



Robert Ramirez
Manager of Regulatory Compliance
Regulatory Policy and Affairs

March 2, 2009

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

Subject: Reporting Standards, System SAIDI, SAIFI, and MAIFI Report
Decisions D.96-09-045

Dear Mr. Clanon:

Pursuant to Appendix A of D.96-09-045, attached is Southern California Edison's (SCE) annual report on reliability.

Attachment 1A provides values of SAIDI, SAIFI and MAIFI, with and without excludable events, for years 1999 through 2008. For 2008, although wildfires did occur in the SCE service area resulting in six states-of-emergency being declared by the Governor, no days were excluded in calculating values for SAIDI, SAIFI and MAIFI as these events were relatively localized and did not have system wide impact.

As you may be aware, many utilities across the U.S. are calculating their system reliability metrics using a methodology consistent with the guidelines provided in IEEE Standard 1366-2003, "IEEE Guide for Electric Power Distribution Reliability Indices," as this standard offers advantages of 1) providing consistency and comparability across different utilities, and 2) clarity and objectivity in the determination of what events are excludable.

Per earlier discussions with members of the CPUC's Energy Division, SCE is submitting, as Attachment 1B, a ten-year summary of reliability metrics calculated per the guidelines of IEEE 1366 in addition to the ten-year summary described in D.96-09-045.

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Most of the differences between reliability metrics calculated per D.96-09-045 and IEEE 1366 are due to the number of days considered to be excludable. To facilitate transparency of the IEEE 1366 method we have provided, as Attachment 1C, a detailed comparison of the days excludable under D.96-09-045 and days excludable under IEEE 1366.

Attachments 2 – 5 provide additional data on significant events as required by D.96-09-045.

If you have any questions regarding this matter, please contact me or Alfred Escamilla at 626-302-1941.



Robert Ramirez
Manager, Regulatory Compliance

Attachments

cc: Ms. Julie Fitch, Energy Division
Mr. Richard Clark, Consumer Protection & Safety Division
Mr. Brian Schumacher, Energy Division

Southern California Edison
Annual System Reliability Report - 2008
March 1, 2009
Table of Contents

Attachment	Tab Name	Description
1A	Historical System Indices	SAIDI, SAIFI, and MAIFI Annual System Statistics with and without major events using DTOM (1999-2005) and ODRM (2005-2008) calculated per D.96-09-045.
1B	IEEE Std 1366-2003 Historical System Indices	SAIDI, SAIFI, and MAIFI Annual System Statistics with and without major events using DTOM (1999-2005) and ODRM (2006-2008) calculated per IEEE-1366.
1C	Excluded Days Detail	For each excluded day, the date & primary cause listed with excluded SAIDI, SAIFI, MAIFI and the basis for the exclusion (either the D96-09045 definition or IEEE Std 1366-2003 2.5Beta Method).
2	List > 12 Sustained	Circuit ID and number of customers experiencing more than one sustained outage per month on a rolling annual average basis after exclusion of major events (1999-2008)
3	Top 10 SAIDI Each Year	Top 10 annual outage events, the number of customers affected, and number of people used to restore service (1999-2008)
4	No Service by Hourly Interval	For each major event, number of customers without service by hourly interval (1999-2008)
5	No Service by Duration	For each major event, number of customers without service by outage duration (1999-2008)

Southern California Edison
 Historical System Reliability Data
 1999 - 2004 DTOM
2005 DTOM & ODRM
2006 - 2008 ODRM

YEAR	All Interruptions Included ¹			Major Events Excluded ²		
	SAIDI ³	SAIFI	MAIFI	SAIDI ³	SAIFI	MAIFI
1999	49.25	1.06	1.18	49.25	1.06	1.18
2000	47.09	1.14	1.18	47.09	1.14	1.18
2001	51.69	1.05	1.13	51.69	1.05	1.13
2002	52.75	1.23	1.11	50.44	1.11	1.10
2003 (w/o sub) ⁵	87.23	1.39	1.37	63.90	1.19	1.17
2003 (w/ sub)	79.20	1.35	1.37	57.78	1.15	1.18
2004 (w/o sub)	75.21	1.34	1.19	67.11	1.26	1.12
2004 (w/ sub)	68.39	1.30	1.19	62.83	1.24	1.13
2005 (w/o sub)	91.64	1.52	1.44	74.25	1.27	1.21
2005 (w/ sub)	91.45	1.52	1.44	74.16	1.27	1.21
2005 (ODRM) ⁴	106.41	1.02	2.00	82.10	0.82	1.67
2006 ODRM	142.27	1.08	1.81	116.34	1.00	1.64
2007 ODRM	151.60	1.15	1.68	141.95	1.11	1.60
2008 ODRM	119.21	1.12	1.67	119.21	1.12	1.67

All calculations utilize a definition of "sustained" interruption as described in D.96-09-046, which is an interruption lasting 5 minutes or longer.

¹ This excludes ISO-directed firm load curtailment, Protective Outage Plan (POP) outages, Remedial Action Scheme (RAS) outages.

² Major Event Exclusions are defined in D.96-09-045 under Appendix A, Section 1 - Item 4c.

³ Metrics for 1999 - 2005 have been adjusted upward to reflect the variance introduced by Southern California Edison's former convention of declaring All Load Up (ALU) when power had been restored up to the last residential transformer. An estimate was added to the annual CMi base to arrive at the normalized SAIDI's. No adjustment was necessary beyond 2005.

