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ANNUAL PROGRESS REPORT

Submitted by:
LS Power Grid California, LLC

February 28, 2025

New Projects

None

Existing Projects in Progress

1. Gates 500 kV Dynamic Reactive Support Project

Project Background

During the 2018-2019 Transmission Planning Process (TPP), CAISO staff performed a comprehensive assessment of the CAISO controlled grid to ensure compliance with applicable NERC reliability standards and CAISO planning standards and tariff requirements. The assessment identified a need for +/-800 MVar Dynamic Reactive power Support (DRS) for reliability purposes at PG&E's Gates 500 kV substation. The CAISO governing board approved the Gates 500 kV DRS project (Project) on March 27, 2019. CAISO then completed a competitive solicitation process and selected LS Power Grid California, LLC (LSPGC) as the project sponsor for the Project.

Since the Project is not a transmission path and is a new addition on which an Existing or Accepted Rating does not depend, the WECC path rating process is not applicable. LSPGC successfully completed the WECC Project Coordination Process for the Project in August 2022.

Project Description

The Project consists of two ±424 MVAR STATCOM blocks interconnecting to the 500 kV bus at the Gates substation. The geographical location of the Gates 500 kV substation in relation to the adjacent paths and other major transmission facilities is shown below in **Figure 1**.

Figure 1: Location of the Gates 500 kV Substation in WECC
(Source of the map: WECC Website[1])

LSPGC will construct and own a new substation (Orchard) containing the STATCOMs adjacent to Gates 500 kV substation. The STATCOMs will be connected to the Gates 500 kV bus via two (2) 500/97.5 kV transformers located inside of the new Orchard substation and two (2) short (< 0.5 mi) 500 kV overhead transmission lines to be constructed and owned by PG&E. Two new Points of Interconnection will be established between LSPGC and PG&E on dead-end take-off structures at Orchard near the high-side of the 500/97.5 kV transformers.

A simplified representation of the Project is provided in **Figure 2** and a detailed one-line diagram is available under the appropriate non-disclosure agreement upon request.

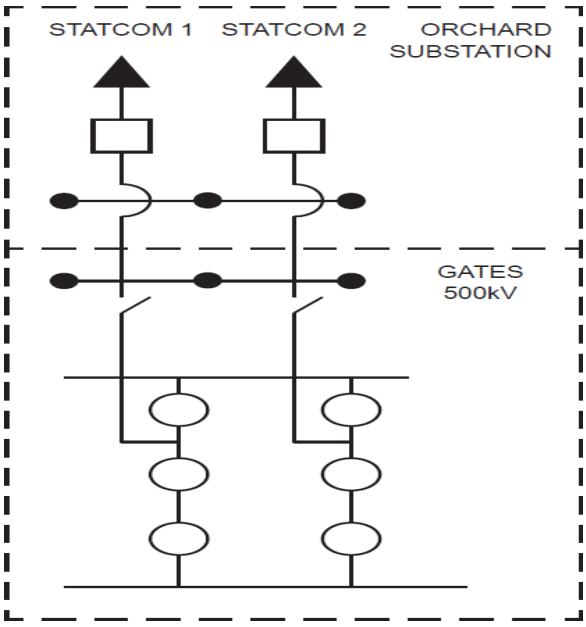

Figure 2: Simplified Representation of the Project

Project Status

As the selected project sponsor, LSPGC began the interconnection process and preliminary engineering design in 2020. The PG&E Facilities Study, interconnection agreement and detailed design is complete. The Affected System Study under the WECC Project Coordination Process was completed in 2022.

The construction of the Orchard facilities is complete. On January 28, 2025 PG&E energized the interconnection lines from Gates to Orchard. Energization and testing for the Orchard STATCOM facilities is currently in process with CAISO operational control expected in March 2025. Key project milestones are listed below:

[1] https://www.wecc.org/Reliability/WECC%20Members%20or%20NDA/2020%20WECC%20Map%20of%20Principal%20Transmission%20Lines.pdf

- Construction Complete Q4 2024
- Functional Testing Q4 2024
- Gates Substation Interconnection Q1 2025
- CAISO Operational Control Q1 2025

2. Round Mountain 500 kV Area Dynamic Reactive Support Project

Project Background

During the 2018-2019 Transmission Planning Process (TPP), CAISO staff performed a comprehensive assessment of the CAISO controlled grid to ensure compliance with applicable NERC reliability standards and CAISO planning standards and tariff requirements. The assessment identified a need for +/-500 MVar Dynamic Reactive power Support (DRS) in the area of PG&E's Round Mountain Substation for reliability purposes. The CAISO governing board approved the Round Mountain area DRS project (Project) on March 27, 2019. CAISO then completed a competitive solicitation process and selected LS Power Grid California, LLC (LSPGC) as the project sponsor for the Project.

