

# Circuit Reliability Review Santa Paula

January 2017

# Providing Safe, Reliable, and Affordable Power

Southern California Edison is modernizing the power grid to meet the changing needs and expectations of our customers and to help California achieve its clean energy goals.

We are investing more than \$12 billion into our power grid between 2015 – 2017 with the goal of increasing power reliability through significant upgrades. These investments include:

- Updating thousands of transmission and distribution poles
- Replacing hundreds of miles of underground cables
- Replacing hundreds of underground structures such as vaults and manholes
- Upgrading critical distribution equipment; capacitor banks, switches, and circuit breakers
- Building new distribution circuits to serve electrical demands in our communities
- Inspecting and replacing overhead conductor and equipment to improve public safety

Our investments in local communities will help ensure that customers receive safe, reliable, and affordable electricity now and in the future.

# **Understanding Your Reliability Report**

As your electric utility, we want you to always have power when you need it. To get there, we constantly track and monitor electric outages across our service territory, and we measure our "system reliability" from this data.

The two metrics we rely on are common in the electric utility industry: the System Average Interruption Duration Index (SAIDI) and the System Average Interruption Frequency Index (SAIFI). Both are described in more detail on the next page.

Replacing and upgrading our infrastructure will help SCE maintain or improve SAIDI and SAIFI measurements.

This report provides historical reliability data for the circuits that serve your jurisdiction and our proposed infrastructure upgrades for the current year.

To view other reliability reports, visit <a href="sce.com">sce.com</a>>Outage Center>Maintaining Reliable Service

# Reliability Metrics

**MOMENTARY OUTAGES:** 

**OUTAGES LASTING 5 MINUTES OR LESS** 

#### MAIFI:

 The number of times the average customer is interrupted by Momentary outages each year.

#### **SUSTAINED OUTAGES:**

**OUTAGES LASTING LONGER THAN 5 MINUTES** 

#### SAIFI:

 The number of times the average customer is interrupted by Sustained outages each year.

#### SAIDI:

 The cumulative amount of time the average customer is interrupted by Sustained outages each year.

# **Cities in the Ventura District**

Camarillo

Channel Islands Beach

El Rio

Fillmore

**Meiners Oaks** 

Mira Monte

Oak View

Ojai

Oxnard

Port Hueneme

San Buenaventura (Ventura)

