

# Circuit Reliability Review

San Bernardino 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 <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 Redlands District

Banning

Beaumont

**Box Springs Mountain** 

Calimesa

Cherry Valley

Colton

**Grand Terrace** 

Highgrove

Highland

Loma Linda

Mentone

Muscoy

Redlands

Rialto

Riverside

San Bernardino

Yucaipa

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

		20	12			20:	13			20	14			20	15			20	16	
	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.

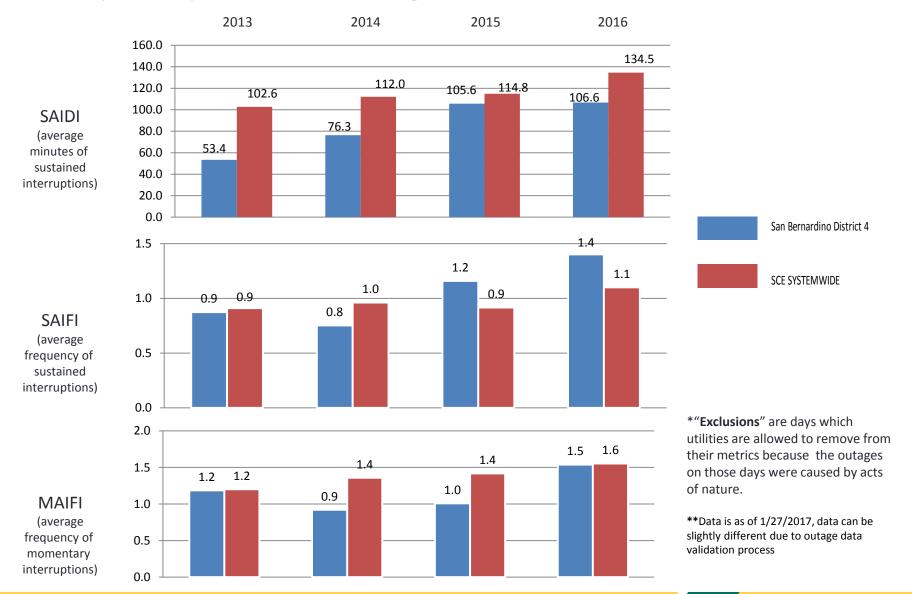
<sup>\*\*</sup>In the columns showing "Rank," lower numbers indicate poorer performance.

## Overview of San Bernardino District 4 There are 23 circuits that serve San Bernardino District 4

Circuit Type	Sum of Customers	Circuit Type	Sum of Customers	Circuit Type	Sum of Customers	Circuit Type	Sum of Customers
ALICIA(12KV)	2,000						
ATLAS(12KV)	2,330						
AVERY(12KV)	2,593						
BANDERA(12KV)	1,446						
BUTTERFIELD(12KV)	1,442						
CABLE(12KV)	2,030						
CALABASH(12KV)	79						
CLUTCH(12KV)	1,788						
CONGO(12KV)	1,815						
DESSAU(12KV)	1,640						
GAYLORD(12KV)	2,115						
HAZEL(12KV)	928						
KADOTA(12KV)	2,787						
MARBUCK(12KV)	2,347						
MOSEBROOK(12KV)	1,273						
OTTER(12KV)	2,497						
PATE(12KV)	2,371						
POMALL(12KV)	2,148						
SAMPRAS(12KV)	90						
TELEPHONE(12KV)	1,726						
THOR(12KV)	1,843						
TILE(12KV)	1,926						
TITUS(12KV)	1,256						

