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Report is required by:

OPUC Order No. 11-160, (amended Order No. 97-196 (UM 814))

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Key words: 2011 Service Quality Measure Report (SQM)

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Electric Rates and Planning



Portland General Electric Company
121 SW Salmon Street • Portland, Oregon 97204
PortlandGeneral.com

May 8, 2012

Public Utility Commission of Oregon
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RE: 2011 Service Quality Measure Report

Pursuant to Order No. 11-160, which amended Order No. 97-196 (UM 814), PGE hereby submits via electronic only, the 2011 Service Quality Measure Report.

Should you have any questions or comments regarding this filing, please contact George Jones at (503) 570-4554.

Please direct all formal correspondence and requests to the following email address pge.opuc.filings@pgn.com

Sincerely,

A handwritten signature in black ink, appearing to read "Karla Wenzel". The signature is fluid and cursive, with the first name "Karla" written in a larger, more prominent script than the last name "Wenzel".

Karla Wenzel
Manager, Tariff Analysis and Administration

Enclosure

cc: Lisa Gorsuch, OPUC



Portland General Electric

2011 Service Quality Measure Report

Annual Review of Safety and Operational Performance Areas

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PGE 2011 SERVICE QUALITY MEASURES REVIEW

Annual Review of Safety and Operational Performance Areas

Portland General Electric submits this annual report pursuant to OPUC Order 97-196 as later amended to provide information on the service quality of the Company. The information addresses service quality performance measures on the following:

- C1 “At fault” customer complaint frequency
- R1 Average customer interruption duration
- R2 Average customer interruption frequency
- R3 Average momentary interruption frequency
- R4 Annual service restoration
- X1 Vegetation management program
- X2 Pole and overhead facilities inspection, testing and maintenance program
- X3 Other Programs (Marina inspection and maintenance)

In addition to the reporting on the above stated service quality performance measures, and to provide a fuller picture of PGE’s service quality, PGE has included in this report since 2008, additional information we call 21st Century Service Quality Indicators. These 21st Century Service Quality Indicators are in the Appendix and provide information on the following: customer satisfaction, system reliability and NESC safety violations.

A. Creating an Enhanced Safety Culture

As reported in 2010 Portland General Electric began a journey to significantly impact the safety culture and reduce the number of injuries experienced by its employees. PGE’s officers and the Executive Safety Council continue to support and provide direction on a variety of initiatives designed to engage all employees to improve safety in the workplace. Safety and accountability is paramount at Portland General Electric. There are areas in the company where work groups have gone many years without a lost work day. Progress has been made with various safety measurements. For example the Lost Work Day, Lost Workday Cases, Medical Cases, and Vehicle Accidents and Severity Rates have decreased from 2010. The total 2011 OSHA Recordables is 132, down 11.4% representing 17 fewer incidents than experienced 2010.

In 2011 Portland General Electric hired Culture Change Consultants to conduct a Safety Culture Assessment. The Assessment was a learning exercise to understand of the employee’s perception of the safety culture at PGE. The Assessment was used as a tool to gain insights about the effect the company safety program has on employees. The goal was to understand the safety culture in a way that it leads to targeted actions for improvement. Safety begins with management modeling by example, providing employees with opportunities to improve safety values, and leading the charge to become a world class safety organization. Their Assessment identified strengths to be celebrated and weaknesses to be addressed. For the most part, PGE personnel share beliefs that: safety is a personal responsibility; working safely helps the business; and it’s important to work together, look after and support one another and support each other to perform work safely.

Safety is further communicated from the executive level. Each weekly officer meeting starts with a safety moment. A safety moment is the sharing of a tip, experience, or recommended safety action for the good of the order. PGE’s executive leadership has encouraged managers to start all staff and management meetings with a safety moment. Safety starts with each individual being accountable for his own action. The safety moment spreads awareness, and awareness is the foundation for improvement.

Portland General Electric has also adopted a weekly safety conference call. Safety committee members and various members of PGE’s leadership team participate in weekly discussions on various safety topics. Typical conference call topics include a Roll Call, What’s Going Well, Safety Action Item Review, Safety Incident Review for the past week, Near Miss Reporting, Safety Notifications, Safety Alerts, Future Safety Coordinator Topics Coming, Corporate Safety, and Safety Recognition. PGE is serious about becoming world class in its safety record.

B. Performance Measures C1 Customer “At Fault” Complaint Frequency

In 2011, PGE’s OPUC Liaisons fielded 254 customer complaints, a significant reduction from 2010 complaints of 353. Of these, OPUC determined 14 “at fault” designations resulting in PGE’s 2011 total “at-fault” complaint rate at 0.0171 per 1,000 customers. It is standard practice to rigorously review all at fault complaints for root cause and lessons learned.

