Application No.:	24-04-017
Exhibit No.:	
Witness:	
ALJ:	Robyn Purchia
Commissioner:	Karen Douglas

Application of LS Power Grid California, LLC (U-247-E) for a Certificate of Public Convenience and Necessity Authorizing Construction of the Power Santa Clara Valley Project.	Application 24-04-017 (Filed April 29, 2024)

TESTIMONY OF JEFF BILLINTON ON BEHALF OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

October 24, 2025

Table of Contents

I. INTRODUCTION 1

II. CAISO'S TRANSMISSION PLANNING PROCESS 1

III. DIRECTED QUESTIONS 4

IV. CONCLUSION 5

TESTIMONY OF JEFF BILLINTON ON BEHALF OF
THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION
A.24-04-017

I. INTRODUCTION

Q. What is your name and by whom are you employed?

A. My name is Jeff Billinton. I am employed by the California Independent System Operator Corporation (CAISO), 250 Outcropping Way, Folsom, California as the Director of Transmission Infrastructure Planning.

Q. Please describe your educational and professional background.

A. I received a Bachelor of Science degree in Electrical Engineering at the University of Saskatchewan, Canada. I have over 36 years of experience in the electric utility industry in distribution and transmission system design, construction, operations, and planning.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to provide a more granular description of the CAISO's transmission planning process in response to issues #1, #2, and #12 outlined in the Commission's Scoping Memo. Through the CAISO's transmission planning process, the CAISO Board of Governors approved the proposed Power Santa Clara Valley Project (Proposed Project). This testimony provides specific details on the analysis underlying the CAISO's approval of the Proposed Project, which alleviates overload concerns and provides a foundation for future upgrades in the San Jose area. My testimony supports a finding that there is no substantial change to the scope, estimated cost, or timeline of the proposed transmission project as approved by the CAISO Board of Governors and therefore also supports a finding that the environmentally superior alternative to the Proposed Project meets the conditions for the rebuttable presumption under Section 1001.1 of the California Public Utilities Code.

II. CAISO'S TRANSMISSION PLANNING PROCESS

Q. Please provide an overview of the CAISO's transmission planning process.

A. The CAISO conducts an annual transmission planning process to identify and plan the development of solutions to meet the future needs of the CAISO controlled grid. This annual process culminates in the CAISO Board of Governors approving a comprehensive

transmission plan. The plan identifies needed transmission solutions and authorizes their cost recovery through CAISO transmission rates, subject to regulatory approval. The CAISO develops the transmission plan in the larger context of supporting achievement of important state energy and environmental policies and facilitating the transition to a cleaner, lower emission future, while maintaining reliability through a resilient electric system.

The transmission plan identifies transmission facilities that are needed for three main purposes: reliability, public policy, and economics. In the planning process, the CAISO also considers and evaluates non-transmission alternatives, including conventional generation and preferred resources such as energy efficiency, demand response, renewable resources, and energy storage.

The annual transmission planning process is structured in three consecutive phases with each planning cycle identified by a beginning year and a concluding year. Each annual cycle begins in January and extends into the subsequent year.

In Phase 1 of the annual transmission planning process, the CAISO establishes the assumptions and models to be used in the planning studies, develops and finalizes a study plan, and specifies the public policy mandates that CAISO planners will adopt as objectives in the current planning cycle. This phase takes roughly three months from January through March of the first year of the planning cycle. During Phase 1, the CAISO first posts a draft study plan for stakeholder review and then conducts a public stakeholder session. At the stakeholder session, the CAISO answers questions regarding the draft study plan and requests additional written comments from stakeholders. The CAISO then considers stakeholder comments in completing its final study plan.

In Phase 2, the CAISO performs studies to identify transmission needs and the necessary solutions to meet those needs, culminating in the annual comprehensive transmission plan. Phase 2 takes approximately 12 months and generally involves three additional

public stakeholder sessions at which the CAISO presents preliminary and draft results for vetting with stakeholders. After each stakeholder session, the CAISO requests and considers stakeholder comments on its planning analyses. Identifying non-transmission alternatives that the CAISO can rely upon in lieu of transmission solutions also occurs during Phase 2. After this process concludes, the draft transmission plan is presented to the CAISO's Board of Governors for final review and approval. Phases 1 and 2 take a total of 15 months to complete.

During Phase 3, the CAISO solicits competitive bids for the construction and ownership of new regional transmission facilities identified in the approved transmission plan that are eligible for competition. In any given planning cycle, Phase 3 may or may not occur depending on whether the final plan includes transmission facilities that are open to competitive solicitation in accordance with criteria specified in the CAISO tariff.

