



# Angeles Link Q3 Quarterly Report (Phase One)

For the Period July 1, 2023, through September 30, 2023



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## **I. BACKGROUND**

On December 15, 2022, the California Public Utilities Commission (CPUC) adopted Decision 22-12-055 (Decision) authorizing the establishment of SoCalGas’s Angeles Link Memorandum Account (Memorandum Account) to track costs for advancing the first phase of the Angeles Link Project (Project). SoCalGas established the Memorandum Account on December 21, 2022.

The objective of the proposed Project is to develop a system that will transport clean renewable hydrogen,<sup>1</sup> likely from multiple local, and longer term, regional clean hydrogen production sources to various delivery points in the Los Angeles Basin (including the concentrated commercial and industrial areas in and around the Ports of Los Angeles and Long Beach), and in the broader Southern and Central California region. The CPUC recognized 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.”<sup>2</sup>

To increase transparency and gain valuable feedback, SoCalGas proposed in its Memorandum Account Application for Angeles Link to submit interim reports to the CPUC and the public regarding Project status and updates. Pursuant to Ordering Paragraph (OP) 3(h) of the Decision,<sup>3</sup> SoCalGas hereby submits this Q3 Quarterly Report, for the period July 1, 2023, through September 30, 2023 (Q3-2023). In compliance with the Decision, this report is also served on the service list for the Angeles Link proceeding (A.22-02-007) and is publicly available at: <https://www.socalgas.com/sustainability/hydrogen/angeles-link>.

## **II. PLANNING ADVISORY GROUP AND COMMUNITY BASED ORGANIZATION STAKEHOLDER GROUP ACTIVITY SUMMARY**

During this reporting period, in compliance with the Decision’s directive to conduct quarterly stakeholder engagement meetings, four Planning Advisory Group (PAG) meetings (one quarterly and three workshops) and four Community Based Organization Stakeholder Group (CBOSG) meetings (one quarterly and three workshops) were held. These meetings are discussed below.

In addition to engaging with CBOSG and PAG members at quarterly meetings, in response to requests from PAG and CBOSG members and to enhance transparency throughout the Phase

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<sup>1</sup> Per the Decision (D.22-12-055), “clean renewable hydrogen” is defined as hydrogen produced with a carbon intensity equal to or less than four kilograms of carbon dioxide-equivalent produced on a lifecycle basis per kilogram and does not use any fossil fuel in its production process.

<sup>2</sup> Decision 22-12-055, p. 2

<sup>3</sup> *Id.* at pp. 74-75.

One study process, supplemental CBOSG/PAG workshops were held to provide members with additional opportunities to engage in the process and provide feedback on Phase One feasibility studies.

SoCalGas identified four milestones in Phase One to allow meaningful opportunities for PAG and CBOSG input: (1) the Scope of Work description for the studies, (2) the Technical Approach for the studies, (3) Preliminary Findings and Data, and (4) the Draft Reports. During the Q2 quarterly meeting, CBO and PAG members were asked to complete a poll to prioritize the Phase One studies that were of most interest and to select a preferred meeting format and approach to review the remaining Scope of Work descriptions as a group, which were provided on July 6, 2023.<sup>4</sup> The majority of members preferred to review the study descriptions via additional in-person/supplemental workshops, which were held in July and August 2023.

SoCalGas hosted additional supplemental workshops in August 2023 to focus on the Demand Study and the Environmental & Environmental Social Justice Analysis Study. Since the Demand Study is progressing ahead of other Phase One feasibility studies, SoCalGas presented initial findings to stakeholders during the supplemental August workshops. Further, since CBOSG members provided significant verbal feedback in July to the scope of the environmental justice (EJ) workstream within the Environmental & Environmental Social Justice Analysis Study, SoCalGas presented scope refinements made in response to that feedback for additional input from CBOSG members.

Next, the regularly scheduled quarterly meetings were held in September. In response to CBOSG member feedback requesting coverage of more hydrogen-related educational topics, external industry experts presented an overview of nitrogen oxide (NOx) air emissions related to hydrogen combustion, and an overview of hydrogen fundamentals at the CBOSG Q3 quarterly meeting. In addition, SoCalGas identified key elements that would be part of a proposed Environmental Justice Community Stakeholder Engagement Plan (Plan) and facilitated a break-out working group session with CBOSG members to solicit their feedback on the Plan's technical approach. More information regarding the break-out session on the Plan is outlined in Section III, Environmental Justice Engagement Plan – Breakout Session Activity. For PAG members, the September Q3 quarterly meeting focused on providing additional details and gathering feedback on study technical approaches. In preparation for the September Q3 quarterly meetings, SoCalGas provided updated Scope of Work descriptions that were refined in response to stakeholder feedback and provided study technical approach descriptions (Milestone 2) to stakeholders on September 7.

Table 1 below provides a summary of third quarter stakeholder meeting activity. Table 2 provides a chronological overview of significant milestones throughout the third quarter, detailing when materials were provided for stakeholder feedback and comment deadlines. The rows delineate the specific calendar dates, and the columns categorize information provided on

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<sup>4</sup> Scope of Work descriptions were provided on July 6, 2023. SoCalGas reviewed the Project Options and Alternative Scope of Work Description with CBOSG members on June 22, and with PAG members on June 28.

those dates. This table serves as a reference for understanding the information distributed to stakeholders for their feedback during the third quarter.

Table 3 provides a high-level summary of stakeholder comment themes captured for each Phase One feasibility study during the third quarter. Additional information regarding the meetings including all meeting materials is provided in the Q3 Quarterly Report Appendices as detailed below:

- Appendix 1 includes SoCalGas’s response to stakeholder feedback for Phase One feasibility study Scope of Work descriptions (Milestone 1) and technical approaches (i.e., methodology) (Milestone 2); and
- Appendix 2 includes lists of PAG and CBOSG members who were invited to and attended the respective meetings;
- Appendix 3 includes CBOSG materials presented at each CBOSG meeting, including presentation slides;
- Appendix 4 includes PAG materials presented at each PAG meeting, including presentation slides;
- Appendix 5 contains links to websites hosting recordings of both the PAG and CBOSG meetings;
- Appendix 6 is the CBOSG summary report for the four CBOSG meetings and CBOSG polling results from the Q2 quarterly meeting;
- Appendix 7 is the PAG summary report for the four PAG meetings and PAG polling results from the Q2 quarterly meeting;
- Appendix 8 includes court reporter transcripts for each meeting;
- Appendix 9 contains the revised Angeles Link Scope of Work descriptions for Phase One Studies, with modifications from the version shared with the PAG/CBOSG on July 6, 2023 shown in underline/strikeout format for efficiency of review. This updated version was provided to PAG and CBOSG members on September 7, 2023.
- Appendix 10 contains the Angeles Link Technical Approach Document for Phase One Studies
- Appendix 11 contains comments received from the PAG/CBOSG

