

Southern California Edison
***WSD-001 – Resolution WSD-001 to Establish Procedures for the Wildfire Safety Division's
Review of 2020 Wildfire Mitigation Plans Pursuant to PUC Sections 8386 and 8386.3***

DATA REQUEST SET Cal Advocates - SCE - 2020 WMP - 04

To: Cal Advocates
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Received Date: 9/18/2020

Response Date: 9/23/2020

Question 003.a:

In SCE's RSE model, on the worksheet "Table 11&18 map," "Unknown/Unspecified" drivers account for an average of 1928 incidents and 4.8 ignitions per year on distribution (40% of total incidents, 13.5% of total ignitions), and 133 incidents and 0 ignitions per year on transmission (75% of total incidents, 0% of total ignitions). In SCE's Remedial Compliance Plan submitted July 27, 2020, SCE provided updated versions of Tables 11-a and 11-b. Per these tables, "No Cause Found" and "Other" accounted for an average of 2077 incidents and 10.2 ignitions per year on distribution (15.9% of total incidents, 10% of total ignitions), and 80.2 incidents and 1 ignition per year on transmission (21.8% of total incidents; 13.9% of total ignitions).

a) Please explain the apparent discrepancy between the RSE model and SCE's Remedial Compliance Plan with respect to the historic baseline number of incidents and ignitions due to unknown causes.

Response to Question 003.a:

There is no discrepancy between what is used in SCE's RSE model and what was provided in the RCP submitted on July 27th. Instead, the difference is attributed to assumptions used in the RSE model. For example, the data request highlights 10.2 ignitions per year in distribution as shown in the RCP:

Table 18a: Key drivers of ignition probability (Distribution)									
Ignition probability drivers		Number of incidents per year (according to 5-year historical average)	Average likelihood of ignition per incident	(Distribution) Ignitions from this driver (according to 5-year historical average)					
				Total	In non-HFTD	In HFTD Zone 1	In HFTD Tier 2	In HFTD Tier 3	SOB322
Contact From Object	Contact From Object	2,667.6	2.04%	54.4	34.8	0	6.4	12.6	0.6
	Animal contact	641.8	1.65%	10.6	6.2	0	1.8	2.6	0
	Balloon contact	841.0	2.02%	17	12.4	0	1.2	3.4	0
	Unspecified CFO	116.8	3.25%	3.8	2	0	0.4	1.2	0.2
	Vegetation	500.8	2.76%	13.8	8.8	0	1.8	3	0.2
	Vehicle contact	557.2	1.65%	9.2	5.4	0	1.2	2.4	0.2
	ICE/SNOW	10.0	0.00%	0	0	0	0	0	0
Equipment/Facility Failure	Equipment/Facility Failure	5,148.0	0.58%	29.8	19.8	0	2.6	7.2	0.2
	Capacitor bank failure	378.2	0.16%	0.6	0.4	0	0	0.2	0
	Conductor failure—all	708.0	1.47%	10.4	7.2	0	1.2	2	0
	Conductor failure—wires down	282.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Crossarm	319.2	0.38%	1.2	1	0	0	0.2	0
	Fuse failure—all	485.0	0.21%	1	0.8	0	0	0.2	0
	Fuse failure—conventional blown fuse	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Insulator	88.4	1.81%	1.6	0.4	0	0.6	0.6	0
	Lightning arrester failure	130.4	0.77%	1	1	0	0	0	0
	Other Equipment Types	38.8	11.86%	4.6	3.2	0	0	1.4	0
	Splice/Clamp/Connector	456.6	0.83%	3.8	1.6	0	0.6	1.4	0.2
	Switch failure	57.4	1.05%	0.6	0.6	0	0	0	0
	Transformer failure	2,119.8	0.19%	4	2.8	0	0.2	1	0
	Pothead	124.8	0.16%	0.2	0.2	0	0	0	0
	Pole	220.4	0.36%	0.8	0.6	0	0	0.2	0
	Guy	18.4	0.00%	0	0	0	0	0	0
	Regulator	2.0	0.00%	0	0	0	0	0	0
	Tower	0.4	0.00%	0	0	0	0	0	0
	Pole Top Sub	0.2	0.00%	0	0	0	0	0	0
	Other	5,183.2	0.25%	13	8.2	0	1.4	3	0.4
Other	3rd Party/VANDALISM	88.2	2.49%	2.2	1.8	0	0.2	0.2	0
	Lightning	347.2	0.00%	0	0	0	0	0	0
	No Cause Found-Momentary	1,308.2	0.49%	10.2	6.4	0	0.8	2.6	0.4
	No Cause Found-Sustained	755.0							
	OTHER	13.8							
	Source Lost	36.0	0.00%	0	0	0	0	0	0
	Substation	45.6	0.00%	0	0	0	0	0	0
	Testing/Crew	105.2	0.57%	0.6	0	0	0.4	0.2	0
	Underground Equipment	2,427.8	0.00%	0	0	0	0	0	0
	Dig In	56.2	0.00%	0	0	0	0	0	0
Wire-to-wire contact / Contamination		48.4	7.85%	3.8	2.6	0	0.6	0.6	0

