

RE 113 e-FILING REPORT COVER SHEET

REPORT NAME:

PGE 2014 Annual Reliability Report

COMPANY NAME:

Portland General Electric

DOES REPORT CONTAIN CONFIDENTIAL INFORMATION?

Yes, will provide a CD to the OPUC of the designated material.

If known, please select designation:

RE (Electric)

Report is required by:

OAR 860-023-0151

Is this report associated with a specific docket/case?

No

Key words:

2014 Annual Reliability Report

If known, please select the PUC Section to which the report should be directed:

Electric Rates and Planning



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

April 30, 2015

Public Utility Commission of Oregon  
Attn: Filing Center  
3930 Fairview Industrial Drive SE  
P.O. Box 1088  
Salem, OR 97308-1088

**RE: PGE 2014 Annual Reliability Report**

Pursuant to OAR 860-023-0151, PGE hereby submits the Company's annual report via electronic only; the 2014 Annual Reliability Report.

Attachment A provides Section III, Feeder Performance Summary and Section VIII 2014 Feeder Information which will be sent on a CD. Attachment A should be treated as a confidential submission under OAR 860-001-0070 and is provided in a separate sealed envelope marked "Confidential."

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@pge.com](mailto:pge.opuc.filings@pge.com)

Sincerely,

A handwritten signature in black ink, appearing to read "Karla Wenzel", written in a cursive style.

Karla Wenzel  
Manager, Pricing and Tariffs

Enclosure  
cc: Lori Koho, OPUC



# **Portland General Electric 2014 Annual Reliability Report**



**January 1, 2014 through December 31, 2014**

# **Section I**

## **Report Summary**

The Annual Reliability Report provides distribution system performance information based on service interruptions to PGE customers. The report is utilized to understand the overall reliability of the distribution system and to identify areas of improvement and excellence. The information in this report is also used to inform the system performance values in the Service Quality Measure Report provided to the Oregon Public Utility Commission.

The overall performance of PGE's distribution system is represented by the following indices<sup>1</sup>: System Average Interruption Duration Index (SAIDI), System Average Interruption Frequency Index (SAIFI), and Momentary Average Interruption event Frequency Index<sup>2</sup> (MAIFIE).

PGE's distribution system performance calculations are based on the IEEE 1366 TMED (Threshold Major Event Day) methodology. The data utilized for the calculations is captured from PGE's Outage Management System (OMS) and confirmed via a multi-step evaluation process. The results of the calculations are evaluated on a monthly basis and confirmed via a standardized review process.

Per the PGE IEEE 1366 TMED methodology, PGE excluded the following dates<sup>3</sup> from the 2104 distribution system performance indices: January 11th, March 6th, September 24th, October 13th, October 25th - 26th, November 11th - 13th, and December 11th, 2014.

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<sup>1</sup> Details regarding the performance indices can be found in Reliability Measure Definitions section of the Appendix

<sup>2</sup> MAIFIE calculations are limited to feeders with remote monitoring equipment

<sup>3</sup> Details for the IEEE 1366 TMED methodology can be found in the Appendix section.

## Corporate Annual Summary Without Major Events

Year	Reported Outages	SAIFI Outages per Customer Served	SAIDI Average Annual Outage Duration per Customer (min)	MAIFle Momentary Average Interruption Frequency Index
2014	5,832	0.69	93	1.3
2013	4,495	0.45	62	0.9
2012	5,093	0.55	72	1.1
2011	4,535	0.51	66	0.9

## Corporate Annual Summary With Major Events

Major Events	Year	Reported Outages	SAIFI Outages per Customer Served	SAIDI Average Annual Outage Duration per Customer (min)	MAIFle Momentary Average Interruption Frequency Index
Yes	2014	7,696	1.20	245	1.3
Yes	2013	5,069	0.57	205	0.9
Yes	2012	6,051	0.72	136	1.1
Yes	2011	4,692	0.57	95	0.9

SAIDI numbers are rounded to the nearest whole number.

## 2014 Regional Annual Summary Without Major Events

Region	Reported Outages	SAIFI Outages per Customer Served	IEEE 1366/SAIDI Average Annual Outage Duration per Customer (min)	MAIFle Momentary Average Interruption Frequency Index
<b>CENTRAL</b>	1,118	0.65	91	1.5
<b>EASTERN</b>	1,561	1.05	145	1.9
<b>SOUTHERN</b>	1,651	0.40	67	0.9
<b>WESTERN</b>	1,502	0.67	78	1.1
<b>PGE:</b>	<b>5,832</b>	<b>0.69</b>	<b>93</b>	<b>1.3</b>

## 2014 Regional Annual Summary With Major Events

Region	Reported Outages	SAIFI Outages per Customer Served	IEEE 1366/SAIDI Average Annual Outage Duration per Customer (min)	MAIFle Momentary Average Interruption Frequency Index
<b>CENTRAL</b>	1,423	1.04	215	1.5
<b>EASTERN</b>	2,129	1.98	364	1.9
<b>SOUTHERN</b>	2,173	0.82	224	0.9
<b>WESTERN</b>	1,973	1.08	208	1.1
<b>PGE:</b>	<b>7,696</b>	<b>1.20</b>	<b>245</b>	<b>1.3</b>

Major Event = "Major Event" designates an event that exceeds the reasonable design and or operational limits of the electric power system. A "Major Event" includes at least one Major Event Day in which the daily SAIDI exceeds a threshold value, TMED.

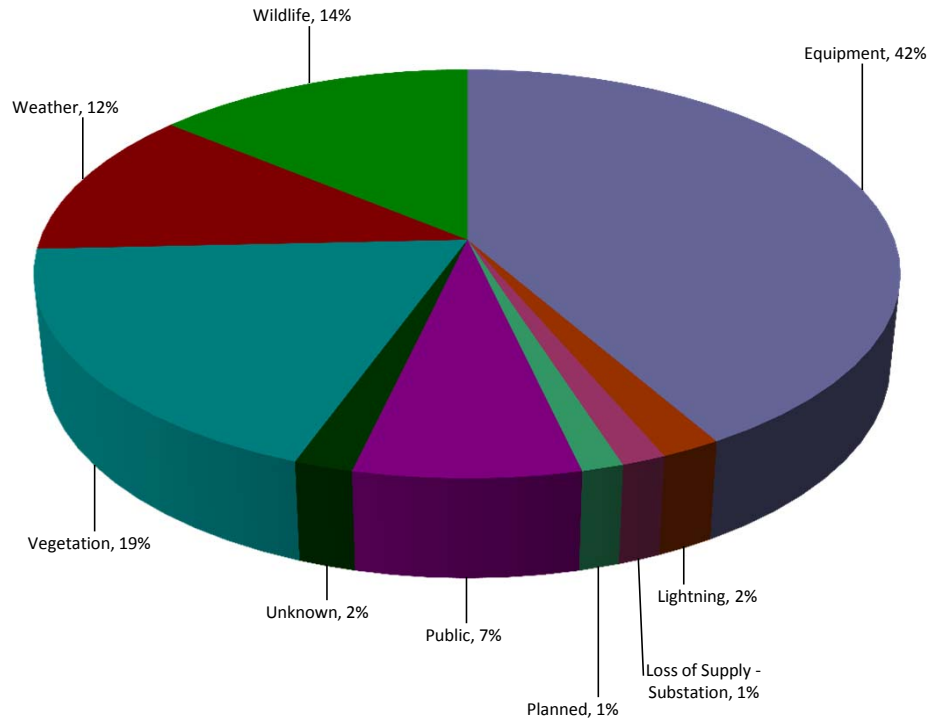
NOTE: Major Event Days were: January 11th, March 6th, September 24th, October 13th, October 25th-26th, November 11th - 13th, and December 11th, 2014,

## **Section II**

### **Outage Analysis**

This section provides graphical representation of 2014 outage causes by both customer hours and event type. The intent of this section is to provide high-level analysis of the outages that result in the highest number of customer hours and the type of events with the highest frequency.

# Outages by Cause - Count -2014

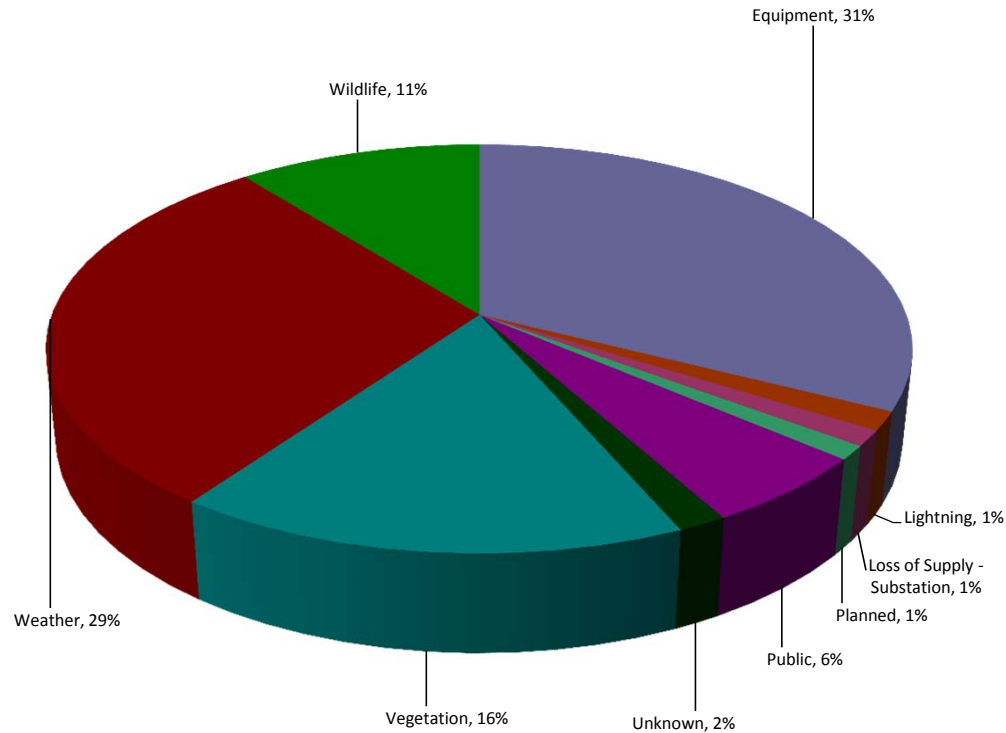


<b>Equipment</b>	2416	41.4%
<b>Lightning</b>	112	1.9%
<b>Loss of Supply -</b>	83	1.4%
<b>Loss of Supply -</b>	20	0.3%
<b>Other</b>	12	0.2%
<b>Planned</b>	78	1.3%
<b>Public</b>	418	7.2%
<b>Unknown</b>	112	1.9%
<b>Vegetation</b>	1089	18.7%
<b>Weather</b>	682	11.7%
<b>Wildlife</b>	810	13.9%
<b>Total:</b>	5832	100.0%

<b>Equipment:</b>	<b>Total:</b>	<b>2416</b>	
Cutout/Fuse/Arrestor Failure	755	31.3%	
Meter Problem Failure	12	0.5%	
OH Clamp Failure	76	3.1%	
OH Conductor Failure	253	10.5%	
OH Transformer Failure	255	10.6%	
Pole Failure	4	0.2%	
Pole Hardware Failure	39	1.6%	
Protective Fuse Operation	245	10.1%	
Switch/Recloser Failure	20	0.8%	
UG Clamp Failure	1	0.0%	
UG Conductor Failure	577	23.9%	
UG Hardware Failure	30	1.2%	
UG Transformer Failure	149	6.2%	
<b>Vegetation:</b>	<b>Total:</b>	<b>1089</b>	
Equip Damage/Tree Cut/Felled	17	1.6%	
Hay On Line	2	0.2%	
Tree-Broken Limb/Top	992	91.1%	
Tree Uprooted	65	6.0%	
Tree-Burning	13	1.2%	



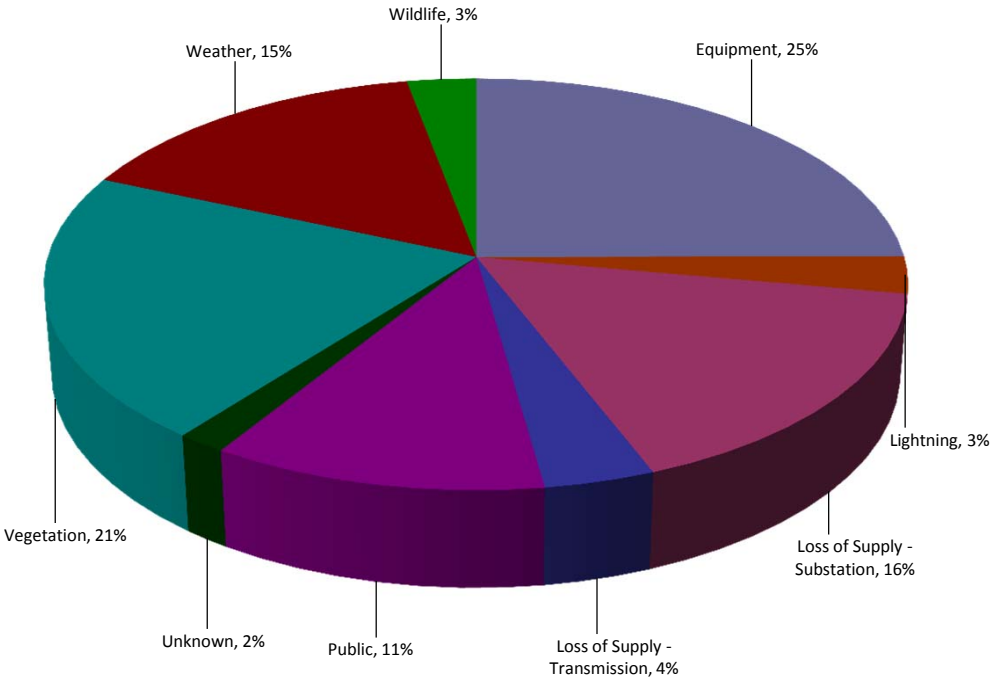
# Outages by Cause Count -With MED -2014



<b>Equipment</b>	2485	32.3%
<b>Lightning</b>	114	1.5%
<b>Loss of Supply</b>	93	1.2%
<b>Loss of Supply</b>	20	0.3%
<b>Other</b>	13	0.2%
<b>Planned</b>	83	1.1%
<b>Public</b>	431	5.6%
<b>Unknown</b>	123	1.6%
<b>Vegetation</b>	1259	16.4%
<b>Weather</b>	2257	29.3%
<b>Wildlife</b>	818	10.6%
<b>Total:</b>	7696	100.0%

<b>Equipment:</b>	<b>Total:</b>	<b>2485</b>
Cutout/Fuse/Arrestor Failure	769	30.9%
Meter Problem Failure	12	0.5%
OH Clamp Failure	79	3.2%
OH Conductor Failure	274	11.0%
OH Transformer Failure	258	10.4%
Pole Failure	5	0.2%
Pole Hardware Failure	41	1.6%
Protective Fuse Operation	252	10.1%
Switch/Recloser Failure	23	0.9%
UG Clamp Failure	1	0.0%
UG Conductor Failure	592	23.8%
UG Hardware Failure	30	1.2%
UG Transformer Failure	149	6.0%
<b>Vegetation:</b>	<b>Total:</b>	<b>1259</b>
Equip Damage/Tree Cut/Felled	18	1.4%
Hay On Line	2	0.2%
Tree-Broken Limb/Top	1144	90.9%
Tree-Uprooted	80	6.0%
Tree-Burning	15	1.2%

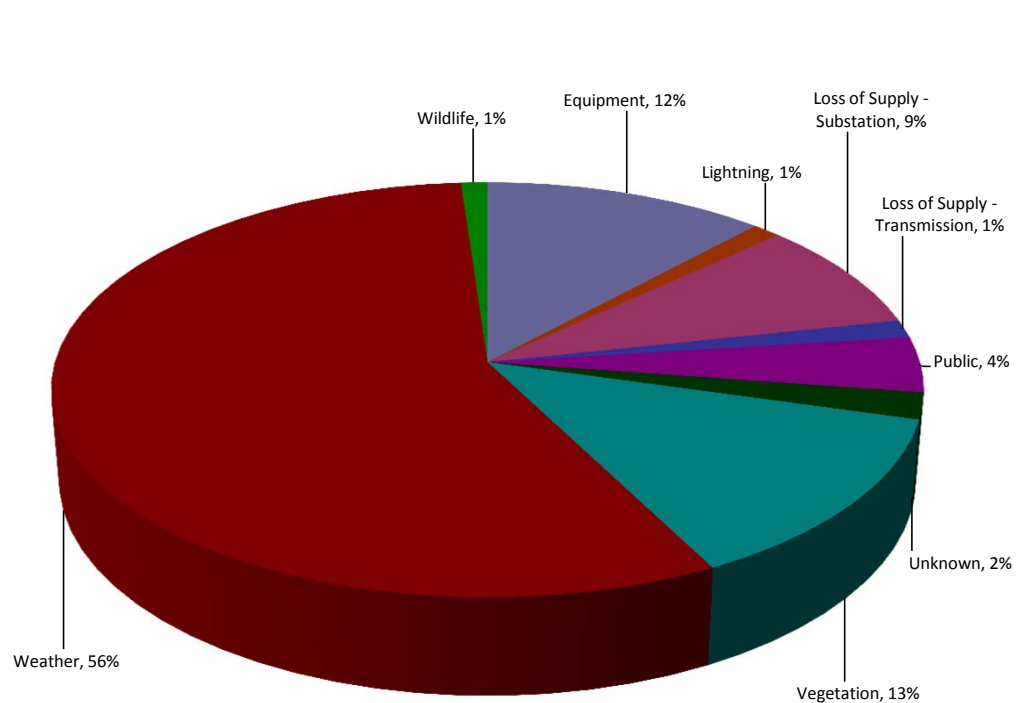
# Outages by Cause - Customer Hours -2014



<b>Equipment</b>	334,559	24.8%
<b>Lightning</b>	38,912	2.9%
<b>Loss of Supply -</b>	217,118	16.1%
<b>Loss of Supply -</b>	49,130	3.6%
<b>Other</b>	6,221	0.5%
<b>Planned</b>	6,644	0.5%
<b>Public</b>	146,170	10.8%
<b>Unknown</b>	22,810	1.7%
<b>Vegetation</b>	281,929	20.9%
<b>Weather</b>	205,412	15.2%
<b>Wildlife</b>	39,403	2.9%
<b>Total:</b>	1,348,308	100.0%

<b>Equipment:</b>	<b>Total:</b>	<b>334,559</b>	
Cutout/Fuse/Arrestor Failure	21,061	6.3%	
Meter Problem Failure	164	0.0%	
OH Clamp Failure	4,008	1.2%	
OH Conductor Failure	92,905	27.8%	
OH Transformer Failure	10,334	3.1%	
Pole Failure	18	0.0%	
Pole Hardware Failure	19,041	5.7%	
Protective Fuse Operation	5,525	1.7%	
Switch/Recloser Failure	13,964	4.2%	
UG Clamp Failure	2	0.0%	
UG Conductor Failure	133,327	39.9%	
UG Hardware Failure	6,972	2.1%	
UG Transformer Failure	27,238	8.1%	
<b>Vegetation:</b>	<b>Total:</b>	<b>281,929</b>	
Equip Damage/Tree Cut/Felled	3,390	1.2%	
Hay On Line	35	0.0%	
Tree-Broken Limb/Top	248,703	88.2%	
Tree-Uprooted	27,019	10.0%	
Tree-Burning	2,781	1.0%	

# Outages by Cause - Customer Hours -With MED - 2014



<b>Equipment</b>	420,902	11.9%
<b>Lightning</b>	41,939	1.2%
<b>Loss of Supply</b>	303,688	8.6%
<b>Loss of Supply</b>	49,130	1.4%
<b>Other</b>	6,137	0.2%
<b>Planned</b>	7,811	0.2%
<b>Public</b>	149,701	4.2%
<b>Unknown</b>	71,453	2.0%
<b>Vegetation</b>	459,416	13.0%
<b>Weather</b>	1,990,931	56.2%
<b>Wildlife</b>	39,520	1.1%
<b>Total:</b>	<b>3,540,628</b>	<b>100.0%</b>

<b>Equipment:</b>	<b>Total:</b>	<b>420,902</b>	
Cutout/Fuse/Arrestor Failure	25,553	6.1%	
Meter Problem Failure	164	0.0%	
OH Clamp Failure	4,252	1.0%	
OH Conductor Failure	113,457	27.0%	
OH Transformer Failure	10,806	2.6%	
Pole Failure	27	0.0%	
Pole Hardware Failure	19,669	4.7%	
Protective Fuse Operation	17,008	4.0%	
Switch/Recloser Failure	60,890	14.5%	
UG Clamp Failure	2	0.0%	
UG Conductor Failure	134,886	32.0%	
UG Hardware Failure	6,972	1.7%	
UG Transformer Failure	27,238	6.5%	
<b>Vegetation:</b>	<b>Total:</b>	<b>459,416</b>	
Equip Damage/Tree Cut/Felled	3,551	0.8%	
Hay On Line	35	0.0%	
Tree-Uprooted	49,304	11.0%	
Tree-Broken Limb/Top	394,499	85.9%	
Tree-Burning	12,026	2.6%	

### SECTION III

#### FEEDER PERFORMANCE SUMMARY

This section provides a summary of reliability indices by Region and Feeder. The list is sorted in alphabetical order by Region and Feeder Name. Each feeder is classified as one of the following:

P/R Remote  
R Rural  
U Urban

#### Definition of Feeder Classifications

A feeder is designated Urban if 50% or more of the load is inside the Urban Growth Boundary (UGB)

A feeder is designated Rural if one or more of the following apply:

- The load on a feeder is greater than 0.5 MVA per square mile.
- A feeder has more than 100 customers per mile.
- A feeder is serving load inside an incorporated city.
- A feeder is directly adjacent to the UGB with feeder ties into the UGB.

A feeder is Remote if all conditions above do not apply.

