



Circuit Reliability Review

Ventura District 4

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 [sce.com>Outage Center>Maintaining Reliable Service](https://sce.com/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

Ventura

Reliability by SCE District (No Exclusions)

District Name	2012				2013				2014				2015				2016			
	District SAIDI	SAIDI RANKING	District SAIFI	SAIFI Ranking	District SAIDI	SAIDI RANKING	District SAIFI	SAIFI Ranking	District SAIDI	SAIDI RANKING	District SAIFI	SAIFI Ranking	District SAIDI	SAIDI RANKING	District SAIFI	SAIFI Ranking	District SAIDI	SAIDI RANKING	District SAIFI	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	

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.

**In the columns showing "Rank," lower numbers indicate poorer performance.

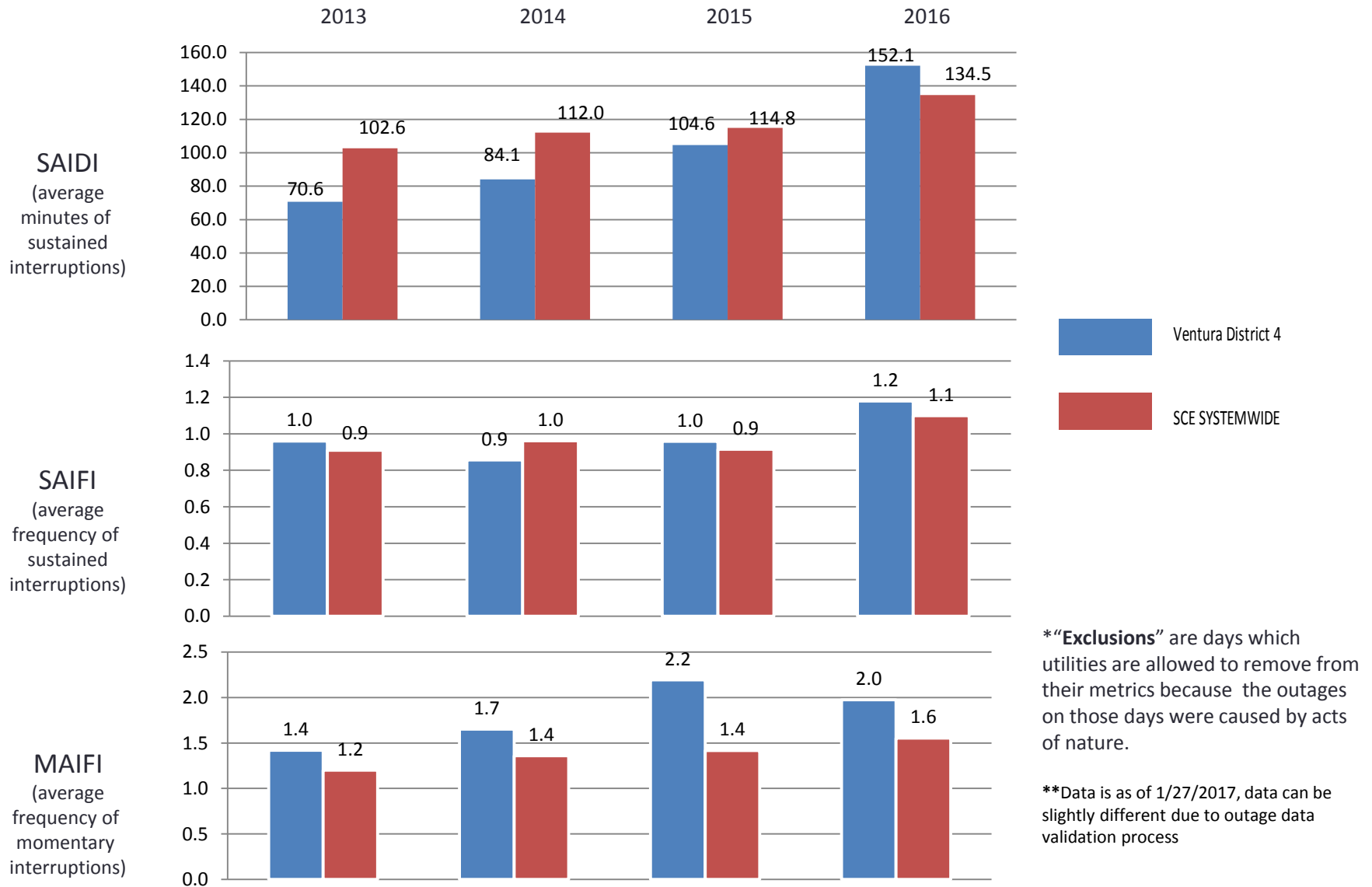
Overview of Ventura District 4

There are 22 circuits that serve Ventura District 4

Circuit Type	Sum of Customers	Circuit Type	Sum of Customers	Circuit Type	Sum of Customers	Circuit Type	Sum of Customers
ANTON(16KV)	285						
BARRINGTON(16KV)	639						
BIG ROCK(16KV)	1,936						
BRENNAN(16KV)	2,495						
BUCKNER(16KV)	2,218						
BUFFER(16KV)	1,061						
BURLESON(16KV)	2,481						
CASSIDY(16KV)	1,265						
CORRIGAN(2.4KV)	336						
DONLON(16KV)	541						
ENCHANTED(16KV)	382						
ENERGY(16KV)	1,473						
GABBERT(16KV)	1,467						
GUJAR(16KV)	243						
MORGANSTEIN(16KV)	2,046						
RAINBOW(16KV)	404						
REJADA(16KV)	1,024						
SINALOA(16KV)	2,203						
STRATHERN(16KV)	2,661						
TAPO(16KV)	1,346						
YOSEMITE(16KV)	1,327						
ZONE(16KV)	938						

