



Circuit Reliability Review

Claremont

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 Covina District

Avocado Heights

Azusa

Charter Oak

Citrus

Claremont

Covina

Diamond Bar

Glendora

Hacienda Heights

Industry

La Puente

La Verne

Pomona

Rowland Heights

San Dimas

South San Jose Hills

Valinda

Vincent

Walnut

West Covina

West Puente Valley

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.

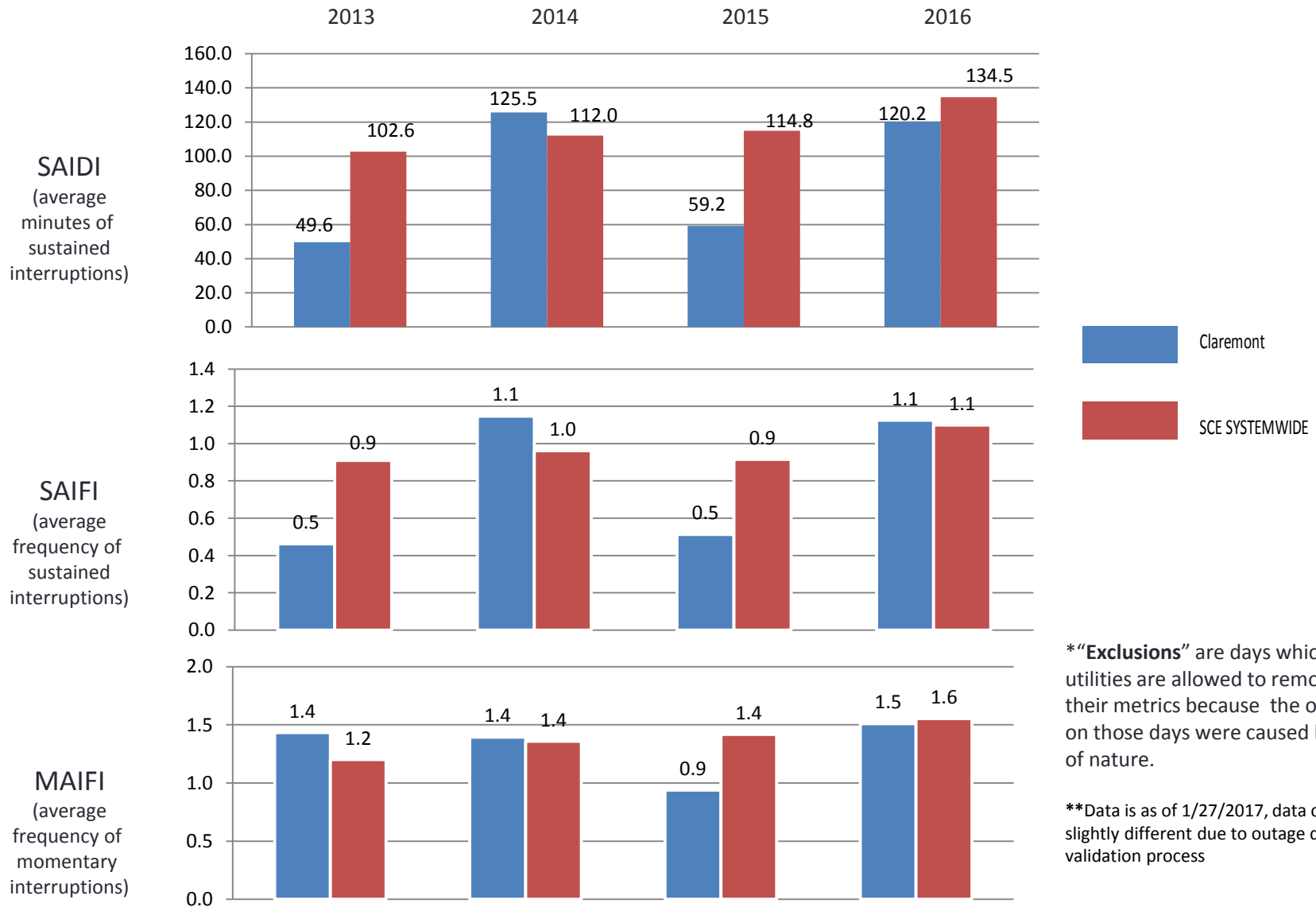
Overview of Claremont

There are 19 circuits that serve Claremont

Circuit Type	Sum of Customers	Circuit Type	Sum of Customers	Circuit Type	Sum of Customers	Circuit Type	Sum of Customers
ALAMOSA(12KV)	2,370						
ANAWALT(12KV)	2,324						
BASELINE(12KV)	1,621						
BIG CONE(12KV)	1,440						
BONTANIC(12KV)	841						
CALSPAR(12KV)	1,760						
FERRARA(12KV)	1,787						
FORBES(12KV)	1,828						
KINGSLEY(12KV)	2,163						
LEHIGH(12KV)	2,614						
LIMBER(12KV)	1,146						
MOAB(4.16KV)	68						
NEIBEL(12KV)	1,205						
PADOVA(12KV)	1,346						
PALMER(12KV)	1,557						
PITZER(12KV)	1,455						
POMALL(12KV)	2,148						
ROCK(12KV)	1,982						
WINTHROP(12KV)	1,842						