**Table 1 Third Quarter Stakeholder Meeting Summary Table**

<b>Stakeholder Group</b>	<b>Dates</b>	<b>Meeting Type</b>	<b>Milestone</b>	<b># of Attendees</b>	<b>Study or Topics Covered</b>
PAG	July 18, 2023	Supplemental	Scope of Work	24	Plan for Applicable Safety Requirements, Workforce Planning & Training Evaluation, Preliminary Routing/Configuration Analysis, Demand Study, Production Planning & Assessment, High-Level Economic Analysis & Cost Effectiveness
CBOSG	July 19, 2023	Supplemental	Scope of Work	21	Plan for Applicable Safety Requirements, Workforce Planning & Training Evaluation, Preliminary Routing/Configuration Analysis, Demand Study, Production Planning & Assessment, High-Level Economic Analysis & Cost Effectiveness
PAG	July 20, 2023	Supplemental	Scope of Work	27	Environmental & Social Justice Analysis, Hydrogen Leakage Assessment, Greenhouse Gas Emission Evaluation, Nitrogen Oxides (NOx) Emission Assessment, Water Resource Evaluation
CBOSG	July 21, 2023	Supplemental	Scope of Work	22	Environmental & Social Justice Analysis, Hydrogen Leakage Assessment,

<b>Stakeholder Group</b>	<b>Dates</b>	<b>Meeting Type</b>	<b>Milestone</b>	<b># of Attendees</b>	<b>Study or Topics Covered</b>
					Greenhouse Gas Emission Evaluation, Nitrogen Oxides (NOx) Emission Assessment, Water Resource Evaluation, Right-of-Way & Franchise Analysis
CBOSG	August 28, 2023	Supplemental	Scope of Work	23	Environmental & Social Justice Analysis
CBOSG	August 29, 2023	Supplemental	Preliminary Findings	26	Demand Study
CBOSG	September 26, 2023	Quarterly	Technical Approach	23	Hydrogen Basics, NOx Emissions Basics, Environmental & Social Justice Analysis
PAG	September 28, 2023	Quarterly	Technical Approach	16	Project Options & Alternatives, High-Level Economics and Cost Effectiveness, Greenhouse Gas Emission Evaluation, Nitrogen Oxides (NOx) Emission Assessment



**Table 2. Third Quarter Milestone Dates and Comment Deadlines**

Study	Scope of Work Provided by SoCalGas (Milestone 1)	Stakeholder Workshop on Scope of Work description (Milestone 1)	Feedback due from CBOSG/PAG Members	Technical Approach (Milestone 2)	Redlines to Scope of Work	Feedback due from CBOSG/PAG Members <sup>5</sup>
Demand Study	July 6 <sup>th</sup>	July 18 <sup>th</sup> & July 19 <sup>th</sup>	July 31 <sup>st</sup>	September 7 <sup>th</sup>	September 7 <sup>th</sup>	September 25 <sup>th</sup>
Production Planning & Assessment	July 6 <sup>th</sup>	July 18 <sup>th</sup> & July 19 <sup>th</sup>	July 31 <sup>st</sup>	September 7 <sup>th</sup>	Not Applicable (NA) <sup>6</sup>	November 3 <sup>rd</sup>
Project Options and Alternatives	July 6 <sup>th</sup>	June 22 <sup>nd</sup> and 28 <sup>th</sup>	July 31 <sup>st</sup>	September 7 <sup>th</sup>	September 7 <sup>th</sup>	November 2 <sup>nd</sup>
High-Level Economic Analysis & Cost Effectiveness	July 6 <sup>th</sup>	July 18 <sup>th</sup> & July 19 <sup>th</sup>	July 31 <sup>st</sup>	September 7 <sup>th</sup>	NA <sup>7</sup>	November 2 <sup>nd</sup>
Water Resource Evaluation	July 6 <sup>th</sup>	July 20 <sup>th</sup> & July 21 <sup>st</sup>	July 31 <sup>st</sup>	September 7 <sup>th</sup>	September 7 <sup>th</sup>	October 13 <sup>th</sup>
Nitrogen Oxide (NOx) and other Air Emission Assessment	July 6 <sup>th</sup>	July 20 <sup>th</sup> & July 21 <sup>st</sup>	July 31 <sup>st</sup>	September 7 <sup>th</sup>	September 7 <sup>th</sup>	November 2 <sup>nd</sup>
Hydrogen Leakage Assessment	July 6 <sup>th</sup>	July 20 <sup>th</sup> & July 21 <sup>st</sup>	July 31 <sup>st</sup>	September 7 <sup>th</sup>	September 7 <sup>th</sup>	October 13 <sup>th</sup>
Greenhouse Gas Emission Evaluation	July 6 <sup>th</sup>	July 20 <sup>th</sup> & July 21 <sup>st</sup>	July 31 <sup>st</sup>	September 7 <sup>th</sup>	September 7 <sup>th</sup>	November 2 <sup>nd</sup>

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<sup>5</sup> Review deadlines were extended for some studies per request from stakeholders.

<sup>6</sup> The Scope of Work description was not modified/and or clarified in response to stakeholder feedback for the Production Planning & Assessment study.

<sup>7</sup> The Scope of Work description was not modified and/or clarified in response to stakeholder feedback for the Production High-Level Economic Analysis & Cost Effectiveness study.

Study	Scope of Work Provided by SoCalGas (Milestone 1)	Stakeholder Workshop on Scope of Work description (Milestone 1)	Feedback due from CBOSG/PAG Members	Technical Approach (Milestone 2)	Redlines to Scope of Work	Feedback due from CBOSG/PAG Members <sup>5</sup>
Environmental & Environmental Social Justice Analysis	July 6 <sup>th</sup>	July 20 <sup>th</sup> & July 21 <sup>st</sup>	July 31 <sup>st</sup>	September 7 <sup>th</sup>	September 7 <sup>th</sup>	September 25 <sup>th</sup>
High-Level Feasibility Assessment & Permitting Analysis	July 6 <sup>th</sup>	NA <sup>8</sup>	July 31 <sup>st</sup>	NA <sup>9</sup>	September 7 <sup>th</sup>	October 13 <sup>th</sup>
Right-of-Way Study	July 6 <sup>th</sup>	July 21 <sup>st</sup>	July 31 <sup>st</sup>	September 7 <sup>th</sup>	NA <sup>10</sup>	October 13 <sup>th</sup>
Franchise Study	July 6 <sup>th</sup>	July 21 <sup>st</sup>	July 31 <sup>st</sup>	September 7 <sup>th</sup>	NA <sup>11</sup>	October 13 <sup>th</sup>
Preliminary Routing/Configuration Analysis	July 6 <sup>th</sup>	July 18 <sup>th</sup> & July 19 <sup>th</sup>	July 31 <sup>st</sup>	September 7 <sup>th</sup>	September 7 <sup>th</sup>	November 3 <sup>rd</sup>
Pipeline Sizing & Design Criteria	July 6 <sup>th</sup>	NA <sup>12</sup>	July 31 <sup>st</sup>	September 7 <sup>th</sup>	September 7 <sup>th</sup>	November 3 <sup>rd</sup>