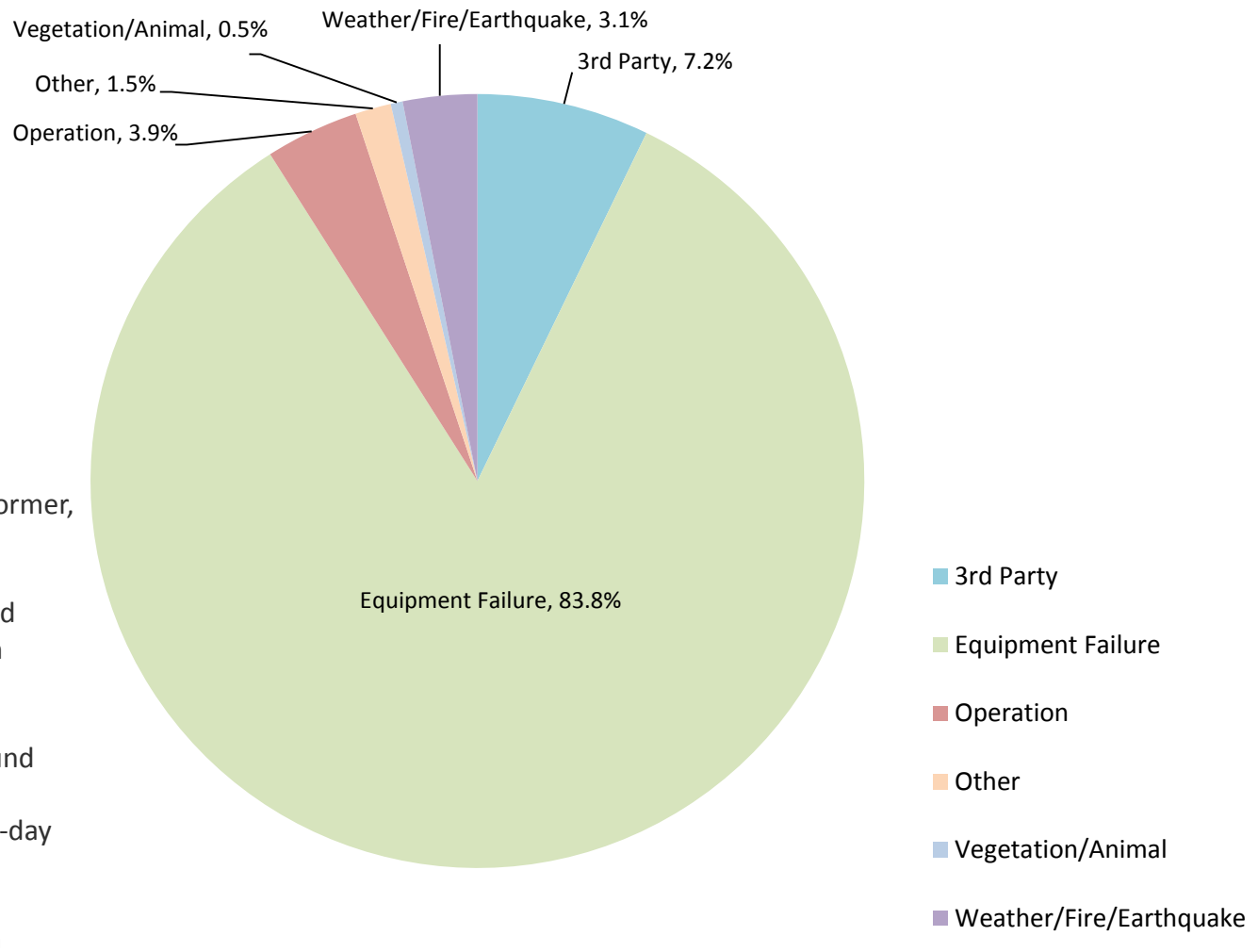
Grand Total 28,771

Reliability History of Circuits Serving Ventura District 4 (No Exclusions)



Causes of Repair Outages in Ventura District 4 Circuits 2016 YTD

