

STATUS REPORTS

ELECTRIC RELIABILITY

PREPARED BY

Alan Horton
Associate Engineer

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Associate Engineer L.A.C.U.

							<u>Customers</u>	<u>Combined Customer</u>		
<u>Date</u>	<u>Call Rcd.</u>	<u>Circuit</u>	<u>Cause</u>	<u>Start Time</u>	<u>End Time</u>	<u>Duration</u>	<u>Affected (Meters)</u>	<u>Outage Durations</u>	<u>Total Outage H:M:S</u>	<u>Running SAID!</u>
7/5/2020	Utilities	WR2	URD Failure	13:00	14:00	1:00	20	20:00:00	20:00:00	0:00:08
7/11/2020	Utilities	WR1	URD Failure	12:30	13:50	1:20	15	20:00:00	40:00:00	0:00:16
7/11/2020	Utilities	13	OH Failure	20:30	21:30	1:00	13	13:00:00	53:00:00	0:00:21
7/12/2020	Utilities	17	UNKNOWN	21:30	23:00	1:30	17	25:30:00	78:30:00	0:00:31
7/18/2020	Utilities	13	ANIMAL	21:50	22:30	0:40	25	16:40:00	95:10:00	0:00:38
7/25/2020	Utilities	WR1	ANIMAL	18:30	19:30	1:00	75	75:00:00	170:10:00	0:01:08
7/27/2020	Utilities	WR2	URD Failure	11:45	18:30	6:45	44	297:00:00	467:10:00	0:03:06
8/7/2020	Utilities	14	URD Failure	6:20	7:25	1:05	4	4:20:00	471:30:00	0:03:08
8/9/2020	Utilities	WR2	URD Failure	13:00	13:30	0:30	25	12:30:00	484:00:00	0:03:13
8/17/2020	Utilities	WR1	URD Failure	0:35	2:00	1:25	59	83:35:00	567:35:00	0:03:46
8/19/2020	Utilities	13	URD Failure	4:00	4:30	0:30	25	12:30:00	580:05:00	0:03:51
9/4/2020	Utilities	16	UNKNOWN	16:00	17:00	1:00	11	11:00:00	591:05:00	0:03:55
9/4/2020	Utilities	WR1	UNKNOWN	17:00	18:00	1:00	2	2:00:00	593:05:00	0:03:56
9/5/2020	Utilities	13	UNKNOWN	18:00	19:00	1:00	1	1:00:00	594:05:00	0:03:56
10/2/2020	Utilities	15	ANIMAL	1:00	3:30	2:30	50	125:00:00	719:05:00	0:04:46
10/9/2020	Utilities	15	ANIMAL	22:15	23:15	1:00	25	25:00:00	744:05:00	0:04:56
10/12/2020	Utilities	15	URD Failure	7:00	8:15	1:15	25	31:15:00	775:20:00	0:05:09
10/27/2020	Utilities	17	Weather	5:00	6:30	1:30	70	105:00:00	880:20:00	0:05:50
10/27/2020	Utilities	17	URD Failure	9:00	19:00	10:00	10	100:00:00	980:20:00	0:06:30
11/8/2020	Utilities	WR1	OH Failure	9:35	13:40	4:05	1	4:05:00	984:25:00	0:06:32
11/23/2020	Utilities	WR1	Weather	18:30	20:00	1:30	528	792:00:00	1776:25:00	0:11:47
11/23/2020	Utilities	WR1	Weather	20:00	20:50	0:50	1586	1321:40:00	3098:05:00	0:20:33
11/23/2020	Utilities	13	Weather	18:30	21:30	3:00	4	12:00:00	3110:05:00	0:20:38
11/27/2020	Utilities	WR1	URD Failure	1:29	4:15	2:46	20	55:20:00	3165:25:00	0:21:00
12/19/2020	Utilities	14	URD Failure	17:00	18:10	1:10	1	1:10:00	3166:35:00	0:21:00
12/27/2020	Utilities	15	UNKNOWN	1:00	2:30	1:30	20	30:00:00	3196:35:00	0:21:12
1/15/2021	Utilities	13	UNKNOWN	13:20	14:15	0:55	36	33:00:00	3229:35:00	0:21:25
2/2/2021	Utilities	15	ANIMAL	6:30	7:15	0:45	200	150:00:00	3379:35:00	0:22:25
2/4/2021	Utilities	16	URD Failure	0:00	5:00	5:00	69	345:00:00	3724:35:00	0:24:42
2/5/2021	Utilities	EA-4	OH Failure	21:45	22:30	0:45	10	7:30:00	3732:05:00	0:24:45
2/25/2021	Utilities	14	URD Failure	8:30	11:30	3:00	1	3:00:00	3735:05:00	0:24:47
4/21/2021	Utilities	14	ANIMAL	21:23	22:38	1:15	539	673:45:00	4408:50:00	0:29:15
5/16/2021	Utilities	WR1	UNKNOWN	10:30	12:00	1:30	5	7:30:00	4416:20:00	0:29:18
5/18/2021	Utilities	14	URD Failure	16:00	19:00	3:00	2	6:00:00	4422:20:00	0:29:20
5/22/2021	Utilities	EA-4	Weather	19:30	20:30	1:00	30	30:00:00	4452:20:00	0:29:32
5/26/2021	Utilities	16	URD Failure	16:45	22:20	5:35	100	558:20:00	5010:40:00	0:33:14
5/27/2021	Utilities	WR1	Weather	14:15	15:38	1:23	1586	2193:58:00	7204:38:00	0:47:48
6/5/2021	Utilities	15	ANIMAL	23:30	0:00	0:30	270	135:00:00	7339:38:00	0:48:41
6/5/2021	Utilities	15	ANIMAL	0:00	0:30	0:30	270	135:00:00	7474:38:00	0:49:35
6/17/2021	Utilities	16	URD Failure	18:35	21:30	2:55	3	8:45:00	7483:23:00	0:49:38
6/17/2021	Utilities	WR1	URD Failure	23:45	0:00	0:15	50	12:30:00	7495:53:00	0:49:43
6/17/2021	Utilities	WR1	URD Failure	0:00	2:30	2:30	50	125:00:00	7620:53:00	0:50:33

