Appendix A

Project Details

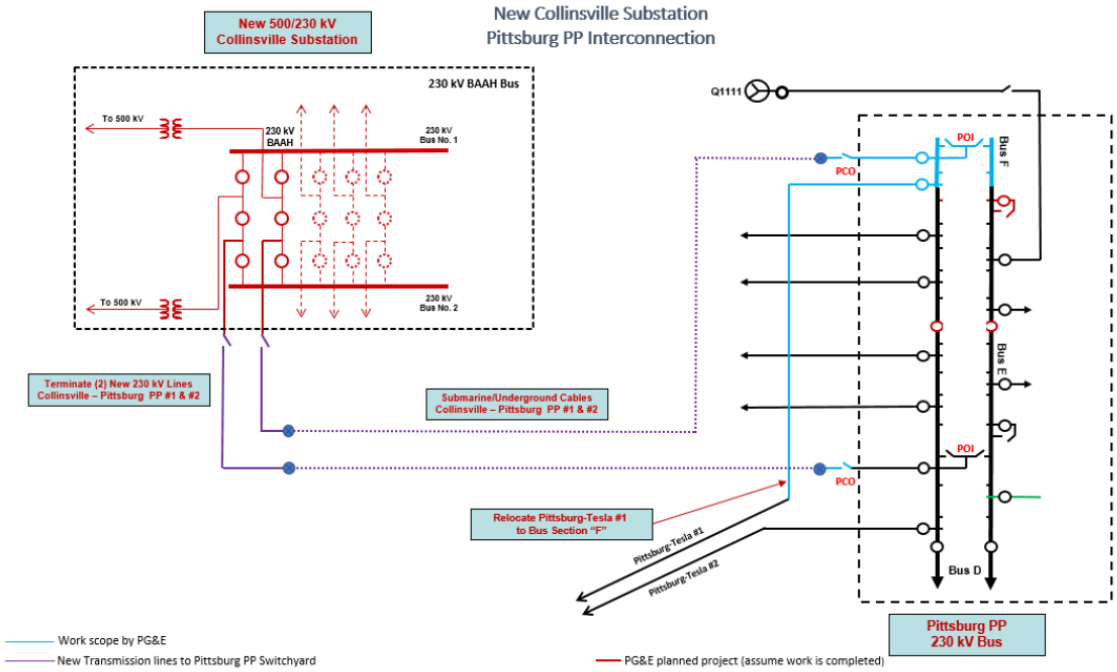
1. Description

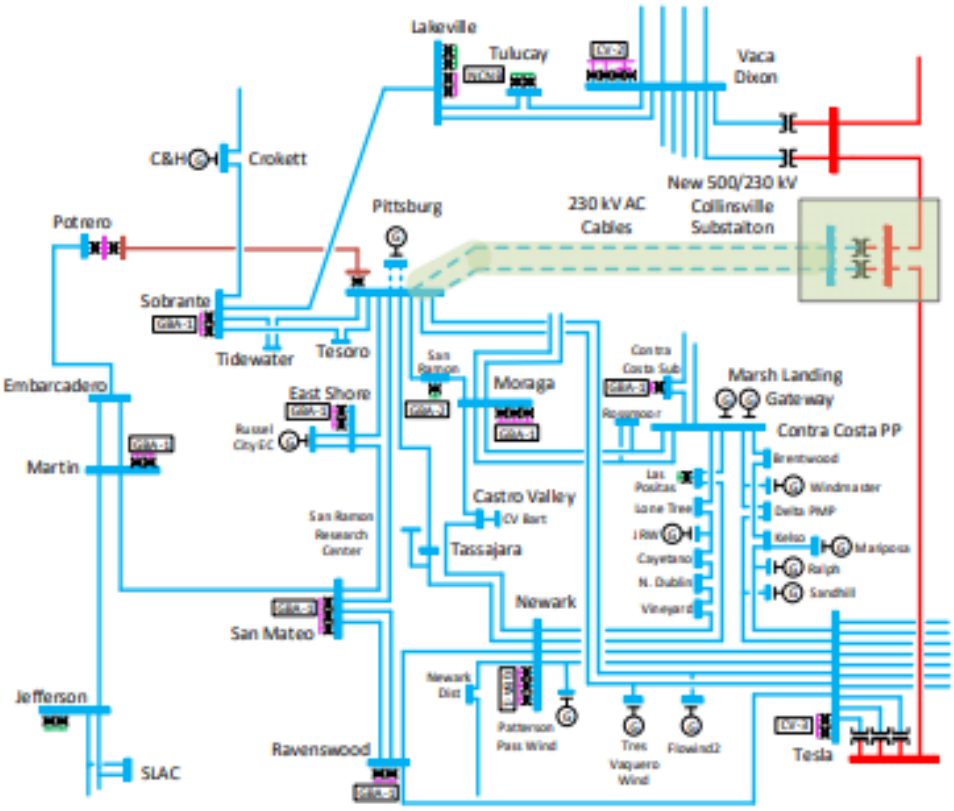
In the 2021-2022 Transmission Plan, CAISO identified a policy-driven need for the Collinsville 500/230 kV Substation Project to address multiple overloads on the 230 kV corridor between Contra Costa and Newark under normal, N-1 and N-2 contingency conditions. This Project provides additional supply from the 500 kV system into the northern Greater Bay Area to increase reliability and advance additional renewable generation.

