

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

DATA REQUEST SET A1503003 ED-SCE-06

To: ENERGY DIVISION
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Title: Power System Planner
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Question 01.a:

DR#2 Q.7

Alternatives: Reduced Substation Alternative (Two 1200-MVA 500/230-kV Transformer Banks)

CPUC is evaluating an alternative that would involve construction of the Mesa Substation as proposed but with only two 1200 MVA 500/220-kV transformer banks. Provide the following information about a reduced substation alternative that would consist of two 1200 MVA 500/220-kV transformer banks:

- A. State whether SCE concurs that two 1200 MVA 500/230-kV transformer banks 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 01.a:

SCE does not concur that two transformer banks would be sufficient. SCE's approved Engineering Design Standard for a 500/230 kV transformer bank is 1120 MVA nameplate rating with a 1344 MVA emergency rating, which is utilized in performance of planning assessments. With only two transformer banks, under a loss of one of the 500/230 kV transformer banks (N-1), the remaining bank is loaded to 1407 MVA, which exceeds the bank's emergency rating. This overload would be made worse by additional contingencies such as a loss of the Eagle Rock – Sylmar 230 kV transmission line. Alternate operating conditions would also increase the magnitude of this overload, such as dispatch of additional renewable generation north of Vincent Substation.