Year	Logged Complaints	Total Customers	At Faults	At Fault Frequency
2009	298	814,000	16	0.0197
2010	353	815,000	24	0.0294
2011	254	820,676	14	0.0171

Of the 14 At Fault complaints violations assessed in 2011, the At Fault designation for these violations resulted in 3 Rule violations, 1 Tariff violation and 10 Customer Service violations.

**C. Performance Measure on Reliability:
R1-SAIDI, R2-SAIFI, R3-MAIFI, R4-CAIDI**

Executive Summary

This executive summary provides an overview of the 2011 Reliability Report and highlights key information with comparisons to past years’ data. If there are any questions about this information, please call Richard Goddard at (503) 464-8061.

a. 2011 Reliability

The three-year weighted average for SAIDI, SAIFI, and MAIFI indices for 2011 were 79.1 minutes, 0.61 occurrences and 1.05 occurrences respectively. The SAIDI three-year weighted averages are below the OPUC thresholds, and reflect a reduction from the three-year weighted average reported in 2010.

The five-year service availability for Portland General Electric customers is 99.999%. Continued efforts in 2012 will improve system reliability by focusing on the poorest performing feeders and tap lines, putting processes in place to reduce the length of major outages and investigating outage causes that are trending up.

b. Summary of Reliability indices excluding Major Events

(Major Event Days = March 13th through the 15th for Eastern Region only)

Table 1 below indicates that PGE's system stayed under the OPUC three-year weighted average penalty threshold limits for SAIFI, MAIFI, and SAIDI thresholds.

TABLE 1
Three-year Weighted Average Penalty Threshold Limits

Year	SAIDI (minutes)	SAIFI (occurrences)	MAIFI (occurrences)	**CAIDI (minutes)	Number Of Outages
2011	66	0.51	0.89	129.0	4,535
2010	77	0.65	1.1	118.3	5,454
2009	115	0.81	1.4	141.6	6,354
2008	75	0.73	1.3	102.7	5,817
2007	77	0.71	1.3	108.5	5,994
2006	117	1.06	1.6	110.4	6,930
2005	86	0.83	1.6	103.6	5,560
2004	85	0.8	1.8	106.3	5,582
2003	82	0.8	2.1	102.5	5,366
2002	73	0.65	2.2	112.3	4,935
2001	67	0.65	2.2	103.1	4,558
2000	64	0.62	2.7	103.2	4,040
1999	83	0.78	3.3	106.4	4,216
3 year weighted Average for 2011	79.1	0.61	1.05	128.3	5,175
OPUC Levels for (2011)					
Level 1 Penalty Threshold	105	1.2	5	N/A	N/A
*Level 1 Penalty Threshold- For (2011)	115	1.2	5		

*The OPUC adopted revised thresholds for SAIDI effective 1/1/2011.

**CAIDI equals the annual SAIDI index divided by the annual SAIFI index.

The following methods were used to derive the 2011 reliability data. PGE experienced another relatively mild year. Even though this year was mild, our Eastern Region

experienced one major event. PGE excluded storm outages for March 13th through the 15th for Eastern Region as a major event. High winds swept through the area causing broken limbs and trees to topple into our power lines affecting more than 10% of Eastern Region customers.

1. Correction factors for SAIDI and SAIFI are applied to tap line outages to more accurately reflect actual events. The factors of 0.8 for duration and 0.9 for number of customers have been used since 2004.

Note: Correction factors are not applied to feeder outages or outages affecting fewer than 30 customers. The information regarding number of customers affected and outage duration are more accurate for these types of outages.

2. All outages of five minutes or less are excluded from SAIDI and SAIFI calculations.
3. The three-year weighted averaging formula for 2011 is calculated with 2010 weighted at 50%, 2009 weighted at 30%, and 2008 weighted at 20%.

c. Underperforming Feeder Summary*

**TABLE 2
Number of Feeders Exceeding Underperforming Index**

YEAR	SAIDI # Of Feeders	SAIFI # Of Feeders	MAIFI # Of Feeders	MAIFI ONLY # Of Feeders	*TOTAL Number of Feeders
2011	56	29	11	12	61
2010	78	37	11	7	91
2009	124	44	25	12	136
2008	59	34	16	12	80
2007	71	35	25	17	96
2006	114	86	24	15	143
2005	76	49	33	27	111
2004	67	45	40	26	104
2003	77	45	51	36	116
2002	55	36	37	26	96
2001	51	28	17	12	71
2000	57	33	26	15	77
1999	66	47	N/A	N/A	75

*A feeder can be underperforming for more than one index. In the “MAIFI ONLY” column, a feeder is underperforming only for MAIFI and no other indices. This column was added to show the impact of tracking MAIFI on more feeders every year.