The Collinsville 500/230 kV Substation Project was approved by the CAISO Board of Governors on March 17, 2022. CAISO selected LS Power Grid California, LLC as the Approved Project Sponsor on January 23, 2023. The Project is to be in service by June 1, 2028.

As depicted in the schematic diagrams below, the Project scope includes the following facilities:

- A new Collinsville 500/230 kV substation 500/230 kV Transformers
- Two new 230 kV circuits from Collinsville to Pittsburg
- The Collinsville substation shall be configured to permit the installation of a 20 ohm series reactor on each 230 kV circuit in the future.





The Approved Project Sponsor will design, install, own and maintain the 500/230 kV Collinsville substation and the two new 230 kV transmission lines connecting the Collinsville and Pittsburg substations. Subject to the definition of Excluded Costs herein, the Approved Project Sponsor will be responsible for owning and maintaining the protection equipment located within the Collinsville substation that is designated for the protection of the incoming transmission lines, will coordinate with PG&E regarding the specifications and the details of the associated line protection (e.g., current differential, directional comparison, etc.), and will work with PG&E to develop relay logic and detailed relay settings.

The Approved Project Sponsor will be responsible for installing (and will own and maintain) 15 – 17 ohms[1] series capacitors on the Collinsville – Tesla line to be installed at Collinsville.

As the Project includes building new transmission facilities with voltage level over 200 kV, the Approved Project Sponsor will be responsible for completing the WECC Progress Report and other WECC processes that may be required for this Project to

[1] Note: Proposal basis was 15 ohms. After Interconnecting PTO determines what impedance is required at Collinsville, incremental costs incurred by the Approved Project Sponsor associated with a design modification required by Interconnecting PTO shall be Excluded Costs as defined in Appendix E.

consider effects to other systems. All incremental costs incurred by the Approved Project Sponsor associated with such studies and processes shall be Excluded Costs as defined in Appendix E.

The Collinsville Substation will be designed to accommodate future expansion, it being understood that the items labeled as "Ultimate" in the functional specification in Section 2 below are informative for such future expansion but are not part of the Project.

To enable interconnection of the Project, the Interconnecting PTO will be responsible for:

- Looping in the Vaca Dixon – Tesla 500 kV line into Collinsville substation.
- In post Project configuration, series capacitors may need to be added/modified to ensure:
  (a) no 500 kV line section is compensated above 73% to meet PG&E protection standards, and
  (b) the overall compensation on Vaca Dixon – Tesla path will remain the same as the existing system at 73%.
  PG&E will adjust the existing series capacitors at Vaca Dixon to meet the above two requirements.
- In addition, PG&E will also upgrade the terminal equipment that is currently limiting the line rating.

The facilities that are the responsibility of the Interconnecting PTO are further described in Sections 3, 4 and 5 below.