Contributions to SAIDI by Outage Cause

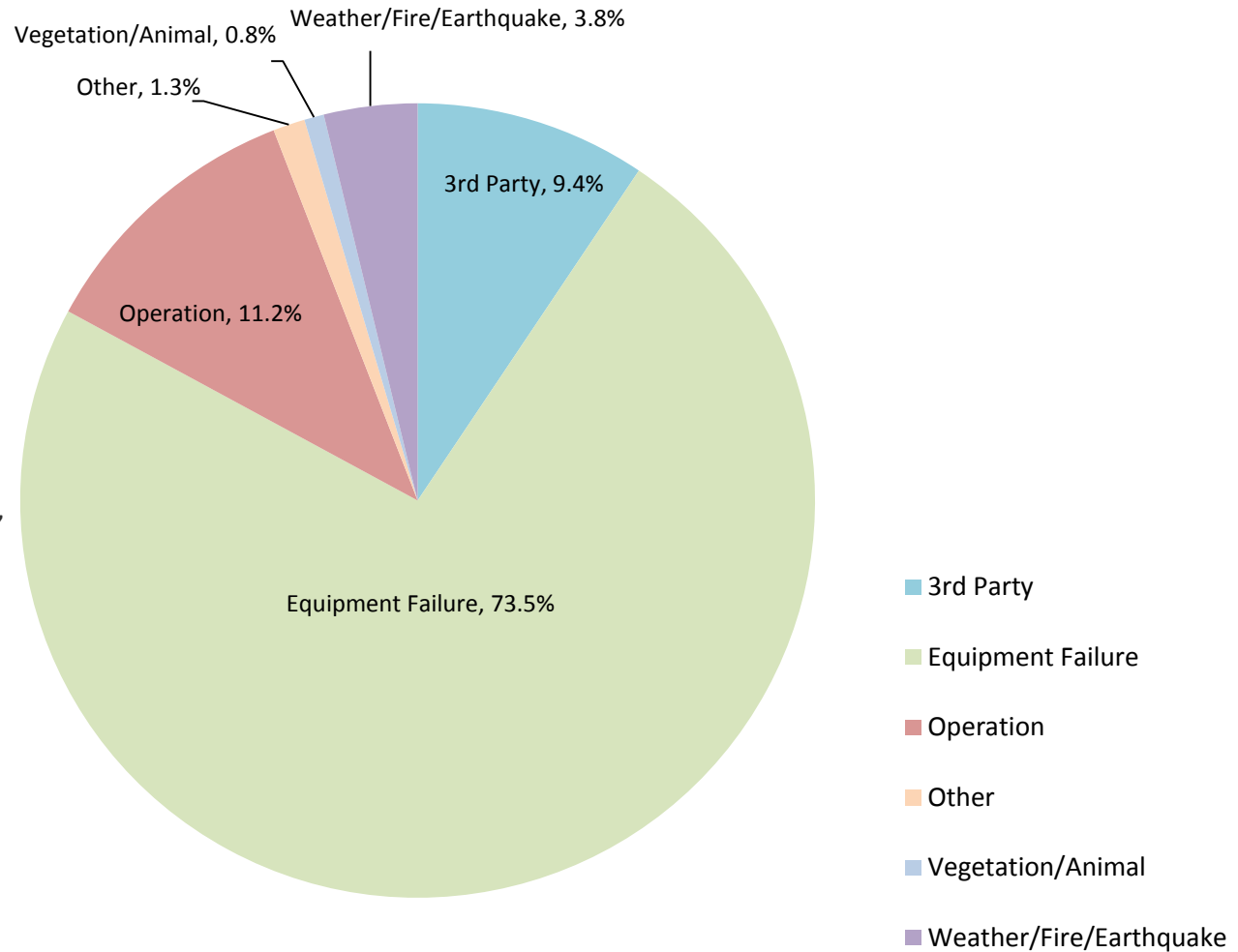


SAIDI = the cumulative amount of time the average customer is interrupted by “sustained” outages each year.

