Docket:	:	R.12-03-014
Exhibit Number	:	
Commissioner	:	Michel Peter Florio
Admin. Law Judge	:	David M. Gamson
DRA Witnesses	:	Peter Spencer

DIVISION OF RATEPAYER ADVOCATES
CALIFORNIA PUBLIC UTILITIES COMMISSION

REPLY TESTIMONY OF PETER H SPENCER

Order Instituting Rulemaking to Integrate and Refine Procurement Policies and Consider Long-Term Procurement Plans

(R.12-03-014)

San Francisco, California
July 23, 2012

585880

TABLE OF CONTENTS

SUMMARY OF REPLY TESTIMONY AND RECOMMENDATIONS

Q1. What is the purpose of your reply testimony?

A1. My testimony responds to the initial testimony of other parties filed on June 25, 2012 related to the issues of LCR need for the Los Angeles (LA) Basin and Big Creek/Ventura in 2021, flexibility of resources, and establishment of a new proceeding to consider a centralized capacity market.

Q2. What are your main conclusions?

A2. After reviewing the testimony of other parties, my primary conclusion remains that the Commission should not rely on the California Independent System Operator's (CAISO) estimates of need for the LA Basin and Big Creek/Ventura in 2021. Many parties, including Southern California Edison (SCE)[1], The Utility Reform Network (TURN),[2] Calpine[3], EnerNOC[4], and California Environmental Justice Alliance (CEJA)[5] share the Division of Ratepayer Advocate's (DRA) concern that the CAISO Transmission Study's ten-year forward procurement recommendations for local areas may overestimate procurement needs.

Additionally, DRA concludes that work in future tracks of this long term procurement proceeding (LTPP) will provide important information that should inform local procurement needs, and therefore, a reassessment of the adopted LCR procurement from Track 1 should be included in Track 2 and/or Track 3.

Finally, DRA adamantly opposes SCE's proposal calling for a separate proceeding to examine a new forward procurement mechanism involving central capacity markets.

Q.3 Please summarize your recommendations.

A.3 DRA recommends the following:

---

[1] 2012 Long-Term Procurement Plan Testimony of Southern California Edison Company on Local Capacity Requirements, June 25, 2012 (SCE Testimony) at 7.

[2] Prepared Testimony of Kevin Woodruff on Behalf of the Utility Reform Network Regarding Track 1-Local Reliability, June, 25, 2012 (TURN Testimony) at. 5.

[3] Track 1 Direct Testimony of Calpine Corporation, June 25, 2012 (Calpine Testimony) at. 5.

[4] EnerNOC, Inc., Local Reliability Track 1 Prepared Testimony of Mona Tierney Lloyd, June 25, 2012 at I-2.

[5] Prepared Direct Testimony of Bill Powers on Behalf of The California Environmental Justice Alliance, June, 25, 2012 (CEJA Powers Testimony) at 4.

1. The Commission should compare the potential costs of procurement shortfalls with the costs of over-procurement, and should carefully evaluate the risks to ratepayers associated with long-term procurement for local areas.

2. Local capacity requirements (LCR) procurement determined in Track 1 of this proceeding should be re-assessed later in the current LTPP proceeding after important decisions on planning assumptions, planning scenarios, and renewable integration are decided in later LTPP Tracks.

3. Potential procurement needs determined in Track 1 should be assessed for specific flexible attributes only after those attributes have been defined and quantified in the Resource Adequacy proceeding R.11-10-023 and/or the later tracks of the current LTPP proceeding.

4. Demand Response should receive at least the same value (not less than 1519 MW) planning for local areas as it does in the planning for system needs.

5. The Commission should reject SCE's proposal for a new proceeding to establish a centralized forward procurement mechanism. Instead, the Commission should consider a forward procurement mechanism in a later phase of this proceeding to develop longer-term bilateral capacity contracts.

Risks Associated with LCR Procurement

Q.4 Are there risks associated with LCR procurement that the Commission should consider before authorizing long-term procurement for local areas?