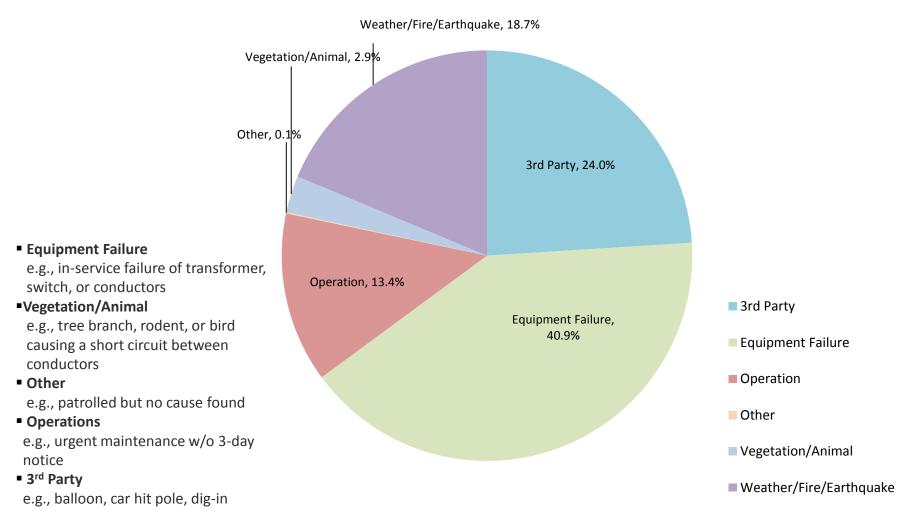
**Grand Total** 40,470

#### Reliability History of Circuits Serving San Bernardino District 4 (No Exclusions)



## Causes of Repair Outages in San Bernardino District 4 Circuits 2016 YTD

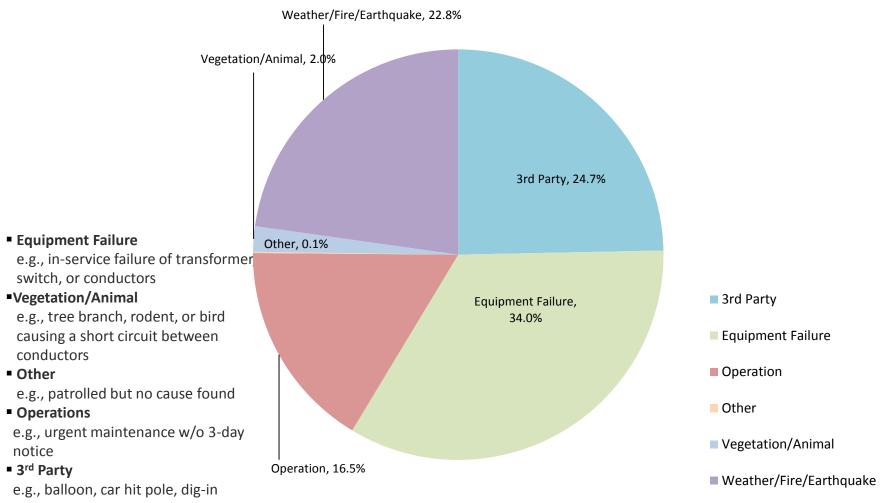
#### **Contributions to SAIDI by Outage Cause**



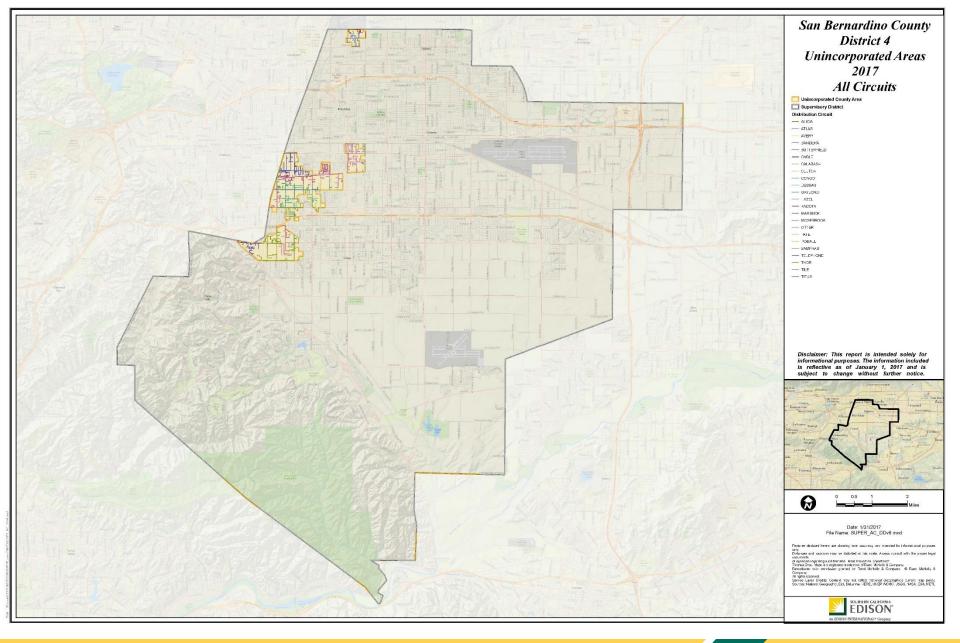
**SAIDI** = the cumulative amount of time the average customer is interrupted by "sustained" outages each year.