Santa Paula

#### Reliability by SCE District (No Exclusions)

		20	12			20:	13			20	14			20	15		2016				
	District	SAIDI	District	SAIFI																	
District Name	SAIDI	RANKING	SAIFI	Ranking																	
ANTELOPE VALLEY	78.60	28	0.56	31	94.42	22	0.62	31	51.05	35	0.59	34	104.34	22	0.68	30	107.67	24	0.87	29	
ARROWHEAD	129.58	13	1.31	7	180.59	7	1.39	8	193.25	5	1.59	5	362.61	4	3.97	1	659.46	3	2.85	5	
BARSTOW	184.80	7	1.15	12	204.33	6	1.40	7	201.53	4	1.34	10	187.11	8	1.17	12	134.83	18	1.35	9	
BIG CREEK	1184.25	1	4.52	1	176.51	8	3.08	1	920.25	1	1.34	11	422.77	2	3.42	2	1062.01	2	4.99	1	
BISHOP	463.09	2	1.25	9	104.44	17	0.51	35	118.79	17	0.59	35	298.11	6	2.22	4	168.59	8	1.22	14	
BLYTHE	225.88	6	1.53	3	483.13	1	1.38	9	707.54	2	2.42	2	427.00	1	1.52	7	396.38	5	2.71	6	
CATALINA	78.46	30	0.72	29	105.94	16	2.97	2	97.02	24	4.17	1	42.56	35	2.25	3	65.01	35	3.66	3	
COVINA	108.73	19	0.92	19	100.51	19	0.86	20	91.60	27	0.87	22	100.08	23	0.81	25	112.13	22	0.97	24	
DOMINGUEZ HILLS	117.22	18	0.82	24	89.17	26	0.80	21	82.30	29	0.71	28	130.63	15	0.97	17	146.38	12	1.11	17	
FOOTHILL	91.69	25	0.90	20	85.80	27	0.79	24	93.35	25	0.93	21	109.64	20	0.95	20	142.81	14	1.03	21	
FULLERTON	68.99	33	0.42	35	90.57	25	0.79	22	82.23	30	0.72	27	76.59	29	0.67	31	92.72	30	0.76	34	
HUNTINGTON BEACH	95.78	23	0.89	21	66.51	32	0.68	29	79.61	31	0.78	25	98.32	25	0.95	19	128.02	20	1.26	12	
KERNVILLE	226.76	5	1.31	6	232.18	4	1.96	3	178.69	8	1.99	3	286.38	7	0.96	18	2421.32	1	3.67	2	
LONG BEACH	75.83	31	0.55	33	75.11	30	0.70	28	66.33	34	0.61	32	164.46	9	0.89	23	135.16	17	0.86	31	
MENIFEE	99.32	22	0.84	23	107.39	15	1.26	10	156.68	11	1.32	12	111.46	19	0.98	16	156.75	9	1.31	10	
MONROVIA	108.11	20	1.13	15	99.12	20	1.02	16	133.32	14	1.16	16	96.68	26	0.88	24	116.57	21	0.84	32	
MONTEBELLO	131.06	12	1.13	14	118.08	13	1.17	12	158.34	10	1.16	15	150.28	12	1.18	11	133.52	19	1.17	15	
ONTARIO	93.09	24	0.87	22	77.39	29	0.79	23	97.91	23	1.00	19	94.04	27	0.74	27	105.07	27	0.93	27	
PALM SPRINGS	175.92	8	1.27	8	112.80	14	0.77	25	107.04	20	0.71	29	99.54	24	0.80	26	107.58	25	1.07	19	
REDLANDS	120.13	16	1.11	16	96.48	21	1.04	15	154.25	12	1.04	18	124.52	17	1.01	14	137.11	16	0.98	23	
RIDGECREST	229.65	4	1.44	4	161.95	9	1.12	13	176.84	9	1.57	6	148.90	13	1.01	15	254.31	6	1.05	20	
SADDLEBACK	83.01	27	0.73	27	70.69	31	0.53	34	99.07	22	0.74	26	46.03	34	0.39	35	65.99	34	0.65	35	
SAN JOAQUIN	135.90	10	1.04	18	244.44	2	1.45	6	138.25	13	1.17	14	127.50	16	1.05	13	108.44	23	1.09	18	
SANTA ANA	78.60	29	0.55	32	93.35	24	0.74	26	91.68	26	0.84	23	67.46	32	0.71	29	97.27	29	1.00	22	
SANTA BARBARA	153.81	9	1.15	13	82.00	28	0.70	27	183.78	7	1.38	9	152.37	11	1.52	6	156.66	10	1.41	8	
SANTA MONICA	101.69	21	0.79	25	122.78	12	1.00	17	110.76	19	0.99	20	75.41	30	0.62	32	91.08	31	0.95	26	
SOUTH BAY	122.68	15	1.17	10	142.15	10	1.49	5	125.28	16	1.39	8	164.07	10	1.31	8	183.90	7	1.88	7	
TEHACHAPI	117.96	17	1.43	5	232.67	3	1.12	14	130.70	15	1.29	13	298.96	5	1.21	9	97.29	28	1.13	16	
THOUSAND OAKS	127.73	14	1.05	17	93.86	23	0.91	18	104.37	21	1.10	17	106.59	21	0.92	21	143.78	13	1.31	11	
VALENCIA	62.01	35	0.46	34	51.04	34	0.53	33	79.23	32	0.61	33	72.27	31	0.61	33	105.09	26	0.97	25	
VENTURA	134.81	11	1.15	11	100.52	18	1.21	11	183.79	6	1.65	4	148.85	14	1.19	10	150.41	11	1.24	13	
VICTORVILLE	67.70	34	0.66	30	61.33	33	0.63	30	68.85	33	0.63	31	87.03	28	0.91	22	79.35	33	0.92	28	
WHITTIER	72.60	32	0.74	26	135.04	11	0.86	19	87.60	28	0.70	30	114.52	18	0.73	28	137.34	15	0.81	33	
WILDOMAR	88.54	26	0.72	28	40.51	35	0.56	32	118.49	18	0.81	24	52.70	33	0.60	34	84.01	32	0.87	30	
YUCCA VALLEY	319.82	3	3.41	2	216.97	5	1.50	4	304.25	3	1.49	7	389.08	3	1.80	5	463.68	4	3.39	4	
SCE SystemWide	108.13		0.89		102.61		0.91		112.00		0.96	_	114.83		0.92		134.48		1.10		

<sup>\*&</sup>quot;Exclusions" are days which utilities are allowed to remove from their metrics because the outages on those days were caused by a severe acts of nature.

