Southern California Edison

WSD-011 – Resolution implementing the requirements of Public Utilities Code Sections 8389(d)(1), (2) and (4) related to catastrophic wildfire caused by electrical corporations subject to the Commission's regulatory authority

DATA REQUEST SET M G R A - S C E - 0 0 6

To: MGRA
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Response Date: 3/8/2021

Question 010:
Please provide data and/or calculation showing the dependency of FPI 2.0 on wind speed.

Response to Question 010:
The current FPI references a matrix to calculate the weather score which is based on wind speed (miles per hour at 20 feet) and dew point depression (degrees F). Dew point depression is a way to measure how dry the air is near the ground.

FPI Weather Component (Wx)							
		Wind Speed (mph)					
		<=5	6-10	11-16	17-22	23-28	>=29
Dew Point Depression	>=50	2	3	3	4	5	6
	40-49	2	2	3	3	4	5
	30-39	1	2	2	3	3	4
	20-29	1	1	2	2	3	3
	10-19	0	0	1	1	1	1
	<10	0	0	0	0	0	0

The limitation to the current FPI is that it does not account for wind speeds that are greater than 29 mph and dew point depressions that are greater than 50 since anything above these values would be assigned a "6" no matter the level of exceedance in both variables.

FPI 2.0 will have no upper boundaries because it will not be utilizing a matrix. The weather score in FPI 2.0 will be calculated using one of the following formulas:

FPI 2.0weather = (WindSpeed^2)*(Dew Point Depression) or (WindSpeed^2)*(Vapor Pressure Deficit)

Testing and evaluating these formulas over both a historical period and in real time will determine which performs better. Both versions of the equation put the same emphasis on the wind speed which is why that variable is squared. It has been observed that stronger winds can overcome fire mitigating factors such as moisture in the air or in the vegetation, so it is important that wind speeds

be the dominant factor in the FPI 2.0 formula. In addition, this new formula will account for winds at any strength with no upper boundary limitations.