Causes of Repair Outages in Ventura District 4 Circuits

2016 YTD

Contributions to SAIFI by Outage Cause



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

Ventura County District 4 Unincorporated Areas 2017 Capital Improvement Plan

Unincorporated County Area

Supervisory District

Replacement/Equipment Upgrade

◆ Pole Replacement

Other Work

● Circuit Rebuild

● Circuit Reliability Upgrade

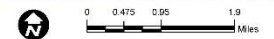
Replacement/Equipment Upgrade (Transmission)

■ Pole Replacement

Other Work (Transmission)

■ Added Facilities

Disclaimer: This report is intended solely for informational purposes. The information included is reflective as of January 1, 2017 and is subject to change without further notice.



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Back-up Slides

Reliability Histories of Circuits Serving Ventura District 4

Updated through Year-End 2016

Average Reliability of 22 Circuits Serving Ventura District 4

	2013			2014			2015			1st Qtr 2016			2nd Qtr 2016			3rd Qtr 2016			4th Qtr 2016			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
Ventura District 4	70.6	1.0	1.4	84.1	0.9	1.7	104.6	1.0	2.2	59.9	0.5	0.9	46.4	0.3	0.2	29.1	0.2	0.5	16.7	0.1	0.4	152.1	1.2	2.0
3rd Party	5%	9%	9%	2%	2%	8%	14%	14%	8%	0%	0%	0%	17%	23%	0%	11%	21%	0%	0%	0%	0%	7%	9%	0%
Equipment Failure	59%	37%	29%	57%	45%	37%	65%	55%	11%	92%	81%	28%	75%	64%	0%	82%	67%	61%	83%	75%	14%	84%	74%	31%
Operation	8%	19%	23%	12%	10%	3%	10%	9%	5%	5%	17%	28%	4%	6%	0%	2%	11%	3%	4%	4%	0%	4%	11%	13%
Other	23%	24%	23%	25%	33%	20%	2%	4%	28%	0%	0%	20%	3%	3%	87%	0%	0%	33%	5%	4%	82%	2%	1%	42%
Vegetation/Animal	0%	1%	14%	2%	9%	32%	3%	12%	45%	0%	0%	15%	1%	3%	5%	0%	0%	3%	0%	0%	0%	0%	1%	8%
Weather/Fire/Earthquake	4%	9%	2%	2%	1%	1%	5%	5%	3%	3%	2%	9%	1%	2%	8%	5%	1%	0%	8%	17%	3%	3%	4%	5%
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

