

Los Alamos County
Department of Public Utilities

Electric Distribution
Reliability

May 18, 2022

Stephen Marez
Electrical Engineering Manager

Twelve Month History	APRIL 2022	
Total # Accounts	9045	
Total # Interruptions	43	
Sum Customer Interruption Durations	26057:06:00	hours:min
# Customers Interrupted	19342	
SAIFI (APPA AVG. = 1.0)	2.14	int./cust.
SAIDI (APPA AVG. = 1:00)	2:52	hours:min
CAIDI	1.20	hours:min/INT
ASAI	99.9986%	% 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)

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

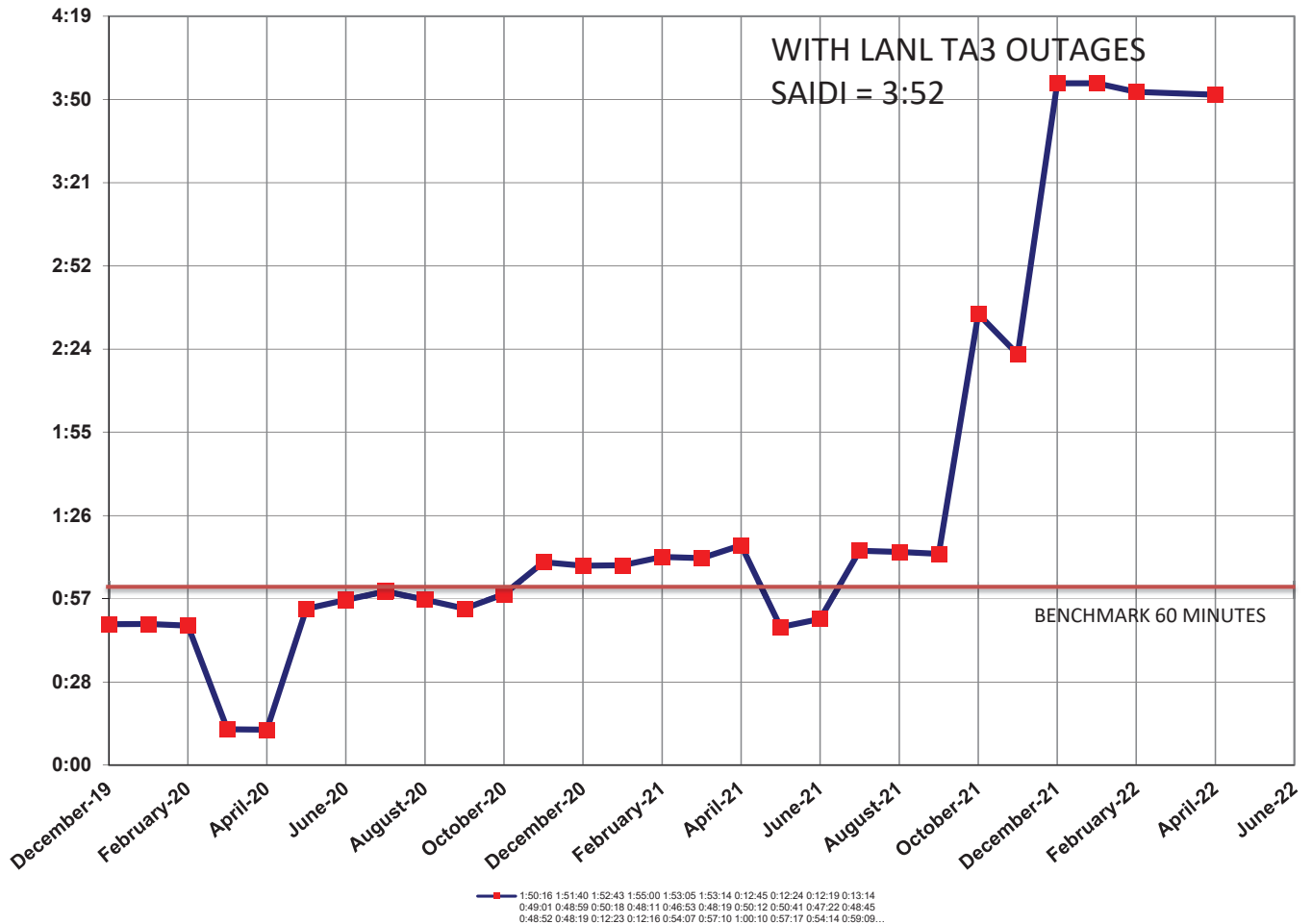
CIRCUIT SAIDI IS CALCULATED ACCORDING TO THE NUMBER OF CUSTOMERS IN EACH CIRCUIT RESPECTIVELY