Since the Project is not a transmission path and is a new addition on which an Existing or Accepted Rating does not depend, the WECC path rating process is not applicable. LSPGC successfully completed the WECC Project Coordination Process for the Project in August 2022.

Project Description

The Project consists of two ±264.5 Mvar STATCOM blocks and a new 6-position 500 kV breaker-and-a-half switchyard, collectively the Fern Road Substation (Fern Road). Fern Road will be constructed at a location approximately 11 miles south of PG&E's Round Mountain 500 kV substation. Fern Road will loop in the existing Round Mountain – Table Mountain 500 kV #1 & #2 Lines. LSPGC will connect the STATCOMs to the Fern Road 500 kV bus via two (2) 500/60.9 kV transformers. Four (4) new Points of Interconnection on the Round Mountain to Table Mountain 500 kV lines will be established between LSPGC and PG&E at Fern Road. PG&E will modify existing series compensation at Round Mountain and Table Mountain substations as necessary to maintain 74% compensation on the transmission lines. The 500 kV line extensions constructed by PG&E will have a rating commensurate with the capability of the existing lines. **Figure 3** shows the approximate geographical location of the Project in relation to the adjacent paths and other major transmission facilities.

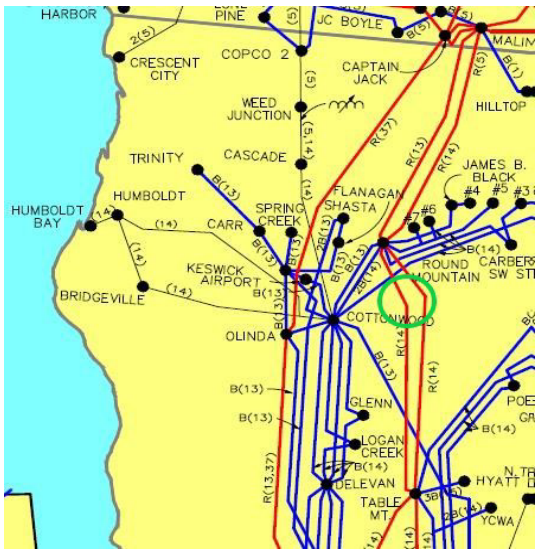

Figure 3: Approximate Location of the Fern Road 500 kV Substation
(Source of the map: WECC[2])

A simplified representation of the Project is provided in **Figure 4**, and a detailed one-line diagram is available upon request under the appropriate non-disclosure agreement.