A.4 Yes. SCE requests authorization to procure up to 3,741 MW based on CAISO studies, but this request fails to adequately consider the costs and benefits of such additional procurement.[6] The Commission has not previously undertaken a comprehensive evaluation of local area long-term procurement needs. This new effort requires adapting the procedures and policies used in prior LTPP proceedings for system long-term assessments, and applying those policies and procedures to local areas. The Commission must consider not only the CAISO's conservative reliability studies, but also California's

[6] SCE Testimony at 2.

policy on energy procurement, as delineated by the loading order in the Commission-adopted California Energy Action Plan.[7]

SDG&E[8] echoes the CAISO's opinion that under-procurement in LCR areas can result in severe repercussions for ratepayers. However, no party offered quantitative data supporting the potential costs of the potential impacts from procurement shortfalls in a long-term planning process. Further, no testimony estimates the effect on electricity rates of the proposed additional procurement,

Long-term planning should attempt to minimize potential power losses in local areas while also considering the costs of minimizing potential power losses. Current data SCE supplied to the Commission shows that in the years 2002 through 2011, a customer could expect slightly more than one sustained outage[9] per year.[10] The average yearly duration for sustained outages during the ten-year span was 80.3 minutes.[11] SCE did not provide the Commission with data showing the ratepayer costs of these outages. The Commission should balance any financial impacts of outages with the costs and feasibility of mitigation measures, consistent with its past acknowledgment that:

> "reliability at any cost' is not a policy option. Ultimately, measures that are proposed to promote greater grid reliability should be evaluated by weighing their expected costs against the value of their expected contribution to reliability."[12]

Moreover, long-term planning shortfalls that are likely to result in outages should become apparent years in advance, and thus allow time for the implementation of various mitigation measures. SCE uses an example of a seven-year time line to complete new

---

[7] 2008 Updated California Energy Action Plan; see also Public Utilities Code Section 454.5(b)(9)(C).

[8] Prepared Track 1 Testimony of San Diego Gas & Electric Company (SDG&E Testimony) at 6.

[9] D.96-09-045 defines a sustained outage as an interruption lasting 5 minutes or longer.

[10] SCE Reporting Standards, System SAIDI, SAIFI and MAIFI Report (appended as Attachment A to this Reply Testimony), Attachment 1A, p. 2.

[11] SCE Reporting Standards, System SAIDI, SAIFI and MAIFI Report, Attachment 1A, p. 2. (Average SAIDI with major events days excluded per IEEE 1366).

[12] D.05-10-042 at 7.

generation.[13] However, other options exist including dispatchable demand response and increased customer conservation. My initial testimony provided an example from 2006 in which an error related to planning was corrected within one year.[14]

The Commission should consider the potential costs of procurement shortfalls from the long-term planning process to the costs of over-procurement in Track 2 of the current LTPP proceeding. SCE requests authority to procure as much as 3,741 MW.[15] Although it is not possible at this point in time to calculate the exact cost of building or procuring 3,741 MW, the cost of PG&E's proposed 586 MW Oakley project was estimated at $1.5 billion in 2010.[16] In contrast, each unnecessary MW that SCE does not procure will cost nothing. Building new generation will add to the current projected rate increases, so the Commission should authorize only projects that are necessary for a reasonable level of reliability.

With an apparent lack of sufficient data to fully assess risk and cost issues, the Commission should err on the side of caution, and should not be swayed by statements predicting dire consequences from potential shortages related to ten-year projections, especially when those projected shortages are based on extremely conservative estimates by CAISO, as pointed out in the testimony of CEJA.[17]

Q.5 Do parties agree that flexible capacity issues have not yet been resolved?

A.5 Yes. Several parties, SCE, SDG&E, TURN, and Calpine specifically address this issue in their testimonies by noting that the Commission's work on flexible capacity attributes is ongoing.[18] In a coordinated effort between the Resource Adequacy (RA) and LTPP

[13] SCE Testimony at 17.

[14] Prepared Testimony of Peter Spencer on Behalf of DRA, June 25, 2012 (DRA/Spencer Testimony) at 16, 17.

[15] SCE Testimony at 2.

[16] See October 26, 2010, DRA press release, appended as Attachment B.

[17] Prepared Direct Testimony of Bill Powers on Behalf of the California Environmental Justice Alliance, June 25, 2012, p. 4.

[18] SCE Testimony at 11, 12; SDG&E Testimony at 2,3; TURN Testimony at 17-12; Calpine Testimony at 4,5.

proceedings,[19] flexible attributes will be defined in Phase 1 of the RA proceeding and specific needs determined in the LTPP proceeding. SCE notes that "work to develop a better understanding of flexibility needs is ongoing, and will continue into Track 2 of this LTPP cycle during 2013."[20] DRA agrees.

