

February 27, 2014

Mr. Paul Clanon, Executive Director
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, California 94102

Subject: Reporting Standards, System SAIDI, SAIFI, and MAIFI Report
Decision 96-09-045

Dear Mr. Clanon:

Pursuant to Appendix A of D.96-09-045 as modified by Advice Letter 2673-E dated December 11, 2011, attached is Southern California Edison's 2013 Annual System Reliability Report.

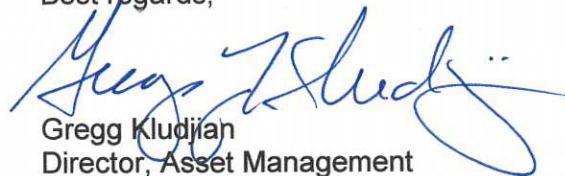
Attachment 1 provides values of SAIDI, SAIFI, and MAIFI for each of the past ten years calculated using the guidance of IEEE Standard 1366-2003, "*IEEE Guide for Electric Power Distribution Reliability Indices.*" Following the guidance of this standard, one day in 2013 was deemed excludable as a Major Event Day.

Attachment 2 provides details of all Major Event Days excluded over the past ten years, whether excluded under IEEE 1366 or D.96-09-045.

Attachments 3 – 6 provide additional information on significant outages as required by D.96-09-045.

If you have any questions regarding this submittal, please contact me at 909-274-1133 or Roger Lee at 714-973-5545.

Best regards,


Gregg Kludjian
Director, Asset Management

Enclosures

CC: Edward Randolph, Energy Division Director
Denise Tyrrell, Safety Enforcement Division Director
Elizaveta Malashenko, Grid Planning & Reliability, Energy Division
David K. Lee, Energy Division
John David Erickson, Energy Division

Southern California Edison
Annual System Reliability Report - 2013
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Southern California Edison

Historical System Reliability (IEEE Std 1366-2003)

2004 - 2005 Using DTOM Outage Database

2006 - 2013 Using ODRM Outage Database

YEAR	All Interruptions Included			Major Event Days Excluded Per IEEE 1366		
	SAIDI	SAIFI	MAIFI	SAIDI	SAIFI	MAIFI
2004	74.93	1.34	1.21	55.30	1.15	1.05
2005	92.26	1.53	1.47	72.57	1.33	1.23
2006	142.14	1.05	1.85	96.59	0.89	1.52
2007	151.32	1.10	1.74	85.34	0.88	1.37
2008	118.91	1.06	1.73	99.35	0.95	1.56
2009	105.80	0.90	1.45	88.77	0.83	1.31
2010	140.91	1.05	1.69	98.69	0.82	1.41
2011	232.39	1.04	1.53	108.15	0.91	1.36
2012	108.13	0.89	1.43	100.70	0.86	1.35
2013	102.61	0.91	1.20	94.48	0.88	1.18

All calculations utilize a definition of "sustained" interruption as described in IEEE Std 1366, 2003 Edition, which is an interruption lasting longer than 5 minutes.

In years 2006 - 2010, values of SAIDI, SAIFI, and MAIFI were calculated per the guidance of IEEE 1366 with the one exception of using five years of historical data in applying the "2.5 beta method" to determine excludable days. Per IEEE 1366, days are excluded from a given year's metric if their SAIDI exceeds 2.5 times the standard deviation of the natural logarithm of daily SAIDI over the previous five year period. However, complete ODRM data did not exist prior to 2006. Therefore, excludable days for years 2006 and 2007 were both determined based on daily SAIDI data in year 2006. Excludable days for 2008 were determined based on daily SAIDI data in years 2006 and 2007. Excludable days for 2009 were determined based on daily SAIDI data in years 2006, 2007, and 2008. Excludable days for 2010 were determined based on daily SAIDI data in years 2006, 2007, 2008, and 2009. This interim approach is consistent with IEEE 1366.

