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Angeles Link Phase 1 Reasonableness Review
Chapter 3 Workpapers: Production Planning and Assessment

I. Introduction

This workpaper provides details on the prudent and reasonable activities taken to develop the Production Planning & Assessment (Production Study) in compliance with Decision (D.) 22-12-055 (Phase 1 Decision),[1] Including details on study costs and management and cost control measures. The total loaded cost associated with the Production Study is $2.1 million in operating and maintenance (O&M) expenditures for Phase 1 activities.[2]

II. Study Costs

A combination of internal and external resources were utilized to execute the Production Study. Direct costs for these activities reflect labor costs (e.g., internal personnel) and non-labor costs (e.g., third-party contractors and miscellaneous costs associated with supporting Angeles Link Phase 1 activities).[3] Indirect costs reflect costs for overhead loaders.[4] The total loaded cost for the Production Study is $2.1 million. See Table 1: Production Study Total Costs below for additional cost details.

Table 1: Production Study Total Costs (in millions)

Labor	Non-Labor	Overheads	Total Loaded Costs
$0.2	$1.7	$0.2	$2.1

[1] Phase 1 Decision Ordering Paragraphs (OP) 3(a), 3(e), 3(h), 5(a), 5(c), 5(d) (Phase 1 Decision at 73-75). The activities were scoped and conducted in compliance with the Phase 1 Decision in its entirety, which includes broader requirements than those required for cost recovery, including OP 6(b) and OP 6(j) (*id.* at 76). Phase 1 Decision OP 6 requirements to advance to Phase 2 are being addressed in A.24-12-011.

[2] Expenditures for these activities were incurred from January 2023 through December 2024, with some discrete trailing charges through 2025.

[3] *See* Chapter 1 (Direct Testimony of Shirley Arazi and Amy Kitson) for a description of miscellaneous costs.

[4] *See* Chapter 6 (Direct Testimony of Jenny Chhuor and Michael W. Foster) for a description of the overhead costs.

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A. Labor Costs

Labor costs for the Production Study total $0.2 million and consist of support from SoCalGas personnel within the Angeles Link organization (e.g. project managers, directors and subject matter experts (SMEs) as well as personnel from other departments, in areas such as general administration, regulatory and policy, and public affairs).[5]

Subject matter expertise within SoCalGas was utilized throughout the development of the Production Study including collaboration with personnel from Market Assessment Group.

Labor costs reflect the following activities:

- Defined study objectives and developed scope of work.
- Oversaw contractor performance, including review of progress, activities, and invoices.
- Assigned staff including a dedicated project manager with experience in market and financial analysis.
- Provided review, feedback, and comments on contractor deliverables.
- Synchronized the study workstreams and facilitated the integration of information across dependent studies.
- Collaborated with other Angeles Link personnel to align workstreams and support integration across studies, review drafts and final study findings.
- Collaborated with SMEs throughout the development of the study.
- Developed materials, including slide decks and handouts to support stakeholder engagement meetings.
- Reviewed and prepared responses to stakeholder feedback,
- Incorporated stakeholder feedback into the study as appropriate.
- Supported the preparation of quarterly reports.
- Development of the Production Study.

[5] *See* Chapter 1 (Direct Testimony of Shirley Arazi and Amy Kitson) for additional labor costs details.

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B. Non-Labor Costs

Non-labor costs for the Production Study total $1.7 million and consist of third-party contractor costs and miscellaneous expenses. Examples of non-labor costs activities include the following:

- Meetings/workshops to gather information based on the scope objectives, including evaluating study interdependencies.
- Development of technical approach and methodology to meet the study objectives.
- Conduct research and analysis to identify the potential sources of hydrogen generation from renewable sources such as solar and wind and identify primary production areas within SoCalGas's service territory.
- Evaluate land for potential clean renewable hydrogen production facilities that could be supported by the proposed Angeles Link system.
- Assessment of potential clean renewable hydrogen production volumes.
- Estimation of costs of clean renewable hydrogen production.
- Communication and collaboration with SoCalGas and other third-party contractors.
- Project management activities such as maintaining cost reports, schedules, and overall study progress.
- Review of milestones deliverables, quarterly reports, and stakeholder comments and responses, as appropriate.
- Development of the Production Study

The following section provides details on the third-party contractor and contract amendments necessary to conduct the Production Study.

Considering the interdependences between the Production Study and other studies, SoCalGas streamlined the contracting effort and consolidated the Production Study and other Phase 1 Studies under one Burns and McDonnell (BMcD) contract.[6]

[6] Other studies included the Pipeline Sizing & Design Criteria Study (Design Study), Preliminary Routing/Configuration Analysis (Routing Analysis), Evaluation of Applicable

In May 2023, SoCalGas awarded BMcD a contract for a not-to-exceed amount of $1,889,257[7] under their existing Master Services Agreement (MSA)[8] on a time-and-material basis (T&M)[9] to develop multiple Phase 1 Studies, including the Production Study. To help SoCalGas exercise financial oversight across the multiple studies under the same contract, the Production Study allocated $869,814 of the total contract based on the expected level of effort to complete the study and proposed scope of work. Having multiple studies under the BMcD contract offered cost efficiencies and flexibility, allowing for re-allocation of funding between the studies as they progressed. Amendments were needed to extend the contract and increase contractor resources for multiple studies including the Production Study.

In January 2024, an amendment was executed to extend the term of the original agreement through December 2024. The extension supported the incorporation of stakeholder feedback and collaboration across various studies including the Design, Routing, and Cost Effectiveness Studies. The amendment did not result in an increase in the study cost.

In February 2024, a second amendment was executed to revise the scope of services. The amendment resulted in an increase of cost to the Production Study by $309,514, from its initial estimate of $869,814, for a total of $1,179,328. The cost increase was necessary to support additional activities such as review, consideration, and incorporation of additional stakeholder feedback, including incorporation of new siting data, iterations to assess production locations and volumes, and integrating draft results across various Phase 1 Studies such as the Water Evaluation, Design Study,

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Safety Requirements (Safety Study), and Workforce Planning & Training Evaluation. (Workforce Study). *See* Chapter 3 (Direct Testimony of Vijai Atavane) and Chapter 5 (Direct Testimony and Workpapers of Katrina Regan) for further details.

7 The Angeles Link Phase 1 studies covered by this agreement include the Routing Analysis, Safety Study, Workforce Study, Design Study, and Production Study. *See* Chapter 3 (Direct Testimony of Vijai Atavane) for further details.

8 Where applicable, SoCalGas entered into agreements that were set at market-based rates stemming from prior competitive solicitations (e.g., MSA) to select vetted and qualified firms and leverage their particular expertise in preparing each study.

9 A time-and-material contract is the type of project agreement where costs are incurred for the actual time spent on the project and the cost of materials used.

and Cost Effectiveness Study. The total cost incurred for the Production Study was $1,309,282.

SoCalGas utilized study and cost control measures to oversee the scope of the study and management of contractors. These measures included:

- Developing an effective third-party contractor selection process.
- Following a structured invoice and cost management process, including reviewing invoices against activities and deliverables to confirm that costs accurately reflect work performed.
- Maintaining regular communication with the third-party contractor to oversee the scope and timeline of milestone deliverables, responding to technical inquiries as they emerged, and offering guidance on work expectations.
- Modifying the scope to better align study topics, technical analyses, and third-party contractor expertise and to address stakeholder feedback where appropriate.
- Considering publicly available data where feasible.