The table below displays the individual feeder performance thresholds based on classification

Feeder Classification	SAIDI	SAIFI	MAIFle
P/R Remote	7 hours (420 Minutes)	2.6 Occurrences	15
R – Rural	5 hours (300 Minutes)	2.6 Occurrences	10
U – Urban	2 hours (120 Minutes)	2.0 Occurrences	5

Attachment A  
PGE 2014 Annual Reliability Report

Confidential - Provided on CD Only  
Section III, Feeder Performance Summary  
Section VIII, 2014 Feeder Information

## **SECTION IV**

### **Outages by Cause-Natural**

This section provides the number of customer outages (frequency) and customer outage hours (duration) caused by natural events. The information is presented by feeder and attributed to one of the following causes:

- Adverse Weather
- Lightning
- Animals
- Tree Contacts (Preventable and Non-Preventable)
- Unknown

## 2014 Outages by Cause Natural

Feeder Name	Total Nat		Adverse Envir		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
1 ABERN-CLACK HTS														
2 ABERN-ORE CITY	9	590	1	5	1	36	3	14	4	535				
3 ABERNETHY-TRANSIT	6	1,613					4	1,577	2	36				
4 ALDER CT-ANKENY	3	133					3	133						
5 ALDER CT-IRVING														
6 ALDER CT-LINCOLN	7	1,956					5	554	2	1,401				
7 ALDER CT-STARK	2	2					2	2						
8 ALDER CT-TAYLOR	2	171							2	171				
9 ALDER CT-YAMHILL														
10 AMITY 13KV	18	821	6	697	4	10	2	3	4	101			2	10
11 AMITY-BELLEVUE	17	15,223	3	1,283	5	5,399	1	2	7	8,537			1	1
12 ARLETA-52ND ST	11	8,441	3	1,289			4	158	3	6,992			1	2
13 ARLETA-FOSTER	2	17					2	17						
14 ARLETA-HAROLD	4	165	2	77					2	88				
15 ARLETA-POWELL	2	587	1	546			1	42						
16 ARLETA-STEELE	7	625			1	35	5	205	1	385				
17 B LAKE-SUNDIAL	1	468											1	468
18 B LAKE-TOYOTNSO														
19 BANKS 13KV	10	367	2	100	3	29	1	1	4	238				
20 BANKS-CEDAR CYN	16	808	5	234			1	4	10	570				
21 BARNES-BATTLCRK	2	106					1	96	1	10				
22 BARNES-BOONE	1	108							1	108				
23 BARNES-COMMERCL	7	285	4	27	1	7	1	3	1	247				
24 BARNES-SUNNYSID	6	531	5	529			1	1						
25 BELL-FLAVEL	3	69					1	9	2	60				
26 BELL-JOHNNSN CRK														
27 BELL-KENDALL	4	86					3	79					1	7
28 BELL-KING	4	7,775	2	7,012					1	741			1	22
29 BELL-SOUTHGATE	1	95							1	95				
30 BELL-WICHITA	2	139							2	139				
31 BELMONT 4KV														
32 BETHANY-BURTON	5	401					2	17	3	384				
33 BETHANY-GERMANTOWN	6	2,291	2	106			1	32	3	2,153				

Total Nat = Total Natural Caused Outages  
Outs = Outages

Hrs - # of customers \* duration hrs

\*For detailed Tree Contacts, see Outages by Tree Contacts report

## 2014 Outages by Cause Natural

Feeder Name	Total Nat		Adverse Envir		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
34 BETHANY-KAISER	2	10					2	10						
35 BETHANY-LAIDLAW	3	226	1	151					2	75				
36 BETHANY-SPRINGVILLE	2	196							2	196				
37 BETHANY-THOMPSON	2	176					2	176						
38 BETHEL-FRUTLAND	5	98			1	31	2	64	1	3			1	1
39 BETHEL-GEER	8	229	2	14	2	10			4	206				
40 BETHEL-MCLAY	1	1					1	1						
41 BLUE LAKE 13 KV	4	5,096	1	5			2	136					1	4,956
42 BOONS-GOODALL	1	375							1	375				
43 BOONS-KRUSEWAY	3	258					2	210	1	48				
44 BOONS-LK GROVE	10	1,108	2	553			3	49	5	506				
45 BOONS-MT PARK														
46 BOONS-WMBLY PK	12	1,949	2	1,138			4	24	6	787				
47 BORING-282ND AV	15	7,752	5	7,208			4	20	6	524				
48 BORING-CITY	4	116	1	26			2	29	1	61				
49 BORING-TELFORD	14	1,068	5	683			2	2	6	370			1	12
50 BRIGHTWD 13KV	38	11,252	10	8,634			2	87	25	2,477			1	54
51 BRIGHTWD-N BANK	12	9,430	3	2,933					9	6,496				
52 BROOKWOOD 13KV														
53 BROOKWOOD-BRWCK														
54 BROOKWOOD-SUNRS	4	3,733					2	2	2	3,731				
55 BVRTN-ALLEN	10	1,630					7	534	3	1,096				
56 BVRTN-JAMIESON	1	29					1	29						
57 BVRTN-NORTHWEST	3	26					3	26						
58 BVRTN-W SLOPE	1	16					1	16						
59 CANBY-13643	12	148	2	13			4	70	5	64			1	1
60 CANBY-13644	5	42	1	27					4	15				
61 CANBY-BUTTEVLE	3	90	1	3					2	87				
62 CANYON 13KV	11	1,467	1	908			4	156	5	370			1	33
63 CANYON-13114														
64 CANYON-13115														
65 CANYON-13116														
66 CANYON-13117														

Total Nat = Total Natural Caused Outages  
Outs = Outages

Hrs - # of customers \* duration hrs

\*For detailed Tree Contacts, see Outages by Tree Contacts report



## 2014 Outages by Cause Natural

Feeder Name	Total Nat		Adverse		Lightning		Animal		Non-Preventable		Preventable Tree		Unknown	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Tree Outs	Contacts* Hrs	Contacts* Outs	Hrs	Outs	Hrs
67 CANYON-13118PSU														
68 CANYON-13119PSU														
69 CANYON-13120														
70 CANYON-13121														
71 CANYON-13122														
72 CANYON-13123														
73 CANYON-13124														
74 CANYON-13125														
75 CANYON-13133														
76 CANYON-13134														
77 CANYON-13135														
78 CANYON-13136														
79 CANYON-21ST AVE														
80 CANYON-23RD AVE	18	4,465	5	1,061			5	136	7	3,063	1	205		
81 CANYON-BURNSIDE	1	1					1	1						
82 CARVER 13 KV	9	634	1	55	1	29	4	5	2	543			1	1
83 CARVER-ALMOND														
84 CARVER-NORTH	1	8	1	8										
85 CARVER-RIVRBEND														
86 CARVER-SOUTH														
87 CARVER-WOODS	4	1,059	3	1,058					1	1				
88 CEDAR HILLS 13KV														
89 CEDAR-LEAHY	6	1,693	2	1,576			2	26	2	91				
90 CEDAR-SHOP CEN	12	1,648	4	1,156			4	163	4	329				
91 CEDAR-SKYLINE	2	10							2	10				
92 CEDAR-ST VINCNT	2	27	1	24			1	3						
93 CEDAR-SYLVAN	4	638	1	101			1	10	1	1			1	526
94 CLACK-EVELYN														
95 CLACK-GLADSTONE	4	171	1	5			3	166						
96 CLACK-JENNIFER														
97 CLACK-TOLBERT	1	10							1	10				
98 CLAXTAR 13KV	2	423			2	423								
99 CLAXTAR-HAYSVIL	2	22					2	22						

Total Nat = Total Natural Caused Outages  
Outs = Outages

Hrs - # of customers \* duration hrs

\*For detailed Tree Contacts, see Outages by Tree Contacts report

## 2014 Outages by Cause Natural

Feeder Name	Total Nat		Adverse Envir		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
100 CLAXTAR-RIDGE	3	53					2	48	1	5				
101 CNTNNIL 13KV	9	1,898	1	75			4	142	4	1,682				
102 CNTNNIL-BARKER	9	445	5	425			1	3	3	18				
103 CNTNNIL-BRACRFT	7	842	2	241					5	601				
104 CNTNNIL-TREEAND	9	1,059	1	70			7	211	1	778				
105 COFFEE CREEK-FREEMAN														
106 COFFEE CREEK-HOLIDAY														
107 COLTON-DHOOGHE	10	508	2	111			1	2	7	396				
108 COLTON-GRAYS HL	24	2,064	7	441	2	735	2	6	13	883				
109 CORNELIUS 13KV	13	760	1	348			6	170	6	241				
110 CORNELIUS-ADAIR	1	67							1	67				
111 CORNELIUS-VRBRT	12	3,671			1	17	8	180	2	3,119			1	355
112 CORNELL-BLUFFS	2	65					1	61	1	4				
113 CORNELL-SALTZMAN	8	336			1	142			4	191			3	2
114 CORNELL-WESTLAWN	9	1,389					5	573	4	816				
115 CULVER 13KV														
116 CULVER-GAFFIN														
117 CULVER-SANYO #1														
118 CULVER-SANYO #2														
119 CURTIS 13KV	4	266					3	230	1	36				
120 CURTIS-11077														
121 DAYTON-EAST	9	242	3	202					4	33	1	4	1	3
122 DAYTON-LAFAYETT	12	498	2	142	4	43	2	155	3	89			1	69
123 DAYTON-S AND W	3	110			1	2			2	108				
124 DELAWARE-DENVER	2	45					1	14	1	31				
125 DELAWARE-INTER	4	303					4	303						
126 DELAWARE-LOMBRD	5	14,450	1	272					4	14,178				
127 DENNY-EAST	9	194	3	96			3	29	2	65			1	3
128 DENNY-NORTH														
129 DENNY-SOUTH	2	135					1	134	1	0				
130 DENNY-WEST	10	1,223					3	139	7	1,084				
131 DILLEY-13KV	7	453	1	161			2	4	4	288				
132 DILLEY-SPRINGHL														

Total Nat = Total Natural Caused Outages  
Outs = Outages

Hrs - # of customers \* duration hrs

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## 2014 Outages by Cause Natural

	Feeder Name	Total Nat		Adverse Envir		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
133	DUNNS C 13 KV	31	4,243	11	547	4	8	2	40	12	2,726	1	716	1	206
134	DUNNS C-KELSO														
135	DURHAM 13KV														
136	DURHAM-BONITA														
137	DURHAM-BRIDGEPORT	2	497	1	496			1	1						
138	DURHAM-SATTLER	2	16					2	16						
139	DURHAM-SOUTH														
140	E-11021														
141	E-11039														
142	E-11040														
143	E-11041														
144	E-11042														
145	E-11043														
146	E-11047														
147	E-11064														
148	E-13139	3	126					2	67	1	59				
149	E-13140	8	804	1	61					7	743				
150	E-13141														
151	E-13144	3	100					2	32	1	68				
152	E-13145	1	2					1	2						
153	E-13148														
154	E-13149														
155	E-13150														
156	EAGLE CR-BARTON	10	846	1	16					8	826	1	4		
157	EAGLE CR-RIVRML	6	1,293	3	1,069					3	223				
158	EASTPORT-76TH	2	3,839							1	3,742			1	97
159	EASTPORT-PLAZA	1	57					1	57						
160	ELMA 13KV														
161	ELMA-4 CORNERS														
162	ELMA-HUDSON	2	163	1	31			1	132						
163	ELMA-STATE 13KV														
164	ESTACADA 13KV	13	4,536			1	51	1	7	9	4,391			2	87
165	ESTACADA-FARADY	49	6,986	16	3,186			5	363	26	3,426			2	11

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Hrs - # of customers \* duration hrs

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## 2014 Outages by Cause Natural

	Feeder Name	Total Nat		Adverse Envir		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
166	FAIRMT-CNDLARIA	3	347	1	90			1	16	1	241				
167	FAIRMT-MISSION	9	5,626	3	5,384			1	94	3	133	1	1	1	14
168	FAIRVIEW 13 KV	1	1							1	1				
169	FAIRVIEW-CLRCK														
170	FAIRVIEW-K CLUB	4	60					2	42	2	18				
171	FAIRVIEW-TROUTD	1	24											1	24
172	FAIRVIEW-W VILL														
173	FARGO 13KV	9	762	4	165			2	17	3	579				
174	G HOME-MCKAY	8	2,682	4	2,261					4	421				
175	G HOME-METZGER	10	1,705	3	951			1	8	6	745				
176	GALES CRK 13KV	27	3,091	5	257	1	2,005			20	791	1	39		
177	GLENCOE-GLISAN	5	223	1	120	1	2	3	101						
178	GLENCOE-PROVID														
179	GLENCOE-SUNNY	7	4,260					5	291	2	3,969				
180	GLISAN-FAB 2A														
181	GLISAN-UTIL 1B														
182	GLNCLN-BRIDLMIL	14	984	4	242			4	345	6	397				
183	GLNCLN-SUNSET	11	5,868	3	5,286			4	167	4	415				
184	GLNDOVEER-13596	2	73	1	21					1	52				
185	GLNDOVEER-13597	2	270	1	269					1	1				
186	GLNDOVEER-13598	1	40							1	40				
187	GLNDOVEER-13599	3	112	2	99			1	13						
188	GLNDOVEER-CLFGT	5	155					3	126	2	29				
189	GLNDOVEER-NEAST	2	9					2	9						
190	GRAND AV 4KV														
191	GRND RND-AGENCY	2	371	1	307					1	64				
192	GRND RND-FORHL	23	3,026	9	1,934			1	2	10	1,045			3	46
193	HABRTN-BURLINTN	14	2,845	4	33			1	1	8	241			1	2,570
194	HABRTN-LINNTON	6	1,697	1	4					4	491			1	1,202
195	HARBORTON 13KV	1	40											1	40
196	HARMONY 13KV	13	669	3	334			7	166	3	169				
197	HARMONY-INTERNATIONAL	4	469					2	84	1	11			1	375
198	HARMONY-LAKE	3	177	1	27			1	33	1	116				

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## 2014 Outages by Cause Natural

Feeder Name	Total Nat		Adverse Envir		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
199 HARMONY-LINWOD	7	505	4	205			1	1	1	187			1	112
200 HARMONY-MILWAKI	10	2,636	2	183			4	150	4	2,303				
201 HARMONY-THIESEN														
202 HARRISON 13KV	2	25					2	25						
203 HARRISON-DAVIS	1	17					1	17						
204 HARRISON-IVON	3	348					3	348						
205 HEMLOCK 13KV	2	10					2	10						
206 HEMLOCK-FREMONT	4	114					1	51	3	63				
207 HEMLOCK-MASON	4	368	4	368										
208 HILLCREST 13KV	1	95							1	95				
209 HILLCREST-CASCADIA														
210 HILLCREST-REED														
211 HILLCREST-SOUTH														
212 HILLS-DAIRY CREEK	8	1,253	1	676	1	305	4	67	1	204			1	1
213 HILLS-DENNIS														
214 HILLS-JACKSON	2	8					2	8						
215 HILLS-LAUREL	20	3,336	9	2,732	4	32	3	212	3	303	1	57		
216 HILLS-SCHOLLS	1	101					1	101						
217 HOGAN N 13KV	11	1,954	3	1,910			1	15	7	28				
218 HOGAN N-BRGDOON	1	22	1	22										
219 HOGAN N-LINKS	26	5,887	9	2,616					17	3,271				
220 HOGAN N-SLQUIST	3	3,759	1	2,963			1	16	1	780				
221 HOGAN S-CLEVLND	3	2					3	2						
222 HOGAN S-LAWRNCE	11	5,192	7	447			2	156	1	4,513	1	77		
223 HOGAN S-MAIN	2	146	1	90			1	56						
224 HOGAN S-PAROPA	2	67	2	67										
225 HOGAN S-WALLULA	6	644	1	311			2	171	2	63			1	100
226 HOLGATE 13KV	3	14	3	14										
227 HOLGATE-BYBEE	1	6					1	6						
228 HOLGATE-GIDEON	1	2					1	2						
229 HOLGATE-KENLWOR	10	505	1	170	1	25	8	310						
230 HOLGATE-RHONE	4	54					4	54						
231 HUBER 13KV	3	122	1	104			2	18						

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## 2014 Outages by Cause Natural

Feeder Name	Total Nat		Adverse Envir		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
232 HUBER-BANY	3	35	1	6					2	29				
233 HUBER-FRMINGTON	5	102					4	69	1	33				
234 HUBER-KINNAMON	4	16					3	15					1	1
235 HUBER-MARYVILLE	2	463	1	438			1	25						
236 HYDN IS-MALAND	1	8							1	8				
237 HYDN IS-N SHORE	2	19	2	19										
238 HYDN IS-S SHORE														
239 INDIAN-KEIZER	3	87					3	87						
240 INDIAN-LABISH	7	39					3	19	2	14			2	5
241 INDIAN-NORTH	5	10					2	4	2	4			1	3
242 INDIAN-STATION	1	1					1	1						
243 INDIAN-WEST	5	490			2	196	1	3	2	291				
244 ISLAND 13KV														
245 ISLAND-13180	11	10,049	3	217	2	5,131	5	180	1	4,521				
246 ISLAND-13187	15	7,370	4	2,131			5	424	4	292			2	4,523
247 ISLAND-13188	7	1,637					3	106	3	1,523			1	7
248 JEN LDG 13KV	4	517					2	16	2	502				
249 JEN LDG-MELDRUM	10	1,979	4	309			3	36	3	1,634				
250 JEN LDG-O GROVE	12	4,440	3	737			5	67	4	3,636				
251 JEN LDG-WEBSTER	5	733	1	697			3	29	1	7				
252 KELLEY POINT-LEDBETTER	1	269					1	269						
253 KELLEY POINT-SOLAR1														
254 KELLEY POINT-SOLAR2														
255 KELLEY PT 13 KV	1	2	1	2										
256 KING CTY-BULL MT	3	6,443	2	6,442			1	1						
257 KING CTY-FISCHER	3	3,188	1	42					2	3,146				
258 KING CTY-HAZEL B	2	69	2	69										
259 KING CTY-NORTH														
260 KING CTY-SUMERFL														
261 KLY BU-BINNSMED														
262 KLY BU-FAIRLAWN	2	248	1	34					1	215				
263 KLY BU-MALL 205	15	1,218	4	535			6	279	5	404				
264 KLY BU-MC GREW	4	1,009	2	968			1	37	1	4				

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## 2014 Outages by Cause Natural

Feeder Name	Total Nat		Adverse Envir		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
265 KLY PT-MARINEDR														
266 KLY PT-SIMMONS	2	59					2	59						
267 LAKE LABISH 4KV														
268 LELAND-BEAVERC	14	3,204	5	3,121			2	3	5	68			2	12
269 LELAND-CARUS	42	29,640	15	13,195			9	5,215	14	11,173			4	58
270 LELAND-KELM	2	46							2	46				
271 LENTS-13101	9	1,643	2	1,342			3	161	4	140				
272 LENTS-HAPPY VAL	5	12,821	2	85					3	12,735				
273 LENTS-MT SCOTT	5	610					2	310	3	300				
274 LENTS-NORTH	4	93	1	31			2	35	1	27				
275 LIB-BROWNING	6	107					4	73	1	8			1	26
276 LIB-LONE OAK	2	159					1	131					1	28
277 LIB-MORNINGSIDE	2	33					2	33						
278 LIB-ROSEDALE	13	200	3	134	1	8	3	29	6	29				
279 LIB-VISTA	3	137	1	52			1	32	1	54				
280 LIBERAL 13KV	5	687			2	251	1	3	1	2			1	430
281 LIBERAL-SAWMILL														
282 LIBERTY-SKYLINE	16	3,557	5	2,001	1	1,051	6	253	4	252				
283 MAIN-AIRPORT	6	337			4	144			2	194				
284 MAIN-BENTLEY	1	1,066							1	1,066				
285 MAIN-EXPRESS	8	726	2	121			6	604						
286 MAIN-GRIFFIN														
287 MAIN-JFS1														
288 MAIN-JONES FARM														
289 MAIN-RVR RD	3	11					1	3	2	8				
290 MC CL-COTTAGE	2	11					2	11						
291 MC CL-FRONT ST	2	40					1	25					1	15
292 MC CL-HOLLYWOOD	7	234					6	104					1	129
293 MCGILL-LSIAIR1A														
294 MCMINNVILLE W AND L														
295 MERIDIAN 13KV	13	1,922	5	1,709			2	22	6	191				
296 MERIDIAN-65TH														
297 MERIDIAN-BORLND	5	6,574					1	8	4	6,566				

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## 2014 Outages by Cause Natural

	Feeder Name	Total Nat		Adverse Envir		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
298	MERIDIAN-CHILDS	1	53					1	53						
299	MERIDIAN-LAKEVIEW	1	6					1	6						
300	MERIDIAN-NYBERG														
301	MERIDIAN-PLKNGTN	13	1,952	2	750			6	343	5	860				
302	MERIDIAN-SAGERT	1	280					1	280						
303	MIDGROVE-BROWN	2	39					2	39						
304	MIDGROVE-CHEMEK	1	1					1	1						
305	MIDGROVE-CORDON	6	7,792			4	7,790	1	2	1	1				
306	MIDGROVE-SWEGLE	1	6					1	6						
307	MIDGROVE-WEST	2	102	1	45			1	58						
308	MIDWAY-DIVISION	6	1,441	2	1,194			2	29	2	217				
309	MIDWAY-DOUGLAS	4	73	1	30			1	14	2	29				
310	MIDWAY-LYNCH	3	603	2	518			1	84						
311	MIDWAY-POWELHST	2	109					1	1	1	108				
312	MILL CREEK 13KV														
313	MILL CREEK-EASTLAND	9	37	2	17			5	14	2	6				
314	MILL CREEK-KUEBLER														
315	MOLALLA-BUCKAROO	1	180	1	180										
316	MOLALLA-FOREST	11	121	4	80	1	10	2	3	3	6			1	23
317	MOLALLA-MARQUAM	24	4,416	11	1,096			1	7	12	3,314				
318	MOLALLA-YODER	5	201	2	76			1	2	2	123				
319	MRKT ST-ENGLEWD	4	146							1	8			3	138
320	MRKT ST-FAIRGND	3	7					1	3	2	4				
321	MRKT ST-HAWTHNE	4	2,846					1	168	3	2,678				
322	MRKT ST-PARK	1	48					1	48						
323	MT ANGEL-EAST	6	59			6	59								
324	MT ANGEL-WEST	13	310	3	195	6	82	1	8	3	25				
325	MT PLS-CLAIRMONT	4	3,073	2	3,021			1	49	1	3				
326	MT PLS-MT VIEW	3	40					1	1	1	9			1	31
327	MT PLS-RIVRCRST	5	5,154					4	205	1	4,949				
328	MT PLS-SOUTHEND	5	1,529	1	1,506			3	7	1	17				
329	MULINO-NORTH	6	47	1	7			1	21	4	18				
330	MULINO-SOUTH	11	3,158	1	2			1	138	9	3,018				

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## 2014 Outages by Cause Natural

Feeder Name	Total Nat		Adverse Envir		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
331 MULTNOMAH 13KV	6	1,683	1	240			1	23	4	1,421				
332 MULTNOMAH-13176	10	5,738	4	5,510			5	162	1	66				
333 MULTNOMAH-13177	17	1,329	3	238			11	1,012	3	79				
334 MULTNOMAH-13181	8	1,840	1	138			6	602	1	1,099				
335 MURRAYHILL 13KV														
336 MURRAYHL-KINTON	1	99					1	99						
337 MURRAYHL-QUARRY														
338 MURRAYHL-REUSER	2	2,494					1	2,181					1	314
339 MURRAYHL-TEAL	3	88					2	48					1	40
340 N MARION FRONT	1	1											1	1
341 N MARION-CROSBY	4	77					3	74	1	3				
342 N MARION-HUBBRD	3	76					2	73	1	3				
343 N MARION-MCLARN	6	761	4	628					2	133				
344 N PLAINS 13KV	23	7,370	5	851	2	37			16	6,482				
345 N PLAINS-M HILL	28	5,284	7	744	4	1,988	3	125	12	752			2	1,676
346 NEWBERG-CHEHALM	13	5,764	2	2,984	1	1,719	5	91	5	970				
347 NEWBERG-COLLEGE	1	1					1	1						
348 NEWBERG-DUNDEE	9	1,059	1	50			1	2	5	954			2	53
349 NEWBERG-HOOVR PK	4	122	1	86					3	36				
350 NORTHERN-11009	3	336	2	313			1	23						
351 NORTHERN-11016														
352 NORTHERN-11071	3	108					1	14	2	94				
353 OAK HILLS 13KV														
354 OAK HILLS-5 OAK	1	3											1	3
355 OAK HILLS-BRIER														
356 OAK HILLS-SMRST	2	670	1	166					1	504				
357 OAK HILLS-WLKRD														
358 OCKLEY GRN 4KV														
359 OK GRV-LK HARRT	4	464	1	48					3	416				
360 OK GRV-WT WATER														
361 ORENCO 13KV	1	14					1	14						
362 ORENCO PRIMATE														
363 ORENCO-231ST														

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## 2014 Outages by Cause Natural

Feeder Name	Total Nat		Adverse Envir		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
364 ORENCO-AMBRGLEN														
365 ORENCO-BASELINE	3	93					3	93						
366 ORENCO-WILKINS														
367 ORIENT 13KV	35	9,454	15	548					20	8,906				
368 ORIENT-BARLOW	21	4,874	6	372			4	11	11	4,492				
369 OSWEGO-IRON MTN	4	227	1	131			1	10	2	86				
370 OSWEGO-MARYLHST	11	818	3	614			6	190	2	14				
371 OSWEGO-PALATINE	13	740	2	130			1	3	10	608				
372 OSWEGO-STAFFORD	5	1,856	1	1,797			3	31	1	28				
373 OXFORD 13KV	5	91	1	1			4	89						
374 OXFORD-FAIRVIEW	4	86					3	6	1	80				
375 OXFORD-LEE	2	117	1	22			1	95						
376 OXFORD-MADRONA														
377 OXFORD-RURAL														
378 OXFORD-SHELTON	6	280					6	280						
379 PELTON-ROUND BUTTE														
380 PENIN PARK 4KV	1	70					1	70						
381 PLSNT VALY 13KV	16	1,930	4	1,004					12	927				
382 PLSNT VALY-BXTR	3	2,524					2	11	1	2,513				
383 PLSNT VALY-MOON	6	3,608	3	3,600			1	1	2	7				
384 PLSNT VALY-SUN	8	2,636	3	276			3	110	2	2,250				
385 PORTLAND GRD W PUMPING														
386 PORTSMTH-CARB	6	913	1	62	3	746	2	105						
387 PORTSMTH-DISP														
388 PORTSMTH-WILL	7	458	1	288	1	40	4	88					1	42
389 PRGRS-GREENBURG	7	45			2	1	5	43						
390 PRGRS-HALL														
391 PRGRS-ROBINSON														
392 PRGRS-SAWYER	1	1							1	1				
393 PRGRS-WSH SQ #1														
394 PRGRS-WSH SQ #2														
395 RAL H-DOGWOOD	17	2,779	5	1,660			3	13	5	849			4	256
396 RAL H-MONTCLAIR	7	732	1	476			4	128	2	129				

