



# Circuit Reliability Review

## **Redondo Beach**

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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.

## Cities in the South Bay District

Alondra Park  
Del Aire  
El Segundo  
Gardena  
Hawthorne  
Hermosa Beach  
Inglewood  
Ladera Heights  
Lawndale  
Lennox  
Lomita  
Los Angeles  
Manhattan Beach  
Palos Verdes Estates  
Rancho Palos Verdes  
**Redondo Beach**  
Rolling Hills

Rolling Hills Estates  
Torrance  
View Park-Windsor Hills  
West Athens  
Westmont

# 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
<b>SCE SystemWide</b>	<b>108.13</b>		<b>0.89</b>		<b>102.61</b>		<b>0.91</b>		<b>112.00</b>		<b>0.96</b>		<b>114.83</b>		<b>0.92</b>		<b>134.48</b>		<b>1.10</b>	

\*\*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.

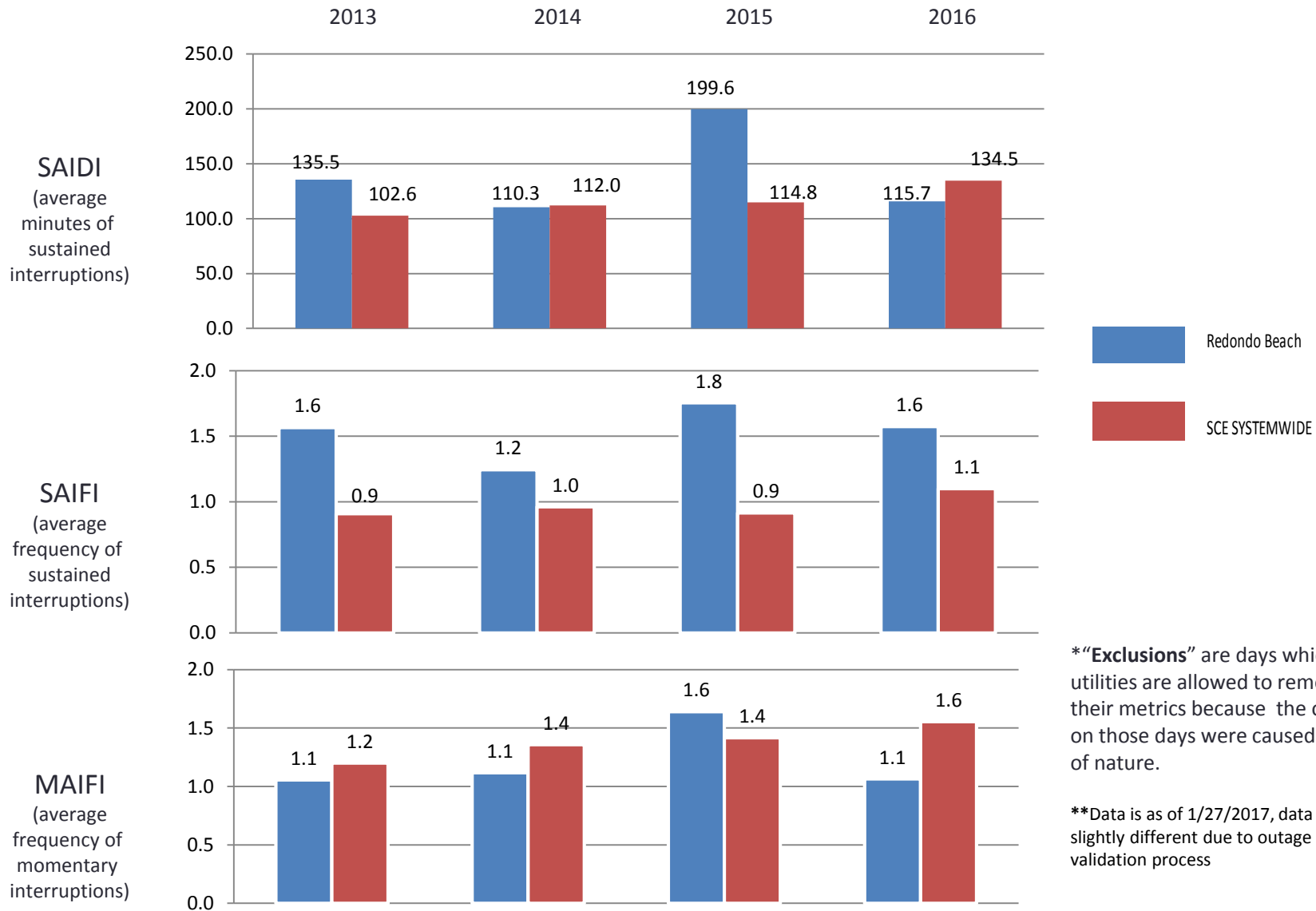
\*\*In the columns showing "Rank," lower numbers indicate poorer performance.

# Overview of Redondo Beach

## There are 49 circuits that serve Redondo Beach

Circuit Type	Sum of Customers	Circuit Type	Sum of Customers	Circuit Type	Sum of Customers	Circuit Type	Sum of Customers
ADDIS(16KV)	3,124	MORGAN(4.16KV)	959				
ALBACORE(16KV)	1,756	NELSON(16KV)	3,436				
ANGELINA(16KV)	1,364	OPAL(4.16KV)	729				
ARVANA(16KV)	3,360	PENGUIN(16KV)	455				
AZALIA(4.16KV)	767	PISTON(16KV)	4,348				
AZURE(4.16KV)	961	PRUITT(4.16KV)	332				
BERYL(4.16KV)	833	PUEBLO(16KV)	1,032				
BLOODSTONE(4.16KV)	804	PULLMAN(4.16KV)	1,872				
BLOSSOM(16KV)	1,701	SAGO(16KV)	3,703				
BLUEGILL(16KV)	3,197	SALMON(16KV)	3,803				
BORDEN(4.16KV)	624	SELVA(16KV)	1,965				
CAMINO REAL(4.16KV)	771	SPINEL(4.16KV)	334				
CARNELIAN(16KV)	4,902	STRAWBERRY(4.16KV)	500				
CATALINA(4.16KV)	931	TALENT(4.16KV)	543				
CHICO(16KV)	2,996	TENOR(4.16KV)	1,008				
CLEO(4.16KV)	1,075	TOURMALINE(4.16KV)	896				
CLIFTON(4.16KV)	982	TRANSPLANT(4.16KV)	1,497				
COMO(4.16KV)	1,016	VALVE(16KV)	3,364				
CORAL(4.16KV)	298	VILLA(4.16KV)	1,450				
CYLINDER(16KV)	1,392						
EL PASEO(4.16KV)	919						
FLYWHEEL(16KV)	1,565						
FREEMAN(4.16KV)	1,231						
GEM(4.16KV)	667						
GRAVEYARD(16KV)	1,395						
HARKNESS(4.16KV)	845						
HERMOSA(4.16KV)	1,205						
HILLSIDE(16KV)	438						
JANICE(4.16KV)	1,109						
KING(16KV)	3,821						
<b>Grand Total</b>	<b>78,275</b>						