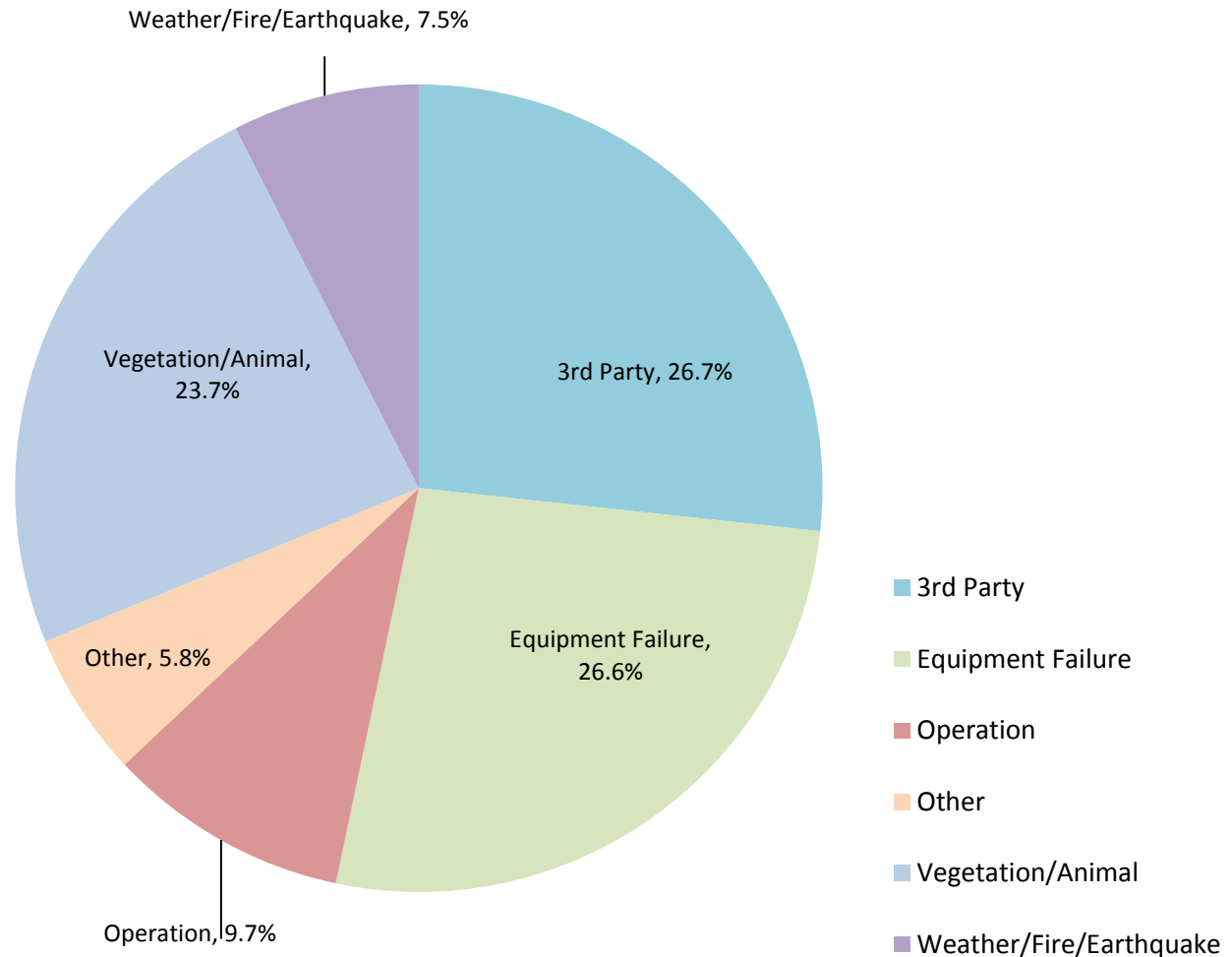
Grand Total 31,497

Reliability History of Circuits Serving Claremont (No Exclusions)



