



Circuit Reliability Review

Orange District 5

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://www.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.

Orange County District 5 – Saddleback District

Aliso Viejo

Irvine

Laguna Beach

Laguna Hills

Laguna Niguel

Laguna Woods

Lake Forest

Mission Viejo

Orange County

Rancho Santa Margarita

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.

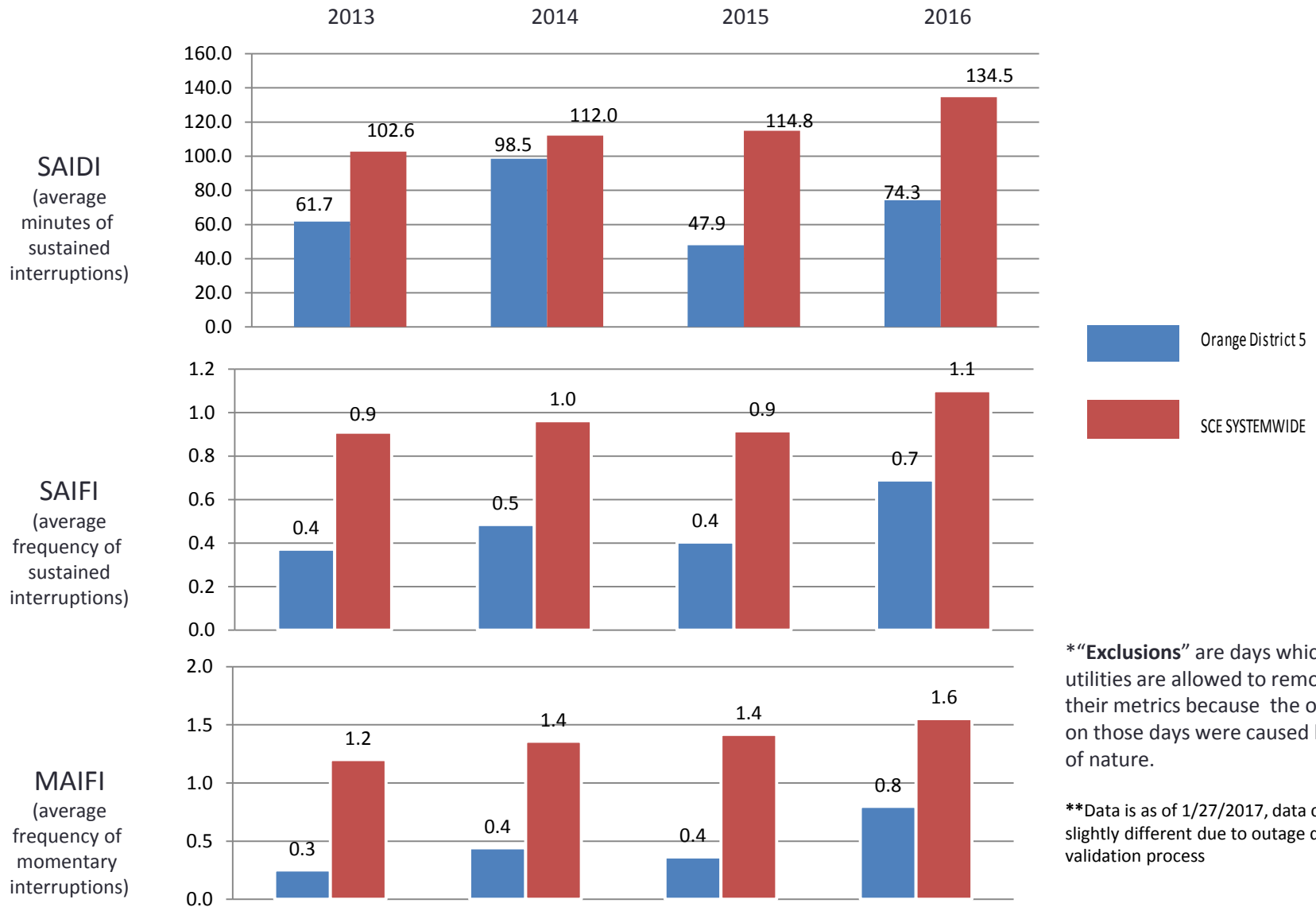
Overview of Orange District 5

There are 19 circuits that serve Orange District 5

Circuit Type	Sum of Customers	Circuit Type	Sum of Customers	Circuit Type	Sum of Customers	Circuit Type	Sum of Customers