SCE subsequently states: "Nevertheless, the Commission's Track 1 LCR decision should authorize procurement of new LCR resources that also have flexible attributes."[21] DRA disagrees. The Commission should not require new procurement with specific flexible attributes in local areas before it determines which attributes are needed, the specific amounts needed, and when those attributes will be needed. Only after the Commission determines flexible parameters, can the markets react to provide these new products in the most cost-effective manner and in compliance with the Commission's loading order. CAISO's recommendation for flexible capacity focuses on gas-fired power plants.[22] Requiring any authorizations determined in Track 1 of this proceeding to be flexible, without having defined flexibility first, will likely guarantee the construction of new gas fired power plants with no attention given to alternatives more consistent with Commission policies. The Center for Energy Efficiency and Renewable Technologies (CEERT) points out that a broader ("more relaxed") definition of flexibility, as opposed to current CAISO proposed definitions, would allow for a broader range of available resources to meet a potential need.[23] EnerNOC testimony notes that DR can provide flexible attributes[24] and CESA comments on the ability of energy storage to provide flexibility.[25]

---

[19] Scoping Memo, p. 5.

[20] SCE Testimony at 11.

[21] SCE Testimony at 12.

[22] In response to a question about alternatives to thermal resources, Mr. Rothleder stated: "There may be alternatives…but at this point the ISO is not aware of a viable alternative." Testimony of Mark Rothleder on Behalf of the California Independent System Operator Corporation, June 25, 2012 at. 9.

[23] Center for Energy Efficiency and Renewable Technologies, Local Reliability Track 1 Prepared Testimony, June 25, 2012 at II-3.

[24] EnerNOC, Inc., Local Reliability Track 1 Prepared Testimony of Andrew Hoffman, June 25, 2012 at II-1—II2.

[25] Testimony of Janice Lin on Behalf of the California Energy Storage Alliance Concerning Long Term Procurement Planning, Track 1 – Local Reliability, June 25, 2012, at. 3,4

Calpine notes, and DRA agrees, that examining flexibility issues for local areas independently and prior to system issues could result in inefficient procurement decisions.[26] Thus, flexible attributes should not be determined in Track 1 of this proceeding, but should instead be determined in Track 1/Phase 1 of the RA proceeding. Adopting DRA's recommendation to re-examine and modify Track 1 decisions based on determinations in the RA proceeding and the other LTPP tracks, would make it easier for the Commission to decide if flexible attributes are needed for LCR.

Q.6 Do you agree with SDG&E's testimony related to distributed generation in local areas?

A.6 I disagree with SDG&E's testimony that distributed generation (DG) should only be included in forecasts when there is a very high degree of confidence that it will be present and deliverable.[27] The Commission in R.10-05-004 has adopted policies that would help achieve the Governor's goal of implementing 12,000 MW of distributed generation by 2020 (e.g., D.11-07-031 expanding virtual net metering to all multi-meter and multi-tenant properties and D.11-09-015 expanding SGIP eligibility to more technologies). Underestimating the energy and capacity that is reasonably expected to result from such policies equates to a failure to plan for their successful implementation, which in turn creates a risk of over-procurement with unnecessary resources. If the Commission were to follow SDG&E's recommendation, it would not only shortchange the Governor's goal; more importantly, it would remove the motivation for SDG&E to address its local capacity requirements through effective implementation of customer-side DG programs

To prevent this inconsistent approach to California's DG goals, the Commission should adopt at least 1,519 MW of DG in its LCR determination, the amount reflected in the environmentally constrained case in CAISO's 2011-2012 Transmission Plan.[28] This amount should be updated after Track 2 of the 2012 LTPP proceeding completes future work in the current LTPP proceeding on planning assumptions and the future scenarios to be incorporated for system need analysis.

---

[26] Calpine Testimony at 3.

[27] SDG&E Testimony at 6, 8.

[28] CAISO 2011-2012 Transmission Plan, March 23, 2012, p. 238.

Q.7 Do you agree with EnerNOC's testimony that Demand Response (DR) should be included in long-term planning assumptions?

A.7 Yes. I concur with EnerNOC's testimony, which states "demand response must be incorporated into the long-term planning assumptions over the planning period."[29] Failure to include reasonable assessments of DR in long-term planning violates the Commission's loading order which gives DR programs the highest priority, along with energy efficiency, to reduce load. In Track 2 of this LTPP proceeding, the parties will develop planning assumptions and scenarios. Deliberations with full party involvement will lead to new values for DR in the system resources. DR should receive at least the same value in planning for local areas as it does in the planning for system needs. The locally constrained areas may, in fact, reap the greatest benefits from DR programs by reducing transmission loads which define the local areas. Additionally, the loads in local areas are calculated using more conservative assumptions which result in higher requirements. Thus, local reductions from DR programs have a greater impact than the same programs in system areas.

