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February 27, 2015

**BY HAND DELIVERY AND  
ELECTRONIC MAIL  
(TJS@CPUC.CA.GOV)**

Tim Sullivan, Interim Executive Director  
California Public Utilities Commission  
505 Van Ness Avenue  
San Francisco, CA 94102

**Re: 2014 Annual Electric Distribution Reliability Report, D.96-09-045 and D.04-10-034**

Dear Mr. Sullivan:

Pursuant to Decision (D.) 96-09-045, D.04-10-034, and Pacific Gas and Electric's (PG&E) Advice Letter 3812-E, enclosed is a copy of PG&E's 2014 Annual Electric Distribution Reliability Report.

Following the approval of PG&E Advice Letter 3812-E<sup>1</sup>, PG&E began the transition to the Institute of Electrical and Electronic Engineers (IEEE) Standard 1366-2012 methodology to calculate system reliability indices. This transition from the reporting indices requirements covered under Decision (D.) 96-09-045 to the IEEE methodology has now been fully incorporated into this 2014 annual reliability report. We are also sending you an electronic version of the report via e-mail.

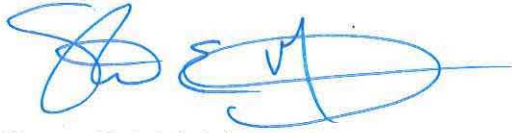
Please let me know if you have any questions or comments on this report.

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<sup>1</sup> In an August 27, 2010 letter, Executive Director Paul Clanon recommended that PG&E submit an advice letter requesting a change to IEEE standard 1366-2003 for calculating reliability indices in order to provide: 1) consistency in comparing reliability data across the country; and 2) more objectivity in the determination of what major events are excludable for reliability reporting purposes. On July 25, 2011, Julie Fitch, Energy Division Director, sent a letter to PG&E making Advice Letter 3812-E effective July 25, 2011.

Tim Sullivan, Interim Executive Director  
February 27, 2015  
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Sincerely,

A handwritten signature in blue ink, appearing to read "S. E. Malnight". The signature is stylized with a large initial "S" and a horizontal line extending from the end.

Steven E. Malnight

cc: Edward Randolph, Director, Energy Division  
David K. Lee, Energy Division  
Joe Como, Acting Director ORA  
Linda Serizawa, Deputy Director, ORA  
Mark Pocta, Program Manager, ORA

Enclosure

PACIFIC GAS AND ELECTRIC COMPANY

2014 ANNUAL ELECTRIC RELIABILITY REPORT  
(D.96-09-045, D.04-10-034 AND ADVICE LETTER 3812-E)

February 27, 2015

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## GENERAL

This is the 2014 Reliability Report for Pacific Gas and Electric Company (“PG&E”) as required by Decision 96-09-045. As stated in PG&E’s Advice Letter 3812-E (effective July 25, 2011), PG&E has moved away from the D.96-09-045 reporting indices and closer to the Institute of Electrical and Electronic Engineers (IEEE) Standard 1366-2003 methodology<sup>1</sup>. Therefore, this report includes system reliability data based on this IEEE Standard. The report consists of the following:

Section	Description
1.	System Indices For The Last 10 Years (2005-2014)
2.	Significant Outage Events Of 2014
3.	Customers Experiencing >12 Sustained Outages In 2014
4.	Division Reliability Indices (Per D. 04-10-034, Appendix A, Agreement 1)
5.	PG&E Service Territory Map
6.	Summary list of Excludable Major Events per IEEE 1366
7.	Historical Top Ten Outage Events (2004-2013)
8.	System Indices For The Last 10 Years (2005-2014) Based on IEEE 1366 and Including Planned Outages

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 (2005-2014)

Table 1 lists the required SAIDI, SAIFI, and MAIFI as directed in 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 (2005-2014)**  
(Includes Transmission and Distribution related outages)

YEAR	Major Events Included				Major Events Excluded			
	SAIDI	SAIFI	MAIFI	CAIDI	SAIDI	SAIFI	MAIFI	CAIDI
2005	252.0	1.558	1.895	161.7	159.4	1.276	1.663	125.0
2006	286.7	1.741	1.768	164.7	171.2	1.359	1.573	125.9
2007	162.4	1.259	1.565	129.0	144.9	1.208	1.516	119.9
2008	424.0	1.577	1.829	268.9	156.9	1.209	1.592	129.7
2009	211.8	1.320	1.540	160.5	134.3	1.122	1.391	119.6
2010	249.5	1.395	1.487	178.8	130.2	1.107	1.252	117.6
2011	278.8	1.272	1.478	219.2	109.7	0.969	1.169	113.2
2012	141.5	1.128	1.920	125.4	111.2	1.034	1.799	107.5
2013	117.8	1.068	1.636	110.3	96.5	0.966	1.527	99.8
2014	133.8	1.046	1.561	127.9	92.8	0.880	1.391	105.4

<sup>1</sup> The reliability indices are for unplanned outages only and include the following changes from D.96-09-045:

- A sustained outage is an outage lasting longer than 5 minutes and a momentary outage is an outage lasting 5 minutes or less.
- Outages involving single line transformers area included in the report.

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. Please also note, the MAIFI information is not included in these tables since the existing non-SCADA automatic recording devices (EON<sup>2</sup> or Smart Meters) do not distinguish between the two systems.

**Table 2 - Distribution System Indices (2005-2014)**  
(Excludes transmission and generation related outages)

YEAR	Major Events Included			Major Events Excluded		
	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI
2005	203.3	1.296	156.8	133.2	1.066	124.9
2006	247.1	1.487	166.2	147.1	1.150	127.8
2007	131.1	1.049	125.0	121.5	1.021	119.0
2008	374.9	1.365	274.6	132.8	1.043	127.3
2009	191.2	1.154	165.7	119.4	0.977	122.2
2010	210.8	1.165	181.0	108.2	0.921	117.4
2011	239.1	1.045	228.9	92.8	0.799	116.1
2012	120.1	0.963	124.8	96.3	0.885	108.8
2013	100.1	0.872	114.8	84.8	0.806	105.1
2014	119.5	0.925	129.2	85.1	0.780	109.1

**Table 3 - Transmission System Indices (2005-2014)**  
(Excludes distribution and generation related outages)

YEAR	Major Events Included			Major Events Excluded		
	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI
2005	48.7	0.262	185.9	26.2	0.209	125.3
2006	39.5	0.254	155.9	24.0	0.208	115.4
2007	31.3	0.210	149.4	23.3	0.187	124.9
2008	48.8	0.211	231.0	23.8	0.166	143.6
2009	20.6	0.166	124.0	14.9	0.145	102.6
2010	38.7	0.230	168.2	22.0	0.186	118.4
2011	39.6	0.225	175.7	16.9	0.168	100.6
2012	21.3	0.166	128.6	14.9	0.149	99.5
2013	13.1	0.169	77.8	11.7	0.160	73.0
2014	14.1	0.119	118.8	7.6	0.099	76.9

<sup>2</sup> On November 18, 2011 the EON recording system was removed from service. Momentary outage data is now being collected from SCADA devices and through the use of Smart Meters. Data collection from the Smart Meters is more effective than the previous EON system since Smart Meters don't rely on customer volunteers having EON devices securely connected inside their buildings. PG&E anticipates that the number of future momentary outages recorded will increase slightly as a result of this more effective approach.

## **SECTION 2**

### **Significant Outage Events Of 2014**

Table 4 lists the ten largest outage events experienced during 2014. 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 2014 Outage Events**