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<sup>8</sup> Poll was provided to PAG/CBOSG in Q2 2023 to prioritize the topics for the stakeholder workshops. High-Level Feasibility Assessment & Permitting Analysis was not a topic prioritized by stakeholders; therefore, not presented.

<sup>9</sup> High-Level Feasibility Assessment & Permitting Analysis Technical Approach was not provided because it is a screening analysis that was appropriately described in the Scope of Work description document.

<sup>10</sup> The Scope of Work description in the Right-of-Way Study was not modified in response to stakeholder feedback.

<sup>11</sup> The Scope of Work description in the Franchise Study was not modified in response to stakeholder feedback.

<sup>12</sup> Poll was provided to PAG/CBOSG in Q2 2023 to prioritize the topics for the stakeholder workshops. Pipeline Sizing & Design Criteria was not a study presented during a stakeholder meeting.

Study	Scope of Work Provided by SoCalGas (Milestone 1)	Stakeholder Workshop on Scope of Work description (Milestone 1)	Feedback due from CBOSG/PAG Members	Technical Approach (Milestone 2)	Redlines to Scope of Work	Feedback due from CBOSG/PAG Members <sup>5</sup>
Plan for Applicable Safety Requirements	July 6 <sup>th</sup>	July 18 <sup>th</sup> & July 19 <sup>th</sup>	July 31 <sup>st</sup>	September 7 <sup>th</sup>	September 7 <sup>th</sup>	October 13 <sup>th</sup>
Workforce Planning & Training Evaluation	July 6 <sup>th</sup>	July 18 <sup>th</sup> & July 19 <sup>th</sup>	July 31 <sup>st</sup>	September 7 <sup>th</sup>	September 7 <sup>th</sup>	October 13 <sup>th</sup>

**Table 3. Third Quarter Phase One Feasibility Study Stakeholder Comment Key Themes**

Study	Stakeholder Comment Key Themes
Plan for Applicable Safety Requirements	Support for community education programs about hydrogen with emphasis on raising community awareness and concerns about the consultation process with tribal communities.
Workforce Planning & Training Evaluation Scope	Reiteration of the importance of moving forward with hydrogen swiftly, recognizing the demand for sustainable energy, affordability, community education, and the need to learn from previous incidents concerning hydrogen. Discussion on permanent job creation, how historically marginalized communities will gain access to job and workforce training and aim to connect with job training centers in Los Angeles.
Preliminary Routing & Configuration Analysis	Questions were asked about timing for determining the route and construction. Statements were made regarding the need for clear communication, and adequate preparation to minimize community disruptions in subsequent phases of the Project that could include site specific outreach for construction activities.
Demand Study	Discussion around delivery of hydrogen gas beyond Los Angeles and understanding how the region's efforts and advantages in hydrogen technology compared to other locations, such as Europe. Questions about cost projections, variables determining demand and how the demand study interrelates with other studies.
Environmental and Social Justice Analysis	Recommendations on various strategies for community outreach, such as use of third-party academic or expert facilitators, including more stakeholders in the process, including Native American representation, and having roundtable discussions and listening sessions. Focus on decreasing potential environmental exposure and burdens for DACs. Prioritize education and transparency within the community. Requests for analysis on air pollution for potentially impacted communities and emphasis on research into non-pipeline alternatives.
Production Planning and Assessment	Support for emission-free hydrogen production and identifying the best locations for production based on renewable resources and proximity to demand centers. Questions about hydrogen potentially competing with other energy storage options such as batteries, pump hydro and compressed air. Discussions on the need for cost analysis of electrification and in-state vs. out-of-state hydrogen production.
High-Level Economic Analysis & Cost Effectiveness	Comments regarding the timing of investment in hydrogen assets, affordability, potential project costs and cost allocation, and discussion on the need for scalability to drive down hydrogen costs.
Hydrogen Leakage Assessment	Questions about research on existing hydrogen pipelines and facilities, how leakage will be determined and how to measure hydrogen leakage rates at low levels.

Study	Stakeholder Comment Key Themes
Greenhouse Gas (GHG) Emissions Evaluation	Comments about presenting both Global Warming Potential (GWP) 100-year and 20-year for hydrogen when discussing the potential role of hydrogen as an indirect greenhouse gas as related to potential leakage.
Pipeline Sizing & Design Study	Questions about the expected life of the hydrogen pipeline infrastructure, materials that would be used to combat pipeline degradation, and an emphasis on proper infrastructure design and maintenance to prevent emissions.
Nitrogen Oxide (NOx) and other Emission Assessment	Interest in both positive and negative health impacts tied to hydrogen. Comment that NOx emissions assessment will be dependent upon results from the demand study and that NOx emissions result from use (e.g., combustion) rather than electrolytic production. Additional feedback on determining emissions impacts on disadvantaged communities
Water Resources Evaluation	Questions about how the water study fits into the overall Project scheme considering that SoCalGas does not itself propose hydrogen production. Suggestion to set water usage standards for producers and end users. Discussion on evaluating recycled water, wastewater, and other water sources for hydrogen production.
Land Rights, Right-of-way & Franchise	Comments about specific potential impacts on communities during construction and the importance of mitigation measures. Discussion about the importance of community outreach and engagement.
Project Options and Alternatives	Questions regarding whether the localized hub analysis includes in-state or out-of-state production. Emphasis on the need for more comprehensive data when evaluating issues.

### **III. ENVIRONMENTAL JUSTICE ENGAGEMENT PLAN – CBOSG BREAKOUT SESSION ACTIVITY**

During the September 26 CBOSG meeting, SoCalGas facilitated a breakout session where CBOSG participants were organized into small groups to provide feedback on the Environmental Justice Community Engagement Plan (Plan) that SoCalGas is developing in Phase One to address and mitigate impacts to disadvantaged communities and other environmental justice concerns relating to the Project. The Plan identifies elements of engagement activities that are proposed to occur in future phases of the Project, subject to approval by the CPUC. The Plan is anticipated to evolve over time as the Project is further studied and developed in subsequent phases and further stakeholder feedback is gathered.