Major Event Days Detail

Attachment 2

No.	YEAR	DATE	CAUSE	Excluded under IEEE 1366	SAIDI	SAIFI	MAIFI	Excluded under D.96-09-045	SAIDI	SAIFI	MAIFI	Source of data
1	2004	8/12/2004	Lightning Storm	Y	1.57	0.00	0.01					DTOM
2	2004	9/11/2004	Moorpark A-Bank Transformer Failure	Y	1.62	0.03	0.01					DTOM
3	2004	10/17/2004	Rain Storm	Y	1.99	0.02	0.03					DTOM
4	2004	10/20/2004	Rain Storm	Y	1.61	0.03	0.02					DTOM
5	2004	10/27/2004	Wind Storm	Y	2.39	0.02	0.02					DTOM
6	2004	11/21/2004	Wind Storm	Y	2.57	0.02	0.02					DTOM
7	2004	12/28/2004	Winter Rain Storm	Y	2.71	0.03	0.05	Y	2.71	0.03	0.05	DTOM
8	2004	12/29/2004	Winter Rain Storm	Y	3.55	0.03	0.01	Y	3.55	0.03	0.01	DTOM
9	2004	12/30/2004	Winter Rain Storm	Y	3.55	0.03	0.01	Y	0.22	0.00	0.00	DTOM
10	2004	12/31/2004	Winter Rain Storm	Y	1.62	0.01	0.00	Y	1.62	0.01	0.00	DTOM
Total				9	19.63	0.19	0.16	4	8.10	0.08	0.07	
1	2005	1/9/2005	Winter Rain Storm	Y	1.49	0.02	0.01					DTOM
2	2005	1/10/2005	Winter Rain Storm	Y	1.48	0.03	0.01	Y	1.48	0.03	0.01	DTOM
3	2005	1/11/2005	Winter Rain Storm	Y	1.57	0.02	0.01	Y	1.57	0.02	0.01	DTOM
4	2005	1/12/2005	Winter Rain Storm	Y				Y	0.36	0.01	0.00	DTOM
5	2005	2/19/2005	Winter Rain Storm	Y	2.26	0.03	0.02					DTOM
6	2005	7/24/2005	Lightning Storm	Y	1.50	0.01	0.02					DTOM
7	2005	8/6/2005	Wind Storm	Y	1.68	0.01	0.02					DTOM
8	2005	9/3/2005	Brush Fire	Y	2.12	0.01	0.00					DTOM
9	2005	9/20/2005	Lightning Storm	Y	3.89	0.04	0.09	Y	3.89	0.04	0.09	DTOM
10	2005	10/17/2005	Lightning Storm	Y	3.69	0.04	0.04					DTOM
Total				9	19.69	0.21	0.24	4	7.30	0.10	0.12	
1	2006	1/2/2006	Wind storm & Rain storm	Y	10.48	0.05	0.10	Y	10.48	0.05	0.10	ODRM
2	2006	7/15/2006	Heat Storm	Y	2.49	0.02	0.02					ODRM
3	2006	7/20/2006	Heat Storm	Y	2.30	0.01	0.03					ODRM
4	2006	7/22/2006	Heat Storm	Y	15.44	0.04	0.07	Y	15.44	0.04	0.07	ODRM
5	2006	7/23/2006	Heat Storm	Y	4.87	0.01	0.02					ODRM
6	2006	7/24/2006	Heat Storm	Y	2.82	0.01	0.01					ODRM
7	2006	12/27/2006	Wind storm, Others	Y	4.05	0.02	0.04					ODRM
8	2006	12/28/2006	Wind storm, Others	Y	3.09	0.01	0.02					ODRM
Total				8	45.55	0.16	0.33	2	25.92	0.08	0.18	

Major Event Days Detail

Attachment 2

No.	YEAR	DATE	CAUSE	Excluded under IEEE 1366	SAIDI	SAIFI	MAIFI	Excluded under D.96-09-045	SAIDI	SAIFI	MAIFI	Source of data
1	2007	1/5/2007	Wind storm & Rain storm	Y	2.17	0.02	0.04					ODRM
2	2007	3/27/2007	Wind storm & Rain storm	Y	5.71	0.03	0.04					ODRM
3	2007	4/12/2007	Wind storm, Others	Y	2.21	0.02	0.04					ODRM
4	2007	8/31/2007	Lightning storm & Heat storm	Y	3.28	0.02	0.03					ODRM
5	2007	9/1/2007	Lightning storm & Heat storm	Y	3.40	0.01	0.03					ODRM
6	2007	9/2/2007	Lightning storm & Heat storm	Y	6.13	0.02	0.02					ODRM
7	2007	9/3/2007	Lightning storm & Heat storm	Y	10.33	0.03	0.02					ODRM
8	2007	9/4/2007	Lightning storm & Heat storm	Y	2.33	0.01	0.01					ODRM
9	2007	10/21/2007	Wind Storm, Wild Fires & 10% Major Event (higher customers interrupted on momentary with low duration)	Y	9.61	0.04	0.09	Y	9.61	0.04	0.09	ODRM
10	2007	10/22/2007	Wind Storm, Wild Fires, (less customers interrupted with high duration) i.e. Snow Valley 12KV, Taggart 12KV, Oak Knoll were de-energized requested by Fire Dept.	Y	18.31	0.04	0.03					ODRM
11	2007	12/25/2007	Wind storm	Y	2.49	0.01	0.02					ODRM
Total				11	65.98	0.23	0.36	1	9.61	0.04	0.09	
1	2008	1/4/2008	Rain storm & Wind storm	Y	3.00	0.02	0.03					ODRM
2	2008	1/5/2008	Rain storm & Wind storm	Y	2.10	0.01	0.01					ODRM
3	2008	1/24/2008	Rain storm & Wind storm	Y	3.63	0.01	0.01					ODRM
4	2008	2/3/2008	Rain storm & Wind storm	Y	2.63	0.02	0.06					ODRM
5	2008	7/2/2008	Wild Fires	Y	3.30	0.02	0.02					ODRM
6	2008	12/15/2008	Rain storm & Wind storm	Y	2.18	0.01	0.02					ODRM
7	2008	12/17/2008	Rain storm & Wind storm	Y	2.72	0.01	0.02					ODRM
Total				7	19.57	0.10	0.18	0	0.00	0.00	0.00	
1	2009	6/3/2009	Lightning Storm	Y	3.85	0.02	0.05					ODRM
2	2009	8/27/2009	Wild Fires	Y	2.93	0.00	0.01					ODRM
3	2009	8/29/2009	Wild Fires	Y	1.98	0.00	0.00					ODRM
4	2009	8/31/2009	Wild Fires	Y	3.84	0.00	0.00					ODRM
5	2009	10/27/2009	Wind Storm	Y	1.99	0.01	0.03					ODRM
6	2009	12/7/2009	Rain/Wind Storm	Y	2.43	0.02	0.03					ODRM
Total				6	17.03	0.07	0.13	0	0.00	0.00	0.00	

