

Los Alamos County
Department of Public Utilities
Electric Distribution Reliability

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Deputy Utility Manager -
Electric Distribution

Twelve Month History	JULY 25	
Total # Accounts	9045	
Total # Interruptions	36	
Sum Customer Interruption Durations	7060:09:00	hours:min
# Customers Interrupted	3255	
SAIFI (APPA AVG. = 1.0)	.36	int./cust.
SAIDI (APPA AVG. = 1:00)	00:46	hours:min
CAIDI	2.10	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)

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

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	Running SAIDI Circuit EA4 & ELK RING	Running SAIDI Circuit WR1	Running SAIDI Circuit WR2	Monthly SAIDI		Monthly Customer Minutes out of service	WEATHER SAIDI
			0:02:15							0:00:27		
								0:00:37		0:00:04		
		0:02:24								0:00:30		0:00:34
		0:01:32								0:00:19		
0:45:58										0:08:25		
								0:10:46	AUGUST	0:01:09	0:10:54	0:01:09
	0:08:21									0:00:30		
	0:20:16									0:01:12		
						0:06:25				0:00:07		
0:01:03										0:00:12		
0:03:57										0:00:43		
			0:04:28							0:00:55		
			0:00:28						OCTOBER	0:00:06	0:03:44	
0:21:54										0:04:00		
0:39:58										0:07:19		
								0:01:47		0:00:11		0:00:11
0:00:53							0:00:47		NOVEMBER	0:00:10	0:11:40	
									DECEMBER	0:00:05	0:00:05	
						0:02:11				0:00:02		
		0:00:43							JANUARY	0:00:09	0:00:11	
0:02:02										0:00:22		
						0:04:36				0:00:05		0:00:05
0:00:54										0:00:10		
								0:09:23		0:01:00		
								0:28:22		0:03:01		
			1:07:37						MARCH	0:13:46	0:18:24	
		0:01:57								0:00:24		0:00:24
	0:01:58								MAY	0:00:07	0:00:31	
								0:02:49		0:00:18		
								0:06:15		0:00:40		
								0:02:30		0:00:16		
							0:00:56		JUNE	0:00:06	0:01:20	
			0:00:16						JULY	0:00:03		
0:55:40										0:10:11		
0:00:27										0:00:05		
		0:00:04								0:00:01	0:10:20	0:00:04
1:56:40	0:30:35	0:04:39	1:14:48	#REF!	#REF!	0:13:12	0:01:43	1:02:28	Total	0:46:50		0:02:23
1655	539	1875	1842	209	213	165	1586	961	9045			

