

Southern California Edison
A.09-09-022 – Alberhill PTC & CPCN

DATA REQUEST SET J W S - S C E - 0 3

To: Energy Division
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Received Date: 10/28/2019

Response Date: 11/4/2019

Question 04:

Identify the resiliency need that Edison seeks to address and illustrate -with examples. Provide information to explain the level of resilience for which Edison is planning, and the basis for Edison's recommendation.

Response to Question 04:

SCE's previous data request response¹ for this proceeding provided in April 2019 summarized the reliability and resiliency needs for the Valley South System. Simply put, as discussed throughout the Alberhill System Project Certificate of Convenience and Necessity (CPCN) proceeding, the resiliency (and reliability) concerns for the current Valley South System are principally driven by the extraordinary number of customers served from a single substation (Valley) and the lack of system tie-lines in the Valley South System. The Valley South System is the only SCE subtransmission system that has zero tie lines. These issues are compounded by the limited capacity margin remaining in the Valley South System which substantially limits temporary remedial actions that SCE can take for events that challenge the system.

The minimum level of resiliency that SCE is seeking to achieve would be to add system tie-lines with sufficient transfer capacity to appreciably reduce the amount of load at risk of being unserved during abnormal system conditions (consistent with other SCE subtransmission systems from the perspective of customers served, operating margin and flexibility to address planned and unplanned events). Ideally, this solution would involve diversifying the source of power to the region in conjunction with creating system tie-lines.

Examples of events that challenge system resiliency in the Valley South System include:

- losing a subtransmission line as a result of a car accident or other third-party event when another line is out of service for maintenance,
- loss of multiple lines due to wildfire,

¹See SCE Response to Question 01b of CPUC Data Request Set ED-Alberhill-SCE-JWS-2 (available here: <https://www.cpuc.ca.gov/Environment/info/ene/alberhill/Docs/A.09-09-022%20ED-Alberhill-SCE-JWS-2%20Q.01b%20Response.pdf>, last checked November 1, 2019), at 2 (describing reliability and resilience challenges facing Valley South system given, among other things, its geographic size, isolation, and number of customers and MVA served), Tables 1 and 2 (putting Valley South system's characteristics (size, etc.) in context with SCE's other systems).

- loss of two transformers serving the Valley South System due to a common mode failure initiated either internal to the substation (transformer fire or explosion) or external to the substation (such as an earthquake, wildfire or act of sabotage), or
- loss of a single transformer serving the Valley South System when the installed spare at Valley Substation is in-service serving the Valley North System.