Major Event Days Detail

Attachment 2

No.	YEAR	DATE	CAUSE	Excluded under IEEE 1366	SAIDI	SAIFI	MAIFI	Excluded under D.96-09-045	SAIDI	SAIFI	MAIFI	Source of data
1	2010	1/18/2010	Vegetation Blown	Y	3.97	0.02	0.04					ODRM
2	2010	1/21/2010	Vegetation Blown	Y	5.83	0.02	0.03					ODRM
3	2010	1/22/2010	Vegetation Blown	Y	3.52	0.01	0.01					ODRM
4	2010	1/23/2010	Vegetation Blown	Y	1.98	0.01	0.00					ODRM
5	2010	7/15/2010	Lightning & Toppled/Broken	Y	2.39	0.01	0.03					ODRM
6	2010	9/27/2010	Overloaded	Y	3.38	0.01	0.01					ODRM
7	2010	10/1/2010	Lightning	Y	2.48	0.03	0.02					ODRM
8	2010	10/4/2010	Lightning & Fire	Y	3.15	0.02	0.01					ODRM
9	2010	10/19/2010	Lightning & Protection	Y	3.50	0.04	0.04					ODRM
10	2010	12/19/2010	Vegetation Blown & Overload	Y	2.99	0.01	0.03					ODRM
11	2010	12/22/2010	Vegetation Blown	Y	3.82	0.02	0.02					ODRM
12	2010	12/29/2010	Vegetation Blown & Low Voltage	Y	2.25	0.01	0.02					ODRM
13	2010	12/30/2010	Vegetation Blown & Wind	Y	2.97	0.01	0.02					ODRM
Total				13	42.22	0.23	0.28	0	0.00	0.00	0.00	
1	2011	1/1/2011	Unknown	Y	2.40	0.00	0.00					ODRM
2	2011	3/20/2011	Snow & Vegetation Blown	Y	8.85	0.03	0.05					ODRM
3	2011	3/21/2011	Vegetation Blown & Lightning	Y	2.76	0.01	0.01					ODRM
4	2011	7/31/2011	Lightning	Y	2.77	0.01	0.01					ODRM
5	2011	11/30/2011	Vegetation Blown & Wind	Y	47.89	0.02	0.02	Y	59.57	0.05	0.06	ODRM
6	2011	12/1/2011	Wind & Vegetation Blown	Y	59.56	0.05	0.06	Y	59.57	0.05	0.06	ODRM
Total				6	124.24	0.12	0.17	1	59.57	0.05	0.06	
1	2012	1/21/2012	Wind Storm & Toppled/Broken	Y	3.26	0.02	0.03					ODRM
2	2012	3/17/2012	Wind & Vegetation Blown	Y	1.96	0.01	0.03					ODRM
3	2012	10/11/2012	Lightning & Rain	Y	2.21	0.01	0.02					ODRM
Total				3	7.43	0.04	0.08	0	0.00	0.00	0.00	
1	2013	8/19/2013	Lightning	Y	8.13	0.03	0.03					ODRM
Total				1	8.13	0.03	0.03	0	0.00	0.00	0.00	

Customers experiencing > 12 sustained outages 2004 - 2013

Year	Circuit	Circuit Name	Number of customers experiencing > 12 sustained outages
2004	390	ALPINE*	302
2004	1630	BIG ROCK	534
2004	3387	CHAWA	894
2004	5085	DINKEY CREEK	85
2004	6432	FINGAL	189
2004	8670	HOOK CREEK*	297
2004	8930	INTAKE	13
2004	9060	IVERSON	125
2004	9194	JEEP*	1,079
2004	9205	JENKS LAKE*	121
2004	9290	JOHNSONDALE	119
2004	11760	METTLER	340
2004	12136	MONTREAL*	630
2004	12190	MORITZ*	1,447
2004	12840	NORTH BAY*	226
2004	12860	NORTH SHORE*	245
2004	13959	PERIMETER	1,090
2004	14705	RANIER	7
2004	15090	RIM*	1,328
2004	15275	ROBIN	45
2004	15415	ROSEBUD	734
2004	15986	SCHMIDT	470
2004	17915	TITAN	79
2004	17985	TOPOC	92
2004	17997	TORONTO*	690
2004	19694	ANGELES	1,088
2005	2664	CALCADIA	4
2005	5090	DISCOVERY	32
2005	7490	GRANITE	267
2005	9777	KINSEY	70
2005	10216	LAVA	55
2005	10670	LOMBARDY	94
2005	12722	NIPTON	33
2005	13776	PAT	1,151
2005	15282	ROBINSON CREEK	199
2005	15415	ROSEBUD	581
2005	16308	SHEEPHOLE	3
2005	17731	THACHER	457
2005	19136	WEISS	177