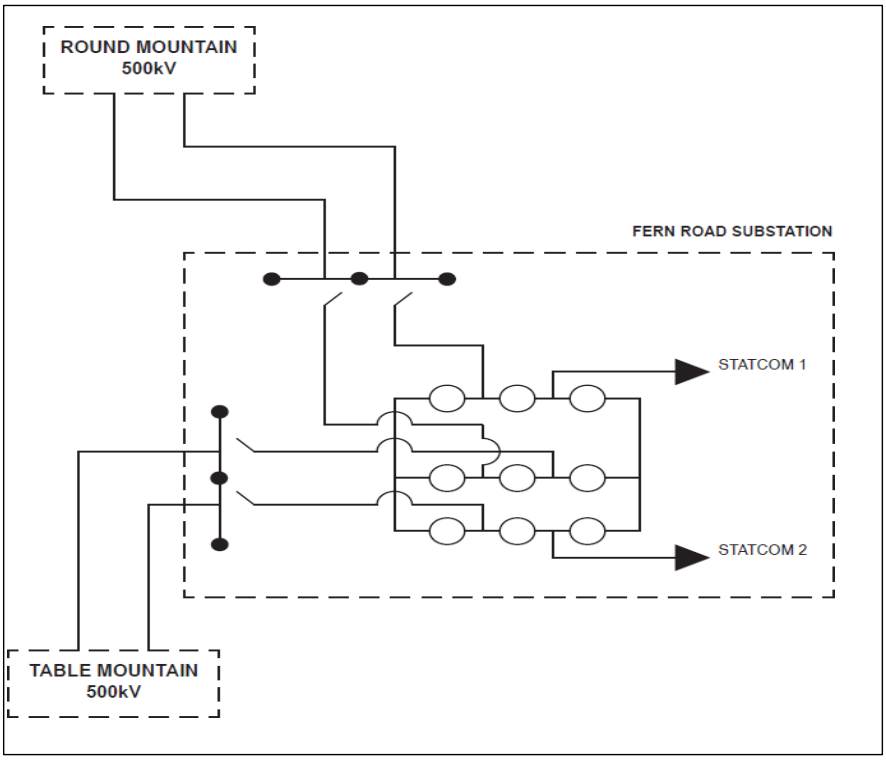

Figure 4: Simplified Representation of the Project

Project Status

As the selected project sponsor, LSPGC began the interconnection process and preliminary engineering design in 2020. PG&E's Facility study and interconnection agreement are complete, with detailed design nearing completion. The Affected System Study under the WECC Project Coordination Process were completed in 2022.

On January 11, 2024, LSPGC received a Permit to Construct from the CPUC, followed by a Notice to Proceed from the CPUC on January 25, 2024. Construction began in February 2024. Key construction activities have been completed to date or are ongoing including site preparation and grading, grounding, foundations, transformer installation and building erection. Key project milestones are listed below:

[2] https://www.wecc.org/Reliability/WECC%20Members%20or%20NDA/2020%20WECC%20Map%20of%20Principal%20Transmission%20Lines.pdf

- Construction Start Q1 2024
- Construction Complete Q4 2025
- OEM Functional Testing complete Q4 2025
- PG&E interconnection complete Q4 2025
- CAISO Operational Control Q1 2026

3. Manning 500 kV Substation Project

Project Background

In its 2021-2022 Transmission Plan[3] the California Independent System Operator (CAISO) identified a Policy-driven need for the Manning 500/230 kV Substation Project (Project) to address constraints impacting the deliverability of resources that are needed to meet the State's policy goals.

Following approval of the Transmission Plan, the CAISO initiated an open, competitive solicitation in 2022-23, which provided potential project sponsors the opportunity to submit proposals to finance, construct, own, operate, and maintain the Project. Through this competitive solicitation process, the CAISO then selected LSPGC as the Approved Project Sponsor for the Project.

LSPGC initiated a WECC Project Coordination process for the Project in 2024. On November 15, 2024, at the request of LSPGC, WECC sent an open invitation for interested parties to join the WECC Project Coordination Review Group (PCRG) and participate in the study. The study is currently in progress and expected to complete by mid-2025.

Project Description

The Manning 500/230 kV Substation Project will consist of a 500/230 kV substation and associated 230 kV transmission infrastructure between Manning and Tranquility as depicted in **Figure 5.**
LSPGC's scope for the Project includes:

- New Manning 500/230 kV substation including fixed series capacitors on each of the Manning – Los Banos 500 kV lines:
- New 12-mile-long double-circuit 230 kV transmission line from the new Manning Substation to PG&E's existing Tranquility Switching Station

Points of Interconnection with PG&E include:

- Loop-in of Los Banos – Gates #1 500 kV line
- Loop-in of Los Banos – Midway #2 500 kV line
- Loop-in of Panoche – Tranquility #1 & #2 230 kV lines
- Two 230 kV bus positions at Tranquility

In addition, PG&E will be reconductoring approximately seven (7) miles of PG&E's existing Panoche – Tranquility Switching Station #1 and #2 230 kV lines between Manning and Tranquility. PG&E will also be modifying series capacitors at Gates as required to maintain appropriate compensation levels on the 500 kV lines.

[3] http://www.caiso.com/InitiativeDocuments/ISOBoardApproved-2021-2022TransmissionPlan.pdf

