STATE OF CALIFORNIA
PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

ARNOLD SCHWARZENEGGER, *Governor*

January 28, 2009

Advice Letter 3337-E

Brian K. Cherry
Vice President, Regulatory Relations
Pacific Gas and Electric Company
77 Beale Street, Mail Code B10C
P.O. Box 770000
San Francisco, CA 94177

Subject: Reliability Performance Incentive Mechanism Results for Performance Year 2007

Dear Mr. Cherry:

Advice Letter 3337-E is effective January 26, 2009.

Sincerely,

Julie A. Fitch, Director
Energy Division

Pacific Gas and Electric Company

Brian K. Cherry
Vice President
Regulatory Relations

Pacific Gas and Electric Company
77 Beale St., Mail Code B10C
P.O. Box 770000
San Francisco, CA 94177

415.973.4977
Fax: 415.973.7226

September 4, 2008

Advice 3337-E
(Pacific Gas and Electric Company ID U 39 E)

Public Utilities Commission of the State of California

Subject: **Reliability Performance Incentive Mechanism Results For Performance Year 2007**

Purpose

Pacific Gas and Electric Company (PG&E) hereby requests that the Commission approve a Reliability Performance Incentive Mechanism (RPIM) result of neither a reward nor a penalty for PG&E for 2007, based on the performance results presented in PG&E's Annual Distribution Reliability Report, submitted to the Commission on February 29, 2008[1]. PG&E's 2007 RPIM results for both System Average Interruption Duration Index (SAIDI) and the System Average Interruption Frequency Index (SAIFI) fell within the deadband established by Decision 04-10-034. This is the third and final year for the RPIM.

Background

Decision 96-09-045 adopted recording and reporting requirements related to the frequency and duration of electric system outages. Among other things, Decision 96-09-045 requires each electric distribution utility to submit an annual report to the Commission by March 1 with statistics regarding system reliability performance for the previous calendar year, including SAIDI and SAIFI.

SAIDI measures the average duration of outages per customer during a specified time period. It is calculated by dividing the total minutes of sustained customer interruptions by the total number of customers. SAIFI measures the average number of sustained power interruptions for each customer during a specified time period. It is calculated by dividing the total number of sustained customer interruptions by the total number of customers.

[1] A copy of PG&E's Annual Distribution Reliability Report is attached.

Pursuant to Decision 04-10-034, the Commission adopted the RPIM for PG&E. The RPIM establishes individual annual SAIDI and SAIFI performance targets for the years 2005-2007. The targets and parameters for PG&E's RPIM are provided below.

	SAIDI excluding Major Events	SAIFI excluding Major Events
2005	165	1.40
2006	161	1.33
2007	157	1.24
Deadbands	10 min/yr	0.10 outages/yr
Livebands	15.8 min/yr	0.15 outages/yr
Max Annual Reward/Penalty	$12 million	$12 million

For performance year 2007, PG&E's SAIDI target was 157 total minutes and its SAIFI target was 1.24 interruptions per customer.

On March 9, 2006, PG&E filed Advice 2800-E, requesting that the RPIM be made a part of PG&E's DRAM and to adopt for 2005 results an RPIM penalty of $2,810,128.[2] In Resolution E-4003, the Commission approved PG&E's Advice 2800-E, including the request to make the RPIM part of PG&E's DRAM. In addition, the Commission ordered that the advice letter for the 2006 PG&E RPIM results include:

> a) Data supporting the start and end time of each excludable major event;
> b) Data supporting each event excluded due to a declared state of emergency; and
> c) The results of an audit of the outage data used to support any filing it makes for a reward or penalty under RPIM. Internal audit result accuracies should be in the 85% confidence level.
> d) All data bearing on exclusion of outages from RPIM results.

[2] On March 1, 2007, PG&E filed Advice 2998-E, informing the Commission that PG&E had found an error in PG&E's 2005 reported results, and that the RPIM penalty for 2005 should have been $9.2 million, not $2.8 million. Advice 2998-E asked the Commission to correct the error, and impose an additional $6.4 million penalty. The Commission approved Advice 2998-E on May 10, 2007.

(Resolution E-4003, Ordering Paragraph 2.)

PG&E filed its 2006 RPIM results on July 2, 2007, in Advice 3078-E. On April 24, 2008, the Commission issued Resolution E-4119, approving Advice 3078-E. Resolution E-4119 ordered that PG&E's advice filing for 2007 include:

a) Only contiguous days for a single major event;
b) Data supporting the start and end time of each excludable major event;
c) Data supporting each event excluded due to a declared state of emergency; and
d) Results accurate to the 85% confidence level of an audit of the outage data used to support the filing.
e) All data bearing on exclusion of outages from RPIM results. (Resolution E-4119, Ordering Paragraph 2.)

2007 SAIDI/SAIFI Results

On February 29, 2008 PG&E submitted its "Annual Distribution Reliability Report for 2007", attached as Attachment A. Table 1 of that report shows PG&E's 1998-2007 system reliability indices for SAIDI and SAIFI. As explained in the report, PG&E's 2007 SAIDI and SAIFI values were 159.9 for SAIDI and 1.250 for SAIFI. The SAIDI result and the SAIFI result are within the deadband range, and hence do not result in either a penalty or a reward.

There were no excludable major events in 2007. PG&E has attached as Attachment B a copy of its audit of the 2007 results.[3]

Protests

Anyone wishing to protest this filing may do so by letter sent via U.S. mail, by facsimile or electronically, any of which must be received no later than September 24, 2008, which is 20 days after the date of this filing. Protests should be mailed to:

CPUC Energy Division

[3] The 2007 audit results are based on a representative (random stratified) sample of 55 outages from the fourth quarter of 2007 to qualitatively assess the accuracy of reporting trends, similar to what was submitted to the Commission for 2006. Like the 2006 audit, the sample in this audit is too small to calculate outage accuracy with 85% confidence; however, the results indicate that the outage reporting process in 2007 is considerably better than 2005. The results also suggest that a possible trend towards over-reporting, i.e., which means that PG&E's reported outages may have actually been shorter in duration or affected less customers than indicated.

Tariff Files, Room 4005
DMS Branch
505 Van Ness Avenue
San Francisco, California 94102

Facsimile: (415) 703-2200
E-mail: jnj@cpuc.ca.gov and mas@cpuc.ca.gov

Copies of protests also should be mailed to the attention of the Director, Energy Division, Room 4004, at the address shown above.

The protest also should be sent via U.S. mail (and by facsimile and electronically, if possible) to PG&E at the address shown below on the same date it is mailed or delivered to the Commission:

Brian K. Cherry
Vice President, Regulatory Relations
Pacific Gas and Electric Company
77 Beale Street, Mail Code B10C
P.O. Box 770000
San Francisco, California 94177
Facsimile: (415) 973-7226
E-mail: PGETariffs@pge.com

Effective Date

PG&E requests that this advice filing become effective on regular notice, **October 4**, **2008**, which is 30 calendar days after the date of filing.

Notice

In accordance with General Order 96-B, Section IV, a copy of this advice letter is being sent electronically and via U.S. mail to parties shown on the attached list and on the service list for PG&E's 2003 General Rate Case Application, A.02-11-017. Address changes to the General Order 96-B service list should be directed to Rose de la Torre at (415) 973-4716. Advice letter filings can also be accessed electronically at: **http://www.pge.com/tariffs**

Vice President, Regulatory Relations

Attachments

cc: A.02-11-017

CALIFORNIA PUBLIC UTILITIES COMMISSION

ADVICE LETTER FILING SUMMARY
ENERGY UTILITY

MUST BE COMPLETED BY UTILITY (Attach additional pages as needed)

Company name/CPUC Utility No. **Pacific Gas and Electric Company (ID U39 M)**

Utility type:	Contact Person: David Poster
☒ ELC ☒ GAS	Phone #: (415) 973-1082
☐ PLC ☐ HEAT ☐ WATER	E-mail: dxpu@pge.com

EXPLANATION OF UTILITY TYPE

ELC = Electric GAS = Gas ☐
PLC = Pipeline HEAT = Heat WATER = Water

(Date Filed/ Received Stamp by CPUC)

Advice Letter (AL) #: 3337-E **Tier:** [2]
Subject of AL: Reliability Performance Incentive Mechanism Results for Performance Year 2007
Keywords (choose from CPUC listing): RPIM

AL filing type: ☐ Monthly ☐ Quarterly ☒ Annual ☐ One-Time ☐ Other _____

If AL filed in compliance with a Commission order, indicate relevant Decision/Resolution #: D.04-10-034

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL: No

Summarize differences between the AL and the prior withdrawn or rejected AL:

Is AL requesting confidential treatment? If so, what information is the utility seeking confidential treatment for: N/A

Confidential information will be made available to those who have executed a nondisclosure agreement: N/A

_____

Resolution Required? ☐ Yes ☒No

Requested effective date: October 4, 2008 No. of tariff sheets: N/A

Estimated system annual revenue effect (%): N/A

Estimated system average rate effect (%): N/A

When rates are affected by AL, include attachment in AL showing average rate effects on customer classes (residential, small commercial, large C/I, agricultural, lighting).

Tariff schedules affected:

Service affected and changes proposed:

Protests, dispositions, and all other correspondence regarding this AL are due no later than 20 days after the date of this filing, unless otherwise authorized by the Commission, and shall be sent to:

CPUC, Energy Division
Tariff Files, Room 4005
DMS Branch
505 Van Ness Ave., San Francisco, CA 94102
jnj@cpuc.ca.gov and mas@cpuc.ca.gov

Pacific Gas and Electric Company
Attn: Brian K. Cherry, Vice President, Regulatory Relations
77 Beale Street, Mail Code B10C
P.O. Box 770000
San Francisco, CA 94177
E-mail: PGETariffs@pge.com

Advice 3337-E

Attachment A

Pacific Gas and Electric Company™

WE DELIVER ENERGY.™

Stephen L. Garber
Attorney at Law
Law Department

Mailing Address
P.O. Box 7442
San Francisco, CA 94120

Street/Courier Address
77 Beale Street, B30A
San Francisco, CA 94105

415.973.8003
Fax: 415.973.0516
Internet: slg@pge.com

February 29, 2008

VIA HAND DELIVERY

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

Re: Annual Electric Distribution Reliability Report (R.96-11-004)

Dear Mr. Clanon:

Pursuant to Decision No. 96-09-045, Appendix A, page 3 and Decision No. 04-10-034, page 104 and Appendix A, page A-107, enclosed is a copy of Pacific Gas and Electric Company's Electric Distribution Reliability Report. An electronic version is also being sent to you via e-mail for posting on the Commission's website.

Sincerely,

Stephen L. Garber

SLG/ld

cc: Brian Schumacher, Energy Division
David Lee, Energy Division

General

This is the 2007 Reliability Report for Pacific Gas & Electric Company as required by Decision 96-09-045. This report also includes for the first time system reliability data based on the IEEE Standard 1366 as discussed in the CPUC sponsored workshops conducted at the end of 2007. In addition, this report includes additional reporting requirements as specified in Decision 04-10-034 and its Appendix A. The report consists of the following:

Section	Description
1.	System Indices For The Last 10 Years (1998-2007)
2.	Significant Outage Events Of 2007
3.	Customers Experiencing >12 Sustained Outages In 2007
4.	Attachment 1 - Division Reliability Indices (Per D. 04-10-034, Appendix A, Agreement 1)
5.	Attachment 2 - PG&E Service Territory Map
6.	Attachment 3 - Summary list of excludable major events per D. 96-09-045
7.	Attachment 4 - System Indices For The Last 10 Years (1998-2007) Based on IEEE 1366
8.	Attachment 5 - Historical (1998-2006) Outage Information From Prior Reports

PG&E maintains account specific information for customers affected by outages that are recorded in PG&E's outage reporting system (OUTAGE). This system tracks outages at the generation, transmission, substation, primary distribution, and individual transformer levels. Additionally, OUTAGE models the actual electric switching operations during the circuit restoration process (which is useful for determining accurate customer outage minutes for calculating SAIDI and CAIDI). PG&E used its most current outage data to compile the information contained in this report.

SECTION 1

System Indices (1998-2007)

Table 1 lists the required SAIDI, SAIFI, and MAIFI values in accordance with Appendix A of D. 96-09-045. As required by Decision 04-10-034, CAIDI values are also included in this report.

Table 1 - System Indices (1998-2007)
(Includes Transmission, Distribution and Generation related outages)

	Major Events Included				Major Events Excluded			
YEAR	SAIDI	SAIFI	MAIFI	CAIDI	SAIDI	SAIFI	MAIFI	CAIDI
1998	317.1	2.145	3.821	147.9	180.1	1.669	3.397	107.9
1999	157.3	1.503	2.405	104.7	156.8	1.499	2.397	104.6
2000	170.7	1.438	2.302	118.7	170.2	1.435	2.301	118.6
2001	261.2	1.647	2.360	158.6	222.1	1.520	2.217	146.1
2002	400.8	1.763	2.698	227.3	146.7	1.174	2.095	125.0
2003	208.0	1.411	1.878	147.5	201.8	1.389	1.874	145.3
2004	205.3	1.426	1.875	143.9	205.1	1.425	1.872	143.9
2005	249.3	1.549	1.895	161.0	187.1	1.407	1.782	132.9
2006	280.6	1.728	1.768	162.3	150.9	1.274	1.532	118.5
2007	159.9	1.250	1.561	127.9	159.9	1.250	1.561	127.9

Included in this annual report is supplemental information noted in Tables 2 and 3 representing the corresponding indexes separated for both the distribution and transmission systems. It should be noted that the totals from these two tables will not exactly match Table 1 for the following reasons:

(a) Generation related outages are included in Table 1 but not in Tables 2 and 3;
(b) There are database limitations related to the major event exclusion process when separating the transmission and distribution systems.

Please also note, the MAIFI information is not included in these tables since the existing automatic recording (EON) devices do not distinguish between the two systems.

Table 2 - Distribution System Indices (1998-2007)
(Excludes transmission and generation related outages)

	Major Events Included			Major Events Excluded		
YEAR	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI
1998	245.0	1.819	134.7	157.4	1.499	105.0
1999	145.2	1.344	108.0	144.9	1.341	108.0
2000	154.2	1.314	117.3	153.7	1.312	117.1
2001	239.7	1.509	158.8	201.8	1.389	145.3
2002	358.1	1.615	221.7	136.2	1.086	125.4
2003	187.6	1.283	146.3	181.6	1.263	143.9
2004	181.7	1.277	142.2	181.5	1.277	142.1
2005	210.9	1.352	156.0	157.7	1.222	129.0
2006	252.1	1.535	164.2	136.5	1.137	120.1
2007	139.4	1.121	124.3	139.4	1.121	124.3

Table 3 - Transmission System Indices (1998-2007)
(Excludes distribution and generation related outages)

	Major Events Included			Major Events Excluded		
YEAR	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI
1998	72.0	0.325	221.8	22.7	0.170	133.6
1999	12.1	0.160	76.1	11.9	0.158	75.2
2000	15.2	0.110	138.9	15.2	0.110	138.9
2001	21.6	0.138	156.7	20.3	0.132	154.5
2002	42.1	0.147	285.9	10.5	0.088	120.1
2003	20.4	0.128	159.7	20.2	0.127	159.5
2004	23.3	0.148	157.7	23.3	0.148	157.8
2005	38.3	0.197	195.1	29.3	0.185	158.8
2006	28.4	0.193	147.4	14.4	0.136	105.4
2007	20.5	0.128	160.0	20.5	0.128	160.0

Excludable Major Events

Appendix A to D. 96-09-045 defines excludable major events as follows:

> Each utility will exclude from calculation of its reliability indices major events that meet either of the two following criteria: (a) the event is caused by earthquake, fire, or storms of sufficient intensity to give rise to a state of emergency being declared by the government, or (b) any other disaster not in (a) that affects more than 15% of the system facilities or 10% of the utility's customers, whichever is less for each event.

There were no excludable major events in 2007, as defined in Appendix A of D. 96-09-045.

SECTION 2

Significant Outage Events Of 2007

Table 4 lists the ten largest outage events experienced during 2007. PG&E interprets this reporting requirement as the ten events (individual days or in some cases a group of consecutive days) with a significant number of customer interruptions in the system or a portion of the system. These events are listed in descending order of customer interruptions.

Table 4 - Ten Largest 2007 Outage Events

Rank	Description	Date	Number of Customers Affected *	Longest Customer Interruption (Hours)	# of People Used To Restore Service	CPUC Major Event?
1	Gusty winds and rain Feb 26 and 27. Peak wind speeds of 30-45 mph Bay Area (Oakland 40 mph, SF approximately 43 mph). Interior valley reported 25-40 mph gusts, strongest in the San Joaquin Valley (Fresno 38 mph). Rainfall generally below one inch. Snow levels lowered to 2000 ft as far south as the San Joaquin Valley on Feb 27.	2/26 - 2/28	266,764	214 **	Not Requested	N
2	Heat wave centered around July 5. Maximums between 105-115 degrees in the interior valleys, 95-110 degrees in the coastal valleys.	7/4 - 7/7	172,778	20	Not Requested	N
3	Widespread lightning with subtropical rain. Lightning all three days but extensive strikes on Aug 30 over Areas 3 and 4	8/29 - 8/31	149,883	75	Not Requested	N
4	Early summer hot temperatures in the interior; maximums 100-105 degrees in the Central Valley, upper 80's to low 100's in the coastal valleys. North winds 20-25 mph	6/14 - 6/16	137,977	27	Not Requested	N
5	Light rain across Central and North Areas. Winds generally below 25 mph. Lightning on Sep 21 in the evening continuing through Sep 22 mainly in San Joaquin Valley and foothills. Many outages reported due to insulator flashover resulting from light rain.	9/22	100,606	33	Not Requested	N
6	Rain, gusty winds and scattered thundershowers Feb 22. Peak winds at Redding - 51 mph on the Feb 21 and 44 mph on Feb 22nd. Bay Area gusts from 25-35 mph (Oakland 37 mph) on the Feb 22nd. Over 2 inches of rain in Eureka, less than one inch most other locations	2/22 - 2/23	96,420	79	Not Requested	N
7	Light rain far north, winds below 25 mph. Cold morning temperatures.	1/16	91,695	24	Not Requested	N
8	Thunderstorms / lightning in the Sierra foothills of Area 4 and 5. Afternoon temperatures between 95-100 degrees in the Central Valley	7/24	70,602	29	Not Requested	N
9	Light rain across the Service Area. Many outages reported due to insulator flashover resulting from light rain.	10/10	62,434	34	Not Requested	N
10	Moderately strong winds occurred across the Central and Northern Service Areas with gusts up to 50 mph.	12/27	59,594	20	Not Requested	N

* Note: Values exclude single distribution line transformer and planned outages
** Note: Reflects an outage at two customer locations in a remote area that experiences deep snow with limited access.