Q. Please describe the approval by the CAISO Board of Governors of the Proposed Project.

A. The CAISO's 2021-2022 Transmission Plan originally identified the Metcalf to San Jose B High Voltage Direct Current (HVDC) Project and the Newark - North Receiving Station (NRS) HVDC Project (together the San Jose Area HVDC Projects) as needed reliability-driven transmission projects to address an increase in the long-term load forecast to approximately 2,100 MW in the San Jose area. To address this load growth and mitigate potential overloads, the CAISO approved transmission upgrades consisting of a 500 MW HVDC line from the Metcalf 500 kV station to San Jose B 115 kV station and a 500 MW HVDC line from the Newark 230 kV station to Silicon Valley Power's (SVP) NRS 230 kV station.

As part of the CAISO's 2024-2025 planning cycle, the CAISO further evaluated the growing needs of the Greater Bay Area. The CAISO's evaluation identified an increase in the long-term load forecast to approximately 3,400 MW in the base case and 4,200 MW in the sensitivity scenario in the San Jose area – significantly more load than when

the CAISO originally authorized the San Jose Area HVDC Projects in 2021-2022. Through its evaluation, the CAISO made the following adjustments to the scope of the original San Jose Area HVDC Projects: (1) for the Metcalf-San Jose B HVDC project, the CAISO modified the scope to a 1,000 MW HVDC link between the Metcalf and San Jose B substations with a 230 kV termination at the San Jose B station; and (2) for the Newark – NRS HVDC project, the CAISO modified the scope to a high capacity 230 kV AC line from Pacific Gas and Electric Company's (PG&E) Newark substation to SVP's NRS substation. The CAISO Board of Governors unanimously approved these modifications on November 12, 2024.

Q. Does the CAISO's transmission planning process consider siting, such as that included in the environmentally superior alternative?

A. No. The CAISO does not consider the specific routing of transmission solutions identified in the transmission planning process. Instead, the studies and solutions focus on eliminating reliability issues in a particular location or between specific points. The scope of the CAISO's identified and approved projects is limited to selecting electrical solutions to meet identified needs. The process does not prescribe specific routes for identified new lines or facilities. However, in cases where the identified solution is an upgrade to an existing facility, the siting is inherent to the facility.

III. DIRECTED QUESTIONS

Q. Does the environmentally superior alternative constitute a change in the scope, estimated cost, or timeline of the Proposed Project, as approved by the CAISO Governing Board? [Scoping Memo directed question 5.]

A. The environmentally superior alternative does not constitute a change in the scope of the Proposed Project as previously approved by the CAISO Board of Governors. The environmentally superior alternative would construct the proposed Grove HVDC Terminal on the property of the existing PG&E Metcalf Substation directly northwest of the proposed Metcalf Substation modification area. The CAISO does not consider siting

and routing in its process to identify and approve transmission solutions. Any preferred or alternative sites or routes pursued by project developers or evaluated following the CAISO's approval of the project will remain in scope if it addresses the same electrical need. The environmentally superior alternative meets the same electrical solution objective of the CAISO-approved project. Therefore, the Proposed Project remains consistent with the version approved by the CAISO Board of Governors.

The CAISO is unaware of any change in the estimated cost or timeline of the Proposed Project, as approved by the CAISO Board of Governors.

Q. Did the CAISO Board of Governors approve the *total* estimated cost of the Proposed Project, including the cost of PG&E's modifications, expansions, and upgrades associated with the Proposed Project? [Scoping Memo directed question 6.]

A. Yes. The original project cost estimates included in the 2020-2021 annual transmission plan were based on the CAISO's estimate for the competitively solicitated scope and estimates provided by PG&E for the interconnection scope. For the revised scope, the CAISO relied upon the most recent estimates provided by LS Power to estimate the cost for the Proposed Project. As part of the 2024-2025 annual transmission plan, the CAISO's Board approved the revised scope with a revised cost estimate of $1.321 B -- $1.371 B. The revised cost estimate of $1.321 B -- $1.371 B included the cost of PG&E's modifications, expansions, and upgrades for the Proposed Project. The CAISO notes the revised cost estimates result in total project costs very similar to the cost estimates upon which the Proposed Project was originally approved.

The CAISO attaches (1) CAISO Board of Governors Motion as Exhibit CAISO-001; (2) CAISO Board of Governors Memo as Exhibit CAISO-002; and (3) San Jose Area Transmission Plan – Engineering Study Report as Exhibit CAISO-003.

IV. CONCLUSION

Q. Please summarize your testimony.

A. The CAISO identified the Proposed Project as necessary to meet reliability needs in the San Jose area. Specifically, the Proposed Project will address near-term and long-term overload risks. The Proposed Project will provide the required capacity for the forecasted increase in load as well as flexibility for future expansion. The environmentally superior alternative does not constitute a significant change in scope, timeline, or cost to the CAISO-approved project.

Q. Does this conclude your testimony?

A. Yes.