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## 2014 Outages by Cause Natural

Feeder Name	Total Nat		Adverse Envir		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
397 RAL H-OLESON RD	8	834	1	631			4	48	3	155				
398 RAMAPO 13KV	8	190	1	12			6	77	1	101				
399 RAMAPO-GILBERT	2	624	1	615					1	9				
400 REDLAND 13KV	23	4,992	5	1,920	1	1,079	3	40	13	1,877			1	76
401 REDLAND-HENRICI	24	2,142	6	1,042			7	48	10	680	1	372		
402 REED-BLANTON	2	185	1	172			1	13						
403 REED-HAZELDALE	7	343	1	231			3	7	2	96			1	10
404 REED-INTEL #1														
405 REED-INTEL #2														
406 REED-INTEL #3														
407 REED-INTEL #4														
408 REED-TV HWY	3	55					1	1	2	54				
409 REEDVILLE-AUGUSTA	3	401					2	345	1	56				
410 ROCKWD 13KV	9	638	3	333			1	40	4	231			1	34
411 ROCKWD-AIRPT WY														
412 ROCKWD-BOEING														
413 ROCKWD-INDUSTR														
414 ROCKWD-REYNOLDS	4	1,248	3	1,218			1	30						
415 ROCKWD-WILKES														
416 ROSEMONT-HIDDEN SPRINGS	8	323	2	48			3	151	2	7			1	117
417 ROSEMONT-MOSSY BRAE	8	510	1	83			4	87	3	341				
418 ROSEMONT-OVERLOOK	2	126	1	101					1	26				
419 ROSEWAY 13 KV	1	11							1	11				
420 ROSEWAY-ALEXNDR	1	2					1	2						
421 ROSEWAY-ESPLANA	4	472					2	30	1	323			1	119
422 ROUND BUTTE SPILLWAY														
423 RUBY-13502	2	100					2	100						
424 RUBY-13503	3	372	2	57					1	315				
425 RVRGATE-11010														
426 RVRGATE-11011	1	8					1	8						
427 RVRGATE-PEARCY														
428 RVRGATE-SWIFT														
429 RVRVIW-FULTON	10	1,529	1	473			5	552	4	504				

Total Nat = Total Natural Caused Outages  
Outs = Outages

Hrs - # of customers \* duration hrs

\*For detailed Tree Contacts, see Outages by Tree Contacts report

## 2014 Outages by Cause Natural

Feeder Name	Total Nat		Adverse Envir		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
430 RVRVIW-MACADAM	1	784											1	784
431 RVRVIW-TWILLIGR	10	542	2	286	1	168	1	25	6	63				
432 SALEM-13260														
433 SALEM-13261														
434 SALEM-13262														
435 SALEM-13263														
436 SALEM-13264														
437 SALEM-UNION														
438 SANDY 13KV	56	13,234	24	11,433			9	117	23	1,685				
439 SANDY-362ND	12	3,476	7	2,988			1	7	3	383			1	98
440 SANDY-BLUFF	8	381	4	279			3	68					1	34
441 SANDY-WILDCAT	32	9,534	8	2,254			5	88	18	7,191			1	1
442 SCHOLLS FERRY-KEMMER RD	2	134	2	134										
443 SCHOLLS FERRY-RAINBOW	33	4,364	13	2,098			9	125	11	2,141				
444 SCHOLLS FERRY-ROY ROGERS	2	27					1	2					1	25
445 SCOGG-CHERRY G	6	1,062	2	23			1	71	2	690			1	277
446 SCOGG-LAUREL W	26	657	3	256			16	385	7	16				
447 SCOTTSMILL 13KV	33	11,182	17	5,791			1	2	15	5,388				
448 SELLWD 13KV	7	1,894	1	157			5	158	1	1,580				
449 SELLWD-KELOG PK	6	684	1	245	1	111	2	136	2	191				
450 SELLWD-WAVERLY														
451 SHERIDAN EAST	6	878	1	132	1	565			4	181				
452 SHERIDAN-KADELL	4	450	1	1	3	449								
453 SILVERTON-NORTH	7	185	4	136			3	49						
454 SILVERTON-SOUTH	6	3,374	2	499					4	2,875				
455 SILVERTON-WEST	23	1,207	9	600			3	9	11	598				
456 SIX COR-13359	17	678	2	21	3	115	8	379	4	163				
457 SIX COR-13360	1	1	1	1										
458 SIX COR-BORCHER	9	1,513	2	234			2	120	4	471	1	689		
459 SIX COR-CHAPMAN	3	176	1	20	1	102	1	53						
460 SIX CORNER-13KV	1	14					1	14						
461 SMURFIT-NEWBERG														
462 SPRINGBK-FERNWD	5	270					2	4	3	265				

Total Nat = Total Natural Caused Outages  
Outs = Outages

Hrs - # of customers \* duration hrs

\*For detailed Tree Contacts, see Outages by Tree Contacts report

## 2014 Outages by Cause Natural

Feeder Name	Total Nat		Adverse Envir		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
463 SPRINGBK-STPAUL	9	1,614	4	816			2	2	3	796				
464 SPRINGBK-VILLA	4	193					4	193						
465 SPRINGBK-ZIMRI	11	690	1	349	1	1	4	63	4	238			1	40
466 ST LOUIS-EAST														
467 ST LOUIS-NORTH	4	160	1	7	1	150			2	4				
468 ST LOUIS-WEST	8	127			1	4	1	21	2	9			4	94
469 ST MARY 13KV														
470 ST MARY-BETHANY														
471 ST MARY-BUTNER	14	1,412	3	285			3	226	6	406			2	494
472 ST MARY-ELMONIC														
473 ST MARY-JENKINS														
474 ST MARY-MILLIKN														
475 STEPHN-11001														
476 STEPHN-11020														
477 STEPHN-11054														
478 STEPHN-11055														
479 STEPHN-11092														
480 STEPHN-11093														
481 STEPHN-11094														
482 STEPHN-11095														
483 STEPHN-11097														
484 STEPHN-11098														
485 STEPHN-11099														
486 SULL-ROBINWOOD	12	1,061					9	201	3	860				
487 SULL-SALAMO	5	119	3	37					2	82				
488 SULL-SUSSEX	5	436	1	403	2	17	2	15						
489 SULL-WILLAMETTE	10	9,073	3	262	3	7,477	2	117	2	1,217				
490 SULLIVAN-TANNER	1	1					1	1						
491 SULZER 115A														
492 SULZER 115B														
493 SULZER BINGHAM														
494 SUMMIT-GOVT CAMP	1	1							1	1				
495 SUMMIT-MEADOWS	1	7	1	7										

Total Nat = Total Natural Caused Outages  
Outs = Outages

Hrs - # of customers \* duration hrs

\*For detailed Tree Contacts, see Outages by Tree Contacts report

## 2014 Outages by Cause Natural

Feeder Name	Total Nat		Adverse Envir		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
496 SUMMIT-SUMMIT	2	68	1	41					1	27				
497 SUNSET-BLANCHET														
498 SUNSET-COLFAX														
499 SUNSET-CORNELL														
500 SUNSET-D1X1														
501 SUNSET-DORION														
502 SUNSET-IDTB														
503 SUNSET-INTEL D1B1														
504 SUNSET-KOMATSU #1														
505 SUNSET-KOMATSU #2														
506 SUNSET-KOMATSU #3														
507 SUNSET-LANE														
508 SUNSET-LINDE PHASE 1														
509 SUNSET-MCCALL														
510 SUNSET-MEEK														
511 SUNSET-PAULING														
512 SUNSET-SPALDING														
513 SUNSET-WHITMAN	1	2											1	2
514 SUNSET-YOUNG														
515 SWAN IS-BASIN														
516 SWAN IS-DOLPHIN														
517 SWAN IS-FREIGHTLINER														
518 SWAN IS-GOING														
519 SWAN IS-SHIPYRD														
520 SYLVAN-BARNES	23	5,238	8	514			1	13	13	4,679			1	32
521 SYLVAN-PATTON	18	3,423	3	1,734			8	348	6	1,327			1	14
522 TABOR 13KV	1	180					1	180						
523 TABOR-82ND AV	1	69					1	69						
524 TABOR-HOSPITAL														
525 TEK 13KV														
526 TEK-HOCKEN														
527 TEK-NORTH														
528 TEK-SHANNON	9	1,312	2	414			2	43	4	506	1	348		

Total Nat = Total Natural Caused Outages  
Outs = Outages

Hrs - # of customers \* duration hrs

\*For detailed Tree Contacts, see Outages by Tree Contacts report

## 2014 Outages by Cause Natural

	Feeder Name	Total Nat		Adverse Envir		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
529	TEK-SOUTH	2	15					2	15						
530	TEK-WEST														
531	TEMP-NORTH														
532	TEMP-SOUTH														
533	TIGARD - 13 KV	4	799					3	337	1	462				
534	TIGARD-13336	3	80	2	52			1	28						
535	TIGARD-13337	1	1,058											1	1,058
536	TIGARD-13361	2	138					2	138						
537	TIGARD-13362	4	186	1	179			2	6					1	2
538	TNCTR-LAWNFIELD														
539	TNCTR-MONTEREY	1	34							1	34				
540	TNCTR-NORTH 13KV														
541	TNCTR-PRECISION														
542	TNCTR-SOUTH 13KV														
543	TNCTR-SUNNYBROOK	1	43					1	43						
544	TNCTR-VALLEY VW														
545	TROJAN PLNT E														
546	TUALATIN 13KV														
547	TUALATIN-AVERY	2	24					1	10					1	14
548	TUALATIN-CIPOLE	2	4							2	4				
549	TUALATIN-HERMAN														
550	TUALATIN-IBACH	1	1,542							1	1,542				
551	TUALATIN-LEVETON														
552	TURNER 13KV	4	517	1	374			1	1	1	111			1	31
553	TURNER-CASCADE	2	4			1	2			1	2				
554	TWILIGHT-BREMER	12	826	3	620			4	12	5	194				
555	UNIONVALE 13KV	19	1,907	2	6	4	10	1	79	11	1,806			1	6
556	UNIVRSITY-MILL														
557	UNIVRSITY-TRADE	5	64					3	27	1	1			1	37
558	URBAN-BARBUR	3	25					2	24					1	1
559	URBAN-CAMPUS														
560	URBAN-CORBETT	4	9,112	1	6,877			1	2,232	2	3				
561	URBAN-GAINES	2	14							2	14				

Total Nat = Total Natural Caused Outages  
Outs = Outages

Hrs - # of customers \* duration hrs

\*For detailed Tree Contacts, see Outages by Tree Contacts report

## 2014 Outages by Cause Natural

Feeder Name	Total Nat		Adverse Envir		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
562 URBAN-GIBBS	6	163					6	163						
563 URBAN-KELLY	2	15					2	15						
564 URBAN-LANDING														
565 URBAN-MEDICAL	1	17					1	17						
566 URBAN-OHSU														
567 W PTLD 13KV	10	2,718	3	314					7	2,403				
568 W PTLD-72ND	2	1,099							1	1,099			1	1
569 W PTLD-NORTH	9	601	1	110			4	117	4	374				
570 W PTLD-PACIFIC	9	3,427	4	2,962			5	465						
571 W UNION 13KV														
572 W UNION-CORNELS	22	4,262	6	1,628	2	14	6	181	7	2,420			1	20
573 WACKER														
574 WACONDA 13KV	13	50	4	31			3	4	5	12			1	2
575 WACONDA-NORPAC														
576 WACONDA-RIVER RD	5	531	2	528					3	3				
577 WALLACE RD 13KV	7	580	3	71			1	8	3	500				
578 WALLACE-WILLOW LAKE	2	5					1	5	1	1				
579 WELCHES 13KV	32	5,484	4	371			10	127	18	4,986				
580 WELCHES-ZIG ZAG	42	20,403	10	2,390			1	5	30	17,740	1	268		
581 WILLAMINA-BRIDGE	5	45	1	1			2	3	2	41				
582 WILLAMINA-BUELL	9	1,714	6	1,699			1	2	2	12				
583 WILLAMINA-LUMBER														
584 WILLBRDG #1														
585 WILLBRDG #4														
586 WILSV-BOECKMAN	6	250	3	118			1	3	2	129				
587 WILSV-CHARBNEAU	5	20					2	16	3	3				
588 WILSV-CITY	2	651	1	540			1	111						
589 WILSV-MENTORTEK														
590 WILSV-PARKWAY														
591 WILSV-VILLEBOIS														
592 WILSV-WEST	4	166			1	20	3	145						
593 WOODBURN-CANNERY	2	84					1	83					1	1
594 WOODBURN-EAST	10	1,219	4	873					3	188	1	1	2	156

Total Nat = Total Natural Caused Outages  
Outs = Outages

Hrs - # of customers \* duration hrs

\*For detailed Tree Contacts, see Outages by Tree Contacts report



## 2014 Outages by Cause Natural

Feeder Name	Total Nat		Adverse Envir		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
595 WOODBURN-TOMLIN	2	3					1	1	1	3				
596 WOODBURN-WEST	4	159	1	77			2	78					1	3
597 YAMHILL 13KV	13	695	2	405			7	28	4	262				
598 YAMHILL-CARLTON	17	1,816	3	1,458			4	18	9	336			1	4
<b>Grand Totals:</b>	<b>2,783</b>	<b>586,024</b>	<b>681</b>	<b>205,107</b>	<b>112</b>	<b>38,912</b>	<b>789</b>	<b>37,266</b>	<b>1,076</b>	<b>279,148</b>	<b>13</b>	<b>2,781</b>	<b>112</b>	<b>22,810</b>

Total Nat = Total Natural Caused Outages  
Outs = Outages

Hrs - # of customers \* duration hrs

\*For detailed Tree Contacts, see Outages by Tree Contacts report

## **SECTION V**

### **Outages by Cause-System**

This section provides the number of customer outages (frequency) and customer outage hours (duration) caused by system (failure of equipment or loss of source) events. The information is presented by feeder and attributed to one of the following causes:

- PGE Equipment
- Cutout/Fuse/Arrestor Failure
- Loss of Substation
- Loss of Transmission
- Human Element
- Public
- Planned

## 2014 Outages by Cause System

Feeder Name	Total System		Equipment				Loss of Substation		Loss of Transmission		Human Element		Public		Planned	
	Outs	Hrs	PGE Equip * Outs	Hrs	Cutout/Fuse /Arrestor Failure Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
1 ABERN-CLACK HTS																
2 ABERN-ORE CITY	15	1,159	3	26	3	63							10	1,070		
3 ABERNETHY-TRANSIT	4	77			3	47									1	30
4 ALDER CT-ANKENY																
5 ALDER CT-IRVING	6	731	2	468									5	313		
6 ALDER CT-LINCOLN	2	389			2	389							1	19		
7 ALDER CT-STARK																
8 ALDER CT-TAYLOR	4	327	1	84	2	52							2	215		
9 ALDER CT-YAMHILL																
10 AMITY 13KV	16	364	8	49	4	64							6	256		
11 AMITY-BELLEVUE	16	3,013	8	175	7	22							3	2,821		
12 ARLETA-52ND ST	5	460	2	30	3	430							1	1		
13 ARLETA-FOSTER	2	5	1	4	1	1										
14 ARLETA-HAROLD	5	139	3	127	2	12										
15 ARLETA-POWELL	6	520	4	285	1	222							3	27		
16 ARLETA-STEELE	3	347	2	305									1	6	1	42
17 B LAKE-SUNDIAL	6	1,758	6	1,758			1	1,711								
18 B LAKE-TOYOTNSO	1	75	1	75			1	75								
19 BANKS 13KV	10	1,946	5	1,878	3	62	1	1,557					3	50		
20 BANKS-CEDAR CYN	9	5,282	7	5,228	2	54	1	4,690					1	2		
21 BARNES-BATTLCRK	2	115	1	11											1	104
22 BARNES-BOONE	3	217	2	215	1	2										
23 BARNES-COMMERCL	10	1,259	5	840	1	1							3	146	1	272
24 BARNES-SUNNYSID	14	1,904	9	1,752	1	2							5	154		
25 BELL-FLAVEL	3	62	1	48	2	14										
26 BELL-JOHNSEN CRK	2	95	2	95												
27 BELL-KENDALL	4	580	2	539									2	168	1	2
28 BELL-KING	3	91	2	78	1	13										
29 BELL-SOUTHGATE																
30 BELL-WICHITA	4	90	3	84	1	6							1	12		
31 BELMONT 4KV																
32 BETHANY-BURTON	5	335	1	197	1	33	1	197					1	7	2	99
33 BETHANY-GERMANTOWN	4	441	3	377			1	349					1	5	1	63
34 BETHANY-KAISER	5	629	3	494			1	339					1	124	1	11
35 BETHANY-LAIDLAW	4	9,864	4	9,864			1	267					2	2		

Equip - Equipment Failures  
Hrs - # of customers \* duration hrs

Outs = Outages

\* For detailed PGE equipment, see Outage by PGE Equipment report

## 2014 Outages by Cause System

Feeder Name	Equipment															
	Total System		PGE Equip *		Cutout/Fuse /Arrestor Failure		Loss of Substation		Loss of Transmission		Human Element		Public		Planned	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
36 BETHANY-SPRINGVILLE	1	209	1	209			1	209					2	18		
37 BETHANY-THOMPSON	3	544	3	544			1	168								
38 BETHEL-FRUTLAND	8	3,035	3	2,874	3	8							2	153		
39 BETHEL-GEER	8	467	3	362	5	105										
40 BETHEL-MCLAY	5	337	3	335	1	1							1	1		
41 BLUE LAKE 13 KV	5	10,473	3	10,465	1	3	1	10,144					1	5		
42 BOONS-GOODALL	10	4,381	9	4,377									2	24	1	4
43 BOONS-KRUSEWAY	1	39	1	39												
44 BOONS-LK GROVE	7	374	6	367	1	8										
45 BOONS-MT PARK	7	7,938	6	7,918	1	20										
46 BOONS-WMBLY PK	4	466	4	466									1	236		
47 BORING-282ND AV	10	589	4	65	5	118				1	2,241		2	407		
48 BORING-CITY	9	3,370	6	3,135	3	235							1	1		
49 BORING-TELFORD	13	1,608	5	113	3	5							11	1,880		
50 BRIGHTWD 13KV	8	214	5	189	2	3							9	456		
51 BRIGHTWD-N BANK	2	66	1	62	1	4							2	405		
52 BROOKWOOD 13KV	1	4,072	1	4,072												
53 BROOKWOOD-BRWCK	2	16	2	16												
54 BROOKWOOD-SUNRS	1	54													1	54
55 BVRTN-ALLEN	3	53	2	32	1	21										
56 BVRTN-JAMIESON																
57 BVRTN-NORTHWEST	1	8			1	8										
58 BVRTN-W SLOPE	7	491	6	490	1	1										
59 CANBY-13643	14	4,613	6	2,451	4	76	1	2,382					4	1,921	1	167
60 CANBY-13644	6	879	1	870	4	7	1	870					2	5		
61 CANBY-BUTTEVLE	5	56	3	52	2	5							1	1		
62 CANYON 13KV	3	1,053	1	14							1	879			1	160
63 CANYON-13114																
64 CANYON-13115																
65 CANYON-13116																
66 CANYON-13117																
67 CANYON-13118PSU																
68 CANYON-13119PSU																
69 CANYON-13120	1	20											1	20		
70 CANYON-13121																

Equip - Equipment Failures  
Hrs - # of customers \* duration hrs

Outs = Outages

\* For detailed PGE equipment, see Outage by PGE Equipment report

## 2014 Outages by Cause System

Feeder Name	Total System		Equipment				Loss of Substation	Loss of Transmission	Human Element	Public		Planned	
	Outs	Hrs	PGE Equip *	Cutout/Fuse /Arrestor Failure	Outs	Hrs				Outs	Hrs	Outs	Hrs
71 CANYON-13122													
72 CANYON-13123													
73 CANYON-13124													
74 CANYON-13125													
75 CANYON-13133													
76 CANYON-13134													
77 CANYON-13135													
78 CANYON-13136													
79 CANYON-21ST AVE	2	128			2	128							
80 CANYON-23RD AVE	9	292	4	133	3	8						2	151
81 CANYON-BURNSIDE	4	793	2	667	2	126							
82 CARVER 13 KV	10	622	7	515	3	108							
83 CARVER-ALMOND	1	4			1	4							
84 CARVER-NORTH													
85 CARVER-RIVRBEND													
86 CARVER-SOUTH	1	3			1	3							
87 CARVER-WOODS	8	2,860	2	462	3	10					3	2,388	
88 CEDAR HILLS 13KV													
89 CEDAR-LEAHY	4	388	1	190	1	4					1	38	1 155
90 CEDAR-SHOP CEN	8	464	5	380	1	3					3	84	
91 CEDAR-SKYLINE	1	45	1	45									
92 CEDAR-ST VINCNT	3	146	2	86							1	60	
93 CEDAR-SYLVAN	3	343	1	328	2	15							
94 CLACK-EVELYN	2	1,181	1	1,180	1	1							
95 CLACK-GLADSTONE	19	2,669	8	470	2	91					5	2,013	4 94
96 CLACK-JENNIFER	4	37	3	35	1	2							
97 CLACK-TOLBERT	7	6,287	5	5,894							3	415	
98 CLAXTAR 13KV	1	3									1	3	
99 CLAXTAR-HAYSVIL	2	233									2	233	
100 CLAXTAR-RIDGE	7	663	7	663									
101 CNTNNIL 13KV	5	193	4	189	1	4					1	25	
102 CNTNNIL-BARKER	6	180	2	27	4	153					1	76	
103 CNTNNIL-BRACRFT	4	229			2	81					5	286	
104 CNTNNIL-TREEAND	11	13,359	4	565	2	12					4	12,791	2 10
105 COFFEE CREEK-FREEMAN	2	8	1	4	1	5							

Equip - Equipment Failures  
Hrs - # of customers \* duration hrs

Outs = Outages

\* For detailed PGE equipment, see Outage by PGE Equipment report

## 2014 Outages by Cause System

Feeder Name	Equipment															
	Total System		PGE Equip *		Cutout/Fuse /Arrestor Failure		Loss of Substation		Loss of Transmission		Human Element		Public		Planned	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
106 COFFEE CREEK-HOLIDAY	10	871	8	869	1	1							1	1		
107 COLTON-DHOOGHE	5	471	3	14	1	4							1	454		
108 COLTON-GRAYS HL	6	471	3	427	2	5							1	38		
109 CORNELIUS 13KV	18	783	8	627	4	21							4	113	2	23
110 CORNELIUS-ADAIR	2	8	1	7	1	1										
111 CORNELIUS-VRBRT	8	9,949	3	9,892	4	53							2	9		
112 CORNELL-BLUFFS	6	10,544	5	2,161			1	1,455					1	8,383		
113 CORNELL-SALTZMAN	7	2,457	6	2,450			1	675					1	7		
114 CORNELL-WESTLAWN	8	3,213	5	2,242	3	971	1	852								
115 CULVER 13KV																
116 CULVER-GAFFIN																
117 CULVER-SANYO #1																
118 CULVER-SANYO #2																
119 CURTIS 13KV	2	98	1	0									3	441		
120 CURTIS-11077																
121 DAYTON-EAST	5	189	4	187	1	2										
122 DAYTON-LAFAYETT	5	243	3	240	2	3										
123 DAYTON-S AND W	8	32	4	19	3	6							1	7		
124 DELAWARE-DENVER	5	7,573	3	7,519	1	36	1	7,160							1	17
125 DELAWARE-INTER	2	1,865	1	1,721	1	143	1	1,721								
126 DELAWARE-LOMBRD	7	10,376	2	9,943	4	320	1	9,941							1	113
127 DENNY-EAST	7	470	3	350	3	76							2	99		
128 DENNY-NORTH	1	105	1	105												
129 DENNY-SOUTH	4	4,594	2	650									2	3,421	1	536
130 DENNY-WEST	7	4,412	6	4,046									1	366		
131 DILLEY-13KV	9	71	3	51	6	20										
132 DILLEY-SPRINGHL																
133 DUNNS C 13 KV	8	37	1	2	4	8							10	1,155		
134 DUNNS C-KELSO	2	60	1	2									1	57		
135 DURHAM 13KV																
136 DURHAM-BONITA	1	11	1	11												
137 DURHAM-BRIDGEPORT	1	187													1	187
138 DURHAM-SATTLE	10	1,181	8	1,114	1	14							1	164	1	53
139 DURHAM-SOUTH	2	179											2	179		
140 E-11021	1	15	1	15			1	15								