- 7 feeders have been underperforming for each of the last three consecutive years.
- 27 feeders have been underperforming for two out of the last three years.

The number of underperforming feeders decreased in 2011 due to a mild weather year.

d. Impact of Weather without Outage Events on SAIDI

The 10 worst days for SAIDI in 2011 based on total customer hours are shown in Table 3. These 10 days made up 27 % of the total customer minutes and contributed 17.55 minutes to the system SAIDI number listed in Table 1.

TABLE 3
12 WORST DAYS FOR SAIDI IN 2011
(Without Major Events)

Rank	Date	Customer-Minutes	Minutes Contributed to SAIDI Total	Largest Contributor to SAIDI
1	2/28/11	3,808,174	4.55	Weather
2	3/13/11	3,568,590	4.26	Weather
3	3/1/11	2,422,497	2.89	Weather
4	2/9/11	1,846,528	2.20	Public
5	2/19/11	1,402,729	1.67	Loss of Supply - Substation
6	5/24/11	1,185,233	1.41	Equipment
7	1/17/11	1,155,527	1.38	Vegetation
8	4/25/11	1,067,102	1.27	Vegetation
9	11/16/11	1,056,318	1.26	Vegetation
10	9/26/11	1,012,273	1.21	Car Hit Pole

D. Performance Measure X1 – Vegetation Management Program

Completed 98% of scheduled line miles during 2011

Line Miles Scheduled: 3300

Line Miles Trimmed: 3248

Note: PGE Foresters monitor all trimming projects on a continuous basis using QA performance logs.

Budget Plan and Actual Expenditures:

2011 Actual versus budgeted YTD:

	<u>Actual</u>	<u>Budget</u>
	\$13,058,912	\$12,718,547
PGE Supervision and Administration:	\$649,431	
Maintenance Cycle Trimming:	\$10,406,812	94%
Customer Assistance Trimming:	\$442,843	4%
Line Construction Trimming:	\$221,422	2%

Vegetation Management Personnel Information:

	2011	2010	2009
a. Company foresters:	8	8	8
b. Company tree trimmers and arborists; and	0	0	0
c. Contractor tree trimmers and arborists.	95	79	80

E. Performance Measure X2 Pole & Overhead Facilities Inspection, Testing, and Maintenance Program

2011 was our fifth year of the Facility Inspections and Treatment to the National Electrical Safety Code (FITNES) III 10-year cycle. 2011 FITNES overhead inspection and treatment was performed on 29,965 distribution and transmission poles and associated overhead distribution facilities (11% of 270,000 wood poles included in 2011 FITNES Overhead Program).

a. Corrections of Violations Discovered During Inspections

- FITNES Program timelines are established and maintained to perform corrections, repairs, or replacement work within two (2) years of violation discovery. 11,000 violations were corrected in 2011.
- Violations deemed an immediate hazard received expedited attention to ensure treatment/correction within 30 days.

b. PGE Quality Control

- Accuracy of the inspection is ensured by performing QC on a random sampling pulled on average weekly.
- QC was also performed on 880 corrected violations (8% of total 11,000 corrections).

c. Program Expenditures

- 2011 Pole and Overhead Facilities Inspection, Testing and Pole Treatment:
\$1,028,200 (Budget) \$1,029,000 (Actual)

d. Repair and replacement of Facilities

- 2011 Pole and Overhead Facilities Repair
\$1,467,000 (Budget) \$498,000 (Actual)
- 2011 Replacement of Facilities (Capital)
\$765,000 (Budget) \$929,000 (Actual)

e. 2012 Plans

- PGE plans to stay on the Cycle 3 FITNES plan for Pole and OH Inspections and inspect approximately 28,000 poles and related OH facilities in 2012.

F. Performance Measure X3- Other Programs

Marina Inspections

Forty seven (47) marinas (100%) were inspected during both high and low water marks. During high water mark twelve marinas were found to have violations. Four of the twelve violations have been corrected for a completed for a 33% completion rate. The balance of the eight is in design. During low water mark four marinas were found to have violations. All four violations have been corrected for a 100% completion rate.