Causes of Repair Outages in Claremont Circuits 2016 YTD

Contributions to SAIDI by Outage Cause

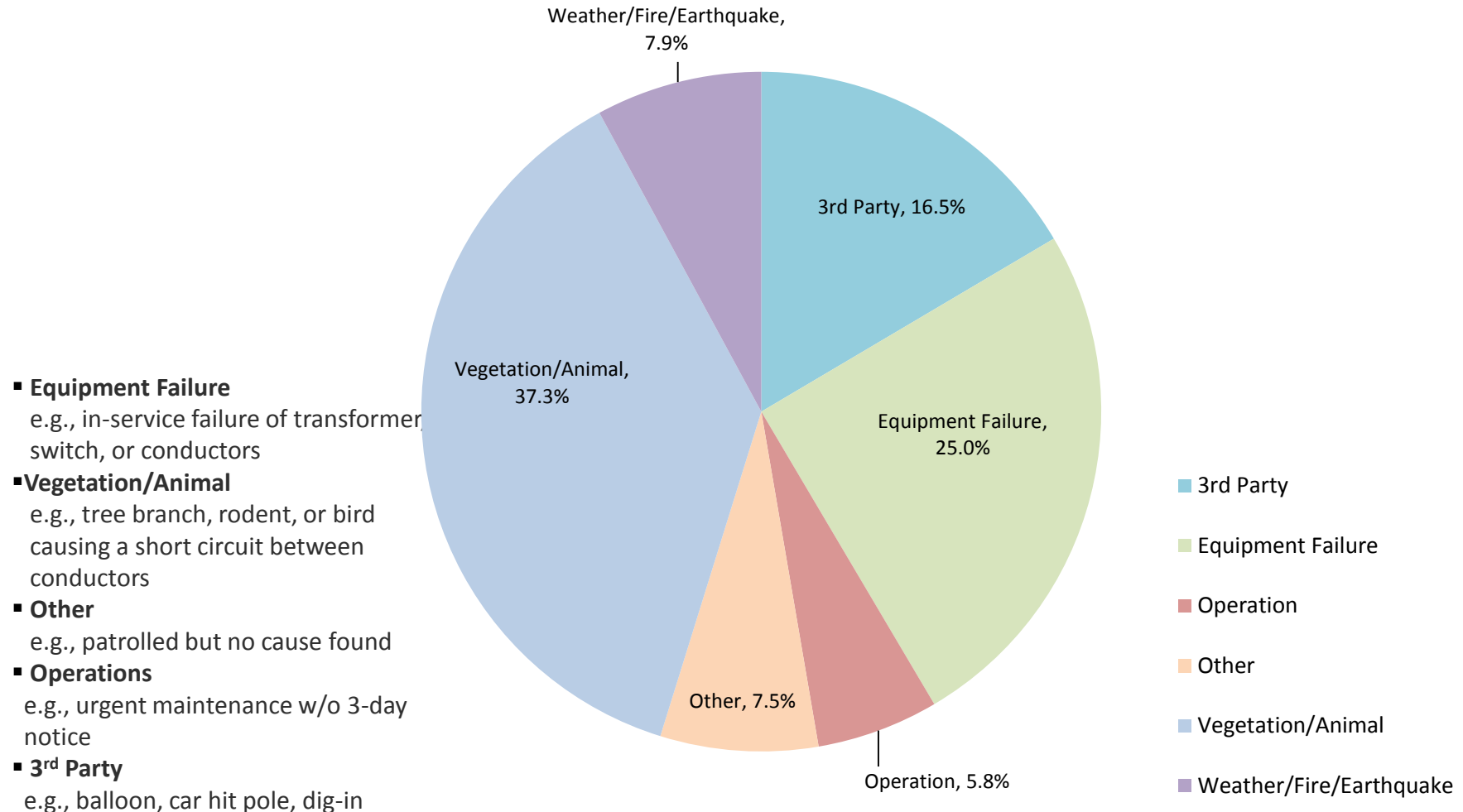


- **Equipment Failure**
e.g., in-service failure of transformer, switch, or conductors
- **Vegetation/Animal**
e.g., tree branch, rodent, or bird causing a short circuit between conductors
