
- LA Black Workers Center/Care at Work, UCLA Labor Center
- Little Tokyo Community Council (LTCC)
- Los Angeles Indigenous People's Alliance
- Mexican American Opportunity Foundation (MAOF)
- Nature for All
- Parents, Educators/Teachers, and Students in Action (PESA)
- Physicians for Social Responsibility-Los Angeles
- Protect Playa Now
- Reimagine LA Foundation
- Soledad Enrichment Action (SEA)
- Southside Coalition of Community Health Centers
- Vote Solar
- Watts Labor Community Action Committee
- Watts/Century Latino Organization
- YMCA of Greater Los Angeles



*Some of the represented organizations have offices located outside the mapped area.

Phase 1 Process Update

Since March 2023, SoCalGas also made process improvements to enhance stakeholder engagement and transparency in response to member requests, including:

- **Virtual Meeting Options:** All meetings offered virtual attendance to increase accessibility.
- **Expanded Membership**: Stakeholders were invited to suggest new group members, broadening participation.
- **Advance Distribution of Meeting Materials** Materials were provided at least one week in advance, with a goal of two weeks.
- **Extended Comment Periods:** Comment deadlines were extended as needed, ensuring stakeholders had ample time to review materials and provide feedback.
- **Improved Communication:** Introduced a deadline matrix for clear communication of comment submission timelines.

PHASE 1 ACTIVITIES

SINCE CPUC APPROVED ANGELES LINK MEMORANDUM ACCOUNT APPLICATION (DECEMBER 2022):

Received
100+
COMMENT LETTERS
from PAG and CBOSG

Reviewed and responded to
1,000+
PAGES
of comments

FEASIBILITY STUDIES

Conducted
16
STUDIES
includes multiple feasibility studies, an Affordability Framework, and an ESJ plan

which collectively span
2,500+
PAGES
covering a wide range of topics

TOP FIVE STAKEHOLDER PRIORITIES BASED ON FEEDBACK

SAFETY | HEALTH | COST

WORKFORCE DEVELOPMENT | ROUTING / ENVIRONMENTAL

70 PARTICIPATING ORGANIZATIONS

PLANNING ADVISORY GROUP (PAG)
offers technical advice and feedback
42 PAG

+

COMMUNITY BASED ORGANIZATION STAKEHOLDER GROUP (CBOSG)
provides community feedback
28 CBOSG

27 TOTAL MEETINGS

14 Quarterly Meetings

13 Workshops

ANGELES LINK

ANGELES LINK

MEMBER DISCUSSION: SUMMARY OF PAG/CBOSG PROCESS

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ANGELES LINK

LUNCH

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ANGELES LINK PHASE 2 UPDATE

ANGELES LINK

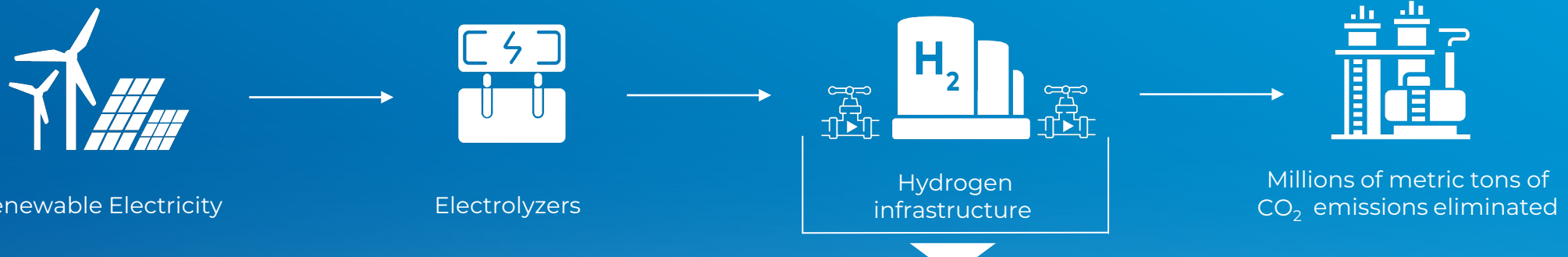
SHIRLEY ARAZI
Angeles Link Director
Regulatory & Policy

SoCalGas

ANGELES LINK AS ENVISIONED TODAY

- An open access ~450-mile **pipeline system** that is dedicated to public use
- Would transport clean renewable hydrogen[1] from regional third-party production and storage sites to end users in Central and Southern California
- Includes two pipeline segments (San Joaquin Valley and North LA County) identified by ARCHES
- Serving clean electric generation, transportation, manufacturing/industrial sectors
- Sized for an annual total throughput of approximately 0.5 to 1.5MMT over time
- May be constructed in stages

[1] For purposes of Angeles Link, per CPUC directives, clean renewable hydrogen is defined as that which does not exceed a standard of four (4) kilograms of carbon dioxide equivalent produced on a lifecycle basis per kilogram of hydrogen produced and does not use fossil fuel in its production process.