Topics for discussion during the breakout session included: (1) Goals and Objectives; (2) Disadvantaged Communities; (3) Native American Tribes, Tribal Groups, and Individuals; (4) Others Who May be Affected by or Have a Concerted Interest in the Project Based on Solicited Feedback; (5) Meetings; (6) Topics and Subject Matter Experts; and (7) Project Communication Challenges and Contingency Planning.

Every group engaged in discussions on Topic 1, which focused on the goals and objectives of the Plan. Subsequent discussion topics were different for each breakout group in order to cover all topics during the allocated breakout session time. Discussion topics were accompanied with a set of guiding questions to facilitate discussion and feedback. Each group had a designated scribe responsible for recording the ideas and feedback. These notes were then added to a larger master discussion board, creating a visual representation of overall stakeholder input. Because the meeting was conducted in a hybrid format, the breakout session activity was modified for online participants to have a similar experience engaging via a digital brainstorm board. There were two in-person groups and four online groups actively participating in this activity. Following these smaller group discussions, one member from each group was assigned to report on the key themes and ideas that had emerged during their discussions. Some of the key themes that emerged during the breakout session included:

- Direct and indirect costs to consumers and the community is a top priority;
- Provide educational opportunities and simplify information being presented to community members;
- Leverage the *Promotoras*<sup>13</sup> model to support the community engagement process by engaging trusted community messengers to share information;
- Provide unbiased and transparent information on the Project that includes different perspectives, not just SoCalGas' viewpoint;
- Provide flexible meeting times that includes hosting a roadshow of meetings preferably during evenings or Saturday mornings; and
- Be transparent about costs and explain how the Project will impact the region financially.

Additional themes and further detail about the CBOSG breakout session are contained within Appendix 3.

## **IV. COMMENTS AND RESPONSES TO STAKEHOLDER FEEDBACK**

In compliance with D.12-22-015, Ordering Paragraph (OP) 3(h), SoCalGas solicited feedback from the PAG and CBOSG and has summarized that feedback in this Q3 Quarterly Report. SoCalGas appreciates the continued engagement of the PAG and CBOSG throughout the stakeholder engagement process and the continued active participation in the third quarter stakeholder workshops and meetings. The work being conducted for each of the Phase One

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<sup>13</sup> “Promotores or Promotoras de Salud is a Spanish term used to describe trusted individuals who empower their peers through education and connections to health and social resources in Spanish speaking communities.” From: <https://mhpsalud.org/our-programs/promotoras-de-salud/>

studies is part of an iterative process and the feedback and insights provided by members of the PAG and CBOSG are being considered as the Angeles Link Phase One studies progress.

During the third quarter, SoCalGas received PAG and CBOSG member input verbally, through in-person and virtual attendee comments/discussions at workshops, and in writing through email and through Zoom chat functions from virtual attendees. SoCalGas developed a comment tracker database to document and track the stakeholder comments received as well as SoCalGas’s response to comments (see Appendix 1). Feedback was often relayed as part of a PAG/CBOSG discussion, and, in many cases, responses were provided in real time. Please note that the tracker does not include a response to every comment recorded during stakeholder meetings as explained below. Formal responses were developed for substantive comments focused on the applicable Phase One study milestone (i.e., Description of Work, Technical Approach, etc.). General stakeholder feedback received during stakeholder workshop sessions was grouped thematically (see Table 4 below). For additional detail on verbal feedback and meeting discussions, please refer to court reporter transcripts of all third quarter meetings (Appendix 8).

**Table 4: General Thematic Stakeholder Feedback and SoCalGas Response**

<b>General Stakeholder Feedback</b>	<b>SoCalGas Action/Response</b>
<p>A number of CBOSG stakeholders had comments about their lack of ability to collect compensation for participation in the stakeholder engagement process and participation in stakeholder meetings, and indicated this hinders their ability to attend meetings and participate fully in the process. These individuals typically represent smaller grassroots non-profit organizations that do not hold their own 501(c)(3) status.</p>	<p>SoCalGas appreciates the comments raised by members regarding the CBOSG compensation guidelines. As directed by D. 22-12-055, SoCalGas coordinated with the Energy Division and the PAG to develop a compensation plan for non-profit organizations which provides payment directly to such organizations, and not to individuals, for participation in stakeholder engagement meetings. Compensation is provided in accordance with the Detailed Plan and Set of Procedures for Community Based Organization Compensation approved in Advice No. 6146G. Parties to the proceeding may continue to request compensation through the CPUC’s Intervenor Compensation Program. Consistent with Commission guidelines, payments are not made to individuals. For smaller non-profit organizations that do not hold official 501(c)(3) status, it is customary for fiduciary responsibilities to be handled by another 501(c)(3) organization on their behalf.</p>
<p>A number of stakeholders commented that there is too much information to review in the time provided which makes it difficult for</p>	<p>SoCalGas understands that a large amount of technical information is being shared with stakeholders as part of the Phase One</p>

<b>General Stakeholder Feedback</b>	<b>SoCalGas Action/Response</b>
<p>stakeholders to fully engage in the process and provide complete and thorough feedback on the studies.</p>	<p>outreach activities. In the interest of further facilitating the exchange of Phase One study information, SoCalGas created a web-based “living library” that hosts the Phase One study information and comments in one place. SoCalGas also extended the schedule for stakeholder study review to provide additional opportunities for input. SoCalGas also conducted additional interim meetings/workshops to give members further opportunity to provide input on Phase One studies as they are being conducted.</p>
<p>Members requested third party facilitators for environmental justice-related discussions, community outreach efforts and specifically tribal outreach.</p>	<p>SoCalGas welcomes recommendations from stakeholders regarding environmental justice subject matter experts and/or facilitators to invite to future meetings for discussions on environmental justice issues.</p> <p>As part of the Environmental and Environmental Social Justice Study, SoCalGas will develop a community-focused Environmental Justice Community Engagement Plan for use in future phases (pending CPUC authorization) to gather community concerns and address how potential impacts to historically marginalized communities could be mitigated. This plan will include outreach to local indigenous communities.</p>
<p>Stakeholders raised concerns whether blending hydrogen with natural gas should be considered and evaluated as part of the Phase One studies.</p>	<p>As described in D.22-12-015, Angeles Link would deliver clean renewable hydrogen only. Transporting blended hydrogen gas is not proposed for Angeles Link.</p>
<p>Stakeholders requested additional details on contracts with vendors and raised concerns about perceptions of biased execution of studies.</p>	<p>SoCalGas is using credible, non-biased third-party consultants to execute Phase One feasibility studies.<sup>14</sup> SoCalGas has committed to a transparent and robust stakeholder engagement process. The Description of Work description materials shared with</p>

<sup>14</sup> Right-of-Way Analysis and Franchise Analysis are being conducted in-house.