Appendix 21st Century Service Quality Indicators

1. Customer Survey Data

PGE collects survey data from Residential, Business, and Large Industrial (Key) customers to assess how customers evaluate PGE's performance across several categories of activities. These activities include electricity reliability and restoration performance, customer service relationships, perceptions of management, communications, and pricing relationships with customers. The surveys reveal relative strengths and weaknesses in the Company's performance, and opportunities for improvement.

On a quarterly basis, 400 to 600 residential customers are surveyed by Market Strategies International (MSI), a market research firm with over 100 U.S. energy utility clients. Customer data is collected, analyzed, benchmarked, and reported to PGE with a maximum sampling error of +/- 5% at the 95% confidence level. Quarter-to-quarter and year-to-year comparisons are made based on the percent total positive (%6-10) scores on an anchored 11-point 0-10 scale where 0 means the respondent has a "Very Unfavorable" impression, 10 means the respondent has a "Very Favorable" impression of PGE, and 5 means that the respondent has neither a favorable nor unfavorable impression.

Business customer data is collected in much the same way as for residential customers. On a semiannual basis (Q2 and Q4), MSI collects customer data from 300-400 PGE business customers and analyzes, benchmarks, and reports their findings to PGE management, based on the percent total positive (%6-10) scores on the same 0-10 scale as used for Residential customer data.

For PGE's Key Customers, perceptions of the Company are collected through executive interviews, benchmarked, and reported on a yearly basis by TQS Research, Inc. For 2011, 95 PGE Key Customer interviews were completed and the data benchmarked against that of 52 other U.S. utilities. For each question asked, TQS utilizes a 10-point anchored scale with 1 being *Very Dissatisfied* and 10 being *Very Satisfied*. TQS then sums and reports the percent of customers answering with 8, 9, or 10 (%8-10).

2. Ranking Methodology

National and peer comparison groups are not identical for MSI and TQS research results, although there is significant overlap in the utilities included in both. MSI includes roughly 95 utilities serving residential and 85 serving business customers in their national databases. The TQS national comparison database contains 52 utilities and compares their performance with respect to their Key Customers only. All performance “rank” comparisons shown are made among the appropriate utility groups.

Utilities in the peer comparison groups for PGE are shown below for both MSI and TQS, with nine and six utilities, respectively.

MSI	TQS
NV Energy North	X
NV Energy South	X
Seattle City Light	
Southern CA Edison	X
Portland General Electric	X
Pacific Gas & Electric	X
Pacific Power	X
Puget Sound Energy	
Rocky Mountain Power	
San Diego Gas & Electric	X

3. Customer Satisfaction Results

MSI: “Based on your overall experience as a customer of PGE, how would you rate the company on a 0-10 scale, where a 0 means you are extremely dissatisfied and 10 mean you are extremely satisfied?”

TQS: “Overall, how satisfied are you with the full package of electrical services provided by your local utility?” See PGE Customer Satisfaction results on the following page.

PGE Customer Satisfaction Results

	Residential (MSI) (%6-10)	General Business (MSI) (%6-10)	Key Customers (TQS) (%8-10)
2011	84%	93%	90.5%
2010	84%	94%	81%
2009	85%	92%	72%
2008	85%	94%	82%
2007	83%	92%	75%
2006	82%	92%	76%
2005	81%	93%	64%
2004	80%	87%	58%

Year End 2011 Rank on Customer Satisfaction

National	24 th /100	5 th /90	9 th /52
Peers	4 th /10	1 st /9	NA

4. System Reliability Results

MSI: “Thinking about the overall reliability of electric service to your [home/business], on a 0-10 scale, where 0 means you are extremely dissatisfied and 10 means you are extremely satisfied, how satisfied are you with the overall reliability of electric service?”

TQS: “Concerning the reliability of electric power, please rate the reliability at this site on the following... overall how satisfied are you with the reliability of electric power?”

PGE System Reliability

	MSI: Residential (%6-10)	General Business (MSI) (%6-10)	Key Customers (TQS) (%8-10)
2011	92%	95%	88.4%
2010	96%	96%	96%
2009	94%	98%	87%
2008	95%	96%	86%
2007	94%	95%	85%
2006	95%	94%	88%
2005	94%	94%	83%
2004	93%	91%	71%

Year End 2011 Rank on System Reliability

National	12 th /99	2 nd /85	11 th /52
Peers	3 rd /10	1 st /9	NA

5. Safety Results

MSI: “Using this same 0-10 scale, how would you rate PGE in terms of... helping customers use electricity safely in their [homes/businesses]?”