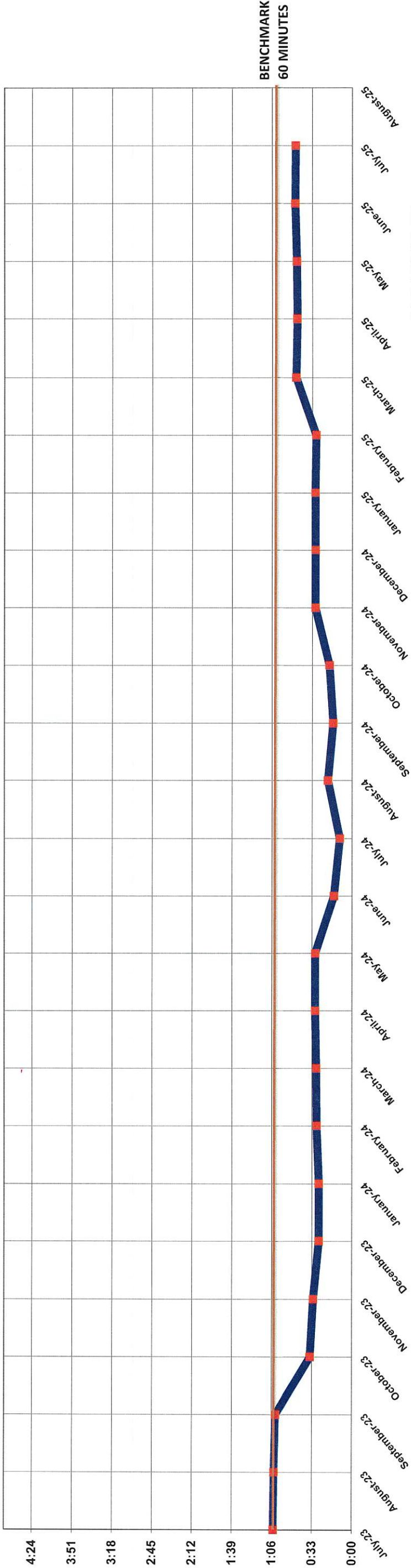
NUMBER OF CUSTOMERS BY CIRCUIT

							<u>Customers Affected (Meters)</u>	<u>Combined Customer Outage Durations</u>	<u>Total Outage H:M:S</u>	<u>Running SAIDI</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>				
8/8/2024	Utilites	16	URD Failure	16:30	17:40	1:10	59	68:50:00	68:50:00	0:00:27
8/9/2024	Utilites	WR2	WEATHER	18:30	20:30	2:00	5	10:00:00	78:50:00	0:00:31
8/12/2024	Utilites	15	WEATHER	4:00	6:30	2:30	30	75:00:00	153:50:00	0:01:01
8/20/2024	Utilites	15	URD Failure	16:00	22:00	6:00	8	48:00:00	201:50:00	0:01:20
8/25/2024	Utilites	13	URD Failure	11:30	15:30	4:00	317	1268:00:00	1469:50:00	0:09:45
8/25/2024	Utilites	WR2	WEATHER	18:00	21:45	3:45	46	172:30:00	1642:20:00	0:10:54
10/2/2024	Utilites	14	URD Failure	22:30	23:30	1:00	75	75:00:00	1717:20:00	0:11:24
10/2/2024	Utilites	14	URD Failure	22:30	5:00	6:30	28	182:00:00	1899:20:00	0:12:36
10/3/2024	LANL	EA4 LANL	TREE	12:19	13:05	0:46	23	17:38:00	1916:58:00	0:12:43
10/5/2024	Utilites	13	ANIMAL	11:15	12:15	1:00	29	29:00:00	1945:58:00	0:12:55
10/13/2024	Utilites	13	Unknown	19:24	20:30	1:06	99	108:54:00	2054:52:00	0:13:38
10/14/2024	Utilites	16	URD Failure	19:02	20:00	0:58	142	137:16:00	2192:08:00	0:14:32
10/14/2024	Utilites	16	ANIMAL	2:30	2:49	0:19	45	14:15:00	2206:23:00	0:14:38
11/4/2024	Utilites	13	TREE	8:02	9:00	0:58	625	604:10:00	2810:33:00	0:18:39
11/4/2024	Utilites	13	TREE	8:02	9:40	1:38	675	1102:30:00	3913:03:00	0:25:57
11/7/2024	Utilites	WR2	WEATHER	0:00	4:45	4:45	6	28:30:00	3941:33:00	0:26:09
11/19/2024	Utilites	13	TREE	8:36	9:10	0:34	43	24:22:00	3965:55:00	0:26:18
12/18/2024	Utilites	WR1	URD Failure	6:00	6:50	0:50	15	12:30:00	3978:25:00	0:26:23
1/9/2025	Utilites	ELK RIDGE	Unknown	18:00	19:00	1:00	6	6:00:00	3984:25:00	0:26:26
1/30/2025	Utilites	15	Unknown	11:30	12:15	0:45	30	22:30:00	4006:55:00	0:26:35
3/1/2025	Utilites	13	Unknown	12:45	15:00	2:15	25	56:15:00	4063:10:00	0:26:57
3/14/2025	Utilites	ELK RIDGE	WEATHER	10:30	11:08	0:38	20	12:40:00	4075:50:00	0:27:02
3/18/2025	Utilites	13	TREE	15:30	16:30	1:00	25	25:00:00	4100:50:00	0:27:12
3/19/2025	Utilites	WR2	URD Failure	21:30	4:20	6:50	22	150:20:00	4251:10:00	0:28:12
3/25/2025	Utilites	WR2	URD Failure	20:00	1:45	5:45	79	454:15:00	4705:25:00	0:31:13
3/31/2025	Utilites	16	URD Failure	18:00	21:00	3:00	692	2076:00:00	6781:25:00	0:44:59
5/5/2025	Utilites	15	WEATHER	3:26	7:15	3:49	16	61:04:00	6842:29:00	0:45:23
5/8/2025	Utilites	14	URD Failure	9:07	10:00	0:53	20	17:40:00	6860:09:00	0:45:30
6/8/2025	Utilites	WR2	URD Failure	5:00	8:00	3:00	15	45:00:00	6905:09:00	0:45:48
6/8/2025	Utilites	WR2	URD Failure	5:00	10:00	5:00	20	100:00:00	7005:09:00	0:46:28
6/8/2025	Utilites	WR2	URD Failure	5:00	13:00	8:00	5	40:00:00	7045:09:00	0:46:44
6/19/2025	Utilites	WR1	OH Failure	16:00	17:30	1:30	10	15:00:00	7060:09:00	0:46:50
7/16/2025	Utilites	16	Weather	9:25	10:15	0:50	10	8:20:00	63:20:00	0:00:25
7/22/2025	Utilites	13	OH Failure	12:25	13:20	0:55	1			

EACH POINT IS A MONTHLY SAIDI HISTORY
60 MINUTES = LACDPU SAIDI BENCHMARK

SAIDI = STANDARD AVERAGE INTERRUPTION DURATION INDEX

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



SAIDI NOW AT
47 MINUTES