<b>General Stakeholder Feedback</b>	<b>SoCalGas Action/Response</b>
	<p>PAG/CBO members on July 6, 2023, capture details for the scope of work being conducted under each study. Full copies of contracts to perform Phase One feasibility studies were submitted by SoCalGas to the Public Advocates Office on August 15, 2023, in response to a formal data request.</p>
<p>Commenters noted that SoCalGas should not use the PAG and CBOSG meetings for promotional purposes.</p>	<p>SoCalGas is not utilizing PAG and CBOSG meetings for promotional purposes. As directed by the Decision, SoCalGas uses stakeholder engagement meetings to review technical information, and as appropriate, to educate and engage CBOSG members on hydrogen topics. SoCalGas also coordinates with CPUC Energy Division staff on meeting topics and materials to be presented prior to each stakeholder meeting.</p>
<p>Messaging and content of materials presented to CBOSG are very complex and can be difficult to follow.</p>	<p>SoCalGas recognizes that much of the Phase One study materials are highly technical. SoCalGas has condensed technical information and added more visuals to CBOSG presentation materials to better communicate study content. SoCalGas has also brought in external third-party experts to help educate and engage CBOSG participants on technical topics during stakeholder meetings. These materials continue to be made available via the PAG/CBOSG Living Library, and subject matter experts make themselves available during and between meetings to offer additional support. SoCalGas is also considering an alternative approach to the CBOSG meetings, which includes more small groups and one-on-one time with subject matter experts.</p>
<p>Comments related to the level of detail being undertaken in Phase One studies compared to what would ultimately be expected during project-level California Environmental Quality Act (CEQA) review were expressed.</p>	<p>SoCalGas is still in Phase One of the Angeles Link Project, which consists of high-level feasibility studies. A preferred system has not yet been identified and, therefore, detailed project-level review (akin to that typically conducted for a project under the California Environmental Quality Act (CEQA) and</p>

General Stakeholder Feedback	SoCalGas Action/Response
	National Environmental Policy Act (NEPA)) is not proposed as part of Phase One. More detailed analysis would be conducted in future phases (subject to CPUC authorization) after a preferred system is identified.
Questions related to safety of 100% (unblended) hydrogen gas and flammability of hydrogen gas compared to natural gas.	To educate CBOSG stakeholders on hydrogen characteristics, SoCalGas brought in an external expert to present information about hydrogen safety to the group (Hydrogen 101) at the Q3 quarterly CBOSG meeting. The external expert presented on hydrogen basics, hydrogen misconceptions, and hydrogen regulations and standards. Please refer to Appendix 3 for the slide deck presented by the external expert for more information on hydrogen’s properties.
Comments regarding the potential benefits of displacing fossil fuel use with hydrogen in reducing pollution in industrial and heavily trafficked areas, especially as it relates to disadvantaged communities.	SoCalGas agrees that taking diesel trucks off the roads and replacing them with zero emissions hydrogen fuel cell trucks has the potential for significant GHG reductions and other significant air quality benefits, including in disadvantaged communities. Such benefits will be highlighted in the NOx Emissions Assessment Study and the Greenhouse Gas Emissions Evaluation Study findings once available.
Comment received about the interviews being conducted for the Demand Study and if those interviews will be available to review.	The insights and feedback from these interviews helped to inform the demand analysis. Transcripts and recordings of interviews were not created.
Comments received about responsiveness to stakeholder questions and requests for SoCalGas to provide all meeting materials in advance of stakeholder meetings and provide recordings promptly after each meeting.	SoCalGas is committed to working with stakeholders in a transparent manner and seeks to make meeting materials easily accessible and digestible. SoCalGas has committed to providing meeting materials one week prior to quarterly meetings and 72 hours in advance of supplemental workshops and strives to meet this commitment before each meeting. SoCalGas has also developed a living library that allows PAG/CBOSG members to readily access all PowerPoint presentations, supplemental materials, and recordings from stakeholder meetings and workshops. Additionally, once meeting

<b>General Stakeholder Feedback</b>	<b>SoCalGas Action/Response</b>
	materials are received, stakeholders have a minimum of four weeks to provide feedback.

## V. SUMMARY OF MODIFICATIONS TO SCOPE OF WORK DESCRIPTIONS FOR PHASE ONE STUDIES IN RESPONSE TO STAKEHOLDER FEEDBACK

As discussed in the Q2 Quarterly Report, SoCalGas shared descriptions of the scopes of work for each study with the CBOSG and PAG members in June/July 2023. Based on input received from stakeholders during the third quarter, SoCalGas modified and/or clarified the scopes of work for many of the Phase One Studies. Accordingly, SoCalGas revised the previously shared Scope of Work descriptions and issued an updated document with modifications shown in underline/strikeout format for efficiency of review. The updated document was provided to PAG and CBOSG members on September 7, 2023, and a copy is included in Appendix 9. Table 5 below summarizes the key changes/clarifications made to the Scopes of Work descriptions (Milestone 1) as a result of stakeholder feedback. Please note that formal responses to comments received on Milestone 1 are documented in Appendix 1 (SoCalGas Responses to Comments).

**Table 5. Summary of Key Revisions to Scopes of Work Descriptions in Response to Stakeholder Feedback**

Study	Summary of Key Revisions to Scope of Work
Environmental & Social Justice Analysis	Modified so that the assessment will include a high-level analysis of air quality and greenhouse gas emissions. The environmental justice analysis was also modified to include the development of an Environmental Justice Community Stakeholder Engagement Plan. This Plan will establish an approach for engaging disadvantaged communities in future phases (subject to CPUC authorization), which will focus on gathering community input and providing education regarding hydrogen related topics.
Preliminary Routing/Configuration Analysis	Modified so that the evaluation criteria will include certain social constraints (e.g., land uses, historic locations).
Pipeline Sizing & Design Criteria	Modified so that pipeline sizing and compression options will include high-level considerations for resiliency and reliability.
Plan for Applicable Safety Requirements	Modified to add opportunities for collaboration with other stakeholders (e.g., community colleges, ports, etc.); high-level evaluation of existing safety programs, plans, and systems for applicability to 100% (unblended) hydrogen systems; a summary of lessons learned; and other relevant information gained from actual experiences that could be applicable to the proposed Angeles Link system (including pipeline, compression, storage, and transportation).
Workforce Planning & Training Evaluation	Modified to include an estimate of jobs created. As the construction timetable is developed, the timeline for workforce staging and growth may be updated to reflect the additional information. Opportunities for partnering with local training centers, colleges and