<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 & 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>
	0:00:40					0:10:55	0:00:17					
			0:18:11						MAY	0:18:33	2795:48:00	0:00:12
							1:23:00					0:14:33
		0:04:19										
		0:04:19										
			0:00:17									
							0:00:28					
							0:04:44		JUN	0:02:46	416:15:00	
								0:01:34				
							0:00:34					
	0:04:51						0:02:00					
0:00:42												
0:02:21												
0:00:07												
							3:59:18		JUL	0:26:46	4036:10:00	
							0:02:30		AUG	0:00:16	40:00:00	
	0:03:29											
			0:00:38						SEP	0:00:20	50:50:00	
	0:30:00											
	1:00:00											
			0:04:40									
			0:06:31									
	0:07:39											
		0:50:03										
		0:01:30										
			0:00:31						OCT	0:19:09	2886:43:00	
				24:49:23	24:21:25				NOV	0:00:06	15:52:00	
	9:37:31								DEC	0:34:25		
2:50:00										0:31:06		
0:23:06	1:10:57	0:20:24	0:20:46	3:02:58	2:59:32					0:04:14		
0:12:58										0:02:22		
2:10:00										0:23:47		
					0:20:27					0:00:28		
			0:20:00						JAN	0:04:04	15143:11:00	1:16:12
					0:15:00					0:00:21		
			0:00:15						FEB	0:00:03	60:57:00	
			0:00:29						APRIL	0:00:06		
			0:01:34							0:00:19		
0:05:05										0:00:56		
0:14:48										0:02:43	611:20:00	0:04:03
5:59:08	12:35:06	1:20:35	1:13:53	3:52:21	3:56:24	0:10:55	5:32:51	0:01:34	Total	2:52:51		1:35:00
1655	539	1875	1842	209	213	165	1586	961	9045			

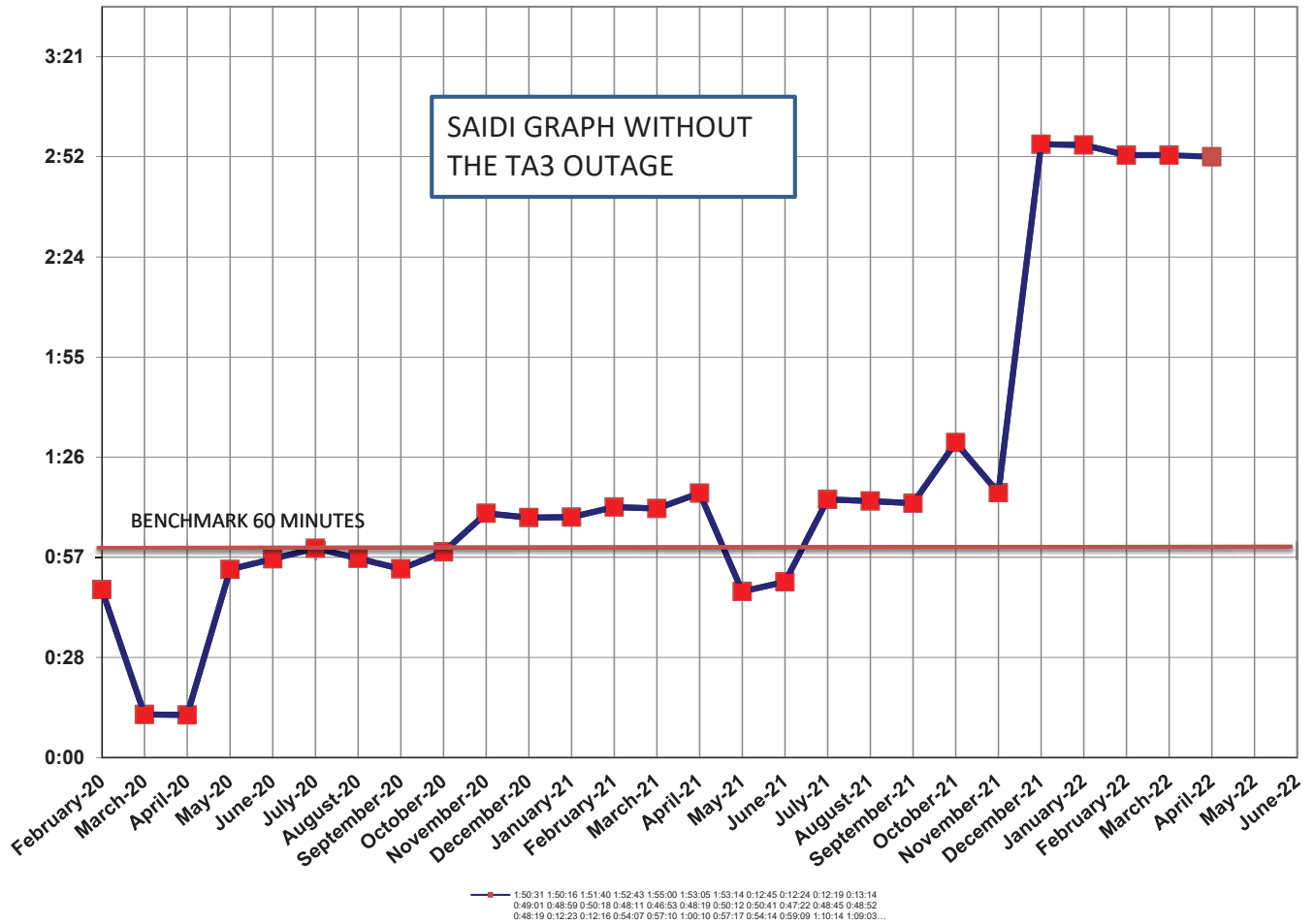
EACH POINT IS A 12 MONTH SAIDI HISTORY
1:00 = APPA BENCHMARK SAIDI

WITH LANL TA3 OUTAGES
SAIDI = 3:52

BENCHMARK 60 MINUTES



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



LOS ALAMOS COUNTY PV INSTALLATIONS