SECTION 3

Customers Experiencing > 12 Sustained Outages During 2007

Table 5 lists all circuits where one or more customers on a circuit experienced more than 12 sustained outages in 2007. Please note, this list does not mean that all the customers on the circuit experienced more than 12 outages.

PG&E is addressing the necessary portions of these circuits as part of the overall service reliability improvement plans.

Table 5 – Customers Experiencing > 12 Sustained Outages During 2007

Division	Feeder Name	Customers Experiencing > 12 Outages
CENTRAL COAST	DOLAN ROAD 1104	33
CENTRAL COAST	ROB ROY 2104	53
DIABLO	BRENTWOOD SUB 2105	17
LOS PADRES	SISQUOC 1102	1
LOS PADRES	ZACA 1101	1
NORTH BAY	NOVATO 1104	8
NORTH BAY	SILVERADO 2102	16
NORTH COAST	BRIDGEVILLE 1102	9
NORTH COAST	MONTE RIO 1111	8
NORTH VALLEY	CHALLENGE 1101	350
NORTH VALLEY	GERBER 1102	22
NORTH VALLEY	JACINTO 1101	2
SACRAMENTO	CORDELIA 1104	57
SACRAMENTO	JAMESON 1104	9
SACRAMENTO	PEABODY 2107	72
SIERRA	EL DORADO P H 2101	10
YOSEMITE	COTTLE 1702	63
YOSEMITE	FIGARDEN SUB. 2110	2

SECTION 4

Attachment 1

Division Reliability Indices (Per D. 04-10-034, Appendix A, Agreement 1)

Per D. 04-10-034
Appendix A
Agreement 1

Pacific Gas and Electric
Division Reliability Indices
2002-2007
(Excluding Major Events)

Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2002	CENTRAL COAST	222.8	1.503	2.634	148.2
2003	CENTRAL COAST	221.5	1.403	2.936	157.9
2004	CENTRAL COAST	488.2	2.624	3.726	186.1
2005	CENTRAL COAST	323.2	2.309	3.291	139.9
2006	CENTRAL COAST	180.8	1.491	2.499	121.3
	02-06 Avg	287.3	1.866	3.017	150.7
2007	CENTRAL COAST	211.7	1.849	2.731	114.5
	% Difference	-26.3%	-0.9%	-9.5%	-24.0%

Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2002	DE ANZA	107.2	0.884	1.453	121.3
2003	DE ANZA	117.1	0.905	1.687	129.3
2004	DE ANZA	253.6	1.384	1.862	183.2
2005	DE ANZA	102.2	1.047	1.943	97.6
2006	DE ANZA	122.4	0.936	1.455	130.8
	02-06 Avg	140.5	1.031	1.680	132.4
2007	DE ANZA	94.1	0.865	1.136	108.8
	% Difference	-33.0%	-16.1%	-32.4%	-17.8%

Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2002	DIABLO	127.9	1.418	1.551	90.2
2003	DIABLO	153.0	1.416	1.558	108.1
2004	DIABLO	147.0	1.365	1.482	107.7
2005	DIABLO	185.7	1.459	1.744	127.3
2006	DIABLO	130.7	1.238	1.388	105.6
	02-06 Avg	148.9	1.379	1.545	107.8
2007	DIABLO	120.3	1.095	1.579	109.9
	% Difference	-19.2%	-20.6%	2.2%	2.0%

Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2002	EAST BAY	118.6	1.039	0.962	114.1
2003	EAST BAY	122.4	1.172	1.252	104.4
2004	EAST BAY	144.0	1.187	1.589	121.3
2005	EAST BAY	162.5	1.267	1.150	128.2
2006	EAST BAY	138.9	1.060	0.882	131.1
	02-06 Avg	137.3	1.145	1.167	119.8
2007	EAST BAY	164.2	1.310	1.010	125.4
	% Difference	19.6%	14.4%	-13.5%	4.7%

Per D. 04-10-034
Appendix A
Agreement 1

Pacific Gas and Electric
Division Reliability Indices
2002-2007
(Excluding Major Events)

Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2002	FRESNO	165.9	1.364	2.469	121.6
2003	FRESNO	212.6	1.544	2.214	137.7
2004	FRESNO	217.6	1.321	1.725	164.8
2005	FRESNO	308.8	1.930	1.899	160.0
2006	FRESNO	202.5	1.688	2.159	120.0
	02-06 Avg	221.5	1.569	2.093	140.8
2007	FRESNO	229.0	1.771	2.237	129.3
	% Difference	3.4%	12.8%	6.9%	-8.2%

Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2002	KERN	157.5	1.251	0.883	125.9
2003	KERN	119.2	1.149	1.112	103.7
2004	KERN	149.1	1.275	1.402	116.9
2005	KERN	166.5	1.283	1.612	129.8
2006	KERN	177.6	1.586	1.696	112.0
	02-06 Avg	154.0	1.309	1.341	117.7
2007	KERN	122.2	1.133	1.580	107.8
	% Difference	-20.6%	-13.4%	17.8%	-8.4%

Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2002	LOS PADRES	128.3	1.249	2.373	102.7
2003	LOS PADRES	117.4	1.333	2.222	88.0
2004	LOS PADRES	167.7	1.445	2.239	116.0
2005	LOS PADRES	162.2	1.254	1.916	129.3
2006	LOS PADRES	155.0	1.438	2.461	107.7
	02-06 Avg	146.1	1.344	2.242	108.7
2007	LOS PADRES	134.6	1.156	2.682	116.4
	% Difference	-7.9%	-14.0%	19.6%	7.0%

Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2002	MISSION	67.3	0.846	0.927	79.6
2003	MISSION	75.8	0.909	1.067	83.4
2004	MISSION	77.6	1.001	0.975	77.5
2005	MISSION	103.0	1.038	0.984	99.2
2006	MISSION	77.1	0.882	1.179	87.4
	02-06 Avg	80.2	0.935	1.026	85.4
2007	MISSION	82.1	0.829	1.021	99.1
	% Difference	2.4%	-11.4%	-0.5%	16.0%

Per D. 04-10-034
Appendix A
Agreement 1

Pacific Gas and Electric
Division Reliability Indices
2002-2007
(Excluding Major Events)

Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2002	NORTH BAY	145.1	1.272	1.766	114.1
2003	NORTH BAY	177.2	1.619	2.309	109.4
2004	NORTH BAY	213.0	1.622	2.638	131.3
2005	NORTH BAY	108.5	1.066	1.982	101.8
2006	NORTH BAY	123.8	0.936	1.301	132.3
	02-06 Avg	153.5	1.303	1.999	117.8
2007	NORTH BAY	117.0	1.088	1.782	107.6
	% Difference	-23.8%	-16.5%	-10.9%	-8.6%

Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2002	NORTH COAST	237.1	1.253	6.622	189.2
2003	NORTH COAST	346.5	1.804	2.147	192.1
2004	NORTH COAST	301.1	1.690	1.823	178.2
2005	NORTH COAST	265.2	1.548	2.415	171.3
2006	NORTH COAST	232.0	1.452	1.648	159.8
	02-06 Avg	276.4	1.549	2.931	178.1
2007	NORTH COAST	318.0	1.475	2.383	215.7
	% Difference	15.1%	-4.8%	-18.7%	21.1%

Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2002	NORTH VALLEY	239.8	1.480	3.877	162.0
2003	NORTH VALLEY	494.1	1.879	2.946	263.0
2004	NORTH VALLEY	266.9	1.566	2.936	170.4
2005	NORTH VALLEY	267.7	1.733	2.208	154.5
2006	NORTH VALLEY	279.0	2.092	2.009	133.4
	02-06 Avg	309.5	1.750	2.795	176.7
2007	NORTH VALLEY	265.2	1.581	2.130	167.8
	% Difference	-14.3%	-9.7%	-23.8%	-5.0%

Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2002	PENINSULA	110.6	1.046	1.735	105.7
2003	PENINSULA	136.3	1.248	1.696	109.1
2004	PENINSULA	142.9	1.243	1.964	114.9
2005	PENINSULA	100.4	0.934	1.333	107.5
2006	PENINSULA	94.3	1.030	1.085	91.5
	02-06 Avg	116.9	1.100	1.563	105.7
2007	PENINSULA	80.0	0.754	1.061	106.1
	% Difference	-31.6%	-31.5%	-32.1%	0.3%

Per D. 04-10-034
Appendix A
Agreement 1

Pacific Gas and Electric
Division Reliability Indices
2002-2007
(Excluding Major Events)

Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2002	SACRAMENTO	172.7	1.334	2.620	129.5
2003	SACRAMENTO	224.0	1.185	2.465	189.1
2004	SACRAMENTO	191.4	1.294	1.861	147.9
2005	SACRAMENTO	175.6	1.131	1.825	155.3
2006	SACRAMENTO	153.0	1.184	1.991	129.2
	02-06 Avg	183.3	1.226	2.152	150.2
2007	SACRAMENTO	122.7	0.857	1.151	143.2
	% Difference	-33.1%	-30.1%	-46.5%	-4.7%

Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2002	SAN FRANCISCO	77.1	0.715	0.379	107.8
2003	SAN FRANCISCO	308.6	1.219	0.313	253.2
2004	SAN FRANCISCO	86.9	0.905	0.246	96.0
2005	SAN FRANCISCO	107.3	1.006	0.326	106.6
2006	SAN FRANCISCO	67.0	0.823	0.275	81.4
	02-06 Avg	129.4	0.934	0.308	129.0
2007	SAN FRANCISCO	99.1	1.027	0.356	96.5
	% Difference	-23.4%	10.0%	15.7%	-25.2%

Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2002	SAN JOSE	114.3	0.982	0.807	116.4
2003	SAN JOSE	165.0	1.296	0.975	127.3
2004	SAN JOSE	143.4	1.167	0.770	122.9
2005	SAN JOSE	101.1	0.980	0.729	103.2
2006	SAN JOSE	84.6	0.802	0.898	105.5
	02-06 Avg	121.7	1.045	0.836	115.1
2007	SAN JOSE	99.2	0.944	1.009	105.0
	% Difference	-18.5%	-9.7%	20.7%	-8.7%

Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2002	SIERRA	183.1	1.245	2.233	147.1
2003	SIERRA	234.1	1.534	2.963	152.6
2004	SIERRA	304.0	1.647	2.585	184.6
2005	SIERRA	166.6	1.232	1.756	135.2
2006	SIERRA	198.4	1.414	0.940	140.3
	02-06 Avg	217.2	1.414	2.095	152.0
2007	SIERRA	196.7	1.431	1.684	137.5
	% Difference	-9.5%	1.2%	-19.6%	-9.5%

Per D. 04-10-034
Appendix A
Agreement 1

Pacific Gas and Electric
Division Reliability Indices
2002-2007
(Excluding Major Events)

Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2002	STOCKTON	187.9	1.371	1.900	137.1
2003	STOCKTON	217.9	1.817	1.952	119.9
2004	STOCKTON	258.5	1.621	2.692	159.5
2005	STOCKTON	260.7	2.293	2.936	113.7
2006	STOCKTON	136.9	1.445	2.295	94.8
	02-06 Avg	212.4	1.709	2.355	125.0
2007	STOCKTON	183.6	1.636	1.813	112.2
	% Difference	-13.6%	-4.3%	-23.0%	-10.2%

Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2002	YOSEMITE	143.1	1.311	3.442	109.1
2003	YOSEMITE	214.8	1.708	3.990	125.8
2004	YOSEMITE	249.2	1.832	3.312	136.0
2005	YOSEMITE	291.0	2.095	3.634	138.9
2006	YOSEMITE	245.3	1.994	2.778	123.0
	02-06 Avg	228.7	1.788	3.431	126.6
2007	YOSEMITE	226.5	1.606	1.412	141.1
	% Difference	-1.0%	-10.2%	-58.8%	11.5%

Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2002	SYSTEM	146.7	1.174	2.095	125.0
2003	SYSTEM	201.8	1.389	1.874	145.3
2004	SYSTEM	205.1	1.425	1.872	143.9
2005	SYSTEM	187.1	1.407	1.782	132.9
2006	SYSTEM	150.9	1.274	1.532	118.5
	02-06 Avg	178.3	1.334	1.831	133.1
2007	SYSTEM	159.9	1.25	1.561	127.9
	% Difference	-10.3%	-6.3%	-14.7%	-3.9%

SECTION 5

Attachment 2

PG&E Service Territory Map


PG&E
Service Territory
SISKYOU
MODOC
TRINITY
SHASTA
LASSEN
HUMBOLDT
North Valley
Division
TEHAMA
PLUMAS
BUTTE
Area 6
GLENN
SIERRA
MENDOCINO
NEVADA
North Coast
Division
COLUSA
SUTTER
YUBA
Sierra
Division
PLACER
LAKE
Area 7
YOLO
EL DORADO
SONOMA
North Bay
Division
Sacramento
Division
NAPA
SACRAMENTO
AMADOR
Stockton
Division
SOLANO
CALAVERAS
MARIN
TUOLUMNE
MONO
Diablo
Division
SAN JOAQUIN
CONTRA COSTA
East Bay
Division
Area 2
Area 5
ALAMEDA
San Francisco
Division
Mission
Division
STANISLAUS
MARIPOSA
Yosemite
Division
Area 1
SANTA CLARA
Peninsula
Division
De Anza
Division
San Jose
Division
MERCED
MADERA
SANTA CRUZ
Fresno
Division
Area 3
SAN BENITO
FRESNO
Central Coast
Division
TULARE
MONTEREY
KINGS
Area 4
Los Padres
Division
Kern
Division
KERN
SAN LUIS OBISPO
SANTA BARBARA
VENTURA
LOS
Kilometers
Miles

SECTION 6

Attachment 3

Summary list of excludable major events per D. 96-09-045

Date	Description	Reason
12/26/06 – 12/28/06	A strong storm moved across the service area on Dec 26. Strong post-frontal winds occurred Dec 27-28.	10% customer criteria
07/20/06 – 07/27/06	A severe and long lasting heat wave affected the service area. In many locations three day average temperatures were the highest recorded in over 50 years.	Declared State of Emergency
04/04/06 – 04/05/06	A surge of subtropical moisture moved over the service area resulting in periods of heavy rainfall and moderately gusty winds in the 20-35 mph range.	Declared State of Emergency
03/09/06 – 03/14/06	A cold air mass brought periods of rain, wind, thundershowers and low elevation snow to the service area.	Declared State of Emergency
03/02/06 – 03/05/06	During this four day period several storms crossed through the service territory. Strong winds, rain and thunderstorms occurred on Mar 3, especially affecting the San Joaquin Valley.	Declared State of Emergency
02/26/06 - 02/28/06	A strong storm occurred on February 27-28. Bay Area wind gusts generally ranged from 45 to 70 mph; SF Airport reported a wind gust of 71 mph. Gusts to 50 mph were reported in many other parts of the service area.	Declared State of Emergency
12/30/2005 - 01/05/2006	A series of strong storms struck the service area The Dec 30 event was strongest in the north. The Dec 31 event affected the entire service area. An additional one to three inches of rain fell across northern and central California on Dec 31.	10% customer criteria
12/18/2005 - 12/20/2005	A strong weather front accompanied by heavy rain and strong gusty winds targeted the central portion of the service area. Many coastal locations received between one to three inches of rain.	Declared State of Emergency
08/11/2004 - 08/16/2004	North Valley Division wildfires.	Declared State of Emergency
12/22/2003	Los Padres Division earthquake.	Declared State of Emergency
12/13/2002 - 12/21/2002	Very powerful early-season storm with gusty winds and heavy rains.	10% customer criteria
11/07/2002 - 11/08/2002	Very powerful early-season storm with gusty winds and heavy rains.	10% customer criteria
11/24/2001	Strong early-season storm with gusty winds (over 50 mph at many locations), heavy rains (.75 to 2+ inches in a 24-hour period) and mountain snows.	10% customer criteria
09/06/2001 - 09/07/2001	North Valley Division wildfires.	Declared State of Emergency
9/3/2000	North Bay Division earthquake - Napa area.	Declared State of Emergency
10/16/1999	North Valley Division wildfires.	Declared State of Emergency
08/23/1999 - 08/25/1999	North Valley Division wildfires.	Declared State of Emergency
01/31/1998 - 02/11/1998	A series of weather systems pounded northern and central California bringing heavy rains and periods of strong winds. Coastal and coastal mountain areas south of Cape Mendocino were hardest hit.	10% customer criteria
12/8/1998	San Francisco, Northern Peninsula Outage – Human error. Refer to PG& E's "December 8 1998 Outage Investigation Report" dated January 25, 1999 for complete details.	10% customer criteria

SECTION 7

Attachment 4

System Indices for the Last 10 Years (1998-2007) Based in IEEE 1366

Table A - IEEE 1366 Method – T&D System

(Exlcludes 2.5 Beta Days, ISO, Planned and Transformer Only Outages				
YEAR	**SAIDI**	**SAIFI**	**MAIFI**	**CAIDI**
1998	168.3	1.603	3.322	105.0
1999	134.8	1.381	2.286	97.6
2000	139.8	1.273	2.167	109.8
2001	143.4	1.197	1.803	119.8
2002	137.4	1.137	2.051	120.8
2003	162.5	1.288	1.745	126.2
2004	152.2	1.179	1.568	129.1
2005	157.0	1.266	1.663	124.0
2006	168.5	1.350	1.573	124.8
2007	142.3	1.199	1.512	118.7

Table B - IEEE 1366 Method – Distribution System

(Exlcludes 2.5 Beta Days, ISO, Planned and Transformer Only Outages			
YEAR	**SAIDI**	**SAIFI**	**CAIDI**
1998	148.0	1.445	102.5
1999	124.4	1.228	101.3
2000	125.5	1.172	107.1
2001	130.1	1.102	118.0
2002	127.4	1.049	121.4
2003	147.6	1.173	125.9
2004	140.9	1.074	131.2
2005	137.9	1.120	123.1
2006	151.7	1.196	126.8
2007	128.8	1.090	118.2

Table C - IEEE 1366 Method – Transmission System

(Exlcludes 2.5 Beta Days, ISO, Planned and Transformer Only Outages			
YEAR	**SAIDI**	**SAIFI**	**CAIDI**
1998	20.2	0.158	127.8
1999	10.3	0.152	67.7
2000	14.3	0.101	140.8
2001	13.3	0.094	141.1
2002	10.0	0.087	114.4
2003	14.9	0.115	129.3
2004	11.0	0.104	106.5
2005	19.1	0.146	130.5
2006	16.8	0.154	109.4
2007	13.5	0.109	123.3

The totals shown in Tables B and C may not exactly match the values in Table A due to the following:

- Generation related outages are included in the first table but not in Tables B and C;
- There are database limitations related to the exclusion process when separating the outage data associated with the transmission and distribution systems.