ANGELES LINK

PHASE 2 APPLICATION OVERVIEW

What it is:

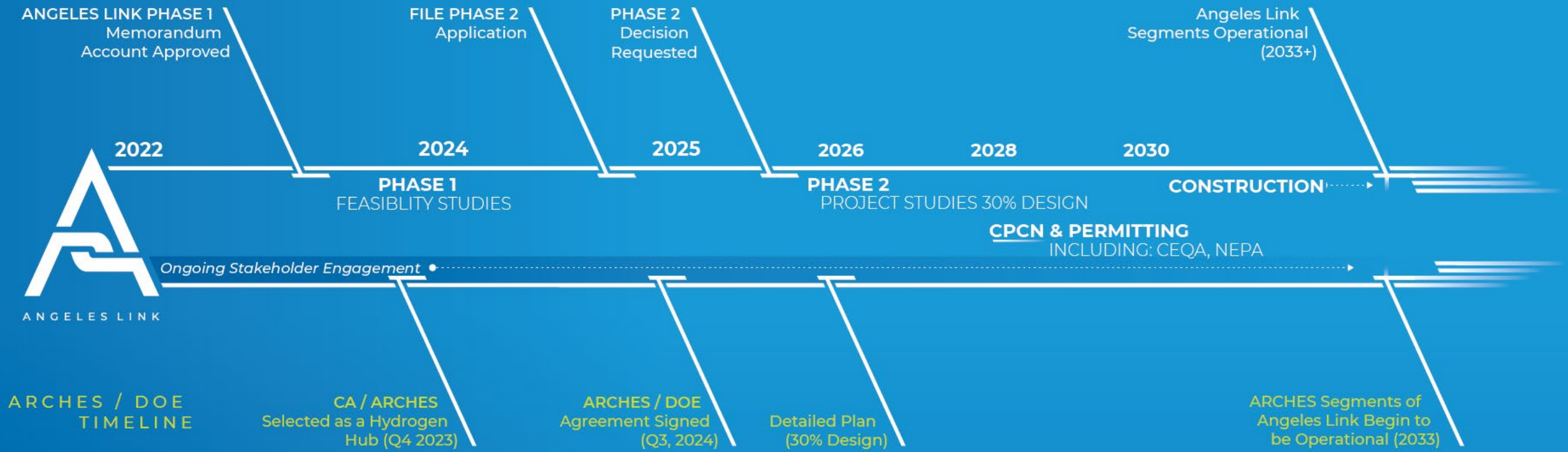
- Build upon Phase 1 activities
- ~$266 million estimated cost
- Identify preferred system route and refine engineering
  - Siting, technical, and design analysis
  - System evaluation and modeling
  - 30% engineering design
- Evaluate topics such as:
  - End user and producer requirements
  - Environmental analysis
  - Safety
  - Workforce planning
- Advance and align timing with ARCHES' schedule
- Expand stakeholder community outreach
- Forecasted 30-month schedule after CPUC decision
- Cost recovery
- Refined analyses will inform affordability assessments and opportunities

What it is NOT:

- Procurement of materials
- CEQA or NEPA review
- Obtaining permits and entitlements
- Construction

ANGELES LINK

CONCEPTUAL ANGELES LINK TIMELINE



ESTIMATED AS OF DECEMBER 2024

Timeline Not to Scale

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PROPOSED CPUC APPLICATION PROCESS FOR PHASE 2

APPLICATION MILESTONES	ANTICIPATED TIMING
File Phase 2 Application	Est. Dec 2024
Intervenor Protest Period	Early 2025
Prehearing Conference	Scheduled by Administrative Law Judge
Public Workshop	Est. Q1 2025
Proposed Decision Issued & Intervenor Comments	Est. Q4 2025
Final Decision	Est. Q4 2025

ANGELES LINK

PROPOSED STAKEHOLDER ENGAGEMENT: PHASE 2

- SoCalGas will continue to meet with and solicit feedback from a PAG on Phase 2 activities at key milestones.