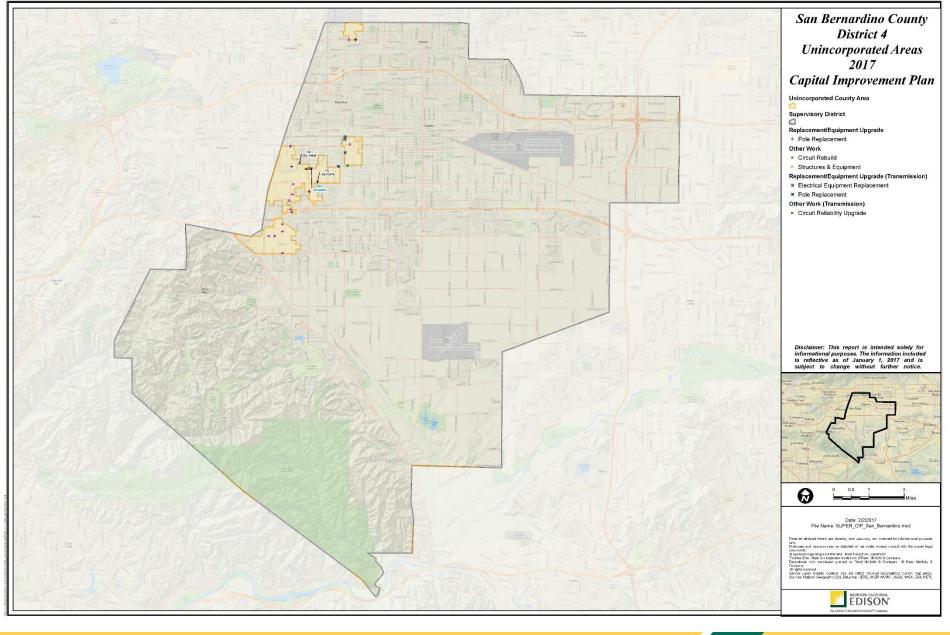
# Causes of Repair Outages in San Bernardino District 4 Circuits 2016 YTD

**Contributions to SAIFI by Outage Cause** 



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





## **Back-up Slides**

Reliability Histories of Circuits Serving San Bernardino District 4

**Updated through Year-End 2016** 

#### Average Reliability of 23 Circuits Serving San Bernardino District 4

		2013	•		2014			2015		1st	Qtr 20.	16	2nd	d Qtr 2	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
San Bernardino District 4	53.4	0.9	1.2	76.3	0.8	0.9	105.6	1.2	1.0	8.8	0.2	0.2	29.6	0.4	0.5	39.6	0.4	0.4	28.6	0.4	0.4	106.6	1.4	1.5
3rd Party	38%	38%	35%	22%	21%	19%	9%	14%	38%	22%	9%	30%	23%	32%	38%	37%	38%	53%	8%	9%	16%	24%	25%	35%
Equipment Failure	36%	36%	14%	37%	27%	22%	55%	42%	22%	27%	21%	12%	44%	33%	0%	41%	49%	47%	42%	25%	13%	41%	34%	18%
Operation	22%	20%	9%	17%	17%	7%	17%	28%	0%	3%	1%	0%	21%	26%	10%	15%	6%	0%	7%	23%	0%	13%	16%	3%
Other	0%	0%	24%	6%	14%	17%	4%	5%	10%	0%	0%	58%	1%	0%	13%	0%	0%	0%	0%	0%	38%	0%	0%	22%
Vegetation/Animal	1%	0%	7%	6%	9%	30%	8%	5%	9%	0%	0%	0%	1%	0%	38%	7%	6%	0%	0%	0%	8%	3%	2%	14%
Weather/Fire/Earthquake	3%	5%	10%	11%	12%	6%	7%	6%	21%	49%	69%	0%	11%	9%	0%	0%	0%	0%	43%	42%	26%	19%	23%	7%
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.