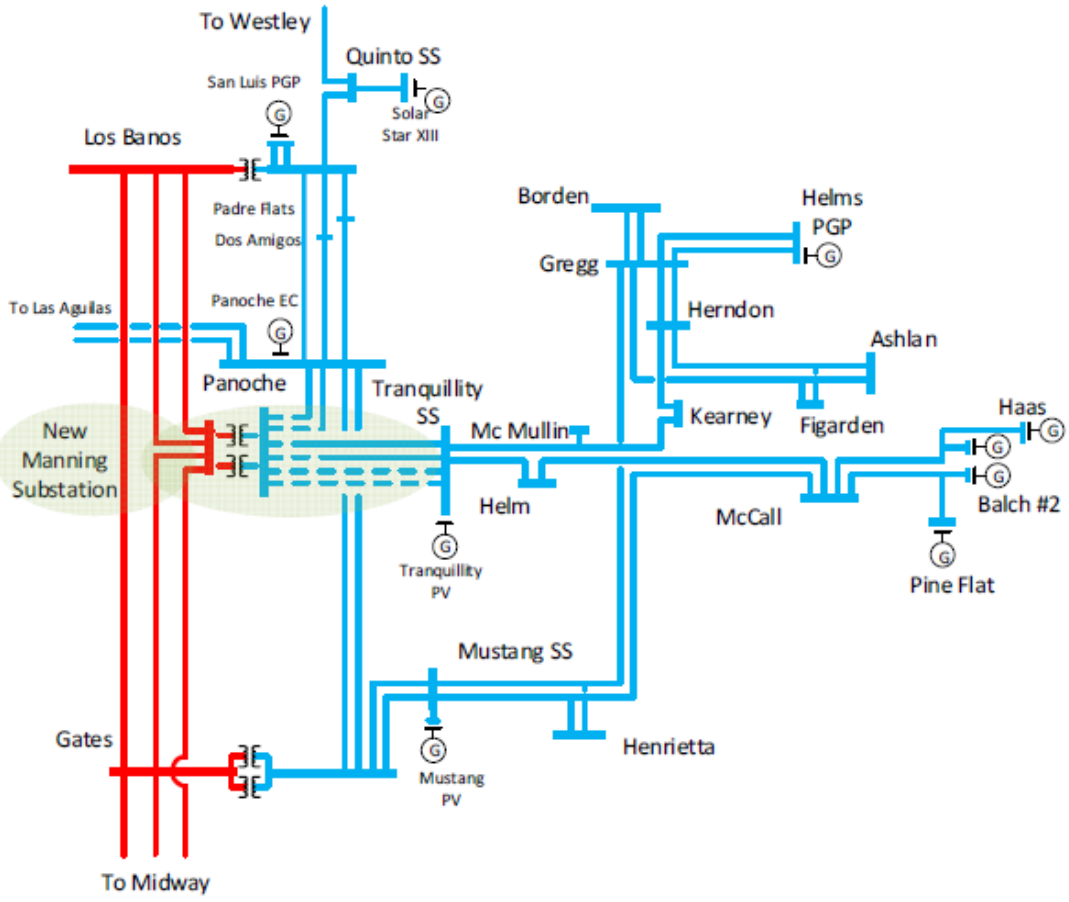

Figure 5: Location of Manning 500/230kV Substation Project

Project Status

The project is currently in the design phase and scheduled to be in service by April 1, 2028. Key project milestones are listed below:

- CPCN Application Filing at CPUC Q2 2024
- Commence Construction Q2 2026
- Construction Complete Q1 2028
- Placed in service Q1 2028

4. Collinsville 500 kV Substation Project

Project Background

In its 2021-2022 Transmission Plan the California Independent System Operator (CAISO) identified a Policy-driven need for the Collinsville 500/230 kV Substation Project (Project) to address constraints impacting the deliverability of resources that are needed to meet the State's policy goals and resource adequacy needs. The Project effectively eliminates multiple constraints within the Greater Bay Interconnection Area. Additionally, the Project will contribute to an increased supply for the 500 kV system in the northern Greater Bay Area, enhancing reliability and promoting further development of renewable generation in the northern region.

Following approval of the Transmission Plan, the CAISO initiated an open, competitive solicitation in 2022-23, which provided project sponsors the opportunity to submit proposals to finance, construct, own, operate, and maintain the Project. Through this competitive solicitation process, the CAISO then selected LS Power Grid California, LLC (LSPGC) as the Approved Project Sponsor for the Project.

LSPGC initiated a WECC Project Coordination process for the Project in 2024. On November 15, 2024, at the request of LSPGC, WECC sent an open invitation for interested parties to join the WECC Project Coordination Review Group (PCRG) and participate in the study. The study is currently in progress and expected to complete by mid-2025.