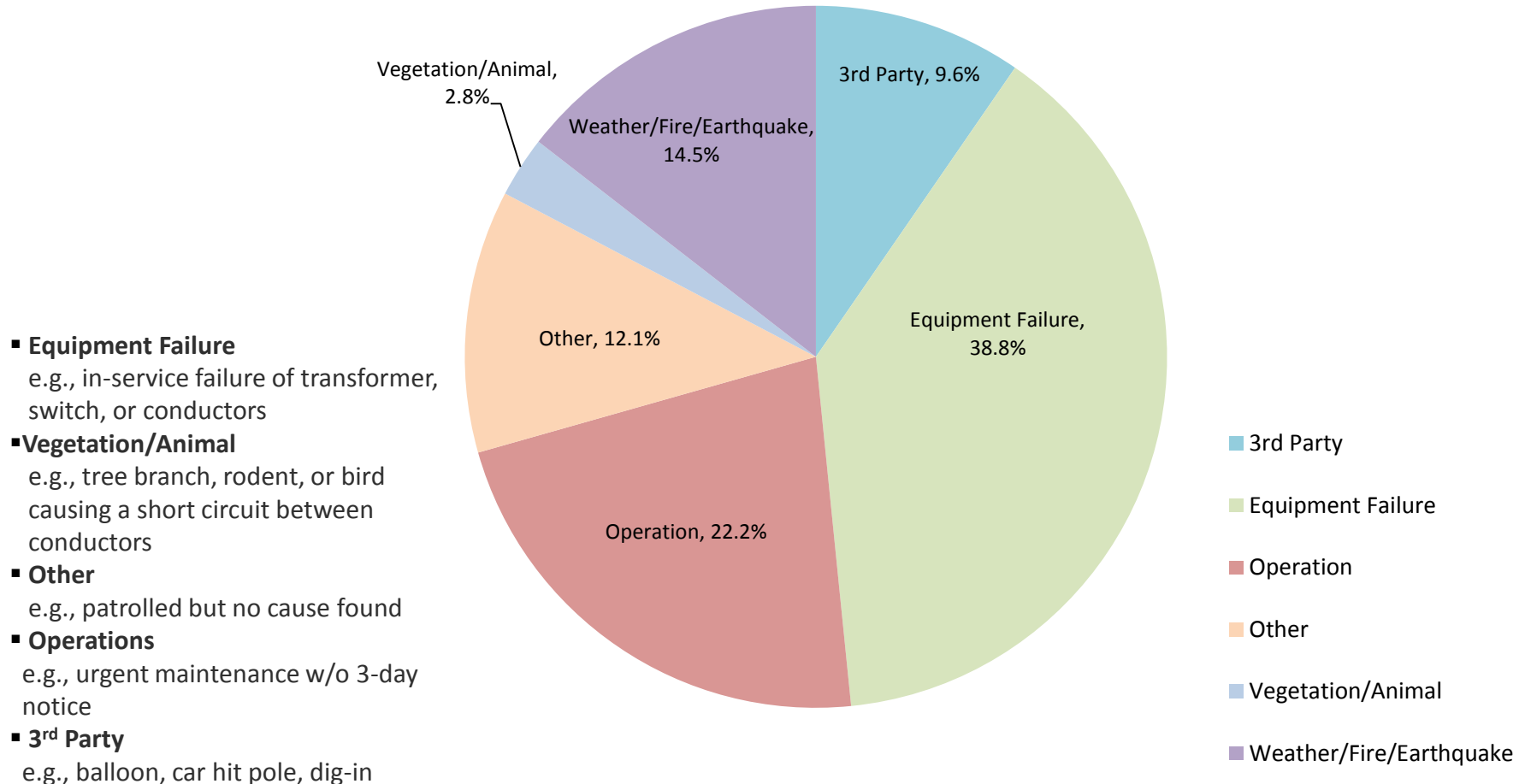
# Reliability History of Circuits Serving Redondo Beach (No Exclusions)





# Causes of Repair Outages in Redondo Beach Circuits 2016 YTD

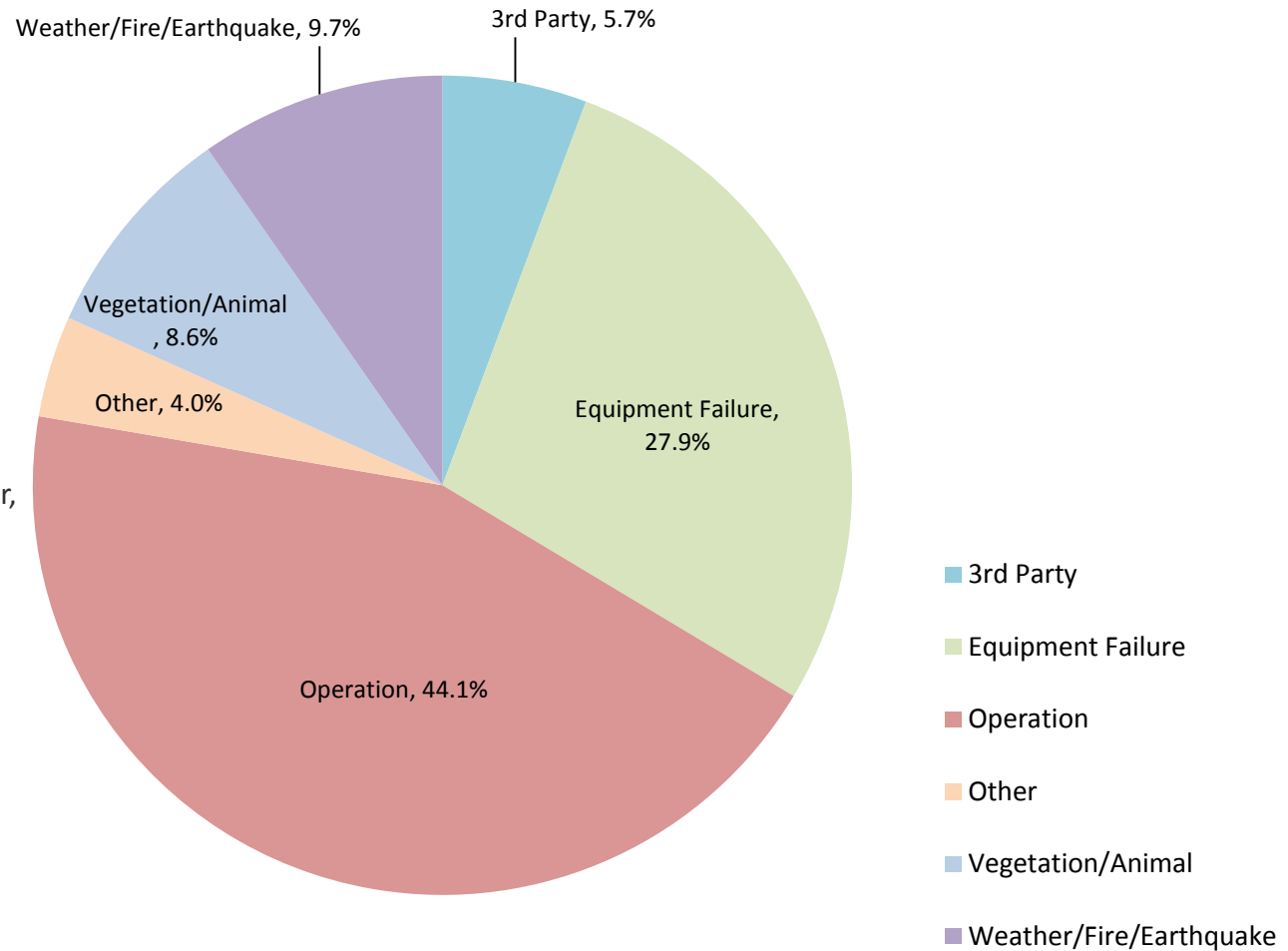
## Contributions to SAIDI by Outage Cause



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

# Causes of Repair Outages in Redondo Beach Circuits 2016 YTD

## Contributions to SAIFI by Outage Cause



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

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



## Redondo Beach 2017 Capital Improvement Plan

### Replacement/Equipment Upgrade

✦ Pole Replacement

### Other Work

● Circuit Public Safety Upgrade

● Circuit Rebuild

✕ Underground Structure Replacement

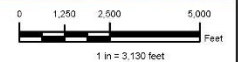
### Replacement/Equipment Upgrade (Transmission)

✕ Electrical Equipment Replacement

✕ Misc.

