

STATUS REPORTS

ELECTRIC RELIABILITY

PREPARED BY

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Electrical Engineering Manager

Twelve Month History	JANUARY 2022	
Total # Accounts	9045	
Total # Interruptions	42	
Sum Customer Interruption Durations	26564:00	hours:min
# Customers Interrupted	19844	
SAIFI (APPA AVG. = 1.0)	2.19	int./cust.
SAIDI (APPA AVG. = 1:00)	2:56	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)

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

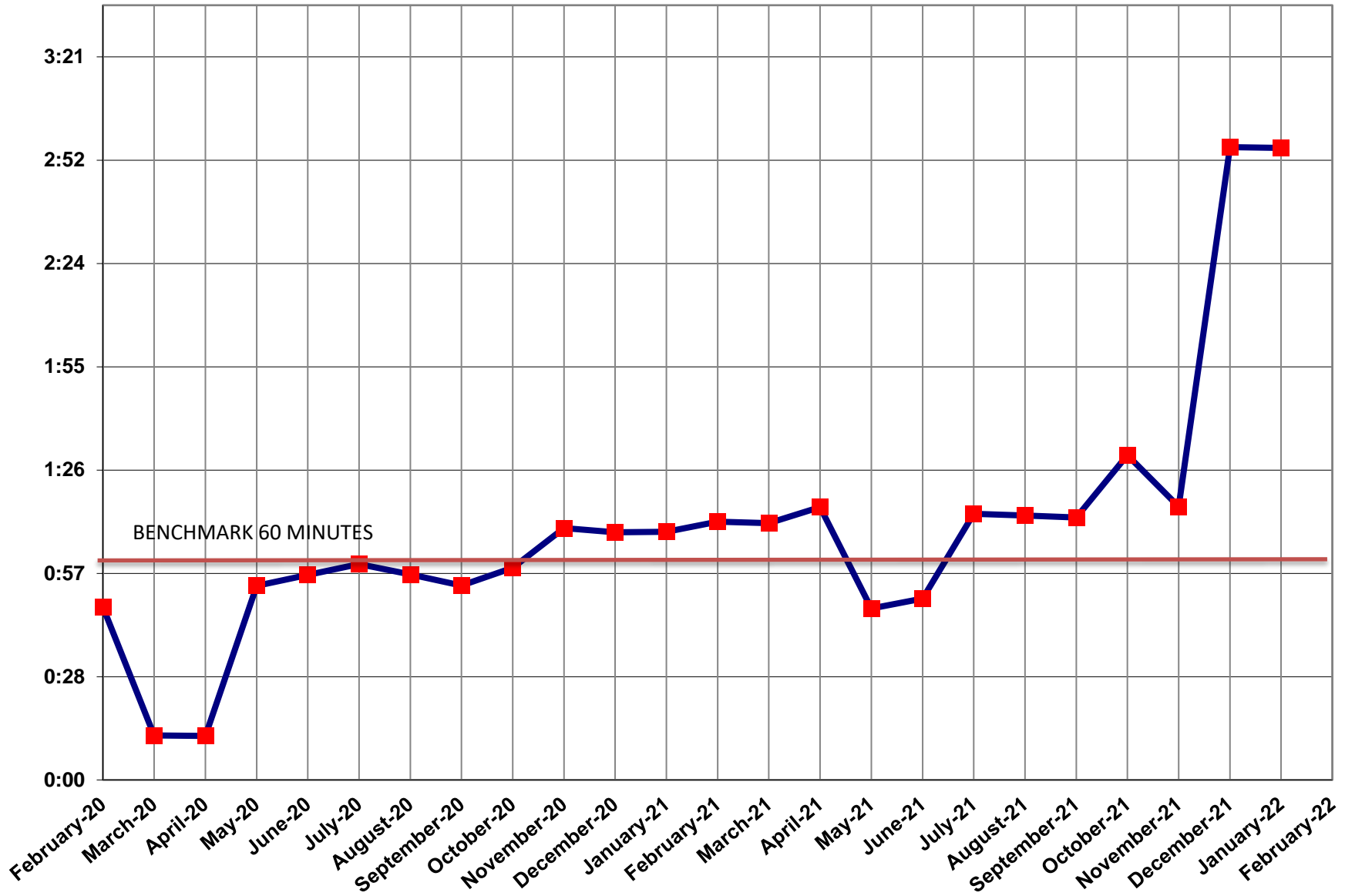
- **ASAI – Average System Availability Index**
A measure of the average service availability (Per unit)