Project Description

The Collinsville 500/230 kV Substation Project will consist of a 500/230 kV substation and associated 230 kV transmission infrastructure between Collinsville and Pittsburg as depicted in **Figure 6.**

LSPGC's scope for the Project includes:

- New Collinsville 500/230 kV substation including a fixed series capacitor on the Collinsville – Tesla 500 kV line
- New ~5-mile long double-circuit 230 kV transmission line that consists of ~1.0 miles of overhead lines and ~4.0 miles of submarine cables from the new Collinsville Substation to the existing PG&E Pittsburg Substation.
- Add (2) 20 ohm reactors on the Collinsville – Pittsburg 230 kV lines at Collinsville Substation

Points of Interconnection with PG&E include:

- Loop in of Vaca Dixon – Tesla 500kV line
- Two 230kV bus positions at Pittsburg Substation

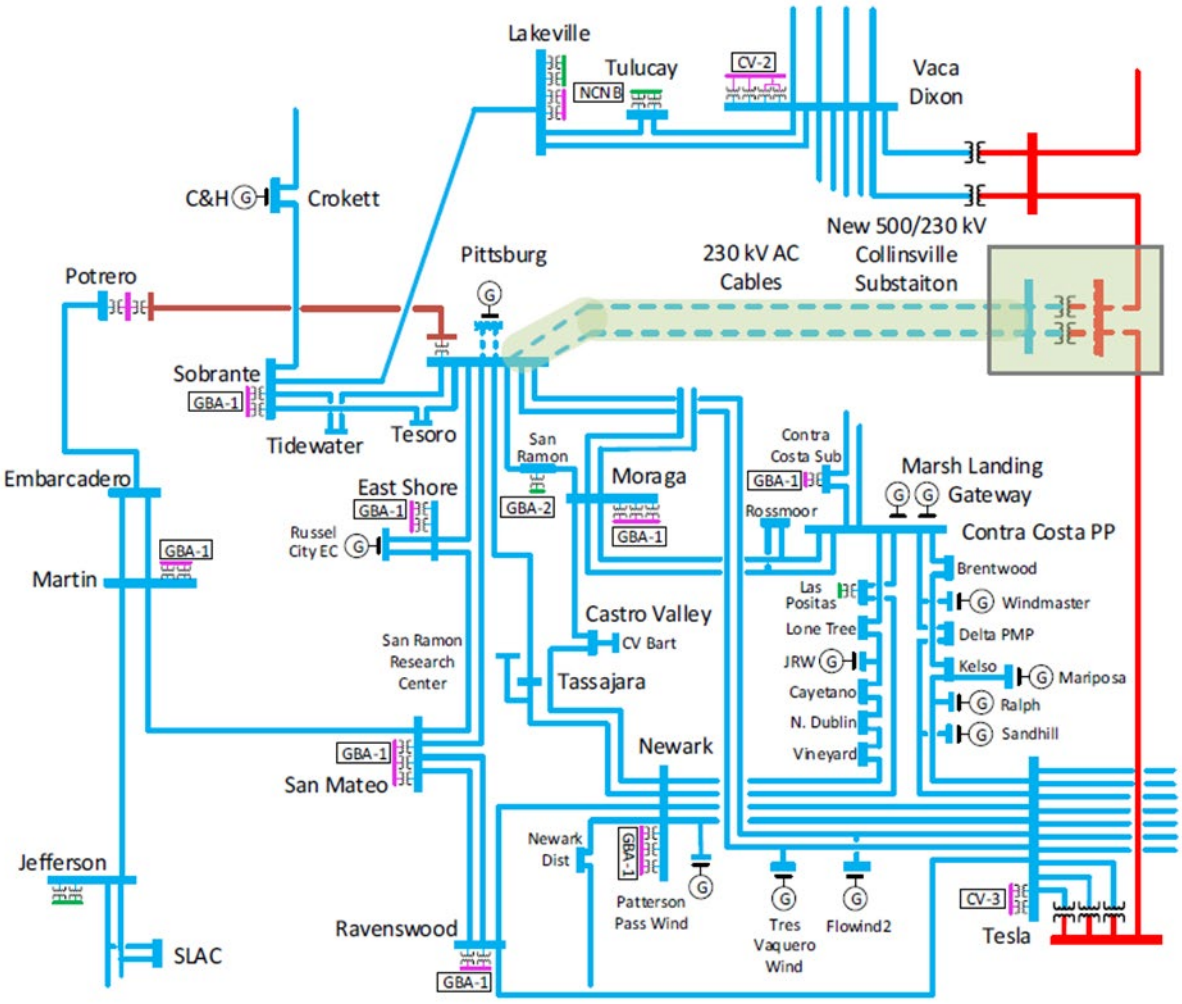

Figure 6: Location of Collinsville 500/230kV Substation Project

Project Status

The project is currently in the design phase and is required to be in service by June 1, 2028. Key project milestones are listed below:

- CPCN Application Filing at CPUC Q3 2024
- Commence Construction Q2 2026
- Construction Complete Q2 2028
- Placed in service Q2 2028