✕ Pole Replacement

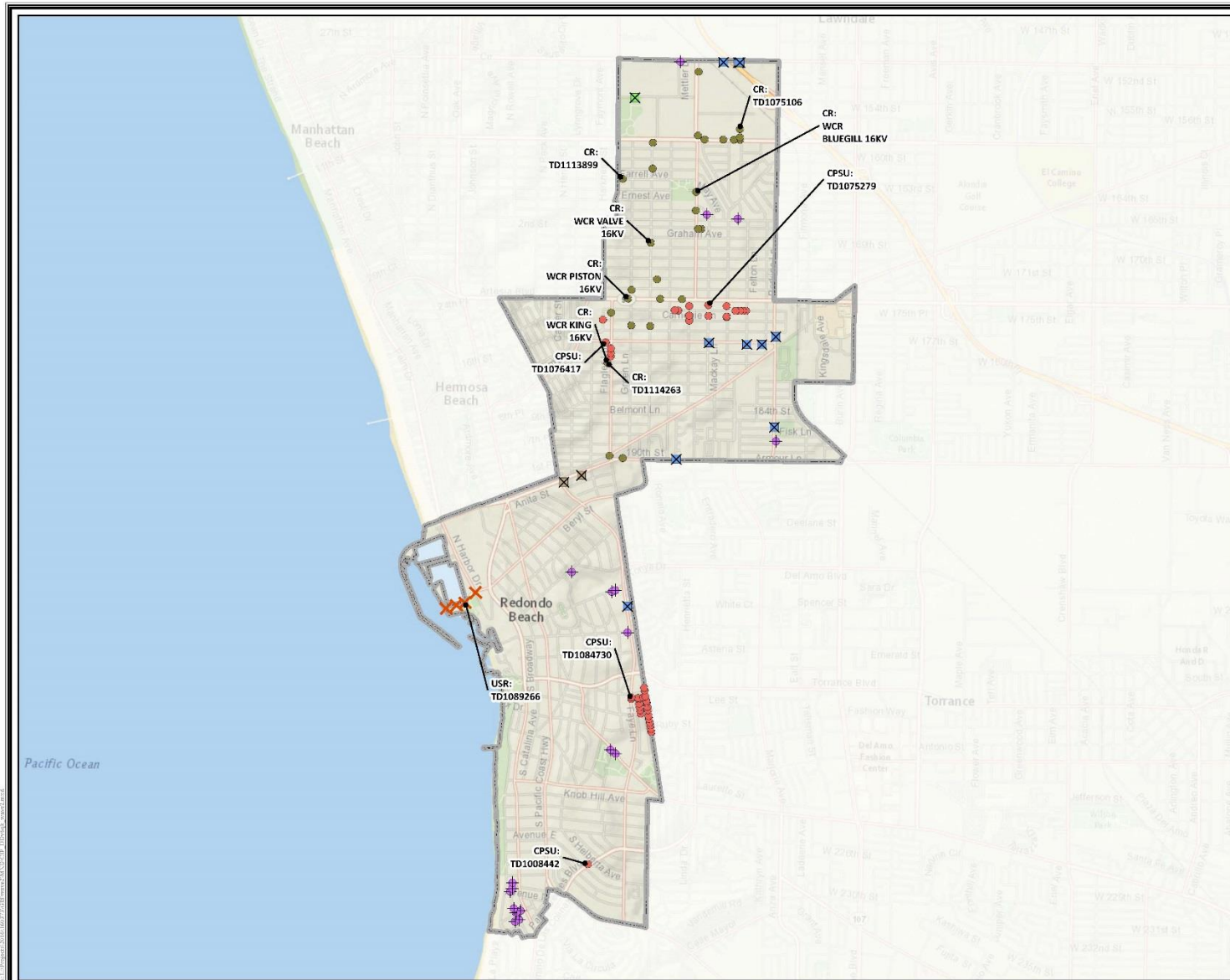
**Disclaimer:** This report is intended solely for informational purposes. The information included is reflective as of January 1, 2017 and is subject to change without further notice.



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# Back-up Slides

**Reliability Histories of Circuits Serving Redondo Beach**

**Updated through Year-End 2016**

# Average Reliability of 49 Circuits Serving Redondo Beach

	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
<b>Redondo Beach</b>	<b>135.5</b>	<b>1.6</b>	<b>1.1</b>	<b>110.3</b>	<b>1.2</b>	<b>1.1</b>	<b>199.6</b>	<b>1.8</b>	<b>1.6</b>	<b>35.8</b>	<b>0.4</b>	<b>0.4</b>	<b>18.0</b>	<b>0.3</b>	<b>0.3</b>	<b>11.7</b>	<b>0.1</b>	<b>0.1</b>	<b>50.2</b>	<b>0.8</b>	<b>0.3</b>	<b>115.7</b>	<b>1.6</b>	<b>1.1</b>
3rd Party	15%	15%	22%	5%	3%	6%	15%	20%	33%	3%	7%	14%	40%	20%	19%	1%	2%	4%	5%	1%	15%	10%	6%	15%
Equipment Failure	60%	60%	39%	44%	35%	30%	46%	41%	15%	44%	53%	17%	26%	16%	19%	91%	93%	89%	27%	12%	2%	39%	28%	23%
Operation	9%	11%	2%	6%	2%	4%	8%	15%	0%	2%	1%	6%	15%	8%	0%	4%	4%	0%	44%	79%	29%	22%	44%	9%
Other	2%	2%	13%	19%	30%	32%	21%	10%	34%	20%	5%	15%	0%	0%	44%	1%	0%	6%	13%	5%	30%	12%	4%	26%
Vegetation/Animal	12%	10%	19%	6%	12%	4%	2%	3%	14%	0%	0%	16%	18%	51%	18%	0%	0%	0%	0%	0%	0%	3%	9%	11%
Weather/Fire/Earthquake	2%	3%	5%	21%	19%	23%	8%	11%	4%	31%	33%	32%	2%	5%	0%	3%	1%	0%	10%	2%	24%	14%	10%	17%
<b>SCE Systemwide</b>	<b>102.6</b>	<b>0.9</b>	<b>1.2</b>	<b>112.0</b>	<b>1.0</b>	<b>1.4</b>	<b>114.8</b>	<b>0.9</b>	<b>1.4</b>	<b>40.5</b>	<b>0.3</b>	<b>0.4</b>	<b>34.8</b>	<b>0.3</b>	<b>0.4</b>	<b>29.4</b>	<b>0.2</b>	<b>0.3</b>	<b>29.8</b>	<b>0.3</b>	<b>0.4</b>	<b>134.5</b>	<b>1.1</b>	<b>1.6</b>

## Notes:

No outages are excluded from the metrics.

## Outage Causes:

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

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

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

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

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

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

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



# Reliability Histories for Individual Circuits Serving Redondo Beach

	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
<b>ADDIS(16KV) - Customers: 3,124</b>	<b>258.5</b>	<b>1.2</b>	<b>0.0</b>	<b>0.8</b>	<b>0.0</b>	<b>0.0</b>	<b>136.1</b>	<b>2.4</b>	<b>2.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>2.6</b>	<b>0.0</b>	<b>0.0</b>	<b>1.1</b>	<b>0.0</b>	<b>0.0</b>	<b>147.7</b>	<b>2.0</b>	<b>0.0</b>	<b>151.4</b>	<b>2.0</b>	<b>0.0</b>
3rd Party	0%	0%	0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	29%	16%	0%	0%	0%	0%	100%	99%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%
Operation	0%	0%	0%	100%	100%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	24%	50%	0%	24%	50%	0%
Other	3%	2%	0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	76%	50%	0%	74%	50%	0%
Vegetation/Animal	67%	82%	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%
<b>ALBACORE(16KV) - Customers: 1,756</b>	<b>376.4</b>	<b>4.0</b>	<b>1.3</b>	<b>296.1</b>	<b>4.7</b>	<b>1.2</b>	<b>360.1</b>	<b>4.6</b>	<b>1.3</b>	<b>1.4</b>	<b>0.0</b>	<b>0.0</b>	<b>46.0</b>	<b>1.5</b>	<b>1.4</b>	<b>3.1</b>	<b>0.0</b>	<b>0.0</b>	<b>114.9</b>	<b>1.0</b>	<b>0.0</b>	<b>165.3</b>	<b>2.5</b>	<b>1.4</b>
3rd Party	61%	34%	48%	0%	0%	0%	0%	0%	82%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	11%	19%	18%	38%	16%	18%	54%	39%	0%	34%	14%	0%	58%	36%	30%	100%	100%	0%	100%	100%	0%	88%	62%	30%
Operation	27%	28%	34%	3%	1%	0%	44%	58%	18%	66%	86%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%
Other	0%	0%	0%	51%	61%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Vegetation/Animal	1%	19%	0%	8%	21%	82%	2%	2%	0%	0%	0%	0%	42%	64%	70%	0%	0%	0%	0%	0%	0%	12%	38%	70%
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%
<b>ANGELINA(16KV) - Customers: 1,364</b>	<b>77.8</b>	<b>1.1</b>	<b>0.0</b>	<b>3.5</b>	<b>0.0</b>	<b>0.0</b>	<b>126.8</b>	<b>1.9</b>	<b>2.0</b>	<b>1.7</b>	<b>0.0</b>	<b>1.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>59.6</b>	<b>2.0</b>	<b>0.0</b>	<b>61.3</b>	<b>2.0</b>	<b>1.0</b>
3rd Party	0%	0%	0%	0%	0%	0%	96%	99%	51%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	97%	96%	0%	0%	0%	0%	4%	1%	0%	30%	2%	0%	0%	0%	0%	0%	0%	0%	17%	2%	0%	17%	2%	0%
Operation	3%	4%	0%	0%	0%	0%	0%	0%	0%	70%	98%	100%	0%	0%	0%	0%	0%	0%	83%	98%	0%	83%	98%	100%
Other	0%	0%	0%	100%	100%	0%	0%	0%	49%	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%
<b>ARVANA(16KV) - Customers: 3,360</b>	<b>108.7</b>	<b>0.9</b>	<b>0.2</b>	<b>47.4</b>	<b>1.0</b>	<b>1.0</b>	<b>745.0</b>	<b>4.8</b>	<b>1.2</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>95.0</b>	<b>0.8</b>	<b>0.2</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>141.9</b>	<b>1.2</b>	<b>0.0</b>	<b>236.9</b>	<b>2.0</b>	<b>0.2</b>
3rd Party	0%	0%	0%	0%	0%	0%	22%	40%	0%	0%	0%	0%	97%	99%	100%	0%	0%	0%	36%	8%	0%	61%	45%	100%
Equipment Failure	98%	92%	100%	99%	100%	100%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Operation	2%	8%	0%	1%	0%	0%	2%	20%	0%	0%	0%	0%	3%	1%	0%	0%	0%	0%	27%	85%	0%	17%	50%	0%
Other	0%	0%	0%	0%	0%	0%	69%	17%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	37%	8%	0%	22%	5%	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%	6%	22%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

