

STATUS REPORTS

ELECTRIC RELIABILITY

Los Alamos County Utilities



Electric Distribution Reliability

August 16, 2017

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							Customers	Combined		
							Affected	Customer		
Date	Call Rcd.	Circuit	Cause	Start Time	End Time	Duration	(Meters)	Outage	Total Outage	Running
								Durations	H:M:S	SAIDI
8/3/2016	Utilities	13	Planned	9:00	10:15	1:15	13	16:15:00	16:15:00	0:00:06
8/10/2016	Utilities	17	URD Failure	3:10	3:30	0:20	209	69:40:00	85:55:00	0:00:34
8/10/2016	Utilities	WR1	Planned	9:00	10:20	1:20	8	10:40:00	96:35:00	0:00:38
8/11/2016	Utilities	WR1	Planned	9:00	11:00	2:00	6	12:00:00	108:35:00	0:00:43
8/16/2016	Utilities	WR1	URD Failure	12:30	13:00	0:30	80	40:00:00	148:35:00	0:00:59
9/23/2016	Utilities	18	Planned	9:00	10:25	1:25	3	4:15:00	152:50:00	0:01:01
10/3/2016	Utilities	WR2	HUMAN	11:00	12:05	1:05	16	17:20:00	170:10:00	0:01:08
10/22/2016	Utilities	14	HUMAN	10:53	11:52	0:59	539	530:01:00	700:11:00	0:04:39
10/28/2016	Utilities	WR1	URD Failure	21:20	22:30	1:10	15	17:30:00	717:41:00	0:04:46
11/2/2016	Utilities	14	URD Failure	17:47	18:40	0:53	129	113:57:00	831:38:00	0:05:31
11/10/2016	Utilities	17	URD Failure	8:15	12:30	4:15	6	25:30:00	857:08:00	0:05:41
11/15/2016	Utilities	14	Planned	8:30	9:30	1:00	54	54:00:00	911:08:00	0:06:03
11/28/2016	Utilities	15	Unknown	6:00	6:45	0:45	25	18:45:00	929:53:00	0:06:10
11/28/2016	Utilities	15	Unknown	6:00	8:05	2:05	25	52:05:00	981:58:00	0:06:31
11/28/2016	Utilities	14	URD Failure	10:15	14:15	4:00	6	24:00:00	1005:58:00	0:06:40
12/16/2016	Utilities	13	Tree	9:17	13:00	3:43	13	48:19:00	1054:17:00	0:07:00
12/17/2016	Utilities	13	OH Failure	9:17	10:30	1:17:00	10	170:00:00	1224:17:00	0:08:07
1/1/2017	Utilities	15	Animal	13:00	13:45	0:45	25	18:45:00	1243:02:00	0:08:15
1/16/2016	Utilities	13	Weather	20:15	23:59	3:44	5	18:40:00	1261:42:00	0:08:22
1/29/2017	Utilities	15	Animal	2:20	3:00	0:40	1145	763:20:00	2025:02:00	0:13:26
1/29/2017	Utilities	15	Animal	2:20	3:15	0:55	131	120:05:00	2145:07:00	0:14:14
1/29/2017	Utilities	15	Animal	2:20	3:40	1:20	72	96:00:00	2241:07:00	0:14:52
1/29/2017	Utilities	15	Animal	2:20	4:30	2:10	527	1141:50:00	3382:57:00	0:22:26
3/6/2017	Utilities	WR1	OH Failure	8:00	9:30	1:30	5	7:30:00	3390:27:00	0:22:29
4/27/2017	Utilities	16	URD Failure	9:00	10:00	1:00	70	70:00:00	3460:27:00	0:22:57
4/29/2017	Utilities	16	URD Failure	0:00	5:00	5:00	7	35:00:00	3495:27:00	0:23:11
5/6/2017	Utilities	WR1	Animal	9:35	10:30	0:55	30	27:30:00	3522:57:00	0:23:22
5/15/2017	Utilities	16	URD Failure	12:15	13:15	1:00	40	40:00:00	3562:57:00	0:23:38
5/6/2017	Utilities	WR1	Planned	9:00	12:00	3:00	10	30:00:00	3592:57:00	0:23:50
6/18/2017	Utilities	14	URD Failure	15:15	15:30	0:15	539	134:45:00	3727:42:00	0:24:44
6/27/2017	Utilities	17	URD Failure	11:30	12:30	1:00	4	4:00:00	3731:42:00	0:24:45
7/26/2017	Utilities	WR1	URD Failure	6:50	10:30	3:40	10	36:40:00	3768:22:00	0:25:00
6/26/2017	Utilities	FRANSMISSION	WEATHER	2:30	6:50	4:20	2547	11037:00:00	14656:47:00	1:37:14

[illegible]

Twelve Month History	July 2017	
Total # Accounts	9045	
Total # Interruptions	32	
Sum Customer Interruption Durations	3768:22:00	hours:min:sec
# Customers Interrupted	3777	
SAIFI(APPA AVG. = 1.0)	.42	int./cust.
SAIDI (APPA AVG. = 1:00)	:25	hours:min
CAIDI	:59	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)

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

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