	2013			2014			2015		15	t Qtr 201	!6	2n	d Qtr 20.	16	3r	d Qtr 201	6	4th	Qtr 201	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
ALICIA(12KV) - Customers: 2,000	193.8	3.1	0.1	30.6	0.2	2.0	108.7	0.7	0.7	0.0	0.0	0.0	10.1	1.3	0.0	0.1	0.0	0.0	44.7	1.3	2.5	54.9	2.6	2.5
3rd Party	49%	33%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	51%	67%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	57%	3%	0%	46%	2%	0%
Operation	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	100%	100%	0%	28%	96%	0%	41%	98%	0%
Other	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	51%	0%	0%	51%
Vegetation/Animal	0%	0%	0%	0%	0%	50%	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%	15%	0%	49%	12%	0%	49%
ATLAS(12KV) - Customers: 2,330	19.0	1.0	1.0	9.6	0.1	0.0	421.2	5.8	2.0	69.4	2.0	0.0	73.5	0.2	0.9	2.3	0.0	1.0	0.0	0.0	0.0	145.2	2.2	1.9
3rd Party	0%	0%	0%	6%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	53%
Equipment Failure	4%	0%	0%	0%	0%	0%	45%	48%	50%	3%	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	3%	0%	0%
Operation	75%	98%	0%	15%	16%	0%	6%	18%	0%	0%	0%	0%	100%	100%	100%	0%	0%	0%	0%	0%	0%	51%	8%	47%
Other	0%	0%	100%	0%	0%	0%	15%	17%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Vegetation/Animal	21%	1%	0%	0%	0%	0%	34%	17%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Weather/Fire/Earthquake	0%	0%	0%	79%	81%	0%	0%	0%	0%	97%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	46%	91%	0%
AVERY(12KV) - Customers: 2,593	79.2	1.0	2.0	0.0	0.0	2.0	3.0	0.0	1.0	0.0	0.0	0.0	0.7	0.0	1.0	0.0	0.0	0.0	78.8	1.1	1.9	79.5	1.1	2.9
3rd Party	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	52%	1%	1%	34%
Equipment Failure	0%	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%	0%
Operation	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	11%	6%	0%	11%	6%	0%
Other	0%	0%	100%	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%	50%	0%	0%	100%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	34%
Weather/Fire/Earthquake	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	88%	94%	48%	87%	93%	32%
BANDERA(12KV) - Customers: 1,446	8.4	0.1	0.0	49.3	1.0	0.0	59.2	1.4	1.0	44.8	0.4	0.0	1.4	0.0	1.0	98.3	0.6	1.0	60.6	1.0	0.0	205.0	2.0	2.0
3rd Party	0%	0%	0%	80%	99%	0%	0%	0%	100%	100%	100%	0%	0%	0%	0%	38%	77%	100%	100%	100%	0%	70%	93%	50%
Equipment Failure	100%	100%	0%	20%	1%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	57%	21%	0%	0%	0%	0%	28%	6%	0%
Operation	0%	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	4%	2%	0%	0%	0%	0%	2%	1%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	50%
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%