- Phase 1 PAG and CBOSG members would be invited to participate in Phase 2 PAG. Membership would be expanded to include broader set of stakeholders

- SoCalGas would hold hybrid and virtual public meetings to solicit feedback from communities on route selection and alignment, including EJ and tribal communities

- SoCalGas would leverage its Phase 2 stakeholder engagement activities to gather input on the future development of a community benefits plan for Angeles Link.

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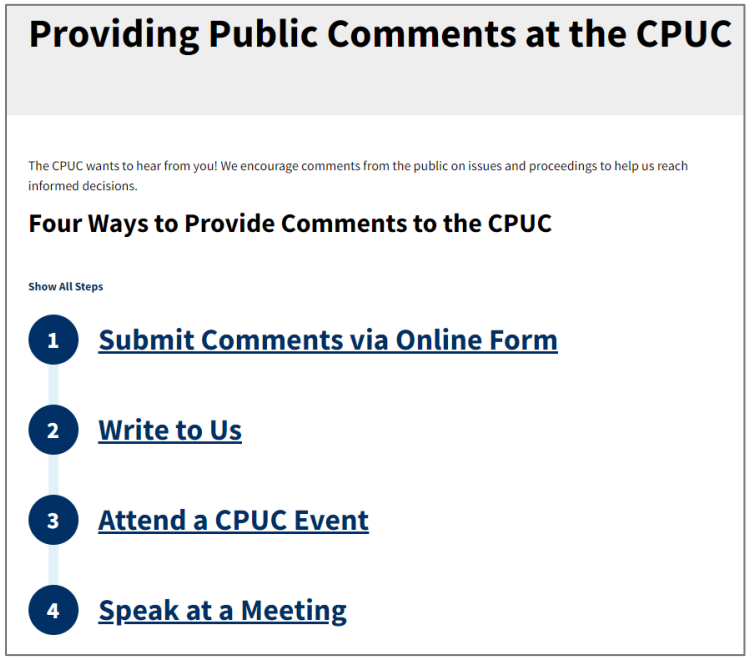
HOW TO STAY INFORMED AND ENGAGED IN THE REGULATORY PROCESS

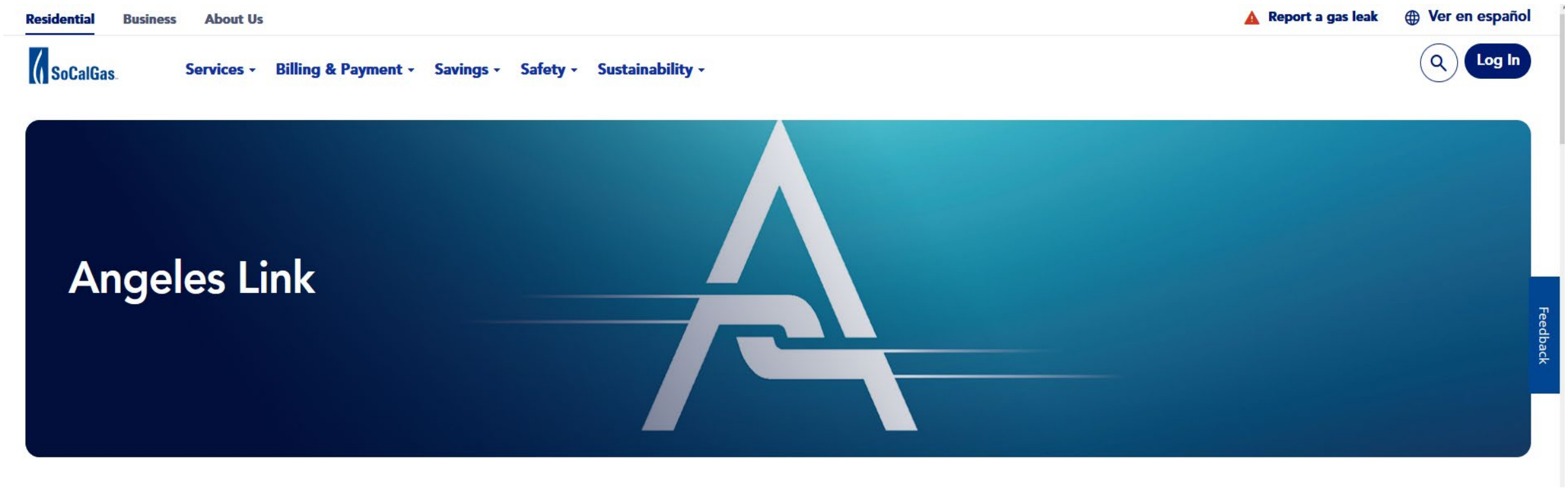
Subscribe to Proceedings



Submit a Letter

Become a Party in a Proceeding

ANGELES LINK WEBSITE



SoCalGas plans to phase out the use of the Living Library at conclusion of Angeles Link Phase 1. The Living Library will remain accessible to all members until **Friday, December 27, 2024**.