Year	Circuit	Circuit Name	Number of customers experiencing > 12 sustained outages
2006	5085	DINKEY CREEK	29
2006	14955	RHINEDOLLAR	64
2007	1832	BLUE CUT	193
2007	12847	NORTH PARK	436
2007	17121	STROH	112
2008	2290	BROOKINGS	1
2008	3240	CEDAR GLEN	605
2008	4221	COVE	10
2008	4360	CRESTLINE	22
2008	4170	FROZEN	3
2008	8268	HEAPS PEAK	4
2008	8670	HOOK CREEK	147
2008	8848	HURST	6
2008	10119	LARK	147
2008	10216	LAVA	52
2008	12011	MIST	7
2008	14482	PUFF	2
2008	14690	RANGER	343
2008	14955	RHINEDOLLAR	31
2008	17997	TORONTO	47
2008	19036	WASP	46
2009	3240	CEDAR GLEN	19
2009	4136	COSO	45
2009	5492	EARTH	4
2009	8268	HEAPS PEAK	6
2009	14690	RANGER	306
2009	14955	RHINEDOLLAR	31
2009	16395	SHOSHONE	1
2009	17997	TORONTO	23
2010	12960	OAK GLEN	4
2010	13194	OPPORTUNITY	9
2010	14955	RHINEDOLLAR	31
2010	15415	ROSEBUD	41
2010	17061	STONELEY	82
2011	04223	COVEVIEW	184
2011	04367	CRESTWIND	28
2011	04170	FROZEN	3
2011	09185	JAWBONE	2
2011	09275	JOB	35

Year	Circuit	Circuit Name	Number of customers experiencing > 12 sustained outages
2011	12190	MORITZ	983
2011	14758	RED BOX	8
2012	11627	MELODY	274
2012	14750	REDBANKS	17
2012	14955	RHINEDOLLAR	31
2013			0

2013

Rank	Description	Date	SAIDI	Number of customers affected	Longest customer interruption (min)	Number of people used to restore service	D.96-09-045 Major Event?	IEEE 1366 Major Event?
1	Lighting Strike	8/19/2013	8.128	293,292	4,309		N	Y
2	Unknown caused transmission conductor failure	9/15/2013	1.720	123,122	1,188		N	N
3	Substation Transformer Sudden Pressure	6/28/2013	1.575	99,290	6,571		N	N
4	Unknown, Fire, Open For Repairs	11/21/2013	1.538	165,109	2,795		N	N
5	Unknown, Vegetation Blown, Wind	4/9/2013	1.499	54,286	1,453		N	N
6	Unknown, Fire, Vegetation Blown	10/9/2013	1.471	102,577	1,449		N	N
7	Unknown, Open For Repairs	10/28/2013	1.060	73,107	1,705		N	N
8	Lightning Storm	2/8/2013	1.032	78,275	4,650		N	N
9	Vegetation Blown	4/8/2013	0.992	151,235	1,976		N	N
10	Unknown, Vegetation Blown	8/30/2013	0.972	51,552	2,823		N	N

2012

Rank	Description	Date	SAIDI	Number of customers affected	Longest customer interruption (min)	Number of people used to restore service	D.96-09-045 Major Event?	IEEE 1366 Major Event?
1	Wind Storm & Toppled/Broken	1/21/2012	3.259	240,460	24,868		N	Y
2	Lightning & Overhead equipment	10/11/2012	2.214	146,054	10,377		N	Y
3	Wind & Vegetation Blown	3/17/2012	1.959	187,878	5,709		N	Y
4	Toppled/Broken & Transformer	8/12/2012	1.261	73,569	7,887		N	N
5	Vegetation Blown & Repairs	3/18/2012	1.174	86,048	4,346		N	N
6	Vegetation Blown, Wind & Standard Operation	12/18/2012	1.135	138,374	1,434		N	N
7	Substation & underground cable	8/23/2012	1.132	58,317	2,609		N	N
8	Underground Cable	2/3/2012	1.079	20,531	147,812		N	N
9	Patrolled, Lightning	8/30/2012	1.013	187,417	3,065		N	N
10	Transmission Equipment & Operation Error	8/21/2012	1.001	45,595	4,320		N	N

2011

Rank	Description	Date	SAIDI	Number of customers affected	Longest customer interruption (min)	Number of people used to restore service	D.96-09-045 Major Event?	IEEE 1366 Major Event?
1	Wind & Vegetation Blown	12/1/2011	59,564	569,969	14,806	3,338	Y	Y
2	Vegetation Blown & Wind	11/30/2011	47,890	234,977	10,255	3,338	N	Y
3	Snow & Vegetation Blown	3/20/2011	8,851	385,628	45,068		N	Y
4	Lightning	7/31/2011	2,769	116,749	21,682		N	Y
5	Vegetation Blown & Lightning	3/21/2011	2,763	122,222	4,795		N	Y
6	Unknown	1/1/2011	2,403	22,886	260,236		N	Y
7	Vegetation Blown	2/18/2011	1,737	119,202	5,501		N	N
8	Vegetation Blown & Snow	2/26/2011	1,563	92,686	4,226		N	N
9	Lightning	9/10/2011	1,531	161,304	6,904		N	N
10	Wind & Vegetation Blown	11/2/2011	1,490	90,559	2,752		N	N