⁴ ODRM data in 2005 only does not include Area Outages.

⁵ "Sub" refers to substitution of historical average metrics in circuits affected by the Bark Beetle Infestation.

Southern California Edison
Historical System Reliability Data (IEEE Std 1366-2003 2.5 Beta Method)
1999 - 2005 DTOM
2006 - 2008 ODRM

YEAR	All Interruptions Included			Major Events Excluded		
	SAIDI	SAIFI	MAIFI	SAIDI	SAIFI	MAIFI
1999	48.76	1.04	1.23	41.66	0.97	1.16
2000	46.59	1.12	1.23	46.59	1.12	1.23
2001	60.00	1.19	1.16	45.71	0.97	1.08
2002	52.29	1.27	1.15	44.95	1.05	1.09
2003	89.26	1.39	1.43	53.37	1.11	1.15
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

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 - 2008, values of SAIDI, SAIFI, and MAIFI were calculated per the guidance of IEEE 1366 with the 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 daily SAIDI over the previous five year period. However, because complete ODRM data did not exist prior to 2006, determination of the standard deviation over a five-year period will not be possible until 2011. 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. This interim approach is consistent with IEEE 1366.

Excluded Days Detail

Attachment 1C

No.	YEAR	DATE	CAUSE	Excluded under IEEE 2.5Beta				Excluded under D.96-09-045		SAIDI	SAIFI	MAIFI	Source of data	
1	1999	01/25/1999	Rain/Wind Storm	Y	2.10	0.02	0.01							DTOM
2	1999	10/16/1999	Hector Mines Earthquake	Y	3.31	0.04	0.04							DTOM
3	1999	11/08/1999	Rain Storm	Y	1.69	0.02	0.02							DTOM
Total				3	7.11	0.08	0.07	0	0.00	0.00	0.00	0.00	0.00	
1	2001	01/17/2001	Rain/Wind Storm	Y	1.73	0.03	0.03							DTOM
2	2001	02/13/2001	Rain/Snow/Wind Storm	Y	3.11	0.03	0.03							DTOM
3	2001	03/19/2001	ISO-Directed Rotating Blackouts	Y	6.08	0.10	0.00							DTOM
4	2001	05/04/2001	ISO-Directed Rotating Blackouts	Y	1.71	0.03	0.00							DTOM
5	2001	11/24/2001	Rain/Wind Storm	Y	1.67	0.02	0.02							DTOM
Total				5	14.29	0.22	0.08	0	0.00	0.00	0.00	0.00	0.00	
1	2002	06/26/2002	Louisiana Fire	Y	2.15	0.15	0.00	Y		2.15	0.15	0.00		DYOM
2	2002	06/27/2002	Louisiana Fire	Y				Y		0.05	0.00	0.00		DTOM
3	2002	06/28/2002	Louisiana Fire	Y				Y		0.11	0.00	0.00		DTOM
4	2002	11/08/2002	Rain/Wind Storm	Y	2.42	0.04	0.03							DTOM
5	2002	12/16/2002	Rain/Wind Storm	Y	2.78	0.03	0.02							DTOM
Total				3	7.34	0.22	0.06	3	2.31	0.15	0.01			
1	2003	01/05/2003	Santa Ana Wind Storm	Y	2.44	0.01	0.03	Y		14.95	0.09	0.11		DTOM
2	2003	01/06/2003	Santa Ana Wind Storm	Y	14.95	0.09	0.11	Y						DTOM
3	2003	01/07/2003	Santa Ana Wind Storm	Y	1.86	0.02	0.03	Y		1.86	0.02	0.03		DTOM
4	2003	01/08/2003	Santa Ana Wind Storm	Y				Y		0.40	0.01	0.01		DTOM
5	2003	02/25/2003	Rain Storm	Y	2.30	0.02	0.01							DTOM
6	2003	10/24/2003	Southern California Wild Fires	Y				Y		0.16	0.01	0.03		DTOM
7	2003	10/25/2003	Southern California Wild Fires	Y				Y		1.13	0.01	0.01		DTOM
8	2003	10/26/2003	Southern California Wild Fires	Y	5.98	0.06	0.02	Y		5.98	0.06	0.02		DTOM
9	2003	10/28/2003	Southern California Wild Fires	Y	1.87	0.00	0.00							DTOM
10	2003	11/12/2003	Lightning Storm	Y	3.02	0.03	0.03							DTOM
11	2003	12/25/2003	Rain Storm & Mud Slides	Y	3.47	0.04	0.04							DTOM
Total				8	35.88	0.28	0.28	6	24.48	0.20	0.21			