3rd 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 Ventura District 4

	2013			2014			2015			1st Qtr 2016			2nd Qtr 2016			3rd Qtr 2016			4th Qtr 2016			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
ANTON(16KV) - Customers: 285	256.8	2.4	2.5	86.8	0.2	0.0	327.8	1.8	2.6	77.0	1.1	0.7	2.2	0.0	0.0	42.4	0.3	0.8	13.7	0.1	1.2	135.3	1.5	2.7
3rd Party	0%	0%	0%	0%	0%	0%	10%	30%	7%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	14%	24%	61%	77%	62%	0%	10%	4%	0%	88%	93%	67%	0%	0%	0%	100%	100%	34%	18%	3%	0%	83%	85%	27%
Operation	1%	1%	39%	0%	0%	0%	2%	2%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	2%	3%	0%
Other	79%	73%	0%	23%	38%	0%	3%	2%	55%	12%	7%	7%	0%	0%	0%	0%	0%	0%	66%	71%	89%	13%	10%	41%
Vegetation/Animal	0%	0%	0%	0%	0%	0%	1%	1%	20%	0%	0%	0%	0%	0%	0%	0%	0%	66%	0%	0%	0%	0%	0%	20%
Weather/Fire/Earthquake	6%	3%	0%	0%	0%	0%	74%	63%	17%	0%	0%	26%	0%	0%	0%	0%	0%	0%	16%	26%	11%	2%	2%	11%
BARRINGTON(16KV) - Customers: 639	47.4	0.1	2.1	65.9	0.1	1.0	231.3	1.7	0.0	6.1	0.0	0.0	123.6	1.5	1.7	9.7	1.0	2.0	9.7	0.0	0.0	149.1	2.6	3.7
3rd Party	70%	56%	3%	0%	0%	0%	95%	98%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	4%	0%	0%
Equipment Failure	13%	5%	0%	59%	39%	0%	0%	0%	0%	0%	0%	0%	85%	82%	0%	100%	100%	50%	21%	29%	0%	79%	88%	27%
Operation	16%	37%	0%	7%	9%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	79%	71%	0%	5%	1%	0%
Other	0%	0%	48%	34%	51%	100%	0%	0%	0%	0%	0%	0%	0%	0%	59%	0%	0%	50%	0%	0%	0%	0%	0%	54%
Vegetation/Animal	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Weather/Fire/Earthquake	2%	2%	48%	0%	0%	0%	4%	1%	0%	0%	0%	0%	15%	18%	41%	0%	0%	0%	0%	0%	0%	12%	10%	19%
BIG ROCK(16KV) - Customers: 1,936	94.1	4.0	1.0	187.5	2.2	3.9	46.4	1.0	3.6	169.7	1.1	2.0	103.8	0.4	0.0	3.3	0.0	0.0	0.0	0.0	0.0	276.8	1.5	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%	0%	44%	48%	26%	3%	0%	0%	98%	99%	0%	98%	92%	0%	100%	100%	0%	0%	0%	0%	98%	97%	0%
Operation	46%	50%	0%	8%	6%	0%	0%	0%	18%	1%	0%	0%	2%	8%	0%	0%	0%	0%	0%	0%	0%	1%	3%	0%
Other	41%	25%	0%	45%	45%	0%	8%	0%	27%	2%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	50%
Vegetation/Animal	0%	0%	100%	3%	0%	74%	89%	99%	56%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Weather/Fire/Earthquake	12%	25%	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%
BRENNAN(16KV) - Customers: 2,495	0.0	0.0	3.0	75.6	1.0	0.0	27.6	0.1	0.0	0.6	0.0	0.0	23.0	0.1	0.0	19.6	0.2	0.0	93.5	0.8	0.0	136.7	1.2	0.1
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%	33%	0%	0%	0%	58%	44%	0%	0%	0%	0%	74%	80%	0%	100%	100%	0%	100%	100%	100%	95%	95%	55%
Operation	0%	0%	33%	0%	0%	0%	42%	56%	0%	100%	100%	100%	26%	20%	0%	0%	0%	0%	0%	0%	0%	5%	5%	45%
Other	0%	0%	33%	100%	100%	0%	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%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
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%

Reliability Histories for Individual Circuits Serving Ventura District 4

	2013			2014			2015			1st Qtr 2016			2nd Qtr 2016			3rd Qtr 2016			4th Qtr 2016			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
BUCKNER(16KV) - Customers: 2,218	3.6	0.0	0.0	56.0	1.1	1.0	13.1	0.0	1.7	22.4	0.1	1.0	10.5	0.1	0.0	2.5	0.0	0.0	0.0	0.0	0.0	35.5	0.2	1.0
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%	0%	76%	94%	0%	10%	7%	0%	81%	74%	0%	47%	36%	0%	100%	100%	0%	0%	0%	0%	72%	52%	0%
Operation	100%	100%	0%	24%	6%	0%	53%	83%	34%	0%	0%	100%	53%	64%	0%	0%	0%	0%	0%	0%	0%	16%	39%	100%
Other	0%	0%	0%	0%	0%	0%	37%	10%	66%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Vegetation/Animal	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Weather/Fire/Earthquake	0%	0%	0%	0%	0%	0%	0%	0%	0%	19%	26%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	12%	9%	0%
BUFFER(16KV) - Customers: 1,061	157.3	2.0	2.2	20.1	0.1	0.0	1.2	0.0	1.0	0.0	0.0	0.0	5.3	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	6.2	0.0	0.0
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	96%	98%	54%	99%	89%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	85%	77%	0%
Operation	4%	2%	0%	1%	11%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	15%	23%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Vegetation/Animal	0%	0%	46%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
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%
BURLESON(16KV) - Customers: 2,481	6.2	0.0	0.0	47.9	0.2	1.0	198.8	2.0	2.9	262.7	2.2	1.0	0.0	0.0	0.0	14.8	0.1	0.0	0.0	0.0	1.0	277.5	2.3	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	100%	100%	0%	35%	50%	100%	100%	100%	31%	100%	100%	100%	0%	0%	0%	100%	100%	0%	0%	0%	0%	100%	100%	51%
Operation	0%	0%	0%	65%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%	35%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	49%
Vegetation/Animal	0%	0%	0%	0%	0%	0%	0%	0%	35%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
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%
CASSIDY(16KV) - Customers: 1,265	219.3	2.5	2.2	25.5	0.0	2.9	150.6	2.6	2.5	1.0	0.0	1.0	4.3	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	5.3	0.0	4.0
3rd Party	0%	0%	45%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	100%	100%	10%	100%	100%	65%	95%	98%	20%	100%	100%	0%	89%	67%	0%	0%	0%	0%	0%	0%	0%	91%	76%	0%
Operation	0%	0%	0%	0%	0%	0%	5%	2%	0%	0%	0%	0%	11%	33%	0%	0%	0%	0%	0%	0%	0%	9%	24%	0%
Other	0%	0%	45%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	75%
Vegetation/Animal	0%	0%	0%	0%	0%	35%	0%	0%	80%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	25%
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%