2010

Rank	Description	Date	SAIDI	Number of customers affected	Longest customer interruption (min)	Number of people used to restore service	D.96-09-045 Major Event?	IEEE 1366 Major Event?
1	Vegetation Blown	1/21/2010	5.832				N	Y
2	Vegetation Blown	1/18/2010	3.966				N	Y
3	Vegetation Blown	12/22/2010	3.817				N	Y
4	Vegetation Blown	1/22/2010	3.518				N	Y
5	Lightning & Protection	10/19/2010	3.495				N	Y
6	Overloaded	9/27/2010	3.378				N	Y
7	Lightning & Fire	10/4/2010	3.153				N	Y
8	Vegetation Blown & Overload	12/19/2010	2.992				N	Y
9	Vegetation Blown & Wind	12/30/2010	2.973				N	Y
10	Lightning	10/1/2010	2.483				N	Y

2009

Rank	Description	Date	SAIDI	Number of customers affected	Longest customer interruption (min)	Number of people used to restore service	D.96-09-045 Major Event?	IEEE 1366 Major Event?
1	Lightning Storm	6/3/2009	3.848				N	Y
2	Wild Fires	8/31/2009	3.837				N	Y
3	Wild Fires	8/27/2009	2.935				N	Y
4	Rain/Wind Storm	12/7/2009	2.436				N	Y
5	Wind Storm	10/27/2009	1.993				N	Y
6	Wild Fires	8/29/2009	1.983				N	Y
7	Wind Storm	3/22/2009	1.724				N	N
8	Wild Fires	4/3/2009	1.564				N	N
9	Rain Storm	2/9/2009	1.543				N	N
10	Car Hit Pole	12/12/2009	1.222				N	N

2008

Rank	Description	Date	SAIDI	Number of customers affected	Longest customer interruption (min)	Number of people used to restore service	D.96-09-045 Major Event?	IEEE 1366 Major Event?
1	Rain/Wind Storm	1/24/2008	3.633				N	Y
2	Wild Fires	7/2/2008	3.304				N	Y
3	Rain/Wind Storm	1/4/2008	3.006				N	Y
4	Rain/Wind Storm	12/17/2008	2.723				N	Y
5	Rain/Wind Storm	2/3/2008	2.628				N	Y
6	Rain/Wind Storm	12/15/2008	2.186				N	Y
7	Rain/Wind Storm	1/5/2008	2.103				N	Y
8	Rain/Wind Storm	12/25/2008	1.793				N	N
9	Rain/Wind Storm	1/27/2008	1.555				N	N
10	Rain/Wind Storm	1/25/2008	1.404				N	N

2007

Rank	Description	Date	SAIDI	Number of customers affected	Longest customer interruption (min)	Number of people used to restore service	D.96-09-045 Major Event?	IEEE 1366 Major Event?
1	Wild Fires	10/22/2007	18.310				N	Y
2	Summer heat storm	9/3/2007	10.336				N	Y
3	Wild Fires	10/21/2007	9.649	628,093	6,632	1,258	Y	Y
4	Summer heat storm	9/2/2007	6.162				N	Y
5	Rain/Wind Storm	3/27/2007	5.711				N	Y
6	Summer heat storm	9/1/2007	3.398				N	Y
7	Summer heat storm	8/31/2007	3.285				N	Y
8	Wind Storm	12/25/2007	2.494				N	Y
9	Summer heat storm	9/4/2007	2.334				N	Y
10	Wind Storm	4/12/2007	2.215				N	Y

2006

Rank	Description	Date	SAIDI	Number of customers affected	Longest customer interruption (min)	Number of people used to restore service	D.96-09-045 Major Event?	IEEE 1366 Major Event?
1	Summer heat storm	7/22/2006	15.441	527,572	6,748	1,616	Y	Y
2	Winter rain storm	1/2/2006	10.478	720,251	4,532	684	Y	Y
3	Summer heat storm	7/23/2006	4.866	170,590			N	Y
4	Winter rain storm	12/27/2006	4.055	285,211			N	Y
5	Winter rain storm	12/28/2006	3.084	155,839			N	Y
6	Summer heat storm	7/24/2006	2.821	98,614			N	Y
7	Summer heat storm	7/15/2006	2.492	159,258			N	Y
8	Summer heat storm	7/20/2006	2.305	208,040			N	Y
9	Summer heat storm	7/21/2006	2.085	238,707			N	N
10	Winter rain storm	1/22/2006	1.966	157,613			N	N

2005

Rank	Description	Date	SAIDI	Number of customers affected	Longest customer interruption (min)	Number of people used to restore service	D.96-09-045 Major Event?	IEEE 1366 Major Event?
1	Winter Rain Storm	01/01/05 - 01/11/05	7.786	954,312	23,269	1,005	Y	Y
2	Winter Rain Storm	02/16/05 - 02/23/05	5.713	696,946	8,233	641	Y	Y
3	Lightning Storm	9/20/2005	3.887	624,737	2,910	391	Y	Y
4	Lightning Storm	10/17/2005	3.693				N	Y
5	Brush Fire	9/3/2005	2.121				N	Y
6	Wind Storm	8/6/2005	1.683				N	Y
7	Lightning Storm	7/24/2005	1.500				N	Y
8	Lightning Storm	5/6/2005	1.235				N	N
9	Wind Storm	11/26/2005	1.089				N	N
10	Rain/Wind Storm	12/31/2005	1.061				N	N

