

STATUS REPORTS

ELECTRIC RELIABILITY

Los Alamos County Utilities



Electric Distribution Reliability

November 15, 2017

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Twelve Month History	October 2017	
Total # Accounts	9045	
Total # Interruptions	29	
Sum Customer Interruption Durations	3535:31:00	hours:min:sec
# Customers Interrupted	3087	
SAIFI(APPA AVG. = 1.0)	.34	int./cust.
SAIDI (APPA AVG. = 1:00)	:23	hours:min
CAIDI	1:08	hours:min/INT
ASAI	99.9998%	% 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)

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

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>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>
	0:12:41			0:07:19							
	0:18:42										
		0:00:36 0:02:16									
	0:21:22								DECEMBER	0:01:55	288:17:00
0:01:45 0:07:55									JANUARY	0:01:27	218:19:00
		0:00:36									0:00:07
		0:24:29 0:28:20 0:31:25 1:08:02									
							0:00:17		FEBRUARY MARCH	0:14:19 0:00:03	2158:40:00 7:30:00
			0:02:17 0:03:25						APRIL	0:00:42	105:00:00
			0:01:18				0:01:02				
							0:02:11		MAY	0:00:39	70:00:00
	0:36:22			0:08:28					JUNE	0:00:55	138:45:00
							0:03:34		JULY	0:00:15	36:40:00
						0:00:05			AUGUST	0:00:01	2:30:00
			0:03:41								
	0:38:02 0:11:08 0:32:34										
		1:08:06							SEPTEMBER	0:03:11	480:50:00
				0:00:17					OCTOBER	0:00:01	396:00:00
Circ 13	Circ 14	Circ 15	Circ 16	Circ 17	Circ 18	Circ EA4	Circ WR1	Circ WR2	Total	SAIDI TOTAL	WEATHER
1655	539	1875	1842	209	213	165	1586	961	9045	0:23:28	0:00:07

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