Study	Summary of Key Revisions to Scope of Work
	industry will also be considered. Also, the assessment was modified to include lessons learned from prior safety incidents as applicable to hydrogen.
Project Options & Alternatives	Clarified the study will include a levelized delivered cost comparison of the Project to hydrogen pipeline system options (e.g., localized hydrogen hub) and to other alternatives including non-hydrogen alternatives (e.g., electrification, energy efficiency, renewable natural gas (RNG), traditional fuels with carbon management) and other hydrogen delivery alternatives (e.g., trucking, in-basin production).
Demand Study	Clarified the study will incorporate a range of potential usage scenarios, which consists of a conservative scenario, a moderate scenario, and an ambitious scenario for each of the primary sectors. Confirmed that peer reviews will be conducted with entities such as academic, regulatory, or government agencies (state and federal) when possible, to provide objective feedback on approach, assumptions, and outputs.
Water Resources Evaluation	Clarified the results of this study, coupled with renewable energy generation sites, will inform potential locations for hydrogen production being evaluated in SoCalGas's Production Planning & Assessment Study. Also clarified that various sources of water would be evaluated.
Nitrogen Oxides (NOx) Emissions Assessment	Confirmed emission calculations will utilize information from evaluated research, the Demand Study, and other Phase One parallel studies, as applicable.
Hydrogen Leakage Assessment	Confirmed potential mitigation opportunities will be identified, including available sensors and emerging leak detection methodologies.
Greenhouse Gas Emissions Evaluation	Confirmed emissions estimates will include information from evaluated third-party research, the Demand Study, and other Phase One parallel studies, as applicable.

## **VI. ALLIANCE FOR RENEWABLE CLEAN HYDROGEN ENERGY SYSTEMS (ARCHES)**

D. 22-12-055 notes the “Angeles Link Project also can help position California to receive federal funding through the Infrastructure Investment and Jobs Act, which is providing \$8 billion to fund the development of four regional clean hydrogen hubs.<sup>15</sup>” D.22-12-055 directs SoCalGas to “join other entities that are members of the Alliance for Renewable Clean Hydrogen Energy Systems in support of the State of California’s application for the federal funding provided through the Infrastructure Investment and Jobs Act”<sup>16</sup> and to report on its “efforts and progress in partnering with the State of California on its application for federal funding provided through the Infrastructure Investment and Jobs Act.”<sup>17</sup> Although this Q3 Quarterly Report is meant to provide information through September 30, 2023, SoCalGas highlights for relevance the October 13, 2023, announcement made by the Department of Energy (DOE) regarding the Regional Clean Hydrogen Hubs Program (H2Hubs). After a rigorous application and review process, ARCHES was one of seven hubs selected from across the country out of over thirty applications.<sup>18</sup> The application details are still not public, and ARCHES will need to go through a negotiation process with the DOE in order to secure funding and start building out the hubs. This new development supports California’s clean energy and climate goals and is a central focus of SoCalGas. SoCalGas looks forward to continuing to work with ARCHES and the CPUC in developing Angeles Link Phase One studies as part of ARCHES’ deployment of clean renewable hydrogen projects throughout the state.

## **VII. PHASE ONE FEASIBILITY STUDIES UPDATE**

The Decision requires SoCalGas to submit Quarterly Reports to the Commission’s Deputy Executive Director for Energy and Climate Policy on the progress of the Phase One activities and to report any preliminary results and findings regarding the feasibility studies.<sup>19</sup> SoCalGas is required to make the Quarterly Reports public and include in them feedback received from parties and PAG members.<sup>20</sup> To ensure the Project delivers clean energy benefits and aligns with the Commission’s public policy goals, the CPUC set additional project-specific standards in the Decision. These project-specific standards address affordability, impacts to disadvantaged communities, consistency with California law and public policies, stakeholder concerns, and

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<sup>15</sup> Decision 22-12-055, p. 2.

<sup>16</sup> Decision 22-12-055, p. 74, OP 3 (d).

<sup>17</sup> Decision 22-12-055, p. 74, OP 3 (c).

<sup>18</sup> <https://archesh2.org/california-wins-up-to-1-2-billion-from-feds-for-hydrogen/>

<sup>19</sup> Decision 22-12-055, p. 74. OP 3(h).

<sup>20</sup> Ibid.

consideration and evaluation of Project alternatives.<sup>21</sup> In authorizing the Angeles Link Project Memorandum Account to track the costs of the studies discussed in this report, the Decision recognized that “clean renewable hydrogen is a key potential solution to decarbonize the state’s and the Los Angeles Basin’s energy use”<sup>22</sup> and “is one of the only few viable carbon-free energy alternatives for hard-to-electrify industries, electric generation, and the heavy-duty transportation sector.”<sup>23</sup> As such, the Project is required to balance multiple public policy priorities, including affordability,<sup>24</sup> environmental justice,<sup>25</sup> public interest benefits, support for California’s environmental law and public policies<sup>26</sup> (including CPUC decisions, policies and directives,<sup>27</sup> and aligning with federal clean renewable hydrogen standards<sup>28</sup>), addressing climate change, reducing greenhouse gas emissions, prioritizing safety, and enhancing energy system reliability. The Phase One feasibility studies are being undertaken in compliance with the Decision, in furtherance of the Project, and in alignment with the additional project-specific standards adopted by the CPUC. Note that the studies may be subject to further modification given PAG/CBOSG input on study descriptions, technical approaches, preliminary findings and data, and draft reports, and are also subject to change based on results from other studies, and/or other variables.

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<sup>21</sup> Ibid.

<sup>22</sup> Decision 22-12-055, p. 28.

<sup>23</sup> Ibid.