DRA recommends that LCR procurements determined in Track 1 should be re-assessed and refined following future tracks of the LTPP proceeding. Otherwise, this new LTPP process to determine long-term needs for local areas may produce results that are inconsistent with Commission programs, such as DR, by not providing ratepayers with the benefits they should expect from the programs they fund through rates.

Q.8 Do you agree with Calpine's opinion that no new resources should be authorized in local areas prior to the assessment of system needs?

A.8 I agree that determining local needs ahead of a full system analysis is not ideal. Recognizing that the purpose of Track 1 is to make local procurement assessments,[30] DRA believes the next best option is for the Commission to reassess and refine local needs determined in Track 1, after Tracks 2 and 3 are concluded, and decide local needs based on updated planning assumptions, and renewable integration studies.

[29] EnerNOC, Prepared Testimony of Mona Tierney-Lloyd at l-1.

[30] Scoping Memo at 3.

Q.9 Is the current track of this proceeding the appropriate forum for SCE's discussion and call for a new proceeding to develop a new multi-year forward procurement mechanism?

A.9 No, it is not within the scope of Track 1 of the LTPP.[31] This track focuses on procurement in locally constrained areas, specifically the LA Basin and Big Creek/Ventura areas. The scoping memo states that this track "will consider authorizing procurement of new infrastructure for local reliability purposes" and that the proceeding will be informed by any Commission decisions in R.11-10-023.[32] The scoping memo also addressed CAM in issues 7-10.[33]

In Section VI of its testimony, SCE encourages the Commission "to implement a new proceeding in conjunction with the CAISO to implement a long-term solution to by developing a forward procurement mechanism."[34] SCE made the same recommendation in the 2010 LTPP proceeding (R.10-05-006). In D.12-04-046 the Commission denied SCE's request stating that "the potential ramifications of this issue are significantly broader than the OTC issue that SCE attempts to shoehorn it into."[35] The Commission should similarly reject SCE's renewed attempt to shoehorn the issue into this proceeding.

SCE's Track 1 testimony filed on June 25, 2012 offers no new or compelling reasons for the Commission to alter its recent decision. The type of market SCE proposes would be expensive, complicated to set up, ill-suited to the development of preferred resources, and could result in unnecessary and duplicative procurement. Moreover, the Commission, not the CAISO, has the statutory responsibility and authority to establish, implement and enforce resource adequacy requirements, to review and approve the investor owned-utilities' (IOU) procurement plans, and to ensure that rates remain just and reasonable. The CAISO's core responsibility is to operate and maintain reliability of the transmission grid. Moreover, if the responsibility for procuring new generation were shifted to the CAISO, such procurement decisions would be reviewable by the Federal Energy

[31] Scoping Memo at 5,6.

[32] Scoping Memo at 5,6.

[33] Scoping Memo at. 6.

[34] SCE Testimony at 17.

[35] D.12-04-012 at 27.

Regulatory Commission (FERC), where the Commission is not a decision maker, but only a party to a proceeding.

In conclusion, the SCE proposal for a new proceeding to enact a forward procurement mechanism should be rejected. Instead, the Commission should consider a forward procurement mechanism in a later phase of this proceeding to develop longer-term bilateral capacity contracts.

APPENDIX A

QUALIFICATIONS AND PREPARED TESTIMONY
OF
PETER SPENCER

Q1. Please state your name, position and business address.

A1. My name is Peter Spencer. I am a Senior Analyst with the Division of Rateapayer Adovcates for the California Public Utilities Commission. I work at 505 Van Ness Avenue, San Francisco, CA 94102.

Q2. Are you the same Peter Spencer who testified in the initial filing of June 25, 2012?

A2. Yes.

ATTACHMENT A

SOUTHERN CALIFORNIA EDISON®
An EDISON INTERNATIONAL® Company

Robert G. Woods
Director
Electric Systems Planning
(909) 274-1276

March 1, 2012

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, attached is Southern California Edison's 2011 Annual System Reliability Report.

Attachment 1A 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, six days in 2011 were deemed excludable as major event days.