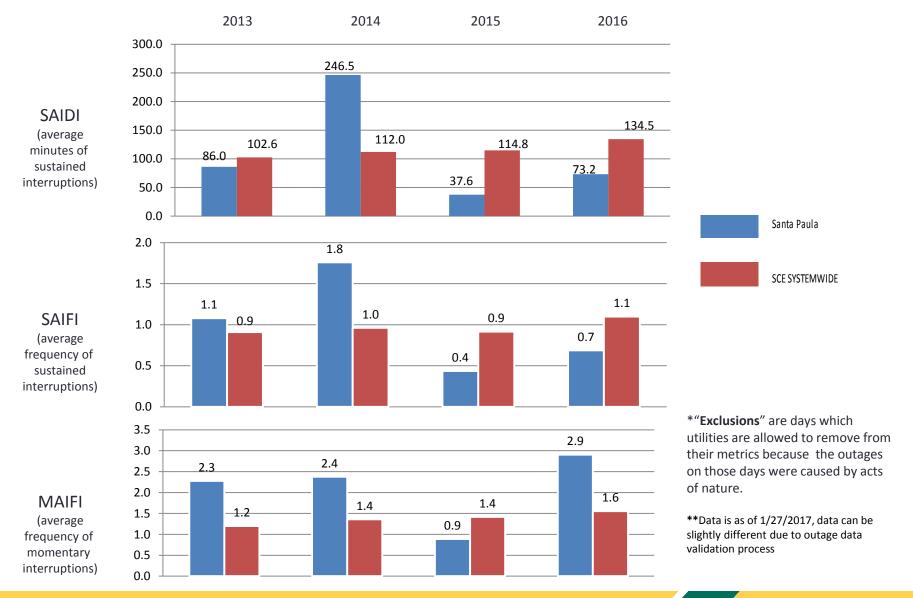
<sup>\*\*</sup>In the columns showing "Rank," lower numbers indicate poorer performance.

# Overview of Santa Paula There are 8 circuits that serve Santa Paula

Circuit Type	Sum of Customers	Circuit Type	Sum of Customers	Circuit Type	Sum of Customers	Circuit Type	Sum of Customers
ATMORE(16KV)	2,930						
CADWAY(16KV)	3,534						
CASTRO(16KV)	2,421						
MCKEVETT(4.16KV)	275						
MIDDLE ROAD(16KV)	1,148						
PETIT(16KV)	315						
PYLE(16KV)	358						
TIMBER CANYON(16KV	) 680						