	2013			2014			2015		15	t Qtr 201	6	2n	d Qtr 201	16	3r	d Qtr 201	6	4tl	h Qtr 201	6		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
BUTTERFIELD(12KV) - Customers: 1,442	23.3	0.2	3.0	13.8	0.1	1.0	107.8	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.5	0.4	0.0	0.0	0.0	0.0	50.5	0.4	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	17%	4%	67%	0%	0%	0%	95%	93%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	1%	0%	0%
Operation	65%	68%	0%	49%	48%	0%	5%	7%	0%	0%	0%	0%	0%	0%	0%	99%	100%	0%	0%	0%	0%	99%	100%	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	18%	28%	33%	51%	52%	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%
CABLE(12KV) - Customers: 2,030	133.8	1.1	2.0	130.6	1.1	0.0	173.7	2.1	1.0	2.3	0.0	0.0	0.0	0.0	0.0	139.1	1.0	1.6	2.0	0.0	0.0	143.4	1.1	1.6
3rd Party	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	69%	91%	0%	100%	100%	0%	98%	96%	0%	0%	0%	0%	0%	0%	0%	59%	96%	100%	0%	0%	0%	57%	94%	100%
Operation	31%	9%	50%	0%	0%	0%	1%	2%	0%	100%	100%	0%	0%	0%	0%	41%	4%	0%	0%	0%	0%	41%	5%	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	0%	0%	0%	0%	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	1%	2%	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%
CALABASH(12KV) - Customers: 79	143.0	1.1	1.0	47.3	1.0	0.0	75.0	1.0	1.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1
3rd Party	0%	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	100%	100%	100%	100%	100%	0%	0%	0%	100%	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%	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%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
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%
CLUTCH(12KV) - Customers: 1,788	46.7	1.8	0.0	360.3	4.1	1.4	131.4	0.9	2.9	10.0	0.0	0.0	13.1	0.6	1.0	6.0	0.0	1.0	1.2	0.0	0.0	30.3	0.6	2.0
3rd Party	0%	0%	0%	32%	24%	32%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	50%
Equipment Failure	0%	0%	0%	9%	2%	68%	99%	95%	65%	100%	100%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	53%	3%	0%
Operation	20%	44%	0%	16%	25%	0%	1%	5%	0%	0%	0%	0%	75%	97%	0%	0%	0%	0%	100%	100%	0%	36%	94%	0%
Other	0%	0%	0%	20%	25%	0%	0%	0%	35%	0%	0%	0%	25%	3%	0%	0%	0%	0%	0%	0%	0%	11%	3%	0%
Vegetation/Animal	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	50%
Weather/Fire/Earthquake	80%	56%	0%	22%	25%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

	2013			2014			2015		15	t Qtr 201	6	2n	d Qtr 20.	16	3r	d Qtr 201	6	4th	Qtr 20:	16		2016		
	SAIDI	SAIFI	MAIFI	SAIDI	SAIFI	MAIFI	SAIDI	SAIFI	MAIFI	SAIDI	SAIFI	MAIFI	SAIDI	SAIFI I	MAIFI	SAIDI	SAIFI I	MAIFI	SAIDI	SAIFI	MAIFI	SAIDI	SAIFI	MAIF
CONGO(12KV) - Customers: 1,815	14.7	0.1	2.0	20.4	0.0	1.0	24.2	0.4	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.2	0.1	1.0	10.2	0.1	1.0
3rd Party	0%	0%	50%	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	0%	0%	0%	85%	88%	0%	30%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Operation	58%	51%	0%	15%	12%	0%	70%	95%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	100%	100%	0%
Other	0%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%
Vegetation/Animal	42%	49%	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%
DESSAU(12KV) - Customers: 1,640	22.5	1.1	1.0	112.4	1.1	0.0	126.3	2.1	2.0	0.0	0.0	0.0	78.9	1.0	0.0	78.6	1.0	0.0	0.0	0.0	0.0	157.6	2.0	0.0
3rd Party	80%	94%	100%	68%	93%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	99%	99%	0%	0%	0%	0%	49%	50%	0%
Equipment Failure	0%	0%	0%	25%	5%	0%	12%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Operation	20%	6%	0%	7%	2%	0%	24%	45%	4%	0%	0%	0%	0%	0%	0%	1%	1%	0%	0%	0%	0%	1%	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	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%	64%	52%	96%	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	50%	50%	0%
GAYLORD(12KV) - Customers: 2,115	52.6	1.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	57.2	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	57.2	1.4	0.0
3rd Party	0%	0%	80%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	64%	97%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	93%	73%	0%	0%	0%	0%	0%	0%	0%	93%	73%	0%
Operation	36%	3%	20%	0%	0%	0%	0%	0%	0%	0%	0%	0%	7%	27%	0%	0%	0%	0%	0%	0%	0%	7%	27%	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%
HAZEL(12KV) - Customers: 928	231.5	0.8	1.1	304.3	1.2	0.5	192.4	1.3	0.7	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%	95%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	40%	47%	5%	100%	100%	100%	50%	17%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Operation	60%	53%	0%	0%	0%	0%	2%	7%	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	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%	48%	76%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