ACRES(12KV)	2,211						
AGATE(12KV)	4,134						
ARTIST(12KV)	2,710						
ATENTO(12KV)	2,226						
CLEVELAND(12KV)	1,815						
COOLER(12KV)	1,566						
CORTESE(12KV)	238						
EMPRESA(12KV)	1,309						
HARMONICA(12KV)	813						
IRON(12KV)	240						
KEWAMEE(12KV)	2,068						
MELINDA(12KV)	1,393						
MODJESKA(12KV)	1,734						
OLYMPIAD(12KV)	1,002						
PENINSULA(12KV)	1,152						
RIMROCK(12KV)	2,448						
RMV 1243(12KV)	102						
RUBIN(12KV)	1,815						
RUSTIC(12KV)	3,100						

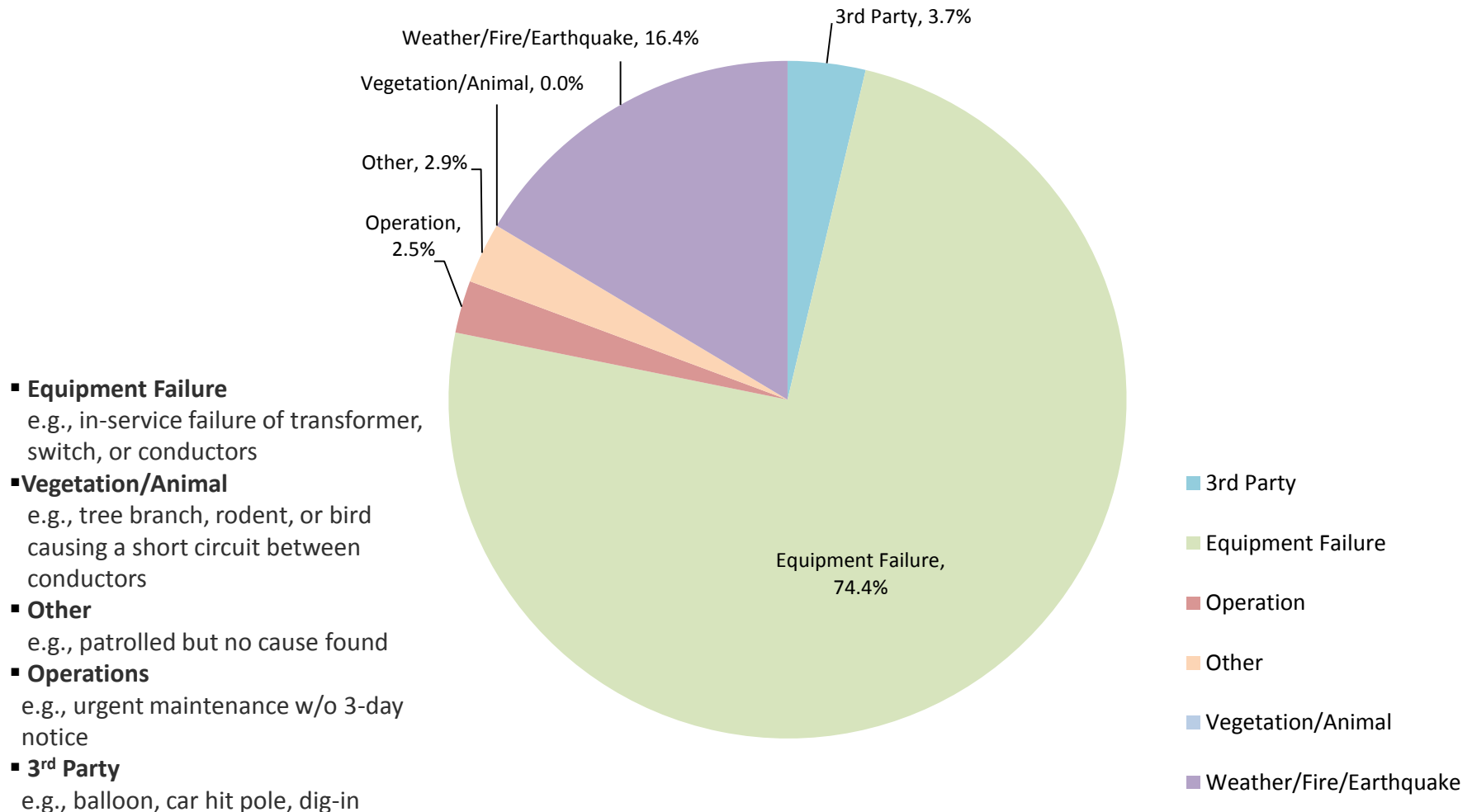
Grand Total 32,076

Reliability History of Circuits Serving Orange District 5 (No Exclusions)