Equip - Equipment Failures  
Hrs - # of customers \* duration hrs

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## 2014 Outages by Cause System

Feeder Name	Equipment															
	Total System		PGE Equip *		Cutout/Fuse /Arrestor Failure		Loss of Substation		Loss of Transmission		Human Element		Public		Planned	
			Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
141 E-11039																
142 E-11040	2	114	1	113	1	2	1	113								
143 E-11041	3	114	2	107			1	105					2	9		
144 E-11042																
145 E-11043	1	30	1	30			1	30								
146 E-11047	3	127	1	92	1	1	1	92				1	33			
147 E-11064	1	10	1	10			1	10								
148 E-13139	1	3	1	3												
149 E-13140	2	50	1	46	1	4						1	91			
150 E-13141																
151 E-13144	3	54	2	45	1	9						1	1			
152 E-13145																
153 E-13148																
154 E-13149																
155 E-13150	1	148	1	148												
156 EAGLE CR-BARTON	5	595	3	557	1	31						2	282			
157 EAGLE CR-RIVRML	2	18	2	18												
158 EASTPORT-76TH	6	129	2	49	2	55						1	14	1	10	
159 EASTPORT-PLAZA	2	22	1	6	1	16										
160 ELMA 13KV	1	116	1	116												
161 ELMA-4 CORNERS	3	5,380	1	108	1	2						2	5,271			
162 ELMA-HUDSON	6	381	3	211								2	38	1	132	
163 ELMA-STATE 13KV																
164 ESTACADA 13KV	4	802	1	748	2	53						3	191			
165 ESTACADA-FARADY	19	851	7	113	8	32						5	705			
166 FAIRMT-CNDLARIA	3	236	2	233	1	3										
167 FAIRMT-MISSION	12	3,035	11	2,820	1	215						1	1			
168 FAIRVIEW 13 KV	1	59	1	59								1	1			
169 FAIRVIEW-CLRCK																
170 FAIRVIEW-K CLUB	5	1,254	4	1,252								1	2			
171 FAIRVIEW-TROUTD	9	843	5	112	4	731										
172 FAIRVIEW-W VILL	4	443	4	443												
173 FARGO 13KV	17	1,155	6	801	7	26						4	21	3	317	
174 G HOME-MCKAY	3	204	2	145								1	1	1	59	
175 G HOME-METZGER	10	2,180	9	2,101	1	78										

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## 2014 Outages by Cause System

Feeder Name	Equipment																
	Total System		PGE Equip *		Cutout/Fuse /Arrestor Failure		Loss of Substation		Loss of Transmission		Human Element		Public		Planned		
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	
176 GALES CRK 13KV	8	92	4	81	4	11								3	328		
177 GLENCOE-GLISAN	5	484	2	2	1	94				1	367			3	238		
178 GLENCOE-PROVID																	
179 GLENCOE-SUNNY	3	1,236	1	20	1	19								1	1,198		
180 GLISAN-FAB 2A																	
181 GLISAN-UTIL 1B																	
182 GLNCLN-BRIDLMIL	12	12,187	10	12,044	1	3	1	5,347						3	245		
183 GLNCLN-SUNSET	4	197			3	116								2	87		
184 GLNDOVEER-13596	4	3,180	2	3,156	2	24								1	7		
185 GLNDOVEER-13597	5	208	1	142	2	32								3	39		
186 GLNDOVEER-13598	2	30			2	30								1	1		
187 GLNDOVEER-13599	2	507	1	484										1	23		
188 GLNDOVEER-CLFGT	2	396	1	382	1	14											
189 GLNDOVEER-NEAST																	
190 GRAND AV 4KV																	
191 GRND RND-AGENCY	2	106	1	56	1	50											
192 GRND RND-FORTHL	12	535	7	453	5	82								1	2		
193 HABRTN-BURLINTN	26	34,384	10	33,901	14	481	1	27,443						4	7		
194 HABRTN-LINNTON	3	9,600	1	7,963	1	7	1	7,963						2	1,632		
195 HARBORTON 13KV	1	242	1	242			1	242									
196 HARMONY 13KV	5	240	3	171	2	68											
197 HARMONY-INTERNATIONAL																	
198 HARMONY-LAKE	6	2,219	3	2,003	1	72								3	144		
199 HARMONY-LINNWOD	7	1,120	3	938	3	55										1	127
200 HARMONY-MILWAKI	7	1,581	6	1,576	1	5											
201 HARMONY-THIESEN	1	2			1	2											
202 HARRISON 13KV	3	5	1	3	2	1											
203 HARRISON-DAVIS	4	51			2	39								3	36		
204 HARRISON-IVON	2	6	1	3	1	2											
205 HEMLOCK 13KV	13	2,004	11	1,882	1	1								1	120		
206 HEMLOCK-FREMONT	2	595												2	595		
207 HEMLOCK-MASON	2	499												3	501		
208 HILLCREST 13KV																	
209 HILLCREST-CASCADIA																	
210 HILLCREST-REED																	

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## 2014 Outages by Cause System

Feeder Name	Total System		Equipment				Loss of Substation	Loss of Transmission	Human Element	Public		Planned	
	Outs	Hrs	PGE Equip *	Cutout/Fuse /Arrestor Failure	Outs	Hrs				Outs	Hrs	Outs	Hrs
211 HILLCREST-SOUTH													
212 HILLS-DAIRY CREEK	4	635	3	574	1	61					4	563	
213 HILLS-DENNIS													
214 HILLS-JACKSON	6	330	5	328	1	2							
215 HILLS-LAUREL	18	1,047	8	633	8	300					2	101	1 17
216 HILLS-SCHOLLS	2	8	2	8									
217 HOGAN N 13KV	6	248	3	102	1	1					2	144	
218 HOGAN N-BRGDOON	7	2,045	6	2,031							1	14	
219 HOGAN N-LINKS	18	11,110	9	413	2	6					8	10,695	
220 HOGAN N-SLQUIST	6	146	6	146							1	1	
221 HOGAN S-CLEVLND	7	5,635	3	445	1	1					2	5,173	1 16
222 HOGAN S-LAWRNCE	11	1,093	10	1,091	1	1							
223 HOGAN S-MAIN	7	1,679	7	1,679									
224 HOGAN S-PAROPA	10	1,454	9	1,387	1	68							
225 HOGAN S-WALLULA	7	1,580	6	1,534							2	72	
226 HOLGATE 13KV	3	249	2	155	1	94							
227 HOLGATE-BYBEE	5	1,023	3	985	2	38							
228 HOLGATE-GIDEON													
229 HOLGATE-KENLWOR	6	956	3	628	3	327					1	165	
230 HOLGATE-RHONE	7	118	1	8	5	76					1	34	
231 HUBER 13KV	7	834	6	820	1	14							
232 HUBER-BANY	12	969	10	956	2	14							
233 HUBER-FRMINGTON	1	49	1	49							1	28	
234 HUBER-KINNAMON	11	5,069	9	4,815	1	9					1	246	
235 HUBER-MARYVILLE	10	1,378	8	1,331	1	2					2	70	
236 HYDN IS-MALAND													
237 HYDN IS-N SHORE	1	149	1	149							2	101	
238 HYDN IS-S SHORE	1	54							1	54			
239 INDIAN-KEIZER	3	39	1	1	1	33					1	6	
240 INDIAN-LABISH	13	1,064	3	347	7	38					2	677	1 2
241 INDIAN-NORTH	12	1,198	4	1,168	6	25					2	5	
242 INDIAN-STATION	8	1,386	7	1,384							2	3	
243 INDIAN-WEST	9	64	2	41	5	13					3	17	
244 ISLAND 13KV													
245 ISLAND-13180	7	848	3	751	2	12					2	85	

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## 2014 Outages by Cause System

Feeder Name	Equipment															
	Total System		PGE Equip *		Cutout/Fuse /Arrestor Failure		Loss of Substation		Loss of Transmission		Human Element		Public		Planned	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
246 ISLAND-13187	2	519	2	519												
247 ISLAND-13188	11	1,114	9	1,104	1	1							2	17		
248 JEN LDG 13KV	8	562	2	253	4	54							1	3	2	255
249 JEN LDG-MELDRUM	5	162	3	128	2	35										
250 JEN LDG-O GROVE	2	26	1	5	1	21										
251 JEN LDG-WEBSTER	5	1,023	5	1,023												
252 KELLEY POINT-LEDBETTER	1	350	1	350			1	350								
253 KELLEY POINT-SOLAR1	1	2	1	2			1	2								
254 KELLEY POINT-SOLAR2	1	6	1	6			1	6								
255 KELLEY PT 13 KV	2	37	2	37			1	28					1	2		
256 KING CTY-BULL MT	2	727	2	727									1	19		
257 KING CTY-FISCHER	3	142	1	9									2	134		
258 KING CTY-HAZEL B																
259 KING CTY-NORTH																
260 KING CTY-SUMERFL	3	133	3	133												
261 KLY BU-BINNSMED	4	591			4	591										
262 KLY BU-FAIRLAWN	4	353	3	348	1	6							2	8		
263 KLY BU-MALL 205	11	5,323	2	3,702	2	253	1	2,011					7	1,369		
264 KLY BU-MC GREW	7	2,358	2	314	2	90							3	1,954		
265 KLY PT-MARINEDR	1	12	1	12			1	12								
266 KLY PT-SIMMONS	7	629	4	591	2	38	1	80					1	1		
267 LAKE LABISH 4KV																
268 LELAND-BEAVERC	18	15,450	11	7,224	4	162	1	5,827					3	8,063		
269 LELAND-CARUS	18	14,816	10	1,947	5	16							8	12,815	1	158
270 LELAND-KELM	2	3,617	2	3,617			1	3,609					2	3,808		
271 LENTS-13101	12	1,004	5	590	6	389							2	32		
272 LENTS-HAPPY VAL	3	1,272	2	1,270	1	2							2	34		
273 LENTS-MT SCOTT	1	10	1	10									2	789		
274 LENTS-NORTH	1	268											1	268		
275 LIB-BROWNING	1	281	1	281												
276 LIB-LONE OAK	10	1,449	10	1,449									1	1		
277 LIB-MORNINGSIDE	6	238	3	210	3	28										
278 LIB-ROSEDALE	7	1,362	3	1,336	2	4							2	22		
279 LIB-VISTA	2	36	1	6	1	30										
280 LIBERAL 13KV	8	148	3	124	3	14							2	11		

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## 2014 Outages by Cause System

Feeder Name	Equipment															
	Total System		PGE Equip *		Cutout/Fuse /Arrestor Failure		Loss of Substation		Loss of Transmission		Human Element		Public		Planned	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
281 LIBERAL-SAWMILL	1	0	1	0												
282 LIBERTY-SKYLINE	15	3,111	9	2,995	4	103							3	441		
283 MAIN-AIRPORT	6	685	5	638	1	47							1	43		
284 MAIN-BENTLEY	8	475	5	385	2	40							1	50		
285 MAIN-EXPRESS	3	354	2	315	1	39										
286 MAIN-GRIFFIN																
287 MAIN-JFS1																
288 MAIN-JONES FARM																
289 MAIN-RVR RD	9	482	5	466	4	16							2	7		
290 MC CL-COTTAGE	3	3,736	2	3,714	1	22							1	43		
291 MC CL-FRONT ST													1	1		
292 MC CL-HOLLYWOOD	2	60	1	32									3	206		
293 MCGILL-LSIAIR1A																
294 MCMINNVILLE W AND L																
295 MERIDIAN 13KV	10	283	4	32	4	12							2	239		
296 MERIDIAN-65TH																
297 MERIDIAN-BORLND	3	240	3	240												
298 MERIDIAN-CHILDS	1	54	1	54												
299 MERIDIAN-LAKEVIEW	1	2			1	2										
300 MERIDIAN-NYBERG																
301 MERIDIAN-PLKNGTN	6	776	4	424									1	285	1	66
302 MERIDIAN-SAGERT	5	1,648	3	774	1	238							2	653		
303 MIDGROVE-BROWN	1	7	1	7												
304 MIDGROVE-CHEMEK	1	72	1	72									1	213		
305 MIDGROVE-CORDON	13	628	9	620	3	5							1	4		
306 MIDGROVE-SWEGLE	1	8	1	8									1	3		
307 MIDGROVE-WEST	2	8	2	8												
308 MIDWAY-DIVISION	9	297	6	274	2	11							3	34		
309 MIDWAY-DOUGLAS	5	468	4	466									2	175		
310 MIDWAY-LYNCH	13	1,310	7	235	6	1,074							2	180		
311 MIDWAY-POWELHST	4	157	3	125	1	32										
312 MILL CREEK 13KV	1	1			1	1										
313 MILL CREEK-EASTLAND	11	586	5	453	3	10							3	123		
314 MILL CREEK-KUEBLER	2	329	2	329												
315 MOLALLA-BUCKAROO	4	46	1	1	3	45										

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## 2014 Outages by Cause System

Feeder Name	Equipment																
	Total System		PGE Equip *		Cutout/Fuse /Arrestor Failure		Loss of Substation		Loss of Transmission		Human Element		Public		Planned		
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	
316	MOLALLA-FOREST	13	563	4	35	1	2					1	89	8	438		
317	MOLALLA-MARQUAM	21	81	12	62	6	11							3	7		
318	MOLALLA-YODER	15	570	1	15	9	39							7	540		
319	MRKT ST-ENGLEWD	1	9											2	12		
320	MRKT ST-FAIRGND	3	555	1	10									2	544		
321	MRKT ST-HAWTHNE	2	40	1	23	1	17							1	11		
322	MRKT ST-PARK																
323	MT ANGEL-EAST	3	77	1	16	2	61										
324	MT ANGEL-WEST	22	1,035	11	889	9	19							2	127		
325	MT PLS-CLAIRMONT	11	1,030	3	20									6	840	2	170
326	MT PLS-MT VIEW																
327	MT PLS-RIVRCRST	2	36	2	36												
328	MT PLS-SOUTHEND	3	175			1	2							1	85	1	89
329	MULINO-NORTH	1	4							1	310			1	4		
330	MULINO-SOUTH	8	131	3	46	2	46			1	2,412			6	42		
331	MULTNOMAH 13KV	7	10,535	6	10,496	1	39							1	18		
332	MULTNOMAH-13176	2	588	1	583	1	5										
333	MULTNOMAH-13177	10	1,737	6	1,358	4	379							2	7		
334	MULTNOMAH-13181	8	913	5	710	3	203										
335	MURRAYHILL 13KV	1	1	1	1												
336	MURRAYHL-KINTON	2	6,463	1	6,342			1	6,342					1	2	1	121
337	MURRAYHL-QUARRY																
338	MURRAYHL-REUSER																
339	MURRAYHL-TEAL	3	686	3	686									1	17		
340	N MARION FRONT	2	1,338	2	1,338			1	380								
341	N MARION-CROSBY	1	1	1	1												
342	N MARION-HUBBRD	1	369	1	369												
343	N MARION-MCLARN	13	849	10	780	2	68							3	50		
344	N PLAINS 13KV	23	2,220	15	2,044	6	167							2	10		
345	N PLAINS-M HILL	18	1,795	5	1,520	6	169							10	110		
346	NEWBERG-CHEHALM	19	981	9	786	6	79							4	21	2	103
347	NEWBERG-COLLEGE	2	81	2	81												
348	NEWBERG-DUNDEE	13	454	12	441	1	13										
349	NEWBERG-HOOVR PK	6	968	2	11	1	1							2	792	1	163
350	NORTHERN-11009	7	110	2	15	5	95							1	4		

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## 2014 Outages by Cause System

Feeder Name	Total System		Equipment				Loss of Substation		Loss of Transmission		Human Element		Public		Planned	
			PGE Equip *		Cutout/Fuse /Arrestor Failure											
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
351 NORTHERN-11016																
352 NORTHERN-11071	4	336	1	142	1	31							2	164		
353 OAK HILLS 13KV	8	6,337	7	6,305	1	31	3	5,328								
354 OAK HILLS-5 OAK	4	9,843	4	9,843			3	9,470								
355 OAK HILLS-BRIER	3	2,417	3	2,417			3	2,417					1	1		
356 OAK HILLS-SMRST	6	7,885	6	7,885			3	7,846					1	10		
357 OAK HILLS-WLKRD	5	11,269	5	11,269			3	10,912					1	1		
358 OCKLEY GRN 4KV																
359 OK GRV-LK HARRT	6	154	1	9	1	3			1	17	2	130	1	12	1	0
360 OK GRV-WT WATER									1	18						
361 ORENCO 13KV																
362 ORENCO PRIMATE	1	123	1	123									1	25		
363 ORENCO-231ST	1	2,473	1	2,473												
364 ORENCO-AMBRGLEN	4	69											4	69		
365 ORENCO-BASELINE	5	215	1	7									3	49	2	181
366 ORENCO-WILKINS	3	18	3	18												
367 ORIENT 13KV	19	3,711	14	2,385	2	6							4	1,320		
368 ORIENT-BARLOW	11	4,263	6	3,713	4	138							2	451		
369 OSWEGO-IRON MTN																
370 OSWEGO-MARYLHST	8	1,710	5	620									3	1,089		
371 OSWEGO-PALATINE	5	35	1	5	3	30							1	0		
372 OSWEGO-STAFFORD																
373 OXFORD 13KV	2	35			2	35										
374 OXFORD-FAIRVIEW	5	1,174	2	815	3	359										
375 OXFORD-LEE	4	223	2	220	2	3										
376 OXFORD-MADRONA	4	442	1	14	2	3							1	425		
377 OXFORD-RURAL	1	9	1	9												
378 OXFORD-SHELTON																
379 PELTON-ROUND BUTTE																
380 PENIN PARK 4KV	3	75	2	73									1	2		
381 PLSNT VALY 13KV	6	308	6	308												
382 PLSNT VALY-BXTR	6	175	1	95	4	66							1	14		
383 PLSNT VALY-MOON	3	3,877	3	3,877												
384 PLSNT VALY-SUN	6	130	4	39	2	91							2	6		
385 PORTLAND GRD W PUMPING																

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## 2014 Outages by Cause System

Feeder Name	Equipment																	
	Total System		PGE Equip *				Cutout/Fuse /Arrestor Failure		Loss of Substation		Loss of Transmission		Human Element		Public		Planned	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
386 PORTSMTH-CARB	9	3,602	5	3,567	3	29								1	6			
387 PORTSMTH-DISP																		
388 PORTSMTH-WILL	9	3,927	6	3,868	3	60								2	537			
389 PRGRS-GREENBURG	13	1,130	9	1,098	1	29								1	1	2	2	
390 PRGRS-HALL																		
391 PRGRS-ROBINSON	9	8,700	7	8,624	1	19								2	146			
392 PRGRS-SAWYER	4	367	1	360	3	7												
393 PRGRS-WSH SQ #1																		
394 PRGRS-WSH SQ #2																		
395 RAL H-DOGWOOD	2	6			2	6												
396 RAL H-MONTCLAIR	5	848	3	365	1	330										1	153	
397 RAL H-OLESON RD	9	1,890	4	565	4	970										1	356	
398 RAMAPO 13KV	7	1,600	3	1,546	3	53								1	1			
399 RAMAPO-GILBERT	6	425	3	309	2	31										1	86	
400 REDLAND 13KV	21	2,604	15	347	5	68								4	2,192			
401 REDLAND-HENRICI	16	658	9	645	6	10								3	162			
402 REED-BLANTON	14	1,935	10	578	2	18								2	1,339			
403 REED-HAZELDALE	10	3,822	7	726	1	4								3	3,092			
404 REED-INTEL #1																		
405 REED-INTEL #2																		
406 REED-INTEL #3																		
407 REED-INTEL #4																		
408 REED-TV HWY	4	2,128	3	2,126	1	2												
409 REEDVILLE-AUGUSTA	6	1,906	6	1,906														
410 ROCKWD 13KV	10	1,019	8	1,001	2	18								2	40			
411 ROCKWD-AIRPT WY	1	14	1	14														
412 ROCKWD-BOEING																		
413 ROCKWD-INDUSTR																		
414 ROCKWD-REYNOLDS	4	521	1	6	2	21								1	495			
415 ROCKWD-WILKES	1	6	1	6														
416 ROSEMONT-HIDDEN SPRINGS	8	1,175	8	1,175														
417 ROSEMONT-MOSSY BRAE	4	739	4	739										2	3			
418 ROSEMONT-OVERLOOK	2	267	2	267														
419 ROSEWAY 13 KV	2	9	2	9														
420 ROSEWAY-ALEXNDR																		

Equip - Equipment Failures  
Hrs - # of customers \* duration hrs

Outs = Outages

\* For detailed PGE equipment, see Outage by PGE Equipment report

## 2014 Outages by Cause System

Feeder Name	Equipment															
	Total System		PGE Equip *		Cutout/Fuse /Arrestor Failure		Loss of Substation		Loss of Transmission		Human Element		Public		Planned	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
421 ROSEWAY-ESPLANA	3	419	3	419												
422 ROUND BUTTE SPILLWAY																
423 RUBY-13502	7	492	3	477	3	7			2	8,054			1	9		
424 RUBY-13503	8	3,908	7	3,905					2	1,743			2	18		
425 RVRGATE-11010																
426 RVRGATE-11011	6	3,522	2	3,059									5	1,174		
427 RVRGATE-PEARCY																
428 RVRGATE-SWIFT	1	2			1	2										
429 RVRVIW-FULTON	7	668	2	152	2	16					1	13			2	487
430 RVRVIW-MACADAM	5	477	5	477												
431 RVRVIW-TWILLIGR	1	106			1	106										
432 SALEM-13260	1	73	1	73				1	73							
433 SALEM-13261	1	88	1	88				1	88							
434 SALEM-13262	1	116	1	116				1	116							
435 SALEM-13263	2	570	2	570				1	248							
436 SALEM-13264	1	10	1	10				1	10							
437 SALEM-UNION	1	262	1	262				1	262				1	8		
438 SANDY 13KV	13	2,954	5	1,130	5	723							8	1,592		
439 SANDY-362ND	11	2,128	7	2,116	4	12							1	1		
440 SANDY-BLUFF	8	625	2	93	2	1							3	442	1	89
441 SANDY-WILDCAT	4	156	2	55	1	93							2	85		
442 SCHOLLS FERRY-KEMMER RD	1	41											1	41		
443 SCHOLLS FERRY-RAINBOW	11	611	5	29	3	8							6	580		
444 SCHOLLS FERRY-ROY ROGERS	3	243	3	243												
445 SCOGG-CHERRY G	5	3,339	1	8	3	516							2	2,821		
446 SCOGG-LAUREL W	13	140	5	22	8	119							2	2		
447 SCOTSMILL 13KV	30	3,269	17	2,117	7	21							9	1,136		
448 SELLWD 13KV	5	14,768	2	14,756	1	2	1	14,686					3	62	1	1
449 SELLWD-KELOG PK	7	15,955	6	15,950	1	5	1	8,935					1	102		
450 SELLWD-WAVERLY	4	4,633	3	4,629			1	3,752					1	5		
451 SHERIDAN EAST	17	3,115	9	390	5	268							4	2,458		
452 SHERIDAN-KADELL	9	2,560	6	2,517	1	40	1	1,713					2	1	1	3
453 SILVERTON-NORTH	9	125	3	44	5	65							1	17		
454 SILVERTON-SOUTH	6	181	3	43	2	21							1	118		
455 SILVERTON-WEST	24	1,351	11	124	6	19							13	1,223		