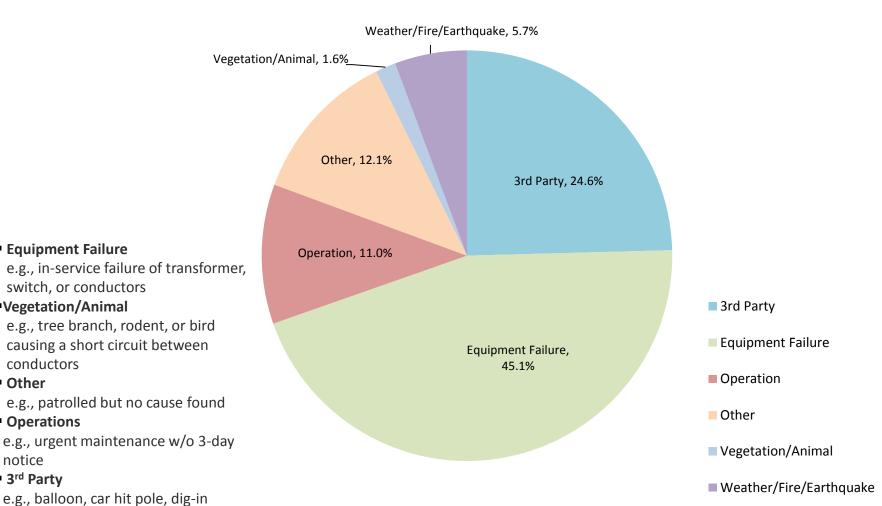
**Grand Total** 11,661

# Reliability History of Circuits Serving Santa Paula (No Exclusions)



#### Causes of Repair Outages in Santa Paula Circuits 2016 YTD

#### **Contributions to SAIDI by Outage Cause**



**SAIDI** = the cumulative amount of time the average customer is interrupted by "sustained" outages each year.

Equipment Failure

conductors

Operations

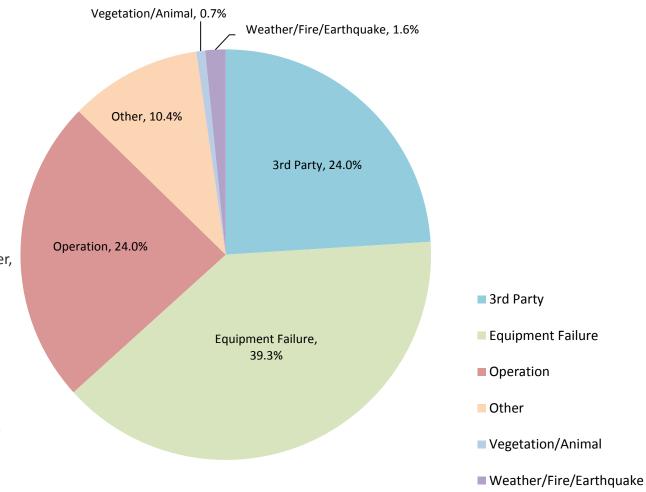
Other

notice ■ 3rd Party

switch, or conductors ■Vegetation/Animal

# Causes of Repair Outages in Santa Paula Circuits 2016 YTD

#### **Contributions to SAIFI by Outage Cause**



Equipment Failure
 e.g., in-service failure of transformer,

switch, or conductors

#### ■Vegetation/Animal

e.g., tree branch, rodent, or bird causing a short circuit between conductors

Other

e.g., patrolled but no cause found

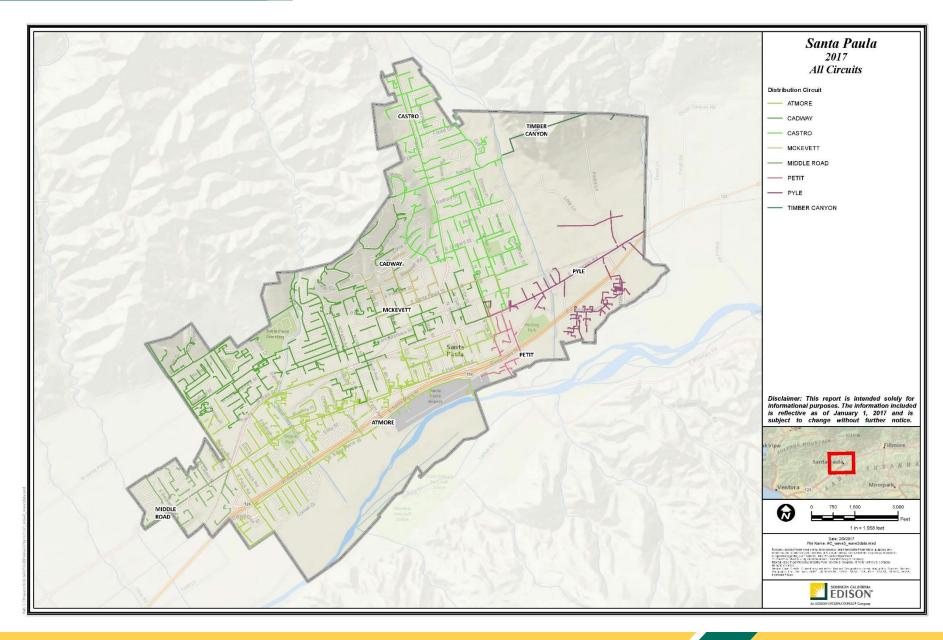
Operations

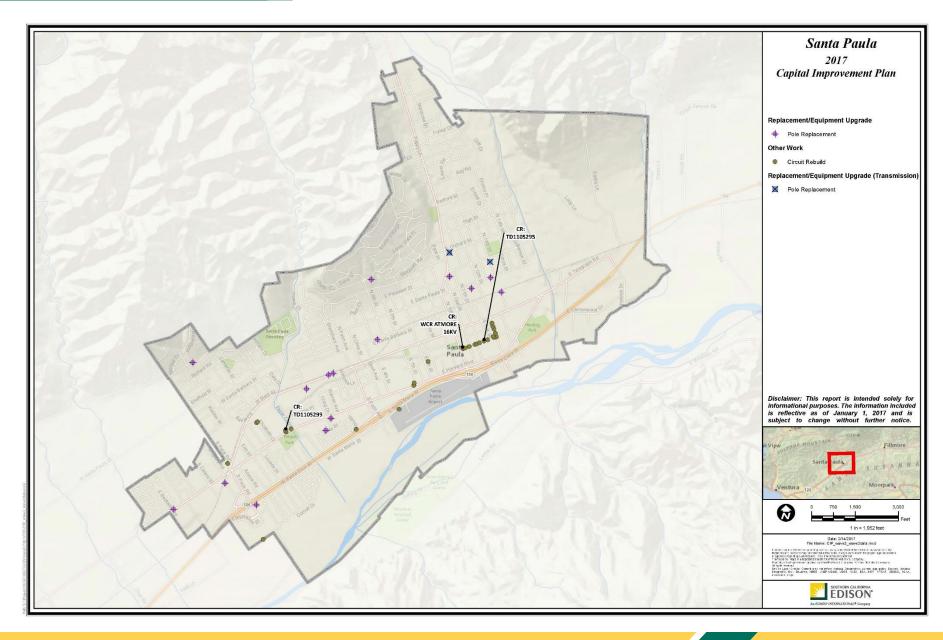
e.g., urgent maintenance w/o 3-day notice

■ 3<sup>rd</sup> Party

e.g., balloon, car hit pole, dig-in

**SAIFI** = the number of times the average customer is interrupted by "sustained" outages each year.





# **Back-up Slides**

Reliability Histories of Circuits Serving Santa Paula

**Updated through Year-End 2016** 

### **Average Reliability of 8 Circuits Serving Santa Paula**

		2013			2014			2015		1st	Qtr 20	16	2nd	Qtr 2	016	3rd	Qtr 20	016	4th	Qtr 2	016		2016	