Causes of Repair Outages in Orange District 5 Circuits 2016 YTD

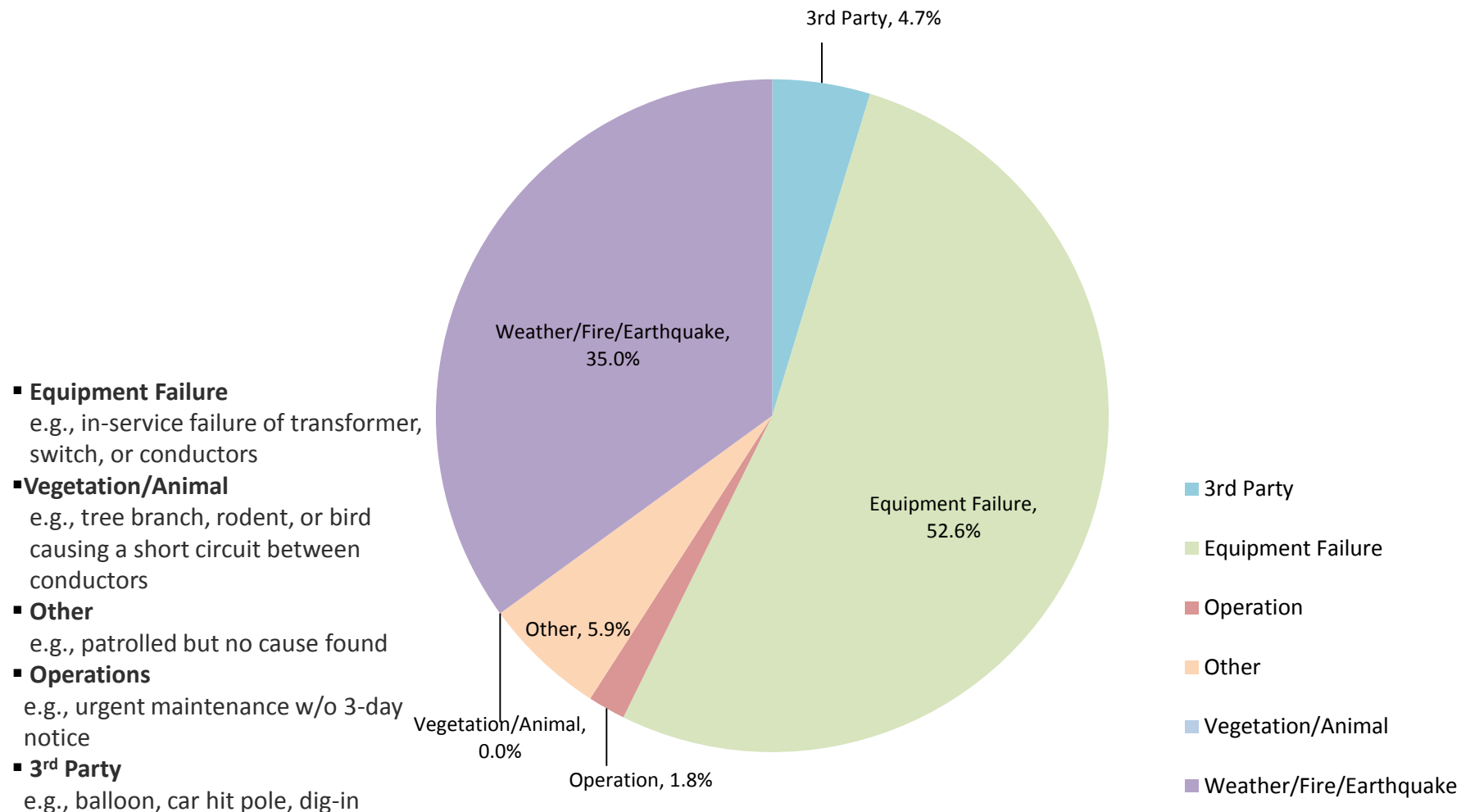
Contributions to SAIDI by Outage Cause



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

Causes of Repair Outages in Orange District 5 Circuits 2016 YTD

Contributions to SAIFI by Outage Cause

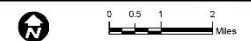


SAIFI = the number of times the average customer is interrupted by “sustained” outages each year.