Equip - Equipment Failures  
Hrs - # of customers \* duration hrs

Outs = Outages

\* For detailed PGE equipment, see Outage by PGE Equipment report

## 2014 Outages by Cause System

Feeder Name	Equipment															
	Total System		PGE Equip *		Cutout/Fuse /Arrestor Failure		Loss of Substation		Loss of Transmission		Human Element		Public		Planned	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
456 SIX COR-13359	16	15,321	9	15,107	6	153	1	12,176					1	62		
457 SIX COR-13360	2	2,235	2	2,235			1	2,229								
458 SIX COR-BORCHER	7	5,683	5	5,609	2	74	1	5,583								
459 SIX COR-CHAPMAN	9	10,185	6	9,877	2	74	1	9,567				1	233			
460 SIX CORNER-13KV	5	6,975	3	6,686	1	23	1	3,876				1	266			
461 SMURFIT-NEWBERG																
462 SPRINGBK-FERNWD	3	736	1	720	1	16						1	0			
463 SPRINGBK-STPAUL	14	141	5	113	6	18						3	9	1	2	
464 SPRINGBK-VILLA	2	423	2	423												
465 SPRINGBK-ZIMRI	18	710	10	262	5	444						3	264	1	2	
466 ST LOUIS-EAST	6	452			1	2						3	74	2	375	
467 ST LOUIS-NORTH	14	57	8	37	6	20										
468 ST LOUIS-WEST	13	2,592	5	37	6	32						4	2,529			
469 ST MARY 13KV																
470 ST MARY-BETHANY																
471 ST MARY-BUTNER	7	6,113	2	738	4	70						1	5,306			
472 ST MARY-ELMONIC	6	373	6	373												
473 ST MARY-JENKINS																
474 ST MARY-MILLIKN	4	64	2	63	2	1										
475 STEPHN-11001																
476 STEPHN-11020	1	39			1	39										
477 STEPHN-11054																
478 STEPHN-11055																
479 STEPHN-11092																
480 STEPHN-11093																
481 STEPHN-11094																
482 STEPHN-11095																
483 STEPHN-11097																
484 STEPHN-11098																
485 STEPHN-11099																
486 SULL-ROBINWOOD	3	64			3	64						1	3			
487 SULL-SALAMO	6	1,763	6	1,763												
488 SULL-SUSSEX	5	68			4	25						1	43			
489 SULL-WILLAMETTE	9	629	6	334	1	3						2	292			
490 SULLIVAN-TANNER	2	171													2	171

Equip - Equipment Failures  
Hrs - # of customers \* duration hrs

Outs = Outages

\* For detailed PGE equipment, see Outage by PGE Equipment report



## 2014 Outages by Cause System

Feeder Name	Total System		Equipment				Loss of Substation		Loss of Transmission		Human Element		Public		Planned	
	Outs	Hrs	PGE Equip * Outs	Hrs	Cutout/Fuse /Arrestor Failure Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
491 SULZER 115A																
492 SULZER 115B																
493 SULZER BINGHAM																
494 SUMMIT-GOVT CAMP	3	74	1	59	2	15	1	59	2	1,399			1	0		
495 SUMMIT-MEADOWS	2	8	2	8			1	2	2	39						
496 SUMMIT-SUMMIT	7	775	7	775			1	33	2	737						
497 SUNSET-BLANCHET	2	34											2	34		
498 SUNSET-COLFAX																
499 SUNSET-CORNELL																
500 SUNSET-D1X1																
501 SUNSET-DORION																
502 SUNSET-IDTB																
503 SUNSET-INTEL D1B1																
504 SUNSET-KOMATSU #1																
505 SUNSET-KOMATSU #2																
506 SUNSET-KOMATSU #3	2	398	2	398			2	398								
507 SUNSET-LANE																
508 SUNSET-LINDE PHASE 1																
509 SUNSET-MCCALL	1	8	1	8			1	8								
510 SUNSET-MEEK	1	83	1	83			1	83								
511 SUNSET-PAULING	2	392	2	392												
512 SUNSET-SPALDING																
513 SUNSET-WHITMAN																
514 SUNSET-YOUNG	1	1											1	1		
515 SWAN IS-BASIN																
516 SWAN IS-DOLPHIN	1	10	1	10												
517 SWAN IS-FREIGHTLINER																
518 SWAN IS-GOING	1	4			1	4										
519 SWAN IS-SHIPYRD																
520 SYLVAN-BARNES	6	606	2	592	3	12							1	5	1	3
521 SYLVAN-PATTON	8	750	1	102	5	487							2	63	1	115
522 TABOR 13KV	1	61													1	61
523 TABOR-82ND AV	5	62			4	59							1	3		
524 TABOR-HOSPITAL	1	64													1	64
525 TEK 13KV																

Equip - Equipment Failures  
Hrs - # of customers \* duration hrs

Outs = Outages

\* For detailed PGE equipment, see Outage by PGE Equipment report

## 2014 Outages by Cause System

Feeder Name	Total System		Equipment				Loss of Substation	Loss of Transmission	Human Element	Public		Planned	
	Outs	Hrs	PGE Equip *	Cutout/Fuse /Arrestor Failure	Outs	Hrs				Outs	Hrs	Outs	Hrs
526 TEK-HOCKEN													
527 TEK-NORTH													
528 TEK-SHANNON	4	323	3	276	1	47							
529 TEK-SOUTH	5	648	4	638	1	10							
530 TEK-WEST													
531 TEMP-NORTH													
532 TEMP-SOUTH	1	1,335	1	1,335									
533 TIGARD - 13 KV	5	4,551	5	4,551									
534 TIGARD-13336	1	4	1	4									
535 TIGARD-13337	4	381	1	3	3	378							
536 TIGARD-13361													
537 TIGARD-13362	12	3,025	11	2,979						1	45		
538 TNCTR-LAWNFIELD	3	146	3	146									
539 TNCTR-MONTEREY	5	105	1	3	4	101							
540 TNCTR-NORTH 13KV													
541 TNCTR-PRECISION													
542 TNCTR-SOUTH 13KV													
543 TNCTR-SUNNYBROOK													
544 TNCTR-VALLEY VW													
545 TROJAN PLNT E													
546 TUALATIN 13KV	1	11	1	11									
547 TUALATIN-AVERY	6	1,592	5	1,552						1	41		
548 TUALATIN-CIPOLE	1	25			1	25							
549 TUALATIN-HERMAN													
550 TUALATIN-IBACH	6	2,908	4	695	1	62				2	2,151		
551 TUALATIN-LEVETON													
552 TURNER 13KV	9	60	2	44	4	6				3	9		
553 TURNER-CASCADE	9	216	2	4	6	184				1	29		
554 TWILIGHT-BREMER	11	5,684	8	5,082	1	279	1	5,048		2	323		
555 UNIONVALE 13KV	25	239	8	47	15	52				5	93	1	55
556 UNIVRSITY-MILL	3	76	3	76									
557 UNIVRSITY-TRADE	5	372	2	197	3	175				1	2		
558 URBAN-BARBUR	1	14			1	14							
559 URBAN-CAMPUS													
560 URBAN-CORBETT	2	1,060	1	1,033						1	27		

Equip - Equipment Failures  
Hrs - # of customers \* duration hrs

Outs = Outages

\* For detailed PGE equipment, see Outage by PGE Equipment report

## 2014 Outages by Cause System

Feeder Name	Equipment															
	Total System		PGE Equip *		Cutout/Fuse /Arrestor Failure		Loss of Substation		Loss of Transmission		Human Element		Public		Planned	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
561 URBAN-GAINES	3	18	1	1	1	3					1	14				
562 URBAN-GIBBS																
563 URBAN-KELLY	3	13,750	3	13,750												
564 URBAN-LANDING																
565 URBAN-MEDICAL	1	1,017	1	1,017												
566 URBAN-OHSU																
567 W PTL D 13KV	3	5			2	3							2	285		
568 W PTL D-72ND	4	329	2	316	1	2							1	12		
569 W PTL D-NORTH	3	624	3	624												
570 W PTL D-PACIFIC	15	3,840	6	955	5	127							3	2,721	1	38
571 W UNION 13KV	7	974	5	763									1	2	1	209
572 W UNION-CORNELS	8	372	5	355	2	13							3	9		
573 WACKER																
574 WACONDA 13KV	16	72	4	22	12	51							3	9		
575 WACONDA-NORPAC																
576 WACONDA-RIVER RD	8	29	4	23	3	6							4	5		
577 WALLACE RD 13KV	19	4,944	10	4,675	6	50	1	3,771					3	184	1	36
578 WALLACE-WILLOW LAKE													1	4		
579 WELCHES 13KV	7	3,233	4	3,117	3	116	1	1,768	1	3,039			3	103		
580 WELCHES-ZIG ZAG	19	4,355	12	4,299	4	22	1	1,953	1	2,645			4	36		
581 WILLAMINA-BRIDGE	5	21	1	6	4	15				1	4,330					
582 WILLAMINA-BUELL	6	70	2	13	2	49				1	2,114		2	5	1	4
583 WILLAMINA-LUMBER	2	7	1	6	1	2				1	34					
584 WILLBRDG #1	3	491	1	13			1	13					2	478		
585 WILLBRDG #4	6	31	3	26	3	5	1	10								
586 WILSV-BOECKMAN																
587 WILSV-CHARBNEAU	6	1,580	5	1,567	1	13										
588 WILSV-CITY	2	705	1	686									2	21		
589 WILSV-MENTORTEK																
590 WILSV-PARKWAY																
591 WILSV-VILLEBOIS																
592 WILSV-WEST	11	249	6	217	3	6							2	26		
593 WOODBURN-CANNERY	1	1			1	1										
594 WOODBURN-EAST	9	101	4	91	5	10							1	2		
595 WOODBURN-TOMLIN	9	92	5	73	1	4							4	21		

Equip - Equipment Failures  
Hrs - # of customers \* duration hrs

Outs = Outages

\* For detailed PGE equipment, see Outage by PGE Equipment report

## 2014 Outages by Cause System

Feeder Name	Total System		Equipment				Loss of Substation	Loss of Transmission	Human Element	Public		Planned		
			PGE Equip *		Cutout/Fuse /Arrestor Failure									
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
596 WOODBURN-WEST	5	29	1	21	3	5					1	3		
597 YAMHILL 13KV	17	983	6	552	6	42					5	388		
598 YAMHILL-CARLTON	19	3,315	4	379	7	31					8	2,905		
<b>Grand Total:</b>	<b>2,714</b>	<b>691,686</b>	<b>2,254</b>	<b>546,236</b>	<b>755</b>	<b>21,061</b>	<b>83</b>	<b>217,202</b>	<b>20</b>	<b>49,130</b>	<b>8</b>	<b>1,546</b>	<b>630</b>	<b>152,706</b>

Equip - Equipment Failures  
Hrs - # of customers \* duration hrs

Outs = Outages

\* For detailed PGE equipment, see Outage by PGE Equipment report

## **SECTION VI**

### **Outages by Cause-PGE Equipment**

This section provides the number of customer outages (frequency) and customer outage hours (duration) caused by PGE equipment failure events. The information is presented by feeder and attributed to one of nine categories of equipment failure. Definitions for the outages caused categories are shown below:

- UG Cond: Failure of underground conductor (NOTE: this does not include failure of splices or terminations)
- UG Clamp: Failure of underground splice or termination
- UG Xfmr: Failure of underground or pad mounted transformer
- OH Cond: Failure of overhead conductor (NOTE: this does not include failure of splices or terminations)
- OH Clamp: Failure of overhead splice or termination
- OH Xfmr: Failure of pole mounted transformer
- Sub: Failure of substation equipment
- Pole: Failure of pole
- PGE Cutout/Fuse Arrestor: Failure of fused cutout, fuse, or lightning arrester

## 2014 Outages by PGE Equipment

Feeder Name	Equipment * Sub-Total		UG Cond		UG Clamp		UG Xfmr		PGE Cutout/Fuse /Arrestor Failure		OH Cond		OH Clamp		OH Xfmr		Sub		Pole	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
1 ABERN-CLACK HTS																				
2 ABERN-ORE CITY	6	89							3	63					3	26				
3 ABERNETHY-TRANSIT	3	47							3	47										
4 ALDER CT-ANKENY																				
5 ALDER CT-IRVING	2	468												2	468					
6 ALDER CT-LINCOLN	2	389							2	389										
7 ALDER CT-STARK																				
8 ALDER CT-TAYLOR	3	137							2	52					1	84				
9 ALDER CT-YAMHILL																				
10 AMITY 13KV	12	112	1	6			2	14	4	64	1	7	1	2	3	19				
11 AMITY-BELLEVUE	15	197	3	42			2	10	7	22	2	105			1	18				
12 ARLETA-52ND ST	5	460	1	4					3	430					1	25				
13 ARLETA-FOSTER	2	5							1	1					1	4				
14 ARLETA-HAROLD	5	139							2	12					3	127				
15 ARLETA-POWELL	5	507							1	222	1	2	1	78	2	205				
16 ARLETA-STEELE	2	305					1	192							1	113				
17 B LAKE-SUNDIAL	6	1,758	5	46													1	1,711		
18 B LAKE-TOYOTNSO	1	75															1	75		
19 BANKS 13KV	8	1,940							3	62	4	321					1	1,557		
20 BANKS-CEDAR CYN	9	5,282	1	48			1	296	2	54	1	176	1	5	2	13	1	4,690		
21 BARNES-BATTLCRK	1	11									1	11								
22 BARNES-BOONE	3	217	1	211					1	2	1	3								
23 BARNES-COMMERCL	6	841	3	421			1	57	1	1	1	362								
24 BARNES-SUNNYSID	10	1,754	5	1,147			3	264	1	2	1	340								
25 BELL-FLAVEL	3	62							2	14	1	48								
26 BELL-JOHNNSN CRK	1	1									1	1								
27 BELL-KENDALL	1	5													1	5				
28 BELL-KING	3	91							1	13	1	47							1	31
29 BELL-SOUTHGATE																				
30 BELL-WICHITA	4	90							1	6					3	84				
31 BELMONT 4KV																				
32 BETHANY-BURTON	2	229							1	33							1	197		
33 BETHANY-GERMANTOWN	3	377	1	24											1	4	1	349		
34 BETHANY-KAISER	3	494	2	155													1	339		
35 BETHANY-LAIDLAW	4	9,864					1	18			2	9,579					1	267		

Hrs - # of customers \* duration hrs  
Outs = Outages

UG = Underground  
OH = Overhead

Xfmr = Transformer  
Sub = Substation

Cond = Conductor

\* Sub-Total Equipment - is sub-total of equipment identified by component type

## 2014 Outages by PGE Equipment

Feeder Name	Equipment * Sub-Total		UG Cond		UG Clamp		UG Xfmr		PGE Cutout/Fuse /Arrestor Failure		OH Cond		OH Clamp		OH Xfmr		Sub		Pole	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
36 BETHANY-SPRINGVILLE	1	209															1	209		
37 BETHANY-THOMPSON	3	544	2	376													1	168		
38 BETHEL-FRUTLAND	6	2,882	1	7			1	401	3	8									1	2,467
39 BETHEL-GEER	8	467	1	13					5	105	1	343			1	6				
40 BETHEL-MCLAY	3	65	1	56					1	1					1	8				
41 BLUE LAKE 13 KV	4	10,467	1	6			1	315	1	3							1	10,144		
42 BOONS-GOODALL	9	4,377	7	4,131							1	245							1	1
43 BOONS-KRUSEWAY	1	39	1	39																
44 BOONS-LK GROVE	7	374	1	249			1	57	1	8	1	3	1	4	2	54				
45 BOONS-MT PARK	7	7,938	5	7,823			1	96	1	20										
46 BOONS-WMBLY PK	4	466									3	465			1	1				
47 BORING-282ND AV	9	183							5	118	1	39	1	0	2	27				
48 BORING-CITY	9	3,370	2	3,119					3	235					4	17				
49 BORING-TELFORD	8	118							3	5	2	63	1	3	2	47				
50 BRIGHTWD 13KV	7	192	2	178					2	3	1	4			2	7				
51 BRIGHTWD-N BANK	2	66	1	62					1	4										
52 BROOKWOOD 13KV	1	4,072									1	4,072								
53 BROOKWOOD-BRWCK	2	16	1	13							1	3								
54 BROOKWOOD-SUNRS																				
55 BVRTN-ALLEN	3	53							1	21			1	20	1	12				
56 BVRTN-JAMIESON																				
57 BVRTN-NORTHWEST	1	8							1	8										
58 BVRTN-W SLOPE	4	461	1	8			1	10	1	1	1	442								
59 CANBY-13643	9	2,523	1	20					4	76	1	42	1	0	1	3	1	2,382		
60 CANBY-13644	5	878							4	7							1	870		
61 CANBY-BUTTEVLE	5	56	1	28					2	5					2	24				
62 CANYON 13KV	1	14									1	14								
63 CANYON-13114																				
64 CANYON-13115																				
65 CANYON-13116																				
66 CANYON-13117																				
67 CANYON-13118PSU																				
68 CANYON-13119PSU																				
69 CANYON-13120																				
70 CANYON-13121																				

Hrs - # of customers \* duration hrs  
Outs = Outages

UG = Underground  
OH = Overhead

Xfmr = Transformer  
Sub = Substation

Cond = Conductor  
\* Sub-Total Equipment - is sub-total of equipment identified by component type

## 2014 Outages by PGE Equipment

Feeder Name	Equipment * Sub-Total		UG Cond		UG Clamp		UG Xfmr		PGE Cutout/Fuse /Arrestor Failure		OH Cond		OH Clamp		OH Xfmr		Sub		Pole	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
71 CANYON-13122																				
72 CANYON-13123																				
73 CANYON-13124																				
74 CANYON-13125																				
75 CANYON-13133																				
76 CANYON-13134																				
77 CANYON-13135																				
78 CANYON-13136																				
79 CANYON-21ST AVE	2	128							2	128										
80 CANYON-23RD AVE	6	140							3	8	1	96			2	36				
81 CANYON-BURNSIDE	4	793					1	516	2	126	1	151								
82 CARVER 13 KV	10	622	2	428			4	29	3	108	1	58								
83 CARVER-ALMOND	1	4							1	4										
84 CARVER-NORTH																				
85 CARVER-RIVRBEND																				
86 CARVER-SOUTH	1	3							1	3										
87 CARVER-WOODS	5	472	1	460					3	10	1	2								
88 CEDAR HILLS 13KV																				
89 CEDAR-LEAHY	2	194							1	4	1	190								
90 CEDAR-SHOP CEN	6	382	5	380					1	3										
91 CEDAR-SKYLINE	1	45					1	45												
92 CEDAR-ST VINCNT	2	86									2	86								
93 CEDAR-SYLVAN	3	343							2	15					1	328				
94 CLACK-EVELYN	2	1,181							1	1	1	1,180								
95 CLACK-GLADSTONE	10	562	5	453			1	3	2	91					2	14				
96 CLACK-JENNIFER	4	37					3	35	1	2										
97 CLACK-TOLBERT	4	5,872	3	5,854							1	18								
98 CLAXTAR 13KV																				
99 CLAXTAR-HAYSVIL																				
100 CLAXTAR-RIDGE	7	663	5	469			2	195												
101 CNTNNIL 13KV	5	193	3	184					1	4			1	5						
102 CNTNNIL-BARKER	6	180					1	25	4	153	1	2								
103 CNTNNIL-BRACRFT	2	81							2	81										
104 CNTNNIL-TREEAND	6	577					1	176	2	12	1	17	1	12	1	359				
105 COFFEE CREEK-FREEMAN	2	8							1	5					1	4				

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Feeder Name	Equipment * Sub-Total		UG Cond		UG Clamp		UG Xfmr		PGE Cutout/Fuse /Arrestor Failure		OH Cond		OH Clamp		OH Xfmr		Sub		Pole	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
106 COFFEE CREEK-HOLIDAY	9	870	8	869					1	1										
107 COLTON-DHOOGHE	4	17							1	4	2	7			1	7				
108 COLTON-GRAYS HL	5	432							2	5			1	2	2	425				
109 CORNELIUS 13KV	12	647	4	105			3	469	4	21	1	53								
110 CORNELIUS-ADAIR	1	1							1	1										
111 CORNELIUS-VRBRT	7	9,944	1	4,033					4	53	1	5,486							1	372
112 CORNELL-BLUFFS	5	2,161	3	698			1	8									1	1,455		
113 CORNELL-SALTZMAN	5	2,423	2	585			2	1,163									1	675		
114 CORNELL-WESTLAWN	8	3,213	1	458			1	105	3	971	1	38	1	790			1	852		
115 CULVER 13KV																				
116 CULVER-GAFFIN																				
117 CULVER-SANYO #1																				
118 CULVER-SANYO #2																				
119 CURTIS 13KV	1	0																	1	0
120 CURTIS-11077																				
121 DAYTON-EAST	5	189	2	71					1	2	1	113			1	4				
122 DAYTON-LAFAYETT	4	72	1	63					2	3					1	7				
123 DAYTON-S AND W	7	26							3	6			2	7	2	13				
124 DELAWARE-DENVER	4	7,556							1	36					2	359	1	7,160		
125 DELAWARE-INTER	2	1,865							1	143							1	1,721		
126 DELAWARE-LOMBRD	6	10,263							4	320	1	2					1	9,941		
127 DENNY-EAST	6	426	3	350					3	76										
128 DENNY-NORTH	1	105	1	105																
129 DENNY-SOUTH	2	650	2	650																
130 DENNY-WEST	6	4,046	3	222			1	365			1	3,422			1	37				
131 DILLEY-13KV	9	71							6	20					1	7			2	44
132 DILLEY-SPRINGHL																				
133 DUNNS C 13 KV	5	10							4	8	1	2								
134 DUNNS C-KELSO	1	2	1	2																
135 DURHAM 13KV																				
136 DURHAM-BONITA	1	11	1	11																
137 DURHAM-BRIDGEPORT																				
138 DURHAM-SATTLER	9	1,129	7	1,110			1	5	1	14										
139 DURHAM-SOUTH																				
140 E-11021	1	15															1	15		

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Feeder Name	<u>Equipment</u> <u>* Sub-Total</u>		<u>UG Cond</u>		<u>UG Clamp</u>		<u>UG Xfmr</u>		<u>PGE</u> <u>Cutout/Fuse</u> <u>/Arrestor</u> <u>Failure</u>		<u>OH Cond</u>		<u>OH Clamp</u>		<u>OH Xfmr</u>		<u>Sub</u>		<u>Pole</u>	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
141 E-11039																				
142 E-11040	2	114							1	2							1	113		
143 E-11041	2	107										1	2				1	105		
144 E-11042																				
145 E-11043	1	30															1	30		
146 E-11047	2	94							1	1							1	92		
147 E-11064	1	10															1	10		
148 E-13139	1	3																	1	3
149 E-13140	2	50							1	4						1	46			
150 E-13141																				
151 E-13144	3	54	2	45					1	9										
152 E-13145																				
153 E-13148																				
154 E-13149																				
155 E-13150	1	148					1	148												
156 EAGLE CR-BARTON	4	588							1	31	2	487			1	70				
157 EAGLE CR-RIVRML	2	18										1	9	1	8					
158 EASTPORT-76TH	4	105							2	55				1	47			1	2	
159 EASTPORT-PLAZA	2	22							1	16					1	6				
160 ELMA 13KV	1	116	1	116																
161 ELMA-4 CORNERS	2	110							1	2			1	108						
162 ELMA-HUDSON	3	211	2	210							1	1								
163 ELMA-STATE 13KV																				
164 ESTACADA 13KV	3	801					1	748	2	53										
165 ESTACADA-FARADY	14	142	3	106					8	32	2	2	1	2						
166 FAIRMT-CNDLARIA	3	236	1	227					1	3					1	6				
167 FAIRMT-MISSION	12	3,035	4	1,581					1	215	5	1,172			2	67				
168 FAIRVIEW 13 KV	1	59									1	59								
169 FAIRVIEW-CLRCK																				
170 FAIRVIEW-K CLUB	2	102					1	39			1	63								
171 FAIRVIEW-TROUTD	9	843					1	90	4	731					3	18			1	4
172 FAIRVIEW-W VILL	4	443	1	174			1	80			1	184			1	5				
173 FARGO 13KV	13	827	5	800					7	26			1	2						
174 G HOME-MCKAY	2	145	1	75			1	70												
175 G HOME-METZGER	10	2,180	3	908			2	987	1	78	4	207								