SCE described in its Quarterly Report for SCE-4 that risk modeling was focused on HFRA only. As such, the 10.2 ignitions number is not the appropriate number to use as it reflects the total ignitions in SCE's system territory (Total) and not HFRA. Table 18 shows a break-down of ignitions in non-HFTD/ HFTD/SOB322 tiers as columns to the right of the "Total" column. Accordingly, SCE added the ignitions in the HFTD and SOB322 tiers to arrive at the number of ignitions in HFRA.

Furthermore, in the RSE model worksheet ("Table 11&18 map"), SCE classified "unknown/unspecified" into the "other" category, as shown in the screenshot below.

	A	B	C	D	E
1				DISTRIBUTION	TRANSMISSION
2				Table 11 [A] HFRA	Table 11 [B] HFRA
3		Current WMP 11,18 order	RSE Model Name	2015-2019 Avg	2015-2019 Avg
4	CFO	All type of object contact	#N/A		
5		Animal contact	D1a - Animal	221.20	7.80
6		Balloon contact	D1b - Balloons	130.20	2.25
7		Vegetation contact	D1d - Veg	228.00	2.60
8		Vehicle contact	D1e - Vehicle	188.80	3.40
9		Unspecified CFO	D1c - Unspecified	46.00	3.00
10	EFF	All types of Equipment	#N/A		
11		Capacitor bank failure	D2a - Cap. Bank	9.80	-
12		Conductor failure—all	D2b - Conductor	285.60	11.80
13		Conductor failure—wires down		0	
14		Fuse failure—all	D2d - Fuse	275.80	0.20
15		Fuse failure—conventional blown fuse		0	
16		Lightning arrester failure	D2i - Lightning arrester	66.20	0.60
17		Switch failure	D2j - Switch	25.00	0.60
18		Transformer failure	D2g - Transformer	862.60	0.40
19		Crossarm	D2c - Crossarm	160.00	1.20
20		Insulator	D2e - Insulator	41.00	1.00
21		Splice/Clamp/Connector	D2f - Splice/Clamp/Connector	149.20	1.00
22		Other Equipment Types	D2h - Unspecified	199.40	5.80
23	WTW	Wire-to-wire contact / Contamination	D3 - Wire to Wire / Contamination	16.20	2.25
24	Other	Other	D4 - Unknown/Unspecified	1,928.40	132.80
25					
26					
27					
28					

Although SCE disaggregated the “Other” category in the RCP into more sub-categories (e.g., no-cause found, substation, dig-in) than what was previously provided in the WMP submitted in February 2020, for purposes of risk modeling, the RSE model still used the “Other” category frequency. The RSE model used ignitions and faults/incidents within HFRA only and the incidents data presented in the RCP (Table 11& 18) are territory-wide numbers.