Excluded Days Detail

Attachment 1C

No.	YEAR	DATE	CAUSE	Excluded under IEEE 2.5Beta				Excluded under D96-09-045			Source of data
				SAIDI	SAIFI	MAIFI	SAIDI under D96-09-045	SAIFI under D96-09-045	MAIFI under D96-09-045	Source of data	
1	2004	08/12/2004	Lightning Storm	Y	1.57	0.00	0.01	Y	0.01	0.01	DTOM
2	2004	09/11/2004	Moarpark A-Bank Transformer Failure	Y	1.62	0.03	0.01	Y	0.02	0.03	DTOM
3	2004	10/17/2004	Rain Storm	Y	1.99	0.02	0.03	Y	0.03	0.03	DTOM
4	2004	10/29/2004	Rain Storm	Y	1.61	0.03	0.02	Y	0.02	0.02	DTOM
5	2004	10/27/2004	Wind Storm	Y	2.39	0.02	0.02	Y	0.02	0.02	DTOM
6	2004	11/21/2004	Wind Storm	Y	2.57	0.02	0.02	Y	0.02	0.02	DTOM
7	2004	12/28/2004	Winter Rain Storm	Y	2.71	0.03	0.05	Y	0.03	0.05	DTOM
8	2004	12/28/2004	Winter Rain Storm	Y	3.56	0.03	0.01	Y	0.03	0.01	DTOM
9	2004	12/30/2004	Winter Rain Storm	Y	3.56	0.03	0.01	Y	0.03	0.01	DTOM
10	2004	12/31/2004	Winter Rain Storm	Y	1.62	0.01	0.00	Y	0.22	0.00	DTOM
		Total		9	19.63	0.19	0.16	4	8.10	0.08	0.07

No.	YEAR	DATE	CAUSE	Excluded under IEEE 2.5Beta				Excluded under D96-09-045			Source of data
				SAIDI	SAIFI	MAIFI	SAIDI under D96-09-045	SAIFI under D96-09-045	MAIFI under D96-09-045	Source of data	
1	2005	01/09/2005	Winter Rain Storm	Y	1.49	0.02	0.01	Y	0.01	0.03	DTOM
2	2005	01/10/2005	Winter Rain Storm	Y	1.48	0.03	0.01	Y	0.02	0.02	DTOM
3	2005	01/11/2005	Winter Rain Storm	Y	1.57	0.02	0.01	Y	0.01	0.01	DTOM
4	2005	01/12/2005	Winter Rain Storm	Y	2.26	0.03	0.02	Y	0.02	0.01	DTOM
5	2005	02/19/2005	Winter Rain Storm	Y	1.50	0.01	0.02	Y	0.01	0.02	DTOM
6	2005	07/24/2005	Lightning Storm	Y	1.68	0.01	0.02	Y	0.01	0.02	DTOM
7	2005	08/08/2005	Wind Storm	Y	2.12	0.01	0.00	Y	0.01	0.00	DTOM
8	2005	09/03/2005	Brush Fire	Y	3.89	0.04	0.09	Y	0.04	0.09	DTOM
9	2005	08/20/2005	Lightning Storm	Y	3.69	0.04	0.04	Y	0.04	0.04	DTOM
10	2005	10/17/2005	Lightning Storm	Y	19.69	0.21	0.24	4	7.30	0.10	0.12
		Total		9	19.69	0.19	0.16	4	8.10	0.08	0.07

No.	YEAR	DATE	CAUSE	Excluded under IEEE 2.5Beta				Excluded under D96-09-045			Source of data
				SAIDI	SAIFI	MAIFI	SAIDI under D96-09-045	SAIFI under D96-09-045	MAIFI under D96-09-045	Source of data	
1	2006	01/02/2006	Wind storm & Rain storm	Y	10.48	0.05	0.10	Y	0.05	0.05	OFRM
2	2006	07/15/2006	Heat Storm	Y	2.49	0.02	0.02	Y	0.02	0.02	OFRM
3	2006	07/20/2006	Heat Storm	Y	2.30	0.01	0.03	Y	0.01	0.03	OFRM
4	2006	07/22/2006	Heat Storm	Y	15.44	0.04	0.07	Y	0.04	0.07	OFRM
5	2006	07/23/2006	Heat Storm	Y	4.87	0.01	0.02	Y	0.01	0.02	OFRM
6	2006	07/24/2006	Heat Storm	Y	2.82	0.01	0.01	Y	0.01	0.01	OFRM
7	2006	12/27/2006	Wind storm, Others	Y	4.05	0.02	0.04	Y	0.02	0.04	OFRM
8	2006	12/28/2006	Wind storm, Others	Y	3.09	0.01	0.02	Y	0.01	0.02	OFRM
		Total		8	46.55	0.16	0.33	2	25.92	0.08	0.18

Excluded Days Detail

Attachment 1C

No.	YEAR	DATE	CAUSE	Excluded under IEEE 2.5Beta		SAIDI	SAIFI	MAIFI	SAIDI under D.95-09-045	Excluded under D.95-09-045	Source of data
				Excluded under IEEE 2.5Beta	Excluded under IEEE 2.5Beta						
1	2007	01/05/2007	Wind storm & Rain storm	Y	2.17	0.02	0.04				ODRM
2	2007	03/27/2007	Wind storm & Rain storm	Y	5.71	0.03	0.04				ODRM
3	2007	04/12/2007	Wind storm, Others	Y	2.21	0.02	0.04				ODRM
4	2007	08/31/2007	Lightning storm & Heat storm	Y	3.28	0.02	0.03				ODRM
5	2007	09/01/2007	Lightning storm & Heat storm	Y	3.40	0.01	0.03				ODRM
6	2007	09/02/2007	Lightning storm & Heat storm	Y	6.13	0.02	0.02				ODRM
7	2007	09/03/2007	Lightning storm & Heat storm	Y	10.33	0.03	0.02				ODRM
8	2007	09/04/2007	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
10	2007	10/22/2007	Wind Storm, Wild Fires, (less customers interrupted with high duration) i.e. Snow Valley 12KV, T890et 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	01/04/2008	Rain storm & Wind storm	Y	3.00	0.02	0.03				ODRM
2	2008	01/05/2008	Rain storm & Wind storm	Y	2.10	0.01	0.01				ODRM
3	2008	01/24/2008	Rain storm & Wind storm	Y	3.63	0.01	0.01				ODRM
4	2008	02/03/2008	Rain storm & Wind storm	Y	2.63	0.02	0.06				ODRM
5	2008	07/02/2008	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