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Feeder Name	Equipment * Sub-Total		UG Cond		UG Clamp		UG Xfmr		PGE Cutout/Fuse /Arrestor Failure		OH Cond		OH Clamp		OH Xfmr		Sub		Pole	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
176 GALES CRK 13KV	8	92	1	8					4	11	2	71	1	2						
177 GLENCOE-GLISAN	3	97							1	94	2	2								
178 GLENCOE-PROVID																				
179 GLENCOE-SUNNY	2	39							1	19	1	20								
180 GLISAN-FAB 2A																				
181 GLISAN-UTIL 1B																				
182 GLNCLN-BRIDLMIL	11	12,046	1	114					1	3	5	5,807			3	776	1	5,347		
183 GLNCLN-SUNSET	3	116							3	116										
184 GLNDOVEER-13596	4	3,180	2	3,156					2	24										
185 GLNDOVEER-13597	3	174							2	32	1	142								
186 GLNDOVEER-13598	2	30							2	30										
187 GLNDOVEER-13599	1	484					1	484												
188 GLNDOVEER-CLFGT	2	396	1	382					1	14										
189 GLNDOVEER-NEAST																				
190 GRAND AV 4KV																				
191 GRND RND-AGENCY	2	106							1	50									1	56
192 GRND RND-FORHTL	11	493							5	82	3	390	1	4	2	17				
193 HABRTN-BURLINTN	23	30,981	2	2,887					14	481	1	3	3	36	2	131	1	27,443		
194 HABRTN-LINNTON	2	7,970							1	7							1	7,963		
195 HARBORTON 13KV	2	244															2	244		
196 HARMONY 13KV	5	240							2	68	3	171								
197 HARMONY-INTERNATIONA L																				
198 HARMONY-LAKE	3	1,627	1	104					1	72	1	1,451								
199 HARMONY-LINNWOD	6	993	2	935					3	55	1	3								
200 HARMONY-MILWAKI	7	1,581	6	1,576					1	5										
201 HARMONY-THIESEN	1	2							1	2										
202 HARRISON 13KV	2	1							2	1										
203 HARRISON-DAVIS	2	39							2	39										
204 HARRISON-IVON	2	6							1	2			1	3						
205 HEMLOCK 13KV	12	1,883	8	1,524			1	350	1	1			1	2	1	6				
206 HEMLOCK-FREMONT																				
207 HEMLOCK-MASON																				
208 HILLCREST 13KV																				
209 HILLCREST-CASCADIA																				
210 HILLCREST-REED																				

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Feeder Name	<u>Equipment</u> <u>* Sub-Total</u>		<u>UG Cond</u>		<u>UG Clamp</u>		<u>UG Xfmr</u>		<u>PGE</u> <u>Cutout/Fuse</u> <u>/Arrestor</u> <u>Failure</u>		<u>OH Cond</u>		<u>OH Clamp</u>		<u>OH Xfmr</u>		<u>Sub</u>		<u>Pole</u>	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
211 HILLCREST-SOUTH																				
212 HILLS-DAIRY CREEK	4	635							1	61	2	552	1	23						
213 HILLS-DENNIS																				
214 HILLS-JACKSON	6	330	3	181			1	143	1	2					1	4				
215 HILLS-LAUREL	16	933	3	24			1	8	8	300	1	588	1	1	1	6			1	5
216 HILLS-SCHOLLS	2	8													2	8				
217 HOGAN N 13KV	4	104	2	100					1	1									1	2
218 HOGAN N-BRGDOON	6	2,031	5	1,654			1	377												
219 HOGAN N-LINKS	11	419	3	223					2	6	3	3	1	1	2	186				
220 HOGAN N-SLQUIST	6	146	4	65			1	71							1	10				
221 HOGAN S-CLEVLND	4	447	3	445					1	1										
222 HOGAN S-LAWRNCE	11	1,093	10	1,091					1	1										
223 HOGAN S-MAIN	7	1,679	6	1,601			1	78												
224 HOGAN S-PAROPA	10	1,454	8	1,339			1	48	1	68										
225 HOGAN S-WALLULA	6	1,534	3	469			1	838							2	227				
226 HOLGATE 13KV	3	249							1	94			1	16	1	138				
227 HOLGATE-BYBEE	5	1,023	1	572			1	301	2	38					1	112				
228 HOLGATE-GIDEON																				
229 HOLGATE-KENLWOR	6	956	2	421					3	327	1	207								
230 HOLGATE-RHONE	6	84	1	8					5	76										
231 HUBER 13KV	7	834	3	422			1	362	1	14	1	5			1	31				
232 HUBER-BANY	12	969	7	455			3	501	2	14										
233 HUBER-FRMINGTON	1	49	1	49																
234 HUBER-KINNAMON	9	1,675	5	517					1	9	2	1,128			1	21				
235 HUBER-MARYVILLE	8	1,041	5	876			1	3	1	2					1	160				
236 HYDN IS-MALAND																				
237 HYDN IS-N SHORE	1	149	1	149																
238 HYDN IS-S SHORE																				
239 INDIAN-KEIZER	1	33							1	33										
240 INDIAN-LABISH	10	385					1	333	7	38					2	13				
241 INDIAN-NORTH	10	1,193	1	14					6	25			2	1,148	1	5				
242 INDIAN-STATION	6	1,383	5	773			1	610												
243 INDIAN-WEST	6	51					1	38	5	13										
244 ISLAND 13KV																				
245 ISLAND-13180	4	229							2	12	2	217								

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Feeder Name	<u>Equipment</u> <u>* Sub-Total</u>		<u>UG Cond</u>		<u>UG Clamp</u>		<u>UG Xfmr</u>		<u>PGE</u> <u>Cutout/Fuse</u> <u>/Arrestor</u> <u>Failure</u>		<u>OH Cond</u>		<u>OH Clamp</u>		<u>OH Xfmr</u>		<u>Sub</u>		<u>Pole</u>	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
246 ISLAND-13187	2	519									2	519								
247 ISLAND-13188	9	968	3	794					1	1	1	102	2	58	2	14				
248 JEN LDG 13KV	6	307	2	253					4	54										
249 JEN LDG-MELDRUM	5	162	3	128					2	35										
250 JEN LDG-O GROVE	2	26							1	21					1	5				
251 JEN LDG-WEBSTER	5	1,023	3	776			1	211							1	36				
252 KELLEY POINT-LEDBETTER	1	350															1	350		
253 KELLEY POINT-SOLAR1	1	2															1	2		
254 KELLEY POINT-SOLAR2	1	6															1	6		
255 KELLEY PT 13 KV	1	28															1	28		
256 KING CTY-BULL MT	2	727	1	639											1	88				
257 KING CTY-FISCHER	1	9													1	9				
258 KING CTY-HAZEL B																				
259 KING CTY-NORTH																				
260 KING CTY-SUMERFL	2	128	1	84			1	44												
261 KLY BU-BINNSMED	4	591							4	591										
262 KLY BU-FAIRLAWN	4	353	1	293					1	6	1	52							1	3
263 KLY BU-MALL 205	3	1,944	1	1,691					2	253										
264 KLY BU-MC GREW	4	404	1	132					2	90					1	183				
265 KLY PT-MARINEDR	1	12															1	12		
266 KLY PT-SIMMONS	4	411	1	293					2	38							1	80		
267 LAKE LABISH 4KV																				
268 LELAND-BEAVERC	15	7,387	6	1,060					4	162	1	324			2	9	1	5,827	1	4
269 LELAND-CARUS	15	1,963	2	20					5	16	5	1,915			1	2			2	11
270 LELAND-KELM	2	3,617	1	8													1	3,609		
271 LENTS-13101	11	979							6	389			1	22	4	568				
272 LENTS-HAPPY VAL	3	1,272					2	1,270	1	2										
273 LENTS-MT SCOTT	1	10													1	10				
274 LENTS-NORTH																				
275 LIB-BROWNING	1	281	1	281																
276 LIB-LONE OAK	8	1,068	6	672			2	395												
277 LIB-MORNINGSIDE	6	238	1	66					3	28					2	144				
278 LIB-ROSEDALE	5	1,340	2	1,319					2	4					1	17				
279 LIB-VISTA	2	36	1	6					1	30										
280 LIBERAL 13KV	6	138	1	12					3	14			1	1					1	111

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	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
281 LIBERAL-SAWMILL	1	0																	1	0
282 LIBERTY-SKYLINE	13	3,098	7	1,873					4	103	2	1,123								
283 MAIN-AIRPORT	6	685	2	203			2	368	1	47									1	67
284 MAIN-BENTLEY	7	426	3	193			2	192	2	40										
285 MAIN-EXPRESS	3	354	1	162			1	153	1	39										
286 MAIN-GRIFFIN																				
287 MAIN-JFS1																				
288 MAIN-JONES FARM																				
289 MAIN-RVR RD	9	482	3	459			1	5	4	16						1	3			
290 MC CL-COTTAGE	3	3,736							1	22						1	102		1	3,612
291 MC CL-FRONT ST																				
292 MC CL-HOLLYWOOD	1	32														1	32			
293 MCGILL-LSIAIR1A																				
294 MCMINNVILLE W AND L																				
295 MERIDIAN 13KV	8	44					1	8	4	12	2	20				1	5			
296 MERIDIAN-65TH																				
297 MERIDIAN-BORLND	3	240	1	223			1	14								1	3			
298 MERIDIAN-CHILDS	1	54									1	54								
299 MERIDIAN-LAKEVIEW	1	2							1	2										
300 MERIDIAN-NYBERG																				
301 MERIDIAN-PLKNGTN	4	424	4	424																
302 MERIDIAN-SAGERT	3	594	2	356					1	238										
303 MIDGROVE-BROWN	1	7	1	7																
304 MIDGROVE-CHEMEK	1	72	1	72																
305 MIDGROVE-CORDON	12	624	4	600					3	5	2	9	2	5	1	5				
306 MIDGROVE-SWEGLE	1	8	1	8																
307 MIDGROVE-WEST	2	8									1	1			1	7				
308 MIDWAY-DIVISION	8	285	1	41					2	11	2	227	3	6						
309 MIDWAY-DOUGLAS	4	466	3	448							1	18								
310 MIDWAY-LYNCH	13	1,310	1	105			1	66	6	1,074	1	3			4	61				
311 MIDWAY-POWELHST	4	157					1	49	1	32			2	76						
312 MILL CREEK 13KV	1	1							1	1										
313 MILL CREEK-EASTLAND	8	463	4	450					3	10	1	4								
314 MILL CREEK-KUEBLER	2	329	2	329																
315 MOLALLA-BUCKAROO	4	46							3	45			1	1						

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	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
316 MOLALLA-FOREST	5	37	1	12					1	2					3	24				
317 MOLALLA-MARQUAM	18	74	1	8					6	11	6	36	1	3	4	16				
318 MOLALLA-YODER	10	54	1	15					9	39										
319 MRKT ST-ENGLEWD																				
320 MRKT ST-FAIRGND	1	10	1	10																
321 MRKT ST-HAWTHNE	2	40							1	17	1	23								
322 MRKT ST-PARK																				
323 MT ANGEL-EAST	3	77							2	61					1	16				
324 MT ANGEL-WEST	19	905					1	7	9	19	4	850			4	24			1	5
325 MT PLS-CLAIRMONT	3	20	3	20																
326 MT PLS-MT VIEW																				
327 MT PLS-RIVRCRST	2	36	1	16							1	20								
328 MT PLS-SOUTHEND	1	2							1	2										
329 MULINO-NORTH																				
330 MULINO-SOUTH	5	92							2	46	1	3			2	43				
331 MULTNOMAH 13KV	7	10,535	3	881			1	14	1	39	2	9,601								
332 MULTNOMAH-13176	2	588	1	583					1	5										
333 MULTNOMAH-13177	9	1,700	5	1,320					4	379										
334 MULTNOMAH-13181	8	913	1	9					3	203	1	225	1	230	2	246				
335 MURRAYHILL 13KV	1	1					1	1												
336 MURRAYHL-KINTON	1	6,342															1	6,342		
337 MURRAYHL-QUARRY																				
338 MURRAYHL-REUSER																				
339 MURRAYHL-TEAL	3	686					3	686												
340 N MARION FRONT	2	1,338	1	958													1	380		
341 N MARION-CROSBY	1	1											1	1						
342 N MARION-HUBBRD	1	369													1	369				
343 N MARION-MCLARN	12	848	4	721					2	68	1	13	2	4	3	42				
344 N PLAINS 13KV	21	2,210	4	23					6	167	7	1,799	1	198	3	23				
345 N PLAINS-M HILL	11	1,690							6	169	4	1,518			1	3				
346 NEWBERG-CHEHALM	14	841	5	619					6	79	1	131			2	12				
347 NEWBERG-COLLEGE	2	81													2	81				
348 NEWBERG-DUNDEE	12	450	8	432					1	13					1	1			2	4
349 NEWBERG-HOOVR PK	3	13	1	7					1	1			1	4						
350 NORTHERN-11009	7	110					1	7	5	95					1	8				

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## 2014 Outages by PGE Equipment

Feeder Name	<u>Equipment</u> * Sub-Total		<u>UG Cond</u>		<u>UG Clamp</u>		<u>UG Xfmr</u>		<u>PGE</u> <u>Cutout/Fuse</u> <u>/Arrestor</u> <u>Failure</u>		<u>OH Cond</u>		<u>OH Clamp</u>		<u>OH Xfmr</u>		<u>Sub</u>		<u>Pole</u>	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
351 NORTHERN-11016																				
352 NORTHERN-11071	2	172							1	31					1	142				
353 OAK HILLS 13KV	8	6,337	1	107			3	870	1	31							3	5,328		
354 OAK HILLS-5 OAK	4	9,843					1	373									3	9,470		
355 OAK HILLS-BRIER	3	2,417															3	2,417		
356 OAK HILLS-SMRST	6	7,885	3	39													3	7,846		
357 OAK HILLS-WLKRD	5	11,269	2	358													3	10,912		
358 OCKLEY GRN 4KV																				
359 OK GRV-LK HARRT	2	12							1	3					1	9				
360 OK GRV-WT WATER																				
361 ORENCO 13KV																				
362 ORENCO PRIMATE	1	123	1	123																
363 ORENCO-231ST	1	2,473	1	2,473																
364 ORENCO-AMBRGLEN																				
365 ORENCO-BASELINE	1	7									1	7								
366 ORENCO-WILKINS	1	6					1	6												
367 ORIENT 13KV	16	2,391	6	657			2	8	2	6	4	1,715	2	5						
368 ORIENT-BARLOW	10	3,851					1	5	4	138	2	3,664			3	43				
369 OSWEGO-IRON MTN																				
370 OSWEGO-MARYLHST	5	620									2	402			3	219				
371 OSWEGO-PALATINE	3	30							3	30										
372 OSWEGO-STAFFORD																				
373 OXFORD 13KV	2	35							2	35										
374 OXFORD-FAIRVIEW	5	1,174	1	800					3	359					1	15				
375 OXFORD-LEE	4	223							2	3					2	220				
376 OXFORD-MADRONA	3	17	1	14					2	3										
377 OXFORD-RURAL	1	9									1	9								
378 OXFORD-SHELTON																				
379 PELTON-ROUND BUTTE																				
380 PENIN PARK 4KV	2	73											1	67	1	6				
381 PLSNT VALY 13KV	6	308					1	2							4	30			1	275
382 PLSNT VALY-BXTR	5	161	1	95					4	66										
383 PLSNT VALY-MOON	2	3,837					1	3,834			1	3								
384 PLSNT VALY-SUN	6	130	3	34			1	5	2	91										
385 PORTLAND GRD W PUMPING																				

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## 2014 Outages by PGE Equipment

Feeder Name	<u>Equipment</u> <u>* Sub-Total</u>		<u>UG Cond</u>		<u>UG Clamp</u>		<u>UG Xfmr</u>		<u>PGE</u> <u>Cutout/Fuse</u> <u>/Arrestor</u> <u>Failure</u>		<u>OH Cond</u>		<u>OH Clamp</u>		<u>OH Xfmr</u>		<u>Sub</u>		<u>Pole</u>	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
386 PORTSMTH-CARB	8	3,596	1	90					3	29	2	151			1	54			1	3,272
387 PORTSMTH-DISP																				
388 PORTSMTH-WILL	9	3,927	3	259					3	60					2	30			1	3,579
389 PRGRS-GREENBURG	10	1,127	8	806					1	29									1	292
390 PRGRS-HALL																				
391 PRGRS-ROBINSON	8	8,642	7	8,624					1	19										
392 PRGRS-SAWYER	4	367	1	360					3	7										
393 PRGRS-WSH SQ #1																				
394 PRGRS-WSH SQ #2																				
395 RAL H-DOGWOOD	2	6							2	6										
396 RAL H-MONTCLAIR	4	695	1	108					1	330					2	257				
397 RAL H-OLESON RD	8	1,535	3	461					4	970					1	104				
398 RAMAPO 13KV	6	1,599	2	1,528					3	53					1	19				
399 RAMAPO-GILBERT	5	339							2	31	1	300			2	8				
400 REDLAND 13KV	20	415	5	243			3	49	5	68	2	7	3	25	2	23				
401 REDLAND-HENRICI	15	655	2	615			2	11	6	10	3	13			2	6				
402 REED-BLANTON	11	584	8	469			1	96	2	18										
403 REED-HAZELDALE	8	730	5	682					1	4	2	43								
404 REED-INTEL #1																				
405 REED-INTEL #2																				
406 REED-INTEL #3																				
407 REED-INTEL #4																				
408 REED-TV HWY	4	2,128	1	50					1	2	2	2,075								
409 REEDVILLE-AUGUSTA	6	1,906	2	431			2	1,459			1	15			1	1				
410 ROCKWD 13KV	10	1,019	7	606					2	18	1	395								
411 ROCKWD-AIRPT WY																				
412 ROCKWD-BOEING																				
413 ROCKWD-INDUSTRAL																				
414 ROCKWD-REYNOLDS	3	26	1	6					2	21										
415 ROCKWD-WILKES	1	6	1	6																
416 ROSEMONT-HIDDEN SPRINGS	8	1,175	5	97			2	738					1	340						
417 ROSEMONT-MOSSY BRAE	4	739	2	708							1	24			1	7				
418 ROSEMONT-OVERLOOK	2	267					2	267												
419 ROSEWAY 13 KV	2	9	1	7									1	2						
420 ROSEWAY-ALEXNDR																				

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## 2014 Outages by PGE Equipment

Feeder Name	Equipment * Sub-Total		UG Cond		UG Clamp		UG Xfmr		PGE Cutout/Fuse /Arrestor Failure		OH Cond		OH Clamp		OH Xfmr		Sub		Pole	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
421 ROSEWAY-ESPLANA	3	419	2	359			1	59												
422 ROUND BUTTE SPILLWAY																				
423 RUBY-13502	8	18,537	2	83					3	7	1	393					2	18,054		
424 RUBY-13503	9	15,648	5	393			1	202									2	11,743	1	3,311
425 RVRGATE-11010																				
426 RVRGATE-11011	2	3,059									1	3,055			1	4				
427 RVRGATE-PEARCY																				
428 RVRGATE-SWIFT	1	2							1	2										
429 RVRVIW-FULTON	4	169	1	150					2	16	1	3								
430 RVRVIW-MACADAM	4	397	2	389									2	8						
431 RVRVIW-TWILLIGR	1	106							1	106										
432 SALEM-13260	1	73															1	73		
433 SALEM-13261	1	88															1	88		
434 SALEM-13262	1	116															1	116		
435 SALEM-13263	2	570					1	322									1	248		
436 SALEM-13264	1	10															1	10		
437 SALEM-UNION	1	262															1	262		
438 SANDY 13KV	10	1,853	2	1,059					5	723	1	61	1	2					1	8
439 SANDY-362ND	11	2,128	5	2,007			1	74	4	12			1	35						
440 SANDY-BLUFF	4	94					2	93	2	1										
441 SANDY-WILDCAT	3	148							1	93					1	10			1	45
442 SCHOLLS FERRY-KEMMER RD																				
443 SCHOLLS FERRY-RAINBOW	8	36	1	6					3	8	1	5			2	9			1	9
444 SCHOLLS FERRY-ROY ROGERS	3	243	2	13			1	230												
445 SCOGG-CHERRY G	4	523	1	8					3	516										
446 SCOGG-LAUREL W	13	140							8	119	2	12	1	2					2	8
447 SCOTSMILL 13KV	24	2,138	3	88			3	154	7	21	5	1,849	1	2	5	24				
448 SELLWD 13KV	3	14,758							1	2					1	70	1	14,686		
449 SELLWD-KELOG PK	7	15,955							1	5	3	6,605	1	332	1	78	1	8,935		
450 SELLWD-WAVERLY	3	4,629	2	876													1	3,752		
451 SHERIDAN EAST	14	659	5	283					5	268	2	94	1	4	1	9				
452 SHERIDAN-KADELL	7	2,557	2	13					1	40	2	786			1	5	1	1,713		
453 SILVERTON-NORTH	8	109	1	34			1	9	5	65			1	1						

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## 2014 Outages by PGE Equipment

Feeder Name	<u>Equipment</u> * Sub-Total		<u>UG Cond</u>		<u>UG Clamp</u>		<u>UG Xfmr</u>		<u>PGE</u> <u>Cutout/Fuse</u> <u>/Arrestor</u> <u>Failure</u>		<u>OH Cond</u>		<u>OH Clamp</u>		<u>OH Xfmr</u>		<u>Sub</u>		<u>Pole</u>	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
454 SILVERTON-SOUTH	4	39	2	18					2	21										
455 SILVERTON-WEST	17	143	2	25			2	11	6	19	1	2			5	81			1	5
456 SIX COR-13359	14	12,798	1	224			3	189	6	153	1	17			2	39	1	12,176		
457 SIX COR-13360	2	2,235	1	7													1	2,229		
458 SIX COR-BORCHER	7	5,683	2	15					2	74					2	11	1	5,583		
459 SIX COR-CHAPMAN	8	9,951							2	74			2	288	3	22	1	9,567		
460 SIX CORNER-13KV	4	6,709	1	2,774					1	23	1	36					1	3,876		
461 SMURFIT-NEWBERG																				
462 SPRINGBK-FERNWD	2	735							1	16	1	720								
463 SPRINGBK-STPAUL	11	131	1	18					6	18	2	91	1	2					1	2
464 SPRINGBK-VILLA	1	105	1	105																
465 SPRINGBK-ZIMRI	15	705	6	229			2	15	5	444	1	13			1	5				
466 ST LOUIS-EAST	1	2							1	2										
467 ST LOUIS-NORTH	13	55	2	27					6	20	1	2	2	2	2	4				
468 ST LOUIS-WEST	9	61	1	9					6	32	1	4			1	16				
469 ST MARY 13KV																				
470 ST MARY-BETHANY																				
471 ST MARY-BUTNER	6	807							4	70					1	434			1	304
472 ST MARY-ELMONIC	6	373	4	194			2	179												
473 ST MARY-JENKINS																				
474 ST MARY-MILLIKN	4	64	2	63					2	1										
475 STEPHN-11001																				
476 STEPHN-11020	1	39							1	39										
477 STEPHN-11054																				
478 STEPHN-11055																				
479 STEPHN-11092																				
480 STEPHN-11093																				
481 STEPHN-11094																				
482 STEPHN-11095																				
483 STEPHN-11097																				
484 STEPHN-11098																				
485 STEPHN-11099																				
486 SULL-ROBINWOOD	3	64							3	64										
487 SULL-SALAMO	6	1,763	5	1,713			1	50												
488 SULL-SUSSEX	4	25							4	25										

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## 2014 Outages by PGE Equipment

Feeder Name	<u>Equipment</u> <u>* Sub-Total</u>		<u>UG Cond</u>		<u>UG Clamp</u>		<u>UG Xfmr</u>		<u>PGE</u> <u>Cutout/Fuse</u> <u>/Arrestor</u> <u>Failure</u>		<u>OH Cond</u>		<u>OH Clamp</u>		<u>OH Xfmr</u>		<u>Sub</u>		<u>Pole</u>	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
489 SULL-WILLAMETTE	7	337	1	147					1	3	3	159			2	28				
490 SULLIVAN-TANNER																				
491 SULZER 115A																				
492 SULZER 115B																				
493 SULZER BINGHAM																				
494 SUMMIT-GOVT CAMP	3	74							2	15							1	59		
495 SUMMIT-MEADOWS	2	8									1	7					1	2		
496 SUMMIT-SUMMIT	7	775	3	377							1	265	1	4			1	33	1	97
497 SUNSET-BLANCHET																				
498 SUNSET-COLFAX																				
499 SUNSET-CORNELL																				
500 SUNSET-D1X1																				
501 SUNSET-DORION																				
502 SUNSET-IDTB																				
503 SUNSET-INTEL D1B1																				
504 SUNSET-KOMATSU #1																				
505 SUNSET-KOMATSU #2																				
506 SUNSET-KOMATSU #3	2	398															2	398		
507 SUNSET-LANE																				
508 SUNSET-LINDE PHASE 1																				
509 SUNSET-MCCALL	1	8															1	8		
510 SUNSET-MEEK																				
511 SUNSET-PAULING	1	242	1	242																
512 SUNSET-SPALDING																				
513 SUNSET-WHITMAN																				
514 SUNSET-YOUNG																				
515 SWAN IS-BASIN																				
516 SWAN IS-DOLPHIN	1	10															1	10		
517 SWAN IS-FREIGHTLINER																				
518 SWAN IS-GOING	1	4							1	4										
519 SWAN IS-SHIPYRD																				
520 SYLVAN-BARNES	5	604							3	12	2	592								
521 SYLVAN-PATTON	5	487							5	487										
522 TABOR 13KV																				
523 TABOR-82ND AV	4	59							4	59										

