

**Los Alamos County
Department of Public Utilities**

**Electric Distribution
Reliability**

October 23, 2024

Stephen Marez

Deputy Utility Manager
Electric Distribution

Twelve Month History	SEPTEMBER 24
Total # Accounts	9045
Total # Interruptions	27
Sum Customer Interruption Durations	23:59:33:00 hours:min
# Customers Interrupted	823
SAIFI (APPA AVG. = 1.0)	.09 int./cust.
SAIDI (APPA AVG. = 1:00)	00:15:39 hours:min
CAIDI	2.52 hours:min/INT
ASAI	99.9999% % Available

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

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

- **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)

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

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

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

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

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

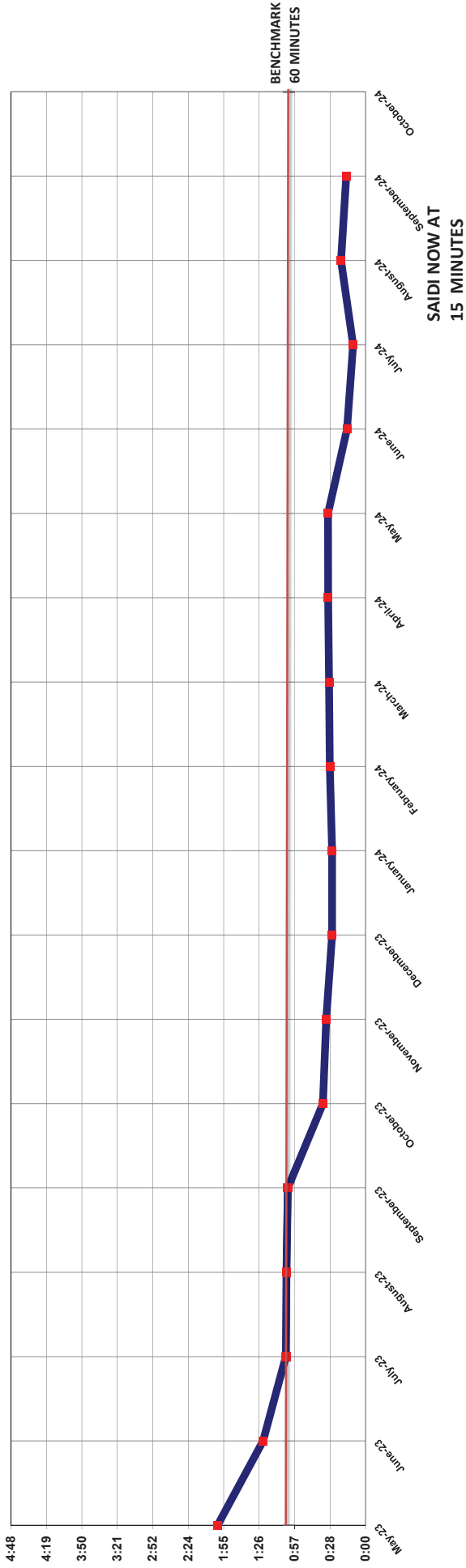
CIRCUIT SAIDI IS CALCULATED ACCORDING TO THE NUMBER OF CUSTOMERS IN EACH CIRCUIT RESPECTIVELY

Running SAIDI Circuit	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 RINCF	Running SAIDI Circuit WR1	Running SAIDI Circuit WR2	Monthly SAIDI	Monthly Customer Minutes out of service	WEATHER SAIDI
0:00:36		0:02:53				0:07:16			OCTOBER	0:00:36	
0:03:29									DEC	0:00:08	
	0:15:35								FEBRUARY	0:00:07	
	0:02:20									0:00:38	0:00:45
	0:03:00									0:00:56	
0:00:15						0:15:38				0:00:08	
										0:00:11	
										0:00:03	
										0:00:17	
										0:00:04	
		0:00:19							MARCH	0:00:10	0:01:48
		0:00:46					0:03:56			0:00:41	
						0:02:55				0:00:03	
									APRIL	0:00:03	
			0:00:15							0:00:03	
			0:00:13							0:00:03	
			0:00:29						MAY	0:00:06	
		0:00:19							JUNE	0:00:04	0:01:10
0:00:11										0:00:02	
0:00:17										0:00:03	0:00:05
			0:00:26							0:00:05	
		0:01:26							JULY	0:00:18	0:00:28
			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								0:10:46	AUGUST	0:01:09	0:01:09
0:50:47	0:20:56	0:09:40	0:03:38	0:00:00	0:00:00	0:25:49	0:03:56	0:11:24	Total	0:15:39	0:02:21
1655	539	1875	1842	209	213	165	1586	961	9045		
NUMBER OF CUSTOMERS BY CIRCUIT											