<sup>24</sup> Decision 22-12-055, p. 76, OP 6 (k)

<sup>25</sup> Decision 22-12-055, p. 76, OP 6 (l)

<sup>26</sup> Decision 22-12-055, p. 77, OP 6 (n)

<sup>27</sup> Decision 22-12-055, p. 77, OP 6 (o)

<sup>28</sup> Decision 22-12-055, p. 77, OP 6 (j)

## Market Assessment & Alternatives

Demand Study	
<b>Overview</b>	<p>The Decision requires (OP 6 (a) and OP 6 (c)) SoCalGas to identify hydrogen demand, end uses, and potential end-users (including current natural gas customers and future customers) of the Project. This study will evaluate potential clean renewable hydrogen demand and assess adoption in the Mobility, Power Generation, and Industrial sectors.</p>
<b>Progress Summary</b>	<p>Over the reporting period, SoCalGas shared preliminary outputs from the Demand Study model, which projects the demand for clean renewable hydrogen across the mobility, power generation, and industrial sectors in SoCalGas’s service territory through 2045. Three scenarios were modeled over the time period of 2025-2045, with the preliminary outputs indicating demand of approximately 1.9 million to 6 million tons per year (TPY) of clean renewable hydrogen by 2045. The preliminary outputs point to potentially widespread demand across the sectors and were informed by estimates from academic institutions, state and federal agencies, and industry.</p> <p>SoCalGas began assessing the feedback on the technical approach and preliminary outputs. SoCalGas also received requests for more detailed calculations and further explanation behind certain assumptions. SoCalGas responded by providing this additional information to the PAG. In addition, SoCalGas held smaller informal virtual meetings with PAG members to discuss feedback on modeling methodologies.</p>



<b>Production Planning &amp; Assessment</b>	
<b>Overview</b>	The Decision requires SoCalGas to identify the potential sources of hydrogen generation for the Project (OP 6 (b)) and its plans to ensure the quality of the hydrogen gas meets the clean renewable hydrogen standards set in the Decision (OP 6 (j)). This study will evaluate potential sources of clean renewable hydrogen production from renewable sources such as solar and wind, input requirements, estimated cost of production, and policies, procedures, and other methods to meet clean renewable hydrogen standards.
<b>Progress Summary</b>	Over the reporting period, SoCalGas continued to advance the production study. This work included assessing technical and market factors of various potential renewable sources of power (e.g., solar, onshore wind, offshore wind, biomass, geothermal, hydroelectric), storage technologies (e.g., lithium-ion batteries, pumped storage hydro energy, flow batteries, compressed air storage), and hydrogen production methods (e.g., electrolysis, biomass, biogas). Compilation of modeling assumptions and methodology is ongoing in coordination with inputs from other Phase One studies, ongoing market and technical interviews, and input from the PAG/CBOSG.

<b>Project Options and Alternatives</b>	
<b>Overview</b>	The Decision requires (OP 6 (d)) SoCalGas to consider and evaluate Project alternatives, including a localized hydrogen hub or other decarbonization options such as electrification. SoCalGas is also required (OP 3 (c)) to study a localized hydrogen hub solution under the specifications required to be eligible for federal funding as part of Phase One. This study will evaluate Project options and alternatives, including a localized hydrogen hub.
<b>Progress Summary</b>	Over the reporting period, SoCalGas selected consultants to conduct an evaluation of potential options and alternatives for other potential decarbonization methods (e.g., electrification, energy efficiency, renewable natural gas, etc.) as well as other hydrogen delivery pathways (e.g., trucking, rail, etc.). For options and alternatives related to pipeline routing and/or configurations of the Angeles Link system (hydrogen pipeline alternatives), SoCalGas conducted a contractor selection process and selected Burns & McDonnell. For other alternatives, which include non-hydrogen alternatives and hydrogen delivery alternatives, SoCalGas selected Wood Mackenzie. Work has continued to progress, including coordination of project execution, integration among the studies, the scope of each alternative, and technical approach. SoCalGas also received stakeholder feedback on the study’s technical approach that is being evaluated for incorporation as appropriate.

<b>High-Level Economic Analysis &amp; Cost Effectiveness</b>	
<b>Overview</b>	<p>The Decision requires (OP 6 (d)) SoCalGas to evaluate the cost effectiveness of the Project against alternatives and determine a methodology to measure cost effectiveness between alternatives. This study will determine a methodology to measure cost effectiveness that includes gathering cost estimates, performing an economic analysis to determine the potential levelized cost of clean renewable hydrogen to be delivered to end users, and comparing the cost effectiveness of the Project against various project alternatives.</p>
<b>Progress Summary</b>	<p>Over the reporting period, SoCalGas completed the contracting process and selected Wood Mackenzie to conduct this study. Work has continued to progress, including development of a methodology to measure cost competitiveness, and integration with the Project Options and Alternatives study and Environmental Analysis study.</p>

## Regulatory, Policy & Environmental

<b>Water Resource Evaluation</b>	
<b>Overview</b>	The Decision requires (OP 6 (b)) SoCalGas to identify the potential sources of clean renewable hydrogen generation and water and estimate the costs of the hydrogen for the Project. This study will evaluate the availability of water resources for clean renewable hydrogen production in the Central and Southern California regions.
<b>Progress Summary</b>	Over the reporting period, SoCalGas continued to progress work, including: (1) outreach to public agencies managing and treating potential water sources to inform further analysis; (2) evaluation of potential water resources available for third-party hydrogen production; and (3) review of the water quality requirements for electrolytic hydrogen generation.

<b>Nitrogen Oxide (NOx) and other Air Emissions Assessment</b>	
<b>Overview</b>	The Decision requires (OP 6 (h)) SoCalGas to assess potential NOx emissions associated with the Project, including appropriate controls to mitigate emissions. The NOx assessment will evaluate NOx and other air emissions associated with storage and transportation of hydrogen, as well as NOx emissions associated with end users. Key areas of focus will be the Mobility, Power Generation, and Industrial sectors. Identification and evaluation of potential mitigation measures will also be included.
<b>Progress Summary</b>	Over the reporting period, SoCalGas received stakeholder comment feedback on the study's technical approach that is being evaluated for incorporation as appropriate.

<b>Hydrogen Leakage Assessment</b>	
<b>Overview</b>	The Decision directs (OP 6 (g)) SoCalGas to assess the risks and mitigations for hydrogen leakage. During Phase One, an evaluation of potential hydrogen leakage associated with production, storage, and transportation of hydrogen will be prepared. Identification and evaluation of potential mitigation measures will also be included.
<b>Progress Summary</b>	Over the reporting period, SoCalGas received stakeholder comment feedback on the study's technical approach that is being evaluated for incorporation as appropriate.

<b>Greenhouse Gas Emissions Evaluation</b>	
<b>Overview</b>	The Decision directs (OP 6 (n)) SoCalGas to provide the findings from Phase One feasibility studies demonstrating compliance with environmental laws and public policies. To support environmental laws and public policies, SoCalGas will conduct an initial evaluation of greenhouse gas (GHG) emissions associated with the Project, including the potential for emissions reductions. This assessment will evaluate GHG emissions associated with storage and transportation of hydrogen, as well as GHG emissions associated with end users. Key areas of focus will be the Mobility, Power Generation, and Industrial sectors.
<b>Progress Summary</b>	Over the reporting period, SoCalGas received stakeholder comment feedback on the study’s technical approach that is being evaluated for incorporation as appropriate.