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

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>
		0:04:48										
			0:11:14									
						0:02:44						
	0:00:20								FEB	0:03:21	505:30:00	
	1:15:00								APR	0:04:28	673:45:00	
							0:00:17					
	0:00:40											
						0:10:55						0:00:12
			0:18:11						MAY	0:18:33	2795:48:00	
							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							OCT	0:19:09	2886:43:00	
			0:00:31						NOV	0:00:06	2633:05:00	
	9:37:31			24:49:23	24:21:25							
2:50:00												
0:23:06	1:10:57	0:20:24	0:20:46	3:02:58	2:59:32					0:34:25		
0:12:58										0:31:06		
2:10:00										0:04:14		
										0:02:22		
										0:23:47		
						0:20:27				0:00:28		
			0:20:00						DEC	0:04:04	15143:11:00	
												1:16:12
5:39:15	13:50:26	1:25:23	1:22:49	3:52:21	3:41:24	0:13:38	5:32:51	0:01:34	Total	2:56:13		1:30:57
1655	539	1875	1842	209	213	165	1586	961	9045			

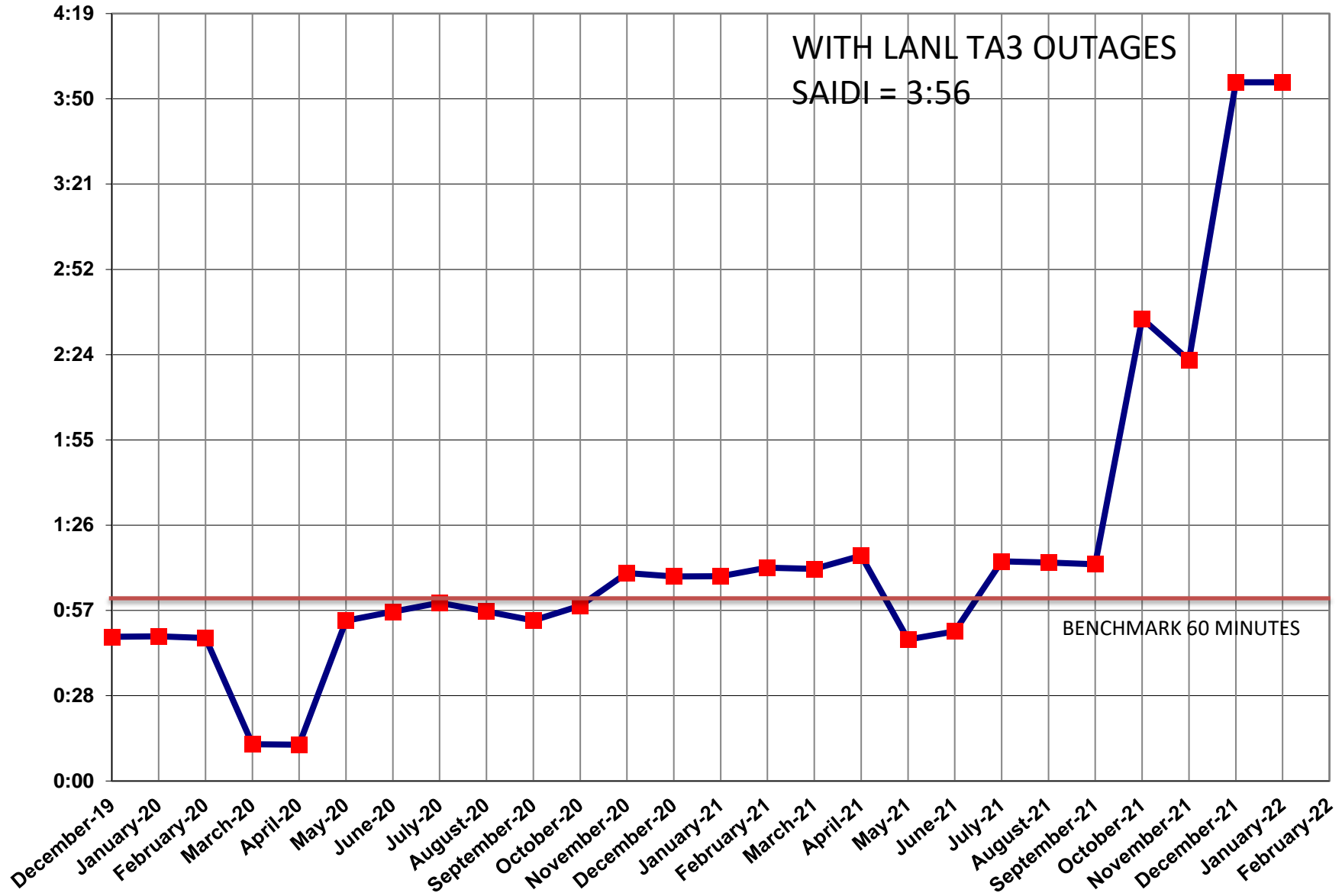
EACH POINT IS A 12 MONTH SAIDI HISTORY
 1:00 = APPA BENCHMARK SAIDI



1:50:31 1:50:16 1:51:40 1:52:43 1:55:00 1:53:05 1:53:14 0:12:45 0:12:24 0:12:19 0:13:14
 0:49:01 0:48:59 0:50:18 0:48:11 0:46:53 0:48:19 0:50:12 0:50:41 0:47:22 0:48:45 0:48:52
 0:48:19 0:12:23 0:12:16 0:54:07 0:57:10 1:00:10 0:57:17 0:54:14 0:59:09 1:10:14 1:09:03...

