



California ISO

Decision on modifications to the 2021-2022 transmission plan

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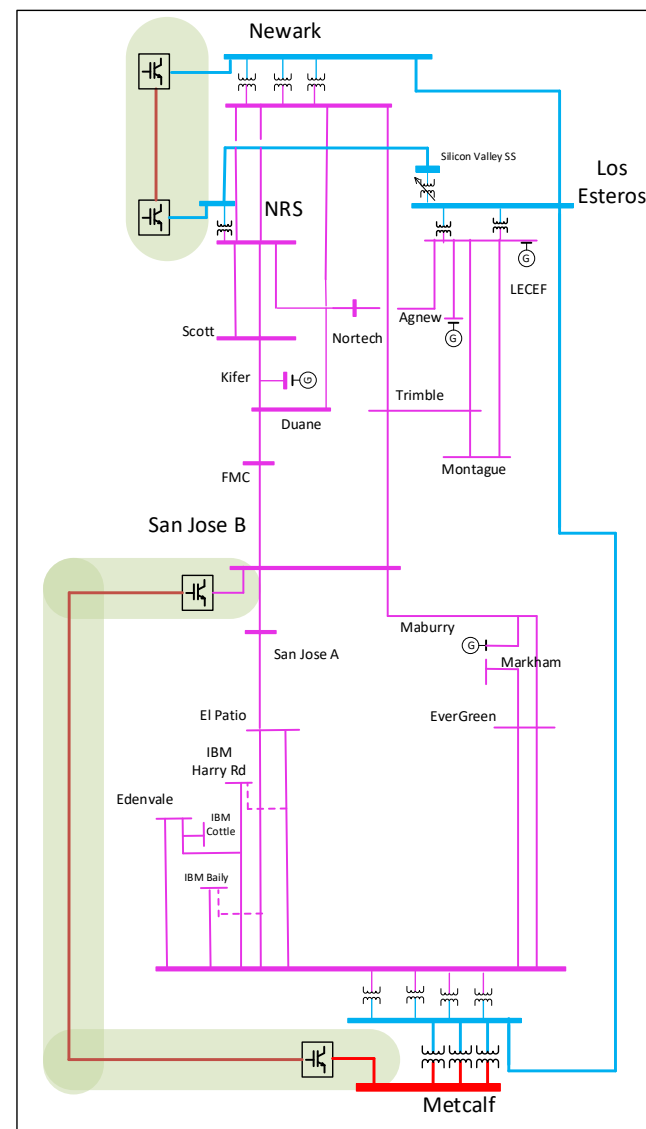
ISO Board of Governors meeting
General Session
November 12, 2024

Management is seeking approval of modifications to two transmission projects previously approved by the Board of Governors

- The long term plan in the San Jose area needs to be modified in light of the rapidly increasing load forecast in the area.
- The two projects were competitively awarded and are under development.
- Management is seeking approval of the modifications now to transition as quickly as possible to the new scope.
- Other area reinforcements will be needed, and will progress through the established 2024-2025 transmission planning process.

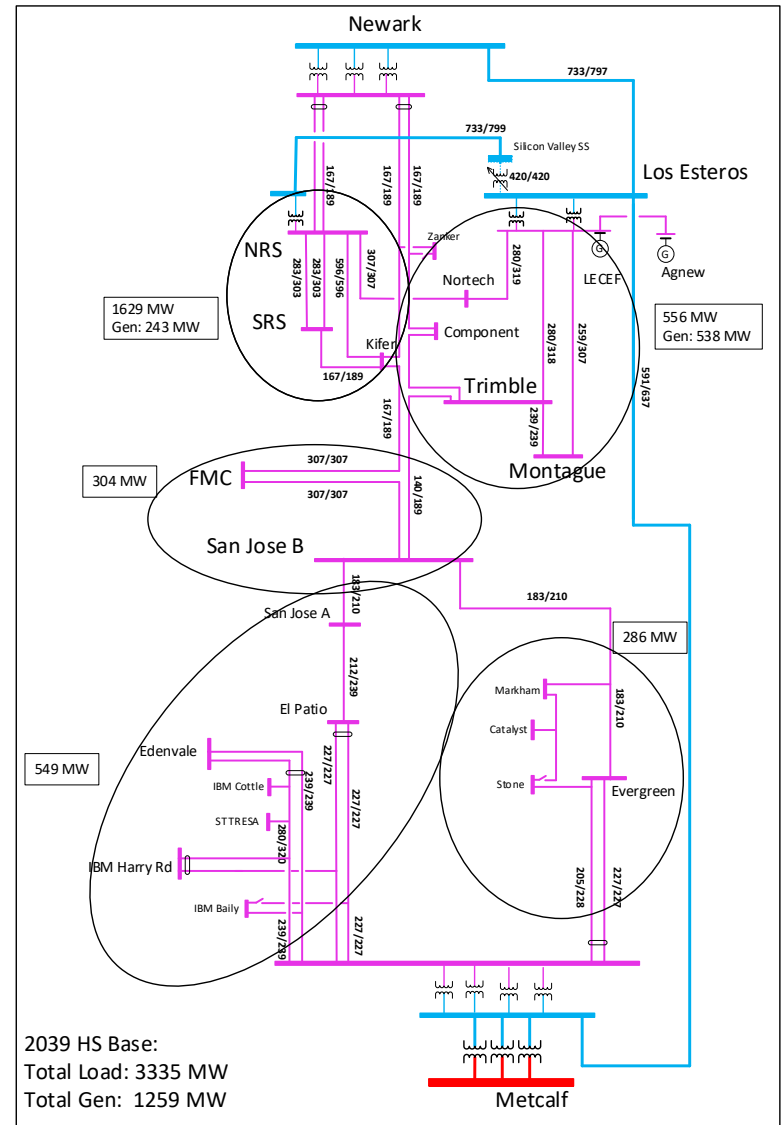
San Jose High Voltage Direct Current (HVDC) Projects in the 2021-2022 Transmission Plan