- **Other**
e.g., patrolled but no cause found
- **Operations**
e.g., urgent maintenance w/o 3-day notice
- **3rd Party**
e.g., balloon, car hit pole, dig-in

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

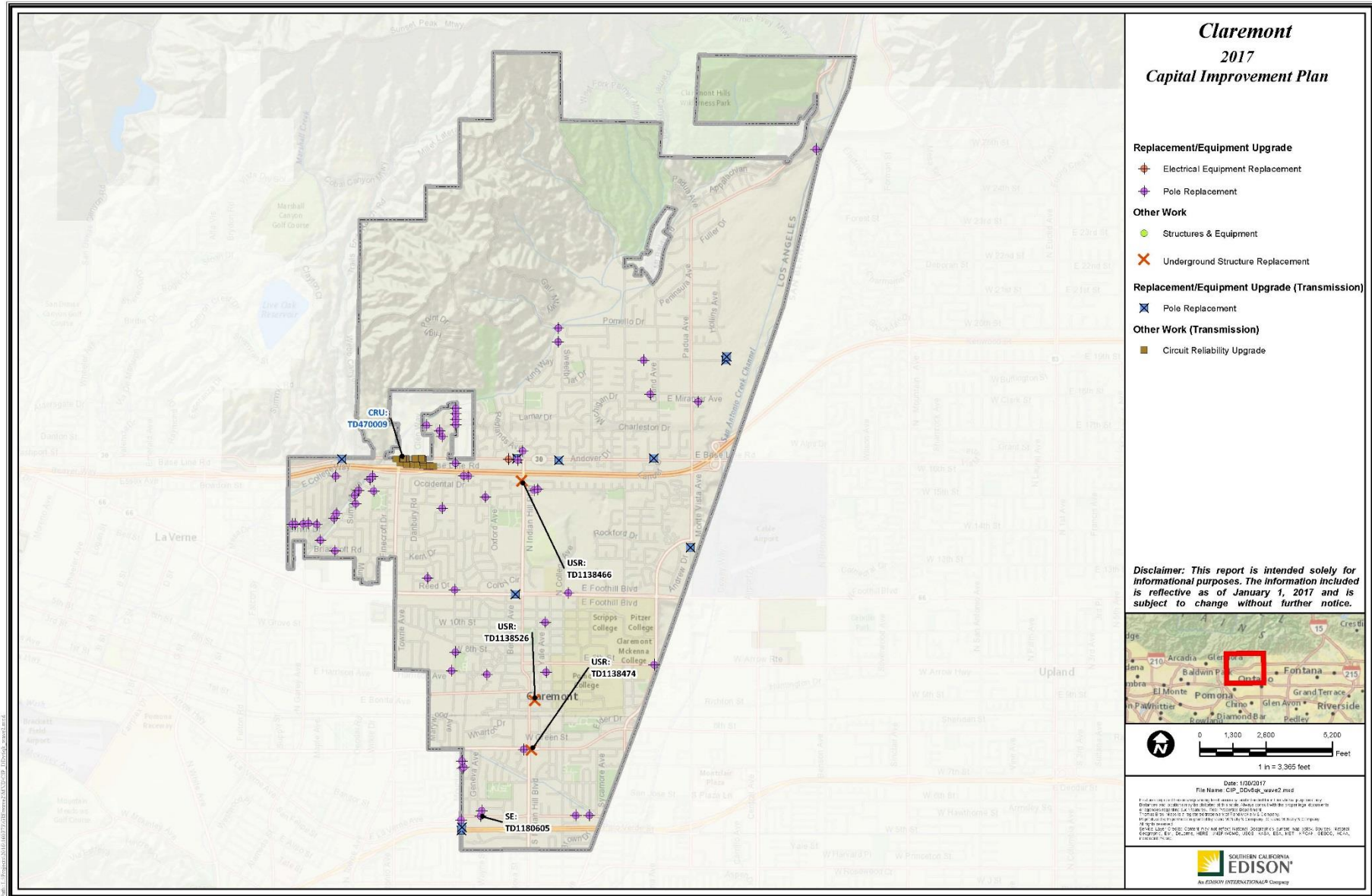
Causes of Repair Outages in Claremont Circuits 2016 YTD