Orange County District 5 Unincorporated Areas 2017 Capital Improvement Plan

- Unincorporated Community
- Unincorporated County Area
- Supervisory District
- Replacement/Equipment Upgrade
- Pole Replacement
- Other Work
- Underground Structure Replacement
- Replacement/Equipment Upgrade (Transmission)
- Pole Replacement

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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File Name: SUPER_CLIP_Orange.mxd

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Back-up Slides

Reliability Histories of Circuits Serving Orange District 5

Updated through Year-End 2016

Average Reliability of 19 Circuits Serving Orange District 5

	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
Orange District 5	61.7	0.4	0.3	98.5	0.5	0.4	47.9	0.4	0.4	37.8	0.4	0.0	10.4	0.1	0.2	20.5	0.1	0.0	5.6	0.1	0.6	74.3	0.7	0.8
3rd Party	7%	15%	7%	1%	5%	22%	4%	4%	10%	5%	7%	0%	5%	1%	47%	0%	0%	#DIV/0!	3%	9%	22%	4%	5%	27%
Equipment Failure	66%	68%	30%	79%	82%	31%	41%	50%	18%	65%	29%	26%	89%	97%	37%	96%	95%	#DIV/0!	33%	5%	0%	74%	53%	10%
Operation	10%	5%	40%	15%	9%	11%	37%	27%	0%	0%	0%	0%	5%	2%	0%	4%	5%	#DIV/0!	7%	5%	0%	2%	2%	0%
Other	7%	3%	14%	1%	2%	2%	6%	2%	8%	0%	0%	74%	0%	0%	0%	0%	0%	#DIV/0!	39%	76%	53%	3%	6%	42%
Vegetation/Animal	3%	2%	7%	1%	2%	34%	9%	17%	46%	0%	0%	0%	0%	0%	0%	0%	0%	#DIV/0!	0%	0%	0%	0%	0%	0%
Weather/Fire/Earthquake	8%	7%	2%	2%	1%	0%	3%	0%	18%	29%	64%	0%	1%	0%	15%	0%	0%	#DIV/0!	18%	5%	24%	16%	35%	21%
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 Orange District 5

	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
ACRES(12KV) - Customers: 2,211	78.88	0.17	-	10.22	0.04	-	274.32	2.17	1.98	#####	1.12	-	-	-	-	-	-	-	-	-	4.06	113.33	1.12	4.06
3rd Party	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Equipment Failure	80%	58%	-	-	-	-	23%	46%	50%	60%	11%	-	-	-	-	-	-	-	-	-	-	60%	11%	-
Operation	9%	22%	-	100%	100%	-	69%	53%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	49%	-	-	49%
Vegetation/Animal	11%	20%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Weather/Fire/Earthquake	-	-	-	-	-	-	8%	1%	50%	40%	89%	-	-	-	-	-	-	-	-	-	51%	40%	89%	51%
AGATE(12KV) - Customers: 4,134	2.31	0.02	-	206.25	2.09	0.84	9.55	0.02	-	82.10	1.43	-	44.46	0.98	0.56	13.10	0.08	-	11.07	0.24	1.01	150.74	2.73	1.57
3rd Party	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Equipment Failure	100%	100%	-	98%	99%	100%	100%	100%	-	19%	1%	-	100%	100%	100%	100%	100%	-	-	-	-	49%	40%	35%
Operation	-	-	-	2%	1%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26%	91%	100%	2%	8%	65%
Vegetation/Animal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Weather/Fire/Earthquake	-	-	-	-	-	-	-	-	-	81%	99%	-	-	-	-	-	-	-	74%	9%	-	49%	52%	-
ARTIST(12KV) - Customers: 2,710	57.55	1.34	0.52	0.01	0.00	-	12.51	0.04	-	-	-	-	-	-	1.00	23.73	0.08	-	1.45	0.00	-	25.18	0.08	1.00
3rd Party	-	-	-	-	-	-	52%	39%	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	100%
Equipment Failure	100%	100%	100%	-	-	-	46%	38%	-	-	-	-	-	-	-	100%	100%	-	-	-	-	94%	95%	-
Operation	-	-	-	100%	100%	-	1%	23%	-	-	-	-	-	-	-	-	-	-	100%	100%	-	6%	5%	-
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vegetation/Animal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Weather/Fire/Earthquake	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ATENTO(12KV) - Customers: 2,226	122.97	0.86	0.39	305.14	0.88	0.20	70.88	1.21	1.37	29.27	0.37	-	0.82	0.00	0.39	-	-	-	26.22	0.20	1.00	56.31	0.57	1.39
3rd Party	-	-	-	-	-	-	-	-	-	98%	100%	-	-	-	-	-	-	-	-	-	100%	51%	64%	72%
Equipment Failure	54%	57%	-	60%	75%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Operation	-	-	-	40%	25%	-	7%	16%	-	-	-	-	-	-	-	-	-	-	1%	2%	-	0%	1%	-
Other	-	-	100%	-	-	-	3%	1%	27%	-	-	-	-	-	-	-	-	-	99%	98%	-	46%	34%	-
Vegetation/Animal	-	-	-	-	-	100%	90%	83%	73%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Weather/Fire/Earthquake	46%	43%	-	-	-	-	-	-	-	2%	0%	-	100%	100%	100%	-	-	-	-	-	-	2%	0%	28%