# Reliability Histories for Individual Circuits Serving Redondo Beach

	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
<b>AZALIA(4.16KV) - Customers: 767</b>	<b>43.8</b>	<b>1.0</b>	<b>1.0</b>	<b>91.3</b>	<b>2.0</b>	<b>0.0</b>	<b>4.7</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>62.5</b>	<b>1.2</b>	<b>0.0</b>	<b>3.7</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>66.2</b>	<b>1.2</b>	<b>0.0</b>
3rd Party	0%	0%	0%	95%	99%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	100%	100%	0%	5%	1%	0%	100%	100%	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%	100%	100%	0%	100%	100%	0%	0%	0%	0%	100%	100%	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%	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%
<b>AZURE(4.16KV) - Customers: 961</b>	<b>68.4</b>	<b>1.1</b>	<b>2.0</b>	<b>30.2</b>	<b>0.1</b>	<b>2.0</b>	<b>271.6</b>	<b>2.2</b>	<b>0.0</b>	<b>376.3</b>	<b>1.1</b>	<b>0.0</b>	<b>24.2</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>1.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>400.5</b>	<b>1.1</b>	<b>1.0</b>
3rd Party	0%	0%	0%	0%	0%	0%	7%	45%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	100%	100%	50%	47%	53%	0%	28%	10%	0%	11%	3%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	10%	3%	100%
Operation	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	6%	2%	0%
Other	0%	0%	50%	53%	47%	100%	0%	0%	0%	89%	97%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	83%	95%	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%	65%	46%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>BERYL(4.16KV) - Customers: 833</b>	<b>0.0</b>	<b>0.0</b>	<b>2.0</b>	<b>1.7</b>	<b>0.0</b>	<b>0.0</b>	<b>354.0</b>	<b>4.0</b>	<b>4.7</b>	<b>11.1</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>37.1</b>	<b>1.0</b>	<b>0.0</b>	<b>48.2</b>	<b>1.1</b>	<b>0.0</b>
3rd Party	0%	0%	0%	0%	0%	0%	68%	50%	37%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	0%	0%	0%	0%	0%	0%	14%	25%	41%	87%	61%	0%	0%	0%	0%	0%	0%	0%	18%	1%	0%	34%	5%	0%
Operation	0%	0%	0%	100%	100%	0%	0%	0%	0%	13%	39%	0%	0%	0%	0%	0%	0%	0%	82%	99%	0%	66%	95%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%	22%	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%	100%	0%	0%	0%	18%	24%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>BLOODSTONE(4.16KV) - Customers: 804</b>	<b>126.4</b>	<b>3.0</b>	<b>1.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>176.6</b>	<b>1.1</b>	<b>3.0</b>	<b>37.8</b>	<b>0.0</b>	<b>0.0</b>	<b>15.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>7.9</b>	<b>0.0</b>	<b>0.0</b>	<b>60.8</b>	<b>0.1</b>	<b>0.0</b>
3rd Party	0%	0%	0%	0%	0%	0%	0%	0%	33%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	33%	33%	0%	0%	0%	0%	85%	95%	33%	100%	100%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	87%	71%	0%
Operation	0%	0%	0%	0%	0%	0%	15%	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	13%	29%	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	67%	67%	100%	0%	0%	0%	0%	0%	34%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%



# Reliability Histories for Individual Circuits Serving Redondo Beach

	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
<b>BLOSSOM(16KV) - Customers: 1,701</b>	<b>20.8</b>	<b>1.0</b>	<b>0.0</b>	<b>108.3</b>	<b>0.7</b>	<b>0.9</b>	<b>69.4</b>	<b>1.0</b>	<b>2.0</b>	<b>1.5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>34.0</b>	<b>1.0</b>	<b>0.0</b>	<b>35.4</b>	<b>1.0</b>	<b>0.0</b>
3rd Party	0%	0%	0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	100%	100%	0%	9%	29%	0%	2%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Operation	0%	0%	0%	91%	71%	100%	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	100%	100%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%	50%	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%	98%	98%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>BLUEGILL(16KV) - Customers: 3,197</b>	<b>15.3</b>	<b>0.3</b>	<b>1.0</b>	<b>251.2</b>	<b>5.7</b>	<b>1.1</b>	<b>208.8</b>	<b>3.4</b>	<b>2.9</b>	<b>3.9</b>	<b>0.5</b>	<b>1.5</b>	<b>22.0</b>	<b>1.0</b>	<b>0.0</b>	<b>0.5</b>	<b>0.0</b>	<b>0.0</b>	<b>110.2</b>	<b>0.3</b>	<b>1.0</b>	<b>136.6</b>	<b>1.8</b>	<b>2.5</b>
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%	100%	5%	0%	0%	11%	26%	12%	100%	100%	32%	0%	0%	0%	0%	0%	0%	48%	44%	0%	41%	35%	19%
Operation	100%	100%	0%	0%	0%	0%	13%	24%	0%	0%	0%	0%	4%	1%	0%	100%	100%	0%	3%	11%	83%	3%	3%	34%
Other	0%	0%	0%	48%	64%	72%	39%	31%	24%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Vegetation/Animal	0%	0%	0%	47%	35%	28%	36%	20%	30%	0%	0%	68%	96%	99%	0%	0%	0%	0%	0%	0%	0%	15%	55%	40%
Weather/Fire/Earthquake	0%	0%	0%	0%	0%	0%	0%	0%	34%	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%	44%	17%	40%	8%	7%
<b>BORDEN(4.16KV) - Customers: 624</b>	<b>3.2</b>	<b>0.0</b>	<b>1.0</b>	<b>4.1</b>	<b>0.0</b>	<b>1.0</b>	<b>16.0</b>	<b>1.1</b>	<b>0.0</b>	<b>45.0</b>	<b>1.0</b>	<b>4.0</b>	<b>8.7</b>	<b>0.0</b>	<b>1.0</b>	<b>1.1</b>	<b>0.0</b>	<b>0.0</b>	<b>31.0</b>	<b>1.0</b>	<b>0.0</b>	<b>85.7</b>	<b>2.1</b>	<b>5.0</b>
3rd Party	0%	0%	100%	0%	0%	100%	0%	0%	0%	100%	100%	0%	38%	29%	100%	0%	0%	0%	0%	0%	0%	56%	49%	20%
Equipment Failure	100%	100%	0%	100%	100%	0%	13%	2%	0%	0%	0%	0%	62%	71%	0%	0%	0%	0%	0%	0%	0%	6%	1%	0%
Operation	0%	0%	0%	0%	0%	0%	87%	98%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	100%	100%	0%	37%	50%	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%	80%
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%
<b>CAMINO REAL(4.16KV) - Customers: 771</b>	<b>164.9</b>	<b>1.5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>3.1</b>	<b>0.0</b>	<b>2.0</b>	<b>1.6</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>9.4</b>	<b>0.1</b>	<b>0.0</b>	<b>30.8</b>	<b>1.0</b>	<b>0.0</b>	<b>41.8</b>	<b>1.1</b>	<b>0.0</b>
3rd Party	0%	0%	0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	100%	100%	0%	0%	0%	0%	100%	100%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	4%	1%	0%
Operation	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	100%	100%	0%	96%	99%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%	50%	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 Redondo Beach