Rank	Description	Date	Number of Customers Affected *	Longest Customer Interruption (Hours)	# of People Used To Restore Service (Major Events) **	IEEE Major Event?
1	The strongest storm event in more than 3 years slammed the territory with strong winds and heavy rain showers starting on 12/11. Rain and unsettled weather began Wednesday along the north coast and then a very strong cold front developed and intensified Wednesday evening and overnight into Thursday and very slowly progressed through the territory bringing very heavy rain and strong southerly winds. The gusty southerly winds reached up to 50 mph across the Santa Cruz mountains, near 70 mph across elevated Bay Area terrain, and near 120 mph across the Sierra Crest. Over 3 inches of rain fell across many Bay Area locations and over 2 inches for northern Central Valley by Thursday afternoon.	12/11/2014 - 12/12/2014	467394	77	3,137	Yes
2	A strong but dry storm system originating from Western Canada dropped south through the Service Area and produced very strong north to northeast winds from Tuesday morning through early Wednesday. Gusts in excess of 60 mph were reported across the Bay Area elevated terrain and foothills across the Sierra Nevada. A strong mountain wave moved into San Jose division from the east, resulting in reported gusts above 50 mph in downtown San Jose.	12/30/2014 – 12/31/2014	296402	67	1942	Yes (Dec 30 <sup>th</sup> )
3	A strong storm moved in from the southwest, bringing heavy rain and gusty southeast winds to many areas, especially the Central Coast and San Joaquin Valley. A secondary line of heavy showers with imbedded thundershowers developed over the San Joaquin Valley during the early afternoon hours, which caused significant outage activity. Wind gusts up to 47 mph were also observed across the lower elevations.	2/28/2014 – 3/1/2014	167137	55		N
4	Two strong Pacific weather systems produced an impressive round of precipitation across the territory Tuesday and Wednesday. Accompanying the rain showers were breezy to gusty southerly winds that developed through the San Joaquin Valley and adjacent elevated terrain. Rainfall totals were 7 inches across the Santa Cruz Mountains and the Central Sierra and generally 2 - 4 inches across the lower elevations in the Bay Area.	12/02/2014 – 12/04/2014	138447	34	1335	Yes (Dec 3 <sup>rd</sup> )
5	An "Atmospheric River" weather event delivered significant rain and high-elevation mountain snow to the territory. The abundant rain and gusty south winds to 40 mph at times produced a prolonged stretch of light to moderate elevated outage activity. Rain totals from the event were highest across the central Sierra and the north coast where 7 – 15 inches of rain fell during the event.	2/7/2014 – 2/8/2014	102832	35		N
6	At 3:20 AM on Sun 8/24/2014 a magnitude 6.0 earthquake was observed in the North Bay Area near American Canyon, Ca. An earthquake summary poster from USGS can be found here: <a href="http://earthquake.usgs.gov/earthquakes/eqarchives/poster/2014/20140824.pdf">http://earthquake.usgs.gov/earthquakes/eqarchives/poster/2014/20140824.pdf</a>	8/24/2014	99705	30	1455	Yes
7	A strong ridge of high pressure and lack of the marine layer and sea-breeze combined to produce hot temperatures for Bay Area interior valleys and across the interior. Maximum temperatures reached over 100 in Santa Rosa and Livermore on Sunday and up to 105 across the interior Central Valley.	6/8/2014 – 6/9/2014	83962	39		N
8	A wet weather system delivered heavy rain across Northern California and the Sierra, along with moderate rain throughout the Bay Area. After the front moved through, thunderstorms developed and produced 331 lightning strikes within the PG&E territory.	9/25/2014	61597	23		N
9	A weather system delivered the first widespread rain of the season south of a Salinas to Sonora line and also produced a northwest gust front down the San Joaquin Valley where gusts up to 40 mph were observed in Fresno and Bakersfield.	10/31/2014	55145	22		N
10	The weather system with a very moist air mass slid through the Bay Area early Thursday morning and produced light showers and drizzly conditions that resulted in isolated significant outage activity in the east Bay Area.	9/18/2014	39860	17		N

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

\*\* Note: This data is requested only for Major Event days.



## SECTION 3

### Customers Experiencing > 12 Sustained Outages During 2014

Table 5 lists all circuits where one or more customers on a circuit experienced more than 12 sustained outages in 2014. 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 2014**

<b>Division</b>	<b>Feeder Name</b>	<b>Customers Experiencing &gt; 12 Outages</b>
CENTRAL COAST	BEN LOMOND 1101	137
DE ANZA	CAMP EVERS 2106	128
FRESNO	DUNLAP 1102	26
HUMBOLDT	GARBERVILLE 1102	32
SIERRA	ALLEGHANY 1101	4
SIERRA	ECHO SUMMIT 1101	76
SIERRA	EL DORADO P H 2101	440
SONOMA	LAKEVILLE 1102	24

## **SECTION 4**

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

Pacific Gas and Electric  
Division Reliability Indices  
2009-2014  
(Excluding Major Events)

Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2009	CENTRAL COAST	223.3	1.965	2.980	113.7
2010	CENTRAL COAST	171.0	1.509	2.930	113.3
2011	CENTRAL COAST	155.7	1.502	1.588	103.7
2012	CENTRAL COAST	137.4	1.242	2.186	110.6
2013	CENTRAL COAST	121.0	1.290	1.960	93.8
5-Yr Ave	09-13 Avg	161.7	1.502	2.329	107.0
2014	CENTRAL COAST	127.2	1.090	1.834	116.7
	% Difference	-21.3%	-27.4%	-21.2%	9.0%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2009	DE ANZA	109.3	0.850	1.587	128.6
2010	DE ANZA	116.3	0.941	1.167	123.6
2011	DE ANZA	62.1	0.639	1.174	97.2
2012	DE ANZA	74.6	0.668	1.109	111.7
2013	DE ANZA	77.1	0.808	1.151	95.4
5-Yr Ave	09-13 Avg	87.9	0.781	1.238	111.3
2014	DE ANZA	90.0	0.893	1.210	100.8
	% Difference	2.4%	14.3%	-2.2%	-9.4%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2009	DIABLO	145.1	1.304	1.157	111.2
2010	DIABLO	104.3	1.237	1.218	84.3
2011	DIABLO	66.8	0.809	1.235	82.6
2012	DIABLO	98.9	1.182	1.367	83.7
2013	DIABLO	80.8	0.995	1.243	81.2
5-Yr Ave	09-13 Avg	99.2	1.105	1.244	88.6
2014	DIABLO	70.0	0.872	1.240	80.3
	% Difference	-29.4%	-21.1%	-0.3%	-9.4%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2009	EAST BAY	124.3	1.161	0.847	107.1
2010	EAST BAY	90.5	0.871	0.681	103.8
2011	EAST BAY	88.1	0.850	0.848	103.6
2012	EAST BAY	100.8	1.287	1.281	78.3
2013	EAST BAY	63.3	0.831	1.158	76.2
5-Yr Ave	09-13 Avg	93.4	1.000	0.963	93.8
2014	EAST BAY	67.0	0.746	1.279	89.7
	% Difference	-28.3%	-25.4%	32.8%	-4.4%

Pacific Gas and Electric  
Division Reliability Indices  
2009-2014  
(Excluding Major Events)

Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2009	FRESNO	138.0	1.228	1.754	112.3
2010	FRESNO	114.9	1.054	1.846	109.0
2011	FRESNO	82.5	0.818	1.687	100.9
2012	FRESNO	99.3	1.042	2.324	95.3
2013	FRESNO	94.2	1.066	2.069	88.3
5-Yr Ave	09-13 Avg	105.8	1.042	1.936	101.2
2014	FRESNO	82.3	0.990	1.702	83.1
	% Difference	-22.2%	-5.0%	-12.1%	-17.9%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2009	HUMBOLDT	221.5	1.582	2.332	140.0
2010	HUMBOLDT	403.0	2.126	1.537	189.6
2011	HUMBOLDT	227.0	1.453	1.882	156.2
2012	HUMBOLDT	278.1	1.549	4.341	179.5
2013	HUMBOLDT	208.3	1.161	2.434	179.4
5-Yr Ave	09-13 Avg	267.6	1.574	2.505	168.9
2014	HUMBOLDT	212.5	1.207	1.819	176.1
	% Difference	-20.6%	-23.3%	-27.4%	4.2%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2009	KERN	101.0	1.135	1.397	89.1
2010	KERN	120.4	1.075	1.409	112.0
2011	KERN	112.1	0.995	1.340	112.7
2012	KERN	89.9	0.978	1.221	91.9
2013	KERN	88.3	1.046	1.114	84.4
5-Yr Ave	09-13 Avg	102.3	1.046	1.296	98.0
2014	KERN	83.7	0.952	1.619	87.9
	% Difference	-18.2%	-9.0%	24.9%	-10.3%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2009	LOS PADRES	102.3	1.012	1.322	101.1
2010	LOS PADRES	110.5	1.159	1.722	95.3
2011	LOS PADRES	89.9	0.969	1.666	92.7
2012	LOS PADRES	97.6	1.035	1.624	94.3
2013	LOS PADRES	89.7	0.737	0.950	121.8
5-Yr Ave	09-13 Avg	98.0	0.982	1.457	101.0
2014	LOS PADRES	95.6	1.029	1.148	93.0
	% Difference	-2.4%	4.7%	-21.2%	-8.0%

Pacific Gas and Electric  
Division Reliability Indices  
2009-2014  
(Excluding Major Events)

Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2009	MISSION	87.1	0.721	0.875	120.7
2010	MISSION	102.0	0.920	0.713	110.9
2011	MISSION	63.1	0.740	0.626	85.2
2012	MISSION	91.2	0.896	0.870	101.9
2013	MISSION	68.3	0.735	0.776	92.9
5-Yr Ave	09-13 Avg	82.3	0.802	0.772	102.3
2014	MISSION	65.1	0.666	0.776	97.7
	% Difference	-20.9%	-17.0%	0.5%	-4.5%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2009	NORTH BAY	112.3	1.058	0.890	106.1
2010	NORTH BAY	131.3	1.035	1.294	126.8
2011	NORTH BAY	111.1	1.082	1.085	102.7
2012	NORTH BAY	109.7	0.791	1.647	138.8
2013	NORTH BAY	101.8	0.910	1.455	111.9
5-Yr Ave	09-13 Avg	113.2	0.975	1.274	117.3
2014	NORTH BAY	114.0	0.885	2.495	128.8
	% Difference	0.7%	-9.2%	95.8%	9.8%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2009	NORTH VALLEY	203.9	1.295	2.986	157.4
2010	NORTH VALLEY	156.9	1.220	1.814	128.6
2011	NORTH VALLEY	161.2	1.218	1.557	132.4
2012	NORTH VALLEY	223.2	1.505	2.576	148.3
2013	NORTH VALLEY	119.3	1.036	1.904	115.1
5-Yr Ave	09-13 Avg	172.9	1.255	2.167	136.4
2014	NORTH VALLEY	111.1	0.968	1.525	114.8
	% Difference	-35.7%	-22.9%	-29.6%	-15.8%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2009	PENINSULA	80.5	0.850	0.767	94.8
2010	PENINSULA	118.4	1.361	1.035	87.0
2011	PENINSULA	83.8	1.042	0.787	80.4
2012	PENINSULA	87.0	1.000	1.527	87.1
2013	PENINSULA	70.7	0.781	1.117	90.5
5-Yr Ave	09-13 Avg	88.1	1.007	1.047	88.0
2014	PENINSULA	77.8	0.899	1.165	86.5
	% Difference	-11.7%	-10.7%	11.3%	-1.7%

