

Southern California Edison
***R.18-10-007 – Order Instituting Rulemaking to Implement Electric Utility Wildfire Mitigation
Plans Pursuant to Senate Bill 901 (2018).***

DATA REQUEST SET A b r a m s - S C E - 0 0 2

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Received Date: 11/12/2019

Response Date: 11/26/2019

Question 005:

List of Every Factor and/or Combination of Factors that Significantly Contributes to Higher Risk – IOUs should list every external (wind, humidity, fuel dryness, etc.) and internal risk factor (component age, repair timeliness, etc.) or factor combinations that change ARR or PCR by more than 5%. Where more granular scales are leveraged by an IOU to determine impacts (Beaufort Wind Scale, Keetch-Byram Drought Index, etc.) please provide that breakdown. The specific change in ARR and RRR provided by the proposed tactic should be indicated along with a CI for the assigned risk reduction ratio.

Response to Question 005:

SCE objects to the question as unduly burdensome and vague and ambiguous. SCE further objects to the question as it calls for the completion of a study or analysis and not for the production of underlying data. As noted in SCE's Response to Question No. 3, SCE does not use the terms "ARR," or "RRR" in its risk analysis processes. Notwithstanding this objection, SCE responds as follows.

The internal factors that contribute to higher risk (fire risk or fire potential) vary based on the component and may include age of the component, pending maintenance work, manufacturer and for conductor the wire size.

External factors that contribute to higher risk (fire risk or fire potential) including the following:

Wind (both magnitude and direction):

Wind magnitude and direction contributes the most weight to determining fire risk/potential because significant wind events can override benefits from other risk mitigating factors.

Humidity:

Lower humidity leads to less fuel moisture within dead vegetation, resulting in more combustible fuel.

Temperature:

Higher air temperatures increase vegetation temperature. Warmer fuels will ignite and burn faster because less heat energy is used to raise the fuels to their ignition temperature.

Days since significant precipitation:

More days since significant precipitation increases the combustibility of vegetation.

Drought:

- Keetch-Byram Drought Index (KBDI)
- Palmer Drought Severity Index (PDSI)
- Evaporative Demand Drought Index (EDDI)

There are a number of drought indicators to measure drought severity. Drought has long-term negative effects on vegetation.

Dead Fuel Moisture:

A measurement of the moisture content of the dead vegetation. The lower the dead fuel moisture, the drier the vegetation is and more supportive of significant fire.

Live Fuel Moisture:

Moisture content of the living vegetation. The lower the live fuel moisture the drier the vegetation is and more supportive of significant fire. Values below 80% are considered to be significant.

Green-up state of the native grasses:

Greener grass will greatly mitigate fire risk/potential so measuring the green-up is important in assessing fire potential.

The National Fire Danger Rating System (NFDRS):

- Energy Release Component (ERC)
- Spread Component (SC)
- Ignition Component (IC)
- Burning Index (BI)

These indices provide an assessment of fire potential from different perspectives.

Duration:

Duration of the event can have an influence on fire potential. Short events (hours) will have limited effect on the vegetation and the overall fire potential, while longer events (days) will lead to a higher risk of wildfires.