5. Newark-NRS 230 KV AC Line and Metcalf – San Jose B HVDC Project

Project Background

In the 2021-2022 Transmission Plan the California Independent System Operator (CAISO) identified a reliability-driven need for the Newark to NRS HVDC Project and Metcalf to San Jose B HVDC Project to address multiple near-term and long-term overloads on the San José 115 kV transmission system and provide system reliability benefits for the Greater Bay Area. In CAISO's 2021-2022 planning cycle, transmission planning studies prepared by CAISO included large load increases in the San José and Silicon Valley Power (SVP) areas, including a significant load increase of approximately 500 MW in the SVP area. As a result, CAISO identified several reliability concerns, including multiple near-term and long-term overloads in the San Jose 115 kV transmission system.

Following approval of the Transmission Plan, the CAISO initiated an open, competitive solicitation in 2022, which provided project sponsors the opportunity to submit proposals to finance, construct, own, operate, and maintain the projects. Through this competitive solicitation process, the CAISO then selected LS Power Grid California, LLC (LSPGC) as the project sponsor for the following projects:

- Newark – NRS HVDC Project
- Metcalf – San Jose B HVDC Project

In 2024, WECC granted LSPGC a Waiver of "Significant Impact" status for both projects pursuant to Section 3 of the WECC Progress Report Policies and Procedures. Meanwhile, in the 2024-2025 planning cycle, CAISO's 10-year load forecast for the study area showed significant load growth. Specifically, the long-term load forecast in the San Jose area has increased from 2,100 MW in the 2021-2022 transmission plan to roughly 3,400 MW in the base case of the 2024-2025 transmission planning studies and roughly 4,200 MW in a sensitivity scenario. In response to this significant load growth, CAISO modified the previously approved projects as follows:

- Newark – NRS 230 kV Line Project
  - Removal of HVDC components
  - Change the Newark to NRS connection to be a 230 kV AC circuit rated at approximately 1,000 MVA
- Metcalf – San Jose B HVDC Project
  - Increase delivery requirement at San Jose B from the original 500 MW to 1,000 MW
  - Change the connection at San Jose B from the original 115 kV to 230 kV

While the Projects' scope has been modified, the driver for the Projects remains the same. The Projects are still required to serve the local load growth in the San José and SVP areas at even higher levels as described above.

Project Description

a. Newark – NRS 230 kV Line Project

The Newark – NRS HVDC project originally involved the construction of two new HVDC terminals, known as the Albrae and Baylands terminals, along with three transmission lines to comprise the path between the Newark

and NRS substations, as shown in **Figure 7**.

CAISO modified the project in November 2024 to remove the HVDC terminals and have a single 230 kV AC transmission line rated at approximately 1,000 MVA. The updated project scope now consists of approximately 12 miles of 230 kV underground and overhead AC transmission line running between the project's original endpoints of PG&E's Newark 230 kV substation and SVP's NRS 230 kV substation, as illustrated in **Figure 8**. The updated project maintains the same overall topology (i.e., connecting Newark and NRS substations) using the same general transmission line route and serves the original purpose of meeting load growth-driven reliability needs, to a greater degree in light of the increased load growth forecast. A detailed one-line diagram is available under the appropriate non-disclosure agreement upon request.

b. Metcalf – San Jose B HVDC Project

CAISO modified Metcalf-San Jose B HVDC Project scope in November 2024 to be a 1,000 MW (from 500 MW) HVDC link between the Metcalf 500 kV and San Jose B 230 kV substations with 300 MVAR (from 150 MVAR) of reactive support. This modification includes the installation of a new 230/115 kV transformer by PG&E to connect to PG&E's San Jose B 115 kV substation, as shown in **Figure 8**. The updated project maintains the same overall topology (i.e., connecting Metcalf and San Jose B substations) using the same general equipment and transmission line route and serves the original purpose of meeting load growth-driven reliability needs, to a greater degree in light of the increased load growth forecast. A detailed one-line diagram is available under the appropriate non-disclosure agreement upon request.