Pacific Gas and Electric  
Division Reliability Indices  
2009-2014  
(Excluding Major Events)

Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2009	SACRAMENTO	145.2	1.159	1.649	125.2
2010	SACRAMENTO	134.0	0.963	1.218	139.2
2011	SACRAMENTO	112.0	0.980	1.771	114.3
2012	SACRAMENTO	146.9	1.301	1.813	112.9
2013	SACRAMENTO	103.2	1.007	1.556	102.5
5-Yr Ave	09-13 Avg	128.3	1.082	1.601	118.8
2014	SACRAMENTO	94.8	0.800	1.115	118.6
	% Difference	-26.1%	-26.1%	-30.4%	-0.2%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2009	SAN FRANCISCO	74.9	0.806	0.096	92.9
2010	SAN FRANCISCO	49.7	0.647	0.077	76.7
2011	SAN FRANCISCO	46.6	0.541	0.210	86.1
2012	SAN FRANCISCO	47.8	0.578	1.000	82.6
2013	SAN FRANCISCO	52.1	0.603	0.304	86.4
5-Yr Ave	09-13 Avg	54.2	0.635	0.337	84.9
2014	SAN FRANCISCO	41.6	0.460	0.234	90.4
	% Difference	-23.3%	-27.6%	-30.6%	6.4%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2009	SAN JOSE	75.8	0.753	0.795	100.7
2010	SAN JOSE	69.4	0.759	0.538	91.5
2011	SAN JOSE	101.6	0.886	0.699	114.7
2012	SAN JOSE	80.6	0.780	0.958	103.4
2013	SAN JOSE	97.1	0.915	0.976	106.1
5-Yr Ave	09-13 Avg	84.9	0.819	0.793	103.3
2014	SAN JOSE	80.3	0.801	1.029	100.3
	% Difference	-5.4%	-2.2%	29.7%	-2.9%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2009	SIERRA	220.0	1.294	1.224	170.0
2010	SIERRA	163.7	1.156	1.011	141.7
2011	SIERRA	158.2	1.109	1.432	142.6
2012	SIERRA	158.6	1.205	2.797	131.6
2013	SIERRA	99.8	1.113	2.746	89.6
5-Yr Ave	09-13 Avg	160.1	1.175	1.842	135.1
2014	SIERRA	132.4	1.105	2.028	119.9
	% Difference	-17.3%	-6.0%	10.1%	-11.3%

Pacific Gas and Electric  
Division Reliability Indices  
2009-2014  
(Excluding Major Events)

Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2009	SONOMA	153.7	1.144	1.319	134.4
2010	SONOMA	151.4	1.130	0.818	134.0
2011	SONOMA	103.8	0.901	1.338	115.1
2012	SONOMA	118.0	0.897	1.730	131.5
2013	SONOMA	113.9	0.846	2.256	134.7
5-Yr Ave	09-13 Avg	128.2	0.984	1.492	129.9
2014	SONOMA	113.7	0.899	1.587	126.6
	% Difference	-11.3%	-8.6%	6.4%	-2.6%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2009	STOCKTON	159.9	1.272	2.702	125.7
2010	STOCKTON	166.2	1.310	1.402	126.8
2011	STOCKTON	180.4	1.234	0.898	146.2
2012	STOCKTON	91.4	0.989	1.975	92.4
2013	STOCKTON	106.9	1.420	2.032	75.2
5-Yr Ave	09-13 Avg	141.0	1.245	1.802	113.3
2014	STOCKTON	108.1	0.764	1.324	141.4
	% Difference	-23.3%	-38.6%	-26.5%	24.8%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2009	YOSEMITE	183.9	1.234	1.460	149.0
2010	YOSEMITE	226.3	1.474	2.598	153.5
2011	YOSEMITE	207.9	1.274	1.817	163.2
2012	YOSEMITE	140.8	1.265	4.096	111.3
2013	YOSEMITE	188.5	1.329	3.275	141.8
5-Yr Ave	09-13 Avg	189.5	1.315	2.649	143.8
2014	YOSEMITE	117.6	1.220	2.452	96.4
	% Difference	-37.9%	-7.2%	-7.4%	-32.9%
Year	Division	SAIDI	SAIFI	MAIFI	CAIDI
2009	SYSTEM	134.3	1.122	1.391	119.6
2010	SYSTEM	130.2	1.107	1.252	117.6
2011	SYSTEM	109.7	0.969	1.169	113.2
2012	SYSTEM	111.2	1.034	1.799	107.5
2013	SYSTEM	96.5	0.966	1.527	99.8
5-Yr Ave	09-13 Avg	116.4	1.040	1.428	111.5
2014	SYSTEM	92.8	0.880	1.391	105.4
	% Difference	-20.3%	-15.4%	-2.6%	-5.5%

**SECTION 5**  
**PG&E Service Territory Map**



# PG&E Service Territory



## **SECTION 6**

### **Summary List of Excludable Major Events per IEEE 1366**

## Excludable Major Events

IEEE Standard 1366-2003 defines Excludable Major Events as follows:

IEEE Standard 1366-2003 uses a statistically-based method of identifying excludable events. Specifically, the IEEE standard provides for the exclusion of all outages occurring on any day where its SAIDI is greater than "TMED" where:

$$T_{MED} \equiv e^{\text{average over 5 yrs. of Ln (daily SAIDI)} + 2.5 * \text{STD DEV of 5 yrs. of Ln (daily SAIDI)}}$$

Unlike D.96-09-045, however, the IEEE Standard includes outage resulting from the failure of a single line transformer.

There were 5 Excludable Major Events in 2014, as defined in the IEEE Standard 1366-2003. These 2014 events include:

Date	Description	Reason
8/24/2014	At 3:20 AM on Sun 8/24/2014 a magnitude 6.0 earthquake was observed in the North Bay Area near American Canyon, Ca. An earthquake summary poster from USGS can be found here: <a href="http://earthquake.usgs.gov/earthquakes/eqarchives/poster/2014/20140824.pdf">http://earthquake.usgs.gov/earthquakes/eqarchives/poster/2014/20140824.pdf</a>	IEEE MED*
12/02/2014 – 12/04/2014	Two strong Pacific weather systems produced an impressive round of precipitation across the territory Tuesday and Wednesday. Accompanying the rain showers were breezy to gusty southerly winds that developed through the San Joaquin Valley and adjacent elevated terrain. Rainfall totals were 7 inches across the Santa Cruz Mountains and the Central Sierra and generally 2 - 4 inches across the lower elevations in the Bay Area.	IEEE MED*
12/11/2014 - 12/12/2014	The strongest storm event in more than 3 years slammed the territory with strong winds and heavy rain showers starting on 12/11. Rain and unsettled weather began Wednesday along the north coast and then a very strong cold front developed and intensified Wednesday evening and overnight into Thursday and very slowly progressed through the territory bringing very heavy rain and strong southerly winds. The gusty southerly winds reached up to 50 mph across the Santa Cruz mountains, near 70 mph across elevated Bay Area terrain, and near 120 mph across the Sierra Crest. Over 3" of rain fell across many Bay Area locations and over 2" for northern Central Valley by Thursday afternoon.	IEEE MED*
12/30/2014 – 12/31/2014	A strong but dry storm system originating from Western Canada dropped south through the Service Area and produced very strong north to northeast winds from Tuesday morning through early Wednesday. Gusts in excess of 60 mph were reported across the Bay Area elevated terrain and foothills across the Sierra Nevada. A strong mountain wave moved into San Jose division from the east, resulting in reported gusts above 50 mph in downtown San Jose.	IEEE MED*

\*MED is defined as Major Events Day

Table 6 below indicates the number of customers without service at periodic intervals for this event (August 24, 2014). The numbers of customers noted in the table are for only those divisions identified in Table 4, which represents the excludable portion of these events. 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 6 – August 24, 2014 Outage Event Duration Summary**