Contributions to SAIFI by Outage Cause



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





Back-up Slides

Reliability Histories of Circuits Serving Claremont

Updated through Year-End 2016

Average Reliability of 19 Circuits Serving Claremont

	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
Claremont	49.6	0.5	1.4	125.5	1.1	1.4	59.2	0.5	0.9	15.6	0.3	0.1	21.2	0.2	0.8	26.5	0.3	0.3	56.9	0.3	0.4	120.2	1.1	1.5
3rd Party	0%	0%	12%	7%	6%	9%	8%	2%	17%	18%	37%	0%	0%	0%	0%	25%	9%	0%	40%	20%	13%	27%	17%	3%
Equipment Failure	54%	35%	9%	69%	63%	21%	42%	21%	17%	43%	32%	0%	40%	32%	37%	40%	35%	0%	11%	4%	9%	27%	25%	22%
Operation	12%	35%	18%	11%	14%	6%	23%	55%	8%	11%	14%	0%	11%	5%	10%	1%	1%	0%	13%	4%	0%	10%	6%	6%
Other	2%	1%	31%	0%	1%	20%	8%	10%	15%	6%	1%	100%	5%	10%	21%	0%	0%	41%	8%	19%	17%	6%	7%	26%
Vegetation/Animal	21%	17%	27%	10%	13%	43%	13%	11%	39%	3%	2%	0%	44%	53%	32%	35%	55%	59%	17%	37%	18%	24%	37%	32%
Weather/Fire/Earthquake	12%	12%	3%	3%	4%	2%	6%	1%	4%	18%	14%	0%	0%	0%	0%	0%	0%	0%	11%	16%	42%	8%	8%	11%
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 Claremont