	SAIDI	SAIFI	MAIFI	SAIDI	SAIFI	MAIFI	SAIDI	SAIFI	MAIFI	SAIDI	SAIFI	MAIFI	SAIDI	SAIFI	MAIFI	SAIDI	SAIFI	MAIFI	SAIDI	SAIFI	MAIFI	SAIDI	SAIFI	MAIFI
Santa Paula	86.0	1.1	2.3	246.5	1.8	2.4	37.6	0.4	0.9	30.5	0.3	1.1	26.7	0.3	0.5	1.7	0.1	0.5	14.2	0.1	0.8	73.2	0.7	2.9
3rd Party	14%	25%	5%	4%	7%	10%	3%	2%	62%	0%	0%	0%	45%	47%	43%	0%	0%	66%	41%	36%	0%	25%	24%	18%
Equipment Failure	37%	38%	40%	40%	19%	12%	46%	65%	2%	58%	47%	20%	49%	50%	0%	26%	3%	21%	13%	9%	0%	45%	39%	11%
Operation	19%	12%	6%	30%	36%	16%	19%	11%	0%	16%	23%	0%	2%	1%	0%	42%	91%	0%	13%	48%	0%	11%	24%	0%
Other	0%	1%	12%	3%	2%	47%	7%	2%	31%	22%	26%	4%	0%	0%	51%	22%	3%	13%	12%	3%	0%	12%	10%	12%
Vegetation/Animal	0%	0%	11%	1%	1%	6%	14%	14%	5%	0%	0%	76%	4%	1%	6%	10%	3%	0%	0%	0%	100%	2%	1%	59%
Weather/Fire/Earthquake	29%	24%	26%	21%	35%	8%	11%	6%	0%	4%	3%	0%	0%	0%	0%	0%	0%	0%	20%	3%	0%	6%	2%	0%
SCE Systemwide	102.6	0.9	1.2	112.0	1.0	1.4	114.8	0.9	1.4	40.5	0.3	0.4	34.8	0.3	0.4	29.4	0.2	0.3	29.8	0.3	0.4	134.5	1.1	1.6

#### Notes:

No outages are excluded from the metrics.

#### Outage Causes:

Other: e.g., patrolled but no cause could be found

Operations: e.g., urgent maintenance w/o 3-day notice to customers

3<sup>rd</sup> Party: e.g., balloons, car hit pole, dig-in

Vegetation/Animal: e.g., tree branch, rodent, or bird causing short circuit across conductors

SAIDI (minutes) = the cumulative amount of time the average customer is interrupted by "sustained" (longer than 5 minutes) outages.