Southern California Edison
Historical System Reliability Data
1999 - 2008

Customers experiencing > 12 sustained outages

Year	Circuit	Circuit Name	Number of customers experiencing > 12 sustained outages	Year	Circuit	Circuit Name	Number of customers experiencing > 12 sustained outages
1999	31170	CATTLE	296	2004	390	ALPINE*	302
1999	15475	ROWCO	849	2004	1630	BIG ROCK	534
2000	5085	DINKEY CREEK	37	2004	3387	CHAWA	694
2000	8702	HOSSACK	100	2004	5086	DINKEY CREEK	86
2000	10945	MAHOGANY	6	2004	6432	FINGAL	189
2000	12910	NOVAC	266	2004	8670	HOOK CREEK*	287
2000	13850	PERIMETER	7	2004	8930	INTAKE	13
2000	17672	TERMINUS	137	2004	9080	IVERSON	125
2001	390	ALPINE	136	2004	9194	JEEP*	1,079
2001	1626	BIGFOOT	47	2004	9205	JENKS LAKE*	121
2001	2684	CALCADA	5	2004	9290	JOHNSONDALE	119
2001	3890	CONCEPCION	84	2004	11760	METTLER	340
2001	5018	DEVINE	8	2004	12136	MONTREAL*	630
2001	6146	DOGWOOD	2,116	2004	12190	MORITZ*	1,447
2001	12722	NIPTON	27	2004	12840	NORTH BAY*	226
2001	15880	SALT CREEK	118	2004	12890	NORTH SHORE*	245
2001	19134	WEILING	64	2004	13999	PERIMETER	1,090
2002	1630	BIG ROCK	469	2004	14705	RANIER	7
2002	4635	DANBY	57	2004	15090	RIM*	1,328
2002	9080	IVERSON	124	2004	15275	ROBIN	46
2002	14814	REDSTONE	1,246	2004	15415	ROSEBUD	734
2003	2290	BROOKINGS*	1	2004	15889	SCHMIDT	470
2003	2370	BUDD	287	2004	17915	TITAN	79
2003	2681	CABANGERO	282	2004	17985	TOPOC	92
2003	3240	CEDAR GLEN*	440	2004	17997	TORONTO*	690
2003	5650	ELSTER	132	2004	19894	ANGELES	1,088
2003	8410	HIGH SCHOOL*	341	2005	2884	CALCADIA	4
2003	8670	HOOK CREEK*	550	2005	5090	DISCOVERY	32
2003	9320	JORDAN	685	2005	7490	GRANITE	267
2003	9649	KELLPEAK*	10	2005	9777	KINSEY	70
2003	11448	MCCLENNY	55	2005	10216	LAVA	55
2003	12190	MORITZ*	1,345	2005	10670	LOMBARDY	94
2003	12860	NORTH SHORE*	528	2005	12722	NIPTON	33
2003	14349	POSO PARK	49	2005	13776	PAT	1,151
2003	14690	RANGER*	730	2005	15282	ROBINSON CREEK	199
2003	15622	SAUNDERS*	733	2005	15415	ROSEBUD	581
2003	16049	SEALS	93	2005	16308	SHEEPHOLE	3
2003	16839	SCINTI*	777	2005	17731	THACHER	457
2003	17190	SUGARLOAF	131	2005	19136	WEISS	177
2003	17987	TORONTO*	63				

Year	Circuit	Circuit Name	Number of customers experiencing > 12 sustained outages	Year	Circuit	Circuit Name	Number of customers experiencing > 12 sustained outages
2006		DINKEY GREEK	29	2006	5085	RHINEDOLLAR	64
2006		BLUE CUT	193	2007	1832	NORTHPARK	436
2007		STROH	112	2007	17121	BROOKINGS	1
2008		CEDAR GLEN	605	2008	3240	COVE	10
2008		CRESTLINE	22	2008	4360	FROZEN	3
2008		HEAPS PEAK	4	2008	8268	HURST	6
2008		LAKE	147	2008	8848	LARK	147
2008		LAVA	52	2008	10119	MIST	7
2008		MIST	2	2008	14482	PUFF	343
2008		RANGER	31	2008	14690	ROSEBUD	46
2008		TORONTO	46	2008	17997	WASP	46

Southern California Edison
Top 10 Annual Events
1999 - 2008

2008

Attachment 3

Rank	Description	Date	SACID	Number of customers affected	Longest customer interruption (min)	Number of people used to restore service	CPUC major event?
1	Rain/Wind Storm	01/24/2008	3,633				N
2	Wild Fires	07/02/2008	3,304				N
3	Rain/Wind Storm	01/04/2008	3,006				N
4	Rain/Wind Storm	12/17/2008	2,723				N
5	Rain/Wind Storm	02/03/2008	2,628				N
6	Rain/Wind Storm	12/15/2008	2,186				N
7	Rain/Wind Storm	01/05/2008	2,103				N
8	Rain/Wind Storm	12/25/2008	1,793				N
9	Rain/Wind Storm	01/27/2008	1,555				N
10	Rain/Wind Storm	01/25/2008	1,404				N