2004

Rank	Description	Date	SAIDI	Number of customers affected	Longest customer interruption (min)	Number of people used to restore service	D.96-09-045 Major Event?	IEEE 1366 Major Event?
1	Winter Rain Storm	12/28/04 - 12/31/04	8.100	708,044	38,065	1,005	Y	Y
2	Wind Storm	11/21/2004	2.571				N	Y
3	Wind Storm	10/27/2004	2.389				N	Y
4	Rain Storm	10/17/2004	1.999				N	Y
5	Moorpark A-Bank	9/11/2004	1.622				N	Y
6	Rain Storm	10/20/2004	1.610				N	Y
7	Lightning Storm	8/12/2004	1.574				N	Y
8	Rain Storm	10/19/2004	0.989				N	N
9	Wind Storm	11/22/2004	0.904				N	N
10	Lightning Storm	8/13/2004	0.883				N	N

**Number of customers w/o service at hourly intervals during Major Event Days
(As defined by D.96-09-045 in yrs. 2004 to 2010 and as defined by IEEE-1366 in yrs. 2011 to 2013)**

Attachment 5

THIS TABLE CONTAINS ROLLING DAY DATA.

Time	12/28/2004	12/29/2004	12/30/2004	12/31/2004	1/1/2005	1/2/2005	1/3/2005	1/4/2005	Description of event
0	12,202	84,434	3,841	1,127	2,344	118	8,955	2,091	
1	7,187	71,180	4,368	1,906	2,921	398	1,652	2,270	
2	24,357	60,971	3,324	1,444	34	398	-	3,830	
3	40,904	47,181	3,834	2,590	358	420	5,475	600	
4	21,739	30,328	3,737	3,755	1,600	2,571	7	3,827	
5	15,563	24,823	3,249	3,888	4,906	303	3,637	807	
6	11,448	19,659	1,972	9,143	7,949	303	1,997	627	
7	30,504	18,040	1,219	7,295	2,774	1,665	7,844	3,186	
8	80,953	15,674	4,717	12,424	4,609	223	16,398	2,784	
9	30,040	13,206	1,640	19,566	540	223	5,447	33,282	
10	42,290	15,031	1,745	7,628	2,162	5,192	479	35,214	
11	30,355	11,669	5,737	8,981	4,074	6,462	29,734	6,727	
12	16,991	14,253	4,276	16,928	1,259	1,261	7,823	2,813	
13	17,970	15,084	5,481	10,208	508	1,860	4,983	1,239	
14	13,537	11,345	4,109	6,843	832	2,845	1,139	5,954	
15	5,871	7,682	6,491	11,140	508	140	5,396	1,593	
16	11,953	13,496	807	8,410	2,442	140	4,085	533	
17	92,301	5,765	629	2,556	172	140	825	116	
18	7,091	5,112	2,592	2,034	172	141	8,390	116	
19	12,949	7,681	2,904	2,536	42	141	13,318	2,102	
20	10,576	5,121	705	2,522	992	65	1,012	116	
21	7,987	4,092	1,738	4,294	1,068	64	5,787	1,011	
22	6,779	3,280	2,262	4,122	118	64	619	331	
23	17,630	6,271	4,535	4,375	118	64	619	89	

**Number of customers w/o service at hourly intervals during Major Event Days
(As defined by D.96-09-045 in yrs. 2004 to 2010 and as defined by IEEE-1366 in yrs. 2011 to 2013)**

Attachment 5

THIS TABLE CONTAINS ROLLING DAY DATA.

Time	1/5/2005	1/6/2005	1/7/2005	1/8/2005	1/9/2005	1/10/2005	1/11/2005	1/16/2005	Description of event
0	89	327	1,136	1,172	4,634	9,150	14,206	849	
1	5,160	281	488	24	5,353	12,379	17,009	125	
2	82	281	3,387	73	12,050	7,614	23,761	9	
3	82	281	555	18,858	5,806	6,362	11,891	3,916	
4	82	281	960	190	2,602	8,523	11,603	10	
5	66	275	3,054	379	14,378	7,153	17,849	10	
6	2,669	275	3,383	589	9,300	10,555	21,763	397	
7	3,824	2,611	2,136	26	14,493	12,129	19,731	397	
8	179	729	5,964	1,758	12,429	21,583	12,136	178	
9	166	981	3,644	2,049	24,223	25,889	11,853	191	
10	7,332	2,008	18,416	1,749	20,625	11,663	13,268	26	
11	2,209	1,911	14,005	1,156	15,716	14,795	14,945	2,782	
12	1,194	2,913	18,630	2,928	15,434	14,101	14,518	1,746	
13	1,192	675	12,035	10,653	14,768	25,907	16,991	1,092	
14	6,876	454	12,229	8,270	9,396	18,741	9,700	822	
15	2,886	620	5,695	5,987	12,776	17,297	8,543	227	
16	361	1,813	7,314	12,102	14,157	15,005	8,302	5,306	
17	385	1,783	6,025	7,942	18,536	11,146	12,089	2,379	
18	444	776	6,402	6,594	18,384	8,124	10,778	5,322	
19	278	1,561	4,794	3,573	10,382	15,219	1,684	4,002	
20	312	1,617	2,449	5,256	8,367	13,053	19,597	933	
21	2,716	304	5,710	7,556	16,640	11,746	11,712	933	
22	2,923	304	4,910	3,131	11,723	17,482	1,331	288	
23	336	1,074	1,313	10,803	10,832	13,659	971	-	

**Number of customers w/o service at hourly intervals during Major Event Days
(As defined by D.96-09-045 in yrs. 2004 to 2010 and as defined by IEEE-1366 in yrs. 2011 to 2013)**

Attachment 5

THIS TABLE CONTAINS ROLLING DAY DATA.

