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Transmission Infrastructure Alternatives and Challenges

SDGE

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Old Town – Mission Scope

Drivers

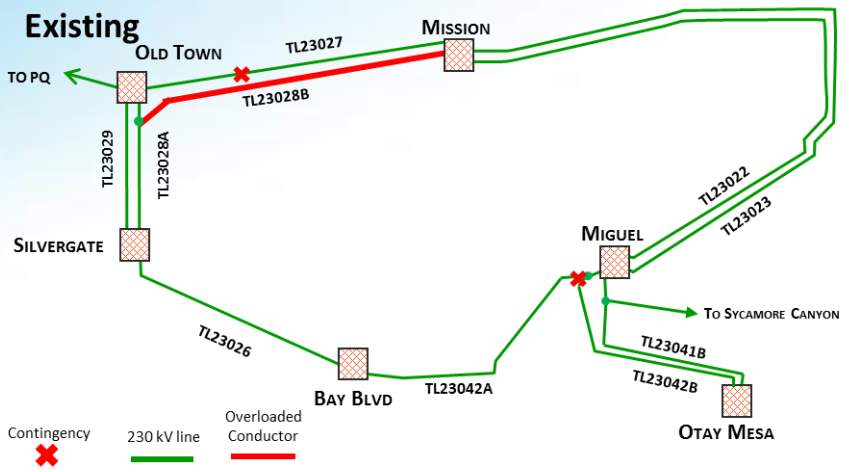
- Overloads on either TL20327 or TL23028 due to NERC Cat P6, N-1-1 Contingency
  - Occurs due outage on one line or the other if SX-PQ ISD of June 30, 2018 delayed and inadequate Encina generation

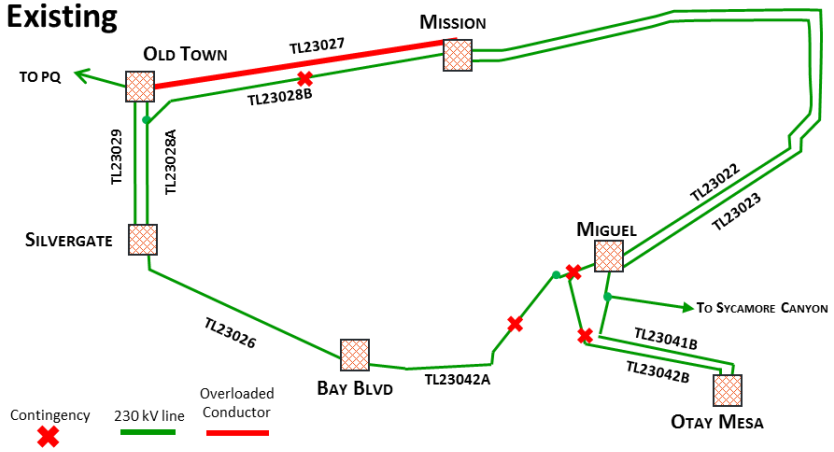
Proposed Scope

- Install Smart Wires power flow control devices on TL23027/28
- Flexible transmission solution with six to twelve month time frame.
- In-Service Date = June 1, 2018