	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
<b>CARNELIAN(16KV) - Customers: 4,902</b>	<b>142.1</b>	<b>1.3</b>	<b>0.0</b>	<b>27.4</b>	<b>0.6</b>	<b>2.0</b>	<b>198.7</b>	<b>1.3</b>	<b>2.0</b>	<b>14.8</b>	<b>0.1</b>	<b>0.0</b>	<b>0.3</b>	<b>0.0</b>	<b>0.0</b>	<b>87.6</b>	<b>1.2</b>	<b>1.1</b>	<b>35.1</b>	<b>1.0</b>	<b>1.0</b>	<b>137.7</b>	<b>2.3</b>	<b>2.1</b>
3rd Party	0%	0%	0%	0%	0%	0%	1%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	96%	80%	0%	100%	100%	50%	99%	99%	0%	0%	0%	0%	0%	0%	0%	100%	100%	100%	0%	0%	0%	64%	52%	52%
Operation	4%	20%	0%	0%	0%	0%	0%	1%	0%	36%	37%	0%	100%	100%	0%	0%	0%	0%	100%	100%	0%	30%	45%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%	50%	64%	63%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	7%	2%	48%
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%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>CATALINA(4.16KV) - Customers: 931</b>	<b>103.4</b>	<b>2.5</b>	<b>0.0</b>	<b>57.6</b>	<b>0.5</b>	<b>1.0</b>	<b>4.9</b>	<b>0.0</b>	<b>2.0</b>	<b>1.6</b>	<b>0.0</b>	<b>0.0</b>	<b>34.6</b>	<b>0.1</b>	<b>0.9</b>	<b>8.7</b>	<b>0.0</b>	<b>0.0</b>	<b>33.0</b>	<b>1.0</b>	<b>0.0</b>	<b>77.9</b>	<b>1.1</b>	<b>0.9</b>
3rd Party	0%	0%	0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	100%	100%	100%	0%	0%	0%	0%	0%	0%	44%	8%	100%
Equipment Failure	81%	61%	0%	100%	100%	0%	100%	100%	0%	100%	100%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	13%	3%	0%
Operation	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	42%	89%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%	50%	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	19%	39%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>CHICO(16KV) - Customers: 2,996</b>	<b>181.0</b>	<b>4.2</b>	<b>2.4</b>	<b>334.3</b>	<b>0.9</b>	<b>0.9</b>	<b>158.0</b>	<b>0.9</b>	<b>1.6</b>	<b>5.2</b>	<b>0.0</b>	<b>0.0</b>	<b>18.7</b>	<b>0.1</b>	<b>0.0</b>	<b>22.4</b>	<b>0.1</b>	<b>0.0</b>	<b>1.0</b>	<b>0.0</b>	<b>2.0</b>	<b>47.2</b>	<b>0.2</b>	<b>2.0</b>
3rd Party	4%	15%	27%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	44%	83%	50%	1%	1%	50%
Equipment Failure	76%	73%	41%	8%	16%	0%	34%	12%	59%	39%	39%	0%	0%	0%	0%	94%	78%	0%	0%	0%	0%	49%	26%	0%
Operation	1%	1%	0%	24%	12%	0%	22%	21%	0%	1%	1%	0%	100%	100%	0%	6%	22%	0%	56%	17%	50%	44%	66%	50%
Other	14%	8%	33%	68%	72%	100%	0%	0%	41%	60%	60%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	7%	7%	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	6%	3%	0%	0%	0%	0%	44%	67%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>CLEO(4.16KV) - Customers: 1,075</b>	<b>3.3</b>	<b>0.0</b>	<b>0.0</b>	<b>3.0</b>	<b>0.0</b>	<b>4.0</b>	<b>149.1</b>	<b>0.4</b>	<b>3.0</b>	<b>0.0</b>	<b>0.0</b>	<b>2.0</b>	<b>23.1</b>	<b>1.0</b>	<b>0.0</b>	<b>0.9</b>	<b>0.0</b>	<b>0.0</b>	<b>30.9</b>	<b>1.0</b>	<b>0.0</b>	<b>55.0</b>	<b>2.0</b>	<b>2.0</b>
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%	0%	0%	0%	37%	9%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Operation	0%	0%	0%	0%	0%	25%	63%	91%	0%	0%	0%	0%	1%	1%	0%	100%	100%	0%	100%	100%	0%	58%	51%	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%	100%	100%	75%	0%	0%	0%	0%	0%	100%	99%	99%	0%	0%	0%	0%	0%	0%	0%	42%	49%	100%

# Reliability Histories for Individual Circuits Serving Redondo Beach

	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
<b>CLIFTON(4.16KV) - Customers: 982</b>	<b>39.1</b>	<b>0.2</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>128.7</b>	<b>2.3</b>	<b>2.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>30.9</b>	<b>1.0</b>	<b>0.0</b>	<b>30.9</b>	<b>1.0</b>	<b>0.0</b>
3rd Party	0%	0%	0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	7%	5%	0%	0%	0%	0%	85%	52%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Operation	4%	50%	0%	0%	0%	0%	9%	45%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	100%	100%	0%
Other	0%	0%	0%	0%	0%	0%	6%	3%	50%	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	89%	45%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>COMO(4.16KV) - Customers: 1,016</b>	<b>135.3</b>	<b>2.0</b>	<b>1.0</b>	<b>245.8</b>	<b>1.5</b>	<b>1.5</b>	<b>44.0</b>	<b>0.5</b>	<b>1.0</b>	<b>2.4</b>	<b>0.0</b>	<b>1.0</b>	<b>0.0</b>	<b>0.0</b>	<b>1.0</b>	<b>0.3</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>1.0</b>	<b>2.7</b>	<b>0.1</b>	<b>3.0</b>
3rd Party	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	34%
Equipment Failure	97%	99%	0%	36%	69%	0%	41%	11%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Operation	3%	1%	0%	0%	0%	0%	59%	89%	0%	100%	100%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	100%	100%	0%
Other	0%	0%	0%	0%	0%	61%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	100%	0%	0%	66%
Vegetation/Animal	0%	0%	100%	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%	64%	31%	39%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>CORAL(4.16KV) - Customers: 298</b>	<b>322.3</b>	<b>1.7</b>	<b>0.9</b>	<b>0.0</b>	<b>0.0</b>	<b>1.0</b>	<b>203.7</b>	<b>2.9</b>	<b>1.0</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>11.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>11.1</b>	<b>0.0</b>	<b>0.0</b>
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%	100%	0%	0%	0%	100%	100%	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%	100%	100%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	100%	100%	0%
Other	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Vegetation/Animal	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	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%
<b>CYLINDER(16KV) - Customers: 1,392</b>	<b>2.8</b>	<b>0.0</b>	<b>1.0</b>	<b>33.8</b>	<b>1.0</b>	<b>1.0</b>	<b>258.5</b>	<b>3.0</b>	<b>0.0</b>	<b>126.3</b>	<b>0.1</b>	<b>0.0</b>	<b>152.9</b>	<b>1.0</b>	<b>0.0</b>	<b>86.1</b>	<b>1.0</b>	<b>1.0</b>	<b>32.8</b>	<b>1.0</b>	<b>0.0</b>	<b>398.1</b>	<b>3.1</b>	<b>1.0</b>
3rd Party	0%	0%	0%	0%	0%	0%	5%	33%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	5%	1%	0%	39%	33%	0%
Equipment Failure	100%	100%	0%	9%	1%	0%	61%	34%	0%	0%	0%	0%	0%	0%	0%	100%	100%	100%	0%	0%	0%	22%	32%	97%
Operation	0%	0%	0%	0%	0%	0%	35%	34%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	95%	99%	0%	8%	32%	0%
Other	0%	0%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	32%	3%	3%
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%	91%	99%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