Southern California Edison
Top 10 Annual Events
1999 - 2008

2007

Attachment 3

Rank	Description	Date	SAIDI	Number of customers affected	Longest customer interruption (min)	Number of people used to restore service	CPUC major event?
1	Wild Fires	10/22/2007	18.310				N
2	Summer heat storm	09/03/2007	10.336				N
3	Wild Fires	10/21/2007	9.649	628,093	6,632	1,258	Y
4	Summer heat storm	09/02/2007	6.162				N
5	Rain/Wind Storm	03/27/2007	5.711				N
6	Summer heat storm	09/01/2007	3.398				N
7	Summer heat storm	08/31/2007	3.285				N
8	Wind Storm	12/25/2007	2.494				N
9	Summer heat storm	09/04/2007	2.334				N
10	Wind Storm	04/12/2007	2.215				N

Southern California Edison
Top 10 Annual Events
1999 - 2008

2006

Attachment 3

Rank	Description	Date	SAIDI	Number of customers affected	Longest customer interruption (min)	Number of people used to restore service	CPUC major event?
1	Summer heat storm	07/22/2006	15,441	527,572	6,748	1,616	Y
2	Winter rain storm	01/02/2006	10,478	720,251	4,532	684	Y
3	Summer heat storm	07/23/2006	4,866	170,590			N
4	Winter rain storm	12/27/2006	4,055	285,211			N
5	Winter rain storm	12/28/2006	3,084	165,839			N
6	Summer heat storm	07/24/2006	2,821	98,614			N
7	Summer heat storm	07/15/2006	2,492	169,268			N
8	Summer heat storm	07/20/2006	2,305	208,040			N
9	Summer heat storm	07/21/2006	2,085	238,707			N
10	Winter rain storm	01/22/2006	1,966	157,613			N

Southern California Edison
Top 10 Annual Events
1999 - 2008

2005

Attachment 3

Rank	Description	Date	SAIDI	Number of customers affected	Longest customer interruption (min)	Number of people used to restore service	CIPUC major event?
1	Winter Rain Storm	01/01/2005 - 01/11/2005	7.785	954,312	23,269	1,005	Y
2	Winter Rain Storm	02/16/2005 - 02/23/2005	5.713	696,946	8,233	641	Y
3	Lightning Storm	09/20/2005	3.887	624,737	2,910	391	Y
4	Lightning Storm	10/17/2005	3.693				N
5	Brush Fire	09/03/2005	2.121				N
6	Wind Storm	08/06/2005	1.683				N
7	Lightning Storm	07/24/2005	1,500				N
8	Lightning Storm	05/06/2005	1,235				N
9	Wind Storm	11/26/2005	1,089				N
10	Rain/Wind Storm	12/31/2005	1,061				N

Southern California Edison
Top 10 Annual Events
1999 - 2008

2004

Attachment 3

Rank	Description	Date	SAIDI	Number of customers affected	Longest customer interruption (min)	Number of people used to restore service	CPUC major event?
1	Winter Rain Storm	12/28/2004 - 12/31/2004	8.100	708,044	38,065	1,005	Y
2	Wind Storm	11/21/2004	2.571				N
3	Wind Storm	10/27/2004	2,389				N
4	Rain Storm	10/17/2004	1,999				N
5	Moorpark A-Bank	09/11/2004	1,622				N
6	Rain Storm	10/20/2004	1,610				N
7	Lightning Storm	08/12/2004	1,574				N
8	Rain Storm	10/19/2004	0,989				N
9	Wind Storm	11/22/2004	0,904				N
10	Lightning Storm	08/13/2004	0,883				N

Southern California Edison
Top 10 Annual Events
1999 - 2008

2003

Attachment 3

Rank	Description	Date	SAIDI	Number of customers affected	Longest customer interruption (min)	Number of people used to restore service	CPUC major event?
1	Santa Ana Wind Storm	01/06/2003 - 01/08/2003	17.228	1,236,698	7,731	2,551	Y
2	Southern California Wild Fires	10/24/2003 - 10/26/2003	6.105	601,653	12,808	1,919	Y
3	Rain Storm & Mud Slides	12/25/2003	3.468				N
4	Lightning Storm	11/12/2003	3.024				N
5	Santa Ana Wind Storm	01/05/2003	2.438				N
6	Rain Storm	02/25/2003	2.303				N
7	Rain Storm	10/31/2003	1.127				N
8	Wind Storm	03/17/2003	0.946				N
9	Wind Storm	02/12/2003	0.796				N
10	Lightning Storm	08/20/2003	0.770				N