The MAIFI information is not included in Tables B and C since the existing automatic recording (EON) devices do not distinguish between the two systems.

SECTION 8

Attachment 5

Historical (1997-2006) Outage Information from Prior Reports

Table 6 - Ten Largest 2006 Outage Events

Rank	Description	Date	Number of Customers Affected	Longest Customer Interruption (Hours)	# of People Used To Restore Service	CPUC Major Event?
1	A severe and long lasting heat wave affected the service area. In many locations three day average temperatures were the highest recorded in over 50 years. Consecutive days with maximum temperatures over 110 F were recorded throughout the Central Valley, and many coastal valleys reported consecutive days with maximum temperatures over 105 F. Sacramento set an all time record of 11 days in a row with maximum temperatures over 100 F. An unusual feature of this heat wave was high nighttime temperatures. Sacramento, San Jose and Fresno set records for the highest minimum temperatures ever recorded.	7/21 - 7/27	651,217	119	Not Requested	Y See Table 4
2	A strong storm moved across the service area on Dec 26. Strong post-frontal winds occurred Dec 27-28. Southerly winds gusted from 45 to 55 mph in the Sacramento Valley and Bay Area on Dec 26th, accompanied by rainfall totals ranging from ½ to 3 inches. Gusty west to northwest winds were recorded after the front passed on Dec 27th. Bay Area wind gusts generally ranged from 45-60 mph, and gusts in the 35 to 50 mph range were reported in both northern and southern portions of the service area. North to northwesterly wind gusts in the 25 to 40 mph range continued into the afternoon of Dec 28th	12/26-12/28	528,496	125	2460	Y See Table 4
3	The storm of Jan 1-2 was a continuation of a series of storms that began at the end of the 2005. Gusts from 45 to over 60 mph were common in the Sacramento Valley and Bay Area; 35 to 55 mph along the Central Coast, and 30 to 45 mph in the San Joaquin Valley. Rainfall amounts ranging from ½ to 2 inches fell on grounds that had been saturated by a series of late December storms.	1/1 – 1/5 (12/30/05 -1/5/06)*	504,072 (1,101,718)	129 (155)	(3522)**	Y See Table 4
4	A strong storm occurred on February 27-28. Bay Area wind gusts generally ranged from 45 to 70 mph; SF Airport reported a wind gust of 71 mph. Gusts to 50 mph were reported in many other parts of the service area. Moderate to heavy rain accompanied the strong winds with up to four inches of rain reported along the north coast and in the northern interior. Bands of thunderstorms rolled through the service area on Feb 28.	2/26 – 2/28	331,813	45	Not Requested	Y See Table 4
5	Strong high pressure resulted in heat wave conditions over most of the service area. On June 22, temperatures ranged from 100 to 110 throughout the Central Valley, Bay Area and coastal valley temperatures ranged from 95 to 105. On Jun 23, a weak sea breeze cooled off the Bay Area slightly, but interior valley temperatures continued to climb resulting in readings generally between 105 and 115 through June 25 (117 @ Red Bluff on Jun 25)	6/22 – 6/25	164,582	31	Not Requested	N
6	The first significant wind and rain storm of the winter occurred during the Dec 8-10 period. Wind gusts generally ranged from 30 to 40 mph on Dec 8 and 9 (45 mph @ SF Apt, 45 mph @ Hanford); and from 25-35 mph on Dec 10 (38 mph @ Oakland, 37 mph @ Redding). Rainfall totals were generally under ½ inch on Dec 8 (0,58 at Santa Rosa), between ¼ and ¾ inch on Dec 9 (0.99 inches at Sacramento); and under ¼ inch on Dec 10. Thunderstorms were reported in the Sacramento Valley on Dec 9.	12/8 – 12/10	146,770	39	Not Requested	N
7	A cold air mass brought periods of rain, wind, thundershowers and low elevation snow to the service area. On Mar 9, winds gusts ranged from 25 to 45 mph through most of the service area (46 mph @ SF Apt). Lightning mainly confined to coast areas on Mar 10, and coastal areas and San Joaquin Valley on Mar 11. Large accumulations of low elevation snow were reported in the foothills of the Central (10 inches at Angels Camp) and Southern Sierra (14 inches at 1500 ft.). In the coastal mountains between six and 12 inches was reported.	3/9 – 3/14	138,997	94	Not Requested	Y See Table 4
8	During this four day period, several storms crossed through the service territory. Strong winds, rain and thunderstorms occurred on March 3, especially affecting the San Joaquin Valley. Fresno reported a wind gust of 41 mph. Wind gusts above 40 mph were recorded in Humboldt County on March 4. The final weather front of this series occurred on Mar 5. Peak winds gusted to 55 mph along the north coast, and an additional one to three inches of rain was reported in parts of the Bay Area, North Coast and Sacramento Valley	3/02 – 3/05	113,235	66	Not Requested	Y See Table 4
9	A surge of subtropical moisture moved over the service area resulting in periods of heavy rainfall (1.14 inches at Sacramento, 1.02 inches at Stockton) and moderately gusty winds in the 20-35 mph range. Lightning activity was strong in the northern and central San Joaquin Valley.	4/04 – 4/05	102,052	31	Not Requested	Y See Table 4
10	A weather front produced 40-45 mph wind gusts in the northern Sacramento Valley, 10 mph gusts elsewhere. Rainfall totals ranged from ¼ to one inch along the north coast and northern Sacramento Valley, less than ¼ inch elsewhere.	1/28	85,089	73	Not Requested	N

Note: Values exclude single distribution line transformer and planned outages. The events listed as CPUC Major Events only include the outages for excludable counties. otherwise the events include the system values. * The values in parenthesis reflect the totals for the entire event from Dec 30, 2005 to Jan 5, 2006 as noted in Section 1. **Approximately 3,300 PG&E Operations, Maintenance & Construction (OM&C) employees responded. In addition to PG&E personnel, a total of 27 Contract Crews (approximately 142 individuals) and 20 Mutual Assistance Crews (approximately 80 individuals) from Southern California Edison (SCE) were utilized to supplement existing resources.

Table 5 - Ten Largest 2005 Outage Events

Rank	Description	Date	Number of Customers Affected *	Longest Customer Interruption (Hours)	# of People Used To Restore Service	CPUC Major Event?
1	A series of strong storms struck the service area (these storms were preceded by several wet events that affected the North Bay and North Coast). The Dec 30 event was strongest in the north. The Eureka NWS office reported 90+ mph winds in the Humboldt Bay area and widespread gusts in excess of 70 mph. Northern Sacramento Valley locations reported strong wind gusts; e.g. 53 mph at Redding. North Coast and North Bay rainfall amounts were in the 3 to 5 inch range. The Dec 31 event affected the entire service area. Wind gusts above 50 mph were recorded in all areas except the Southern San Joaquin Valley; 59 mph at Red Bluff, 58 mph at Arcata, 51 mph at Santa Rosa; 53 mph at Sonoma; 59 mph at Rio vista; 77 mph at Pt San Pablo (SF Bay); 62 mph at Ft. Funston (SF); 60 mph at SF Airport; 52 mph at Los Banos. An additional one to three inches of rain fell across northern and central California on Dec 31.	12/30 – 12/31	597,646	155	3522**	Y
2	A strong weather front delivered wind gusts over 50 mph at many locations in the southern 2/3 of the service area; 53 mph at Beale AFB (Marysville), 53 mph at Mather AFB (Sacramento), 48 mph at SF Airport, 53 mph at Bellota, 51 mph at Stockton, 55 mph at San Luis Obispo, 56 mph at Stockdale (Bakersfield). Rainfall totals were generally less than one inch.	01/07 – 01/09	278,360	149	Not Requested	N
3	A strong weather front accompanied by heavy rain and strong gusty winds targeted the central portion of the service area. Peak wind gusts included 50 mph at Valley Ford, 49 mph at Rio Vista, 55 mph at Ft. Funston, 53 mph at SF Airport, 49 mph at San Luis Obispo. Many coastal locations received between one to three inches of rain. The number of customer's affected (252,679) is a system total for December 18-20. However, PG&E excluded only the following divisions on the following days: December 18 (Diablo, East Bay, North Bay, North Coast, Peninsula, Sacramento, Stockton), December 19 (North Coast, Peninsula, Sacramento), December 20 (North Coast).	12/18 – 12/20	252,679	49	Not Requested	Y Noted in Table 4
4	A series of weather fronts affected the service area over this four day period resulting in a prolonged period of rainy and blustery weather. Some localized flooding was reported with rainfall totals in the two to four inch range. The strongest winds were on Mar 22 with peak gusts of 45 mph at SF Airport, 45 mph at Rio Vista, 44 mph at Sacramento, 43 mph at Redding and 33 mph at Fresno.	03/19 – 03/22	209,867	55	Not Requested	N
5	A weather front crossed the service area producing strong gusty winds in the Bay Area and Sacramento Valley. Peak gusts included 54 mph at Valley Ford, 51 mph at Table Mountain and Corning, 63 mph at Pt. San Pablo, 51 mph at Pleasanton, 64 mph at SF Airport, and 55 mph at Ft. Funston. Rainfall totals were generally between one and two inches in the North Bay and Sacramento Valley.	12/01 – 12/02	199,923	26	Not Requested	N
6	The series of storms that affected the service area on Dec 26-28 produced moderate rain and gusty winds (30-45 mph) in the north on Dec 26, heavy rain north (one to three inches) and gusty winds south; 44 mph at Stockton, 46 mph Bakersfield, 45 mph Santa Maria on Dec 27, and another one to two inches of rain north on Dec 28.	12/26 – 12/28	124,753	26	Not Requested	N
7	Transmission relay malfunction (Moraga-Oakland Station X, 115kV line #3).	11/20	116,513	9	Not Requested	N
8	A strong lightning storm developed a band of subtropical moisture that mainly affected the Bay Area, southern Sacramento Valley and San Joaquin Valley.	09/20	110,271	41	Not Requested	N
9	A weather front affected the central part of the service area bringing gusty winds and widespread shower activity. Strongest peak wind gusts were 44 mph at Salinas, 40 mph at Pleasanton, 38 mph at Bethel Island and 28 mph at Fresno. Thunderstorm activity was reported in the Bay Area, southern Sacramento Valley, and San Joaquin Valley, with numerous lightning strikes recorded.	02/21	105,652	37	Not Requested	N
10	A weak weather front crossed the service area followed by gusty northwesterly winds. Peak gusts were 37 mph at SF Airport, 36 mph at Eureka, 36 mph at Redding and 36 mph at Rio Vista. Rainfall totals were less than one-half inch.	10/15	85,802	37	Not Requested	N

* Note: Values exclude single distribution line transformer and planned outages

**Approximately 3,300 PG&E Operations, Maintenance & Construction (OM&C) employees responded. In addition to PG&E personnel, a total of 27 Contract Crews (approximately 142 individuals) and 20 Mutual Assistance Crews (approximately 80 individuals) from Southern California Edison (SCE) were utilized to supplement existing resources.

Table 4 - Ten Largest 2004 Outage Events

	Description	Date	Number of Customers Affected *	Longest Customer Interruption (Hours)	# of People Used To Restore Service	CPUC Major Event?
	Two storms (Oct 17 and 19) moved through the service area. Wind gusts were generally between 24-50 mph (51 mph at Redding, 40 mph at Red Bluff, 37 mph at Napa) on Oct 17, and 35-60 mph on Oct 19 (51 mph Redding, 47 mph at Red Bluff, 51 mph at Marysville, 49 mph at San Francisco Airport, 55 mph at Bellota, 57 mph at San Luis Obispo). Rainfall totals were generally under ½ inch on Oct 17, but ranged from ½ to over 3 inches on Oct 19 (3.30 in. at Redding, 1.90 in. at Uklah, 1.84 in. at Oakland, 1.89 in. at Santa Rosa)	10/15-10/20	522,213	104	N/A	N
	A series of wet and windy storms crossed the service area during the last week of 2004. Many northern and central California locations received over 5 inches of rain, with totals above 10 inches at many coastal hill locations. Strong gusty winds, generally in the 25 to 45 mph range were reported on the 27th and early hours of the 28th, especially in the central and southern areas (45 mph at Marysville, 43 mph at Sacramento, 44 mph at Stockton, 46 mph at Santa Maria), Salinas and Ft Funston reported a gusts of 62 and 63 mph, respectively, on the morning of the 27th. The storm of Dec 30th delivered another round of strong winds with gusts generally in the 35 to 55 mph range in northern and central California (53 mph at Red Bluff, 51 mph at Redding, 59 mph at SF Airport, 45 mph at Oakland, 44 mph at Stockton, 39 mph at San Jose).	12/27-12/31	435,315	142	N/A	N
	A strong weather front with gusty winds and heavy rain crossed the service area. Peak wind gusts in the northern and central portions of the service area generally ranged in the 35 to 65 mph range (58 mph at Arcata, 53 mph at Santa Rosa, 59 mph at Red Bluff, 64 mph at Cohasset, 56 mph at Marysville, 64 mph at Sacramento, 63 mph at San Pablo, 61 mph at Ft Funston, 57 mph at Bellota, 49 mph at Monterey, 49 mph at Templeton). Rainfall totals were generally in the 1-3 inch range, except under 1 inch in the San Joaquin Valley.	2/25-2/26	337,128	54	N/A	N
	A strong weather front with gusty winds and heavy rain affected the northern half of the service area. Winds gusted from 35 to 65 mph in the Bay Area, Redwood and Northern Interior zones on February 17th (62 mph at SF Airport, 57 mph at Sunol, 50 mph at Pleasanton; 52 mph at Konocti, 45 mph at Santa Rosa, 57 mph at Cohasset, 47 mph at Redding. Rainfall amounts were 3-5 inches in the Redwood zone, 1-4 inches in the Northern Interior and 1-2 inches in the Bay Area.	2/16-2/19	220,162	24	N/A	N
	A strong weather front with gusty winds and heavy rain affected the northern half of the service area late on Dec 6th and early Dec 7th. Winds gusted from 35 to 60 mph in lower elevation areas of the Redwood, Bay Area and Northern Interior zones, 15-40 mph elsewhere (60 mph at Redding, 51 mph at Valley Ford, 48 mph at Sacramento, 45 mph at Clayton, 47 mph at SF Airport, 49 mph at Ben Lomond, 46 mph at Pleasanton). Rainfall amounts ranged from 1-4 inches at lower elevations, 5-12 inches above 2000 ft elevation, in the northern half of the service area.	12/6-12/8	190,673	35	N/A	N
5	A strong weather front with gusty winds and heavy rain affected the northern half of the service area on Jan 1. Winds gusted from 35 to 60 mph at lower elevations in the Bay Area, Redwood and Northern Interior zones (59 mph at Redding, 56 mph at SF Airport, 54 mph at Sunol, 53 mph at Marysville, 47 mph at Pleasanton, 49 mph at Sacramento, 60 mph at Santa Rosa, 54 mph at Cohasset. Rainfall amounts were 1-3 inches in the Redwood zone, Northern Interior and Bay Area zones.	1/01	172,397	74	N/A	N
7	Gusty north winds developed over northern and central portions of the service area as a strong high pressure system developed. Peak wind speeds included 58 mph at Hopland, 51 mph in Santa Rosa, 47 mph at Sonoma. Peak gusts in the East Bay hills ranged from 50-60 mph	11/20-11/21	118,558	32	N/A	N
8	A moderate weather front, with peak winds of 25-40 mph and accompanied by rainfall totals between ½ and 1 ½ inches, affected the entire service area. Strongest wind gusts were in the northern Sacramento Valley (40 mph at Redding, 38 mph at Red Bluff) and the southern San Joaquin Valley (40 mph at Bakersfield, 38 mph at Hanford).	10/26	74,160	41	N/A	N
9	Transmission substation outage occurred in Central Coast Division.	12/10	61,821	4	N/A	N
10	3rd party dig-in to a transmission line in De Anza division.	10/1	58,591	13	N/A	N