	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
ALAMOSA(12KV) - Customers: 2,370	101.5	0.3	1.0	154.4	2.0	2.2	93.9	0.1	2.0	0.0	0.0	0.0	7.2	0.0	2.0	0.0	0.0	0.0	63.3	0.2	0.0	70.4	0.2	2.0
3rd Party	0%	0%	0%	33%	40%	10%	0%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	6%	5%	0%	5%	4%	0%
Equipment Failure	81%	47%	1%	3%	1%	0%	89%	66%	0%	0%	0%	0%	82%	42%	0%	0%	0%	0%	0%	0%	0%	8%	6%	0%
Operation	0%	0%	0%	14%	7%	0%	5%	18%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	54%	31%	0%	48%	26%	0%
Other	10%	26%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	18%	58%	50%	0%	0%	0%	0%	0%	0%	2%	8%	50%
Vegetation/Animal	9%	26%	99%	49%	52%	90%	6%	16%	50%	0%	0%	0%	0%	0%	50%	0%	0%	0%	40%	65%	0%	36%	56%	50%
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%
ANAWALT(12KV) - Customers: 2,324	8.9	0.0	1.4	97.5	0.8	1.8	15.2	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd Party	0%	0%	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	0%	0%	0%	89%	95%	44%	60%	19%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Operation	0%	0%	43%	0%	0%	0%	40%	81%	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%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Vegetation/Animal	100%	100%	57%	10%	3%	56%	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%
BASELINE(12KV) - Customers: 1,621	149.1	0.8	2.5	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	16.3	0.4	0.0	0.3	0.0	0.0	18.0	0.2	0.7	34.6	0.6	0.7
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%	60%	100%	100%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	100%	52%	27%	100%
Operation	0%	0%	40%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	1%	0%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	47%	73%	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%
BIG CONE(12KV) - Customers: 1,440	12.0	0.0	0.0	23.4	0.0	3.0	57.1	1.1	1.0	0.0	0.0	0.0	51.8	1.0	1.0	0.3	0.0	0.0	0.0	0.0	0.0	52.1	1.0	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	83%	44%	0%	97%	56%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Operation	4%	18%	0%	3%	44%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	1%	1%	0%
Other	0%	0%	0%	0%	0%	33%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Vegetation/Animal	13%	39%	0%	0%	0%	66%	0%	0%	0%	0%	0%	0%	100%	100%	100%	0%	0%	0%	0%	0%	0%	99%	99%	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%

Reliability Histories for Individual Circuits Serving Claremont

	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
BONTANIC(12KV) - Customers: 841	0.0	0.0	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.5	0.0	0.0	165.2	1.0	0.0	0.0	0.0	0.0	184.6	1.0	0.0
3rd Party	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	89%	98%	0%
Equipment Failure	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	50%	44%	0%	0%	0%	0%	0%	0%	0%	5%	1%	0%
Operation	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%	56%	0%	0%	0%	0%	0%	0%	0%	5%	1%	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%
CALSPAR(12KV) - Customers: 1,760	43.0	0.1	1.0	100.6	2.2	2.0	94.6	0.3	0.0	0.0	0.0	1.0	30.7	0.1	0.0	0.0	0.0	0.0	1.8	0.0	0.0	32.5	0.1	1.0
3rd Party	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	86%	71%	0%	21%	45%	50%	57%	30%	0%	0%	0%	0%	95%	50%	0%	0%	0%	0%	0%	0%	0%	90%	38%	0%
Operation	4%	16%	0%	74%	52%	0%	34%	65%	0%	0%	0%	0%	5%	50%	0%	0%	0%	0%	0%	0%	0%	5%	38%	0%
Other	0%	0%	0%	5%	3%	0%	9%	5%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
Vegetation/Animal	10%	13%	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	6%	23%	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%
FERRARA(12KV) - Customers: 1,787	133.9	0.2	1.0	319.5	2.7	1.9	120.7	0.3	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.1	104.9	0.1	2.0	105.3	0.1	2.2
3rd Party	0%	0%	0%	23%	4%	53%	64%	45%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	42%	54%	0%	35%	42%	0%	32%	30%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Operation	0%	0%	0%	13%	16%	37%	4%	26%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	62%	76%	0%	62%	76%	0%
Other	0%	0%	11%	0%	0%	10%	0%	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%	100%	0%	0%	53%	0%	0%	56%
Vegetation/Animal	58%	46%	89%	29%	38%	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%	38%	24%	47%	38%	24%	44%
FORBES(12KV) - Customers: 1,828	28.1	1.0	2.0	45.2	1.0	1.0	127.6	3.0	0.0	47.9	0.6	0.0	2.0	0.0	0.0	35.6	1.0	1.0	154.1	2.0	0.0	239.5	3.6	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	52%	98%	50%	92%	97%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Operation	1%	1%	0%	3%	1%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	54%	50%	0%	35%	27%	0%
Vegetation/Animal	47%	2%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	100%	100%	100%	46%	50%	0%	45%	55%	100%
Weather/Fire/Earthquake	0%	0%	0%	5%	2%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	18%	0%