Attachment 1B provides reliability metrics for this same time period calculated per the original directions of CPUC D.96-09-045. Following the guidance of Appendix A of D.96-09-045, one day in 2011 was deemed excludable as a major event day.

Attachment 1C provides details of all excluded days, whether excluded under IEEE 1366 or D.96-09-045.

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

Of particular note, was the windstorm in Los Angeles County occurring on November 30 and December 1, 2011 which resulted in daily levels of SAIDI significantly greater than any seen in the past ten years.

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

Best regards,

Robert G. Woods
Director, Electric System Planning

Attachments

CC: Edward Randolph, Energy Division Director
Michelle Cooke, Consumer Protection & Safety Division Director
Liza Malashenko, Energy Division
David K. Lee, Energy Division

3 Innovation Way
Pomona, CA 91768

Southern California Edison
Annual System Reliability Report - 2011
Table of Contents

Southern California Edison

Historical System Reliability (IEEE Std 1366-2003)

2002 - 2005 Using DTOM Outage Database

2006 - 2011 Using ODRM Outage Database

	All Interruptions Included				Major Event Days Excluded Per IEEE 1366		
YEAR	SAIDI	SAIFI	MAIFI		SAIDI	SAIFI	MAIFI
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
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

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 - 2011, 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 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.

Southern California Edison

Historical System Reliability (CPUC D.96-09-045)

2002 - 2004 Using DTOM

2005 Using DTOM & ODRM

2006 - 2011 Using ODRM

	All Interruptions Included[1]				Major Event Days Excluded Per D.96-09-045[2]		
YEAR	SAIDI[3]	SAIFI	MAIFI		SAIDI[3]	SAIFI	MAIFI
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
2009 ODRM	105.98	0.94	1.41		105.98	0.94	1.41
2010 ODRM	141.14	1.09	1.64		141.14	1.09	1.64
2011 ODRM	232.60	1.08	1.49		173.03	1.03	1.43

All calculations utilize a definition of "sustained" interruption as described in D.96-09-045, 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 I - 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 SAIDIs. 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.

Major Event Days Detail

Attachment 1C

No.	YEAR	DATE	CAUSE	Excluded under IEEE 1366	SAIDI	SAIFI	MAIFI	Excluded under D.96-09-045	SAIDI	SAIFI	MAIFI	Source of data
1	2002	6/26/2002	Louisiana Fire	Y	2.15	0.15	0.00	Y	2.15	0.15	0.00	DTOM
2	2002	6/27/2002	Louisiana Fire					Y	0.05	0.00	0.00	DTOM
3	2002	6/28/2002	Louisiana Fire					Y	0.11	0.00	0.00	DTOM
4	2002	11/8/2002	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	1/5/2003	Santa Ana Wind Storm	Y	2.44	0.01	0.03					DTOM
2	2003	1/6/2003	Santa Ana Wind Storm	Y	14.95	0.09	0.11	Y	14.95	0.09	0.11	DTOM
3	2003	1/7/2003	Santa Ana Wind Storm	Y	1.86	0.02	0.03	Y	1.86	0.02	0.03	DTOM
4	2003	1/8/2003	Santa Ana Wind Storm					Y	0.40	0.01	0.01	DTOM
5	2003	2/25/2003	Rain Storm	Y	2.30	0.02	0.01					DTOM
6	2003	10/24/2003	Southern California Wild Fires					Y	0.16	0.01	0.03	DTOM
7	2003	10/25/2003	Southern California Wild Fires					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**	
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	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**	

Major Event Days Detail

Attachment 1C

No.	YEAR	DATE	CAUSE	Excluded under IEEE 1366	SAIDI	SAIFI	MAIFI	Excluded under D.96-09-045	SAIDI	SAIFI	MAIFI	Source of data
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	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**	
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, Taggert 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**	

Major Event Days Detail

Attachment 1C

No.	YEAR	DATE	CAUSE	Excluded under IEEE 1366	SAIDI	SAIFI	MAIFI	Excluded under D.96-09-045	SAIDI	SAIFI	MAIFI	Source of data
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**	
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					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**	