2. Functional Specifications

Collinsville Substation

Nominal Phase to Phase Voltage: 500 kV and 230 kV

Typical Phase to Phase Operating Voltage: 535 kV and 235 kV

500 kV and 230 kV Initial Bus Configuration: Breaker and a half (BAAH)

500 kV and 230 kV Ultimate Bus Configuration: BAAH

Initial Number of 500 kV Lines: 2	Ultimate Number of 500 kV Lines: 6
Initial Number of 500 kV CBs: 6	Ultimate Number of 500 kV CBs: 12
Initial Number of 230 kV Lines: 2	Ultimate Number of 230 kV Lines: 6
Initial Number of 230 kV CBs: 6	Ultimate Number of 230 kV CBs: 15
Initial Minimum Bus Ampacity: 4000A	Ultimate Bus Ampacity: 4000A

Minimum CB Ampacity: 3000A

Minimum CB Interrupting Capability: 63 kA

Transfer Bus Required (SBSB only): N/A

Station Minimum BIL: 900 kV for 230 kV and 1,800 kV for 500 kV side.

Initial Reactive Power Requirements: None

Ultimate Reactive Power Requirements: None

Telemetering Requirements: Install necessary equipment, including RTUs to monitor the typical bulk power elements such as MW, MVAr, and phase currents (Amps) at each line and also voltages (kV)[2] at lines and buses and all circuit breaker (CB) status/control, protection relays statuses and alarms. The installed equipment must be capable of transmitting information to the appropriate control center.

Latest In Service Date: June 1, 2028

Low Profile Required: Subject to local permitting requirements

Gas Insulation Required: No, but if proposed shall be enclosed

Initial Number of Transformers: Two 3–phase banks with an installed spare, single phase units are permissible with one single phase spare

Ultimate Number of Transformers: Two 3–phase banks with an installed spare, single phase units are permissible with one single phase spare

Transformer Nominal Low Winding Phase to Phase Voltage: 235 kV to match PG&E operation

Tertiary Winding Required: No

Nominal Voltage Rating: N/A

Primary Voltage Winding (wye, grounded wye, delta, etc): Grounded Wye

Secondary Voltage Winding: Grounded Wye

Tertiary Voltage Winding: Corner Grounded Delta

Maximum Transformer % IZ: 19% Minimum Transformer %IZ: 15%

Minimum Transformer Normal Rating: 1500 MVA

Minimum Transformer 4-hour Emergency Rating: 1800 MVA

LTC Required: No

No Load Taps Required: 5 NLTs with two 2.5% taps above & below nominal voltage of 235 kV

CIP 14 requirement: The substation perimeter shall be fenced by a solid wall

Minimum Series Capacitor Continuous Ampacity - Summer: 2700 A

Minimum Series Capacitor Continuous Ampacity – Winter: 3000 A

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2 California ISO - Metering and telemetry (caiso.com)

Minimum Series Capacitor 30 Minute Emergency Ampacity – Summer: 3600 A

Minimum Series Capacitor 30 Minute Emergency Ampacity – Winter: 4000 A

230 kV Transmission Line Functional Specifications - Collinsville – Pittsburg lines

Line Terminus 1: Collinsville 230 kV Bus

Line Terminus 2: Pittsburg Substation 230 kV Bus

Nominal Phase to Phase Voltage: 230 kV

Minimum Line Continuous Ampacity - Summer: 1740 Amps per circuit

Minimum Line Continuous Ampacity – Winter: 1740 Amps per circuit

Minimum Line 4 Hour Emergency Ampacity – Summer: 3278 Amps per circuit

Minimum Line 4 Hour Emergency Ampacity – Winter: 3278 Amps per circuit

Approximate Line Impedance: (0.000016 to 0.00002) + j(0.00026 to 0.00032) pu/mile (100 MVA base).

Approximate Line Length: TBD depending on the location of the Collinsville substation

Latest In Service Date: June 1, 2028

Transmission Line Minimum BIL: 900 kV with solidly grounded systems

Minimum ROW Width: Per applicable codes

Governing Design and Construction Standards: (GO 95, NESC Code, applicable municipal codes)

Overhead Line Construction Requirements

Minimum Line Continuous Ampacity: 2100 Amps per circuit

Minimum Line 4 Hour Emergency Ampacity: 3500 Amps per circuit

Support Structures: Single or double circuit structures

Shield Wire Required: Optical ground wire (minimum 6 pairs of fibers)

Failure Containment Loading Mitigation (anti-cascade structures, etc.): Per applicable codes

Shield Wire Ground Fault Withstand Ampacity: Coordinate with interconnecting entities

Aeolian Vibration Control (Conductor and Shield Wire): Vibration dampers must be installed on all conductors and overhead shield wires, with the exception of slack spans.