SAIFI (interruptions) = the number of times the average customer is interrupted by "sustained" outages.

MAIFI (interruptions) = the number of times the average customer is interrupted by "momentary" (lasting 5 minutes or less) outages.

# Reliability Histories for Individual Circuits Serving Santa Paula

		2013			2014			2015		1st	Qtr 20	016	2nd	l Qtr 2	016	3rd	Qtr 20	016	4th	Qtr 20	016	2016		
	SAIDI	SAIFI	MAIFI	SAIDI	SAIFI	MAIFI	SAIDI	SAIFI	MAIFI	SAIDI	SAIFI	MAIFI	SAIDI	SAIFI	MAIFI	SAIDI	SAIFI	MAIFI	SAIDI	SAIFI	MAIFI	SAIDI	SAIFI	MAIFI
ATMORE(16KV) - Customers: 2,930	52.3	1.1	1.1	213.8	2.2	2.1	7.0	0.9	2.0	11.1	0.1	1.0	0.0	0.0	1.0	0.1	0.0	0.0	0.5	0.0	1.0	11.7	0.1	3.0
3rd Party	88%	99%	12%	7%	1%	47%	2%	2%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	0%	0%	0%	0%	0%	0%	81%	96%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Operation	12%	1%	0%	93%	99%	53%	17%	2%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	100%	100%	0%	6%	4%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%	50%	68%	63%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	64%	60%	33%
Vegetation/Animal	0%	0%	88%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	67%
Weather/Fire/Earthquake	0%	0%	0%	0%	0%	0%	0%	0%	0%	32%	37%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	30%	36%	0%
CADWAY(16KV) - Customers: 3,534	112.3	1.5	1.2	456.1	2.5	3.7	33.8	0.2	1.0	12.0	0.0	1.0	14.0	0.1	0.0	0.0	0.0	1.0	0.0	0.0	1.0	26.0	0.1	3.0
3rd Party	0%	0%	0%	0%	0%	0%	8%	3%	100%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	33%
Equipment Failure	58%	73%	86%	66%	29%	10%	40%	40%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	54%	85%	0%
Operation	42%	27%	14%	0%	1%	0%	45%	52%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	46%	15%	0%
Other	0%	0%	0%	2%	2%	81%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Vegetation/Animal	0%	0%	0%	3%	3%	0%	6%	4%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	67%
Weather/Fire/Earthquake	0%	0%	0%	29%	65%	10%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
CASTRO(16KV) - Customers: 2,421	128.2	1.0	5.1	48.6	0.2	0.1	41.0	0.1	0.1	27.9	0.2	1.2	2.7	0.0	0.0	0.0	0.0	0.0	25.7	0.2	1.0	56.4	0.5	2.2
3rd Party	0%	0%	2%	11%	32%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	24%	4%	38%	2%	1%	0%	95%	80%	7%	83%	43%	14%	6%	6%	0%	0%	0%	0%	4%	4%	0%	43%	24%	7%
Operation	0%	0%	0%	28%	20%	0%	0%	0%	0%	17%	57%	0%	85%	91%	0%	0%	0%	0%	33%	90%	0%	28%	73%	0%
Other	0%	0%	21%	0%	0%	100%	0%	0%	93%	0%	0%	0%	9%	3%	0%	0%	0%	0%	23%	1%	0%	11%	1%	0%
Vegetation/Animal	0%	0%	0%	0%	0%	0%	2%	11%	0%	0%	0%	86%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	93%
Weather/Fire/Earthquake	76%	96%	38%	59%	47%	0%	3%	9%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	40%	5%	0%	18%	2%	0%
MCKEVETT(4.16KV) - Customers: 275	65.7	1.0	4.0	187.8	1.0	1.0	0.0	0.0	0.0	10.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	10.0	1.0	2.0
3rd Party	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	0%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Operation	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%
Other	0%	0%	0%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Vegetation/Animal	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%
Weather/Fire/Earthquake	100%	100%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