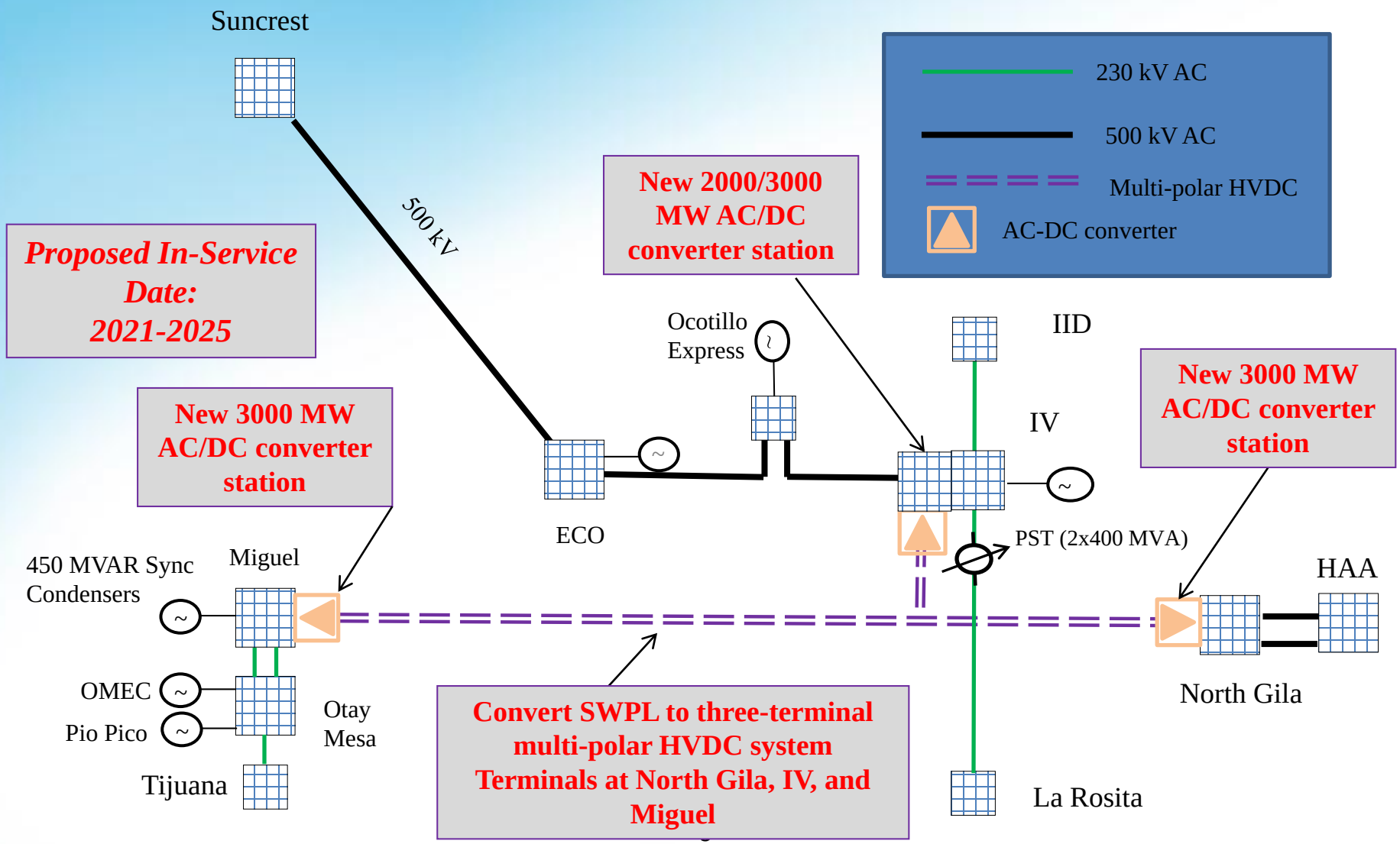
Challenges

- Smart Wires solution nascent require additional qualification activities including seismic
  - Require more time than available to meet ISD





Proposed HVDC Conversion



Challenges for New or Existing Facilities

- Before a transmission or power line project can be built, whether it is only the replacement of poles, overhead conductor, or if it is the addition of a new circuit.
  - The Public Utilities Commission of the State of California General Order (GO) 131-D :
    - Advice Letters are required for PTC exemptions unless the project is deemed categorically or statutorily exempt
  - The GO implements the California Environmental Quality Act (CEQA).
  - In order for categorical exemptions to apply all proper underlying land ownership rights must be met. Any additional need for easement, ROW or similar authorization will trigger the appropriate regulatory licensing process.
  - In addition to GO 131-D there are physical features that require permits anytime we are replacing or adding to existing infrastructure

- Substation objective
  - "Provide three 69kV circuits into the proposed substation to serve load meet the regulatory requirements"
  - A new transmission circuit would be constructed all within existing easements and fee owned property to provide the third line
  - Project review removed third transmission line from the scope of the new substation project
- 230kV #2 line that was built in 2005-2006
  - Designed a transmission line and approved a budget to perform the construction under an Advice Letter
    - Work was to be done within existing easements on structures of an existing transmission line, on existing structures modified or new structures of a similar kind
    - Converting an existing 138kV structure line to 230kV
  - Built under a CPCN at a cost more than originally anticipated

Questions ?

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