<b>Environmental &amp; Environmental Social Justice Analysis</b>	
<b>Overview</b>	The Decision directs (OP 6 (n)) SoCalGas to provide the findings from Phase One feasibility studies demonstrating compliance with environmental law and public policies. Further, the Decision directs SoCalGas to address and mitigate impacts to disadvantaged communities and other environmental justice concerns (OP 6 (l)). SoCalGas will conduct an initial evaluation of a clean renewable hydrogen transportation system’s compliance with environmental law and public policies, which will include an assessment of environmental impacts of project alternatives, environmental justice concerns and impacts to disadvantaged communities.
<b>Progress Summary</b>	Over the reporting period, SoCalGas continued overseeing early activities with its selected consultant for this study—Insignia Environmental. Work has continued to progress for the environmental analysis, including project execution activities and preliminary Geographic Information Systems (GIS) desktop analysis. Based on feedback provided by the CBOSG, SoCalGas amended the scope of work for the environmental social justice analysis to include the addition of the development of an Environmental Justice Community Engagement Plan to be implemented in future phases (subject to CPUC authorization). During the Q3 quarterly meeting held on September 26, 2023, CBOSG members engaged in an interactive breakout activity to inform key elements of the Plan.

<b>High-Level Feasibility Assessment &amp; Permitting Analysis</b>	
<b>Overview</b>	The Decision requires SoCalGas to identify and compare possible routes and configurations for the Project (OP 6 (i)). As part of this assessment, SoCalGas will conduct a high-level assessment of potential environmental and regulatory approvals, including federal, state, and local environmental permitting and regulatory approvals, regulatory approval timing, and environmental constraints.
<b>Progress Summary</b>	Over the reporting period, SoCalGas continued the process of evaluating environmental and regulatory approvals at the regional, state and federal level.

<b>Right-of-Way Study</b>	
<b>Overview</b>	The Decision requires SoCalGas to identify and compare possible routes and configurations for the Project (OP 6 (i)). As part of this assessment, SoCalGas will conduct an initial evaluation to review the potential availability of its existing private rights-of-way to accommodate the Project and future right-of-way locations needed.
<b>Progress Summary</b>	Over the reporting period, SoCalGas continued the process of evaluating right-of-way review. These activities included preliminary identification of private property ownership and private rights of way.

<b>Franchise Study</b>	
<b>Overview</b>	The Decision requires SoCalGas to identify and compare possible routes and configurations for the Project (OP 6 (i)). As part of this assessment, SoCalGas will conduct an initial evaluation to review the potential availability of its existing franchises to accommodate the Project and potential future franchises needed for the Project.
<b>Progress Summary</b>	Over the reporting period, SoCalGas continued the process of identifying and reviewing existing city and county franchise agreements.

## Engineering Design

<b>Preliminary Routing/Configuration Analysis</b>	
<b>Overview</b>	<p>The Decision requires (OP 6 (i)) SoCalGas to identify and compare possible routes and configurations for the Project. This study will (i) determine preferred routing/configuration alternatives for hydrogen system; (ii) consider existing pipeline corridors or rights-of-way, other known existing rights-of-way, franchise rights, designated federal energy corridors or rights-of-way, and the need for new rights-of-way; and (iii) evaluate technical considerations, major crossings, elevations, terrain types, and other potential geographical and urban challenges. This study includes high-level construction staging for implementation of routes and evaluation of a localized hydrogen hub. As part of the configuration analysis, SoCalGas will conduct an initial evaluation of hydrogen storage technology. SoCalGas will assess storage proximity to the Southern California region and both aboveground and underground technologies.</p>
<b>Progress Summary</b>	<p>Over the reporting period, work continued to progress, including evaluation of routing criteria, integration of information from other studies as available, and process development. The study includes the use of the Pivvot platform (<a href="https://pivvot.com/">https://pivvot.com/</a>), which is a route optimization software tool, to assist with the routing process, specifically to streamline siting, suitability analysis and permitting using a data driven process.</p>

<b>Pipeline Sizing &amp; Design Criteria</b>	
<b>Overview</b>	<p>The Decision requires SoCalGas to compare possible routes and configurations (OP 6 (i)) and evaluate safety concerns for the Project (OP6 (f)). This study will: (i) estimate potential pipeline sizes for the pipeline route from production to end-use; (ii) identify specific materials for pipeline, fittings, and differences in operational equipment; (iii) discuss safety considerations, pressures, and maintenance operations associated with design; and (iv) evaluate compression characteristics and options.</p>
<b>Progress Summary</b>	<p>Over the reporting period, SoCalGas initiated preliminary data collection and analysis from other studies as available to begin to establish preliminary pipeline sizing, compression requirements, and pipeline material selection.</p>

<b>Plan for Applicable Safety Requirements</b>	
<b>Overview</b>	The Decision requires (OP 6 (f)) SoCalGas to evaluate safety concerns involved in pipeline transmission, storage, and transportation of hydrogen applicable to the Project. This study will evaluate safety concerns and develop an assessment of applicable safety requirements for employee, contractor, system, and public safety.
<b>Progress Summary</b>	Over the reporting period, SoCalGas initiated review of specifications, standards, and protocols that may apply to a 100% (unblended) clean renewable hydrogen system.

<b>Workforce Planning &amp; Training Evaluation</b>	
<b>Overview</b>	The Decision requires (OP 6 (e)) SoCalGas to evaluate workforce planning and training. This study will evaluate operations and maintenance protocols for utility workers regarding hydrogen infrastructure and workforce needs in terms of staging and growth for the Project.
<b>Progress Summary</b>	Over the reporting period, SoCalGas initiated review of applicable regulatory requirements for establishing the basis for training programs and workforce planning.



## **VIII. APPENDICES**

1. SoCalGas Responses to Comments.
2. Attendee list for PAG and CBOSG meetings, including those invited.
3. CBOSG meeting materials.
4. PAG meeting materials.
5. Links to PAG and CBOSG meeting recordings.
6. Summary of CBO stakeholder meetings, including survey question responses, other feedback during Q3 meetings, and polling results.
7. Summary of PAG meetings, including survey question responses, other feedback obtained during Q3 meetings, and polling results.
8. Transcripts
9. Revised Angeles Link Scope of Work Descriptions
10. Technical Approach Document
11. PAG/CBOSG Member Comments

End of Report