# Reliability Histories for Individual Circuits Serving Santa Paula

		2013			2014			2015		1st	Qtr 20	16	2nd	d Qtr 20	016	3rd	Qtr 20	16	4th	Qtr 20	16	2016		
	SAIDI	SAIFI	MAIFI	SAIDI	SAIFI	MAIFI	SAIDI	SAIFI	MAIFI	SAIDI	SAIFI	MAIFI	SAIDI	SAIFI	MAIFI	SAIDI	SAIFI	MAIFI	SAIDI	SAIFI	MAIFI	SAIDI	SAIFI	MAIFI
MIDDLE ROAD(16KV) - Customers: 1,148	79.1	1.0	2.3	358.6	3.5	6.1	108.0	0.8	0.5	176.6	1.5	2.4	213.8	2.4	2.1	4.6	0.0	1.0	0.0	0.0	0.0	395.0	4.0	5.6
3rd Party	0%	0%	0%	13%	28%	0%	2%	1%	0%	0%	0%	0%	58%	56%	100%	0%	0%	0%	0%	0%	0%	32%	34%	38%
Equipment Failure	71%	75%	59%	18%	32%	33%	8%	2%	0%	73%	65%	81%	42%	44%	0%	100%	100%	100%	0%	0%	0%	56%	52%	53%
Operation	7%	5%	41%	51%	10%	15%	21%	13%	4%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	19%	25%	10%	0%	27%	35%	19%	0%	0%	0%	0%	0%	0%	0%	0%	0%	12%	13%	8%
Vegetation/Animal	0%	1%	0%	0%	0%	16%	44%	73%	96%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Weather/Fire/Earthquake	22%	19%	0%	17%	30%	17%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PETIT(16KV) - Customers: 315	39.2	0.1	0.0	144.5	1.2	0.4	14.8	0.1	0.1	21.7	0.1	1.0	1.9	0.0	0.0	17.9	0.1	0.0	303.7	1.4	1.0	345.2	1.6	2.0
3rd Party	6%	10%	0%	12%	3%	15%	22%	29%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	72%	83%	0%	63%	73%	0%
Equipment Failure	0%	0%	0%	1%	0%	0%	78%	71%	100%	32%	50%	0%	100%	100%	0%	0%	0%	0%	20%	14%	0%	20%	15%	0%
Operation	0%	0%	0%	86%	97%	68%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	17%	0%	0%	0%	0%	0%	0%	0%	0%	0%	63%	50%	0%	0%	0%	0%	3%	4%	0%
Vegetation/Animal	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	37%	50%	0%	0%	0%	100%	2%	4%	100%
Weather/Fire/Earthquake	94%	90%	0%	0%	0%	0%	0%	0%	0%	68%	50%	0%	0%	0%	0%	0%	0%	0%	9%	2%	0%	12%	4%	0%
PYLE(16KV) - Customers: 358	15.0	0.1	0.0	81.5	0.5	0.1	68.6	0.6	0.6	5.4	0.1	1.0	24.7	0.0	1.0	2.1	0.0	0.0	17.3	0.1	1.0	49.5	0.2	3.0
3rd Party	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	4%	2%	0%	60%	22%	0%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	15%	24%	0%	5%	10%	0%
Operation	0%	0%	0%	40%	78%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other	32%	17%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	100%	100%	0%	85%	76%	0%	45%	69%	0%
Vegetation/Animal	63%	81%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	100%	100%	0%	0%	0%	0%	0%	100%	50%	21%	100%
Weather/Fire/Earthquake	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
TIMBER CANYON(16KV) - Customers: 680	20.7	0.3	3.8	13.0	0.1	2.0	70.3	0.4	0.0	0.0	0.0	0.0	4.4	0.0	0.0	12.0	1.0	1.0	0.3	0.0	0.0	16.8	1.1	1.0
3rd Party	0%	0%	26%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	60%	3%	0%	57%	44%	0%	11%	3%	0%	0%	0%	0%	18%	4%	0%	0%	0%	0%	100%	100%	0%	7%	0%	0%
Operation	10%	19%	0%	11%	11%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	98%	100%	0%	0%	0%	0%	71%	97%	0%
Other	17%	76%	22%	0%	0%	50%	1%	2%	0%	0%	0%	0%	0%	0%	0%	2%	0%	100%	0%	0%	0%	1%	0%	100%
Vegetation/Animal	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%	82%	96%	0%	0%	0%	0%	0%	0%	0%	22%	3%	0%
Weather/Fire/Earthquake	12%	1%	52%	32%	44%	0%	88%	94%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%