# Reliability Histories for Individual Circuits Serving Redondo Beach

	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
<b>EL PASEO(4.16KV) - Customers: 919</b>	<b>93.7</b>	<b>1.1</b>	<b>0.9</b>	<b>74.2</b>	<b>1.0</b>	<b>2.0</b>	<b>303.4</b>	<b>0.7</b>	<b>2.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>1.8</b>	<b>0.0</b>	<b>0.0</b>	<b>5.0</b>	<b>0.0</b>	<b>0.0</b>	<b>30.4</b>	<b>1.0</b>	<b>0.0</b>	<b>37.2</b>	<b>1.0</b>	<b>0.0</b>
3rd Party	60%	90%	0%	0%	0%	50%	0%	0%	49%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	40%	10%	100%	10%	2%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	13%	2%	0%
Operation	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	100%	100%	0%	87%	98%	0%
Other	0%	0%	0%	90%	98%	50%	0%	0%	51%	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%
<b>FLYWHEEL(16KV) - Customers: 1,565</b>	<b>32.0</b>	<b>1.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>43.6</b>	<b>0.2</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>31.6</b>	<b>1.0</b>	<b>0.0</b>	<b>31.6</b>	<b>1.0</b>	<b>0.0</b>
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%	0%	0%	0%	11%	16%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Operation	100%	100%	0%	0%	0%	0%	89%	84%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	100%	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	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%
<b>FREEMAN(4.16KV) - Customers: 1,231</b>	<b>1.6</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>2.2</b>	<b>0.0</b>	<b>1.0</b>	<b>160.2</b>	<b>2.1</b>	<b>0.0</b>	<b>13.5</b>	<b>1.9</b>	<b>1.9</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>173.6</b>	<b>4.0</b>	<b>1.9</b>
3rd Party	100%	100%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	50%
Equipment Failure	0%	0%	0%	0%	0%	0%	0%	0%	0%	48%	50%	0%	43%	50%	0%	0%	0%	0%	0%	0%	0%	48%	50%	0%
Operation	0%	0%	0%	0%	0%	0%	100%	100%	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%	57%	50%	50%	0%	0%	0%	0%	0%	0%	4%	24%	50%
Weather/Fire/Earthquake	0%	0%	0%	0%	0%	0%	0%	0%	0%	52%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	48%	26%	0%
<b>GEM(4.16KV) - Customers: 667</b>	<b>66.7</b>	<b>1.1</b>	<b>1.0</b>	<b>4.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>16.5</b>	<b>0.0</b>	<b>2.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>16.5</b>	<b>0.0</b>	<b>2.0</b>
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%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	50%
Operation	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	50%	0%	0%	0%	100%	100%	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%

# Reliability Histories for Individual Circuits Serving Redondo Beach

	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
<b>GRAVEYARD(16KV) - Customers: 1,395</b>	<b>249.4</b>	<b>1.9</b>	<b>2.0</b>	<b>116.7</b>	<b>1.8</b>	<b>2.2</b>	<b>361.3</b>	<b>3.0</b>	<b>1.0</b>	<b>0.6</b>	<b>0.0</b>	<b>1.9</b>	<b>0.0</b>	<b>0.0</b>	<b>2.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>2.1</b>	<b>0.0</b>	<b>0.0</b>	<b>2.7</b>	<b>0.0</b>	<b>4.0</b>
3rd Party	0%	1%	0%	5%	4%	0%	7%	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	99%	97%	24%	90%	90%	60%	74%	35%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	76%	51%	0%
Operation	0%	0%	0%	5%	5%	0%	1%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	0%	0%	0%	40%	0%	0%	0%	0%	0%	50%	0%	0%	50%	0%	0%	0%	0%	0%	0%	0%	0%	50%
Vegetation/Animal	0%	2%	76%	0%	0%	0%	18%	33%	100%	100%	100%	50%	0%	0%	50%	0%	0%	0%	0%	0%	0%	24%	49%	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%
<b>HARKNESS(4.16KV) - Customers: 845</b>	<b>5.5</b>	<b>0.0</b>	<b>0.0</b>	<b>75.5</b>	<b>1.0</b>	<b>0.9</b>	<b>47.3</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>1.4</b>	<b>0.0</b>	<b>0.0</b>	<b>12.8</b>	<b>0.1</b>	<b>0.0</b>	<b>31.1</b>	<b>1.0</b>	<b>0.0</b>	<b>45.3</b>	<b>1.1</b>	<b>0.0</b>
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%	0%	0%	0%	5%	20%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	28%	9%	0%
Operation	0%	0%	0%	0%	0%	0%	95%	80%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	100%	100%	0%	72%	91%	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%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>HERMOSA(4.16KV) - Customers: 1,205</b>	<b>22.1</b>	<b>0.1</b>	<b>0.9</b>	<b>1.9</b>	<b>0.0</b>	<b>3.8</b>	<b>6.3</b>	<b>0.1</b>	<b>2.0</b>	<b>10.2</b>	<b>1.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>1.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>77.6</b>	<b>1.5</b>	<b>0.0</b>	<b>87.8</b>	<b>2.5</b>	<b>1.0</b>
3rd Party	100%	100%	100%	0%	0%	48%	0%	0%	50%	98%	99%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	11%	40%	100%
Equipment Failure	0%	0%	0%	100%	100%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	53%	31%	0%	47%	18%	0%
Operation	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	1%	0%	0%	0%	0%	0%	0%	0%	47%	69%	0%	42%	41%	0%
Other	0%	0%	0%	0%	0%	52%	0%	0%	50%	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%
<b>HILLSIDE(16KV) - Customers: 438</b>	<b>0.0</b>	<b>0.0</b>	<b>1.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>9.4</b>	<b>0.1</b>	<b>3.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>17.8</b>	<b>0.2</b>	<b>1.0</b>	<b>31.3</b>	<b>1.0</b>	<b>0.0</b>	<b>49.1</b>	<b>1.2</b>	<b>1.0</b>
3rd Party	0%	0%	100%	0%	0%	0%	0%	0%	33%	0%	0%	0%	0%	0%	0%	100%	100%	100%	0%	0%	0%	36%	15%	100%
Equipment Failure	0%	0%	0%	0%	0%	0%	100%	100%	34%	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%	100%	100%	0%	64%	85%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%	33%	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 Redondo Beach

	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
<b>JANICE(4.16KV) - Customers: 1,109</b>	<b>154.2</b>	<b>0.8</b>	<b>1.0</b>	<b>63.7</b>	<b>2.0</b>	<b>4.0</b>	<b>52.3</b>	<b>1.0</b>	<b>0.3</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>37.1</b>	<b>2.0</b>	<b>0.0</b>	<b>37.1</b>	<b>2.0</b>	<b>0.0</b>
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	90%	95%	0%	13%	1%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Operation	0%	0%	0%	4%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	100%	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	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	10%	5%	100%	83%	99%	50%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>KING(16KV) - Customers: 3,821</b>	<b>350.9</b>	<b>3.9</b>	<b>0.4</b>	<b>108.8</b>	<b>1.0</b>	<b>0.0</b>	<b>349.5</b>	<b>1.8</b>	<b>3.9</b>	<b>220.4</b>	<b>2.7</b>	<b>0.0</b>	<b>19.1</b>	<b>0.1</b>	<b>1.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>30.9</b>	<b>1.0</b>	<b>0.0</b>	<b>270.4</b>	<b>3.7</b>	<b>1.0</b>
3rd Party	10%	26%	0%	0%	0%	0%	20%	15%	25%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	27%	36%	96%	1%	0%	0%	4%	2%	0%	51%	62%	0%	58%	40%	100%	0%	0%	0%	0%	0%	0%	45%	45%	100%
Operation	29%	11%	4%	0%	0%	0%	1%	1%	0%	0%	0%	0%	42%	60%	0%	0%	0%	0%	100%	100%	0%	14%	28%	0%
Other	0%	0%	0%	0%	0%	0%	76%	81%	75%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Vegetation/Animal	34%	26%	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%	99%	100%	0%	0%	0%	0%	49%	38%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	40%	27%	0%
<b>MORGAN(4.16KV) - Customers: 959</b>	<b>16.5</b>	<b>0.0</b>	<b>1.0</b>	<b>98.4</b>	<b>1.1</b>	<b>3.0</b>	<b>19.5</b>	<b>1.0</b>	<b>1.0</b>	<b>21.5</b>	<b>0.1</b>	<b>0.0</b>	<b>28.5</b>	<b>0.7</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>41.0</b>	<b>1.3</b>	<b>0.0</b>	<b>91.0</b>	<b>2.1</b>	<b>0.0</b>
3rd Party	0%	0%	100%	0%	0%	33%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	100%	100%	0%	0%	0%	0%	100%	100%	100%	100%	100%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	55%	38%	0%
Operation	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	45%	62%	0%
Other	0%	0%	0%	61%	4%	67%	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%	39%	96%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>NELSON(16KV) - Customers: 3,436</b>	<b>128.3</b>	<b>1.9</b>	<b>2.3</b>	<b>407.0</b>	<b>2.7</b>	<b>2.6</b>	<b>86.5</b>	<b>0.7</b>	<b>2.3</b>	<b>31.6</b>	<b>0.2</b>	<b>2.0</b>	<b>3.9</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>99.6</b>	<b>1.3</b>	<b>0.0</b>	<b>135.1</b>	<b>1.5</b>	<b>2.0</b>
3rd Party	0%	0%	0%	0%	0%	0%	18%	14%	44%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	53%	47%	60%	74%	58%	26%	0%	0%	0%	100%	100%	0%	100%	100%	0%	0%	0%	0%	2%	0%	0%	27%	14%	0%
Operation	0%	0%	0%	1%	0%	0%	6%	6%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	35%	77%	0%	26%	67%	0%
Other	0%	0%	0%	2%	5%	0%	0%	0%	41%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Vegetation/Animal	47%	53%	40%	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%	24%	36%	74%	76%	80%	15%	0%	0%	100%	0%	0%	0%	0%	0%	0%	63%	23%	0%	47%	20%	100%