Reliability Histories for Individual Circuits Serving Orange District 5

	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
CLEVELAND(12KV) - Customers: 1,815	71.48	1.00	-	1.42	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3rd Party	100%	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Equipment Failure	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Operation	-	-	-	100%	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vegetation/Animal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Weather/Fire/Earthquake	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
COOLER(12KV) - Customers: 1,566	116.19	0.45	-	-	-	-	95.34	1.19	-	-	-	-	-	-	-	12.62	0.06	-	1.30	0.01	-	13.92	0.06	-
3rd Party	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Equipment Failure	100%	100%	-	-	-	-	89%	94%	-	-	-	-	-	-	-	100%	100%	-	-	-	-	91%	86%	-
Operation	-	-	-	-	-	-	11%	6%	-	-	-	-	-	-	-	-	-	-	100%	100%	-	9%	14%	-
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vegetation/Animal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Weather/Fire/Earthquake	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CORTESE(12KV) - Customers: 238	-	-	0.73	2.05	0.01	-	178.35	0.12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3rd Party	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Equipment Failure	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Operation	-	-	-	100%	100%	-	100%	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vegetation/Animal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Weather/Fire/Earthquake	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EMPRESA(12KV) - Customers: 1,309	20.84	0.08	-	510.89	1.01	-	-	-	-	####	1.00	0.28	-	-	-	-	-	-	4.43	0.12	1.11	295.02	1.12	1.39
3rd Party	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	100%	100%	2%	11%	80%
Equipment Failure	100%	100%	-	100%	99%	-	-	-	-	100%	100%	100%	-	-	-	-	-	-	-	-	-	98%	89%	20%
Operation	-	-	-	0%	1%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vegetation/Animal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Weather/Fire/Earthquake	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Reliability Histories for Individual Circuits Serving Orange District 5

	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
HARMONICA(12KV) - Customers: 813	-	-	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3rd Party	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Equipment Failure	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Operation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vegetation/Animal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Weather/Fire/Earthquake	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IRON(12KV) - Customers: 240	-	-	-	570.53	1.18	-	110.49	1.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3rd Party	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Equipment Failure	-	-	-	90%	65%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Operation	-	-	-	10%	35%	-	100%	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vegetation/Animal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Weather/Fire/Earthquake	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KEWAMEE(12KV) - Customers: 2,068	62.00	0.06	0.08	28.93	0.14	0.15	11.17	0.09	1.00	2.03	0.00	-	6.70	0.03	-	71.65	0.15	-	-	-	-	80.37	0.19	-
3rd Party	-	-	5%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Equipment Failure	100%	100%	-	100%	100%	100%	100%	100%	-	100%	100%	-	-	-	-	100%	100%	-	-	-	-	92%	85%	-
Operation	-	-	95%	-	-	-	-	-	-	-	-	-	100%	100%	-	-	-	-	-	-	-	8%	15%	-
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vegetation/Animal	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Weather/Fire/Earthquake	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MELINDA(12KV) - Customers: 1,393	119.25	1.04	0.52	-	-	-	61.87	1.00	-	-	-	-	-	-	-	50.24	0.04	-	4.79	0.03	-	55.03	0.07	-
3rd Party	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Equipment Failure	100%	100%	100%	-	-	-	100%	100%	-	-	-	-	-	-	-	100%	100%	-	-	-	-	91%	54%	-
Operation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100%	100%	-	-	9%	46%	-
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vegetation/Animal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Weather/Fire/Earthquake	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Reliability Histories for Individual Circuits Serving Orange District 5