PGE Safety

	Residential (MSI) (%6-10)	General Business (MSI) (%6-10)
2011	76%	83%
2010	75%	79%
2009	76%	70%
2008	76%	64%
2007	77%	70%
2006	79%	67%
2005	74%	62%
2004	74%	60%

6. IEEE 2.5 BETA Method

The 2.5 Beta Method looks at the daily SAIDI values of a utility and compares them to a threshold value (T-MED) obtained by performing a logarithmic distribution analysis on the previous 5 years of outage data. Calculating a T-MED value allows the utility to identify and study days in which the distribution system experienced stresses beyond what is observed under daily operation. Per IEEE Standard 1366-2003, the steps to obtain major event day threshold (T-MED) are outlined below.

IEEE GUIDE FOR ELECTRIC POWER DISTRIBUTION RELIABILITY INDICES	IEEE Std 1366-2003
<p>a) Collect values of daily SAIDI for five sequential years ending on the last day of the last complete reporting period. If fewer than five years of historical data are available, use all available historical data until five years of historical data are available.</p> <p>b) Only those days that have a SAIDI/Day value will be used to calculate the T_{MED} (do not include days that did not have any interruptions).</p> <p>c) Take the natural logarithm (\ln) of each daily SAIDI value in the data set.</p> <p>d) Find α (Alpha), the average of the logarithms (also known as the log-average) of the data set.</p> <p>e) Find β (Beta), the standard deviation of the logarithms (also known as the log-standard deviation) of the data set.</p> <p>f) Compute the major event day threshold, T_{MED}, using equation (25).</p> $T_{MED} = e^{(\alpha + 2.5 \beta)} \quad (25)$ <p>g) Any day with daily SAIDI greater than the threshold value T_{MED} that occurs during the subsequent reporting period is classified as a major event day.</p> <p>Activities that occur on days classified as major event days should be separately analyzed and reported.</p>	

Since 2010, OPUC, PGE, Pacific Corp., and Idaho Power collaborated on incorporating the IEEE-2.5 Beta method for calculating Major Event Days into Oregon's Electric Service Reliability Rules. The new rules became effective January 1, 2012. The 2012 IEEE BETA study is shown below. See the table entitled "Portland General Electric IEEE-1366 BETA Study 4/30/2012."

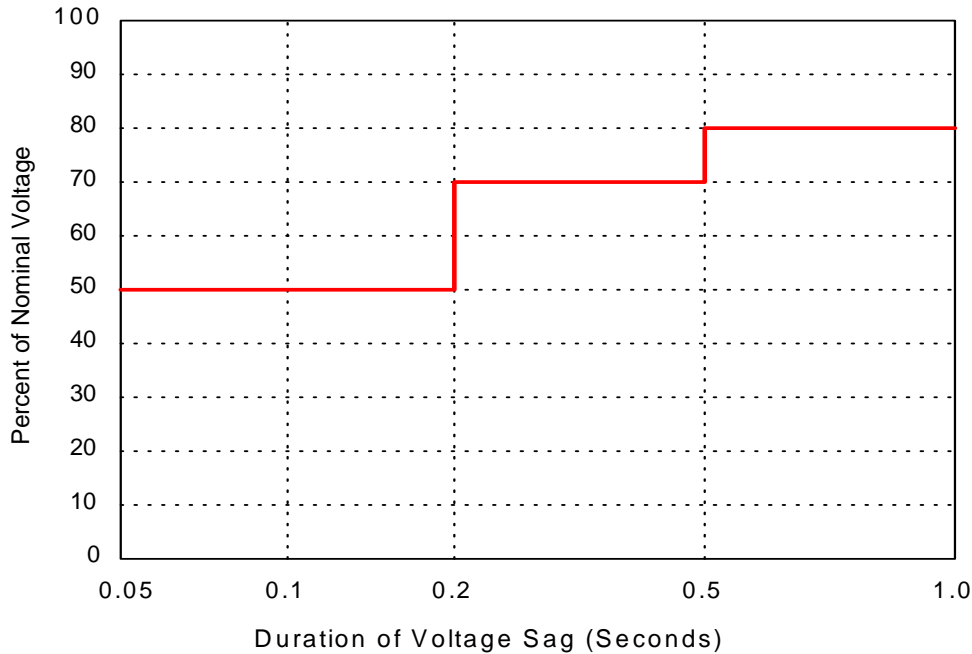
7. Portland General Electric IEEE-1366 BETA Study 4/30/2012