Time	2/17/2005	2/18/2005	2/19/2005	2/20/2005	2/21/2005	2/22/2005	2/23/2005	9/20/2005	Description of event
0	-	2,485	10,466	6,564	17,643	1,611	23,794	35,324	
1	229	1,495	17,924	3,539	13,966	1,398	23,651	73,173	
2	17	1,441	13,917	7,293	16,136	7,833	5,401	117,966	
3	837	1,441	20,607	1,694	12,916	5,314	4,219	94,719	
4	1,623	1,441	52,009	2,959	6,111	167	9,519	70,986	
5	323	4,579	48,850	2,831	10,876	3,305	5,111	59,321	
6	574	908	33,786	2,148	16,259	342	26,381	36,987	
7	622	2,737	27,551	5,496	9,266	339	9,743	44,392	
8	371	2,523	28,434	3,496	13,975	619	8,601	38,176	
9	706	502	9,986	1,428	5,374	4,169	7,510	59,889	
10	10,010	470	26,295	2,064	7,730	3,222	8,704	42,516	
11	9,127	4,659	21,866	2,673	10,107	6,973	11,041	62,892	
12	715	133	20,560	4,118	6,323	2,308	6,804	26,698	
13	1,406	133	12,826	1,424	12,967	3,533	5,970	21,128	
14	8,316	4,986	10,386	928	10,061	7,288	1,898	23,744	
15	946	6,229	8,937	646	3,940	2,330	1,347	16,056	
16	782	141	10,151	2,152	10,584	1,275	2,009	14,467	
17	4,792	141	7,290	3,921	10,439	7,048	2,811	10,871	
18	4,205	141	9,393	4,268	2,793	4,279	2,117	13,237	
19	4,969	1,123	8,156	3,741	4,762	4,235	1,142	9,521	
20	1,357	2,100	4,481	1,904	5,291	1,504	722	6,935	
21	1,357	1,246	5,405	13,372	7,568	2,594	620	6,730	
22	2,455	213	5,280	6,753	2,452	984	1,956	4,476	
23	2,401	21,056	7,146	17,008	5,496	20,739	2,630	4,349	

**Number of customers w/o service at hourly intervals during Major Event Days
(As defined by D.96-09-045 in yrs. 2004 to 2010 and as defined by IEEE-1366 in yrs. 2011 to 2013)**

THIS TABLE CONTAINS ROLLING DAY DATA.

Time	Winter Rain Storm 1/2/2006	Summer Heat Storm 7/22/2006	Wild Fires 10/21/2007	Winter Storm 1/1/2011	Wind Storm 3/20/2011	Wind Storm 3/21/2011	Summer Lightning 7/31/2011	Los Angeles Wind Storm 11/30/2011	Description of event ↵ Date of event
0	934	8,131	8,346	152	2,253	3,756	1,553	346	
1	2,485	6,528	13,208	848	3,614	25,090	17,863	27	
2	979	7,269	13,475	1,802	3,218	6,775	23,571	93	
3	3,901	7,257	42,878	906	4,366	6,002	23,258	136	
4	16,033	6,504	33,204	245	4,836	13,142	50,469	905	
5	23,872	4,299	54,764	221	1,982	14,204	31,683	136	
6	14,740	4,956	20,957	256	19,346	7,630	32,030	101	
7	35,171	4,806	45,298	1,635	19,464	7,215	24,115	101	
8	77,681	4,932	59,570	2,055	22,334	3,739	37,987	101	
9	191,661	2,263	53,648	449	14,170	5,171	6,264	1,953	
10	162,780	2,674	71,391	434	21,641	32,945	8,203	635	
11	169,871	3,161	67,827	1,896	38,613	33,472	10,251	3,655	
12	115,365	7,451	51,300	1,213	50,469	29,369	6,656	2,473	
13	87,849	19,300	43,260	448	65,147	29,585	8,299	9,002	
14	83,069	53,902	60,972	338	59,645	28,413	11,004	3,810	
15	79,866	105,045	49,155	6,185	54,173	12,384	5,024	671	
16	76,523	129,964	41,000	286	54,319	10,565	4,815	6,934	
17	57,515	134,398	51,141	446	46,595	6,619	4,835	14,239	
18	47,499	89,342	42,154	3,814	75,305	8,154	7,279	17,008	
19	36,870	145,110	53,578	2,062	68,778	10,209	1,612	30,999	
20	36,921	84,274	54,253	2,393	42,090	6,559	1,818	47,924	
21	29,519	76,624	45,699	2,871	35,941	3,779	3,094	33,931	
22	28,745	66,383	85,099	2,301	32,844	4,307	1,880	60,206	
23	21,198	53,678	38,793	2,334	33,134	4,136	2,084	124,610	

**Number of customers w/o service at hourly intervals during Major Event Days
(As defined by D.96-09-045 in yrs. 2004 to 2010 and as defined by IEEE-1366 in yrs. 2011 to 2013)**

THIS TABLE CONTAINS ROLLING DAY DATA.