CIRCUIT SAIDI IS CALCULATED ACCORDING TO THE NUMBER OF CUSTOMERS IN EACH CIRCUIT RESPECTIVELY

<u>Running SAIDI Circuit 13</u>	<u>Running SAIDI Circuit 14</u>	<u>Running SAIDI Circuit 15</u>	<u>Running SAIDI Circuit 16</u>	<u>Running SAIDI Circuit 17</u>	<u>Running SAIDI Circuit 18</u>	<u>Running SAIDI Circuit EA4 & Royal Crest</u>	<u>Running SAIDI Circuit WR1</u>	<u>Running SAIDI Circuit WR2</u>	<u>Monthly SAIDI</u>		<u>Monthly Customer Minutes out of service</u>	<u>WEATHER SAIDI</u>
							0:00:45	0:01:15				
0:00:28				0:07:19								
0:01:05							0:03:36					
	0:00:29							0:19:48	JULY	0:03:06	467:10:00	
								0:20:34				
0:01:32							0:06:26		AUG	0:00:45	112:55:00	
			0:00:21									
0:01:34							0:06:30		SEP	0:00:06	14:00:00	
		0:04:00										
		0:04:48										
		0:05:46										
				0:37:28								0:00:42
				1:06:10					OCT	0:02:34	386:15:00	
							0:06:35					
												0:05:15
												0:08:46
												0:00:05
	0:00:37						0:06:39		NOV	0:14:30	2185:05:00	
		0:06:43							DEC	0:00:12	31:10:00	
0:02:46		0:11:31							JAN	0:00:13	33:00:00	
			0:11:36									
						0:02:44						
	0:00:57								FEB	0:03:21	505:30:00	
	1:15:57								APR	0:04:28	673:45:00	
							0:06:57					
	1:16:37											
						0:13:38						0:00:12
			0:29:47						MAY	0:18:33	2795:48:00	
							1:29:57					0:14:33
		0:15:50										
		0:20:10										
			0:30:04									
							1:30:25					
							1:35:09		JUNE	0:02:46	416:15:00	
Circ 13	Circ 14	Circ 15	Circ 16	Circ 17	Circ 18	Circ EA4	Circ WR1	Circ WR2	Total	0:50:33		0:29:33
1655	539	1875	1842	209	213	165	1586	961	9045			

Twelve Month History	June 2021	
Total # Accounts	9045	
Total # Interruptions	42	
Sum Customer Interruption Durations	7620:53:00	hours:min:sec
# Customers Interrupted	5897.0	
SAIFI (APPA AVG. = 1.0)	0.65	int./cust.
SAIDI (APPA AVG. = 1:00)	0.50	hours:min
CAIDI	1.17	hours:min/INT
ASAI	99.9996%	% available

- **SAIFI - System Average Interruption Frequency Index**
A measure of interruptions per customer (Per Year)

$$\text{SAIFI} = \frac{(\text{Total number of customer interruptions})}{(\text{Total number of customers served})}$$

- **SAIDI – System Average Interruption Duration Index**
A measure of outage time per customer if all customers were out at the same time (hours per year)

$$\text{SAIDI} = \frac{(\text{Sum of all customer outage durations})}{(\text{Total number of customers served})}$$

- **CAIDI – Customer Average Interruption Duration Index**
A measure of the average outage duration per customer (hours per interruption)

$$\text{CAIDI} = \frac{(\text{Sum of all customer outage durations})}{(\text{Total number of customer interruptions})} = \frac{\text{SAIDI}}{\text{SAIFI}}$$

- **ASAI – Average System Availability Index**
A measure of the average service availability (Per unit)

$$\text{ASAI} = \frac{(\text{Service hours available})}{(\text{Customer demand hours})} = \frac{8760 - \text{SAIDI}}{8760}$$

EACH POINT IS A 12 MONTH SAIDI HISTORY
1:00 = APPA BENCHMARK SAIDI