* Note: Values exclude single distribution line transformer and planned outages

Table 4 - Ten Largest 2003 Outage Events

	Description	Date	Number of Customers Affected *	Longest Customer Interruption (Hours)	Number of People Used To Restore Service	CPUC Major Event?
	The first storm system of the fall season moved through the Service Area. Gusty southerly winds up to 30 mph developed in Northern and Central Service Area Zones on the 2nd. Gusty northwest winds occurred on the 4th. Widespread precipitation occurred in the Service Area with totals generally 1" in the mountains and 0.25" in the Central Valley.	11/02 –11/04	184,849	26	N/A	N
	A strong winter storm moved through the service area on December 29th. Peak winds ranged from 30 to 70 mph with the strongest gusts north of a Monterey/Madera line. Peak winds included Red Bluff 46 mph, Beale AFB (Marysville) 59 mph, Clayton 47 mph, Sacramento 55 mph, and Stockton 44 mph. One to five inches of rain fell in the northern half of the state. Heavy snowfall was reported at low elevation locations in the northern Sacramento Valley; 18 inches at North Redding, 8-14 inches in downtown Redding, 15 inches at Burney and 10-12 inches at Nevada City.	12/29	164,363	192	N/A	N
	A strong late winter storm system moved through the Service Area. Two to six inches of precipitation fell in the northern half of the Service Area; 0.50" to 1.5" of precipitation fell in the southern half of the Service Area; the southern half of the state also experienced heavy rains with one to four inches in the LA Basin. Peak wind speeds included 51 mph at Redding; 44 mph at SFO; 40 mph at Sacramento; 35 mph in Fresno; and 31 mph at Santa Rosa. Two to three feet of snowfall was recorded in the Sierra Nevada Mountains at elevations above 5,000" during this three-day period.	03/13 – 03/15	160,863	29	N/A	N
	A winter storm system moved through the Service Area during this two-day period. One to three inches of precipitation fell over the northern half of the Service Area. Snowfall totals in the northern half of the Sierra Nevada Mountains ranged from one to three feet with 16" at Alpine Meadows; 24" at Soda Springs; and 28" at Sugar Bowl. Peak wind speeds ranged from 20 to 40 mph with 39 mph at SFO; 29 mph at Sacramento and Fresno; and 24 mph at Santa Rosa.	12/09 – 12/10	147,128	144	N/A	N
	A cold winter storm system moved through the Service Area during this two-day period. Precipitation totals included 2.34" at Redding; 1.38" at Santa Rosa; 0.83" at Sacramento; 0.70" in SFO; and 0.25 at Fresno. The storm was accompanied by numerous thunderstorms and gusty southerly winds, principally on the 8th. Peak wind speeds included 37 mph at SFO; 30 mph in Redding; 26 mph at Sacramento; and 24 mph at Santa Rosa.	11/08 – 11/09	141,666	46	N/A	N
	A strong winter storm, accompanied by heavy rain and gusty southerly winds, moved through the Service Area. Peak wind speeds ranged from 30 to 65 mph with the strongest gusts in the Bay Area, Redwood Coast, and the Northern Interior. Peak wind speeds included 56 mph in Redding; 53 mph in SFO; 33 mph in Santa Rosa; 30 mph in Sacramento; and 23 mph in Fresno.	12/14	108,910	24	N/A	N
7	A strong earthquake in San Luis Obispo County (Paso Robles).	12/22	107,291	34	N/A	Y
8	The Mission Substation was de-energized due to a fire. The cause of the fire is still under investigation.	12/20	101,534	30	N/A	N
9	A cold, upper level low pressure system moved through the State, accompanied by numerous showers and thundershowers, bringing heavy snow to the mountains Six to ten inches of snow fell in Truckee and the Lake Tahoe Region with up to one and on-half feet recorded at higher elevations. Thunder, lightning and small hail was observed in the Bay Area and in the Central Valley from Red Bluff to Sacramento.	10/31	91,907	21	N/A	N
10	A surge of subtropical moisture resulted in an outbreak of summer season shower and thunderstorm activity through out the Service Area. While precipitation totals were insignificant, there were numerous reports of lightning activity from the evening of the 25th through the evening of the 26th.	08/26	80,159	42	N/A	N

- Note: Values exclude single distribution line transformer and planned outage

4 - Ten Largest 2002 Outage Events

Description	Date	Number of Customer Interruptions *	Longest Customer Interruption (Hours)	Number of People Used To Restore Service	CPUC Major Event?
During the December 13-21 storms the highest wind speeds were recorded on December 16 when peak winds ranged from 40 to over 80 mph throughout the service area, except for the southern San Joaquin Valley. Peak gusts over 90 mph were recorded at ridgeline sites along the North Coast and Bay Area. Peak winds over 40 mph were reported in the San Joaquin Valley on December 19. In the northern half of the service area between 5 and 15 inches of rainfall was reported, with over 20 inches of rain reported at some stations in the coastal hills north of the Bay Area and Northern Sierra foothills.	12/13 –12/21	1,973,806	543	3245**	Y
During the November 7-8 storms, peak wind speeds ranged from 30 to over 60 mph throughout the service area, except for the southern San Joaquin Valley. Peak gusts over 90 mph were recorded at ridgeline stations in the Bay Area. Storm rainfall totals generally ranged from one to three inches throughout the service area, with over five inches recorded at some stations in the coastal hills.	11/7 – 11/8	885,431	121	3245**	Y
A series of storm systems moved through the Service Area during this four day period. These storm systems were accompanied by strong gusty winds, especially on the 28th, late on the 30th, and early on the 31st. Peak wind speeds on the 28th included 54 mph in San Francisco, 44 mph in Oakland, 47 mph in Redding, and 43 mph in Bakersfield. Peak wind speeds on the 31st included 103 mph at Kregor Peak, 72 mph at Las Trampas Ridge, 54 mph in San Francisco, 54 mph in Santa Rosa, 49 mph in Concord, and 46 mph in Redding	12/28 – 12/31	356,505	146	Not Requested	N
A heat wave enveloped the entire Service Area beginning on July 8th. Temperatures in the interior valley remained above 100 Deg F through July 15th. The maximum temperatures on the 9th included 92 Deg F in Oakland, 90 in San Francisco, 103 in Santa Rosa, 102 in Concord, 107 in Livermore, 104 in Sacramento, 106 in Fresno. On the 10th, maximum temperatures reached 110 Deg F in Stockton and Sacramento and 115 in Redding. On the 11th, maximum temperatures included 109 in Ukiah, 112 in Redding, 106 in Fresno, and 109 in Bakersfield.	07/09 – 07/11	164,238	46	Not Requested	N
A cold front moved through the Service Area on the 14th and 15th accompanied by gusty west and northwest winds. Peak wind speeds included 52 mph in San Francisco, 52 mph at Los Banos, 43 mph in Redding, 41 mph at Stockton, 41 mph in Fresno, and 37 mph in Bakersfield.	04/14 – 04/15	97,105	25	Not Requested	N
Gusty north winds developed over northern and central portions of the Service Area as a strong high pressure system moved into the Great Basin. Peak wind speeds included 37 mph in San Francisco, 35 mph in Red Bluff, 38 mph in Redding, and 37 mph in Stockton.	02/28 – 03/01	93,922	44	Not Requested	N
An early summer heat wave affected the area with maximum temperatures in the interior valley in the mid-90s to near 100 deg F. Maximum temperatures on the 29th included 96 Deg F in Red Bluff, 95 in Redding, 94 in Stockton, and 94 in Fresno. Maximum temperatures on the 30th included 98 in Redding, 94 in Sacramento, 99 in Stockton, 101 in Fresno, and 99 in Bakersfield.	05/29-05/30	87,244	135	Not Requested	N
A Transmission system outage occurred in Diablo division.	11/19	59,023	7 Minutes	Not Requested	N
A storm system pushed through the Service Area on the 6th and 7th accompanied by one to two inches of rain and gusty southerly winds. Peak wind speeds included 37 mph in San Francisco, 43 mph in Red Bluff, and 38 mph in Stockton.	03/07	51,847	23	Not Requested	N
Gusty north winds occurred in the northern half of the Service Area with 39 mph at Red Bluff, 37 mph at San Francisco, 25 mph at Redding, and 24 mph at Stockton.	03/17	46,065	23	Not Requested	N

Note: Values exclude single distribution line transformer and planned outages. Values reflect all customers in PG&E's service territory affected by outages for those dates.
* Note: Values are estimated of the number of PG&E electric field personnel working.

- Ten Largest 2001 Outage Events

Description	Date	Number of Customers Affected *	Longest Customer Interruption (Hours)	Number of People Used To Restore Service	CPUC Major Event?
Strong early season storm with gusty winds, heavy rains and mountain snows. Many northern and central California weather stations reported wind gusts over 50 mph (e.g. Oroville 54 mph, SF Airport 53 mph, Stockton 58 mph). Most service area locations received over ¾ inch of rain with some 24 hour totals over 2 inches (e.g. 2.25 inches at Concord)	Nov 24	599,915	147	Not Requested	Yes
Series of winter storms brought periods of gusty winds, moderate to heavy rain, thunderstorms and low snow levels. Wind gusts between 30-45 mph, 1-2 ft of snow below 3000 ft Feb 10th, additional snow to 500 ft. in Bay Area Feb 12th (Mt Hamilton reported 17 inches on the ground). Snow also reported on the Sacramento Valley floor (Red Bluff) and in Eureka on Feb 12th. Rainfall totals ranged from 1-2 inches most areas Feb 10th, with 2-4 inches in the Santa Cruz Mountains. Thunderstorms reported Feb 10, 11th and 12th.	Feb 9-12	284,964	264	Not Requested	No
Winter storm with gusty winds, especially along the coast and northern half of service area and central coast. Peak winds between 30 – 60+ mph (59 mph at Redding, 55 mph at SF Airport, 43 mph at Monterey). Total Dec 1-2 rainfall between 2-5 inches at many locations, especially along the coast and Bay Area. Rains fell on near-saturated ground due to frequent preceding storms.	Dec 1 - 2	248,475	39	Not Requested	No
Winter storm moved through service area bringing periods of heavy rain and gusty winds. Records show this was the first strong storm on the 2000-2001 winter season. Wind gusts generally 30 – 50+ mph (52 mph gust at Eureka, 43 mph gust at SF Airport, 70 mph gust at Los Gatos). Rainfall amounts generally 0.5 to 1.5 inches in the northern half of the service area and along the entire coast. Heaviest rain in San Luis Obispo County (2-4 inches).	Jan 10	247,447	37	Not Requested	No
Period of intense thunderstorm activity, especially along the coast and coastal valleys. Over 4600 lightning strikes reported, mostly between Monterey and Sonoma Counties. Reports indicate only two other similar lightning events since 1980.	Sep 24-25	234,412	67	Not Requested	No
Winter storm with periods of heavy rain and gusty winds, especially in the Sacramento and San Joaquin Valleys (gust to 60 mph Red Bluff, gust to 51 mph at Oroville, gust to 51 mph at Bakersfield) and along the coast from Mendocino county south (gust to 71 mph Bodega Bay, gust to57 mph at Half Moon Bay, gust to 46 mph at San Luis Obispo). Rainfall ½ to 3+ inches (e.g 3.01 at San Luis Obispo)	Mar 4	211,452	111	Not Requested	No
Storm event on heels of Thanksgiving weekend storm. Strongest winds in the Central Valley .Wind gusts 30 to 50 mph (e.g. 48 mph at Redding, 49 mph at Oroville, 44 mph at Stockton). Some locations reported over 2 inches of rain (2.52 inches at Santa Rosa, 2.82 inches at Santa Cruz on Nov 29th).	Nov 28-29	166,297	83	Not Requested	No
Winter storm with gusty winds and periods of moderate to heavy rain. Wind gusts of 30-40 mph along coast , coast valleys and northern Sacramento Valley (SF Apt gust to 37 mph, Concord gust to 35 mph, Chico gust to 35 mph). Generally ½ to 1 inch rain except ¼ to ½ inch in San Joaquin Valley	Jan 25	143,300	71	Not Requested	No
Scattered thunderstorms developed in the Central Valley after the weather front moved through. Wind gusts 20 to 30 mph (e.g. gust of 28 mph at Sacramento, gust of 26 mph at Redding, gust of 24 mph at Marysville). Rainfall amounts generally under ½ inch.	Oct 30	122,989	36	Not Requested	No
Weather front with wind gusts 20-30 mph (e.g.28 mph at Sacramento, 24 mph at Salinas) accompanied by periods of moderate to heavy rain. Scattered thunderstorms reportedly developed behind the front. Rainfall totals of ¾ to 2+ inches reported in the bay Area (2.70 inches Kentfield, 2.09 inches at SF Airport)	Nov 12	78,491	30	Not Requested	No

ote: Values exclude single distribution line transformer and planned outages

- Ten Largest 2000 Outage Events

Description	Date	Number of Customers Affected	Longest Customer Interruption (Hours)	Number of People Used To Restore Service	CPUC Major Event?
A series of intense storms brought gusty southeast winds, low snow levels, and heavy rain into the Service Area. Wind gusts of 54 mph, 60mph and 74 mph were recorded in Chico, Morro Bay, and Lake Tahoe, respectively.	February 11 - 14	381,581	90	Not requested	No
A heat wave coupled with gusty north and northeast winds was experienced during this three-day period. Maximum temperatures on the 14th included 103 Deg F in downtown San Francisco, 100 Deg F in Oakland, 105 Deg F in Sacramento, 109 Deg F in San Jose, and 115 Deg F in Paso Robles.	June 13 - 15	354,452	97	Not requested	No
A strong cold front pushed through the Service Area on Friday, October 20th. North and Northeast winds developed on Saturday October 21 and Sunday October 22. Gusts in excess of 40 mph occurred in the Central Valley and gusts up to 70 mph occurred in the East Bay hills early Sunday morning.	October 21 - 22	290,777	42	Not requested	No
An intense cold front moved through the Redwood Region, Northern Interior, and Bay Area. Numerous showers and thundershowers developed on the 26th. A funnel cloud was sighted in Richmond, CA on the afternoon of the 26th.	October 25 - 26	112,426	18	Not requested	No
A storm system moved through northern and central sections on January 31st. Gusty north and northeast winds developed over the Bay Area, Redwood, Northern Interior, and Central Interior in the days after the storm system with the strongest northeast winds occurring overnight from February 2 into the morning of the 3rd. A gust of 53 mph was reported in Grass Valley and a gust of 41 mph was reported in Bakersfield.	February 03	106,915	17	Not requested	No
A storm system brought heavy rain and gusty southeast surface winds to Redwood and the Northern Interior. A gust of 56 mph was recorded at Redding. A gust of 47 mph was recorded at Red Bluff.	January 10 -11	100,236	17	Not requested	No
A cold front pushed through Northern and Central Sections on February 18th. High pressure building into the Great Basin resulted in gusty northeast winds over the coastal hills and the East Bay hills overnight from the 19th through the morning of the 20th. Widespread gusts of 35 to 50 mph were recorded including 49 mph at Bakersfield and 40 mph at Fresno and Visalia.	February 20	89,985	24	Not requested	No
A cold front affecting principally central and southern zones brought rain and gusty southwest winds to the Service Area. 24-hour precipitation totals included 1.60" at Blue Canyon; 0.86" at Monterey; 0.95" at Fresno. Thunderstorms, accompanied by gusty winds, hail, lightning, and heavy downpours, developed over the Central and Southern San Joaquin Valley.	October 09 - 10	89,288	19	Not requested	No
An early season cold front moved through California. Gusty southerly winds with speeds up to 40 mph preceded the frontal passage on September 1. 24-hour precipitation totals set new calendar day records for the date. Totals included 0.99" at Blue Canyon and 2.01" at Redding. Thunderstorms, accompanied by gusty winds, hail, lightning, and heavy downpours, developed over the Central San Joaquin Valley.	September 01	87,250	27	Not requested	No
A cold front moved through northern and central portions of the Service Area on the 15th. Forty-four inches of new snow was reported at Mammoth Lakes. Following frontal passage, northwest winds developed on the 16th across Redwood, Northern Interior, and Central Interior with gusts exceeding 40 mph. A wind gust of 52 mph was recorded on the 16th in Humboldt County.	January 16	66,199	16	Not requested	No