	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
MODJESKA(12KV) - Customers: 1,734	9.83	0.01	-	123.07	0.27	0.92	10.92	0.06	-	98.76	1.00	-	62.70	0.07	-	8.90	0.09	-	-	-	-	170.36	1.16	-
3rd Party	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Equipment Failure	100%	100%	-	68%	70%	-	100%	100%	-	100%	100%	-	100%	100%	-	-	-	-	-	-	-	95%	92%	-
Operation	-	-	-	32%	30%	100%	-	-	-	-	-	-	-	-	-	100%	100%	-	-	-	-	5%	8%	-
Other	-	-	-	-	-	1%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vegetation/Animal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Weather/Fire/Earthquake	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OLYMPIAD(12KV) - Customers: 1,002	48.25	0.10	-	158.37	1.02	1.61	27.92	0.13	-	-	-	1.00	0.80	0.01	-	3.92	0.01	-	-	-	-	4.72	0.01	1.00
3rd Party	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Equipment Failure	100%	100%	-	100%	98%	38%	-	-	-	-	-	-	100%	100%	-	100%	100%	-	-	-	-	100%	100%	-
Operation	-	-	-	0%	2%	-	100%	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	100%
Vegetation/Animal	-	-	-	-	-	62%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Weather/Fire/Earthquake	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PENINSULA(12KV) - Customers: 1,152	-	-	-	-	-	-	9.38	0.02	1.01	-	-	-	-	-	-	-	-	-	-	-	1.01	-	-	1.01
3rd Party	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Equipment Failure	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Operation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	100%	100%	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	100%	-
Vegetation/Animal	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Weather/Fire/Earthquake	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RIMROCK(12KV) - Customers: 2,448	9.39	0.01	-	31.41	0.05	-	87.88	0.34	-	-	-	-	4.21	0.01	-	5.25	0.03	-	-	-	-	9.45	0.04	-
3rd Party	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Equipment Failure	3%	3%	-	46%	61%	-	91%	93%	-	-	-	-	100%	100%	-	-	-	-	-	-	-	45%	30%	-
Operation	97%	97%	-	54%	39%	-	9%	7%	-	-	-	-	-	-	-	100%	100%	-	-	-	-	55%	70%	-
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vegetation/Animal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Weather/Fire/Earthquake	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Reliability Histories for Individual Circuits Serving Orange District 5

	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
RMV 1243(12KV) - Customers: 102	109.16	0.85	-	158.67	2.00	-	#####	2.67	1.00	92.31	0.26	-	29.68	0.16	-	-	-	-	#####	0.87	-	689.32	1.28	-
3rd Party	-	-	-	-	-	-	28%	37%	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Equipment Failure	-	-	-	-	-	-	-	-	-	100%	100%	-	-	-	-	-	-	-	100%	100%	-	96%	88%	-
Operation	-	-	-	-	-	-	-	-	-	-	-	-	100%	100%	-	-	-	-	-	-	-	4%	12%	-
Other	100%	100%	-	100%	100%	-	72%	63%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vegetation/Animal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Weather/Fire/Earthquake	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RUBIN(12KV) - Customers: 1,815	102.15	0.16	0.24	16.63	0.17	1.25	3.65	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3rd Party	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Equipment Failure	78%	42%	-	42%	14%	-	9%	26%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Operation	22%	58%	7%	16%	42%	-	91%	74%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vegetation/Animal	-	-	93%	42%	44%	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Weather/Fire/Earthquake	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RUSTIC(12KV) - Customers: 3,100	120.26	0.30	1.17	95.49	0.43	1.18	5.18	0.14	0.39	1.54	0.00	0.01	5.78	0.02	-	85.04	0.98	-	-	-	0.21	92.35	1.00	0.23
3rd Party	-	-	-	15%	55%	87%	60%	91%	94%	-	-	-	100%	100%	-	-	-	-	-	-	56%	6%	2%	52%
Equipment Failure	22%	27%	5%	40%	9%	6%	0%	0%	-	100%	100%	-	-	-	-	100%	100%	-	-	-	-	94%	98%	-
Operation	27%	30%	83%	8%	12%	-	7%	4%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other	34%	23%	7%	10%	5%	7%	32%	5%	6%	-	-	100%	-	-	-	-	-	-	-	44%	-	-	48%	-
Vegetation/Animal	11%	14%	1%	3%	4%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Weather/Fire/Earthquake	6%	6%	4%	24%	15%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-