Underground / Submarine Line Construction Requirements

Duct Bank: With the exception of the submarine portion that extends up to 350 feet onshore from the mean high water line, the underground cable shall be located in a duct bank with a minimum of one additional spare conduit per circuit.

Design Ambient Air Temperature: 40°C

3. Transmission Interconnection Facilities

On February 2, 2023, the Approved Project Sponsor submitted its request to the Interconnecting PTO ("PG&E") to interconnect its new facilities to the Pittsburg 230 kV substation and to the Vaca Dixon - Tesla 500 kV transmission line.

For the interconnection to the existing Vaca Dixon - Tesla 500 kV line, PG&E will be responsible for bringing the new transmission line extensions up to a point within 100 feet of the new Collinsville substation fence. The new line extensions will terminate on a dead end structure(s) to be owned by PG&E. The Approved Project Sponsor will be responsible for (and will own and maintain) the facilities from this last dead end structure(s) into the Collinsville substation.

For the interconnection of the new Collinsville – Pittsburg 230 kV lines to the Pittsburg 230 kV substation, PG&E will be responsible for installing the new transmission line segments from the Pittsburg 230 kV bus up to a point within 100 feet of the Pittsburg substation property line. These new line segments will terminate on a dead end structure(s) to be owned by PG&E. The Approved Project Sponsor will be responsible for (and will own and maintain) the facilities from this last dead end structure(s) back to the Collinsville substation.

Deviations on the location and ownership of the aforementioned dead end structures may be modified by mutual agreement between CAISO, PG&E and Approved Project Sponsor.

4. Network Upgrades

For the adjustment of the existing series capacitors on the Vaca Dixon– Tesla 500 kV line, PG&E will be responsible for adjusting the series capacitors to be in the range of 10-12 ohms depending on the location of the Collinsville substation. The series capacitors may need to be added or modified to ensure (a) no 500 kV line section is compensated above 73% to meet PG&E protection standards, and (b) the overall compensation on Vaca Dixon – Tesla path will remain the same as the existing system at 73%. In addition, PG&E will also upgrade the terminal equipment that is currently limiting the line rating.