Reliability Histories for Individual Circuits Serving Claremont

	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
KINGSLEY(12KV) - Customers: 2,163	17.8	0.1	0.8	332.7	2.9	2.4	0.1	0.0	2.4	102.8	1.3	0.0	34.5	0.1	4.1	140.4	1.8	1.4	0.0	0.0	1.1	277.7	3.1	6.6
3rd Party	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	23%	1%	0%	0%	0%	0%	11%	1%	0%
Equipment Failure	85%	70%	0%	97%	98%	16%	0%	0%	0%	100%	100%	0%	89%	42%	75%	0%	0%	0%	0%	0%	0%	48%	42%	47%
Operation	0%	0%	100%	3%	2%	0%	0%	0%	16%	0%	0%	0%	6%	33%	0%	0%	0%	0%	0%	0%	0%	1%	1%	0%
Other	0%	0%	0%	0%	0%	84%	100%	100%	42%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Vegetation/Animal	15%	30%	0%	0%	0%	0%	0%	0%	42%	0%	0%	0%	5%	25%	25%	77%	99%	100%	0%	0%	100%	40%	57%	53%
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%
LEHIGH(12KV) - Customers: 2,614	19.5	0.9	1.0	167.4	1.1	0.0	70.7	1.0	0.0	11.7	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	11.7	0.0	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%	98%	96%	0%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Operation	92%	100%	3%	0%	1%	0%	38%	94%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	100%
Other	0%	0%	97%	2%	3%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%
Vegetation/Animal	8%	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%	57%	6%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
LIMBER(12KV) - Customers: 1,146	109.6	1.0	1.0	392.4	3.2	2.0	79.8	1.1	2.6	47.8	1.0	0.0	50.8	0.2	0.0	138.2	1.0	1.0	0.0	0.0	0.0	236.8	2.2	1.0
3rd Party	0%	0%	2%	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%	97%	96%	0%	0%	0%	33%	0%	0%	0%	3%	0%	0%	100%	100%	0%	0%	0%	0%	59%	45%	0%
Operation	0%	0%	0%	3%	4%	0%	0%	0%	0%	100%	100%	0%	97%	100%	0%	0%	0%	0%	0%	0%	0%	41%	55%	0%
Other	1%	0%	95%	0%	0%	0%	95%	97%	33%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	100%
Vegetation/Animal	0%	0%	2%	0%	0%	100%	4%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Weather/Fire/Earthquake	99%	100%	0%	0%	0%	0%	1%	0%	34%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
MOAB(4.16KV) - Customers: 68	0.0	0.0	0.0	4.4	0.0	3.0	95.5	1.0	1.0	0.0	0.0	0.0	132.9	1.1	1.0	0.0	0.0	0.0	2264.3	2.1	0.0	2397.3	3.2	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%	100%	100%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	84%	51%	0%	79%	34%	0%
Operation	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	16%	49%	0%	15%	32%	0%
Other	0%	0%	0%	0%	0%	33%	0%	0%	0%	0%	0%	0%	61%	7%	0%	0%	0%	0%	0%	0%	0%	3%	2%	0%
Vegetation/Animal	0%	0%	0%	0%	0%	67%	0%	0%	0%	0%	0%	0%	39%	93%	100%	0%	0%	0%	0%	0%	0%	2%	31%	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%