Southern California Edison
Top 10 Annual Events
1999 - 2008

2002

Attachment 3

Rank	Description	Date	SAIDI	Number of customers affected	Longest customer interruption (min)	Number of people used to restore service	CPUC major event?
1	Rain/Wind Storm	12/16/2002	2.780				N
2	Rain/Wind Storm	11/08/2002	2.416				N
3	Mira Loma RAS / Louisiana Fire	06/26/2002 - 06/28/2002	2.307	600,607	3,996	50	Y
4	Rain/Wind Storm	11/09/2002	1.043				N
5	Rain Storm	11/25/2002	1.015				N
6	Wind Storm	02/09/2002	0.862				N
7	Car Hit Pole	10/04/2002	0.847				N
8	Rain/Wind Storm	11/07/2002	0.712				N
9	Heat Storm	09/01/2002	0.662				N
10	Rain Storm	02/17/2002	0.643				N

Southern California Edison
Top 10 Annual Events
1999 - 2008

2001

Attachment 3

Rank	Description	Date	SAIDI	Number of customers affected	Longest customer interruption (min)	Number of people used to restore service	CPUC major event?
1	Rain/Snow/Wind Storm	02/13/2001	3.107				N
2	Wind Storm	01/11/2001	1.729				N
3	Rain/Wind Storm	11/24/2001	1.671				N
4	Rain/Wind Storm	11/12/2001	1.180				N
5	Wind Storm	01/10/2001	0.921				N
6	Wind Storm	09/30/2001	0.598				N
7	Rain Storm	10/30/2001	0.591				N
8	Lightning Storm	07/06/2001	0.567				N
9	Structure Fire	06/21/2001	0.564				N
10	Rain/Snow/Wind Storm	02/12/2001	0.554				N

Southern California Edison
Top 10 Annual Events
1999 - 2008

2000

Attachment 3

Rank	Description	Date	SAIDI	Number of customers affected	Longest customer interruption (min)	Number of people used to restore service	CPUC major event?
1	Equipment Failure	10/26/2000	1.571				N
2	Rain/Wind Storm	04/18/2000	1.285				N
3	Rain/Wind Storm	02/20/2000	0.944				N
4	Rain/Wind Storm	02/21/2000	0.820				N
5	Car Hit Transmission Pole	04/03/2000	0.804				N
6	Wind Storm	03/21/2000	0.775				N
7	Rain/Wind Storm	03/05/2000	0.638				N
8	Rain Storm	09/22/2000	0.633				N
9	Rain/Wind Storm	04/17/2000	0.575				N
10	Equipment Failure	05/13/2000	0.551				N

Southern California Edison
Top 10 Annual Events
1999 - 2008

1999

Attachment 3

Rank	Description	Date	SAIDI	Number of customers affected	Longest customer interruption (min)	Number of people used to restore service	CPUC major event?
1	Hector Mines Earthquake	10/16/1999	3.314				N
2	Rain/Wind Storm	01/25/1999	2.101				N
3	Rain Storm	11/08/1999	1.696				N
4	Rain/Wind Storm	04/03/1999	1.092				N
5	Rain Storm	04/06/1999	0.994				N
6	Laguna Bell A-Bank	07/07/1999	0.737				N
7	Rain/Wind Storm	02/09/1999	0.675				N
8	La Cienega A-Bank	01/07/1999	0.663				N
9	Wind Storm	02/11/1999	0.654				N
10	Heat/Lightning Storm	07/11/1999	0.621				N

Southern California Edison**Major Events****Number of customers w/o service at hourly interval**

THIS TABLE CONTAINS ROLLING DAY DATA.

Attachment 4

	Mira Loma RAS	Mira Loma RAS	Mira Loma RAS	Mira Loma RAS	Santa Ana Wind Storm	Santa Ana Wind Storm	Santa Ana Wind Storm	Description of event
Time	06/26/2002	06/27/2002	06/28/2002	01/06/2003	01/07/2003	01/08/2003	01/09/2003	⇒ Date of event
0	1,973	459	119	150,974	24,149	5,099		
1	1,995	459	808	177,276	26,720	9,867		
2	22	459	870	189,666	35,678	7,212		
3	-	9,716	1,364	169,710	23,267	5,691		
4	-	459	9,006	127,917	41,711	4,315		
5	-	4,571	285	112,215	48,693	4,165		
6	469	2,136	223	99,427	35,370	4,102		
7	-	589	3,485	84,646	31,423	4,137		
8	131	589	4,033	86,846	15,173	6,844		
9	-	501	352	58,992	13,628	7,833		
10	412	522	1,533	63,836	26,491	9,774		
11	114	1,302	599	60,261	35,427	8,491		
12	1,053	205	186	69,743	30,026	11,349		
13	622	114	124	77,406	24,075	11,607		
14	622	29	29	61,304	10,701	24,521		
15	-	101	29	45,025	9,033	6,537		
16	-	1,176	29	25,292	8,628	4,368		
17	-	1,918	4,095	25,852	11,222	4,000		
18	540,502	4,243	2,704	25,773	7,709	3,030		
19	16,349	119	227	29,423	12,265	2,930		
20	4,058	119	1,068	51,191	14,995	2,091		
21	1,680	119	227	27,891	12,993	2,026		
22	459	119	227	20,583	10,023	2,313		
23	2,827	119	227	33,400	11,230	1,540		

Southern California Edison**Major Events****Number of customers w/o service at hourly interval**

THIS TABLE CONTAINS ROLLING DAY DATA.