# Reliability Histories for Individual Circuits Serving Redondo Beach

	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
<b>OPAL(4.16KV) - Customers: 729</b>	<b>1.6</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>19.6</b>	<b>0.1</b>	<b>3.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>1.0</b>	<b>6.4</b>	<b>0.0</b>	<b>0.0</b>	<b>30.6</b>	<b>1.0</b>	<b>0.0</b>	<b>37.0</b>	<b>1.0</b>	<b>1.0</b>
3rd Party	0%	0%	0%	0%	0%	0%	0%	0%	67%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	100%	100%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	17%	1%	0%
Operation	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	83%	99%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%	33%	0%	0%	0%	0%	0%	100%	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%
<b>PENGUIN(16KV) - Customers: 455</b>	<b>286.8</b>	<b>1.0</b>	<b>0.6</b>	<b>46.3</b>	<b>3.4</b>	<b>1.2</b>	<b>19.5</b>	<b>0.0</b>	<b>1.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>57.5</b>	<b>1.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>57.5</b>	<b>1.0</b>	<b>0.0</b>
3rd Party	10%	60%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	90%	40%	0%	0%	0%	0%	100%	100%	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%	7%	2%	0%	0%	0%	0%	0%	0%	0%	7%	2%	0%
Other	0%	0%	99%	70%	75%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Vegetation/Animal	0%	0%	0%	30%	25%	100%	0%	0%	100%	0%	0%	0%	93%	98%	100%	0%	0%	0%	0%	0%	0%	93%	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%
<b>PISTON(16KV) - Customers: 4,348</b>	<b>305.1</b>	<b>2.9</b>	<b>2.2</b>	<b>264.4</b>	<b>1.0</b>	<b>1.3</b>	<b>409.2</b>	<b>1.5</b>	<b>0.3</b>	<b>0.2</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>4.2</b>	<b>0.0</b>	<b>0.0</b>	<b>48.1</b>	<b>1.1</b>	<b>0.0</b>	<b>52.5</b>	<b>1.1</b>	<b>0.0</b>
3rd Party	54%	35%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	15%	7%	0%	13%	7%	0%
Equipment Failure	38%	38%	90%	100%	99%	22%	96%	94%	100%	0%	0%	0%	0%	0%	0%	57%	14%	0%	0%	0%	0%	5%	0%	0%
Operation	7%	27%	10%	0%	0%	0%	3%	4%	0%	100%	100%	0%	0%	0%	0%	43%	86%	0%	85%	93%	0%	82%	93%	0%
Other	0%	0%	0%	0%	0%	78%	1%	1%	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%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>PRUITT(4.16KV) - Customers: 332</b>	<b>54.9</b>	<b>1.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>120.3</b>	<b>2.0</b>	<b>2.0</b>	<b>0.0</b>	<b>0.0</b>	<b>1.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>51.0</b>	<b>2.0</b>	<b>0.0</b>	<b>51.0</b>	<b>2.0</b>	<b>1.0</b>
3rd Party	0%	0%	0%	0%	0%	0%	100%	100%	51%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	91%	94%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Operation	9%	6%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	100%	100%	0%	100%	100%	100%
Other	0%	0%	0%	0%	0%	0%	0%	0%	49%	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 Redondo Beach

	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
<b>PUEBLO(16KV) - Customers: 1,032</b>	<b>164.0</b>	<b>2.9</b>	<b>1.0</b>	<b>72.2</b>	<b>1.0</b>	<b>0.0</b>	<b>155.3</b>	<b>1.0</b>	<b>1.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>2.1</b>	<b>0.0</b>	<b>1.0</b>	<b>27.0</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>29.1</b>	<b>0.2</b>	<b>1.0</b>
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	70%	54%	0%	96%	97%	0%	3%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Operation	30%	46%	0%	4%	3%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	7%	28%	0%
Other	0%	0%	0%	0%	0%	0%	97%	97%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	100%
Vegetation/Animal	0%	0%	100%	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%	100%	100%	0%	0%	0%	0%	93%	72%	0%
<b>PULLMAN(4.16KV) - Customers: 1,872</b>	<b>75.9</b>	<b>0.5</b>	<b>1.1</b>	<b>8.7</b>	<b>0.0</b>	<b>0.0</b>	<b>100.7</b>	<b>0.8</b>	<b>0.0</b>	<b>33.7</b>	<b>0.1</b>	<b>0.7</b>	<b>55.8</b>	<b>0.2</b>	<b>0.0</b>	<b>9.9</b>	<b>0.0</b>	<b>0.0</b>	<b>27.6</b>	<b>0.9</b>	<b>0.0</b>	<b>127.0</b>	<b>1.2</b>	<b>0.7</b>
3rd Party	0%	0%	50%	0%	0%	0%	38%	87%	0%	74%	89%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	6%	100%
Equipment Failure	98%	95%	0%	7%	34%	0%	3%	3%	0%	26%	11%	0%	100%	96%	0%	100%	100%	0%	0%	0%	0%	59%	18%	0%
Operation	1%	2%	0%	93%	66%	0%	0%	0%	0%	0%	0%	0%	0%	4%	0%	0%	0%	0%	100%	100%	0%	22%	76%	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	1%	3%	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%	58%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>SAGO(16KV) - Customers: 3,703</b>	<b>263.4</b>	<b>2.8</b>	<b>3.0</b>	<b>14.0</b>	<b>0.1</b>	<b>1.9</b>	<b>411.9</b>	<b>4.7</b>	<b>3.9</b>	<b>40.3</b>	<b>0.7</b>	<b>0.3</b>	<b>24.4</b>	<b>0.0</b>	<b>0.0</b>	<b>17.2</b>	<b>0.0</b>	<b>0.0</b>	<b>157.2</b>	<b>1.3</b>	<b>0.1</b>	<b>239.0</b>	<b>2.1</b>	<b>0.4</b>
3rd Party	0%	0%	0%	0%	0%	0%	50%	56%	24%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	95%	99%	69%	15%	12%	51%	45%	42%	26%	100%	100%	100%	77%	70%	0%	100%	100%	0%	100%	100%	100%	98%	100%	100%
Operation	0%	0%	0%	1%	1%	0%	4%	2%	0%	0%	0%	0%	23%	30%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%
Other	0%	0%	0%	0%	0%	49%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Vegetation/Animal	0%	0%	31%	67%	58%	0%	0%	0%	51%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Weather/Fire/Earthquake	5%	1%	0%	17%	29%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>SALMON(16KV) - Customers: 3,803</b>	<b>73.9</b>	<b>0.9</b>	<b>2.2</b>	<b>93.4</b>	<b>4.0</b>	<b>0.0</b>	<b>226.4</b>	<b>2.5</b>	<b>0.0</b>	<b>129.4</b>	<b>1.2</b>	<b>0.0</b>	<b>23.8</b>	<b>1.0</b>	<b>0.0</b>	<b>6.9</b>	<b>0.0</b>	<b>0.0</b>	<b>6.6</b>	<b>0.0</b>	<b>0.0</b>	<b>166.7</b>	<b>2.2</b>	<b>0.0</b>
3rd Party	0%	0%	46%	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%	0%	0%	13%	58%	0%	0%	0%	0%	1%	1%	0%
Equipment Failure	100%	100%	8%	27%	1%	0%	79%	91%	0%	23%	2%	0%	0%	0%	0%	83%	28%	0%	100%	100%	0%	26%	2%	0%
Operation	0%	0%	0%	2%	1%	0%	2%	2%	0%	1%	1%	0%	0%	0%	0%	3%	13%	0%	0%	0%	0%	1%	1%	0%
Other	0%	0%	46%	54%	73%	0%	13%	7%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Vegetation/Animal	0%	0%	0%	17%	24%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	14%	44%	0%
Weather/Fire/Earthquake	0%	0%	0%	0%	0%	0%	0%	0%	0%	76%	97%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	59%	52%	0%