<b>Outage Duration</b>	<b>Customers Affected</b>	<b>Cumulative %</b>
0 TO 1 HRS	3,972	4.18%
1 TO 5 HRS	59,929	67.29%
5 TO 10 HRS	20,916	89.32%
10 TO 15 HRS	5,575	95.19%
15 TO 20 HRS	2,682	98.01%
20 TO 24 HRS	765	98.82%
>=1 AND <=2	1,122	100.00%
>=2 AND <=3	0	100.00%
>=3 AND <=4	0	100.00%
>=4 AND <=5	0	100.00%
>=5 AND <=6	0	100.00%
>=6 AND <=7	0	100.00%
> 7	0	100.00%
<i>Total</i>	94,961	

**Table 6 / Figure 1 – August 24, 2014 Outage Event Duration Graph**

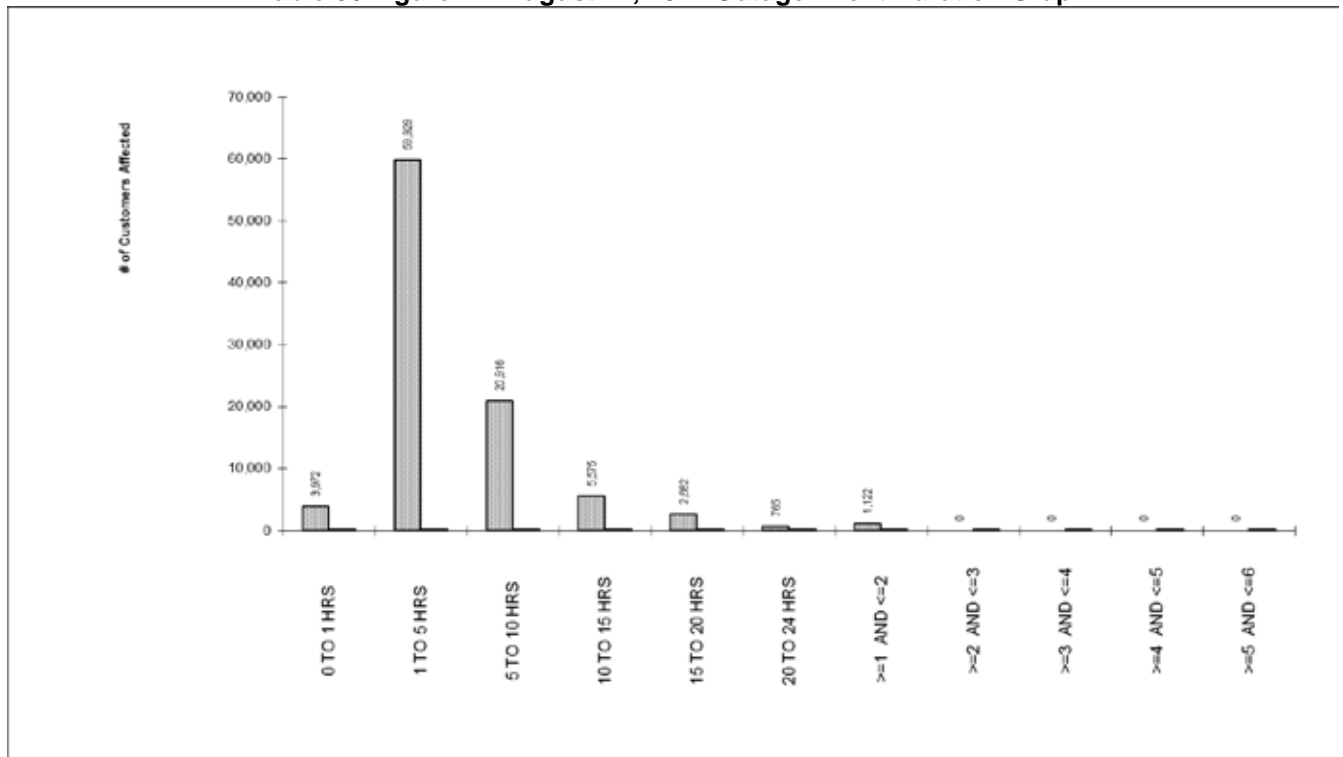


Table 7 below indicates the number of customers without service at periodic intervals for this event (December 3, 2014). The numbers of customers noted in the table are for only those divisions identified in Table 4, which represents the excludable portion of these events. It should be noted that the 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 – December 3, 2014 Outage Event Duration Summary**

<b>Outage Duration</b>	<b>Customers Affected</b>	<b>Cumulative %</b>
0 TO 1 HRS	37,553	42.35%
1 TO 5 HRS	40,601	88.15%
5 TO 10 HRS	6,007	94.92%
10 TO 15 HRS	3,163	98.49%
15 TO 20 HRS	1,043	99.67%
20 TO 24 HRS	151	99.84%
>=1 AND <=2	145	100.00%
>=2 AND <=3	0	100.00%
>=3 AND <=4	0	100.00%
>=4 AND <=5	0	100.00%
>=5 AND <=6	0	100.00%
>=6 AND <=7	0	100.00%
> 7	0	100.00%
<i>Total</i>	88,663	

**Table 7 / Figure 1 – December 3, 2014 Outage Event Duration Graph**

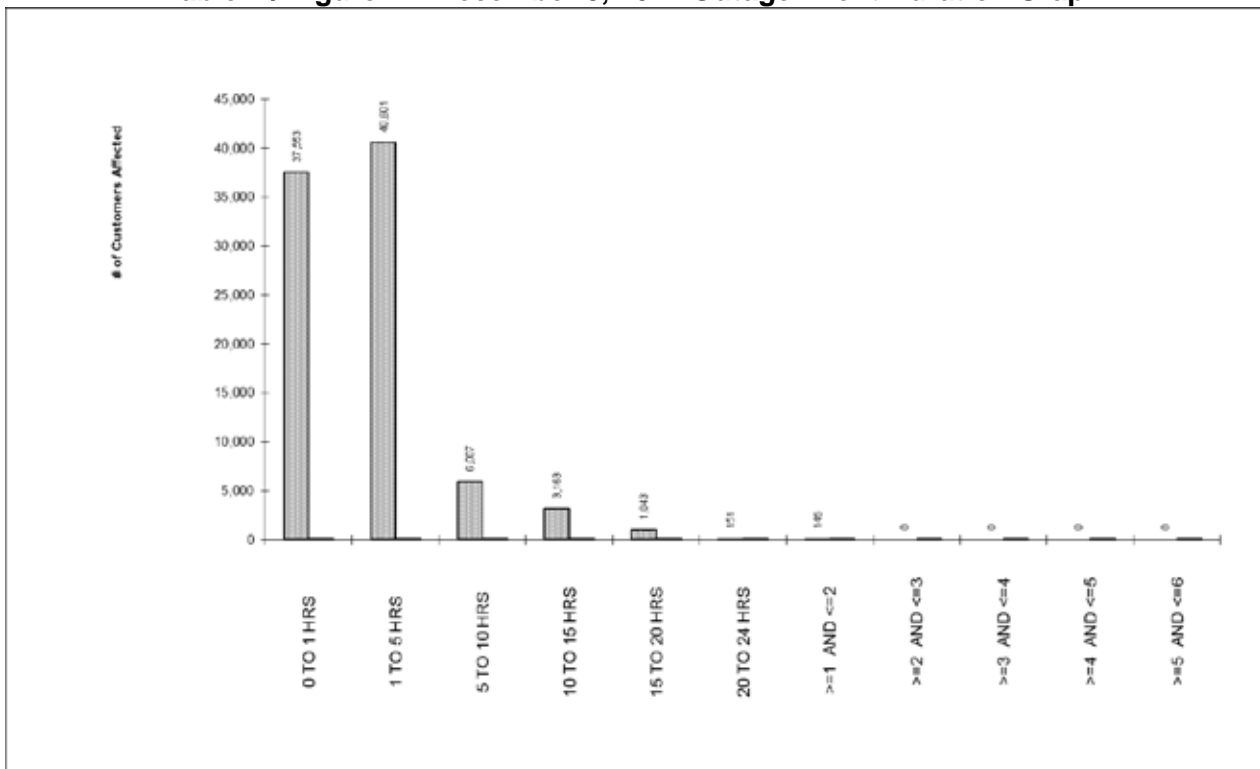


Table 8 below indicates the number of customers without service at periodic intervals for this event (December 11-12, 2014). The numbers of customers noted in the table are for only those divisions identified in Table 4, which represents the excludable portion of these events. It should be noted that 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 8 – December 11-12, 2014 Outage Event Duration Summary**

<b>Outage Duration</b>	<b>Customers Affected</b>	<b>Cumulative %</b>
0 TO 1 HRS	90,881	20.05%
1 TO 5 HRS	232,502	71.34%
5 TO 10 HRS	88,723	90.91%
10 TO 15 HRS	16,019	94.44%
15 TO 20 HRS	10,910	96.85%
20 TO 24 HRS	5,439	98.05%
>=1 AND <=2	7,971	99.81%
>=2 AND <=3	681	99.96%
>=3 AND <=4	194	100.00%
>=4 AND <=5	0	100.00%
>=5 AND <=6	0	100.00%
>=6 AND <=7	0	100.00%
> 7	0	100.00%
<i>Total</i>	453,320	