Year	Company Study				Regional Study						Results			
	Excluded Days per OPUC 10% Exclusion Rule	Excluded Days per Beta Method	SAIDI Contribution	TMED (Company)	Region	Excluded Days per Beta Method	SAIDI Contribution	TMED (Region)	Year End SAIDI per Region per Beta Method	Company SAIDI Contribution per Beta Method per Region	Company Yearly SAIDI per Beta Method (Analyzed as Regions)	Yearly SAIDI per Current Method	Company Yearly SAIDI per Beta Method (Analyzed as Company)	
2007	11/12/2007			3.83	Central	11/12/2007	9.49	8.74	68.85	18.58	68.99	77	66.44	
	11/13/2007	11/12/2007	13.58		Eastern	4/22/2007	14.48	11.66	75.73	15.64				
	11/14/2007	12/3/2007	3.97		Southern	11/12/2007	33.89	8.00	80.28	16.16				
					Western	11/12/2007	8.45	7.94	57.74	18.61				
2008				3.67	Central	12/21/2008	162.53	8.40	66.40	17.94	76.76	75	80.54	
					Central	12/22/2008	145.10							
					Central	12/23/2008	32.52							
					Central	12/24/2008	20.99							
					Eastern	2/12/2008	17.44	10.86	102.53	21.16				
	12/21/2008				Eastern	12/21/2008	740.72							
	12/22/2008	12/21/2008	376.33		Eastern	12/22/2008	224.95							
	12/23/2008	12/22/2008	142.26		Eastern	12/23/2008	45.54							
	12/24/2008	12/23/2008	45.57			Eastern	12/24/2008	87.16	9.00	57.94				11.57
	12/25/2008	12/24/2008	43.23			Eastern	12/25/2008	16.11						
	12/26/2008	12/24/2008	10.00			Eastern	12/21/2008	705.35						
	12/27/2008	12/25/2008			Southern	12/22/2008	146.39							
						Southern	12/23/2008	75.11	7.50	80.55				26.09
						Southern	12/24/2008	66.93						
						Southern	12/25/2008	25.36						
						Southern	12/26/2008	9.03						
				Western	12/21/2008	119.67	8.00	78.08	21.22					
				Western	12/22/2008	84.66								
				Western	12/23/2008	38.27								
				Western	12/24/2008	19.19								
2009				4.08	Central	6/4/2009	8.93	12.68	128.50	26.37	89.68	114.9	74.25	
					Central	1/17/2009	8.06							
					Central	11/22/2009	10.20							
					Eastern	1/17/2009	214.27	9.76	66.55	13.33				
	1/17/2009	1/17/2009	4.68		Eastern	1/18/2009	114.66							
	1/18/2009	1/18/2009	24.91		Eastern	11/22/2009	16.66							
	1/19/2009	3/15/2009	4.98			Southern	6/4/2009	49.04	8.43	81.80				26.36
	6/4/2009	5/2/2009	8.30			Southern	11/22/2009	10.89						
		6/4/2009	19.42		Western	1/17/2009	8.87							
						Western	5/2/2009	17.15	8.54	54.46				14.87
				Western	5/17/2009	9.87								
				Western	6/4/2009	17.77								
2010		4/5/2010	4.92	4.51	Central	4/5/2010	8.70	12.81	94.20	19.31	69.46	77.00	72.27	
					Central	12/17/2010	8.89							
					Eastern	8/20/2010	14.31							
					Southern	N/A	N/A							
					Western	N/A	N/A							
2011 YTD				4.36	Central	N/A	N/A	8.45	55.56	15.58	80.74	65.95	57.25	
	3/13/2011	2/28/2011	4.55		Central	2/28/2011	34.54	12.57	73.97	15.16				
	3/14/2011	3/13/2011	26.61		Eastern	3/13/2011	109.07							
	3/15/2011	3/14/2011	6.79		Eastern	3/14/2011	39.17							
						Southern		9.38	79.46	15.91				
						Western		9.56	44.11	14.09				

■ Major Event Excluded for Southern Region Only.
■ Major Event Excluded for Eastern Region Only.
■ Major Event Excluded ALL Regions.

8. SARFI

System Average RMS Variation Frequency Index (SARFI) represents the average number of RMS sag events experienced by a customer over a time period, where the disturbances are those with a magnitude less than the semiconductor equipment voltage sag ride-through capability curve specified in SEMI F47-0200 (below).



The Semiconductor Equipment and Materials International (SEMI) developed the SEMI F47-0200 standard for semiconductor process equipment voltage sag immunity. The standard specifies minimum voltage sag ride-through requirements of semiconductor processing equipment. A voltage sag event is defined as a short term decrease in voltage (10 - 90% of nominal) ranging between 0.5 cycles and one minute. Voltage sags can be caused by bad weather, tree into line, car hit pole, failed equipment on PGE's system, or events originating outside PGE's system.