ANGELES LINK

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ANGELES LINK

NEXT STEPS

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MEMBER DISCUSSION: ANGELES LINK PHASE 2 UPDATE

- Please announce your name and speak directly into the microphone
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ROUNDTABLE

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SOCALGAS EXECUTIVE CLOSING

ANGELES LINK

NEIL NAVIN
Chief Clean Fuels Officer
SoCalGas

SoCalGas

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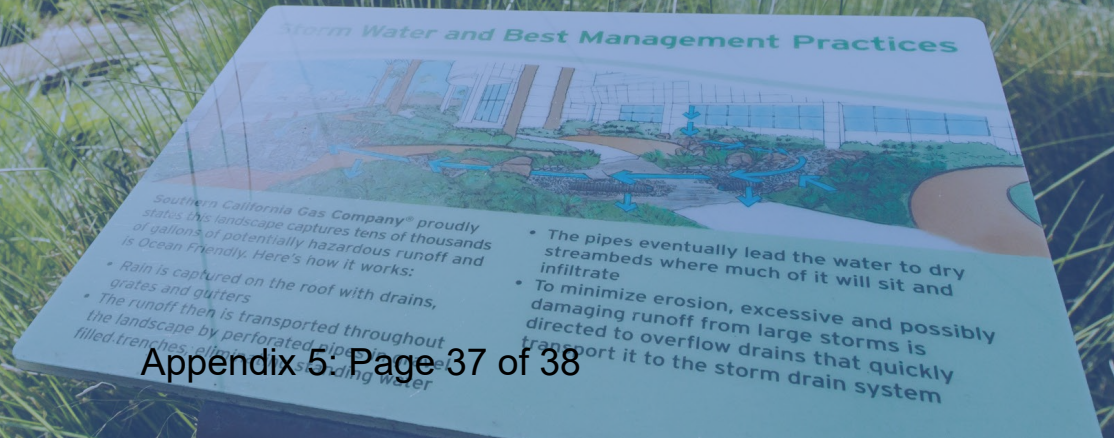
THANK YOU FOR YOUR PARTICIPATION



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RECEPTION

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Appendix 6 - Summary of PAG and CBOSG Meeting

SoCalGas Angeles Link
Planning Advisory Group (PAG) and
Community Based Organization Stakeholder Group (CBOSG)

December 2024 Quarterly Meeting

12/17/24 PAG Workshop (10:00AM-2:00PM)

Bateman Hall in Lynwood California & Online via Zoom

I. Attendee Report

- PAG attendees (5 in-person; 17 via Zoom)
- CBOSG attendees (14 in-person; 6 via Zoom)

Please refer to Attachments A and B for a complete list of attendees.

II. Purpose

- Provide information and gather feedback on the following topics:
    - Angeles Link Phase 1 Summary of Studies
    - Summary of PAG and CBOSG Process
    - Angeles Link Phase 2 Updates

III. Presentation Highlights and Feedback Themes

- **Summary of Phase 1 Studies**: The presentation focused on providing a summary of the 16 studies released during Phase 1 of the Angeles Link.
    - Feedback Themes:
        - Member suggestions to partner with ethnic media outlets to release summary reports
        - Member concerns about the Phase 1 Angeles Link regarding the community engagement process and meeting safety, transparency, and environmental justice standards
        - Member concerns about hydrogen blending with natural gas and clarification on the reasons for running the suggested pipeline routes along freeways
        - Member comments on the actions made by members that left early and withdrew from the stakeholder group
        - Member comments on the importance of community-based organizations' involvement in the Angeles Link and gratitude for SoCalGas's invitation for stakeholders to provide feedback and recommendations throughout the process
        - Member concerns about minimal updates and revisions made in the Phase 1 studies, failure to commit to clean electrolytic hydrogen, and scheduled meeting dates following the recent release of studies