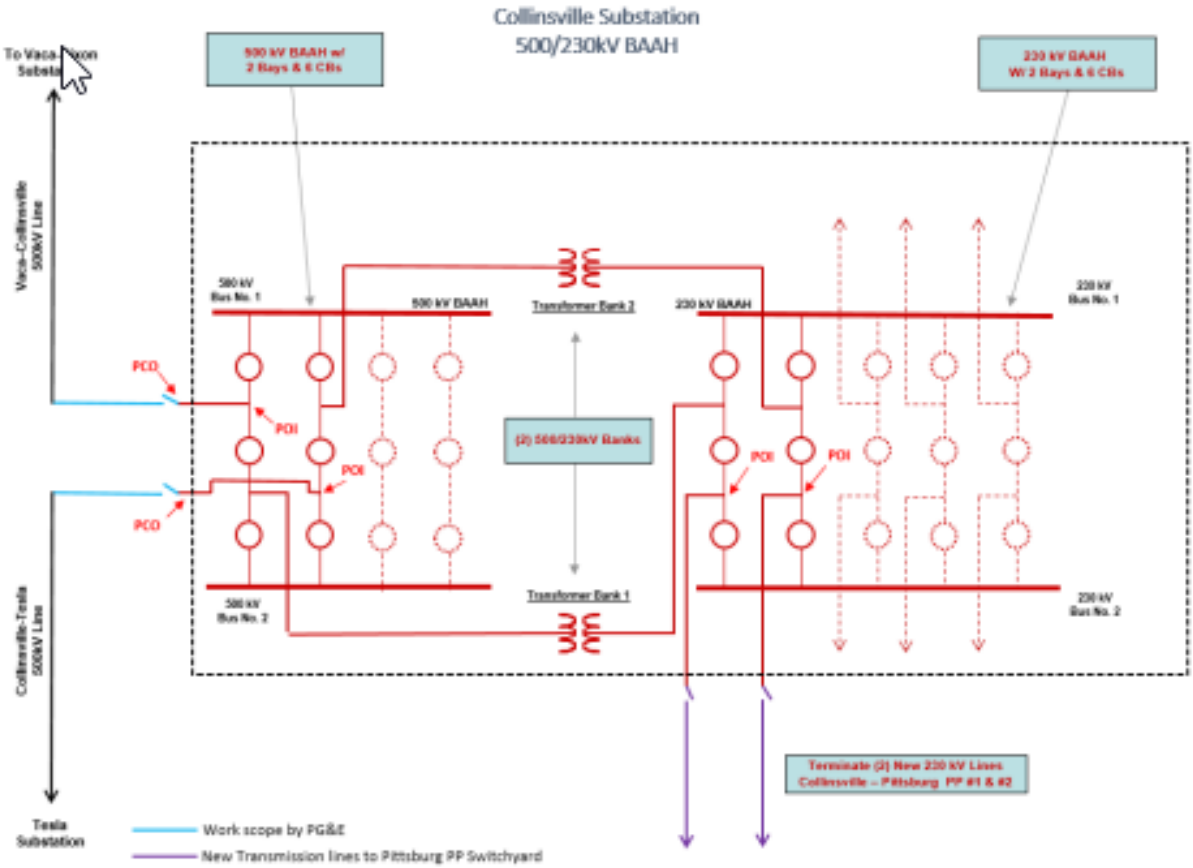
If system studies identify any required Network Upgrades, the cost of such Network Upgrades shall be Excluded Costs as defined in Appendix E.

5. Distribution Upgrades

If any Distribution Upgrades are determined to be required to support the Project, the Transmission Interconnection Facilities, or any Network Upgrades, the cost of such Distribution Upgrades shall be Excluded Costs as defined in Appendix E.

6. Diagram of Project

A preliminary Collinsville Substation schematic and general location diagram for the Project are given below. Dashed lines inside the substation boundary are future expansions and are not part of the Project..



7. Project Team

Approved Team Members:

LS Power Grid California, LLC:

- Paul Thessen – Executive Management
- Doug Mulvey – Project Director
- David Wilson – Regulatory, Environmental, and Compliance Manager
- Andrew Scott – Transmission Line Engineering Manager
- Andrew Scott – Engineering and Procurement Manager

Major Equipment Suppliers/Contractors:

Series Capacitors and Substation GIS: General Electric, Siemens Energy, Hitachi, HICO

Submarine Cable: Kokosing, LS Cable

8. Affected System

Pacific Gas and Electric Company

9. Additional Understandings

a. CAISO acknowledges that its standard practice is to treat all materials received from an approved project sponsor pursuant to an Approved Project Sponsor Agreement as confidential, and will apply that standard practice to the Approved Project Sponsor with respect to this Agreement. Notwithstanding Article 19 of this Agreement, documents will not need to be marked or designated as Confidential Information for this practice to apply.

b. CAISO acknowledges that for the purposes of Section 5.5.5 and Section 12.5 of this Agreement, the applicable team members or vendors subject to the requirements of Section 5.5.5 and Section 12.5 are those team members and vendors identified in Section 7 of Appendix A only. In the event the Approved Project Sponsor notifies CAISO pursuant to Section 5.5.5 of a change to a team member identified in Section 7 of Appendix A, CAISO shall not unreasonably withhold approval of such change. If CAISO does not object to any change noticed under Section 5.5.5 or 12.5 within ten (10) calendar days of receiving such notice, the change shall be deemed approved.

c. CAISO shall cooperate with any assignment for collateral security by reasonably responding to reasonable requests for estoppel certificates, consents, and acknowledgements.

d. Except to the extent the provisions of this Section 9 of Appendix A are also included in the Transmission Control Agreement, the provisions of this Section 9 of Appendix A shall survive termination of this Agreement.