Reliability Histories for Individual Circuits Serving Ventura District 4

	2013			2014			2015			1st Qtr 2016			2nd Qtr 2016			3rd Qtr 2016			4th Qtr 2016			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
CORRIGAN(2.4KV) - Customers: 336	68.8	4.0	1.0	156.5	4.1	2.0	45.4	1.1	5.0	135.1	1.0	2.0	25.1	0.1	0.0	6.1	1.0	1.1	0.0	0.0	0.0	166.3	2.1	3.1
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	2%	0%	0%	39%	24%	0%	6%	1%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	81%	47%	0%
Operation	37%	50%	0%	21%	51%	0%	3%	3%	19%	0%	0%	0%	0%	0%	0%	100%	100%	100%	0%	0%	0%	4%	48%	36%
Other	47%	25%	0%	41%	24%	0%	0%	0%	20%	0%	0%	50%	100%	100%	0%	0%	0%	0%	0%	0%	0%	15%	5%	32%
Vegetation/Animal	0%	0%	100%	0%	0%	100%	91%	96%	60%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Weather/Fire/Earthquake	15%	25%	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	32%
DONLON(16KV) - Customers: 541	304.7	1.8	3.1	60.9	0.3	1.9	56.6	0.3	0.1	32.0	0.1	0.3	34.3	0.5	0.5	70.3	0.1	0.0	24.4	0.1	1.0	161.0	0.9	1.8
3rd Party	0%	0%	65%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	94%	68%	3%	12%	2%	4%	3%	1%	0%	21%	26%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	4%	3%	0%
Operation	2%	1%	0%	17%	11%	67%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	0%	9%	7%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	16%	16%	100%	2%	3%	73%
Vegetation/Animal	2%	28%	24%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	100%	0%	0%	0%	0%	0%	0%	21%	60%	27%
Weather/Fire/Earthquake	2%	3%	8%	71%	87%	30%	86%	90%	0%	79%	74%	0%	0%	0%	0%	100%	100%	0%	84%	84%	0%	72%	35%	0%
ENCHANTED(16KV) - Customers: 382	0.0	0.0	1.0	298.4	1.7	1.0	0.0	0.0	0.9	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	30.5	0.8	0.2	30.5	0.8	1.2
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%	0%	98%	99%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	100%	100%	100%	13%
Operation	0%	0%	0%	2%	1%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	87%
Other	0%	0%	100%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Vegetation/Animal	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
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%
ENERGY(16KV) - Customers: 1,473	3.1	0.0	1.0	3.1	0.0	0.0	75.7	0.7	1.6	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.3	0.0	0.0
3rd Party	32%	32%	0%	0%	0%	0%	0%	0%	35%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	0%	0%	0%	9%	13%	0%	68%	26%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	87%	67%	0%
Operation	61%	64%	0%	87%	73%	0%	32%	74%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	13%	33%	0%
Other	0%	0%	0%	4%	13%	100%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	100%	0%	0%	100%
Vegetation/Animal	7%	4%	100%	0%	0%	0%	0%	0%	65%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
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%