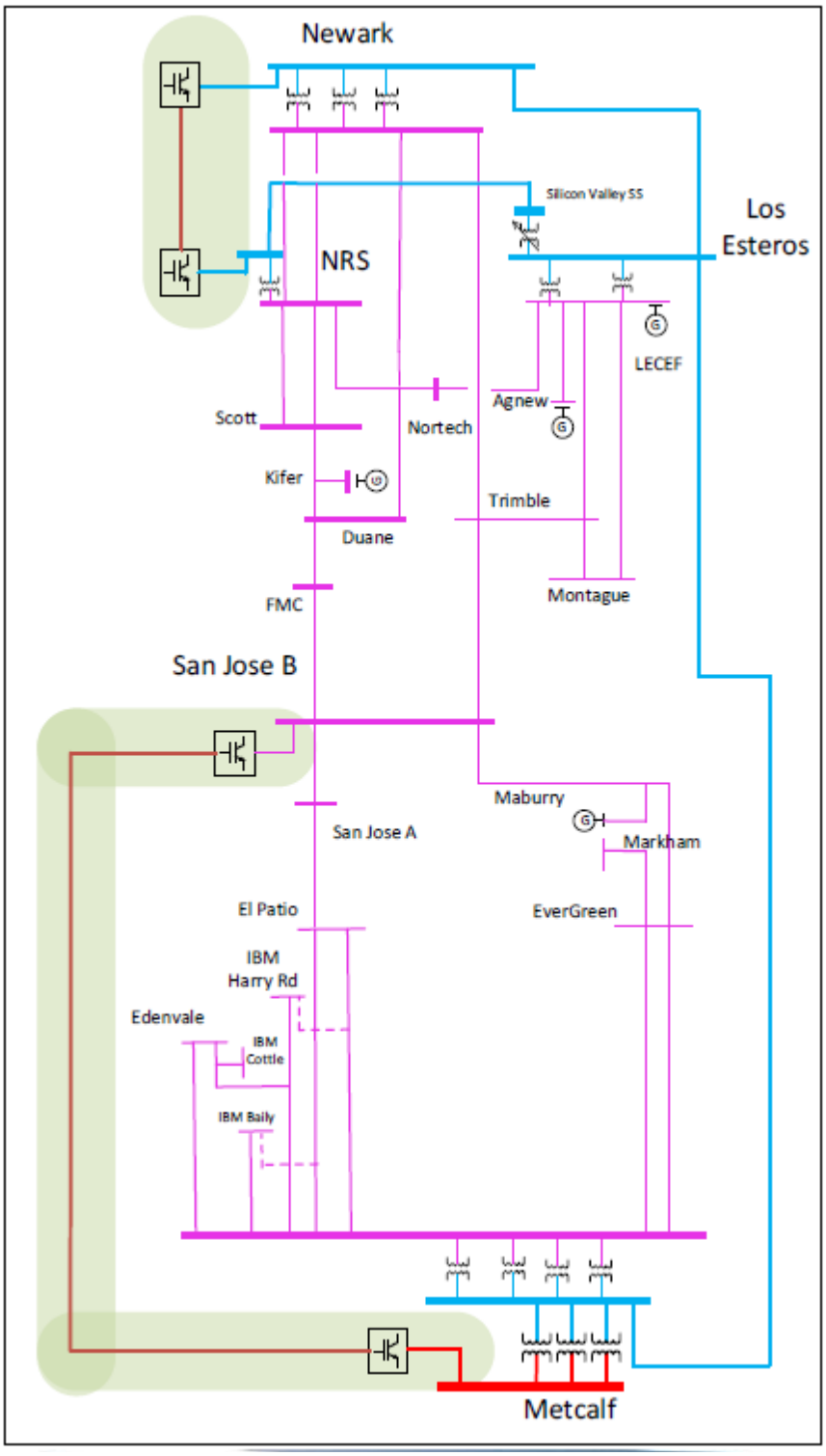

Figure 7: Originally Approved Newark-NRS HVDC Project and Metcalf-San Jose B HVDC Project (2021-2022 Transmission Plan)