Southern California Edison

Historical System Reliability Data

2002 - 2011

Customers experiencing > 12 sustained outages

Year	Circuit	Circuit Name	Number of customers experiencing > 12 sustained outages
2002	1630	BIG ROCK	469
2002	4635	DANBY	57
2002	9060	IVERSON	124
2002	14814	REDSTONE	1,246
2003	2290	BROOKINGS*	1
2003	2370	BUDD	287
2003	2881	CAPANERO	292
2003	3240	CEDAR GLEN*	440
2003	5850	ELSTER	132
2003	8410	HIGH SCHOOL*	341
2003	8670	HOOK CREEK*	550
2003	9320	JORDAN	665
2003	9549	KELLPEAK*	10
2003	11448	MCCLENNY	55
2003	12190	MORITZ*	1,345
2003	12860	NORTH SHORE*	528
2003	14349	POSO PARK	49
2003	14690	RANGER*	730
2003	15922	SAUNDERS*	733
2003	16049	SEALS	93
2003	16839	SQUINT*	777
2003	17190	SUGARLOAF	131
2003	17997	TORONTO*	53
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
2006	5085	DINKEY CREEK	29
2006	14955	RHINEDOLLAR	64
2007	1832	BLUE CUT	193
2007	12847	NORTHPARK	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
2011	12190	MORITZ	983
2011	14758	RED BOX	8

Southern California Edison
Top 10 SAIDI Events
2002 - 2011

2011

Attachment 3

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	3,300	Y	Y
2	Vegetation Blown & Wind	11/30/2011	47.890	234,977	10,255	3,300	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

Southern California Edison
Top 10 SAIDI Events
2002 - 2011

2010

Attachment 3

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

Southern California Edison
Top 10 SAIDI Events
2002 - 2011

2009

Attachment 3

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

Southern California Edison
Top 10 SAIDI Events
2002 - 2011

2008

Attachment 3

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

Southern California Edison
Top 10 SAIDI Events
2002 - 2011

2007

Attachment 3

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

Southern California Edison
Top 10 SAIDI Events
2002 - 2011

2006

Attachment 3

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

Southern California Edison
Top 10 SAIDI Events
2002 - 2011

2005

Attachment 3

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	1/01/2005 - 01/11/200	7.786	954,312	23,269	1,005	Y	Y
2	Winter Rain Storm	2/16/2005 - 02/23/200	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

Southern California Edison
Top 10 SAIDI Events
2002 - 2011

2004

Attachment 3

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	2/28/2004 - 12/31/200	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

Southern California Edison
Top 10 SAIDI Events
2002 - 2011

2003

Attachment 3

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	Santa Ana Wind Storm	1/06/2003 - 01/08/200	17.228	1,236,698	7,731	2,551	Y	Y
2	Southern California Wild Fires	0/24/2003 - 10/26/200	6.105	601,653	12,808	1,919	Y	Y
3	Rain Storm & Mud Slides	12/25/2003	3.468				N	Y
4	Lightning Storm	11/12/2003	3.024				N	Y
5	Santa Ana Wind Storm	01/05/2003	2.438				N	Y
6	Rain Storm	02/25/2003	2.303				N	Y
7	Rain Storm	10/31/2003	1.127				N	N
8	Wind Storm	03/17/2003	0.946				N	N
9	Wind Storm	02/12/2003	0.796				N	N
10	Lightning Storm	08/20/2003	0.770				N	N

Southern California Edison
Top 10 SAIDI Events
2002 - 2011

2002

Attachment 3

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	12/16/2002	2.780				N	Y
2	Rain/Wind Storm	11/8/2002	2.416				N	Y
3	Mira Loma RAS / Louisiana Fire	6/26/2002 - 06/28/200	2.307	600,607	3,996	50	Y	Y
4	Rain/Wind Storm	11/9/2002	1.043				N	N
5	Rain Storm	11/25/2002	1.015				N	N
6	Wind Storm	2/9/2002	0.862				N	N
7	Car Hit Pole	10/4/2002	0.847				N	N
8	Rain/Wind Storm	11/7/2002	0.712				N	N
9	Heat Storm	9/1/2002	0.662				N	N
10	Rain Storm	2/17/2002	0.643				N	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	Santa Ana Wind Storm	Santa Ana Wind Storm	Santa Ana Wind Storm			⇦ Description of event
Time	6/26/2002	6/27/2002	6/28/2002	1/6/2003	1/7/2003	1/8/2003			⇦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	189,656	35,678	7,212			
3	-	9,716	1,364	169,700	23,267	5,691			
4	-	459	9,866	127,917	41,711	4,315			
5	-	4,571	285	112,215	48,693	4,155			
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	86,946	15,173	6,844			
9	-	501	352	58,992	13,628	7,833			
10	412	522	1,533	63,936	26,491	9,774			
11	114	1,302	599	60,261	35,427	8,491			
12	1,053	205	186	69,743	30,025	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	51,181	14,995	2,091			
21	1,690	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	193,783	40,904	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	1,972	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	5,937	30,040	13,206	1,640	19,566		
10	120,708	4,454	8,839	42,290	15,031	1,745	7,628		
11	653	3,256	7,889	30,355	11,669	5,737	8,981		
12	574	2,912	6,350	16,991	14,253	4,276	16,928		
13	15,893	2,295	28,195	17,970	15,084	5,481	10,208		
14	600	2,991	16,756	13,537	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	5,992	10,576	5,121	705	2,522		
21	727	3,087	5,619	7,987	4,092	1,738	4,294		
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	Winter Rain Storm	Winter Rain Storm	Winter Rain Storm	Winter Rain Storm	Winter Rain Storm	Winter Rain Storm	Winter Rain Storm	⇦ Description of event
Time	1/1/2005	1/2/2005	1/3/2005	1/4/2005	1/5/2005	1/6/2005	1/7/2005	1/8/2005	⇦Date of event
0	2,344	118	8,955	2,091	89	327	1,136	1,172	
1	2,921	398	1,652	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	960	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	1,665	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	1,261	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	832	2,845	1,139	5,954	6,876	454	12,229	8,270	
15	508	140	5,396	1,593	2,886	620	5,695	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	13,318	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	7,556	
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