**Table 8 / Figure 1 – December 11-12, 2014 Outage Event Duration Graph**

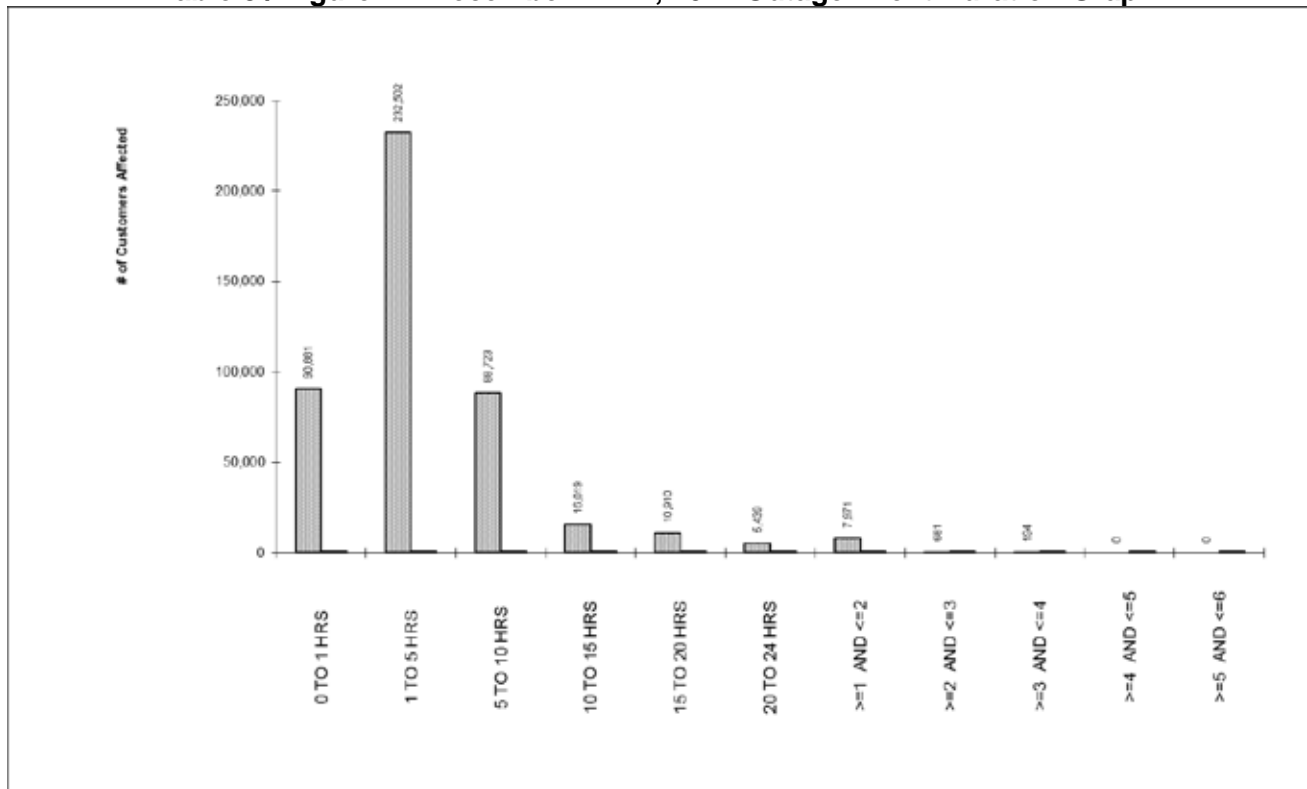
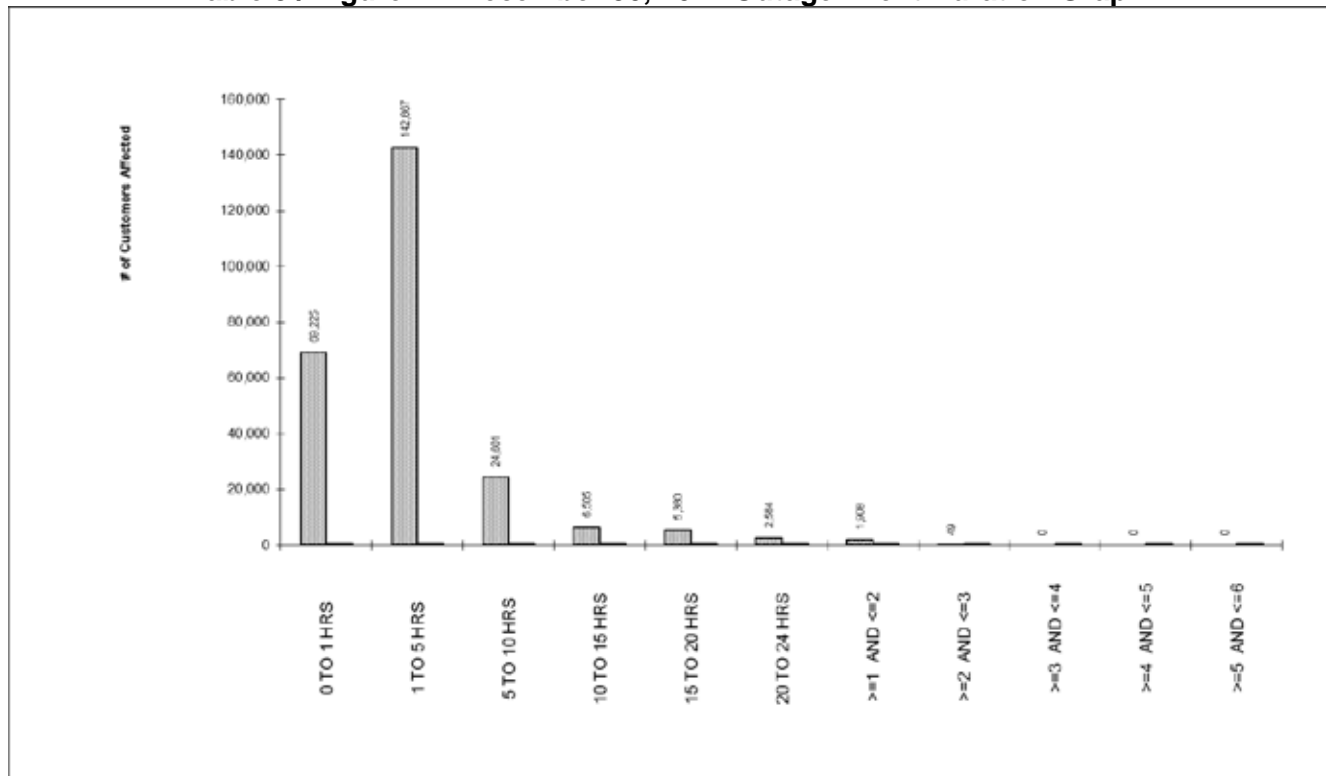


Table 9 below indicates the number of customers without service at periodic intervals for this event (December 30, 2014). The numbers of customers noted in the table are for only those divisions identified in Table 4, which represents the excludable portion of these events. It should be noted that the 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 9 – December 30, 2014 Outage Event Duration Summary**

<b>Outage Duration</b>	<b>Customers Affected</b>	<b>Cumulative %</b>
0 TO 1 HRS	69,225	27.35%
1 TO 5 HRS	142,867	83.79%
5 TO 10 HRS	24,601	93.51%
10 TO 15 HRS	6,505	96.08%
15 TO 20 HRS	5,380	98.21%
20 TO 24 HRS	2,584	99.23%
>=1 AND <=2	1,908	99.98%
>=2 AND <=3	49	100.00%
>=3 AND <=4	0	100.00%
>=4 AND <=5	0	100.00%
>=5 AND <=6	0	100.00%
>=6 AND <=7	0	100.00%
> 7	0	100.00%
<i>Total</i>	253,119	