Values exclude single distribution line transformer and planned outages

- Ten Largest 1999 Outage Events

Description	Date	Number of Customers Affected	Longest Customer Interruption (Hours)	Number of People Used to Restore Service	CPUC Major Event?
A strong weather front brought gusty winds combined with periods of moderate to heavy rainfall throughout the service area. Wind gusts above 40 mph were recorded at many stations in the Bay Area, Central Coast, and Southern Interior zones (48 mph at Bakersfield). Coastal ridgeline and Sierra wind speed peaks exceeded 50 mph (53 mph at Lake Spaulding and 61 mph at Mt Reba).	February 9	286,528	37	Not requested	No
Typical summer weather conditions reported. However, a transmission substation outage event occurred affecting customers predominately located in the Central Coast Division.	August 31	276,823	8	Not requested	No
Strong gusty southerly winds accompanied an early spring storm throughout the service area. Strongest low elevation winds were recorded in the Central Coast (57 mph at San Luis Obispo). Winds were recorded at weather stations in the Bay Area, Central Interior and Southern Interior zones ranging from 40 to 45 mph from Vaca-Dixon through Bakersfield. Coastal ridge and Sierra winds exceeded 50 mph in many areas (61 mph at Davis Peak in San Luis Obispo County and 65 mph at Mt. Reba).	April 3	252,202	70	Not requested	No
An intense band of thunderstorms moved through the Central Coast, Bay Area, Redwood, and Northern Interior zones producing frequent lightning strikes, especially near the coast. One report indicated that over 4,500 lightning strikes were recorded along the coast between Santa Barbara and Pt Arena.	September 8-9	194,280	102	Not requested	No
A strong storm system moved through the service area with gusty southerly winds with wind gusts above 40 mph reported in all zones except the Southern Interior. In the Central Coast zone, a gust of 49 mph was recorded at Salinas. Peak gusts between 40 and 45 mph were recorded at S.F. Airport, Palo Alto, Livermore, Hayward, San Luis Obispo, San Jose, Red Bluff, Chico, Sacramento and Bellota.	November 7-8	181,264	53	Not requested	No
A heat wave was experienced during this three day period affecting coastal and interior areas. Many interior cities recorded maximums temperatures above 105 F including 114 at Redding, 112 at Concord, 107 at Fresno, and 108 in Paso Robles. An influx of subtropical moisture resulted in scattered thunderstorm development along the Sierra Nevada range with lightning activity reported in the foothills south of Yosemite.	July 11-13	163,408	26	Not requested	No
A heat wave affected the service area during this time period. Maximum temperatures above 100 F were observed at most locations in the Central Valley on all three days. The hottest temperatures were found in the Northern Interior zone with Marysville recorded at 109 and Red Bluff recorded at 107.	June 28-30	135,071	59	Not requested	No
Skies were mostly sunny with winds under 20 mph. However, a transmission substation outage event occurred affecting customers predominately located in San Francisco and Peninsula Divisions.	October 31	116,549	14	Not requested	No
Strongest winds and highest rainfall totals were recorded from the Bay Area north. Red Bluff recorded a peak wind gust of 38 mph, and Geysers 13 recorded a peak speed of 40 mph. After the front passed, gusty northwesterly winds up 40 mph developed in the Central Interior, Southern Interior and Central Coast.	October 27-28	112,543	46	Not requested	No
A weak upper level disturbance brought shower activity that was mainly confined to the southern Redwood, Bay Area and Central Coast. Numerous thunderstorms were reported, mostly along the coast from Santa Rosa to San Luis Obispo. A transmission line failure occurred during reported lightning activity which affected customers predominately located in the North Coast Division.	September 22	104,022	35	Not requested	No

: Values exclude single distribution line transformer and planned outages

Largest 1998 Outage Events

Description	Date	Number of Customers Affected	Longest Customer Interruption (Hours)	Number of People Used to Restore Service	CPUC Major Event?
;eries of weather systems pounded northern and central California bringing heavy rains and periods of ong winds. Coastal and coastal mountain areas south of Cape Mendocino were hardest hit. Many vice area weather stations reported between 10 and 20 inches of rain during the 12-day period. despread flooding resulted along rivers and streams from the Sacramento and Russian Rivers and uth as a result of the heavy rains on Feb 3, and additional flooding occurred in the Bay Area and Central ast areas on Feb 7 and 8. Gusty winds in excess of 50 mph were reported on Feb 1, 2 and 3. On Feb a wind gust of 81 mph was reported along at Pigeon Point and many Central Coast stations reported sts over 60 mph. Later that day a gust of 56 mph was reported at Bakersfield. Strong thunderstorms re reported on Feb 6 and 7, with a tornado spotted at Sunnyvale on Feb 7.	January 31-Feburary 11	1,055,963	222.8	5,200	Yes
n Francisco, Northern Peninsula Outage – Human error. Refer to PG&E's "December 8 1998 Outage vestigation Report" dated January 25, 1999 for complete details.	December 8	* 496,304	7.8	Not requested	Yes
strong storm system brought periods of moderate rain and gusty winds to northern and central portions the service area. Wind gusts above 40 mph were recorded at many Sacramento Valley and Bay Area eather stations.	November 6-7	269,880	5.1	Not requested	No
trong high pressure and offshore winds combined to produce the most intense heat wave in the East Bay rea in several years. Nearly all weather stations in central and eastern Contra Costa and Alameda ounties reported afternoon temperatures at or above 105F on August 3 and 4, with Livermore reaching 10F on August 4.	August 2-5	268,679	26.8	Not requested	No
series of storms moved through the service area, the strongest events were on Dec 2-3 and Dec 5. ver 2 inches of rain was reported at Eureka on Dec 2; wind speeds gusted to 40 mph at Redding. On ec 3, wind gusts of 25-45 mph were recorded in the Bay Area and Sacramento Valley. The December 5 torm was stronger in the Bay Area and Central Coast areas, with San Francisco Airport winds gusting to 1 mph. Strong thundershower activity developed during the afternoon, with tornado reported in the Bay rea and Santa Cruz County areas. Winds in the Sacramento and northern San Joaquin Valley gusted rom 25 to 43 mph.	December 2-6	225,475	30.1	Not requested	No
Temperatures warmed into the 80's near the coast and 90's inland on Jun 15 as northerly flow developed. Strong gusty northerly winds developed on Jun 16, with reported gusts of 47 mph at Travis AFB and gusts o 46 mph at Marysville, Sacramento and Vaca-Dixon. Most other Central Valley stations recorded wind gusts between 30 and 45 mph.	June 14-16	218,998	46.6	Not requested	No
A cold storm brought winds of 35-45 mph to the North Coast and Bay Areas on March 28. Most locations had less than 0.50 inches of rain. Afternoon thunderstorm activity was reported at many locations in the service area.	March 28-29	194,480	11.3	Not requested	No
A warm frontal storm brought periods of moderate to heavy rains and strong winds to the northern half of the service area. Redding received over 1.25 inches of rain each day with winds gusting to 51 mph on Nov 30. Wind gusts to 53 mph were recorded along the North Coast at Mendocino, and gusts to 40 mph were recorded in the Sacramento Valley.	November 29-30	179,717	30.8	Not requested	No
The first storm of the winter season moved across the service area. Winds gusted to 35 mph in Fresno. Between 0.25 and 1.25 inches of rain was recorded in the Bay Area.	October 24	123,261	20.5	Not requested	No
A strong winter storm resulted in wind gusts to 51 mph at Redding and brought over one inch of rain to the north Sacramento Valley. Wind gusts above 40 mph were also recorded along the North Coast.	November 23	102,960	47.5	Not requested	No

Values exclude single distribution line transformer and planned outages

* Updated March 1, 2000

Of the ten largest events listed in Table 6 the following events met the CPUC definition of a major event:

- January 1-5, 2006
- February 26-28, 2006
- March 2-5, 2006
- March 9-14, 2006
- April 4-5, 2006
- July 21-27, 2006
- December 26-28, 2006

The following tables in this section indicate the number of customers without service at periodic intervals for this event. It should be noted that the number of customer outages segmented by hourly restoration periods requires a level of detail not normally maintained by PG&E in its central computerized records. The information shown here is what PG&E has been able to reconstruct from several databases and may have a margin of error of up to 5%.

Table 7/ Figure 1 – January 1-5, 2006 Outage Event Duration Summary

Outage Duration	Date of Outage	Description of Outage	Number of Customers Affected
0 TO 1 HRS	01/01/2006	Noted in Table 5	68,532
1 TO 5 HRS	"	"	274,930
5 TO 10 HRS	"	"	91,135
10 TO 15 HRS	"	"	18,499
15 TO 20 HRS	"	"	15,785
20 TO 24 HRS	"	"	5,743
>=1 AND <=2	"	"	20,135
>=2 AND <=3	"	"	5,321
>=3 AND <=4	"	"	754
>=4 AND <=5	"	"	283
>=5 AND <=6	"	"	25
>=6 AND <=7	"	"	0
> 7	"	"	0

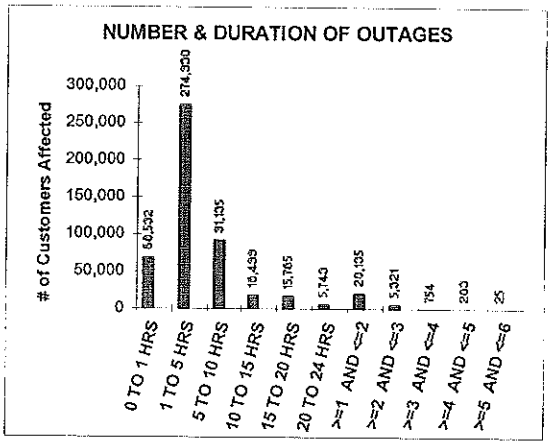


Table 8/ Figure 2 – February 26-28, 2006 Outage Event Duration Summary

Outage Duration	Date of Outage	Description of Outage	Number of Customers Affected
0 TO 1 HRS	02/26/2006	Noted in Table 5	96,141
1 TO 5 HRS	"	"	179,045
5 TO 10 HRS	"	"	28,879
10 TO 15 HRS	"	"	6,948
15 TO 20 HRS	"	"	17,155
20 TO 24 HRS	"	"	1,741
>=1 AND <=2	"	"	1,527
>=2 AND <=3	"	"	0
>=3 AND <=4	"	"	0
>=4 AND <=5	"	"	0
>=5 AND <=6	"	"	0
>=6 AND <=7	"	"	0
> 7	"	"	0

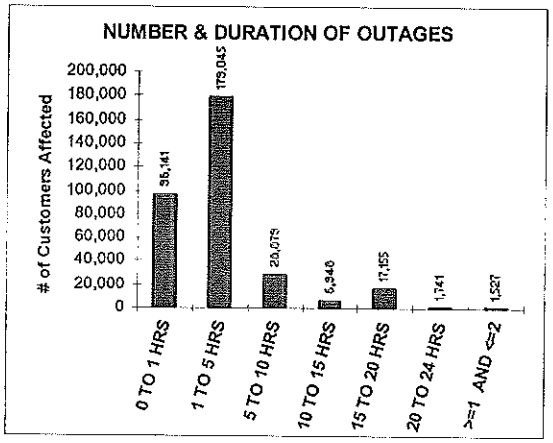


Table 9/ Figure 3 – March 2-5, 2006 Outage Event Duration Summary

Outage Duration	Date of Outage	Description of Outage	Number of Customers Affected
0 TO 1 HRS	03/02/2006	Noted in Table 5	20,352
1 TO 5 HRS	"	"	72,562
5 TO 10 HRS	"	"	14,682
10 TO 15 HRS	"	"	989
15 TO 20 HRS	"	"	1,306
20 TO 24 HRS	"	"	559
>=1 AND <=2	"	"	2,650
>=2 AND <=3	"	"	54
>=3 AND <=4	"	"	0
>=4 AND <=5	"	"	0
>=5 AND <=6	"	"	0
>=6 AND <=7	"	"	0
> 7	"	"	0

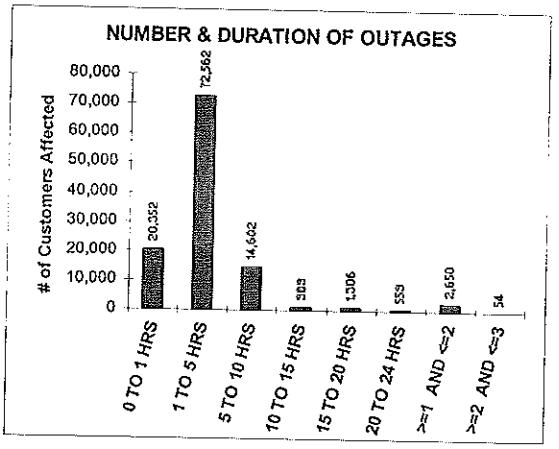


Table 10/ Figure 4 – March 9-14, 2006 Outage Event Duration Summary

Outage Duration	Date of Outage	Description of Outage	Number of Customers Affected
0 TO 1 HRS	03/09/2006	Noted in Table 5	42,289
1 TO 5 HRS	"	"	42,718
5 TO 10 HRS	"	"	29,429
10 TO 15 HRS	"	"	6,572
15 TO 20 HRS	"	"	11,601
20 TO 24 HRS	"	"	4,096
>=1 AND <=2	"	"	1,196
>=2 AND <=3	"	"	589
>=3 AND <=4	"	"	0
>=4 AND <=5	"	"	0
>=5 AND <=6	"	"	0
>=6 AND <=7	"	"	0
> 7	"	"	0

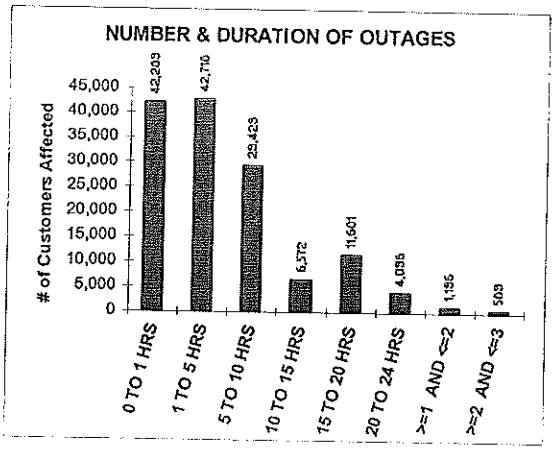


Table 11/ Figure 5 – April 4-5, 2006 Outage Event Duration Summary

Outage Duration	Date of Outage	Description of Outage	Number of Customers Affected
0 TO 1 HRS	04/04/2006	Noted in Table 5	19,565
1 TO 5 HRS	"	"	60,412
5 TO 10 HRS	"	"	18,949
10 TO 15 HRS	"	"	1,507
15 TO 20 HRS	"	"	297
20 TO 24 HRS	"	"	2
>=1 AND <=2	"	"	1,219
>=2 AND <=3	"	"	0
>=3 AND <=4	"	"	0
>=4 AND <=5	"	"	0
>=5 AND <=6	"	"	0
>=6 AND <=7	"	"	0
> 7	"	"	0

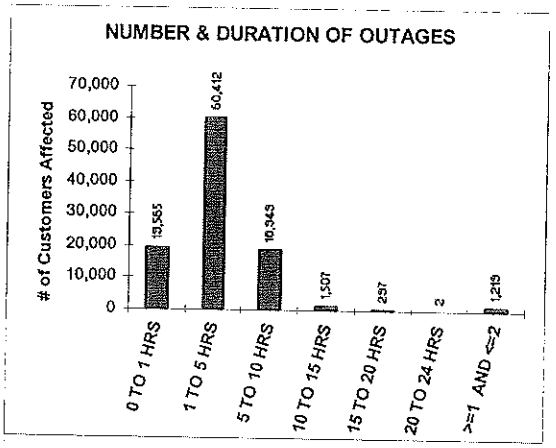


Table 12/ Figure 6 – July 21-27, 2006 Outage Event Duration Summary

Outage Duration	Date of Outage	Description of Outage	Number of Customers Affected
0 TO 1 HRS	07/20/2006	Noted in Table 5	142,417
1 TO 5 HRS	"	"	371,120
5 TO 10 HRS	"	"	79,309
10 TO 15 HRS	"	"	27,622
15 TO 20 HRS	"	"	6,718
20 TO 24 HRS	"	"	3,443
>=1 AND <=2	"	"	17,398
>=2 AND <=3	"	"	1,542
>=3 AND <=4	"	"	69
>=4 AND <=5	"	"	323
>=5 AND <=6	"	"	0
>=6 AND <=7	"	"	0
> 7	"	"	0

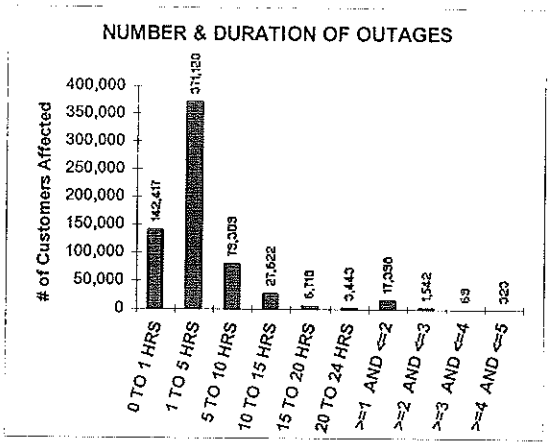
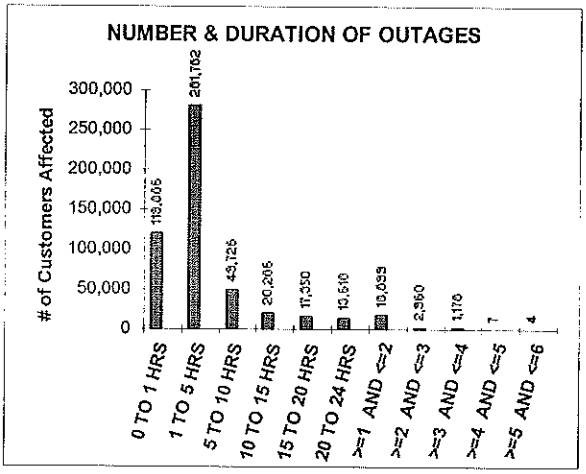


Table 13/ Figure 7 – December 26-28, 2006 Outage Event Duration Summary

Outage Duration	Date of Outage	Description of Outage	Number of Customers Affected
0 TO 1 HRS	12/26/2006	Noted in Table 5	119,886
1 TO 5 HRS	"	"	281,782
5 TO 10 HRS	"	"	49,726
10 TO 15 HRS	"	"	20,286
15 TO 20 HRS	"	"	17,350
20 TO 24 HRS	"	"	13,618
>=1 AND <=2	"	"	18,899
>=2 AND <=3	"	"	2,960
>=3 AND <=4	"	"	1,178
>=4 AND <=5	"	"	7
>=5 AND <=6	"	"	4
>=6 AND <=7	"	"	0
> 7	"	"	0



Of the ten largest events listed in Table 5, two events, December 18-20 and December 30-31, met the CPUC definition of a major event. Tables 6 & 7 indicate the number of customers without service at the requested periodic intervals for this event.

