

*Southern California Edison*  
*2022-WMPs – 2022 Wildfire Mitigation Plan Updates*

**DATA REQUEST SET Cal Advocates - SCE - 2022 WMP - 15**

**To: Cal Advocates**  
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**Response Date: 7/14/2022**

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**Question 01:**

Fast Curve Settings for 2022

Please provide the protective device settings that SCE plans on using during high fire-risk weather in 2022, including the following parameters:

- a) The minimum to trip current;
- b) Definite time delay;
- c) Time curve; and
- d) Coordination parameters.

**Response to Question 01:**

- a. SCE currently has both Fast Curve settings that are set according to a prior practice, created in 2018, and set according to a newer Fast Curve practice.

SCE's prior phase Fast Curve pickup is equal to or greater than 4x the phase minimum trip at the circuit breaker and 5x the phase minimum trip at the recloser. SCE's prior ground Fast Curve pickup is equal to or greater than 4x the ground minimum trip at the circuit breaker, with no ground Fast Curve added to the recloser. If a circuit has Fast Curve enabled reclosers or branch line fuses (BLFs) installed, the substation Fast Curve phase and ground pickup may be set higher than the typical 4x in order to reach past the furthest downstream recloser or BLF with some margin (called overreach), as long as it also provides the standard fault current/minimum trip multiple on all other unprotected branches. Increasing the pickup will prevent excessive overreach of downstream fast tripping devices.

SCE's new phase Fast Curve pickup is equal to or greater than 2.3x the protective device minimum trip. SCE's ground Fast Curve pickup is equal to or greater than 5x the protective device minimum trip. If a circuit has Fast Curve enabled reclosers or branch line fuses (BLFs) installed, the substation or recloser Fast Curve phase and ground pickup may be set higher than the typical 2.3x or 5x in order to overreach the furthest downstream recloser or BLF with some margin, as long as it also provides the standard fault current/minimum trip multiple on all other unprotected branches.

- b. SCE's old phase and ground Fast Curve definite time delays are set to either 0 cycles or 2 cycles (0.033 seconds) at the circuit breaker and 0 cycles at the recloser. SCE's new phase and ground Fast Curve definite time delays are set at 4 cycles (0.066 seconds) at the circuit breaker and recloser.

- c. SCE uses a definite time delay for both phase and ground Fast Curves. SCE's old definite time delay will operate in 0 or 2 cycles, and the new definite time delay will operate in 4 cycles. Both

the old and new definite times operate at the set 0, 2 or 4 cycle time for any current exceeding the Fast Curve pickup value and do not vary as fault currents increase.

d. SCE's Fast Curve parameters are set to selectively coordinate with downstream (i.e., further from the substation) protective device pickup magnitudes to avoid excessive overreach of downstream reclosers or BLFs. The Fast Curve time delay will be set at 0, 2 or 4 cycles to provide selective coordination time interval with downstream main line or branch line fuses.