SAIDI = (Sum of all customer outage durations)
(Total number of customers served)

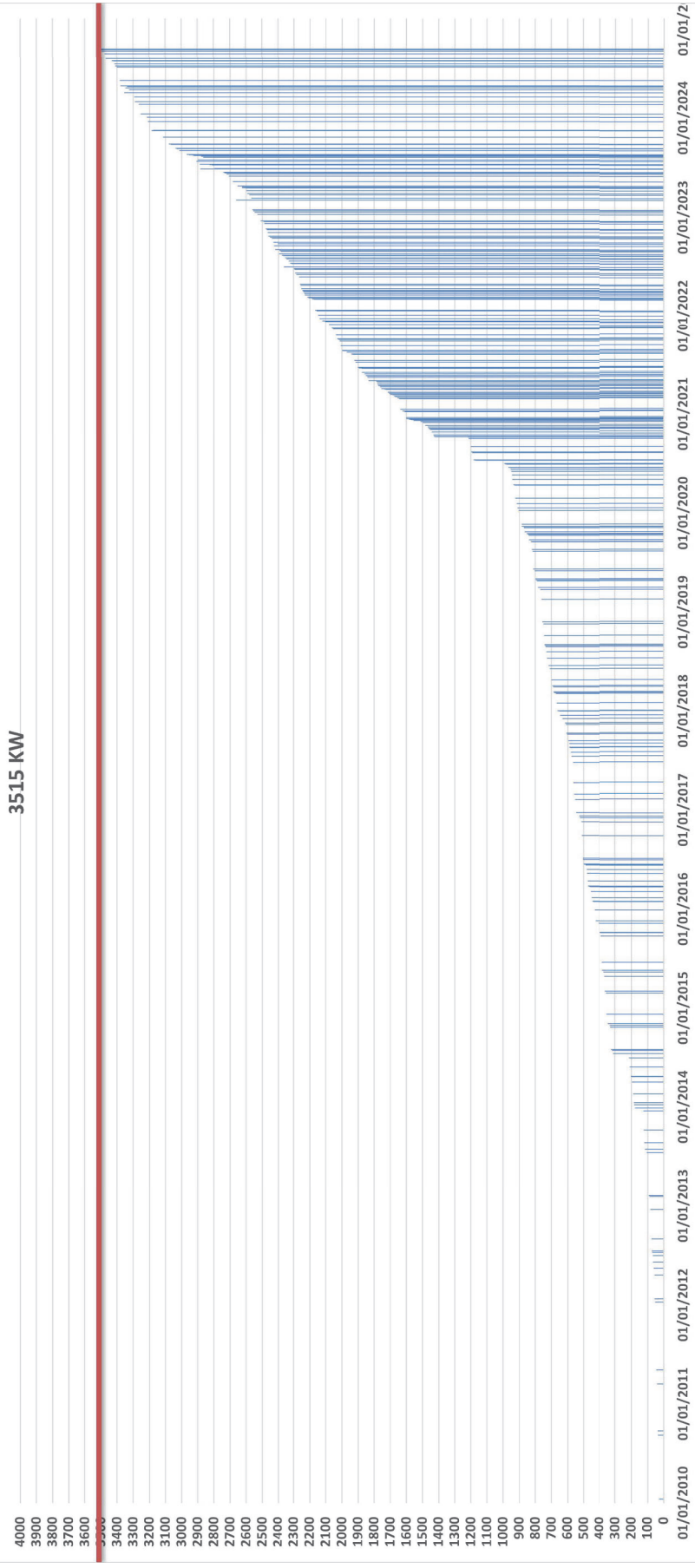
SAIDI = STANDARD AVERAGE INTERRUPTION DURATION

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



SAIDI NOW AT
15 MINUTES

CONNECTED DISTRIBUTED GENERATION SOLAR
3515 KW



NUMBER OF CUSTOMERS	533
TOTAL KW	3680.19
CONNECTED KW	3515.77
Connected Residential KW	2802.1
Connected Commercial KW	713.67
KW Pending	164.42