

STATUS REPORTS

ELECTRIC RELIABILITY

Los Alamos County Utilities



Electric Distribution Reliability

June 19, 2019

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	Date	Call Rcd.	Circuit	Cause	Start Time	End Time	Duration	Customers Affected (Meters)	Combined Customer Outage Durations	Total Outage H:M:S	Running SAIDI
	6/3/2018	Utilities	WR2	URD Failure	15:00	16:00	1:00	50	50:00:00	50:00:00	0:00:20
	6/3/2018	Utilities	WR2	URD Failure	15:00	16:45	1:45	27	47:15:00	97:15:00	0:00:39
	6/3/2018	Utilities	WR2	URD Failure	15:00	17:45	2:45	21	57:45:00	155:00:00	0:01:02
	6/12/2018	Utilities	13	URD Failure	20:45	9:30	12:45	15	191:15:00	346:15:00	0:02:18
	6/17/2018	Utilities	16	URD Failure	18:30	20:00	1:30	2	3:00:00	349:15:00	0:02:19
	7/15/2018	Utilities	14	URD Failure	23:30	5:30	6:00	30	180:00:00	529:15:00	0:03:31
	7/20/2018	Utilities	WR2	URD Failure	10:10	11:30	1:20	12	16:00:00	545:15:00	0:03:37
	8/7/2018	Utilities	13	URD Failure	20:00	1:00	5:00	50	250:00:00	795:15:00	0:05:17
	8/19/2018	Utilities	WR2	URD Failure	19:00	23:00	4:00	24	96:00:00	891:15:00	0:05:55
	9/1/2018	Utilities	WR2	URD Failure	5:00	8:30	3:30	21	73:30:00	964:45:00	0:06:24
	9/3/2018	Utilities	WR1	OH Failure	13:30	16:30	3:00	15	45:00:00	1009:45:00	0:06:42
	9/4/2018	Utilities	WR1	Weather	17:50	19:30	1:40	15	25:00:00	1034:45:00	0:06:52
	9/13/2018	Utilities	WR1	HUMAN	14:45	15:15	0:30	14	7:00:00	1041:45:00	0:06:55
	9/13/2018	Utilities	WR2	URD Failure	9:30	11:15	1:45	24	42:00:00	1083:45:00	0:07:11
	10/3/2018	Utilities	WR2	URD Failure	8:00	11:30	3:30	7	24:30:00	1108:15:00	0:07:21
	11/13/2018	Utilities	13	SAFETY	9:45	15:00	5:15	87	456:45:00	1565:00:00	0:10:23
	11/23/2018	Utilities	13	URD Failure	11:45	12:00	0:15	7	1:45:00	1566:45:00	0:10:24
	11/30/2018	Utilities	13	TREE	19:00	20:52	1:52	15	28:00:00	1594:45:00	0:10:35
	11/30/2018	Utilities	13	TREE	19:00	0:00	5:00	15	75:00:00	1669:45:00	0:11:05
	2/4/2019	Utilities	WR2	HUMAN	9:30	9:34	0:04	961	64:04:00	1733:49:00	0:11:30
	2/8/2019	Utilities	WR2	URD Failure	15:57	17:15	1:18	25	32:30:00	1766:19:00	0:11:43
	2/14/2019	Utilities	WR1	URD Failure	4:00	6:00	2:00	30	60:00:00	1826:19:00	0:12:07
	3/3/2019	Utilities	EA4	OH Failure	14:41	17:45	3:04	15	46:00:00	1872:19:00	0:12:25
	3/12/2019	Utilities	WR2	OH Failure	14:30	14:58	0:28	13	6:04:00	1878:23:00	0:12:28
	3/12/2019	Utilities	13	TREE	3:00	9:40	6:40	104	693:20:00	2571:43:00	0:17:04
	3/12/2019	Utilities	13	TREE	3:00	0:00	21:00	12	252:00:00	2823:43:00	0:18:44
	3/12/2019	Utilities	13	TREE	14:30	17:10	2:40	1541	4109:20:00	6933:03:00	0:45:59
	3/12/2019	Utilities	13	TREE	14:30	17:30	3:00	114	342:00:00	7275:03:00	0:48:16
	3/12/2019	Utilities	13	TREE	16:30	20:30	4:00	2	8:00:00	7283:03:00	0:48:19
	3/12/2019	Utilities	15	TREE	15:00	17:10	2:10	10	21:40:00	7304:43:00	0:48:27
	4/15/2019	Utilities	16	OH Failure	7:00	9:30	2:30	7	17:30:00	7322:13:00	0:48:34
	5/22/2019	Utilities	14	URD Failure	15:00	18:15	3:15	5	16:15:00	7338:28:00	0:48:41
	5/22/2019	Utilities	16	OH Failure	22:00	23:30	1:30	120	180:00:00	7518:28:00	0:49:52
	5/27/2019	Utilities	WR1	URD Failure	17:00	23:30	6:30	10	65:00:00	7583:28:00	0:50:18

CIRCUIT SAIDI IS CALCULATED ACCORDING TO THE NUMBER OF CUSTOMERS IN EACH CIRCUIT RESPECTIVELY											
Running SAIDI Circuit 13	Running SAIDI Circuit 14	Running SAIDI Circuit 15	Running SAIDI Circuit 16	Running SAIDI Circuit 17	Running SAIDI Circuit 18	SAIDI Circuit EA4 & Royal Crest	Running SAIDI Circuit WR1	Running SAIDI Circuit WR2	Monthly SAIDI	Monthly Customer Minutes out of service	WEATHER SAIDI
								0:03:07			
								0:06:04			
								0:09:41			
0:06:56											
			0:00:06						JUNE 0:02:19	349:15:00	
	0:20:02							0:01:00	JULY 0:01:18	183:00:00	
0:16:00								0:07:00	AUGUST 0:02:18	346:00:00	
							0:01:42	0:11:35			
							0:02:39				
							0:02:55				0:00:10
								0:14:12	SEPTEMBER 0:01:17	49:00:00	
0:32:33								0:15:44	OCTOBER 0:00:10	66:30:00	
				0:00:30							
0:33:34											
0:36:17									NOVEMBER 0:03:43	561:30:00	
								0:18:12			
								0:17:46			
							0:05:11		FEBRUARY 0:01:02	259:34:00	
						0:16:44					
								0:18:08			
0:25:08											
0:34:16											
3:03:15											
3:15:39											
3:15:56											
	0:00:42										
			0:00:40						MARCH 0:36:20	4481:00:00	0:36:20
	0:21:51								APRIL 0:00:07	4498:30:00	
			0:06:32								
							0:07:39				
									MAY 0:01:44	300:25:00	
Circ 13 1655	Circ 14 539	Circ 15 1875	Circ 16 1842	Circ 17 209	Circ 18 213	Circ EA4 165	Circ WR1 1586	Circ WR2 961	Total 9045	0:50:18	0:36:30

Twelve Month History	May 2019	
Total # Accounts	9045	
Total # Interruptions	34	
Sum Customer Interruption Durations	7583:28:00	hours:min:sec
# Customers Interrupted	3420	
SAIFI(APPA AVG. = 1.0)	.38	int./cust.
SAIDI (APPA AVG. = 1:00)	00:50	hours:min
CAIDI	2:13	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
1:00:00 = APPA BENCHMARK SAIDI