In 2011, PGE's Large Customer Quality and Reliability Program (QRP) tracked voltage sag events against the SEMI F47 curve for 22 customers who have unique power quality and reliability requirements.

The PGE Quality and Reliability Program (QRP) is a focused effort to provide a high level of service reliability to a group of customers determined to have unique reliability needs. The QRP program includes monitoring and reporting of power quality and reliability metrics for 22 large customers and customers located within our three Reliability Areas. These Reliability Areas are Downtown Salem Core, Hillsboro-Sunset, and Downtown Portland Network.

Additional objectives of the QRP Program include:

- working with stakeholders to review the facilities serving QRP customers and identify potential system improvements
- developing detailed maintenance plans including enhanced system inspections and testing.
- managing implementation of identified capital improvements
- performing root cause investigations and identifying preventive actions for significant reliability events

Through this effort, PGE is providing a higher level of service excellence to meet the service quality and reliability needs of an increasingly sophisticated and demanding customer base.

Events below the curve are considered a SARFI event.
SARFI is calculated using the following formula:

$$SARFI = \sum \frac{\text{Total Number of Events}}{\text{Total Number of Customers}}$$

The 2011 SARFI results reflect 6 events.

Year	SEMI F47 (occurrences)	SEMI F47 (occurrences originating inside PGE system)	SARFI (total)	SARFI (originating inside PGE system)
2011	6	6	0.27	0.27

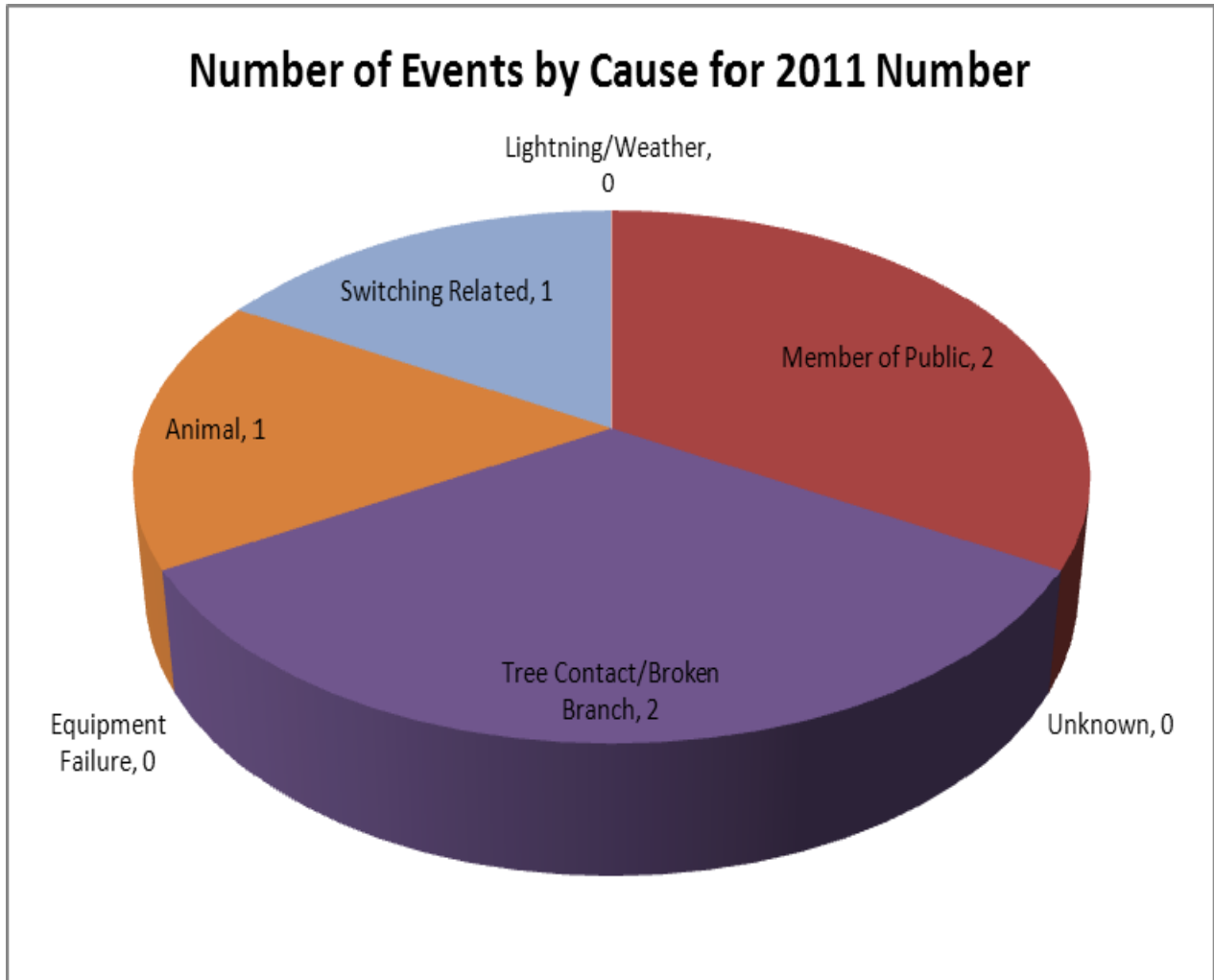
Please see the table on next page for a summary of SARFI SEMI results for 2011.