Attachment 4

	Southern California Wild Fires	Southern California Wild Fires	Southern California Wild Fires	Winter Rain Storm	Winter Rain Storm	Winter Rain Storm	Winter Rain Storm	✓ Description of event
Time	10/24/2003	10/25/2003	10/26/2003	12/28/2004	12/29/2004	12/30/2004	12/31/2004	⇒ Date of event
0	-	99	6,168	12,202	84,434	3,841	1,127	
1	81	4,491	60,988	7,187	71,180	4,368	1,906	
2	1,681	47	7,531	24,357	60,971	3,324	1,444	
3	110	47	183,783	40,604	47,181	3,834	2,590	
4	81	1,847	68,576	21,739	30,328	3,737	3,755	
5	602	14,854	45,513	15,563	24,823	3,249	3,888	
6	6,403	41	29,836	11,448	19,659	1,872	9,143	
7	521	3,546	7,319	30,504	18,040	1,219	7,295	
8	1,134	15,078	9,418	80,953	15,674	4,717	12,424	
9	637	1,317	6,937	30,040	13,206	1,640	19,586	
10	120,708	4,454	8,839	42,290	15,031	1,745	7,628	
11	653	3,256	7,889	30,355	11,869	5,737	8,981	
12	574	2,912	6,350	16,991	14,253	4,276	16,929	
13	15,893	2,285	28,195	17,970	15,084	5,481	10,208	
14	600	2,981	16,756	13,637	11,345	4,109	6,843	
15	590	30,036	14,368	5,871	7,682	6,491	11,140	
16	575	7,055	11,336	11,953	13,496	807	8,410	
17	575	9,159	10,253	92,301	5,765	629	2,556	
18	1,171	1,279	8,013	7,091	5,112	2,592	2,034	
19	616	2,759	5,758	12,949	7,681	2,904	2,536	
20	586	3,800	5,392	10,576	5,121	705	2,522	
21	727	3,087	5,619	7,987	4,092	1,738	4,284	
22	3,652	4,829	5,754	6,779	3,280	2,262	4,122	
23	1,606	4,722	4,065	17,630	6,271	4,535	4,375	

Southern California Edison**Major Events****Number of customers w/o service at hourly interval**

THIS TABLE CONTAINS ROLLING DAY DATA.

Attachment 4

	Winter Rain Storm	Description of event						
Time	01/01/2005	01/02/2005	01/03/2005	01/04/2005	01/05/2005	01/06/2005	01/07/2005	01/08/2005
0	2,344	118	8,955	2,091	89	327	1,136	1,172
1	2,921	398	1,852	2,270	5,160	281	488	24
2	34	398	-	3,830	82	281	3,387	73
3	358	420	5,475	600	82	281	555	18,858
4	1,600	2,571	7	3,827	82	281	980	190
5	4,906	303	3,637	807	66	275	3,054	379
6	7,949	303	1,997	627	2,669	275	3,383	589
7	2,774	1,685	7,844	3,186	3,824	2,611	2,136	26
8	4,609	223	16,398	2,784	179	729	5,964	1,758
9	540	223	5,447	33,282	166	981	3,644	2,049
10	2,162	5,192	479	35,214	7,332	2,008	18,416	1,749
11	4,074	6,462	29,734	6,727	2,209	1,911	14,005	1,156
12	1,259	1,281	7,823	2,813	1,194	2,913	18,630	2,928
13	508	1,860	4,983	1,239	1,192	675	12,035	10,653
14	632	2,845	1,139	5,954	6,876	454	12,229	8,270
15	508	140	6,396	1,593	2,886	620	5,665	5,987
16	2,442	140	4,085	533	361	1,813	7,314	12,102
17	172	140	825	116	385	1,783	6,025	7,942
18	172	141	8,390	116	444	776	6,402	6,594
19	42	141	13,316	2,102	278	1,561	4,794	3,573
20	992	65	1,012	116	312	1,617	2,449	5,256
21	1,068	64	5,787	1,011	2,716	304	5,710	7,566
22	118	64	619	331	2,923	304	4,910	3,131
23	118	64	619	89	336	1,074	1,313	10,803

Southern California Edison**Major Events****Number of customers w/o service at hourly interval**

THIS TABLE CONTAINS ROLLING DAY DATA.

Attachment 4

Time	Winter Rain Storm	Description of event							
01/09/2005	01/10/2005	01/11/2005	01/12/2005	02/13/2005	02/17/2005	02/18/2005	02/19/2005	02/20/2005	02/20/2005
0	4,634	9,150	14,206	849	-	2,485	10,406	6,564	
1	5,353	12,379	17,009	125	228	1,495	17,924	3,539	
2	12,060	7,614	23,781	9	17	1,441	13,917	7,253	
3	5,806	8,362	11,891	3,916	837	1,441	20,607	1,694	
4	2,602	8,623	11,603	10	1,623	1,441	52,009	2,959	
5	14,378	7,153	17,849	10	323	4,579	48,850	2,831	
6	9,300	10,555	21,763	397	574	908	33,796	2,148	
7	14,483	12,129	19,731	397	622	2,737	27,551	5,496	
8	12,429	21,583	12,136	178	371	2,523	28,434	3,496	
9	24,223	25,889	11,853	191	706	502	9,986	1,428	
10	20,625	11,683	13,268	28	10,010	470	26,295	2,064	
11	15,716	14,795	14,945	2,782	9,127	4,659	21,866	2,673	
12	16,434	14,101	14,518	1,746	715	133	20,560	4,118	
13	14,768	25,907	16,991	1,082	1,406	133	12,828	1,424	
14	9,396	18,741	9,700	822	8,316	4,986	10,386	928	
15	12,776	17,297	8,563	227	946	6,229	8,937	646	
16	14,157	15,005	8,302	5,306	782	141	10,161	2,152	
17	18,536	11,145	12,089	2,379	4,792	141	7,290	3,921	
18	18,384	8,124	10,778	5,322	4,205	141	9,393	4,268	
19	10,382	15,219	1,684	4,002	4,969	1,123	8,156	3,741	
20	8,367	13,053	19,597	933	1,357	2,100	4,481	1,904	
21	16,640	11,746	11,712	933	1,357	1,246	5,406	13,372	
22	11,723	17,482	1,331	288	2,455	213	5,280	6,753	
23	10,832	13,659	971	-	2,401	21,056	7,146	17,008	