**Table 9 / Figure 1 – December 30, 2014 Outage Event Duration Graph**



## **SECTION 7**

### **Historical Ten Largest Outage Events (2004-2013)**



**Table 10 - Ten Largest 2013 Outage Events**

Rank	Description	Date	Number of Customers Affected *	Longest Customer Interruption (Hours)	# of People Used To Restore Service (Major Events) **	CPUC Major Event?
1	On 11/19 into 11/20, a weather system moved into the territory and delivered up to 2 inches of rain over elevated terrain. It was the first significant rain storm of the season. Then on 11/21 into 11/22 surface low pressure over southern California combined with developing high pressure in Nevada to deliver very strong north to northeast winds across the north half of the Service Territory. Winds were very strong over elevated terrain; wind gusts up to 65 mph were observed in the Oakland hills (Oakland North RAWS) and to 101 mph in the northern Sierra Nevada. (The wind gust at Oakland north was second only to the January 4 <sup>th</sup> mega-storm gust of 71 mph). Wind speeds near 45 - 50 mph were also observed over lower elevation locations such as Oakland and Santa Rosa.	11/19/2013 - 11/22/2013	385,017	143		N
2	The marine layer surged onto the coast and delivered coastal mist and drizzle which ultimately resulted in an insulator flashover event. The event was preceded by a series of brisk wind events which may have increased salt contamination along the coast.	6/23/2013	170,429	15		N
3	Fair and dry weather was observed on 11/12/2013. An unplanned outage occurred in the Bellota substation.	11/12/2013	113,266	10		N
4	High pressure built over California and maximum temperatures from 99 - 107 were observed along the Central Valley. Temperature maximums near the coast were in the 60s to 70s with 70s - 90s for coastal to intermediate valleys. Most customers were impacted by trouble on the Transmission system.	7/19/2013	99,738	18		N
5	Overnight Sunday into the early morning hours of Monday April 8, 2013, a strong Pacific Jet Stream drove a small but intense cold front with very gusty northwest winds into the California coast and Bay Area. Gusts along the coast reached generally into the 50 - 60 mph range with the peak gust of 75 mph recorded at a station on the west edge of San Francisco County.	4/8/2013	93,200	42		N
6	A strong ridge of high pressure built over California bringing extreme heat to all locations except the coast and immediate coastal valleys. High temperatures on 7/1 near the coast ranged from the 70s - 80s with 90s - low 100s for coastal valleys. Temperatures were extreme in the interior with maximum temperatures up to 111 in the Central Valley. The heat intensified on 7/2 where maximum soared again into the 100s, with Redding observing a 116 degree maximum.	7/1/2013-7/2/2013	93,194	29		N
7	On Sunday a weak area of low pressure moved west to east through the Territory bringing increasing clouds, light showers and snow showers over the Sierra and a few light stray showers elsewhere, primarily across the south. Most customers were impacted by a fault on a substation relay.	3/3/2013	69,578	11		N
8	A classic California October offshore wind event unfolded 10/3/2013 as surface high pressure built north of the Service Territory. Wind speeds were generally 20 – 35 mph with gusts to 40 – 55 across the Sacramento valley, northern Sierra Nevada and elevated terrain around the Bay Area.	10/3/2013	56,573	25		N
9	The ridge of high pressure dramatically amplified delivering significant heat across the Territory. Maximum temperatures across the interior valley locations reached above 105 with Red Bluff reaching 112 degrees. Overnight temperatures remained warm on the far ends of the valley, with minimum temperatures only dipping into the upper 70s in the southern San Joaquin and mid 80s in the northern Sacramento Valley.	6/8/2013	52,442	22		N
10	A cold and dynamic weather system dropped southwestward into the territory and brought cooler and very unsettled weather in the form of rain, snow and gusty winds. Winds were strongest over elevated terrain of the Bay Area – Altamont pass gusted to 69 mph.	10/27/2013	49,692	36		N

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

\*\* Note: This data is requested only for Major Event days.

**Table 11 - Ten Largest 2012 Outage Events**

Rank	Description	Date	Number of Customers Affected *	Longest Customer Interruption (Hours)	# of People Used To Restore Service (Major Events)**	CPUC Major Event?
1	The final and strongest storm of an 'Atmospheric River' series moved through the territory on 12/02/2012 delivering widespread gusts of 50-70 mph in the northern Sacramento Valley. The strongest wind observed was in Plumas National Forest where a gust of 102 mph was recorded. This system also brought heavy amounts of rain across northern California where localized flooding and mudslides were reported in numerous locations. Precipitation totals from the entire series (See Rank #3) topped 20 inches in the wettest locations in the north.	12/02/2012	298,393	80		N
2	A series of moderate to strong storms impacted the Service Area delivering rain, wind, thunderstorms and several feet of snow across the northern mountains and Sierra. The second storm in the series moved onto the Humboldt coast during the evening of 12/21 and then progressed south and east through the territory overnight into 12/22. The third and strongest storm of the series developed just off the coast and pushed a vigorous cold front through the Service Area on 12/23. Gusts up to 80 mph were observed over elevated terrain. Yet another round of heavy mountain snow fell across the north and the Sierra. Up to 6 feet of snow fell in some locations across the north during the series making restoration difficult.	12/21/2012 – 12/23/2012	195,099	172		N
3	The first storm of the 'Atmospheric River' series moved into the territory on 11/28 and delivered strong south winds up to 50-60 mph and heavy rains. The second and stronger system impacted the Territory 11/29 through 11/30. This system brought significant rainfall totals across the north half of the Territory with up to 10" observed in the wettest locations across elevated terrain. After a brief break on 12/1 the final and strongest storm of the series moved through on 12/2 (see Rank 1).	11/28/2012 – 11/30/2012	183,145	71		N
4	On 1/20 a strong Pacific weather system with an associated well-organized frontal band pushed north to south through the territory. This system delivered heavy rains and gusty southerly winds to most locations and was the first rain in a month or more for many locations across the south half of the territory.	1/20/2012 – 1/21/2012	168,496	40		N
5	On 3/16 a system impacted Northern Region and the Bay Area with heavy showers, gusty southerly winds, and a few lightning strikes. On 3/17 this system progressed south through Central Coast and Central Valley Divisions bringing heavy rains, thunderstorms and gusty winds. On 3/18, snow levels fell as cold air filtered in resulting in low snow outage activity from Grass Valley south into Fresno division.	3/16/2012 – 3/18/2012	146,602	63		N
6	Overnight Sunday, 10/21/2012 into Monday, 10/22/2012 a cold front associated with a unusually cold, early-season storm swept west to east across the PG&E Service Area bringing a variety of adverse weather including rain, wind, thunderstorms and low snow. Two tornados also formed in the eastern Sacramento Valley and Sierra foothills.	10/22/2012	129,801	22		N
7	A vigorous late season weather system swept through the Service Area on 6/4 – 6/5 and brought a variety of adverse weather conditions. This system delivered over 700 lightning strikes across the Service Territory with the majority occurring in the northern Sacramento Valley. Winds gusting to 40 mph came up abruptly in the San Joaquin causing numerous wind related outages.	6/4/2012 – 6/5/2012	93,735	22		N
8	On 12/17 a weakening front moved through the Service Area bringing rain showers and breezy southerly winds up to 35-40 mph across the Sacramento Valley. Showers progressed into the southern San Joaquin overnight into 12/18. Post-frontal northwest winds then developed across the San Joaquin Valley, with gusts up to 35 mph observed at Fresno.	12/17/2012 – 12/18/2012	83,063	18		N
9	A Pacific storm system and associated cold front and swept through the north half of the PG&E Service Area. The front brought brisk south winds of 30 to 40 mph, with higher gusts over elevated terrain. During the afternoon, thunderstorms formed along the north coast and northern Sacramento Valley in the post-frontal environment.	3/31/2012	68,165	21		N
10	Non weather related event.	7/21/2012	47,182	30		N

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

\*\* Note: This data is requested only for Major Event days.

**Table 12 - Ten Largest 2011 Outage Events**

Rank	Description	Date	Number of Customers Affected *	Longest Customer Interruption (Hours)	# of People Used To Restore Service (Major Events)**	CPUC Major Event?
1	A series of cold and powerful storms moved through the Service Area with the majority of outages resulting from low snow and gusty winds. The bulk of outage activity occurred overnight Sat 19 <sup>th</sup> to Sun 20 <sup>th</sup> as strong southeasterly wind gusts were observed in many locations (SF Apt 45 mph, Stockton 44 mph, Redding 45 mph, Bakersfield 40 mph). Excessive low elevation snowfall caused significant outage activity. Yosemite Division was hard hit with low snow (snow totals - 38" reported at 4200' above Oakhurst)	Mar 17 - 22	581,949	256	1,839***	Y-Partial (See Table 4)
2	After a short respite from inclement weather, another strong and cold storm moved into the Service Area on March 24 <sup>th</sup> . Once again, strong southerly wind gusts were observed (SF Apt 38 mph, Oakland 37 mph). Low elevation snow was the main adverse weather issue with Sierra, North Valley, Stockton, and Yosemite Divisions hard hit with low snow. (snow totals - 13" in Shingletown, 25" at 3700' along Highway 88, 34" at the 4200' above Oakhurst)	Mar 24 - 27	464,767	504	1,839***	Y-Partial (See Table 4)
3	A series of cold storms moved across the Service Area starting Valentine's day until Feb 19. On the 17 <sup>th</sup> very cold air filtered into the region lowering snow levels enough to create low snow related outages across the Coast Ranges of Humboldt Divisions, and down the entire Sierra Nevada foothills. The hardest hit divisions were Humboldt, Yosemite, and Sierra. (Snow totals - 14" in Shingletown, 38" at 3700' on Highway 88, 12" at 2600' in Humboldt County). Snow recorded down to 500 feet in Humboldt.	Feb 15 - 19	357,802	151		N
4	High pressure in the Great Basin and low pressure off the southern California coast set the stage for strongest northeast wind event to hit the Service Area in the last 20 years. Gusts up to 50 mph were common in the Sierra with the highest gust of 94 mph recorded on Mt. Elizabeth in the Yosemite division. Winds were quite strong in the Valley as well (Stockton 52 mph, Redding 40 mph, Fresno 36 mph)	Nov 30 - Dec 1	325,942	131		N
5	A strong and cold storm affected the entire Service Area with low snow falling in the Northern Region and gusty southerly winds and heavy rains further east and south. The hardest hit divisions were Humboldt, North Valley, and Sierra. (Snow totals - 18" in Shingletown, 20" in Susanville, 19" in Grass Valley). Snow recorded down to 500 feet in Humboldt.	Feb 24 - 25	187,851	152		N
6	An early season storm moved through the Service Area bringing moderate southerly winds and heavy precipitation rates. In Ukiah, more than a half inch of rain fell within one hour in the early morning. The Central Valley Region experienced the most outages. These were mainly pole fires/flashover caused by the first rain to fall in the area after months of prolonged dry weather.	Oct 5	100,357	24		N
7	Widespread thunderstorm activity broke out across the southern part of the Service Area early in the morning with the biggest impacts in Fresno and Kern divisions. The Bakersfield area in Kern was hit particularly hard by lightning, with Kern Division recording 3833 lightning strikes for the day.	Sept 10	77,443	69		N
8	A late season cold storm moved through the Service Area with low snow outage conditions across divisions in the Sierra Nevada, especially the Sierra Division. (8" of snow at 3700' along Highway 88) Thunderstorms and associated lightning also broke out across the Central Valley. Impacts were minimal in the Bay Area and Central Coast Regions.	May 15	62,863	30		N
9	A non-weather related outage day with maximum temperatures along the Central Valley in the mid-80s. The outage count was only slightly above average for a June day; however, a large number of customers in the East Bay were affected by two distribution substation outages.	Jun 12	50,028	15		N
10	The first warm day of the spring was observed in many areas. San Jose had a high of 84. This could have contributed to the above average outage total. No other adverse weather was reported. The largest impacts were recorded in the San Francisco and San Jose Divisions.	Apr 1	44,177	6		N