- **Summary of PAG/CBOSG Process**: The presentation focused on a summary of the PAG and CBOSG process.
    - Feedback Themes:
        - No feedback provided
- **Summary of ALP2 Update**: The presentation focused on giving members an update of what Phase 2 of the project will look like.
    - Feedback Themes:
        - Member inquiry on the methodology and process of community outreach
        - Member suggestions on using historical injustices within communities when developing outreach plan
        - Member encourages SoCalGas to ask more questions on why SoCalGas is doing AL as a regulated line of business versus Sempra developing an affiliate
        - Member comment on ALP2 schedule being unrealistic
        - Member inquiry on the role of PAG and CBOSG operating in parallel to the proceeding once it is underway
        - Member asked for clarification on whether there will be meetings with the public during the regulatory proceeding
        - Member comments on tools and data that will be used when developing a community outreach plan
        - Member suggestions on legislative collaboration
        - Member suggestions on speaking with the community when gathering data and to continue having a transparent library for information
- **Roundtable**
    - Feedback Themes:
        - Member updates on projects their organizations are working on while they wait for the launch of Phase 2

Attachment A

December Quarterly Meeting 2024 Attendee Roster

#	First Name	Last Name	Affiliation
PAG Members			
1	Miles	Heller	Air Products
2	Rizaldo	Aldas	California Energy Commission
3	Katrina	Fritz	California Hydrogen Business Council
4	Benjamin	Tang	California Public Utilities Commission
5	Christopher	Arroyo	California Public Utilities Commission
6	Matthew	Taul	California Public Utilities Commission
7	Christopher	Arroyo	California Public Utilities Commission
8	Tony	Foster	City of Long Beach – Utilities*
9	Tyson	Siegele	Clean Energy Strategies representing the Utility Consumer's Action Network
10	Brian	Goldstein	Energy Independence Now
11	Michael	Colvin	Environmental Defense Fund*
12	Joon Hug	Seong	Environmental Defense Fund*
13	Tim	Kamermayer	Green Hydrogen Coalition*
14	Nathaniel	Williams	Local Union 250
15	Hector	Carbajal	Local Union 250
16	Sam	Cao	South Coast AQMD
17	William	Kunz	Southern California Pipe Trades DC 16
18	Dhruv	Bhatnagar	Green Hydrogen Coalition*
19	Ian	Fisher	California Public Utilities Commission
20	Matt	Ko	City of Burbank
CBOSG Members			
21	Marcia	Hanscom	Ballona Wetlands Institute*
22	Robert "Roy"	Van de Hoek	Defend Ballona Wetlands
23	Michael	Berns	California Greenworks*
24	Ricardo	Mendoza	Coalition for Responsible Community Development*
25	Hyepin	Im	Faith and Community Empowerment (FACE)*
26	Andrea	Vega	Food and Water Watch*
27	Andrew	Pezullo	Food and Water Watch*
28	Kisa	Ito	Little Tokyo LA
29	Ciriaco "Cid"	Pinedo	Mexican American Opportunity Foundation*
30	Edgar	Barraza	Physican for Social Responsibility-LA
31	Rashad	Rucker-Trapp	Reimagine LA*
32	Raul	Claros	Reimagine LA*
33	Enrique	Aranda	Soledad Enrichment Action*
34	Isaac	Gavlan	Soledad Enrichment Action*
35	Andrea	Williams	Southside Coalition of Community Health Centers
36	Faith	Myhra	Protect Playa Now*
37	Kevin	Weir	Protect Playa Now*

38	Marc	Carrel	Breathe Southern California
39	Luis	Pena	Los Angeles Indigenous People's Alliance*
40	Gerry	Salcedo	YMCA LA
Non-Members			
41	Maryam	Brown	SoCalGas*
42	Neil	Navin	SoCalGas*
43	Andy	Carrasco	SoCalGas*
44	Frank	Lopez	SoCalGas*
45	Amy	Kitson	SoCalGas*
46	Shirley	Arazi	SoCalGas*
47	Yuri	Freedman	SoCalGas*
48	Annie	Ng	SoCalGas*
49	Katrina	Regan	SoCalGas*
50	Chester	Britt	Arellano Associates*
51	Stevie	Espinoza	Arellano Associates*
52	Keven	Michel	Arellano Associates*
53	Alma	Marquez	Lee Andrews Group*
54	Keshanna	Wiley	Lee Andrews Group*
55	Isaac	Martinez	Lee Andrews Group*
56	Anniken	Lydon	Insignia Environmental
57	Armen	Keochekian	Insignia Environmental

*In person attendee