Table 6 – December 18-20, 2005 Outage Event Duration Summary

Outage Duration	Date of Outage	Description of Outage	Number of Customers Affected
0 TO 1 HRS	12/18/2005	Noted in Table 5	23,963
1 TO 5 HRS	"	"	77,958
5 TO 10 HRS	"	"	16,446
10 TO 15 HRS	"	"	1,897
15 TO 20 HRS	"	"	1,640
20 TO 24 HRS	"	"	50
>=1 AND <=2 Days	"	"	1,577
>=2 AND <=3 Days	"	"	7

Note: The number of customer outages segmented by hourly restoration periods requires a level of detail not normally maintained by PG&E in its central computerized records. The information shown here is what PG&E has been able to reconstruct from several databases and may have a margin of error of up to 5%.

Figure 1 – December 18-20, 2005 Outage Event Duration Summary

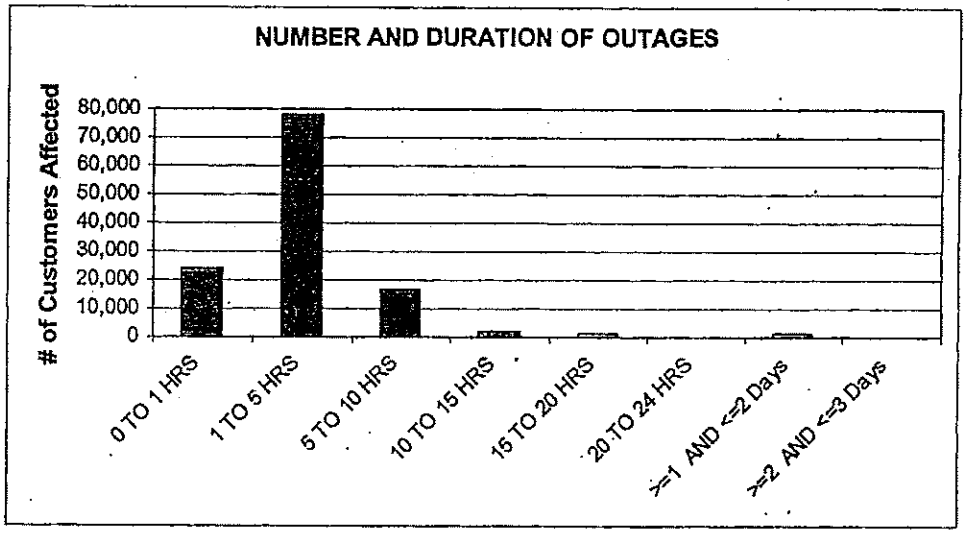
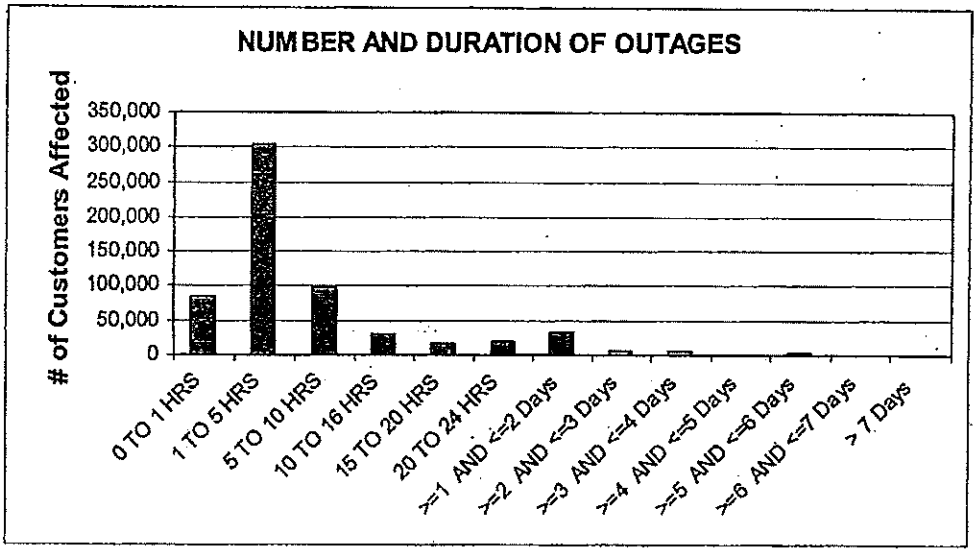


Table 7 – December 30-31, 2005 Outage Event Duration Summary

Outage Duration	Date of Outage	Description of Outage	Customers Affected
0 TO 1 HRS	12/30-12/31/2005	Noted in Table 5	84,112
1 TO 5 HRS	"	"	302,496
5 TO 10 HRS	"	"	97,544
10 TO 16 HRS	"	"	30,534
15 TO 20 HRS	"	"	15,919
20 TO 24 HRS	"	"	18,220
>=1 AND <=2 Days	"	"	32,842
>=2 AND <=3 Days	"	"	6,500
>=3 AND <=4 Days	"	"	6,561
>=4 AND <=5 Days	"	"	1,093
>=5 AND <=6 Days	"	"	1,434
>=6 AND <=7 Days	"	"	391
> 7 Days	"	"	0

Note: The number of customer outages segmented by hourly restoration periods requires a level of detail not normally maintained by PG&E in its central computerized records. The information shown here is what PG&E has been able to reconstruct from several databases and may have a margin of error of up to 5%.

Figure 2 - December 30-31, 2005 Outage Event Duration



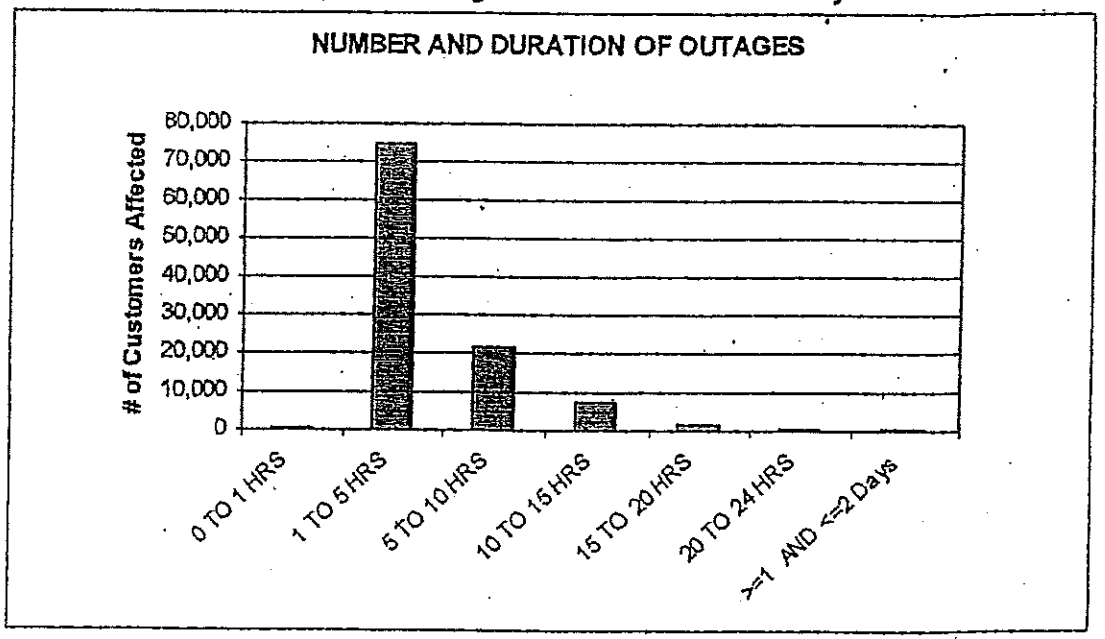
Of the ten largest events listed in 2003, only one event, the December 22 earthquake met the CPUC definition of a major event. Table 5 indicates the number of customers without service at the requested periodic intervals for this request.

Table 5 – December 22, 2003 Outage Event Duration Summary

Outage Duration	Date of Outage	Description of Outage	Number of Customers Affected
0 TO 1 HRS	12/22/2003	Noted in table 4	738
1 TO 5 HRS	"	"	74,623
5 TO 10 HRS	"	"	21,727
10 TO 15 HRS	"	"	7,275
15 TO 20 HRS	"	"	1,642
20 TO 24 HRS	"	"	725
>=1 AND <=2 Days	"	"	704

Note: The number of customer outages segmented by hourly restoration periods requires a level of detail not normally maintained by PG&E in its central computerized records. The information shown here is what PG&E has been able to reconstruct from several databases and may have a margin of error of up to 5%.

Figure 1 – December 22, 2003 Outage Event Duration Summary



Of the ten largest events listed in Table 4, two events, November 7-8 and December 13-21, met the CPUC definition of a major event. Tables 5 & 6 indicate the number of customers without service at the requested periodic intervals for this event.

Table 5 – November 7-8, 2002 Outage Event Duration Summary

Outage Duration	Date of Outage	Description of Outage	Number of Customer Interruptions
0 TO 1 HRS	11/7-8/2002	Noted in Table 4	148,826
1 TO 5 HRS	"	"	434,220
5 TO 10 HRS	"	"	147,786
10 TO 15 HRS	"	"	61,686
15 TO 20 HRS	"	"	29,368
20 TO 24 HRS	"	"	13,523
>=1 AND <=2 Days	"	"	40,519
>=2 AND <=3 Days	"	"	2,413
>=3 AND <=4 Days	"	"	673
>=4 AND <=5 Days	"	"	248
>=5 AND <=6 Days	"	"	50

Note: The number of customer outages segmented by restoration period requires a level of detail not normally maintained by PG&E in its central computerized records. The information shown above is what PG&E has been able to reconstruct from several databases and may have a margin of error of around 5%.

Figure 1 – November 7-8, 2002 Outage Event Duration Summary

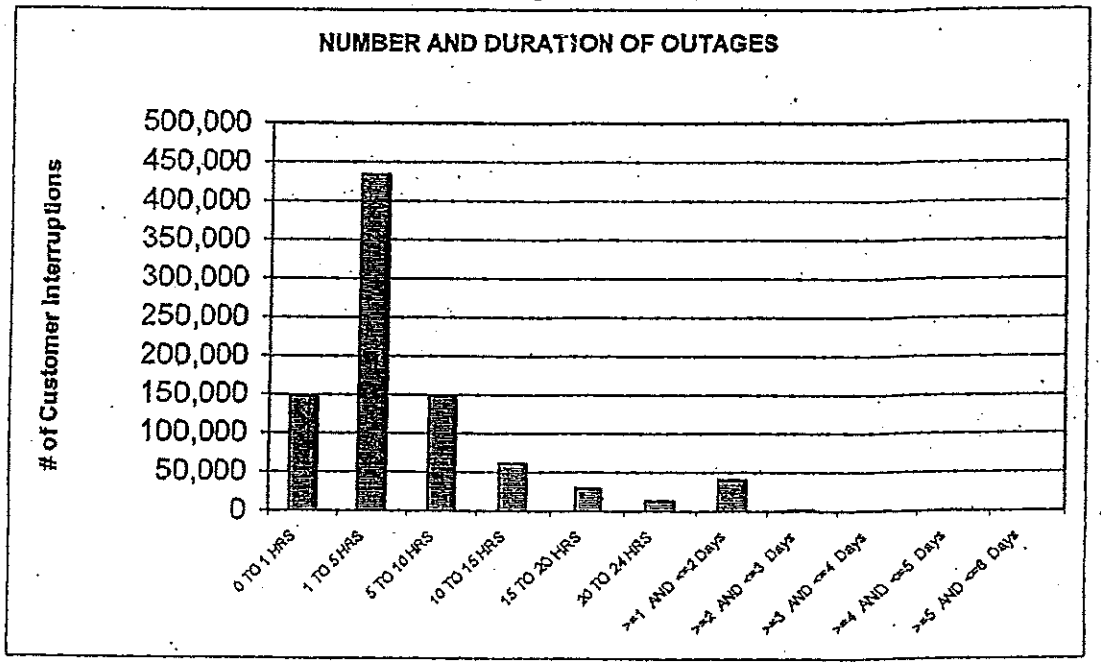
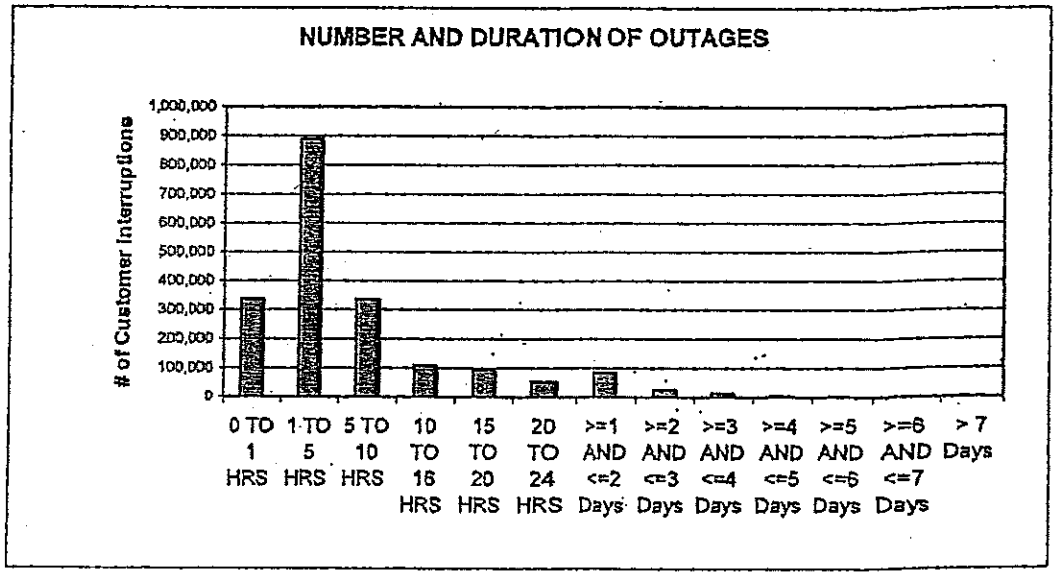


Table 6 – December 13-21, 2002 Outage Event Duration Summary

Outage Duration	Date of Outage	Description of Outage	Number of Customer Interruptions
0 TO 1 HRS	12/13-21/2002	Noted in Table 4	337,928
1 TO 5 HRS	"	"	890,960
5 TO 10 HRS	"	"	335,885
10 TO 16 HRS	"	"	108,435
15 TO 20 HRS	"	"	93,117
20 TO 24 HRS	"	"	53,358
>=1 AND <=2 Days	"	"	84,153
>=2 AND <=3 Days	"	"	25,199
>=3 AND <=4 Days	"	"	13,902
>=4 AND <=5 Days	"	"	5,516
>=5 AND <=6 Days	"	"	2,240
>=6 AND <=7 Days	"	"	913
> 7 Days	"	"	998

Note: The number of customer outages segmented by restoration period requires a level of detail not normally maintained by PG&E in its central computerized records. The information shown above is what PG&E has been able to reconstruct from several databases and may have a margin of error of around 5%.

Figure 2 – December 13-21, 2002 Outage Event Duration Summary



Of the ten largest events listed in Table 4, only one event, November 24, met the CPUC definition of a major event. Table 5 indicates the number of customers without service at the requested periodic intervals for this event.

Table 5 – November 24, 2001 Outage Event Duration Summary

Outage Duration	Date of Outage	Description of Outage	Number of Customers Affected
0 to 1 HRS	11/24/2001	Noted in Table 4	85,878
1 to 5 HRS	"	"	355,344
5 to 10 HRS	"	"	89,828
10 to 15 HRS	"	"	30,067
15 to 20 HRS	"	"	12,321
20 to 24 HRS	"	"	4,824
>1 and <=2 Days	"	"	17,359
>2 and <=3 Days	"	"	2,991
>3 and <=4 Days	"	"	191
>4 and <=5 Days	"	"	13
>5 and <=6 Days	"	"	1
>6 and <=7 Days	"	"	1

Note: The number of customer outages segmented by restoration period requires a level of detail not normally maintained by PG&E in its central computerized records. The information shown above is what PG&E has been able to reconstruct from several databases and may have a margin of error of around 5%.

Figure 1 – November 24, 2001 Outage Event Duration Summary

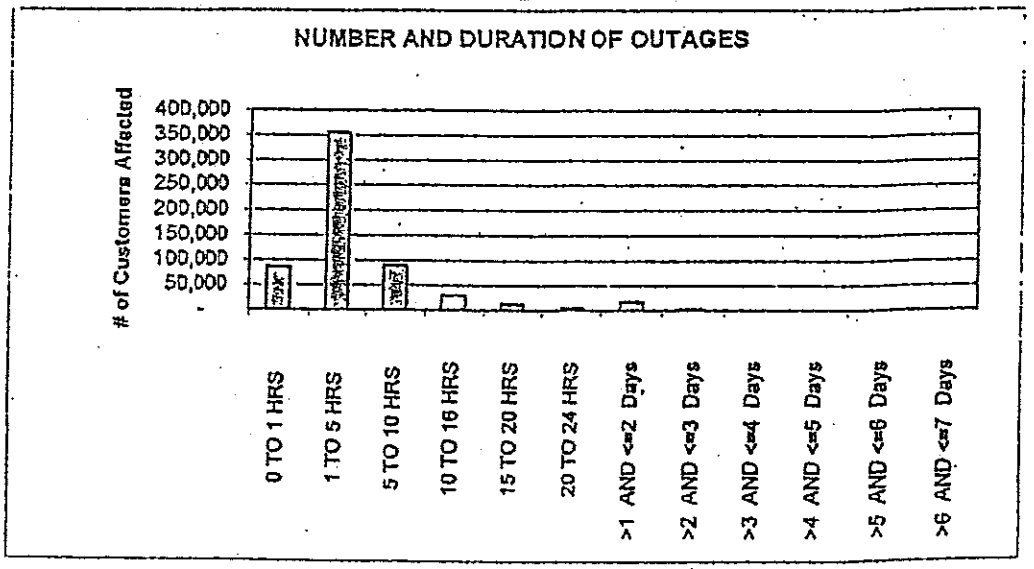


Table 3 - January 31 through February 11, 1998 Outage Event Duration Summary–

Outage Duration	Date of Outage	Description of Outage	Number of Customers Affected.
0 TO 1 HRS	01/31/98 - 02/11/98	Noted in Table 2	456,453
1 TO 5 HRS	"	"	882,947
5 TO 10 HRS	"	"	152,189
10 TO 15 HRS	"	"	68,188
15 TO 20 HRS	"	"	41,539
20 TO 24 HRS	"	"	37,559
>1 AND <=2 Days	"	"	46,730
>2 AND <=3 Days	"	"	12,498
>3 AND <=4 Days	"	"	3,956
>4 AND <=5 Days	"	"	701
>5 AND <=6 Days	"	"	360
>6 AND <=7 Days	"	"	980
>7 Days	"	"	262

Note: The number of customer outages segmented by restoration period requires a level of detail not normally maintained by PG&E in its central computerized records. The information shown above is what PG&E has been able to reconstruct from several databases and may have a margin of error of around 5%.