Time	Los Angeles Wind Storm	WindStorm	WindStorm	Lightning & Rain	Lightning Strike				Description of event
	12/1/2011	1/21/2012	3/17/2012	10/11/2012	8/19/2013				↵ Date of event
0	53,827	1,174	1,008	458	7,082				
1	195,848	4,150	2,741	134	4,622				
2	224,491	1,106	3,610	134	12,256				
3	185,094	6,743	457	1,275	7,281				
4	175,500	7,409	2,393	141	26,855				
5	168,896	15,218	2,255	114	23,729				
6	182,264	23,440	15,540	7,008	49,482				
7	157,517	13,989	12,982	4,880	13,049				
8	153,781	16,516	12,840	4,837	9,445				
9	159,094	5,731	28,104	18,614	8,186				
10	153,681	31,634	38,755	5,405	7,840				
11	149,957	24,455	41,816	8,762	7,110				
12	160,856	26,878	25,858	9,722	11,473				
13	148,958	85,151	22,659	11,453	12,046				
14	138,162	45,427	21,312	27,798	13,468				
15	130,026	36,652	16,647	28,978	20,084				
16	120,737	25,796	19,420	25,540	9,682				
17	115,884	22,711	11,795	27,331	8,588				
18	110,628	17,443	7,487	22,196	8,778				
19	110,607	18,769	6,777	22,669	121,130				
20	101,914	13,776	6,233	15,008	130,812				
21	99,117	12,554	3,685	12,217	115,356				
22	95,108	8,957	5,910	8,776	112,531				
23	92,330	7,587	7,975	9,154	71,972				

**Number of customers w/o service by outage duration during Major Events
(As defined by D.96-09-045 in yrs. 2004 to 2010 and as defined by IEEE-1366 in yrs. 2011 to 2013)**

Outage Duration	Winter Rain Storm 12/28/2004 - 12/31/2004	Winter Rain Storm 01/01/2005 - 01/11/2005	Winter Rain Storm 02/16/2005 - 02/23/2005	Lightning Storm 9/20/2005	Winter Rain Storm 1/2/2006	Summer Heat Storm 7/22/2006	Wild Fires 10/21/2007	Winter Storm 1/1/2011	Wind Storm 3/20/2011	Wind Storm 3/21/2011	Description of event
0 to 1 hour	409,325	561,834	377,235	440,023	572,274	422,684	522,063	19,856	299,989	79,997	
1 to 5 hours	151,123	203,015	153,424	64,816	101,467	55,577	67,433	2,181	53,535	31,620	
5 to 10 hours	60,160	101,172	70,856	33,672	25,500	15,986	21,017	231	11,804	6,513	
10 to 15 hours	38,830	45,767	54,924	28,181	10,751	7,881	4,637	180	5,112	2,755	
15 to 20 hours	16,205	17,431	30,162	17,358	3,862	4,703	4,349	170	3,359	455	
20 to 24 hours	10,963	7,955	6,708	11,119	898	3,591	1,585	17	3,680	278	
1 to 2 days	17,805	12,906	3,634	29,487	5,004	12,458	5,157	50	6,901	567	
2 to 3 days	1,062	13	-	81	459	4,036	1,574	-	1,035	23	
3 to 4 days	-	2,569	-	-	36	646	133	111	158	14	
4 to 5 days	2,564	504	-	-	-	10	145	49	43	-	
5 to 6 days	-	-	3	-	-	-	-	-	-	-	
6 to 7 days	-	-	-	-	-	-	-	-	7	-	
>= 7 days	7	1,146	-	-	-	-	-	41	5	-	
Total	708,044	954,312	696,946	624,737	720,251	527,572	628,093	22,886	385,628	122,222	

**Number of customers w/o service by outage duration during Major Events
(As defined by D.96-09-045 in yrs. 2004 to 2010 and as defined by IEEE-1366 in yrs. 2011 to 2013)**

Attachment 6

Outage Duration	Summer Lightning 7/31/2011	Los Angeles Wind Storm 11/30/2011	Los Angeles Wind Storm 12/11/2011	WindStorm 1/21/2012	WindStorm 3/17/2012	Lightning & Rain 10/11/2012	Lightning Strike 8/19/2013	Description of event Date of event
0 to 1 hour	86,125	141,793	353,515	195,625	160,146	118,987	150,542	
1 to 5 hours	5,895	13,080	54,549	28,201	18,436	17,698	91,386	
5 to 10 hours	22,012	11,329	25,877	10,009	4,425	4,403	47,760	
10 to 15 hours	1,929	7,067	30,380	4,179	3,709	985	1,719	
15 to 20 hours	331	2,323	16,495	1,390	334	2,144	833	
20 to 24 hours	261	5,031	12,249	293	263	404	108	
1 to 2 days	189	16,105	47,274	732	356	1,432	941	
2 to 3 days	2	19,471	21,220	1	1	-	3	
3 to 4 days	-	9,901	3,719	12	208	-	-	
4 to 5 days	2	5,395	3,538	-	-	-	-	
5 to 6 days	-	3,244	848	-	-	-	-	
6 to 7 days	-	221	272	-	-	-	-	
>= 7 days	3	17	33	18	-	1	-	
Total	116,749	234,977	569,969	240,460	187,878	146,054	293,292	