- The 10-year load forecast in the study area in 2021-2022 Plan was ~2,100 MW
- San Jose Area HVDC Projects approved in the 2021-2022 Plan:
 - Newark – NRS HVDC
 - Metcalf – San Jose B HVDC
- The ultimate plan was to form a multi-terminal HVDC configuration by connecting San Jose B HVDC converter to NRS HVDC converter with an HVDC cable



San Jose Area Assessment in 2024-2025 Planning Cycle

- The 10-year load forecast in the study area has increased to ~3,400 MW in the base and ~4,200 MW in the sensitivity scenario
- Due to the increased load forecast, overloads under normal conditions and single and multiple contingencies in the study area were identified in this year's study with both San Jose HVDC projects modeled in the case
- The 10-year and overall long term transmission plan for the area was re-evaluated in light of significant load growth in the area. In addition, LS Power informed ISO of the increased cost estimate for the HVDC projects.

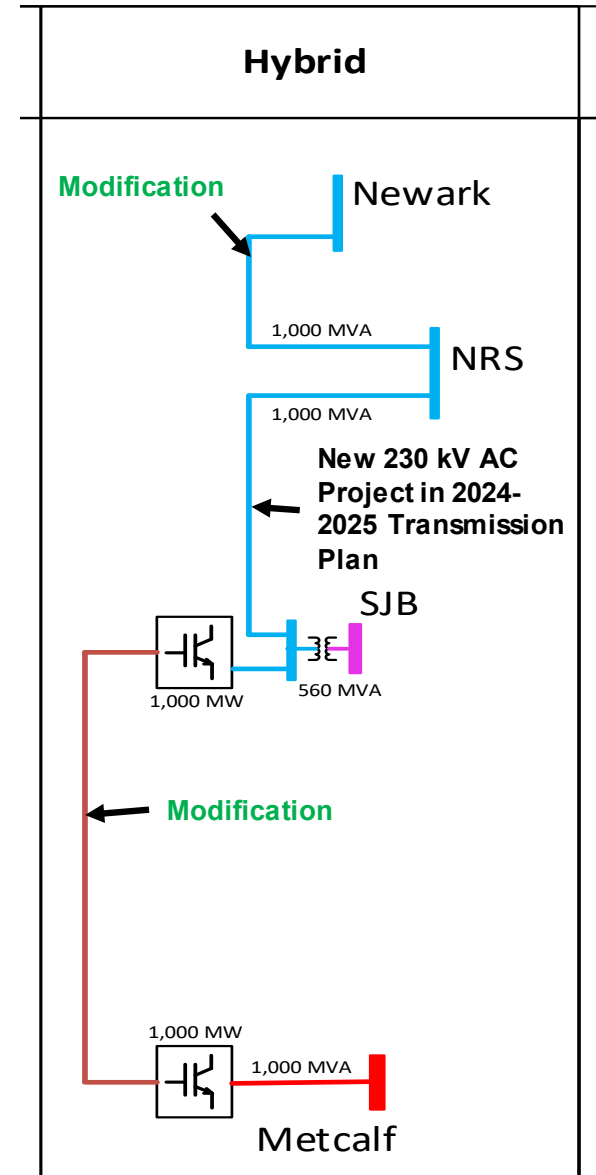


A number of alternatives were considered to reliably serve the load in the long term

- Hybrid HVDC and high capacity 230 kV Alternating Current (AC) line (Recommended Alternative)
- Multi-terminal HVDC
- High capacity 230 kV AC lines: Metcalf – San Jose B – NRS – Newark
- Bipole multi-terminal HVDC
- Other alternatives

Recommended Alternative and Long Term Plan

- Considering the in service date requirements, cost effectiveness, and the flexibility for long term expansion, the hybrid HVDC and high capacity 230 kV AC line has the optimum performance.
- Modifications:
 - A 1000 MW HVDC link between Metcalf and San Jose B 230 kV switchyard
 - Instead of HVDC, a high capacity 230 kV AC circuit between Newark and NRS
- A new project being considered in the 2024-2025 planning cycle:
 - A high capacity 230 kV circuit between San Jose B and NRS



Today's Decision

Management recommends modifying the scope of the Newark – NRS HVDC project and the Metcalf – San Jose B HVDC projects that were approved as part of the 2021-2022 Transmission Plan as follows:

- Newark – NRS 230 kV project
 - The scope of the project will be a 1,000 MVA 230 kV AC circuit from PG&E's Newark substation to SVP's NRS substation.
- Metcalf – San Jose B HVDC project
 - The scope of the project will be a 1,000 MW HVDC link between Metcalf 500 kV and San Jose B 230 kV substation and a 230/115 kV transformer to connect to PG&E's San Jose B 115 kV substation.

Future Decision

The future NRS – San Jose B 230 kV line project and other upgrades will continue to be explored. Management expects to bring a recommendation for approval to the Board of Governors in the 2024-2025 transmission planning process.