	Winter Rain Storm	Winter Rain Storm	Winter Rain Storm	Winter Rain Storm	Winter Rain Storm	Winter Rain Storm	Winter Rain Storm	Winter Rain Storm	⇦ Description of event
Time	1/9/2005	1/10/2005	1/11/2005	2/16/2005	2/17/2005	2/18/2005	2/19/2005	2/20/2005	⇦Date of event
0	4,634	9,150	14,206	849	-	2,485	10,466	6,564	
1	5,353	12,379	17,009	125	229	1,495	17,924	3,539	
2	12,050	7,614	23,761	9	17	1,441	13,917	7,293	
3	5,806	6,362	11,891	3,916	837	1,441	20,607	1,694	
4	2,602	8,523	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	33,786	2,148	
7	14,493	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	11,663	13,268	26	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	15,434	14,101	14,518	1,746	715	133	20,560	4,118	
13	14,768	25,907	16,991	1,092	1,406	133	12,826	1,424	
14	9,396	18,741	9,700	822	8,316	4,986	10,386	928	
15	12,776	17,297	8,543	227	946	6,229	8,937	646	
16	14,157	15,005	8,302	5,306	782	141	10,151	2,152	
17	18,536	11,146	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	5,405	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	2/21/2005	2/22/2005	2/23/2005	9/20/2005	1/2/2006	7/22/2006	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	4,299	54,764		
6	16,259	342	26,381	36,987	14,740	4,956	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	26,698	115,365	7,451	51,300		
13	12,967	3,533	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	129,964	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	47,499	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	66,383	85,099		
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 at hourly interval

THIS TABLE CONTAINS ROLLING DAY DATA.

Attachment 4

	Winter Storm	Wind Storm	Wind Storm	Summer Lightning	Los Angeles Wind Storm	Los Angeles Wind Storm			⇦ Description of event
Time	1/1/2011	3/20/2011	3/21/2011	7/31/2011	11/30/2011	12/1/2011			⇦Date of event
0	152	2,253	3,756	1,553	346	53,827			
1	848	3,614	25,090	17,863	27	195,848			
2	1,802	3,218	6,775	23,571	93	224,491			
3	906	4,366	6,002	23,258	136	185,094			
4	245	4,836	13,142	50,469	905	175,500			
5	221	1,982	14,204	31,683	136	168,896			
6	256	19,346	7,630	32,030	101	182,264			
7	1,635	19,464	7,215	24,115	101	157,517			
8	2,055	22,334	3,739	37,987	101	153,781			
9	449	14,170	5,171	6,264	1,953	159,094			
10	434	21,641	32,945	8,203	635	153,681			
11	1,896	38,613	33,472	10,251	3,655	149,957			
12	1,213	50,469	29,369	6,656	2,473	160,856			
13	448	65,147	29,585	8,299	9,002	148,958			
14	338	59,645	28,413	11,004	3,810	138,162			
15	6,185	54,173	12,384	5,024	671	130,026			
16	286	54,319	10,565	4,815	6,934	120,737			
17	446	46,595	6,619	4,835	14,239	115,884			
18	3,814	75,305	8,154	7,279	17,008	110,628			
19	2,062	68,778	10,209	1,612	30,999	110,607			
20	2,393	42,090	6,559	1,818	47,924	101,914			
21	2,871	35,941	3,779	3,094	33,931	99,117			
22	2,301	32,844	4,307	1,880	60,206	95,108			
23	2,334	33,134	4,136	2,084	124,610	92,330			