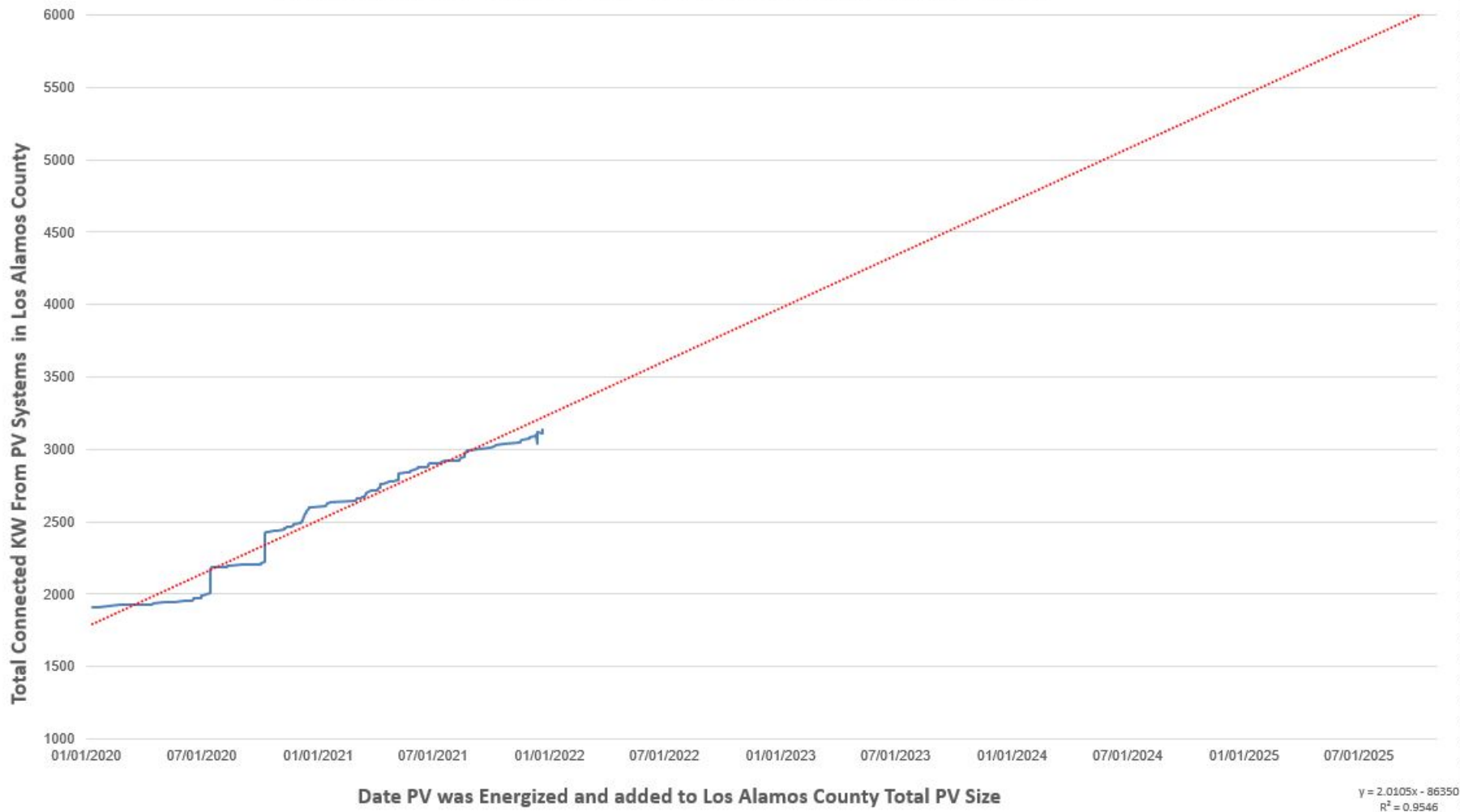
EACH POINT IS A 12 MONTH SAIDI HISTORY
 1:00 = APPA BENCHMARK SAIDI

WITH LANL TA3 OUTAGES
 SAIDI = 3:56



1:50:31 1:50:16 1:51:40 1:52:43 1:55:00 1:53:05 1:53:14 0:12:45 0:12:24 0:12:19
 0:13:14 0:49:01 0:48:59 0:50:18 0:48:11 0:46:53 0:48:19 0:50:12 0:50:41 0:47:22
 0:48:45 0:48:52 0:48:19 0:12:23 0:12:16 0:54:07 0:57:10 1:00:10 0:57:17 0:54:14...

Projected Date for 6 MW of Connected Solar Power In Los Alamos County



$y = 2.0105x - 86350$
 $R^2 = 0.9546$