Reliability Histories for Individual Circuits Serving Ventura District 4

	2013			2014			2015			1st Qtr 2016			2nd Qtr 2016			3rd Qtr 2016			4th Qtr 2016			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
GABBERT(16KV) - Customers: 1,467	22.8	1.0	0.9	57.4	0.9	0.4	4.2	0.0	0.0	21.2	1.0	0.9	0.0	0.0	0.0	11.1	0.1	0.0	9.2	0.1	1.0	41.4	1.2	1.9
3rd Party	99%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	1%	0%	0%	100%	100%	100%	0%	0%	0%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	100%	51%	86%	100%
Operation	0%	0%	100%	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	100%	100%	0%	49%	14%	0%
Other	0%	0%	0%	0%	0%	0%	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%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
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%
GUITAR(16KV) - Customers: 243	0.0	0.0	2.0	213.6	3.1	2.4	193.9	2.3	8.5	24.9	0.3	2.0	5.6	0.0	0.1	0.0	0.0	1.0	8.7	0.0	0.0	39.2	0.3	3.1
3rd Party	0%	0%	0%	23%	27%	6%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	0%	0%	0%	31%	11%	42%	11%	2%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	5%	25%	0%	15%	6%	0%
Operation	0%	0%	0%	0%	1%	0%	2%	1%	0%	90%	39%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	57%	35%	0%
Other	0%	0%	50%	0%	0%	52%	13%	11%	96%	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	67%
Vegetation/Animal	0%	0%	50%	44%	60%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	95%	75%	0%	21%	4%	33%
Weather/Fire/Earthquake	0%	0%	0%	1%	0%	0%	74%	86%	0%	10%	61%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	6%	54%	0%
MORGANSTEIN(16KV) - Customers: 2,046	232.3	2.4	3.1	148.5	2.1	4.1	20.4	0.1	4.7	9.4	0.1	1.0	108.7	1.1	0.0	4.6	0.0	0.0	0.2	0.0	0.0	122.9	1.2	1.0
3rd Party	0%	0%	0%	0%	0%	25%	0%	0%	0%	0%	0%	0%	91%	96%	0%	0%	0%	0%	0%	0%	0%	81%	85%	0%
Equipment Failure	29%	28%	67%	11%	11%	4%	68%	39%	0%	45%	13%	0%	6%	3%	0%	93%	93%	0%	55%	60%	0%	12%	7%	0%
Operation	0%	0%	33%	19%	8%	0%	30%	60%	0%	55%	87%	0%	0%	0%	0%	7%	7%	0%	0%	0%	0%	5%	7%	0%
Other	63%	70%	0%	70%	80%	71%	0%	0%	12%	0%	0%	100%	2%	1%	0%	0%	0%	0%	45%	40%	0%	2%	1%	100%
Vegetation/Animal	0%	0%	0%	0%	0%	0%	2%	0%	88%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Weather/Fire/Earthquake	8%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
RAINBOW(16KV) - Customers: 404	202.5	3.0	2.0	150.0	1.1	2.3	441.3	5.6	8.0	292.4	1.9	0.5	142.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	435.2	3.0	0.5
3rd Party	31%	34%	28%	51%	54%	57%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	33%	26%	22%	48%	44%	0%	25%	17%	6%	72%	52%	0%	61%	54%	0%	0%	0%	0%	0%	0%	0%	68%	52%	0%
Operation	32%	39%	0%	2%	2%	43%	38%	19%	0%	7%	19%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	12%	0%
Other	0%	0%	0%	0%	0%	0%	20%	47%	32%	0%	0%	100%	38%	45%	0%	0%	0%	0%	0%	0%	0%	13%	16%	100%
Vegetation/Animal	4%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Weather/Fire/Earthquake	0%	0%	0%	0%	0%	0%	12%	18%	62%	21%	29%	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	14%	20%	0%

