

Southern California Edison
MESA PTC A.15-03-003

DATA REQUEST SET A1503003 ED-SCE-06

To: ENERGY DIVISION
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Question 02.a:

Alternatives: Reduced Substation Alternative (One 1600-MVA 500/230-kV Transformer Bank)

Provide the following information about a reduced substation alternative that would involve one 1600-MVA 500/230-kV transformer bank.

- A. State whether SCE concurs that one 1600-MVA transformer bank would address overloading on the Serrano Corridor following the 230-kV N-1-1 contingency and voltage issues following the 500-kV N-1-1 contingency.

Response to Question 02.a:

In order for an alternative to be viable, it must comply with NERC performance criteria for a range of expected system operating conditions. SCE does not concur that one 1600 MVA transformer is a feasible alternative as it would not address all reliability concerns. An N-2 of the Rio Hondo – Vincent #1 & 2 230 kV transmission lines would cause a single transformer to be loaded to 1698 MVA which is in excess of the 1600 MVA specification.

Furthermore, the case provided is one snapshot of future operating conditions. With the recent passage of Senate Bill 350, the state renewable energy target has increased from 33% to 50%, which will likely result in new generation connecting to the system. While SCE cannot predict exactly where new renewable generation would be located, generation connecting north of Vincent Substation would further exacerbate bank loading at Mesa Substation.

This alternative would also be in conflict with the objective to “design and construct the Proposed Project in conformance with SCE’s approved engineering, design, and construction standards for substation, transmission, subtransmission, distribution, and telecommunications system projects.” (PEA page 2-3) SCE's engineering design standards utilize only an 1120 MVA transformer bank at this voltage level, therefore a 1600 MVA transformer bank would not be in accordance with SCE’s engineering design standards.