Figure 1 - January 31 through February 11, 1998 Outage Event Duration Summary

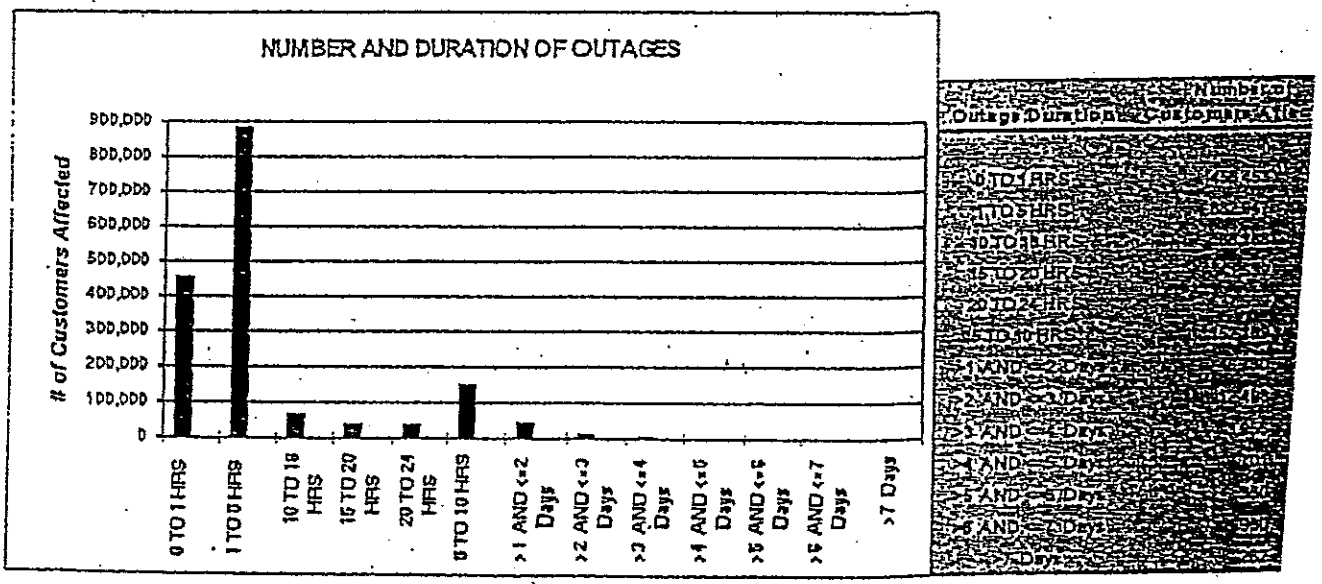
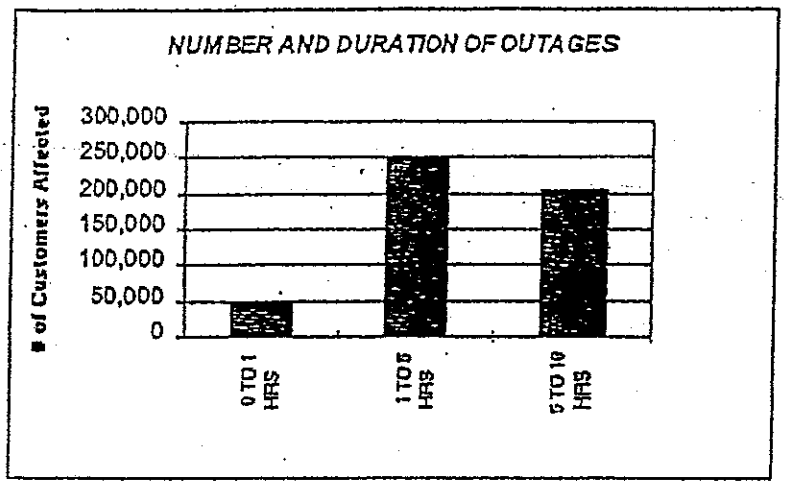


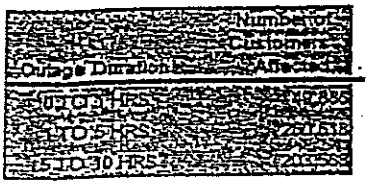
Table 4 - December 8, 1998 Outage Event Duration Summary - *Revised March 1,2000*

Outage Duration	Date of Outage	Description of Outage	Number of Customers Affected
0 TO 1 HRS	12/8/98	Noted in Table 2	49,886
1 TO 5 HRS	"	"	250,518
5 TO 10 HRS	"	"	203,568

Note: The number of customer outages segmented by restoration period requires a level of detail not normally maintained by PG&E in its central computerized records. The information shown above is what PG&E has been able to reconstruct from several databases and may have a margin of error of around 5%.

Figure 2 - December 8, 1998 Outage Event Duration Summary - *Revised March 1,2000*





Customers Experiencing > 12 Sustained Outages During 2006

Table 14 lists all circuits where one or more customers on a circuit experienced more than 12 sustained outages in 2006. Please note, this list does not mean that all the customers on the circuit experienced more than 12 outages.

PG&E is addressing the necessary portions of these circuits as part of the overall service reliability improvement plans

Table 14 – Customers Experiencing > 12 Sustained Outages During 2006

Division	Feeder Name	Customers Experiencing > 12 Outages
CENTRAL COAST	BEN LOMOND 0401	220
CENTRAL COAST	BEN LOMOND 1101	620
CENTRAL COAST	BIG BASIN 1102	1
CENTRAL COAST	BIG TREES 0402	73
CENTRAL COAST	CAMP EVERS 2105	246
CENTRAL COAST	CASTROVILLE 2103	11
CENTRAL COAST	GREEN VALLEY 2103	4
CENTRAL COAST	HOLLISTER 2104	30
CENTRAL COAST	LOMPICO 0401	175
CENTRAL COAST	ROB ROY 2104	160
DE ANZA	CAMP EVERS 2106	818
DE ANZA	LOS GATOS 1107	58
DIABLO	KIRKER SUB 2104	395
FRESNO	WOODWARD 2108	1
LOS PADRES	CAYUCOS 1102	3
LOS PADRES	OCEANO 1101	20
LOS PADRES	OILFIELDS 1103	57
LOS PADRES	SANTA MARIA 1108	77
LOS PADRES	SISQUOC 1102	4
NORTH BAY	OLEMA 1101	13
NORTH COAST	ARCATA 1121	7
NORTH COAST	COTATI 1103	14
NORTH COAST	GARBERVILLE 1101	19
NORTH COAST	GARBERVILLE 1102	19
NORTH COAST	HOOPA 1101	74
NORTH COAST	JANES CREEK 1103	35
NORTH COAST	MONTE RIO 1111	86
NORTH COAST	RIO DELL 1102	22
NORTH COAST	SONOMA 1107	11
NORTH VALLEY	ESQUON 1103	20
PENINSULA	MENLO 1103	2
SACRAMENTO	DEEPWATER 1107	26
SACRAMENTO	GRAND ISLAND 2225	86
SACRAMENTO	PEABODY 2107	4
SACRAMENTO	PUTAH CREEK 1102	99
SIERRA	APPLE HILL 2102	195
SIERRA	EL DORADO P H 2101	970
SIERRA	PLACERVILLE 2106	309
STOCKTON	MANTECA 1704	64
STOCKTON	MANTECA 1705	140

SECTION 3

Customers Experiencing > 12 Sustained Outages During 2005

Table 8 lists all circuits where one or more customers on a circuit experienced more than 12 sustained outages in 2005. Please note, this list does not mean all the customers on the circuit experienced more than 12 outages.

PG&E is addressing the necessary portions of these circuits as part of the overall service reliability improvement plans

Table 8 – Customers Experiencing > 12 Sustained Outages During 2005

Division	Feeder Name	Customers Experiencing > 12 Outages
CENTRAL COAST	BIG BASIN 1102	13
CENTRAL COAST	BIG TREES 0402	32
CENTRAL COAST	CAMP EVERS 2104	93
CENTRAL COAST	GREEN VALLEY 2101	1
CENTRAL COAST	ROB ROY 2104	71
CENTRAL COAST	ROB ROY 2105	13
CENTRAL COAST	VIEJO 2202	30
DIABLO	BRENTWOOD SUB 2105	1
DIABLO	CONTRA COSTA 2108	21
FRESNO	DUNLAP 1103	270
FRESNO	KINGSBURG 1116	967
KERN	TEJON 1102	249
LOS PADRES	OILFIELDS 1103	28
LOS PADRES	SISQUOC 1103	151
LOS PADRES	ZACA 1101	1
NORTH BAY	CALISTOGA 1101	49
NORTH BAY	PUEBLO 2103	32
NORTH BAY	SILVERADO 2104	146
NORTH COAST	EEL RIVER 1101	122
NORTH COAST	FRUITLAND 1142	13
NORTH COAST	GARBERVILLE 1101	12
NORTH COAST	GARBERVILLE 1102	10
NORTH COAST	HARTLEY 1101	3
NORTH COAST	MONTE RIO 1111	8
NORTH COAST	OLEMA 1101	10
NORTH COAST	RIO DELL 1102	2
NORTH COAST	WILLITS 1103	6
NORTH COAST	WILLOW CREEK 1101	3
SACRAMENTO	GRAND ISLAND 2224	244
SACRAMENTO	MADISON 1105	14
SACRAMENTO	PUTAH CREEK 1102	44
SIERRA	EL DORADO P H 2101	734
STOCKTON	COLONY 1102	25
STOCKTON	FROGTOWN 1702	19
STOCKTON	MIDDLE RIVER 1101	4
STOCKTON	OLETA 1101	40
YOSEMITE	OAKHURST 1103	4
YOSEMITE	PEORIA FLAT 1701	117
YOSEMITE	SPRING GAP 1701	37
YOSEMITE	STOREY 1109	25
YOSEMITE	VALLEY HOME 1701	30

SECTION 3

Customers Experiencing > 12 Sustained Outages During 2004

Table 5 lists all circuits where one or more customers on a circuit experienced more than 12 sustained outages in 2004. Please note, this list does not mean all the customers on the circuit experienced more than 12 outages.

PG&E is addressing the necessary portions of these circuits as part of the overall service reliability improvement plans.

Table 5 – Customers Experiencing > 12 Sustained Outages During 2004

Division	Feeder Name	Customers Experiencing > 12 Outages
CENTRAL COAST	BEN LOMOND 0401	11
CENTRAL COAST	BEN LOMOND 1101	284
CENTRAL COAST	CAMP EVERS 2104	343
CENTRAL COAST	CAMP EVERS 2105	105
CENTRAL COAST	FOREST 0422	30
CENTRAL COAST	GREEN VALLEY 2101	39
CENTRAL COAST	LOS OSITOS 2101	108
CENTRAL COAST	POINT MORETTI 1101	21
CENTRAL COAST	ROB ROY 2104	66
CENTRAL COAST	SOLEDAD 2101	12
DE ANZA	CAMP EVERS 2106	408
DIABLO	BRENTWOOD SUB 2113	16
LOS PADRES	SISQUOC 1103	151
NORTH BAY	MONTICELLO 1101	23
NORTH BAY	NAPA 1102	10
NORTH COAST	GARBERVILLE 1101	29
NORTH COAST	GARBERVILLE 1102	13
NORTH COAST	MOLINO 1101	77
NORTH COAST	OLEMA 1101	18
NORTH COAST	TRINIDAD 1102	13
NORTH VALLEY	LOGAN CREEK 2101	54
NORTH VALLEY	ORO FINO 1102	279
SIERRA	ALLEGHANY 1101	152
STOCKTON	AVENA 1702	17
STOCKTON	WEST POINT 1101	26
YOSEMITE	RIVERBANK 1713	144

Customers Experiencing > 12 Sustained Outages During 2003

Table 6 lists all circuits where one or more customers on a circuit experienced more than 12 sustained outages in 2003. Please note, this list does not mean all the customers on the circuit experienced more than 12 outages.

PG&E is addressing the necessary portions of these circuits as part of the overall service reliability improvement plans.

Table 6 - Customers Experiencing > 12 Sustained Outages During 2003

Division	Feeder Name	Customers Experiencing > 12 Outages
CENTRAL COAST	BEN LOMOND 0401	6
CENTRAL COAST	BIG BASIN 1101	35
CENTRAL COAST	CAMP EVERS 2104	22
CENTRAL COAST	GREEN VALLEY 2101	38
CENTRAL COAST	LOS OSITOS 2101	6
DE ANZA	CAMP EVERS 2105	90
DE ANZA	LOS GATOS 1106	191
DIABLO	BRENTWOOD SUB 2113	6
DIABLO	CLAYTON 2212	16
NORTH COAST	BRIDGEVILLE 1102	1
NORTH COAST	EEL RIVER 1101	121
NORTH COAST	GARBERVILLE 1101	5
NORTH COAST	GARBERVILLE 1102	7
NORTH COAST	HARTLEY 1101	27
NORTH COAST	MENDOCINO 1101	145
NORTH COAST	MONTE RIO 1111	78
SACRAMENTO	MADISON 1105	15
STOCKTON	HERDLYN 1103	32
YOSEMITE	GUSTINE 1102	2
YOSEMITE	MENDOTA 1102	239

Customers Experiencing > 12 Sustained Outages During 2002

Table 7 lists all circuits where one or more customers on a circuit experienced more than 12 sustained outages in 2002. Please note, this list does not mean all the customers on the circuit experienced more than 12 outages.

PG&E is addressing the necessary portions of these circuits as part of the overall service reliability improvement plans.

Table 7 - Customers Experiencing > 12 Sustained Outages During 2002

Division	Feeder Name	Customers Experiencing > 12 Outages
CENTRAL COAST	CAMP EVERS 2104	90
CENTRAL COAST	LOMPICO 0401	4
DIABLO	CONTRA COSTA 2109	8
FRESNO	DEVILS DEN 1101	1
NORTH BAY	CALISTOGA 1102	52
NORTH BAY	SILVERADO 2105	31
NORTH COAST	EEL RIVER 1101	89
NORTH COAST	GARBERVILLE 1101	38
NORTH COAST	GARBERVILLE 1102	76
NORTH COAST	MONTE RIO 1111	2
NORTH VALLEY	LOGAN CREEK 2101	53
SAN JOSE	LLAGAS 2104	28
YOSEMITE	COTTLE 1702	3

Customers Experiencing > 12 Sustained Outages During 2001

Table 6 lists all circuits where one or more customers on a circuit that experienced more than 12 sustained outages in 2000. Please note, this list does not mean all the customers on the circuit experienced more than 12 outages.

PG&E is addressing the necessary portions of these circuits as part of the overall service reliability improvement plans.

Table 6 - Customers Experiencing > 12 Sustained Outages During 2001

Division	Feeder Name	# Customers Experiencing > 12 Outages
CENTRAL COAST	BIG BASIN 1101	170
CENTRAL COAST	BIG BASIN 1102	150
CENTRAL COAST	CASTROVILLE 2103	8
CENTRAL COAST	FOREST 0422	21
CENTRAL COAST	POINT MORETTI 1101	49
DE ANZA	CAMP EVERS 2106	130
DE ANZA	LOS GATOS 1106	45
DE ANZA	LOS GATOS 1107	129
FRESNO	DUNLAP 1102	341
FRESNO	TULARE LAKE 2108	11
KERN	SISQUOC 1102	3
LOS PADRES	CABRILLO 1103	47
NORTH BAY	CALISTOGA 1101	6
NORTH COAST	ANNAPOLIS 1101	5
NORTH COAST	ARCATA 1122	16
NORTH COAST	CLEAR LAKE 1101	37
NORTH COAST	GARBERVILLE 1101	342
NORTH COAST	GARBERVILLE 1102	302
NORTH COAST	GEYSERVILLE 1101	14
NORTH COAST	HOOPA 1101	29
NORTH COAST	MONTE RIO 1111	562
NORTH COAST	MONTE RIO 1113	140
NORTH COAST	RIO DELL 1102	161
NORTH COAST	WILLITS 1103	35
NORTH VALLEY	LOGAN CREEK 2101	64
NORTH VALLEY	LOGAN CREEK 2102	27
NORTH VALLEY	WYANDOTTE 1103	13
PENINSULA	HALF MOON BAY 1103	45
SACRAMENTO	MADISON 1105	30
SAN JOSE	LLAGAS 2104	29
SIERRA	BRUNSWICK 1105	686
SIERRA	CATLETT 1101	13
SIERRA	PLACERVILLE 2106	80
STOCKTON	PINE GROVE 1102	125
STOCKTON	VIERRA 1702	91
YOSEMITE	LE GRAND 1110	9
YOSEMITE	OAKHURST 1103	422
		Total – 4,387

Customers Experiencing > 12 Sustained Outages During 2000

Table 5 lists all circuits where one or more customers on a circuit that experienced more than 12 sustained outages in 2000. Please note, this list does not mean all the customers on the circuit experienced more than 12 outages.