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

\*\* Note: This data is requested only for Major Event days.

\*\*\* Note: During the course of the March 17-27, 2011 storms, approximately 1,839 PG&E Operations, Maintenance and Construction (OM&C) employees responded. These employees included electric and gas construction crews, troublemen, meter technicians, clerical staff, gas and electric estimators and meter readers. Resources were dispatched and moved from lesser impacted areas to the more heavily impacted areas. In addition to PG&E personnel, 110 vegetation crews, 10 contract crews (approximately 200 individuals), and 36 mutual aid crews (approximately 175 individuals) were utilized to supplement existing resources.

**Table 13 - Ten Largest 2010 Outage Events**

Rank	Description	Date	Number of Customers Affected *	Longest Customer Interruption (Hours)	# of People Used To Restore Service (Major Events)**	CPUC Major Event?
1	A strong jet stream developed over the Eastern Pacific, which spawned a series of outage producing weather events that included: - Three impulses of strong winds; gust above 50 mph each day (Jan 18, 19, 20) - Periods of moderate to heavy rainfall (Jan 18, 19, 20, 21) - Bands of thundershower activity (several thousand strikes Jan 18-21) - Heavy snowfall at low elevations of the Sierra Nevada (Jan 21, 22)	Jan 18-24	1,169,513	497	3,830 ***	Y
2	A strong storm system with several impulses moved through the entire Service Area during the Dec 17 – 20 period bringing gusty winds and heavy rain. Wind gusts during the period: 43 mph at Stockton, 43 mph at Salinas, 46 mph at SFO, 43 at Red Bluff.	Dec 17-20	215,116	120		N
3	A series of cold storms brought significant snow to low elevations in the Sierra Nevada foothills. The snow came early in the season, when deciduous trees still retained most of their leaves. Excessive snow loading occurred on trees causing large limbs to break off and fall onto power lines. Snowfall amounts ranged from near 1 foot at the 3000' elevation, to several feet above 5000'. This storm produced the most low elevations snow in November in the last 15 years.	Nov 20-21	215,245	186		N
4	Storm system with strong south winds on Dec 28 (gusts to 47 mph at Marysville, 41mph at Stockton, 46 mph SFO) followed by strong northwest winds on Dec 29 (gusts to 46 mph at San Jose, 41 mph at Stockton, 43 at Bakersfield, 46 mph at SFO).	Dec 28-29	180,370	47		N
5	A late season storm brought rain, thunderstorms, and wind. Over 500 lightning strikes were recorded. The storm was particularly strong along the Central Coast and in the southern San Joaquin Valley. Reported wind gusts: 45 mph at Salinas, 46 mph at Santa Maria, 46 mph at Bakersfield 46.	Apr 11-12	122,050	73		N
6	Early season storm brought thunderstorms to Northern Region (over 1000 strikes recorded) along with rain to other parts of the Service Area. In many cases, this was the first rain of the season causing flashover outages.	Sep 8-10	114,402	60		N
7	An early season storm brought high winds and heavy rain to primarily the Northern Region. Redding recorded a peak wind gust of 49 mph. Santa Rosa recorded 4.75" of rainfall.	Oct 24	111,522	43		N
8	Storm system swept across the Service Area bringing rain and gusty winds. Reported wind gusts: 41 mph at Salinas, 41 mph at Bakersfield.	Dec 4-5	98,041	21		N
9	Heat wave conditions resulted in the hottest two days of the summer. Maximum temperatures exceeded 110 in portions of the Central Valley (111 at Bakersfield on 8/25). Maximum temperatures between 100 and 110 were reported both days at many coastal valley areas (109 at Ukiah on 8/25, 107 at Santa Rosa on 8/24, 105 at Livermore on 8/25).	Aug 24-25	97,616	82		N
10	Heat wave affected the service area, on both days Central Valley maximum temperatures ranged between 100 and 110; maximum temperatures above 100 were reported in coastal valleys on 6/27.	Jun 27-28	87,751	38		N

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

\*\*\* Note: This data is requested only for Major Event days.

\*\*\* Note: During the course of the January 18, 2010 Storm approximately 3,830 PG&E Operations, Maintenance and Construction (OM&C) employees responded. These employees included electric and gas construction crews, troublemen, gas service representatives, meter technicians, clerical staff, gas and electric estimators and meter readers. Resources were dispatched and moved from lesser impacted areas to the more heavily impacted areas. In addition to PG&E personnel, 1000 vegetation workers and 60 contract crews (approximately 360 individuals) were utilized to supplement existing resources.

**Table 14 - Ten Largest 2009 Outage Events**

Rank	Description	Date	Number of Customers Affected *	Longest Customer Interruption (Hours)	# of People Used To Restore Service (Major Events)**	CPUC Major Event?
1	A strong early season storm affected the entire service area with many stations reporting wind gusts over 50 mph (57 mph at Ft. Funston (SF), 56 mph at Fairfield, 55 mph at Oroville, 51 mph at Monterey). Single day rainfall totals ranged between two and five inches at many locations (4.54 in. at Watsonville, 4.27 in. at Fairfield, and 3.66 in. at Napa). National Weather Service records indicate this storm was the strongest October rain and wind event since 1962.	10/13-10/14	617,589	244***	4,400 ****	Y
2	A strong cold front produced significant snowfall on Feb. 13 in the 1500-3000 ft. range of the northern and central Sierra foothills (up to 2 feet of snow at 3000 ft. and @ 1 foot at 2000 ft.). A second storm followed on Feb.15 producing widespread heavy rain and strong wind gusts to the entire Service Area (67 mph at Valley Ford, 59 mph at Oroville, 50 mph at Redding, and Ft. Funston (SF), 47 mph at Salinas, 43 mph at San Luis Obispo. A third storm on Feb 16 delivered additional rainfall and wind gusts in the 30 to 40 mph range at several locations.	2/13-2/17	340,582	107		N
3	A large cluster of thunderstorms produced widespread lightning activity in the Bay Area and Sacramento Valley on Sep. 12. The lightning activity was followed by a weak weather front the next day that produced the first light rain of the season over much Northern California resulting in flashover related outages.	9/12-9/14	190,671	92		N
4	A strong cold front produced significant snowfall at the 1000-3000 ft. range of the Sierra foothills (up to 2 feet of snow was observed at 3000 ft., @ 1 foot at 1500 ft.) Light snow was reported at locations in the Central Valley.	12/7	147,630	113		N
5	Strong northerly winds developed across the entire Service Area with the gusts in the 45 to 55 mph range in the Bay Area and Sacramento Valley (52 mph at Fairfield, 49 mph at Sacramento, 45 mph at Red Bluff)	11/28	119,504	84		N
6	Strong north to northwest winds in the 40 to 60 mph range followed the passage of a weak weather front through the service area (58 mph at Ft. Funston (SF), 58 mph at SF Airport, 50 mph at San Carlos, 46 mph at Stockton)	4/14	116,406	45		N
7	An area of low pressure produced a large outbreak of thunderstorms with widespread lightning overnight on Jun. 3, continuing into the morning of June 4.	6/3-6/4	98,187	38		N
8	Strong north to northwest winds in the 45 to 55 mph range were recorded throughout the Sacramento and San Joaquin Valleys following the passage of a weak weather front (52 mph at Merced, 49 mph at Stockton, 47 mph at Modesto and Madera, 46 mph at Red Bluff, 45 mph at Fresno).	10/27	70,901	20		N
9	A winter storm accompanied by periods of moderate to heavy rainfall and scattered thundershower activity crossed the service area. Rainfall totals of up to 2 inches were reported.	12/12	54,111	41		N
10	Widespread thunderstorm activity resulted in several hundred lightning strikes in Areas 4, 5, 6 and 7.	5/28	52,705	22		N

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

\*\* Note: This data is requested only for Major Event days.