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	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	12/28/2004 - 12/31/2004	01/01/2005 - 01/11/2005	02/16/2005 - 02/23/2005	9/20/2005	1/2/2006	7/22/2006	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	15,986	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	

Southern California Edison

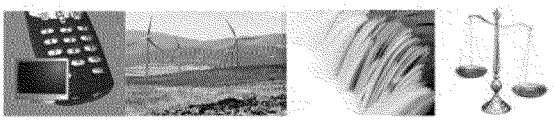
Major Events

Number of customers w/o service by outage duration

Attachment 5

	Winter Storm	*Wind Storm*	*Wind Storm*	*Summer Lightning*	*Los Angeles Wind Storm*	*Los Angeles Wind Storm*					*⇦Description of event*
Outage Duration	*1/1/2011*	*3/20/2011*	*3/21/2011*	*7/31/2011*	*11/30/2011*	*12/1/2011*					*⇦Date of event*
0 to 1 hour	19,856	299,989	79,997	86,125	141,793	353,515					
1 to 5 hours	2,181	53,535	31,620	5,895	13,080	54,549					
5 to 10 hours	231	11,804	6,513	22,012	11,329	25,877					
10 to 15 hours	180	5,112	2,755	1,929	7,067	30,380					
15 to 20 hours	170	3,359	455	331	2,323	16,495					
20 to 24 hours	17	3,680	278	261	5,031	12,249					
1 to 2 days	50	6,901	567	189	16,105	47,274					
2 to 3 days	-	1,035	23	2	19,471	21,220					
3 to 4 days	111	158	14	-	9,901	3,719					
4 to 5 days	49	43	-	2	5,395	3,538					
5 to 6 days	-	-	-	-	3,244	848					
6 to 7 days	-	7	-	-	221	272					
> 7 days	41	5	-	3	17	33					
Total	22,886	385,628	122,222	116,749	234,977	569,969					

ATTACHMENT B



FOR IMMEDIATE RELEASE **PRESS RELEASE**

Media Contacts:
Tom Hall, Information Officer, 415-730-2964, tbh@cpuc.ca.gov
DRA Press Room: http://www.dra.ca.gov/DRA/News/

DRA Warns That PG&E's Proposed Oakley Power Plant Remains Unneeded

SAN FRANCISCO, October 26, 2010 – The Division of Ratepayer Advocates (DRA), an independent consumer advocacy division of the California Public Utilities Commission (CPUC), today warns Pacific Gas and Electric Company (PG&E) customers that the utility continues to seek approval for a new power plant in Oakley, Calif., that, if approved, would sock ratepayers with $1.5-billion in costs for unneeded new electric capacity of 586 megawatts.

The CPUC already denied PG&E's proposal to build the Oakley plant in July 2010, but the utility filed a petition to overturn that decision. The petition is currently under CPUC consideration. In denying PG&E's original proposal, the CPUC relied on data that shows that PG&E has enough power plants both online and in planning to make the Oakley power plant unneeded, excessive and an irresponsible financial burden to customers.

"The CPUC found the Oakley project to be unnecessary in July, and PG&E's need for new power plants hasn't changed in the three months since," DRA acting director Joe Como said. "The CPUC laid out specific conditions under which the Oakley project would be reconsidered. None have been met. PG&E already has roughly 40 percent more resources than it needs. This is an irresponsible act on the part of PG&E to bring Oakley to the CPUC again."

In the CPUC's July decision, it said the Oakley proposal would be considered only if PG&E submitted it as a procurement application, if a previously approved plant failed to come online, or if a statewide renewable integration study found significant reliability risk. No plant has failed, the results of the renewable integration study have not yet been finalized, and PG&E has failed to follow the CPUC's procedural direction.

"Over-procurement hurts ratepayers," acting director Como said. "The CPUC must remain diligent in ensuring that the interests of Californians are a top priority."

For more information on DRA's position on the Oakley project, please visit www.dra.ca.gov/DRA/energy/oakley.htm.

For more information on DRA, please visit www.dra.ca.gov.

###