

New 138/24.9 kV Distribution Substation

**Presented to the CAISO on
September 20-21, 2017**



**Valley Electric
Association, Inc.**

A Touchstone Energy Cooperative 

Overview - Need, Scope, Costs, and ISD



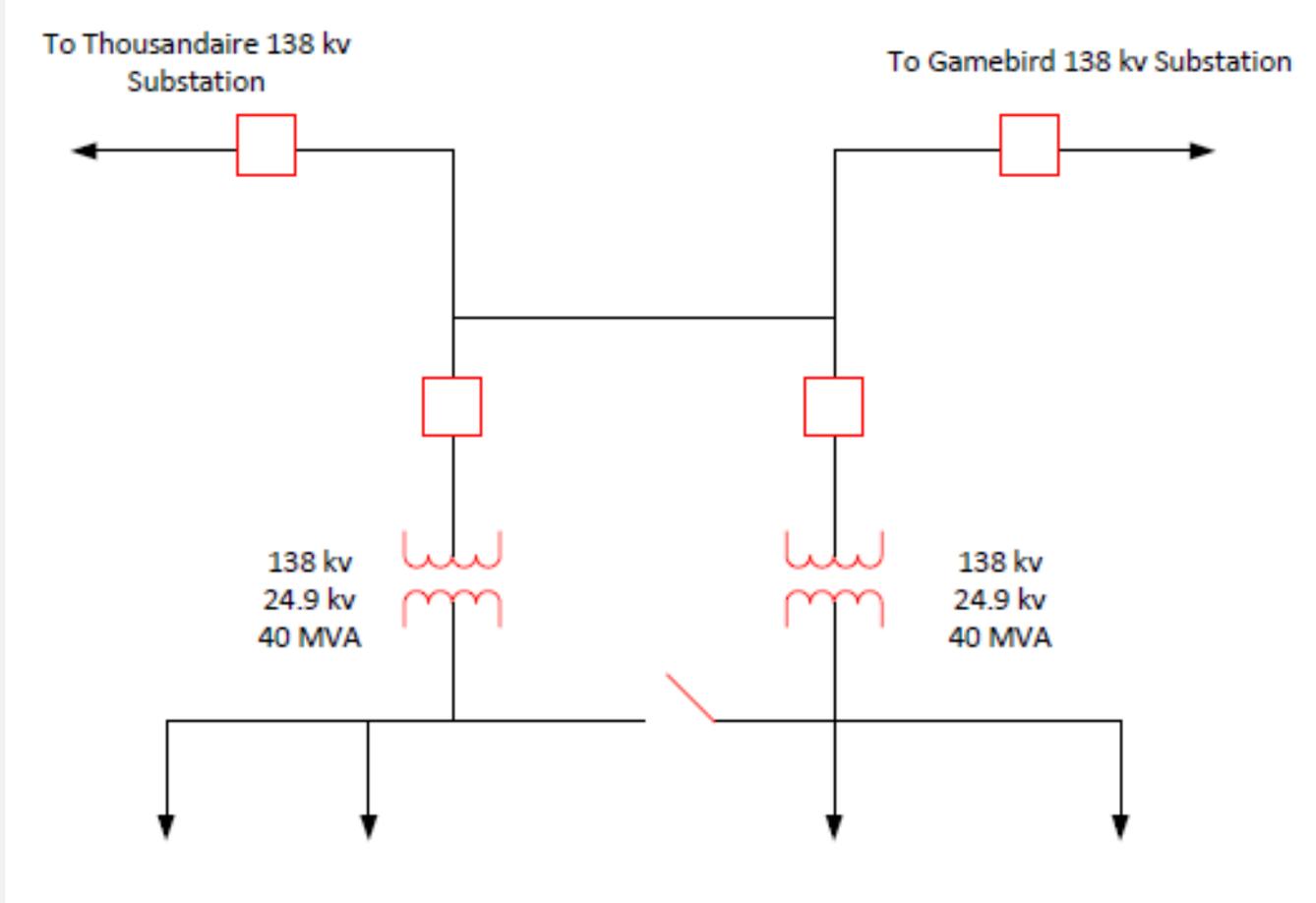
New residential and commercial construction is forecasted to increase local power demand. This new demand cannot be served from existing distribution substation capacity without causing overloads and under-voltages on distribution facilities. A new distribution substation is the low cost most reliable project to serve the forecasted new residential and commercial load.

- **Scope: Construct a new 138/24.9 kV 80 MVA distribution substation.**
- **Energized by looping in the existing Thousandaire-Gamebird 138 kV transmission line.**
- **Conceptual Cost Estimate is: \$10.5m (2017 dollars)**
- **Proposed In-Service date: 12/ 01 / 2019**

Geographic Location – notice the lot lines prepped for new construction in the area



SLD of Proposed New Distribution Sub.



« No Impact to Transmission Grid

- Summary of NERC Steady State Contingency Results from Adding a New Distribution Substation to CAISO TPP 2022 Peak Case
 - Ran CAISO contingencies as pre-project cases
 - Add project and new load to PSLF 2022 case (Post project case)
 - Modified CAISO contingency files to run post-project cases
- Found no impact to 138kV or 230kV Transmission
 - Same per unit flow violations and magnitudes (Bob-Mead 220kV)
 - Expected result from adding a new distribution substation



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