SARFI SEMI results for 2011

Event Date	Number of Customers Impacted	Description of Event	%* Sag / Seconds	Follow Up
2/12/2011	1	Urban – Gains 13kV relayed to lockout due to limb on line.	51% / 0.646	Removed limb and re-energized feeder. Distribution engineer to design jobs for covered wire installation on Urban-Gains feeder
3/5/2011	1	Blown line fuse on Tektronix – Hocken 13kV. A balloon was found tangled in primary lines	38% / .0052	Removed balloon and re-fused tap line.
4/25/2011	1	Tektronix-South 13kV relayed to lockout. A balloon was found tangled in primary lines.	25% / 0.49	Removed balloon and re-energized feeder
6/23/2011	4	Sunset-Cornell 13kV relayed to lockout. Mouse got into padmount switch causing a switch failure.	7% / 0.688	Replace failed switch. Evaluating options of nonconductive materials to cover cable terminations and/or replacing metal support structure for barriers with a nonconductive material.
Event eDat	Number of Customers Impacted	Description of Event	%* Sag / Seconds	Follow Up
8/14/2011	1	This voltage sag occurred during the process of transferring customer to their alternate feeder. The transfer was made to enable crews repair a failing disconnect switch inside the substation.	30% / 0.29	None required
11/22/2011	1	Limb on line resulted to line recloser lockout on Wilsonville-West 13kv.	80% / 0.71	Cleared limb and made repairs to conductor and closed recloser.

* % Sag is the percentage of nominal voltage remaining during event

The graph below shows the sources for the 6 SARFI events which occurred during 2011:



2011 NESC Violations

Starting in 1999, a random sample of newly constructed poles was inspected by trained personnel looking for any National Electric Safety Code (NESC) violation. Quarterly, the results are reviewed with line crew management in each Region. The same crew that built a given pole is sent back to correct any violation identified.

Steady progress has been achieved over the last 10 years in construction to the NESC. Annual training for line crews includes a review of the most common violations found.

In 2011, 1038 newly constructed poles were randomly selected and individually inspected. On average, 0.021 NESC violations were found per pole. Stated another way, 9 out of 10 were constructed in complete accordance with the NESC.

REGION	POLES	ABANDONED ANCHOR	BUILDING CLEARANCE	B/O GROUND	CONDUIT DAM/BRKTS	CLEARANCE PEDESTRIAN	CLIMBING SPACE	GROUND ROD	WH CLEARANCE	GUY BONDING	GUY SLACK	INSULATOR BROKEN	WIRE OFF INSULATOR	STRUCTURE CLEARANCE	LOOSE WIRE	RISER GROUNDING	SECONDARY CLEARANCE	DRIVEWAY CLEARANCE	AG CLEARANCE	POLE-COM CLEARANCE	ROAD CLEARANCE	RAILROAD CLEARANCE	SERVICE ATTACHMENT	MIDSPAN COM CLEARANCE	SERVICE CLEARANCE	VERTICAL CLEARANCE	TOTAL VIOLATIONS	VIOLATIONS PER POLE
		AH	BC	BG	CD	CP	CS	DG	DL	GI	GS	IB	IW	LC	LW	MR	NC	OC	OG	PC	RC	RR	SA	SC	SD	VC		
PSC	95																										0	0.000
ORE CITY	157									1													1		1		3	0.019
EASTERN	99																										0	0.000
SOUTHERN	486				5		3								8	1											17	0.035
WESTERN	201				1																						1	0.005
TOTAL	1038				6		3			1				8	1								1		1	21	0.020	