# Reliability Histories for Individual Circuits Serving Redondo Beach

	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
<b>SELVA(16KV) - Customers: 1,965</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>15.6</b>	<b>0.0</b>	<b>1.0</b>	<b>38.8</b>	<b>0.1</b>	<b>2.0</b>	<b>65.0</b>	<b>0.7</b>	<b>1.2</b>	<b>4.1</b>	<b>0.0</b>	<b>1.0</b>	<b>23.4</b>	<b>0.0</b>	<b>0.0</b>	<b>42.0</b>	<b>1.0</b>	<b>0.0</b>	<b>134.5</b>	<b>1.7</b>	<b>2.2</b>
3rd Party	0%	0%	0%	0%	0%	0%	16%	9%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	0%	0%	0%	51%	42%	100%	81%	65%	0%	100%	100%	100%	100%	100%	0%	100%	100%	0%	11%	1%	0%	72%	43%	54%
Operation	0%	0%	0%	49%	58%	0%	3%	26%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	89%	99%	0%	28%	57%	0%
Other	0%	0%	0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	46%
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%
<b>SPINEL(4.16KV) - Customers: 334</b>	<b>42.0</b>	<b>1.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>25.1</b>	<b>0.1</b>	<b>1.0</b>	<b>20.1</b>	<b>0.2</b>	<b>1.9</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>55.1</b>	<b>0.8</b>	<b>0.2</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>75.2</b>	<b>1.0</b>	<b>2.1</b>
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%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	100%	100%	100%	0%	0%	0%	73%	81%	10%
Operation	0%	0%	0%	0%	0%	0%	100%	100%	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%	100%	100%	47%	0%	0%	0%	0%	0%	0%	0%	0%	0%	27%	19%	42%
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%	53%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	48%
<b>STRAWBERRY(4.16KV) - Customers: 500</b>	<b>130.1</b>	<b>2.0</b>	<b>1.0</b>	<b>87.3</b>	<b>1.0</b>	<b>0.0</b>	<b>28.5</b>	<b>0.2</b>	<b>1.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>24.9</b>	<b>0.1</b>	<b>1.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>24.9</b>	<b>0.1</b>	<b>1.0</b>
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%	100%	100%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%
Operation	0%	0%	0%	0%	0%	0%	100%	100%	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%	100%	0%	0%	0%	0%	0%	0%	0%	0%	100%
Vegetation/Animal	0%	0%	100%	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%
<b>TALENT(4.16KV) - Customers: 543</b>	<b>255.8</b>	<b>3.0</b>	<b>1.0</b>	<b>87.3</b>	<b>1.0</b>	<b>0.0</b>	<b>143.5</b>	<b>1.0</b>	<b>1.0</b>	<b>3.9</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>1.1</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>3.9</b>	<b>0.0</b>	<b>1.1</b>
3rd Party	50%	33%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	50%	67%	0%	100%	100%	0%	100%	100%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	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%	100%	0%	0%	0%	0%	0%	0%	0%	0%	100%
Vegetation/Animal	0%	0%	100%	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%

# Reliability Histories for Individual Circuits Serving Redondo Beach

	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
<b>TENOR(4.16KV) - Customers: 1,008</b>	<b>245.3</b>	<b>3.0</b>	<b>2.0</b>	<b>105.0</b>	<b>1.0</b>	<b>1.0</b>	<b>152.0</b>	<b>1.0</b>	<b>3.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>2.0</b>	<b>0.0</b>	<b>2.0</b>	<b>4.6</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>6.6</b>	<b>0.0</b>	<b>2.0</b>
3rd Party	0%	0%	50%	0%	0%	100%	0%	0%	67%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	58%	67%	0%	100%	100%	0%	100%	100%	0%	0%	0%	0%	100%	100%	0%	100%	100%	0%	0%	0%	0%	100%	100%	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	42%	33%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	100%
Vegetation/Animal	0%	0%	50%	0%	0%	0%	0%	0%	33%	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%
<b>TOURMALINE(4.16KV) - Customers: 896</b>	<b>49.0</b>	<b>1.0</b>	<b>2.0</b>	<b>176.6</b>	<b>1.0</b>	<b>1.0</b>	<b>1.5</b>	<b>0.0</b>	<b>4.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>1.0</b>	<b>7.0</b>	<b>0.0</b>	<b>0.0</b>	<b>7.0</b>	<b>0.0</b>	<b>1.0</b>
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	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	100%	0%	100%	100%	100%
Operation	0%	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Vegetation/Animal	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Weather/Fire/Earthquake	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>TRANSPLANT(4.16KV) - Customers: 1,497</b>	<b>13.7</b>	<b>0.0</b>	<b>1.9</b>	<b>224.2</b>	<b>1.0</b>	<b>1.0</b>	<b>85.5</b>	<b>1.1</b>	<b>0.0</b>	<b>50.5</b>	<b>0.4</b>	<b>1.0</b>	<b>2.6</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>32.4</b>	<b>1.0</b>	<b>1.0</b>	<b>85.6</b>	<b>1.4</b>	<b>2.0</b>
3rd Party	0%	0%	100%	94%	96%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%
Equipment Failure	38%	74%	0%	5%	3%	100%	97%	90%	0%	93%	95%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	55%	27%	0%
Operation	57%	25%	0%	0%	1%	0%	3%	10%	0%	7%	5%	0%	100%	100%	0%	0%	0%	0%	100%	100%	0%	45%	73%	0%
Other	5%	2%	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%	100%	0%	0%	50%
<b>VALVE(16KV) - Customers: 3,364</b>	<b>67.5</b>	<b>1.3</b>	<b>0.9</b>	<b>178.2</b>	<b>3.0</b>	<b>2.1</b>	<b>86.4</b>	<b>1.9</b>	<b>0.9</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>9.6</b>	<b>0.2</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>25.9</b>	<b>0.8</b>	<b>0.8</b>	<b>35.5</b>	<b>1.0</b>	<b>0.8</b>
3rd Party	71%	96%	100%	0%	0%	0%	3%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Equipment Failure	24%	3%	0%	18%	59%	41%	13%	1%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Operation	5%	1%	0%	0%	0%	0%	22%	49%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	73%	82%	0%
Other	0%	0%	0%	0%	0%	59%	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%	100%	100%	0%	0%	0%	0%	0%	0%	0%	27%	18%	0%
Weather/Fire/Earthquake	0%	0%	0%	82%	41%	0%	63%	48%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%

# Reliability Histories for Individual Circuits Serving Redondo Beach

	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
<b>VILLA(4.16KV) - Customers: 1,450</b>	<b>130.0</b>	<b>2.0</b>	<b>2.0</b>	<b>87.4</b>	<b>1.0</b>	<b>1.0</b>	<b>157.1</b>	<b>1.7</b>	<b>1.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>1.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>3.0</b>	<b>0.0</b>	<b>0.0</b>	<b>3.0</b>	<b>0.0</b>	<b>1.0</b>
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	100%	100%	0%	100%	100%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	100%	100%	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%	100%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	100%
Vegetation/Animal	0%	0%	50%	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%