Reliability Histories for Individual Circuits Serving Ventura District 4

	2013			2014			2015			1st Qtr 2016			2nd Qtr 2016			3rd Qtr 2016			4th Qtr 2016			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
REJADA(16KV) - Customers: 1,024	88.1	1.3	0.7	48.6	0.3	6.2	83.6	1.3	1.7	351.2	2.3	0.9	0.0	0.0	0.0	0.0	0.0	0.0	76.7	0.2	0.0	427.9	2.5	0.9
3rd Party	0%	0%	0%	0%	0%	16%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	78%	78%	0%	100%	100%	67%	91%	23%	42%	100%	100%	54%	0%	0%	0%	0%	0%	0%	100%	100%	0%	100%	100%	54%
Operation	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	46%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	46%
Other	22%	22%	100%	0%	0%	0%	0%	0%	58%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Vegetation/Animal	0%	0%	0%	0%	0%	16%	9%	77%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
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%
SINALOA(16KV) - Customers: 2,203	34.3	0.3	0.0	67.8	1.3	2.0	0.0	0.0	2.0	21.0	0.9	0.8	3.9	0.0	0.0	271.0	0.7	3.8	0.0	0.0	1.1	296.0	1.7	5.7
3rd Party	0%	0%	0%	5%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	79%	80%	0%	78%	22%	50%	0%	0%	0%	0%	0%	0%	3%	4%	0%	100%	100%	100%	0%	0%	0%	92%	43%	67%
Operation	21%	20%	0%	0%	0%	0%	0%	0%	0%	100%	100%	100%	97%	96%	0%	0%	0%	0%	0%	0%	0%	8%	57%	14%
Other	0%	0%	0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	19%
Vegetation/Animal	0%	0%	0%	16%	75%	50%	0%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
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%
STRATHERN(16KV) - Customers: 2,661	20.5	0.1	2.0	75.5	0.4	1.1	279.1	2.1	2.6	1.9	0.0	1.7	149.7	1.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	151.8	1.1	1.8
3rd Party	0%	0%	0%	0%	0%	0%	35%	48%	60%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	59%	63%	51%	78%	58%	94%	63%	48%	0%	0%	0%	57%	100%	100%	0%	0%	0%	0%	0%	0%	0%	99%	98%	57%
Operation	13%	30%	49%	22%	42%	6%	2%	4%	0%	100%	100%	43%	0%	0%	0%	100%	100%	0%	0%	0%	0%	1%	2%	43%
Other	0%	0%	0%	0%	0%	0%	0%	0%	40%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%
Vegetation/Animal	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Weather/Fire/Earthquake	28%	8%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
TAPO(16KV) - Customers: 1,346	79.5	0.3	1.0	132.8	0.6	2.6	71.8	0.8	2.9	4.2	0.1	1.2	0.3	0.0	1.0	0.0	0.0	1.0	16.5	0.1	1.1	21.0	0.2	4.3
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	99%	99%	3%	95%	91%	24%	94%	93%	32%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	6%	78%	29%	1%
Operation	1%	1%	0%	5%	9%	0%	1%	6%	0%	100%	100%	19%	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	70%	5%
Other	0%	0%	97%	0%	0%	38%	5%	1%	0%	0%	0%	0%	100%	100%	100%	0%	0%	100%	0%	0%	94%	2%	1%	70%
Vegetation/Animal	0%	0%	0%	0%	0%	38%	0%	0%	68%	0%	0%	81%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	23%
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%

Reliability Histories for Individual Circuits Serving Ventura District 4

	2013			2014			2015			1st Qtr 2016			2nd Qtr 2016			3rd Qtr 2016			4th Qtr 2016			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
YOSEMITE(16KV) - Customers: 1,327	0.0	0.0	1.0	10.9	0.1	1.0	55.0	0.3	2.0	8.7	0.0	1.0	170.2	1.2	1.0	0.0	0.0	1.0	0.0	0.0	1.0	178.9	1.2	4.0
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%	0%	100%	100%	0%	55%	23%	0%	100%	100%	3%	97%	89%	0%	0%	0%	0%	0%	0%	0%	97%	89%	1%
Operation	0%	0%	0%	0%	0%	0%	45%	77%	0%	0%	0%	0%	3%	11%	0%	0%	0%	0%	0%	0%	0%	3%	11%	0%
Other	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	75%
Vegetation/Animal	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	97%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	25%
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%
ZONE(16KV) - Customers: 938	177.5	1.5	3.1	219.7	0.7	0.1	474.2	2.4	1.8	0.0	0.0	0.0	17.9	0.2	0.0	96.1	1.0	0.1	87.9	1.0	0.3	201.9	2.2	0.5
3rd Party	17%	66%	32%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	99%	100%	0%	0%	0%	0%	56%	53%	0%
Equipment Failure	78%	30%	3%	85%	89%	0%	88%	88%	100%	0%	0%	0%	0%	0%	0%	1%	0%	0%	47%	26%	0%	21%	12%	0%
Operation	1%	2%	32%	5%	2%	0%	12%	11%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other	3%	2%	33%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	22%	11%	0%	9%	5%	25%
Vegetation/Animal	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Weather/Fire/Earthquake	0%	0%	0%	10%	9%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	31%	63%	100%	14%	29%	75%