Reliability Histories for Individual Circuits Serving Claremont

	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
NEIBEL(12KV) - Customers: 1,205	55.7	1.1	2.0	78.7	2.1	1.5	12.5	0.1	2.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	55.7	1.1	0.0	55.7	1.1	1.0
3rd Party	0%	0%	50%	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	85%	93%	0%	84%	49%	36%	39%	15%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Operation	4%	1%	0%	9%	48%	64%	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%	61%	85%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	100%
Vegetation/Animal	6%	5%	0%	7%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	100%	100%	0%
Weather/Fire/Earthquake	5%	1%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PADOVA(12KV) - Customers: 1,346	94.0	0.3	2.0	79.6	0.2	2.0	28.5	0.1	2.0	9.3	0.1	0.0	151.1	1.8	0.3	0.0	0.0	0.0	54.0	0.2	0.0	214.4	2.1	0.3
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	91%	62%	0%	95%	77%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	45%	15%	0%	11%	2%	0%
Operation	0%	0%	0%	5%	23%	0%	1%	8%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%
Other	0%	0%	100%	0%	0%	50%	78%	50%	0%	8%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Vegetation/Animal	9%	38%	0%	0%	0%	50%	21%	42%	100%	92%	97%	0%	100%	100%	100%	0%	0%	0%	54%	82%	0%	88%	98%	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%
PALMER(12KV) - Customers: 1,557	11.6	0.1	2.0	73.6	0.1	1.0	290.1	1.8	1.3	0.0	0.0	0.0	20.4	0.0	0.0	0.0	0.0	0.0	19.3	0.0	0.0	39.7	0.1	0.0
3rd Party	0%	0%	0%	0%	0%	100%	0%	0%	78%	0%	0%	0%	0%	0%	0%	0%	0%	0%	93%	90%	0%	45%	47%	0%
Equipment Failure	0%	0%	0%	100%	99%	0%	56%	44%	22%	0%	0%	0%	94%	55%	0%	0%	0%	0%	7%	10%	0%	51%	31%	0%
Operation	63%	96%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	6%	45%	0%	0%	0%	0%	0%	0%	0%	3%	21%	0%
Other	0%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Vegetation/Animal	37%	4%	50%	0%	1%	0%	44%	56%	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%
PITZER(12KV) - Customers: 1,455	34.8	1.1	3.0	109.8	0.4	0.0	26.9	0.3	1.0	59.8	2.1	0.0	1.8	0.0	0.0	0.0	0.0	0.0	45.6	1.0	1.0	107.1	3.1	1.0
3rd Party	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	56%	67%	0%
Equipment Failure	0%	0%	0%	91%	90%	0%	33%	9%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Operation	5%	1%	33%	0%	0%	0%	67%	91%	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%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Vegetation/Animal	95%	99%	67%	2%	7%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	2%	1%	0%
Weather/Fire/Earthquake	0%	0%	0%	7%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	100%	43%	32%	100%

Reliability Histories for Individual Circuits Serving Claremont

	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
POMALL(12KV) - Customers: 2,148	52.8	1.0	0.0	86.6	0.7	1.4	4.5	0.0	0.0	0.0	0.0	0.0	45.9	1.0	0.0	30.7	1.0	0.0	0.0	0.0	0.0	76.6	2.0	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	0%	0%	0%	11%	1%	0%	92%	76%	0%	0%	0%	0%	100%	100%	0%	100%	100%	0%	0%	0%	0%	100%	100%	0%
Operation	99%	99%	0%	42%	6%	0%	8%	24%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other	1%	1%	0%	0%	0%	73%	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%	48%	92%	27%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
ROCK(12KV) - Customers: 1,982	21.4	0.1	2.0	17.3	0.0	2.0	4.1	0.0	0.0	2.2	0.0	0.0	0.0	0.0	3.6	58.8	0.1	0.0	0.0	0.0	0.0	61.1	0.1	3.6
3rd Party	0%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	55%	32%	0%	0%	1%	50%	90%	35%	0%	0%	0%	0%	0%	0%	45%	94%	64%	0%	0%	0%	0%	91%	51%	45%
Operation	4%	36%	50%	100%	99%	0%	7%	61%	0%	0%	0%	0%	0%	0%	0%	6%	36%	0%	0%	0%	0%	6%	29%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	27%	0%	0%	0%	0%	0%	0%	0%	0%	27%
Vegetation/Animal	40%	33%	0%	0%	0%	50%	4%	4%	0%	100%	100%	0%	0%	0%	27%	0%	0%	0%	0%	0%	0%	4%	19%	27%
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%
WINTHROP(12KV) - Customers: 1,842	1.7	0.0	2.8	22.5	0.0	0.0	6.6	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	400.8	1.1	1.8	401.3	1.1	2.8
3rd Party	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	92%	95%	46%	92%	94%	30%
Equipment Failure	0%	0%	0%	79%	74%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Operation	23%	21%	0%	19%	25%	0%	14%	36%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	100%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	35%
Vegetation/Animal	77%	79%	0%	0%	0%	0%	86%	64%	0%	100%	100%	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%	8%	5%	54%	8%	5%	35%