

Los Alamos County
Department of Public Utilities

Electric Distribution
Reliability

April 17, 2024

Stephen Marez

Deputy Utility Manager
Electric Distribution

Twelve Month History	MARCH 24	
Total # Accounts	9045	
Total # Interruptions	36	
Sum Customer Interruption Durations	4465:36:00	hours:min
# Customers Interrupted	2567	
SAIFI (APPA AVG. = 1.0)	.28	int./cust.
SAIDI (APPA AVG. = 1:00)	00:29	hours:min
CAIDI	1:44	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>Running SAIDI Circuit EA4 & ELK RIDGE</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>
			0:00:10							0:00:02		
			0:00:08						MAY	0:00:02	9:00:00	
0:06:56										0:01:16		
0:05:51										0:01:04		
0:43:32										0:07:58		
0:28:42										0:05:15	2345:10:00	
0:01:08										0:00:13	2185:26:00	
				0:06:34					JUNE	0:00:09	2046:50:00	
			0:01:47							0:00:22		
0:01:38										0:00:18		
0:05:59										0:01:06		
0:00:26										0:00:05		
		0:06:26								0:01:20		
			0:00:23				0:02:21			0:00:25	606:05:00	
0:00:58										0:00:11		
							0:00:48			0:00:08		
				0:25:00						0:00:35	197:12:00	
				0:06:15						0:00:09	176:10:00	
	0:04:31									0:00:16		
				0:01:36					JULY	0:00:02	176:10:00	
0:01:05										0:00:12		
				0:12:03						0:00:17	940:16:00	
							0:03:24		AUGUST	0:00:36		
		0:20:40							SEPTEMBER	0:04:17	0:04:17	
		0:02:53							OCTOBER	0:00:36	0:00:36	
						0:07:16			DEC	0:00:08	0:00:08	
0:00:36										0:00:07		0:00:07
0:03:29									FEBRUARY	0:00:38	0:00:45	
	0:15:35									0:00:56		
	0:02:20									0:00:08		
	0:03:00									0:00:11		
0:00:15										0:00:03		
						0:15:38				0:00:17		
		0:00:19								0:00:04		
		0:00:46							MARCH	0:00:10	0:00:00	0:00:33
1:40:21	0:04:31	0:04:31	0:00:10	0:39:26	0:00:00	0:07:16	0:06:33	0:00:00	Total	0:29:37		0:00:40
1655	539	1875	1842	209	213	165	1586	961	9045			

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