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## 2014 Outages by PGE Equipment

Feeder Name	Equipment * Sub-Total		UG Cond		UG Clamp		UG Xfmr		PGE Cutout/Fuse /Arrestor Failure		OH Cond		OH Clamp		OH Xfmr		Sub		Pole	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
524 TABOR-HOSPITAL																				
525 TEK 13KV																				
526 TEK-HOCKEN																				
527 TEK-NORTH																				
528 TEK-SHANNON	4	323	1	51			1	6	1	47	1	218								
529 TEK-SOUTH	5	648					3	256	1	10	1	382								
530 TEK-WEST																				
531 TEMP-NORTH																				
532 TEMP-SOUTH																				
533 TIGARD - 13 KV	5	4,551	1	378							2	3,801			2	373				
534 TIGARD-13336	1	4									1	4								
535 TIGARD-13337	4	381							3	378					1	3				
536 TIGARD-13361																				
537 TIGARD-13362	11	2,979	10	2,766			1	214												
538 TNCTR-LAWNFIELD	3	146	1	142							2	4								
539 TNCTR-MONTEREY	5	105	1	3					4	101										
540 TNCTR-NORTH 13KV																				
541 TNCTR-PRECISION																				
542 TNCTR-SOUTH 13KV																				
543 TNCTR-SUNNYBROOK																				
544 TNCTR-VALLEY VW																				
545 TROJAN PLNT E																				
546 TUALATIN 13KV	1	11					1	11												
547 TUALATIN-AVERY	5	1,552	3	1,080			2	472												
548 TUALATIN-CIPOLE	1	25							1	25										
549 TUALATIN-HERMAN																				
550 TUALATIN-IBACH	5	757	4	695					1	62										
551 TUALATIN-LEVETON																				
552 TURNER 13KV	6	50							4	6					2	44				
553 TURNER-CASCADE	8	188							6	184	1	3							1	1
554 TWILIGHT-BREMER	9	5,361	3	18					1	279	2	4			2	13	1	5,048		
555 UNIONVALE 13KV	23	99	2	17			1	10	15	52	4	14			1	6				
556 UNIVRSITY-MILL	1	57													1	57				
557 UNIVRSITY-TRADE	5	372							3	175	1	104			1	93				
558 URBAN-BARBUR	1	14							1	14										

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## 2014 Outages by PGE Equipment

Feeder Name	Equipment * Sub-Total		UG Cond		UG Clamp		UG Xfmr		PGE Cutout/Fuse /Arrestor Failure		OH Cond		OH Clamp		OH Xfmr		Sub		Pole	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
559 URBAN-CAMPUS																				
560 URBAN-CORBETT	1	1,033																	1	1,033
561 URBAN-GAINES	2	4							1	3	1	1								
562 URBAN-GIBBS																				
563 URBAN-KELLY	1	9,709	1	9,709																
564 URBAN-LANDING																				
565 URBAN-MEDICAL																				
566 URBAN-OHSU																				
567 W PTL D 13KV	2	3							2	3										
568 W PTL D-72ND	3	318	1	285					1	2						1	31			
569 W PTL D-NORTH	3	624					2	611				1	13							
570 W PTL D-PACIFIC	11	1,082	1	26					5	127	1	908	1	7	1	4			2	10
571 W UNION 13KV	5	763	4	581			1	182												
572 W UNION-CORNELS	7	368	3	347					2	13					2	8				
573 WACKER																				
574 WACONDA 13KV	15	67	1	12	1	2			12	51	1	2								
575 WACONDA-NORPAC																				
576 WACONDA-RIVER RD	7	28					1	5	3	6	1	4	1	3	1	11				
577 WALLACE RD 13KV	16	4,726	5	426			1	6	6	50	1	467	1	3	1	4	1	3,771		
578 WALLACE-WILLOW LAKE																				
579 WELCHES 13KV	6	3,220							3	116	1	1,191			1	145	1	1,768		
580 WELCHES-ZIG ZAG	16	4,321	1	269					4	22	8	2,057			2	20	1	1,953		
581 WILLAMINA-BRIDGE	5	21							4	15					1	6				
582 WILLAMINA-BUELL	4	62							2	49					2	13				
583 WILLAMINA-LUMBER	2	7							1	2	1	6								
584 WILLBRDG #1	1	13															1	13		
585 WILLBRDG #4	5	34							3	5							2	28		
586 WILSV-BOECKMAN																				
587 WILSV-CHARBNEAU	6	1,580	3	491			2	1,076	1	13										
588 WILSV-CITY	1	686	1	686																
589 WILSV-MENTORTEK																				
590 WILSV-PARKWAY																				
591 WILSV-VILLEBOIS																				
592 WILSV-WEST	9	223	1	201					3	6	2	5			3	10				
593 WOODBURN-CANNERY	1	1							1	1										

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Feeder Name	<u>Equipment</u> <u>* Sub-Total</u>		<u>UG Cond</u>		<u>UG Clamp</u>		<u>UG Xfmr</u>		<u>PGE</u> <u>Cutout/Fuse</u> <u>/Arrestor</u> <u>Failure</u>		<u>OH Cond</u>		<u>OH Clamp</u>		<u>OH Xfmr</u>		<u>Sub</u>		<u>Pole</u>	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
594 WOODBURN-EAST	9	101	1	8			1	16	5	10	1	60			1	7				
595 WOODBURN-TOMLIN	6	77	1	7					1	4					3	61			1	5
596 WOODBURN-WEST	4	26	1	21					3	5										
597 YAMHILL 13KV	12	595	3	27					6	42	3	526								
598 YAMHILL-CARLTON	11	410							7	31	2	368	1	7	1	4				
<b>Grand Total:</b>	<b>2,196</b>	<b>552,860</b>	<b>577</b>	<b>133,327</b>	<b>1</b>	<b>2</b>	<b>149</b>	<b>27,238</b>	<b>755</b>	<b>21,061</b>	<b>253</b>	<b>92,905</b>	<b>76</b>	<b>4,008</b>	<b>255</b>	<b>10,334</b>	<b>87</b>	<b>244,926</b>	<b>43</b>	<b>19,059</b>

Hrs - # of customers \* duration hrs  
Outs = Outages

UG = Underground  
OH = Overhead

Xfmr = Transformer  
Sub = Substation

Cond = Conductor

\* Sub-Total Equipment - is sub-total of equipment identified by component type

## **SECTION VII**

### **Outages by Vegetation**

This section provides the number of customer outages (frequency) and customer outage hours (duration) caused by vegetation events. The information is presented by feeder and attributed to one of three primary categories and one of three subcategories, if applicable, of vegetation related events. Definitions for the primary and sub-categories are shown below:

- Total Trees: Total number of vegetation (i.e. tree) related outages. This category is the sum of Non-Preventable and Preventable outages.
- Total Non-Preventable: Total number uprooted trees, tree limbs, and broken/felled trees that resulted in an outage.
  - Uprooted: Outages caused by the whole tree uprooting. This does not include broken tree parts (e.g. limb or tree top)
  - Limb: Outages caused by broken tree tops or limbs
  - Tree Broken or Felled into: Outages caused by a member of the public falling a tree or working in a tree. This type of event is considered negligence and is addressed through PGE's safety campaign (in lieu of the PGE tree trimming program).
- Total Preventable (Tree Contacts): Total number of outages caused by a tree growing into the conductor. This also includes tree burning events.



## 2014 Outages by Vegetation

	Feeder Name	Total Trees		Total Non-Preventable		Uprooted		Limb		Tree Broken or Felled into		Total Preventable (Tree Contact)	
		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
1	ABERN-CLACK HTS												
2	ABERN-ORE CITY	4	535	4	535			4	535				
3	ABERNETHY-TRANSIT	2	36	2	36			2	36				
4	ALDER CT-ANKENY												
5	ALDER CT-IRVING												
6	ALDER CT-LINCOLN	2	1,401	2	1,401			2	1,401				
7	ALDER CT-STARK												
8	ALDER CT-TAYLOR	2	171	2	171	1	169	1	2				
9	ALDER CT-YAMHILL												
10	AMITY 13KV	4	101	4	101			4	101				
11	AMITY-BELLEVUE	7	8,537	7	8,537	2	8,457	5	80				
12	ARLETA-52ND ST	3	6,992	3	6,992			3	6,992				
13	ARLETA-FOSTER												
14	ARLETA-HAROLD	2	88	2	88			2	88				
15	ARLETA-POWELL												
16	ARLETA-STEELE	1	385	1	385			1	385				
17	B LAKE-SUNDIAL												
18	B LAKE-TOYOTNSO												
19	BANKS 13KV	4	238	4	238			4	238				
20	BANKS-CEDAR CYN	10	570	10	570			10	570				
21	BARNES-BATTLCRK	1	10	1	10			1	10				
22	BARNES-BOONE	1	108	1	108			1	108				
23	BARNES-COMMERCL	1	247	1	247			1	247				
24	BARNES-SUNNYSID												
25	BELL-FLAVEL	2	60	2	60			2	60				
26	BELL-JOHNNSN CRK												
27	BELL-KENDALL												
28	BELL-KING	1	741	1	741			1	741				
29	BELL-SOUTHGATE	1	95	1	95	1	95						
30	BELL-WICHITA	2	139	2	139			1	45	1	94		
31	BELMONT 4KV												
32	BETHANY-BURTON	3	384	3	384	1	76	2	308				
33	BETHANY-GERMANTOWN	3	2,153	3	2,153	1	155	2	1,998				

Hrs - # of customers \* duration hrs      Outs = Outages

## 2014 Outages by Vegetation

	Feeder Name	Total Trees		Total Non-Preventable		Uprooted		Limb		Tree Broken or Felled into		Total Preventable (Tree Contact)	
		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
34	BETHANY-KAISER												
35	BETHANY-LAIDLAW	2	75	2	75			2	75				
36	BETHANY-SPRINGVILLE	2	196	2	196	1	2	1	194				
37	BETHANY-THOMPSON												
38	BETHEL-FRUTLAND	1	3	1	3			1	3				
39	BETHEL-GEER	4	206	4	206	2	166	2	40				
40	BETHEL-MCLAY												
41	BLUE LAKE 13 KV												
42	BOONS-GOODALL	1	375	1	375			1	375				
43	BOONS-KRUSEWAY	1	48	1	48			1	48				
44	BOONS-LK GROVE	5	506	5	506			4	490	1	16		
45	BOONS-MT PARK												
46	BOONS-WMBLY PK	6	787	6	787			6	787				
47	BORING-282ND AV	6	524	6	524			6	524				
48	BORING-CITY	1	61	1	61			1	61				
49	BORING-TELFORD	6	370	6	370			4	146	2	224		
50	BRIGHTWD 13KV	25	2,477	25	2,477	2	291	23	2,187				
51	BRIGHTWD-N BANK	9	6,496	9	6,496	1	96	8	6,400				
52	BROOKWOOD 13KV												
53	BROOKWOOD-BRWCK												
54	BROOKWOOD-SUNRS	2	3,731	2	3,731			2	3,731				
55	BVRTN-ALLEN	3	1,096	3	1,096			3	1,096				
56	BVRTN-JAMIESON												
57	BVRTN-NORTHWEST												
58	BVRTN-W SLOPE												
59	CANBY-13643	5	64	5	64			5	64				
60	CANBY-13644	4	15	4	15			4	15				
61	CANBY-BUTTEVLE	2	87	2	87			2	87				
62	CANYON 13KV	5	370	5	370			5	370				
63	CANYON-13114												
64	CANYON-13115												
65	CANYON-13116												
66	CANYON-13117												

Hrs - # of customers \* duration hrs      Outs = Outages

## 2014 Outages by Vegetation

Feeder Name	<u>Total Trees</u>		Total		Uprooted		Limb		Tree Broken or Felled into		Total Preventable (Tree Contact)	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
67	CANYON-13118PSU											
68	CANYON-13119PSU											
69	CANYON-13120											
70	CANYON-13121											
71	CANYON-13122											
72	CANYON-13123											
73	CANYON-13124											
74	CANYON-13125											
75	CANYON-13133											
76	CANYON-13134											
77	CANYON-13135											
78	CANYON-13136											
79	CANYON-21ST AVE											
80	CANYON-23RD AVE	8	3,268	7	3,063	1	9	6	3,054			1 205
81	CANYON-BURNSIDE											
82	CARVER 13 KV	2	543	2	543			1	495	1	48	
83	CARVER-ALMOND											
84	CARVER-NORTH											
85	CARVER-RIVRBEND											
86	CARVER-SOUTH											
87	CARVER-WOODS	1	1	1	1			1	1			
88	CEDAR HILLS 13KV											
89	CEDAR-LEAHY	2	91	2	91			2	91			
90	CEDAR-SHOP CEN	4	329	4	329			4	329			
91	CEDAR-SKYLINE	2	10	2	10	1	8	1	2			
92	CEDAR-ST VINCNT											
93	CEDAR-SYLVAN	1	1	1	1			1	1			
94	CLACK-EVELYN											
95	CLACK-GLADSTONE											
96	CLACK-JENNIFER											
97	CLACK-TOLBERT	1	10	1	10			1	10			
98	CLAXTAR 13KV											
99	CLAXTAR-HAYSVIL											

Hrs - # of customers \* duration hrs      Outs = Outages

## 2014 Outages by Vegetation

Feeder Name	Total Trees		Total Non-Preventable		Uprooted		Limb		Tree Broken or Felled into		Total Preventable (Tree Contact)	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
100	CLAXTAR-RIDGE	1	5	1	5			1	5			
101	CNTNNIL 13KV	4	1,682	4	1,682			4	1,682			
102	CNTNNIL-BARKER	3	18	3	18			3	18			
103	CNTNNIL-BRACRFT	5	601	5	601			5	601			
104	CNTNNIL-TREEAND	1	778	1	778			1	778			
105	COFFEE CREEK-FREEMAN											
106	COFFEE CREEK-HOLIDAY											
107	COLTON-DHOOGHE	7	396	7	396			7	396			
108	COLTON-GRAYS HL	13	883	13	883			13	883			
109	CORNELIUS 13KV	6	241	6	241			6	241			
110	CORNELIUS-ADAIR	1	67	1	67			1	67			
111	CORNELIUS-VRBRT	2	3,119	2	3,119			2	3,119			
112	CORNELL-BLUFFS	1	4	1	4			1	4			
113	CORNELL-SALTZMAN	4	191	4	191			4	191			
114	CORNELL-WESTLAWN	4	816	4	816	1	27	3	789			
115	CULVER 13KV											
116	CULVER-GAFFIN											
117	CULVER-SANYO #1											
118	CULVER-SANYO #2											
119	CURTIS 13KV	1	36	1	36			1	36			
120	CURTIS-11077											
121	DAYTON-EAST	5	37	4	33			4	33	1	4	
122	DAYTON-LAFAYETT	3	89	3	89			3	89			
123	DAYTON-S AND W	2	108	2	108			2	108			
124	DELAWARE-DENVER	1	31	1	31			1	31			
125	DELAWARE-INTER											
126	DELAWARE-LOMBRD	4	14,178	4	14,178			4	14,178			
127	DENNY-EAST	2	65	2	65			2	65			
128	DENNY-NORTH											
129	DENNY-SOUTH	1	0	1	0			1	0			
130	DENNY-WEST	7	1,084	7	1,084			7	1,084			
131	DILLEY-13KV	4	288	4	288			4	288			
132	DILLEY-SPRINGHL											

Hrs - # of customers \* duration hrs      Outs = Outages

## 2014 Outages by Vegetation

	Feeder Name	Total Trees		Total Non-Preventable		Uprooted		Limb		Tree Broken or Felled into		Total Preventable (Tree Contact)	
		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
133	DUNNS C 13 KV	13	3,442	12	2,726	3	36	9	2,690			1	716
134	DUNNS C-KELSO												
135	DURHAM 13KV												
136	DURHAM-BONITA												
137	DURHAM-BRIDGEPORT												
138	DURHAM-SATTTLER												
139	DURHAM-SOUTH												
140	E-11021												
141	E-11039												
142	E-11040												
143	E-11041												
144	E-11042												
145	E-11043												
146	E-11047												
147	E-11064												
148	E-13139	1	59	1	59			1	59				
149	E-13140	7	743	7	743	1	7	6	736				
150	E-13141												
151	E-13144	1	68	1	68			1	68				
152	E-13145												
153	E-13148												
154	E-13149												
155	E-13150												
156	EAGLE CR-BARTON	9	830	8	826			8	826			1	4
157	EAGLE CR-RIVRML	3	223	3	223	2	91	1	133				
158	EASTPORT-76TH	1	3,742	1	3,742			1	3,742				
159	EASTPORT-PLAZA												
160	ELMA 13KV												
161	ELMA-4 CORNERS												
162	ELMA-HUDSON												
163	ELMA-STATE 13KV												
164	ESTACADA 13KV	9	4,391	9	4,391	1	3,830	8	562				
165	ESTACADA-FARADY	26	3,426	26	3,426			25	3,406	1	20		

Hrs - # of customers \* duration hrs      Outs = Outages

## 2014 Outages by Vegetation

	Feeder Name	Total Trees		Total Non-Preventable		Uprooted		Limb		Tree Broken or Felled into		Total Preventable (Tree Contact)	
		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
166	FAIRMT-CNDLARIA	1	241	1	241			1	241				
167	FAIRMT-MISSION	4	134	3	133			2	5	1	128	1	1
168	FAIRVIEW 13 KV	1	1	1	1			1	1				
169	FAIRVIEW-CLRCK												
170	FAIRVIEW-K CLUB	2	18	2	18			2	18				
171	FAIRVIEW-TROUTD												
172	FAIRVIEW-W VILL												
173	FARGO 13KV	3	579	3	579			3	579				
174	G HOME-MCKAY	4	421	4	421			4	421				
175	G HOME-METZGER	6	745	6	745			6	745				
176	GALES CRK 13KV	21	829	20	791	1	16	19	774			1	39
177	GLENCOE-GLISAN												
178	GLENCOE-PROVID												
179	GLENCOE-SUNNY	2	3,969	2	3,969			2	3,969				
180	GLISAN-FAB 2A												
181	GLISAN-UTIL 1B												
182	GLNCLN-BRIDLMIL	6	397	6	397			6	397				
183	GLNCLN-SUNSET	4	415	4	415			4	415				
184	GLNDOVEER-13596	1	52	1	52			1	52				
185	GLNDOVEER-13597	1	1	1	1			1	1				
186	GLNDOVEER-13598	1	40	1	40			1	40				
187	GLNDOVEER-13599												
188	GLNDOVEER-CLFGT	2	29	2	29	1	6	1	23				
189	GLNDOVEER-NEAST												
190	GRAND AV 4KV												
191	GRND RND-AGENCY	1	64	1	64			1	64				
192	GRND RND-FORTHL	10	1,045	10	1,045			9	969	1	75		
193	HABRTN-BURLINTN	8	241	8	241	1	11	7	230				
194	HABRTN-LINNTON	4	491	4	491	2	467	2	24				
195	HARBORTON 13KV												
196	HARMONY 13KV	3	169	3	169			3	169				
197	HARMONY-INTERNATIONAL	1	11	1	11			1	11				
198	HARMONY-LAKE	1	116	1	116			1	116				

Hrs - # of customers \* duration hrs      Outs = Outages

## 2014 Outages by Vegetation

Feeder Name	Total Trees		Total Non-Preventable		Uprooted		Limb		Tree Broken or Felled into		Total Preventable (Tree Contact)	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
199 HARMONY-LINNWOD	1	187	1	187			1	187				
200 HARMONY-MILWAKI	4	2,303	4	2,303			4	2,303				
201 HARMONY-THIESEN												
202 HARRISON 13KV												
203 HARRISON-DAVIS												
204 HARRISON-IVON												
205 HEMLOCK 13KV												
206 HEMLOCK-FREMONT	3	63	3	63			3	63				
207 HEMLOCK-MASON												
208 HILLCREST 13KV	1	95	1	95			1	95				
209 HILLCREST-CASCADIA												
210 HILLCREST-REED												
211 HILLCREST-SOUTH												
212 HILLS-DAIRY CREEK	1	204	1	204			1	204				
213 HILLS-DENNIS												
214 HILLS-JACKSON												
215 HILLS-LAUREL	4	360	3	303			3	303			1	57
216 HILLS-SCHOLLS												
217 HOGAN N 13KV	7	28	7	28			6	26	1	2		
218 HOGAN N-BRGDOON												
219 HOGAN N-LINKS	17	3,271	17	3,271	2	2,182	15	1,089				
220 HOGAN N-SLQUIST	1	780	1	780	1	780						
221 HOGAN S-CLEVLND												
222 HOGAN S-LAWRNCE	2	4,589	1	4,513	1	4,513					1	77
223 HOGAN S-MAIN												
224 HOGAN S-PAROPA												
225 HOGAN S-WALLULA	2	63	2	63			2	63				
226 HOLGATE 13KV												
227 HOLGATE-BYBEE												
228 HOLGATE-GIDEON												
229 HOLGATE-KENLWOR												
230 HOLGATE-RHONE												
231 HUBER 13KV												

Hrs - # of customers \* duration hrs      Outs = Outages

## 2014 Outages by Vegetation

Feeder Name	Total Trees		Total Non-Preventable		Uprooted		Limb		Tree Broken or Felled into		Total Preventable (Tree Contact)	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
232 HUBER-BANY	2	29	2	29			1	6	1	23		
233 HUBER-FRMINGTON	1	33	1	33			1	33				
234 HUBER-KINNAMON												
235 HUBER-MARYVILLE												
236 HYDN IS-MALAND	1	8	1	8	1	8						
237 HYDN IS-N SHORE												
238 HYDN IS-S SHORE												
239 INDIAN-KEIZER												
240 INDIAN-LABISH	2	14	2	14			2	14				
241 INDIAN-NORTH	2	4	2	4			2	4				
242 INDIAN-STATION												
243 INDIAN-WEST	2	291	2	291			2	291				
244 ISLAND 13KV												
245 ISLAND-13180	1	4,521	1	4,521			1	4,521				
246 ISLAND-13187	4	292	4	292			4	292				
247 ISLAND-13188	3	1,523	3	1,523			3	1,523				
248 JEN LDG 13KV	2	502	2	502			2	502				
249 JEN LDG-MELDRUM	3	1,634	3	1,634			3	1,634				
250 JEN LDG-O GROVE	4	3,636	4	3,636			4	3,636				
251 JEN LDG-WEBSTER	1	7	1	7			1	7				
252 KELLEY POINT-LEDBETTER												
253 KELLEY POINT-SOLAR1												
254 KELLEY POINT-SOLAR2												
255 KELLEY PT 13 KV												
256 KING CTY-BULL MT												
257 KING CTY-FISCHER	2	3,146	2	3,146			2	3,146				
258 KING CTY-HAZEL B												
259 KING CTY-NORTH												
260 KING CTY-SUMERFL												
261 KLY BU-BINNSMED												
262 KLY BU-FAIRLAWN	1	215	1	215			1	215				
263 KLY BU-MALL 205	5	404	5	404			5	404				
264 KLY BU-MC GREW	1	4	1	4			1	4				

Hrs - # of customers \* duration hrs      Outs = Outages



## 2014 Outages by Vegetation

	Feeder Name	Total Trees		Total Non-Preventable		Uprooted		Limb		Tree Broken or Felled into		Total Preventable (Tree Contact)	
		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
265	KLY PT-MARINEDR												
266	KLY PT-SIMMONS												
267	LAKE LABISH 4KV												
268	LELAND-BEAVERC	5	68	5	68			5	68				
269	LELAND-CARUS	14	11,173	14	11,173	1	147	13	11,025				
270	LELAND-KELM	2	46	2	46			2	46				
271	LENTS-13101	4	140	4	140			4	140				
272	LENTS-HAPPY VAL	3	12,735	3	12,735			3	12,735				
273	LENTS-MT SCOTT	3	300	3	300			3	300				
274	LENTS-NORTH	1	27	1	27			1	27				
275	LIB-BROWNING	1	8	1	8			1	8				
276	LIB-LONE OAK												
277	LIB-MORNINGSIDE												
278	LIB-ROSEDALE	6	29	6	29	1	3	5	26				
279	LIB-VISTA	1	54	1	54			1	54				
280	LIBERAL 13KV	1	2	1	2			1	2				
281	LIBERAL-SAWMILL												
282	LIBERTY-SKYLINE	4	252	4	252	1	13	3	239				
283	MAIN-AIRPORT	2	194	2	194			2	194				
284	MAIN-BENTLEY	1	1,066	1	1,066			1	1,066				
285	MAIN-EXPRESS												
286	MAIN-GRIFFIN												
287	MAIN-JFS1												
288	MAIN-JONES FARM												
289	MAIN-RVR RD	2	8	2	8	1	2	1	6				
290	MC CL-COTTAGE												
291	MC CL-FRONT ST												
292	MC CL-HOLLYWOOD												
293	MCGILL-LSAIR1A												
294	MCMINNVILLE W AND L												
295	MERIDIAN 13KV	6	191	6	191	1	7	4	182	1	2		
296	MERIDIAN-65TH												
297	MERIDIAN-BORLND	4	6,566	4	6,566			4	6,566				