PG&E is addressing the necessary portions of these circuits as part of the overall service reliability improvement plans.

Table 5 - Customers Experiencing > 12 Sustained Outages During 2000

Division	Feeder Name	# Customers Experiencing > 12 Outages
CENTRAL COAST	WATSONVILLE 2101	1
NORTH VALLEY	CHALLENGE 1101	139
NORTH VALLEY	ESQUON 1101	1
NORTH VALLEY	ESQUON 1102	3
PENINSULA	ALPINE-MENLO 1103	20
SACRAMENTO	GRAND ISLAND 2222	72
SIERRA	ECHO SUMMIT 1101	7
STOCKTON	FROGTOWN 1702	3
YOSEMITE	CANAL 1103	5
YOSEMITE	EL NIDO 1103	22
		Total - 273

Historical (1991-1999) Outage Information From Prior Reports

For easy reference, Attachment 1 contains copies of service reliability report information previously submitted for 1991 through 1999.

Customers Experiencing > 12 Sustained Outages During 1999

Table 5 lists all circuits where one or more customers on a circuit that experienced more than 12 sustained outages in 1999. Please note, this list does not mean all the customers on the circuit experienced more than 12 outages.

PG&E is addressing the necessary portions of these circuits as part of the overall service reliability improvement plans.

Table 5 - Customers Experiencing > 12 Sustained Outages During 1999

Division	Feeder Name	# Customers Experiencing > 12 Outages
CENTRAL COAST	OTTER 1102	132
CENTRAL COAST	CAMP EVERS 2105	61
DIABLO	CONTRA COSTA 2109	2
KERN	OLD RIVER 1102	7
KERN	SMYRNA 1103	8
LOS PADRES	OILFIELDS 1103	56
NORTH BAY	OLEMA 1101	1
NORTH BAY	PUEBLO 2102	60
NORTH COAST	FULTON 1104	6
NORTH COAST	GEYSERVILLE 1101	58
NORTH COAST	HOPLAND 1101	206
NORTH COAST	MONTE RIO 1111	132
NORTH VALLEY	GERBER 1101	1
NORTH VALLEY	LOGAN CREEK 2101	54
NORTH VALLEY	PEACHTON 1102	12
NORTH VALLEY	WYANDOTTE 1103	3
SACRAMENTO	MADISON 1105	10
SACRAMENTO	PUTAH CREEK 1102	35
SIERRA	ECHO SUMMIT 1101	39
STOCKTON	CARBONA 1101	39
YOSEMITE	BEAR VALLEY 2101	42
YOSEMITE	COTTLE 1701	18
		Total - 982

Historical (1990-1998) Outage Information From Prior Reports

For easy reference, Attachment 1 contains copies of service reliability report information previously submitted for 1990 through 1998.

Table 5 - Customers Experiencing > 12 Sustained Outages During 1998

Division	Feeder Name	# Customers Experiencing > 12 Outages
CENTRAL COAST	POINT MORETTI 1101	39
CENTRAL COAST	SAN ARDO 1102	332
DE ANZA	CAMP EVERS 2106	443
DE ANZA	LOS GATOS 1106	402
DIABLO	CONTRA COSTA 2109	40
FRESNO	ALPAUGH 1106	13
FRESNO	DUNLAP 1103	298
FRESNO	STROUD 1101	37
LOS PADRES	SANTA MARIA 1105	3
NORTH BAY	NAPA 1102	173
NORTH BAY	SILVERADO 2105	3
NORTH COAST	FORT BRAGG STA A 1	3
NORTH COAST	MONTE RIO 1111	117
NORTH COAST	MONTE RIO 1113	1,361
NORTH COAST	POINT ARENA 1101	10
NORTH VALLEY	CAPAY 1102	15
NORTH VALLEY	CHALLENGE 1101	116
NORTH VALLEY	ELK CREEK 1101	55
NORTH VALLEY	ESQUON 1101	14
NORTH VALLEY	JACINTO 1101	19
NORTH VALLEY	LOGAN CREEK 2101	7
PENINSULA	HALF MOON BAY 1103	473
SACRAMENTO	CORDELIA 1104	17
SACRAMENTO	RICE 1102	8
SIERRA	EL DORADO P H 2101	85
STOCKTON	OLETA 1101	67
STOCKTON	SALT SPRINGS 2101	34
YOSEMITE	COTTLE 1701	94

Advice 3337-E

Attachment B

Report Number: 6-IR-SG-SWR-2008-0094

Pacific Gas and Electric Company™

EO Asset Investment & Planning - Quality Assurance Review Report

2007 SAIDI/SAIFI Outage Reporting Review

Revision 0 / FINAL
Issue Date: 6/30/2008

Prepared By:	**Charles Browne**	**6/30/2008**
	Charles Browne, QA Team Lead	**Date**
Approved By:	**Ted Wittig**	**6/30/2008**
	Ted Wittig, QA Manager	**Date**

Table of Contents

1 Scope & Objectives

This review addresses unplanned sustained outages reported in 2007. The primary objective is to review outage reporting. This review will be filed with the CPUC as part of the 2007 Reliability Performance Incentive Mechanism filing.

To satisfy the primary objective, the 2007 audit qualitatively assesses SAIDI[1] and SAIFI[2] outage reporting relative to prior years, 2005 and 2006. This qualitative assessment focuses on the effectiveness of process improvements and the attendant impact on reporting accuracy trends. Due to the relatively small sample size selected for this assessment, no statistical confidence level is applicable.

The scope of this review is**:**

- Assess implementation of process improvements including monthly outage review process (checks and verifications) by the Distribution Reliability Management
- Assess conformance with process requirements (Utility Std S2200, Electric T&D "Electric Outage Reporting" and UO Guideline G11401, ECCO "Customer Outage Reporting")
- Factor-in the February 2007 storm outage analysis performed by cross-departmental teams in 4Q2007
- Review a representative sample of 55 outages to qualitatively assess reporting accuracy trends. The timeframe for the sample outages is the 4th quarter of 2007.

[1] System Average Interruption Duration Index = (Total minutes of sustained customer interruptions)/ (Total number of customers).
[2] System Average Interruption Frequency Index = (Total number of sustained customer interruptions)/ (Total number of customers).

2 Results

Review results are summarized in four sections:

- Implementation of Process Improvements
- Conformance with Process Requirements
- February 2007 Storm Outage Review
- Review of Sampled Outages.

2.1 Implementation of Process Improvements

In 2005, 54 corrective actions were identified to improve the outage reporting process. A follow-up audit in 2006 confirmed that implementation of the corrective actions had been effective in improving the accuracy of outage reporting. This 2007 follow-up audit confirms some of the gains and improvements have been effective and sustained. However, others have either not been sustained or not realized (i.e., initiatives). Below is a brief summary of the effectiveness of the corrective actions:

1. ILIS vs. OUTAGE monthly reviews by Performance Analysis. These data checks have been effective and sustained.
    - Identified 2,206 various discrepancies out of 40,030 outages (5.5%) in 2007
    - Leading discrepant types were un-posted ILIS outages (42%) and time discrepancies (41%).
    - All discrepancies identified for the 2007 outages were resolved prior to reporting results to the CPUC.
2. Various software enhancements to the outage reporting tools, such as matching drop down menus between ILIS and OUTAGE etc., have been successful.
3. Extensive outage reporting training was performed in 2005 and 2006 – however, many of the gains have not been sustained.
    - The training was well attended by Mapping Outage Reporters, but inconsistently attended by ECCO Distribution Operators.
    - There is no formalized program to sustain the training process.
4. The project to automate the outage reporting process to minimize manual actions and handoffs was postponed beyond 2007 since resources were dedicated to other initiatives.

2.2 Conformance with Process Requirements

1. Utility Standard S2200, Electric T&D “Electric Outage Reporting”
    - Mapping Outage Verification by Mapping Supervisors - 3 primary level, unplanned outages per week per division. This was rigorously implemented.
        - 3,039 outages were reviewed by Mapping Supervisors. 2,865 (94%) were noted as reported correctly; 174 (6%) were corrected.

  - 76% of the 174 incorrectly reported were due to Incorrect Switching and "Other"
  - Supervisor comments regarding the reviews and corrections are noted in OUTAGE.

- ECCO Outage Verification - 3 primary level, unplanned outages per week per control center (the same requirement is in UO Guideline G11401).
  - Verification was not consistently implemented. The verification activity was suspended in late 2007 pending re-evaluation of the ECCO process.
  - No specified documentation was required; and, consequently the value of the verification could not be confirmed.

- Distribution planning engineers are to review for accuracy all outages having more than 100,000 customer outage minutes.
  - 20 of the 55 outages in the sample had >100,000 customer minutes. 6 of those 20 outages (30%) had accuracy issues, including the 2 outages identified in Figure 1 as outliers.

2.3 February 2007 Storm Outage Review

The review team reviewed 908 outages that affected 5 divisions between February 22 and March 1, 2007. This detailed review identified (and corrected) an over-reporting of 6% on Customer Minutes and 2% on Customers impacted.

2.4 Review of Sampled Outages

Fifty-five (55) out of 5,298 outages (4Q2007) were reviewed to qualitatively assess reporting accuracy trends. The sample size for the outage review is not statistically large enough to perform quantitative accuracy calculations, and consequently can not be used to accurately determine the associated confidence level. The results show the trends noted below.

- 18 (33%) had 1 or more SAIDI/SAIFI* accuracy issues.
- There were 10 over-reports and 8 under-reports.
- Over and under-reporting results are shown in Figure 1 below.

*Note: The audit actually measured Customer Minutes of Interruption (CMI) and Customers Experienced Sustained Outage (CESO), but results are relative to an equivalent SAIDI for minutes and SAIFI for customers impacted.

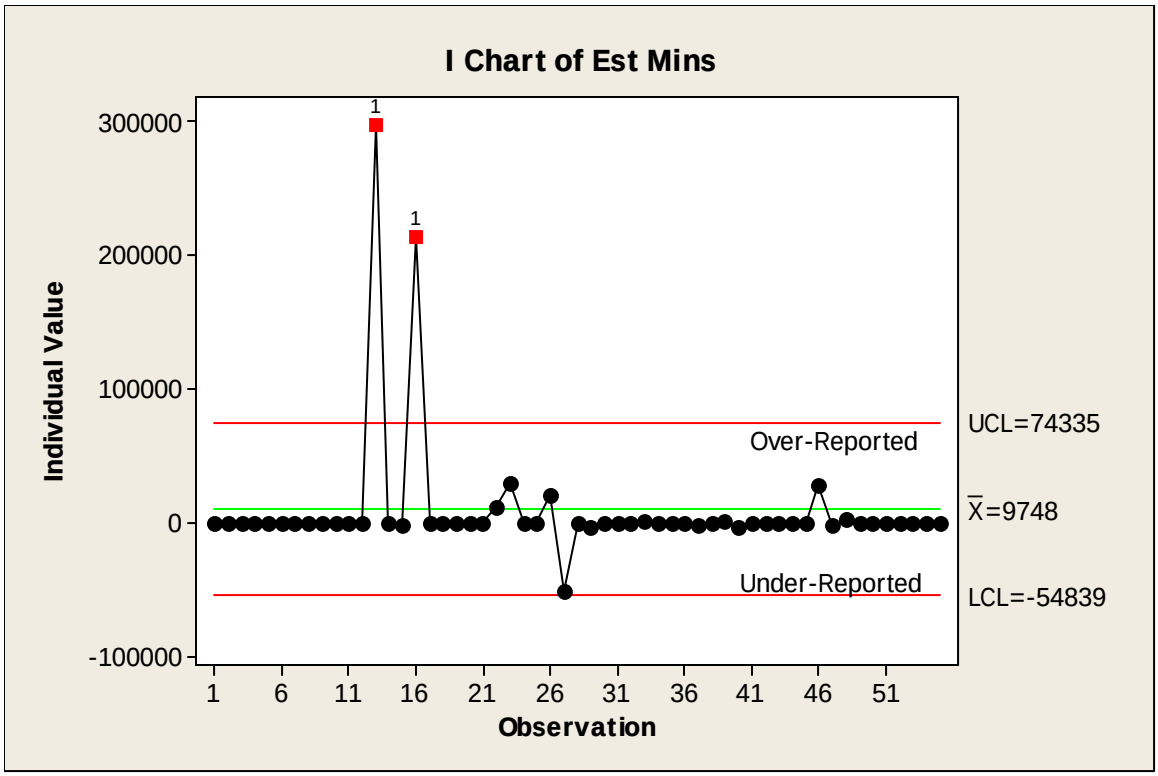


Figure 1: Control Chart for Reporting Errors of the 55 Samples

Over-reporting occurs when PG&E has reported SAIDI/SAIFI values to the CPUC which are higher than the corrected values.

Under-reporting occurs when PG&E has reported SAIDI/SAIFI values to the CPUC which are lower than the corrected values.

Control limits (red lines) are set at a distance of 3 standard deviations above and below the center line. Tests for special causes identified two failed points (outlier outages), at Observations (Outages) 13 and 16, which are more than 3 standard deviations from the center line. These two over-reported outages accounted for over 95% of the over-reported minutes. Removing these two outliers results in a very small over-report of less than 1%.

Results for the 55 outages sampled are:

- Customer Minutes (SAIDI) results showed a net +7.3% over-report
- Customers Impacted (SAIFI) results showed a net +5.3% over- report.

- **SAIDI over-report = +7.3%**
- **SAIFI over-report = +5.3%**

3 Conclusions

Overall, PG&E's review of the 2007 outage reporting process has shown that some momentum was lost in 2007 due to lack of sustainability. Two reviews of 2007 outages (February storm and 4th Quarter sample) suggest that the attendant impact of this lack of sustainability is a potential trend towards over-reporting, which means that PG&E's reported outages may have actually been shorter in duration or affected less customers than indicated. Still, the outage reporting process in 2007 shows considerable improvements relative to 2005. Evidence of substantial improvements includes:

- Training of mappers (well attended) and ECCO personnel (inconsistently attended) has provided a better understanding of roles, responsibilities, and expectations relative to outage reporting.
- Software changes and enhancements have improved the tools.
- Supplemental control points (various checks and data verifications) have been added to help improve outage reporting accuracy.

PG&E Gas and Electric
Advice Filing List
General Order 96-B, Section IV

Aglet
Agnews Developmental Center
Alcantar & Kahl
Ancillary Services Coalition
Anderson & Poole
Arizona Public Service Company
BART
BP Energy Company
Barkovich & Yap, Inc.
Bartle Wells Associates
Blue Ridge Gas
Braun & Associates
C & H Sugar Co.
CA Bldg Industry Association
CAISO
CLECA Law Office
CSC Energy Services
California Cotton Ginners & Growers Assn
California Energy Commission
California League of Food Processors
California Public Utilities Commission
California Water Company
Calpine
Cameron McKenna
Cardinal Cogen
Casner, Steve
Cerox
Chamberlain, Eric
Chevron Company
Chris, King
City of Glendale
City of Palo Alto
City of San Jose
Clean Energy Fuels
Coast Economic Consulting
Commerce Energy
Commercial Energy
Constellation
Constellation New Energy
Consumer Federation of California
Crossborder Energy

Davis Wright Tremaine LLP
Day Carter Murphy
Defense Energy Support Center
Department of Water Resources
Department of the Army
Dept of General Services
Division of Business Advisory Services
Douglas & Liddell
Douglass & Liddell
Downey & Brand
Duke Energy
Duncan, Virgil E.
Dutcher, John
Ellison Schneider & Harris LLP
Energy Management Services, LLC
FPL Energy Project Management, Inc.
Foster Farms
Foster, Wheeler, Martinez
Franciscan Mobilehome
G. A. Krause & Assoc.
GLJ Publications
Goodin, MacBride, Squeri, Schlotz & Ritchie
Green Power Institute
Hanna & Morton
Heeg, Peggy A.
Hitachi
Hogan Manufacturing, Inc.
Imperial Irrigation District
Innercite
International Power Technology
Intestate Gas Services, Inc.
J. R. Wood, Inc.
JTM, Inc.
Los Angeles Dept of Water & Power
Luce, Forward, Hamilton & Scripps LLP
MBMC, Inc.
MRW & Associates
Manatt Phelps Phillips
Matthew V. Brady & Associates
McKenzie & Associates
Meek, Daniel W.
Merced Irrigation District
Mirant
Modesto Irrigation District
Morgan Stanley

Morrison & Foerster
New United Motor Mfg., Inc.
Norris & Wong Associates
North Coast SolarResources
Northern California Power Association
Occidental Energy Marketing, Inc.
OnGrid Solar
PITCO
PPL EnergyPlus, LLC
Pinnacle CNG Company
Praxair
R. W. Beck & Associates
RCS, Inc.
RMC Lonestar
Recon Research
SCD Energy Solutions
SCE
SESCO
SMUD
SPURR
Santa Fe Jets
Seattle City Light

Sempra Utilities
Sequoia Union HS Dist
Sierra Pacific Power Company
Silicon Valley Power
Smurfit Stone Container Corp
Southern California Edison Company
St. Paul Assoc.
Sunshine Design
Sutherland, Asbill & Brennan
TFS Energy
Tabors Caramanis & Associates
Tecogen, Inc.
TransCanada
Turlock Irrigation District
U S Borax, Inc.
United Cogen
Utility Cost Management
Utility Resource Network
Utility Specialists
Vandenberg Air Force
Verizon
Wellhead Electric Company
Western Manufactured Housing Communities Association (WMA)

White & Case
eMeter Corporation