	2013			2014			2015		<b>1</b> s	t Qtr 201	6	2n	d Qtr 20.	16	3r	d Qtr 201	6	4th	Qtr 20.	16		2016		
	SAIDI	SAIFI I	MAIFI	SAIDI	SAIFI I	MAIFI	SAIDI	SAIFI	MAIFI	SAIDI	SAIFI	MAIFI	SAIDI	SAIFI	MAIFI	SAIDI	SAIFI	MAIFI	SAIDI	SAIFI	MAIFI	SAIDI	SAIFI	MAIF
KADOTA(12KV) - Customers: 2,787	18.7	0.1	0.0	73.7	1.1	0.0	66.7	1.1	1.3	1.2	0.0	1.0	137.4	2.1	1.9	8.8	0.0	0.0	91.1	0.7	0.8	238.5	2.8	3.7
3rd Party	0%	0%	0%	0%	0%	0%	84%	94%	100%	0%	0%	0%	70%	97%	100%	0%	0%	0%	0%	0%	0%	40%	72%	53%
Equipment Failure	100%	100%	0%	3%	0%	0%	3%	1%	0%	85%	86%	0%	23%	2%	0%	93%	82%	0%	100%	100%	100%	55%	27%	21%
Operation	0%	0%	0%	88%	91%	0%	0%	0%	0%	0%	0%	0%	7%	1%	0%	7%	18%	0%	0%	0%	0%	4%	1%	0%
Other	0%	0%	0%	9%	9%	0%	10%	3%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	27%
Vegetation/Animal	0%	0%	0%	0%	0%	0%	3%	2%	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%	15%	14%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
MARBUCK(12KV) - Customers: 2,347	137.4	2.0	3.0	0.0	0.0	0.0	128.8	1.2	1.9	0.0	0.0	0.0	8.3	0.0	0.0	14.9	0.2	0.2	87.6	1.1	0.0	110.8	1.3	0.2
3rd Party	98%	100%	33%	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%	33%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	99%	94%	100%	0%	0%	0%	21%	14%	100%
Operation	0%	0%	0%	0%	0%	0%	71%	95%	0%	0%	0%	0%	0%	0%	0%	1%	6%	0%	0%	0%	0%	0%	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%	33%	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%	29%	5%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	79%	86%	0%
MOSEBROOK(12KV) - Customers: 1,273	0.0	0.0	0.0	98.0	1.1	2.0	9.3	1.0	1.0	0.0	0.0	0.0	42.9	0.2	2.0	8.5	0.1	1.0	0.0	0.0	0.0	51.3	0.3	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	0%	0%	0%	10%	90%	50%	100%	100%	100%	0%	0%	0%	86%	47%	0%	0%	0%	100%	0%	0%	0%	72%	37%	33%
Operation	0%	0%	0%	90%	10%	0%	0%	0%	0%	0%	0%	0%	14%	53%	0%	100%	100%	0%	0%	0%	0%	28%	63%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	33%
Vegetation/Animal	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	33%
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%
OTTER(12KV) - Customers: 2,497	26.7	0.9	0.0	6.1	0.0	1.9	31.0	1.0	1.0	11.8	0.0	1.0	0.0	0.0	0.0	38.3	0.4	0.0	0.0	0.0	0.0	50.1	0.4	1.0
3rd Party	100%	100%	0%	100%	100%	52%	84%	99%	100%	45%	50%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	11%	2%	100%
Equipment Failure	0%	0%	0%	0%	0%	0%	16%	1%	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%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	48%	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%	100%	100%	0%	0%	0%	0%	76%	95%	0%
Weather/Fire/Earthquake	0%	0%	0%	0%	0%	0%	0%	0%	0%	55%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	13%	2%	0%

