

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
Dated: 10/30/2015

Question 04.a:

Alternatives: Load Shedding and Line Opening

CPUC is evaluating an alternative that would involve load shedding in Mission Viejo and opening the Lewis – Barre 230-kV transmission line and the Villa Park – Barre 230-kV transmission line following the 230-kV N-1-1 contingency.

The intent of load shedding in Mission Viejo would be to address the voltage issues following the 500-kV N-1-1 contingency. The intent of opening the 230-kV lines is to prevent overload on the Serrano – Villa Park 230-kV line following the 230-kV N-1-1 contingency. Preliminary analysis indicates that this alternative could address the 230-kV N-1-1 contingency.

Provide the following information regarding this potential alternative to allow for full analysis:

- A. State whether SCE concurs that the load shedding and line opening alternative would meet the objectives of the proposed project (i.e., addressing thermal overloads following the 230-kV N-1-1 contingency and voltage performance issues following the 500-kV N-1-1 contingency).

Response to Question 04.a:

SCE does not concur that the load shedding and line opening alternative would meet the objectives of the Proposed Project. See SCE’s responses to Question #3.a and 3.b for additional rationale as to why load shedding does not meet the Proposed Project objectives. The proposed line opening alternative would not meet the Proposed Project objectives as it seeks to address a targeted contingency and does not maintain overall system reliability. This is evidenced by the following two contingencies:

Contingency	Category	Overloaded Facility	Loading (% of Emergency Rating)
Barre - Villa Park 230 kV & Mira Loma - Olinda 230 kV	N-1-1	Barre - Lewis 230 kV	106%
Barre - Lewis 230 kV & Mira Loma - Olinda 230 kV	N-1-1	Barre - Villa Park 230 kV	106%

The proposed alternative of opening the Barre – Villa Park and Barre – Lewis 230 kV transmission lines would not address these contingencies. If either the Barre – Villa Park 230 kV or Barre – Lewis 230 kV (whichever is not already offline due to the contingency) is opened in attempt to alleviate the overload, it would create another overload on the Mira Loma – Walnut 230 kV transmission line. This cascading overload effect demonstrates the inadequacy of this

alternative to meet the reliability objectives of the Proposed Project.

Furthermore, the transmission system operates as an integrated network, with each component providing resiliency and capacity to the overall system. Rather than maintain or improve overall system reliability as sought in the Proposed Project objectives, the proposed line opening alternative degrades overall system reliability. This alternative would open two transmission lines following an N-1-1 contingency resulting in the loss of four transmission lines from the system. This action completely severs the transmission path from Serrano Substation into the Western LA Basin, causing increased flows on other paths.