Hrs - # of customers \* duration hrs      Outs = Outages

## 2014 Outages by Vegetation

	Feeder Name	Total Trees		Total Non-Preventable		Uprooted		Limb		Tree Broken or Felled into		Total Preventable (Tree Contact)	
		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
298	MERIDIAN-CHILDS												
299	MERIDIAN-LAKEVIEW												
300	MERIDIAN-NYBERG												
301	MERIDIAN-PLKNGTN	5	860	5	860			5	860				
302	MERIDIAN-SAGERT												
303	MIDGROVE-BROWN												
304	MIDGROVE-CHEMEK												
305	MIDGROVE-CORDON	1	1	1	1			1	1				
306	MIDGROVE-SWEGLE												
307	MIDGROVE-WEST												
308	MIDWAY-DIVISION	2	217	2	217			2	217				
309	MIDWAY-DOUGLAS	2	29	2	29			2	29				
310	MIDWAY-LYNCH												
311	MIDWAY-POWELHST	1	108	1	108			1	108				
312	MILL CREEK 13KV												
313	MILL CREEK-EASTLAND	2	6	2	6			2	6				
314	MILL CREEK-KUEBLER												
315	MOLALLA-BUCKAROO												
316	MOLALLA-FOREST	3	6	3	6			3	6				
317	MOLALLA-MARQUAM	12	3,314	12	3,314	3	2,973	9	341				
318	MOLALLA-YODER	2	123	2	123			2	123				
319	MRKT ST-ENGLEWD	1	8	1	8					1	8		
320	MRKT ST-FAIRGND	2	4	2	4			1	3	1	1		
321	MRKT ST-HAWTHNE	3	2,678	3	2,678			2	207	1	2,471		
322	MRKT ST-PARK												
323	MT ANGEL-EAST												
324	MT ANGEL-WEST	3	25	3	25			3	25				
325	MT PLS-CLAIRMONT	1	3	1	3			1	3				
326	MT PLS-MT VIEW	1	9	1	9			1	9				
327	MT PLS-RIVRCRST	1	4,949	1	4,949			1	4,949				
328	MT PLS-SOUTHEND	1	17	1	17			1	17				
329	MULINO-NORTH	4	18	4	18			3	17	1	2		
330	MULINO-SOUTH	9	3,018	9	3,018	2	164	7	2,854				

Hrs - # of customers \* duration hrs      Outs = Outages

## 2014 Outages by Vegetation

Feeder Name	Total Trees		Total Non-Preventable		Uprooted		Limb		Tree Broken or Felled into		Total Preventable (Tree Contact)	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
331 MULTNOMAH 13KV	4	1,421	4	1,421			4	1,421				
332 MULTNOMAH-13176	1	66	1	66			1	66				
333 MULTNOMAH-13177	3	79	3	79			3	79				
334 MULTNOMAH-13181	1	1,099	1	1,099			1	1,099				
335 MURRAYHILL 13KV												
336 MURRAYHL-KINTON												
337 MURRAYHL-QUARRY												
338 MURRAYHL-REUSER												
339 MURRAYHL-TEAL												
340 N MARION FRONT												
341 N MARION-CROSBY	1	3	1	3			1	3				
342 N MARION-HUBBRD	1	3	1	3			1	3				
343 N MARION-MCLARN	2	133	2	133			2	133				
344 N PLAINS 13KV	16	6,482	16	6,482	4	820	12	5,662				
345 N PLAINS-M HILL	12	752	12	752			11	718	1	33		
346 NEWBERG-CHEHALM	5	970	5	970			5	970				
347 NEWBERG-COLLEGE												
348 NEWBERG-DUNDEE	5	954	5	954			5	954				
349 NEWBERG-HOOVR PK	3	36	3	36			3	36				
350 NORTHERN-11009												
351 NORTHERN-11016												
352 NORTHERN-11071	2	94	2	94			2	94				
353 OAK HILLS 13KV												
354 OAK HILLS-5 OAK												
355 OAK HILLS-BRIER												
356 OAK HILLS-SMRST	1	504	1	504			1	504				
357 OAK HILLS-WLKRD												
358 OCKLEY GRN 4KV												
359 OK GRV-LK HARRT	3	416	3	416			3	416				
360 OK GRV-WT WATER												
361 ORENCO 13KV												
362 ORENCO PRIMATE												
363 ORENCO-231ST												

Hrs - # of customers \* duration hrs      Outs = Outages

## 2014 Outages by Vegetation

Feeder Name	Total Trees		Total Non-Preventable		Uprooted		Limb		Tree Broken or Felled into		Total Preventable (Tree Contact)	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
364	ORENCO-AMBRGLEN											
365	ORENCO-BASELINE											
366	ORENCO-WILKINS											
367	ORIENT 13KV	20	8,906	20	8,906			20	8,906			
368	ORIENT-BARLOW	11	4,492	11	4,492			11	4,492			
369	OSWEGO-IRON MTN	2	86	2	86			2	86			
370	OSWEGO-MARYLHST	2	14	2	14	1	8	1	6			
371	OSWEGO-PALATINE	10	608	10	608			10	608			
372	OSWEGO-STAFFORD	1	28	1	28			1	28			
373	OXFORD 13KV											
374	OXFORD-FAIRVIEW	1	80	1	80			1	80			
375	OXFORD-LEE											
376	OXFORD-MADRONA											
377	OXFORD-RURAL											
378	OXFORD-SHELTON											
379	PELTON-ROUND BUTTE											
380	PENIN PARK 4KV											
381	PLSNT VALY 13KV	12	927	12	927	1	1	11	925			
382	PLSNT VALY-BXTR	1	2,513	1	2,513			1	2,513			
383	PLSNT VALY-MOON	2	7	2	7			2	7			
384	PLSNT VALY-SUN	2	2,250	2	2,250			2	2,250			
385	PORTLAND GRD W PUMPING											
386	PORTSMTH-CARB											
387	PORTSMTH-DISP											
388	PORTSMTH-WILL											
389	PRGRS-GREENBURG											
390	PRGRS-HALL											
391	PRGRS-ROBINSON											
392	PRGRS-SAWYER	1	1	1	1			1	1			
393	PRGRS-WSH SQ #1											
394	PRGRS-WSH SQ #2											
395	RAL H-DOGWOOD	5	849	5	849			5	849			
396	RAL H-MONTCLAIR	2	129	2	129			2	129			

Hrs - # of customers \* duration hrs      Outs = Outages

## 2014 Outages by Vegetation

	Feeder Name	Total Trees		Total Non-Preventable		Uprooted		Limb		Tree Broken or Felled into		Total Preventable (Tree Contact)	
		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
397	RAL H-OLESON RD	3	155	3	155			3	155				
398	RAMAPO 13KV	1	101	1	101			1	101				
399	RAMAPO-GILBERT	1	9	1	9			1	9				
400	REDLAND 13KV	13	1,877	13	1,877	1	196	12	1,681				
401	REDLAND-HENRICI	11	1,052	10	680			10	680			1	372
402	REED-BLANTON												
403	REED-HAZELDALE	2	96	2	96			2	96				
404	REED-INTEL #1												
405	REED-INTEL #2												
406	REED-INTEL #3												
407	REED-INTEL #4												
408	REED-TV HWY	2	54	2	54			2	54				
409	REEDVILLE-AUGUSTA	1	56	1	56			1	56				
410	ROCKWD 13KV	4	231	4	231			4	231				
411	ROCKWD-AIRPT WY												
412	ROCKWD-BOEING												
413	ROCKWD-INDUSTRL												
414	ROCKWD-REYNOLDS												
415	ROCKWD-WILKES												
416	ROSEMONT-HIDDEN SPRINGS	2	7	2	7	1	5	1	2				
417	ROSEMONT-MOSSY BRAE	3	341	3	341			3	341				
418	ROSEMONT-OVERLOOK	1	26	1	26			1	26				
419	ROSEWAY 13 KV	1	11	1	11			1	11				
420	ROSEWAY-ALEXNDR												
421	ROSEWAY-ESPLANA	1	323	1	323			1	323				
422	ROUND BUTTE SPILLWAY												
423	RUBY-13502												
424	RUBY-13503	1	315	1	315			1	315				
425	RVRGATE-11010												
426	RVRGATE-11011												
427	RVRGATE-PEARCY												
428	RVRGATE-SWIFT												
429	RVRVIW-FULTON	4	504	4	504	1	5	3	498				

Hrs - # of customers \* duration hrs      Outs = Outages

## 2014 Outages by Vegetation

	Feeder Name	Total Trees		Total Non-Preventable		Uprooted		Limb		Tree Broken or Felled into		Total Preventable (Tree Contact)	
		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
430	RVRVIW-MACADAM												
431	RVRVIW-TWILLIGR	6	63	6	63	2	8	4	55				
432	SALEM-13260												
433	SALEM-13261												
434	SALEM-13262												
435	SALEM-13263												
436	SALEM-13264												
437	SALEM-UNION												
438	SANDY 13KV	23	1,685	23	1,685	1	1	22	1,684				
439	SANDY-362ND	3	383	3	383			3	383				
440	SANDY-BLUFF												
441	SANDY-WILDCAT	18	7,191	18	7,191			18	7,191				
442	SCHOLLS FERRY-KEMMER RD												
443	SCHOLLS FERRY-RAINBOW	11	2,141	11	2,141			11	2,141				
444	SCHOLLS FERRY-ROY ROGERS												
445	SCOGG-CHERRY G	2	690	2	690			2	690				
446	SCOGG-LAUREL W	7	16	7	16			7	16				
447	SCOTSMILL 13KV	15	5,388	15	5,388			14	5,320	1	68		
448	SELLWD 13KV	1	1,580	1	1,580			1	1,580				
449	SELLWD-KELOG PK	2	191	2	191			2	191				
450	SELLWD-WAVERLY												
451	SHERIDAN EAST	4	181	4	181			4	181				
452	SHERIDAN-KADELL												
453	SILVERTON-NORTH												
454	SILVERTON-SOUTH	4	2,875	4	2,875			4	2,875				
455	SILVERTON-WEST	11	598	11	598	2	298	9	300				
456	SIX COR-13359	4	163	4	163			4	163				
457	SIX COR-13360												
458	SIX COR-BORCHER	5	1,160	4	471	1	3	3	468			1	689
459	SIX COR-CHAPMAN												
460	SIX CORNER-13KV												
461	SMURFIT-NEWBERG												
462	SPRINGBK-FERNWD	3	265	3	265			3	265				

Hrs - # of customers \* duration hrs      Outs = Outages

## 2014 Outages by Vegetation

Feeder Name	Total Trees		Total Non-Preventable		Uprooted		Limb		Tree Broken or Felled into		Total Preventable (Tree Contact)	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
463 SPRINGBK-STPAUL	3	796	3	796			3	796				
464 SPRINGBK-VILLA												
465 SPRINGBK-ZIMRI	4	238	4	238	2	138	1	4	1	97		
466 ST LOUIS-EAST												
467 ST LOUIS-NORTH	2	4	2	4			2	4				
468 ST LOUIS-WEST	2	9	2	9			2	9				
469 ST MARY 13KV												
470 ST MARY-BETHANY												
471 ST MARY-BUTNER	6	406	6	406			6	406				
472 ST MARY-ELMONIC												
473 ST MARY-JENKINS												
474 ST MARY-MILLIKN												
475 STEPHN-11001												
476 STEPHN-11020												
477 STEPHN-11054												
478 STEPHN-11055												
479 STEPHN-11092												
480 STEPHN-11093												
481 STEPHN-11094												
482 STEPHN-11095												
483 STEPHN-11097												
484 STEPHN-11098												
485 STEPHN-11099												
486 SULL-ROBINWOOD	3	860	3	860			3	860				
487 SULL-SALAMO	2	82	2	82			2	82				
488 SULL-SUSSEX												
489 SULL-WILLAMETTE	2	1,217	2	1,217			2	1,217				
490 SULLIVAN-TANNER												
491 SULZER 115A												
492 SULZER 115B												
493 SULZER BINGHAM												
494 SUMMIT-GOVT CAMP	1	1	1	1			1	1				
495 SUMMIT-MEADOWS												

Hrs - # of customers \* duration hrs      Outs = Outages

## 2014 Outages by Vegetation

Feeder Name	Total Trees		Total Non-Preventable		Uprooted		Limb		Tree Broken or Felled into		Total Preventable (Tree Contact)	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
496 SUMMIT-SUMMIT	1	27	1	27			1	27				
497 SUNSET-BLANCHET												
498 SUNSET-COLFAX												
499 SUNSET-CORNELL												
500 SUNSET-DIXI												
501 SUNSET-DORION												
502 SUNSET-IDTB												
503 SUNSET-INTEL D1B1												
504 SUNSET-KOMATSU #1												
505 SUNSET-KOMATSU #2												
506 SUNSET-KOMATSU #3												
507 SUNSET-LANE												
508 SUNSET-LINDE PHASE 1												
509 SUNSET-MCCALL												
510 SUNSET-MEEK												
511 SUNSET-PAULING												
512 SUNSET-SPALDING												
513 SUNSET-WHITMAN												
514 SUNSET-YOUNG												
515 SWAN IS-BASIN												
516 SWAN IS-DOLPHIN												
517 SWAN IS-FREIGHTLINER												
518 SWAN IS-GOING												
519 SWAN IS-SHIPYRD												
520 SYLVAN-BARNES	13	4,679	13	4,679			13	4,679				
521 SYLVAN-PATTON	6	1,327	6	1,327			6	1,327				
522 TABOR 13KV												
523 TABOR-82ND AV												
524 TABOR-HOSPITAL												
525 TEK 13KV												
526 TEK-HOCKEN												
527 TEK-NORTH												
528 TEK-SHANNON	5	854	4	506			4	506	1	348		

Hrs - # of customers \* duration hrs      Outs = Outages



## 2014 Outages by Vegetation

	Feeder Name	Total Trees		Total Non-Preventable		Uprooted		Limb		Tree Broken or Felled into		Total Preventable (Tree Contact)	
		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
529	TEK-SOUTH												
530	TEK-WEST												
531	TEMP-NORTH												
532	TEMP-SOUTH												
533	TIGARD - 13 KV	1	462	1	462	1	462						
534	TIGARD-13336												
535	TIGARD-13337												
536	TIGARD-13361												
537	TIGARD-13362												
538	TNCTR-LAWNFIELD												
539	TNCTR-MONTEREY	1	34	1	34			1	34				
540	TNCTR-NORTH 13KV												
541	TNCTR-PRECISION												
542	TNCTR-SOUTH 13KV												
543	TNCTR-SUNNYBROOK												
544	TNCTR-VALLEY VW												
545	TROJAN PLNT E												
546	TUALATIN 13KV												
547	TUALATIN-AVERY												
548	TUALATIN-CIPOLE	2	4	2	4			2	4				
549	TUALATIN-HERMAN												
550	TUALATIN-IBACH	1	1,542	1	1,542			1	1,542				
551	TUALATIN-LEVETON												
552	TURNER 13KV	1	111	1	111			1	111				
553	TURNER-CASCADE	1	2	1	2	1	2						
554	TWILIGHT-BREMER	5	194	5	194			5	194				
555	UNIONVALE 13KV	11	1,806	11	1,806			11	1,806				
556	UNIVRSITY-MILL												
557	UNIVRSITY-TRADE	1	1	1	1			1	1				
558	URBAN-BARBUR												
559	URBAN-CAMPUS												
560	URBAN-CORBETT	2	3	2	3			2	3				
561	URBAN-GAINES	2	14	2	14			2	14				

Hrs - # of customers \* duration hrs      Outs = Outages

## 2014 Outages by Vegetation

	Feeder Name	Total Trees		Total Non-Preventable		Uprooted		Limb		Tree Broken or Felled into		Total Preventable (Tree Contact)	
		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
562	URBAN-GIBBS												
563	URBAN-KELLY												
564	URBAN-LANDING												
565	URBAN-MEDICAL												
566	URBAN-OHSU												
567	W PTLD 13KV	7	2,403	7	2,403			7	2,403				
568	W PTLD-72ND	1	1,099	1	1,099			1	1,099				
569	W PTLD-NORTH	4	374	4	374			4	374				
570	W PTLD-PACIFIC												
571	W UNION 13KV												
572	W UNION-CORNELS	7	2,420	7	2,420			7	2,420				
573	WACKER												
574	WACONDA 13KV	5	12	5	12			5	12				
575	WACONDA-NORPAC												
576	WACONDA-RIVER RD	3	3	3	3			3	3				
577	WALLACE RD 13KV	3	500	3	500			3	500				
578	WALLACE-WILLOW LAKE	1	1	1	1			1	1				
579	WELCHES 13KV	18	4,986	18	4,986	1	5	17	4,981				
580	WELCHES-ZIG ZAG	31	18,008	30	17,740	3	262	26	17,366	1	112	1	268
581	WILLAMINA-BRIDGE	2	41	2	41			2	41				
582	WILLAMINA-BUELL	2	12	2	12			2	12				
583	WILLAMINA-LUMBER												
584	WILLBRDG #1												
585	WILLBRDG #4												
586	WILSV-BOECKMAN	2	129	2	129			2	129				
587	WILSV-CHARBNEAU	3	3	3	3			3	3				
588	WILSV-CITY												
589	WILSV-MENTORTEK												
590	WILSV-PARKWAY												
591	WILSV-VILLEBOIS												
592	WILSV-WEST												
593	WOODBURN-CANNERY												
594	WOODBURN-EAST	4	189	3	188			3	188			1	1

Hrs - # of customers \* duration hrs      Outs = Outages

## 2014 Outages by Vegetation

Feeder Name	Total Trees		Total Non-Preventable		Uprooted		Limb		Tree Broken or Felled into		Total Preventable (Tree Contact)	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
595	1	3	1	3			1	3				
596												
597	4	262	4	262			4	262				
598	9	336	9	336			9	336				
<b>Grand Total:</b>	<b>1,089</b>	<b>281,929</b>	<b>1,076</b>	<b>279,148</b>	<b>65</b>	<b>27,019</b>	<b>992</b>	<b>248,703</b>	<b>19</b>	<b>3,425</b>	<b>13</b>	<b>2,781</b>

Hrs - # of customers \* duration hrs      Outs = Outages

## **SECTION VIII**

### **2014 Feeder Information**

- 2014 Feeder List with Customer Counts and Feeder Classifications
- 2014 Feeder Modifications

Attachment A  
PGE 2014 Annual Reliability Report

Confidential - Provided on CD Only  
Section III, Feeder Performance Summary  
Section VIII, 2014 Feeder Information

## **SECTION IX**

### **Appendix**

- Reliability Measure Definitions
- IEEE 1366 TMED Definition and Classification
- Cause Code Category
- PGE Service Territory Map

## Reliability Measure Definitions

1. Reliability The degree to which electric service is supplied without interruptions.
2. SAIDI The system average interruption duration index. This is the sustained interruption duration time (in minutes) that an average customer experiences during the year. It is determined by dividing the annual sum of all customer sustained interruption durations by the total number of customers served.  
$$\text{SAIDI} = \frac{\text{Sum of customer sustained interruption durations}}{\text{Total number of PGE customers served}}$$
3. SAIFI The system average sustained interruption frequency index. This index is the number of times that an average customer experiences a sustained interruption during a year. It is determined by dividing the total annual number of customer sustained interruptions by the total number of customers served.  
$$\text{SAIFI} = \frac{\text{Total number of customer sustained interruptions}}{\text{Total number of PGE customers served}}$$
4. MAIFle Momentary average interruption frequency index of events for the system. This index is the number of times that an average customer experiences momentary interruption events during a year. It is determined by dividing the total annual number of customer momentary interruption events by the total number of customers served. Note that this index does not include the events immediately preceding a sustained interruption.  
$$\text{MAIFle} = \frac{\text{Total number of customer momentary interruption events}}{\text{Total number of PGE customers served on Feeders with MV90 or SCADA}}$$
5. Major Event Designates a catastrophic event which:
  - exceeds the design limits of the electric power system;
  - Includes at least one Major Event Day (MED)

## Major Event Day (MED) Definition and Classification<sup>1</sup>

A MED is a day in which the daily system SAIDI exceeds a threshold value, TMED. The SAIDI index is used as the basis of this definition since it leads to consistent results regardless of utility size, and because SAIDI is a good indicator of operational and design stress. Even though SAIDI is used to determine the MEDs, all indices should be calculated based on removal of the identified days.

In calculating daily system SAIDI, any interruption that spans multiple days is accrued to the day on which the interruption begins. The MED identification TMED value is calculated at the end of each reporting period (typically one year) for use during the next reporting period, as follows:

- 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.
- b) Only those days that have a SAIDI/Day value will be used to calculate TMED (do not include days that did not have any interruptions).
- c) Take the natural logarithm (ln) of each daily SAIDI value in the data set.
- d) Find  $\alpha$  (Alpha), the average of the logarithms (also known as the log-average) of the data set.
- e) Find  $\beta$  (Beta), the standard deviation of the logarithms (also known as the log-standard deviation) of the data set.
- f) Compute the MED threshold, TMED, using:
$$T_{MED} = e^{(\alpha+2.5\beta)}$$
- g) Any day with daily SAIDI greater than the threshold value TMED that occurs during the subsequent reporting period is classified as a MED.

Activities that occur on days classified as MEDs should be separately analyzed and reported.

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<sup>1</sup> Per IEEE Standard 1366-2012: IEEE Guide for Electric Power Distribution Reliability Indices



**Outage Management System - Cause Codes - 2014**

OMS Cause Code	Distribution - Equipment
101	OH Conductor Failure
102	UG Conductor Failure
103	Switch/Reclsoer Failure
104	Cutout/Fuse/Arrestor Failure
105	OH Transformer Failure
106	UG Transformer Failure
109	OH Clamp Failure
110	Pole Failure
111	Pole Hardware Failure
112	UG Hardware Failure
113	UG Clamp Failure
114	Meter Problem/Failure
115	AMI Meter Install Failure
116	Regulator
OMS Cause Code	Distribution - Public
2	Customer Equipment Problem/Non-Billing
200	House Fire
201	Customer Equipment Problem/Billing
202	Customer Problem/Dispatched
203	Dispatcher Resolved
5	Equipment Damage/Misc Public Accident
501	Equipment Damage/Vandalism
502	Equipment Damage/Car Hit Pole
503	Equipment Damage/UG Wire Dig In
504	Equipment Damage/Pad Transformer
505	Equipment Damage/OH Transformer
507	Balloons
OMS Cause Code	Loss of Supply - Substation
107	Substation Transformer
108	Other Substation Equipmenet
OMS Cause Code	Loss of Supply - Transmission
117	Loss of Supply Transmission





OMS Cause Code	Distribution - Weather-Other than Lightning
4	Weather-Normal Conditions
401	Weather-Heavy Snow
402	Weather-High Winds
403	Weather-Ice/Freezing Rain
405	Flooding
OMS Cause Code	Distribution -Vegetation
701	Tree Burning
702	Tree-Uprooted
703	Tree-Broken Limb/Top
506	Tree Cut/Felled into Line
704	Hay on Line
OMS Cause Code	Distribution -Wildlife
6	Animal/Squirrel
601	Bird/Reportable Bird
OMS Cause Code	Lightning
404	Lightning
OMS Cause Code	Planned
8	Planned Outage
801	Planned Outage-Load Curtailment
OMS Cause Code	Other
3	Operations-Switching Error
802	Crew Caused/Not Planned
OMS Cause Code	Unknown
9	Unknown/Investigating Cause
90	Unknown/No Cause Found
OMS Cause Code	Codes Removed from Reliability Numbers
10	Non-Outage
1001	Telco Wire
1002	Cable TV
1003	Verizon Equipment
1004	Qwest Equipment
1005	Comcast Equipment

# PGE SERVICE TERRITORY

Including Regional Boundaries

REVISED: 2/24/2012

### Legend

-  SERVICE TERRITORY BOUNDARY
-  EASTERN
-  SOUTHERN
-  WESTERN

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