	2013			2014			2015		<b>1</b> s	t Qtr 201	16	2n	d Qtr 201	16	3r	d Qtr 201	6	4th	Qtr 201	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
PATE(12KV) - Customers: 2,371	0.0	0.0	2.0	80.4	1.1	0.0	187.1	1.1	0.7	28.7	0.6	0.4	0.0	0.0	1.0	5.0	0.1	0.0	0.0	0.0	0.0	33.7	0.6	1.4
3rd Party	0%	0%	0%	0%	0%	0%	6%	2%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	70%
Equipment Failure	0%	0%	0%	0%	0%	0%	89%	93%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	85%	90%	30%
Operation	0%	0%	0%	4%	1%	0%	5%	4%	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	0%	0%	0%	96%	99%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	15%	10%	0%
Weather/Fire/Earthquake	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
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%
SAMPRAS(12KV) - Customers: 90	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.1	1.0	1.0	0.0	0.0	0.0	19.1	1.0	1.0
3rd Party	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	100%	0%	0%	0%	100%	100%	100%
Equipment Failure	0%	0%	0%	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%	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	0%	0%	100%	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%
TELEPHONE(12KV) - Customers: 1,726	57.1	0.1	1.0	125.9	0.9	0.2	48.6	0.1	0.0	0.0	0.0	0.0	25.6	0.1	0.0	67.8	0.8	1.0	7.0	0.0	0.0	100.4	0.9	1.0
3rd Party	17%	23%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	76%	96%	100%	0%	0%	0%	52%	86%	100%
Equipment Failure	77%	59%	0%	97%	96%	100%	97%	80%	0%	0%	0%	0%	67%	24%	0%	23%	2%	0%	96%	50%	0%	40%	5%	0%
Operation	6%	18%	0%	1%	2%	0%	3%	20%	0%	0%	0%	0%	9%	32%	0%	0%	2%	0%	4%	50%	0%	3%	5%	0%
Other	0%	0%	0%	2%	2%	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%	24%	45%	0%	0%	0%	0%	0%	0%	0%	6%	4%	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%

	2013			2014			2015		<b>1</b> s	t Qtr 201	16	2n	d Qtr 201	16	3r	d Qtr 201	6	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	MAII
THOR(12KV) - Customers: 1.843	0.3	0.0	0.0	36.5	0.2	1.0	130.7	1.8	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.
3rd Party	0%	0%	0%	57%	14%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		09
Equipment Failure	100%	100%	0%	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%	8%	14%	0%	100%	100%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0
Other	0%	0%	0%	35%	72%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	09
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%	09
TLE(12KV) - Customers: 1,926	46.2	2.1	0.6	28.4	1.1	3.2	0.3	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	301.1	3.0	2.1	90.0	1.0	0.0	391.2	4.0	4.
3rd Party	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	55%	44%	33%	0%	0%	0%	43%	33%	17
Equipment Failure	68%	95%	100%	75%	8%	29%	0%	0%	0%	0%	0%	0%	0%	0%	0%	41%	52%	67%	100%	100%	0%	55%	64%	35
Operation	32%	5%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	4%	4%	0%	0%	0%	0%	3%	3%	0
Other	0%	0%	0%	25%	92%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	249
Vegetation/Animal	0%	0%	0%	0%	0%	71%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	24
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
ITUS(12KV) - Customers: 1,256	36.8	0.2	1.0	339.1	2.2	2.7	375.3	1.6	0.0	0.0	0.0	0.0	95.6	1.0	0.0	0.0	0.0	0.0	87.5	2.0	3.0	183.1	3.0	3.
3rd Party	0%	0%	0%	49%	46%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0'
Equipment Failure	97%	52%	100%	32%	47%	65%	100%	100%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	52%	34%	0
Operation	3%	48%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	11%	50%	0%	5%	33%	0
Other	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	67%	0%	0%	679
Vegetation/Animal	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	33%	0%	0%	33
Weather/Fire/Earthquake	0%	0%	0%	19%	7%	35%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	89%	50%	0%	42%	33%	09