Southern California Edison**Major Events****Number of customers w/o service at hourly interval**

THIS TABLE CONTAINS ROLLING DAY DATA.

Attachment 4

	Winter Rain Storm	Winter Rain Storm	Winter Rain Storm	Lightning Storm	Winter Rain Storm	Summer Heat Storm	Wild Fires	Description of event
Time	02/21/2005	02/22/2005	02/23/2005	03/20/2005	01/02/2006	07/22/2006	10/21/2007	Date of event
0	17,643	1,611	23,794	35,324	934	8,131	8,346	
1	13,966	1,398	23,651	73,173	2,485	6,528	13,208	
2	16,136	7,833	5,401	117,966	979	7,269	13,475	
3	12,916	5,314	4,219	94,719	3,901	7,257	42,878	
4	6,111	167	9,519	70,986	16,033	6,504	33,204	
5	10,876	3,305	5,111	59,321	23,872	4,298	54,764	
6	16,259	342	26,381	36,987	14,740	4,958	20,957	
7	9,266	339	9,743	44,392	35,171	4,806	45,298	
8	13,975	619	8,601	38,176	77,681	4,932	59,570	
9	5,374	4,169	7,510	59,889	191,661	2,263	53,648	
10	7,730	3,222	8,704	42,516	162,780	2,674	71,391	
11	10,107	6,973	11,041	62,892	169,871	3,161	67,827	
12	6,323	2,308	6,804	26,688	115,365	7,451	51,300	
13	12,967	3,633	5,970	21,128	87,849	19,300	43,260	
14	10,061	7,288	1,898	23,744	83,069	53,902	60,972	
15	3,940	2,330	1,347	16,056	79,866	105,045	49,155	
16	10,584	1,275	2,009	14,467	76,523	129,954	41,000	
17	10,439	7,048	2,811	10,871	57,515	134,398	51,141	
18	2,793	4,279	2,117	13,237	47,489	89,342	42,154	
19	4,762	4,235	1,142	9,521	36,870	145,110	53,578	
20	5,291	1,504	722	6,935	36,921	84,274	54,253	
21	7,568	2,594	620	6,730	29,519	76,624	45,699	
22	2,452	984	1,956	4,476	28,745	68,383	85,089	
23	5,496	20,739	2,630	4,349	21,198	53,678	38,793	

Southern California Edison

Major Events

Number of customers w/o service by outage duration

Attachment 5

	Mira Loma RAS	Santa Ana Wind Storm	Southern California Wild Fires	Winter Rain Storm	Winter Rain Storm	Lightning Storm	Winter Rain Storm	Summer Heat Storm	Wild Fires	Description of event
Outage Duration	06/26/2002 - 06/28/2002	01/06/2003 - 01/08/2003	10/24/2003 - 10/26/2003	1/2/28/2004 - 12/31/2004	01/01/2005 - 01/11/2005	02/16/2005 - 02/23/2005	09/20/2005	01/02/2006	07/22/2006	10/21/2007 & Date of event
0 to 1 hour	583,670	788,468	491,078	409,325	561,834	377,235	440,023	572,274	422,684	522,063
1 to 5 hours	7,126	172,308	58,450	151,123	203,015	153,424	64,816	101,467	55,577	67,433
5 to 10 hours	5,835	59,570	11,547	60,160	101,172	70,856	33,672	25,500	15,906	21,017
10 to 15 hours	1,203	57,778	4,883	38,830	45,767	54,924	28,181	10,751	7,881	4,637
15 to 20 hours	2,744	55,373	1,996	16,205	17,431	30,162	17,358	3,862	4,703	4,349
20 to 24 hours	-	15,325	4,081	10,963	7,955	6,708	11,119	898	3,591	1,585
1 to 2 days	-	56,503	11,169	17,805	12,906	3,634	29,487	5,004	12,458	5,157
2 to 3 days	29	24,949	1,734	1,062	13	-	81	459	4,036	1,574
3 to 4 days	-	5,524	5,040	-	2,569	-	-	36	646	133
4 to 5 days	-	-	7,169	2,564	504	-	-	-	10	145
5 to 6 days	-	900	3,478	-	-	3	-	-	-	-
6 to 7 days	-	-	25	-	-	-	-	-	-	-
> 7 days	-	-	1,003	7	1,146	-	-	-	-	-
Total	600,607	1,236,698	601,653	708,044	954,312	696,946	624,737	720,251	527,572	628,093