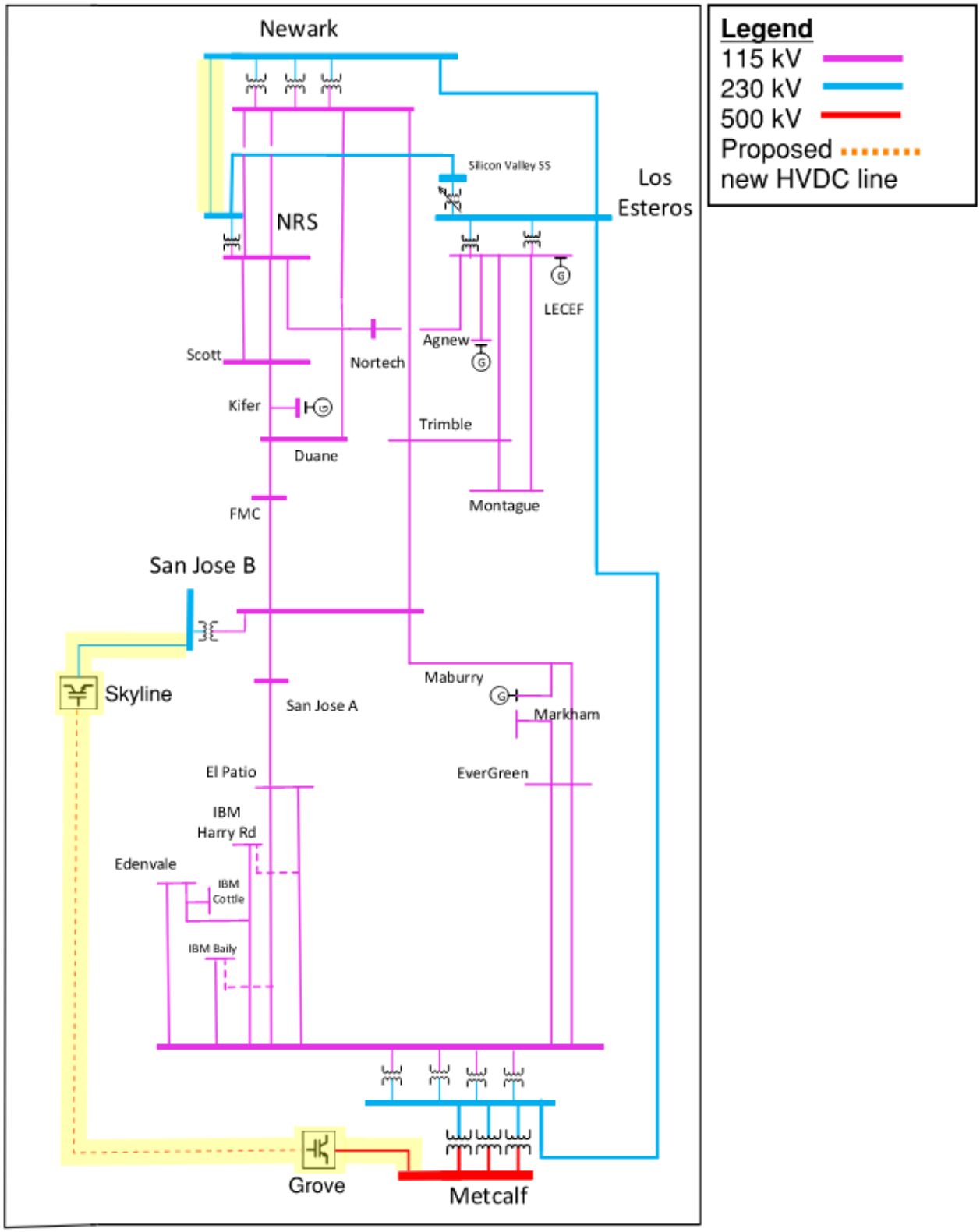

Figure 8: CAISO Modified Newark-NRS 230 kV Line Project and Metcalf-San Jose B HVDC Project

Project Status

a. Newark – NRS 230 kV Line Project

LSPGC submitted an interconnection request to PG&E and SVP on March 15, 2023. Following the approval of CAISO's scope changes, LSPGC submitted updated interconnection requests to PG&E and SVP. PG&E's facilities scope requirements study and SVP's facility study are currently in progress. The interconnection agreements are expected to be executed in 2025, and detailed engineering design is anticipated to be completed in 2026. Construction activities are expected to commence in 2026, and the project is expected to be ready to enter service in May 2028. Key project milestones are listed below:

- CPCN Application Filing at CPUC May 2024
- Commence Construction Q1 2026
- Construction Complete May 2028
- Anticipated In-Service Date May 2028

b. Metcalf – San Jose B HVDC Project

LSPGC submitted an interconnection request for the Metcalf – San Jose B HVDC Project to PG&E on March 15, 2023. Following the approval of CAISO's scope changes, LSPGC submitted an updated interconnection request to PG&E. PG&E's facilities scope requirements study is currently in progress. The interconnection agreement is expected to be executed in 2025, and detailed engineering design is anticipated to be completed in 2026. Construction activities are expected to commence in 2026, and the project is expected to be ready to enter service in May 2028. Key project milestones are listed below:

- CPCN Application Filing at CPUC April 2024
- Commence Construction Q1 2026
- Construction Complete May 2028
- Anticipated In-Service Date May 2028

Completed Projects

None

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