\*\*\* Note: This duration was due to the lack of access caused by flooding in the Stockton area. Access was granted after waters receded. Work was the completed and service was restored to the six customers remaining out of service.

\*\*\*\* Note: Approximately 4,400 PG&E Operations, Maintenance & Construction (OM&C) employees responded. In addition to PG&E personnel, 400 vegetation workers and 42 contract crews (approximately 210 individuals) were utilized to supplement existing resources.

**Table 15 - Ten Largest 2008 Outage Events**

Rank	Description	Date	Number of Customers Affected *	Longest Customer Interruption (Hours)	# of People Used To Restore Service (Major Events)**	CPUC Major Event?
1	Strongest storm system since December 1995 affected the entire service area on Jan 4. Wind gusts exceeded 65 mph at many low elevation sites throughout the service area (Redding 70 mph, Beale AFB 69 mph, Sacramento Apt. 66 mph, Pt. San Pablo 83 mph), with some coastal hills and foothill sites gusting to over 80 mph (Los Gatos, elev. 2000 ft. 105 mph, Big Rock, Marin Co. elev. 1500 ft. 83 mph). Rainfall totals on Jan 4 ranged up to 4 inches with storm totals above 6 inches in the North Bay counties. Multiple lightning strikes were reported on Jan 4 and 5.	1/3 – 1/6	1,631,765	290	7,130 ***	Y
2	A series of cold winter storms crossed the state. The first system (Jan 24-25) delivered gusty winds (generally in the 30 to 50 mph range), up to 2 inches of rain and snow below 2000 ft. A second system focused on the southern half of the service territory brought additional rain and thundershower activity along with even gustier winds (Santa Maria 67 mph, Bakersfield 49 mph).	1/24 – 1/27	303,168	172		N
3	A storm system with wind gusts in the 25 to 40 mph range crossed the state. Most locations reported under one inch of rain with a few coastal stations reaching two inches total.	10/31 – 11/1	189,811	50		N
4	The first rains of the winter season were accompanied by winds generally gusting from 25 to 35 mph (Red Bluff 44 mph). A large number of flashover incidents were likely triggered by the combination of light rain and power lines heavily sooted after the widespread summer season wildfires.	10/3 – 10/4	147,703	65		N
5	Gusty winds with periods of moderate rain accompanied a weather system that crossed the state. Wind gusts were generally in the 30 to 50 mph range (SF Airport 47 mph, Stockton 47 mph, Merced 45 mph).	2/2 – 2/3	121,865	65		N
6	Gusty winds from this storm were strongest in the southern half of the service area. Gusts between 50 and 55 mph were reported at SF Airport, Salinas, Santa Maria, Red Bluff and Bakersfield.	2/23 – 2/24	113,086	101		N
7	A weather front brought gusty winds and periods of moderate to heavy rain to the state. Post-frontal west to northwest wind gusts were strongest in the Bay Area (SF Apt 54 mph, Hayward 63 mph, Oakland 47 mph, Salinas 51 mph)	12/25	111,134	102		N
8	Gusty north winds generally in the 25 to 35 mph range were reported in the north. San Joaquin and Central Coast winds gusted from 30 to over 50 mph (Santa Maria 41 mph, Stockton 45 mph, Madera 52 mph, Merced 47 mph)	5/22	105,635	102		N
9	Gusty north winds developed on the evening of Feb 13 and continued through Feb 14. Winds were generally in the 30 to 45 mph range, with strongest gusts in the Central Valley (Redding 48 mph, Marysville 48 mph, Sacramento 47 mph)	2/13 – 2/14	98,788	47		N
10	Gusty north winds between 20 and 35 mph resulted in a record breaking early season heat wave. Bay Area and Central Valley temperatures ranged from 100 to 105F	5/15	84,659	28		N

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

\*\* Note: This data is requested only for Major Event days.

\*\*\* Note: Approximately 6,000 PG&E Operations, Maintenance & Construction (OM&C) employees responded. In addition to PG&E personnel, 300-350 vegetation crews (approximately 700 individuals), 70 contract crews (approximately 450 individuals) and 28 mutual assistance crews (approximately 170 individuals) from Southern California Edison (SCE), San Diego Gas and Electric (SDG&E), City of Gridley, City of Redding, and Sierra Pacific Power were utilized to supplement existing resources

**Table 16 - Ten Largest 2007 Outage Events**

Rank	Description	Date	Number of Customers Affected *	Longest Customer Interruption (Hours)	# of People Used To Restore Service (Major Events)**	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 ***		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		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		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		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		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 22 <sup>nd</sup> . Over 2 inches of rain in Eureka, less than one inch most other locations	2/22 - 2/23	96,420	79		N
7	Light rain far north, winds below 25 mph. Cold morning temperatures.	1/16	91,695	24		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		N
9	Light rain across the Service Area. Many outages reported due to insulator flashover resulting from light rain.	10/10	62,434	34		N
10	Moderately strong winds occurred across the Central and Northern Service Areas with gusts up to 50 mph.	12/27	59,594	20		N

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

\*\* Note: This data is requested only for Major Event days.

\*\*\* Note: Reflects an outage at two customer locations in a remote area that experiences deep snow with limited access.

**Table 17 - Ten Largest 2006 Outage Events**

Rank	Description	Date	Number of Customers Affected	Longest Customer Interruption (Hours)	# of People Used To Restore Service (Major Event)**	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		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 26 <sup>th</sup> , accompanied by rainfall totals ranging from ½ to 3 inches. Gusty west to northwest winds were recorded after the front passed on Dec 27 <sup>th</sup> . 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 28 <sup>th</sup>	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		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		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		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		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		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		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		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. \* Note: The values in parenthesis reflect the totals for the entire event from Dec 30, 2005 to Jan 5, 2006 as noted in Section 1.

\*\* Note: This data is requested only for Major Event Days.

\*\*\* Note: 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 18 - Ten Largest 2005 Outage Events**

Rank	Description	Date	Number of Customers Affected *	Longest Customer Interruption (Hours)	# of People Used To Restore Service (Major Events)**	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		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		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		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		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		N
7	Transmission relay malfunction (Moraga-Oakland Station X, 115kV line #3).	11/20	116,513	9		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		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		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		N

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

\*\* Note: This data is requested only for Major Event Days.

\*\*\* Note: 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 19 - Ten Largest 2004 Outage Events**

Rank	Description	Date	Number of Customers Affected *	Longest Customer Interruption (Hours)	# of People Used To Restore Service (Major Events)**	CPUC Major Event?
1	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 Ukiah, 1.84 in. at Oakland, 1.89 in. at Santa Rosa)	10/15-10/20	522,213	104		N
2	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 27 <sup>th</sup> and early hours of the 28 <sup>th</sup> , 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 27 <sup>th</sup> . The storm of Dec 30 <sup>th</sup> 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
3	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
4	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 17 <sup>th</sup> (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
5	A strong weather front with gusty winds and heavy rain affected the northern half of the service area late on Dec 6 <sup>th</sup> and early Dec 7 <sup>th</sup> . 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
6	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
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
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
9	Transmission substation outage occurred in Central Coast Division.	12/10	61,821	4		N
10	3 <sup>rd</sup> party dig-in to a transmission line in De Anza division.	10/1	58,591	13		N

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

\*\* Note: This data is requested only for Major Event Days.

## **SECTION 8**

### **System Indices for the Last 10 Years (2005-2014) Based on IEEE 1366 and Including Planned Outages**

Table 20 - As supplemental data, PG&E has listed below the 2005-2014 system reliability indices including planned outages. This data is reported externally for benchmarking purposes as well as in the media.

**Table 20 - System Indices for the Last 10 Years (2005-2014)**  
(Includes Planned Transmission, and Distribution related outages)

	Major Events Included				Major Events Excluded			
Year	SAIDI	SAIFI	MAIFI	CAIDI	SAIDI	SAIFI	MAIFI	CAIDI
2005	275.7	1.656	1.896	166.5	182.8	1.372	1.664	133.2
2006	311.5	1.847	1.770	168.6	195.7	1.463	1.575	133.8
2007	184.7	1.362	1.570	135.6	167.0	1.311	1.521	127.4
2008	448.7	1.669	1.832	268.9	181.5	1.301	1.595	139.5
2009	235.2	1.409	1.543	167.0	157.5	1.211	1.394	130.1
2010	276.6	1.497	1.491	184.8	157.2	1.208	1.256	130.1
2011	311.8	1.397	1.485	223.1	141.9	1.091	1.176	130.0
2012	161.8	1.223	1.923	132.4	131.5	1.128	1.802	116.5
2013	138.3	1.170	1.640	118.2	116.8	1.067	1.531	109.4
2014	151.3	1.134	1.568	133.5	110.2	0.967	1.397	114.0