

RE 113 e-FILING REPORT COVER SHEET

REPORT NAME:

PGE 2015 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:

2015 Annual Reliability Report

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

Electric Rates and Planning



Portland General Electric 2015 Annual Reliability Report



January 1, 2015 through December 31, 2015

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 indices¹: System Average Interruption Duration Index (SAIDI), System Average Interruption Frequency Index (SAIFI), and Momentary Average Interruption event Frequency Index² (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 dates³ from the 2015 distribution system performance indices: March 15th, August 29th, November 17th-18th, December 8th-9th, and December 21st.

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

² MAIFIE calculations are limited to feeders with remote monitoring equipment

³ Dates were excluded due to storm exclusions

Corporate Annual Summary Without Major Event Days¹

Year	Reported Outages	SAIFI Average Annual Outages per Customer (occurrences)	SAIDI ² Average Annual Outage Duration per Customer (minutes)	MAIFle Average Annual Momentary Interruptions per Customer (occurrences)
2015	6,613	0.48	75	1.2
2014	5,832	0.70	95	1.3
2013	4,495	0.45	61	0.9
2012	5,093	0.55	72	1.1

Corporate Annual Summary With Major Event Days³

Year	Reported Outages	SAIFI Average Annual Outages per Customer (occurrences)	SAIDI Average Annual Outage Duration per Customer (minutes)	MAIFle ⁴ Average Annual Momentary Interruptions per Customer (occurrences)
2015	8,752	0.78	175	1.2
2014	7,696	1.22	248	1.3
2013	5,069	0.57	97	0.9
2012	6,051	0.72	136	1.1

¹ A Major Event Day (MED) is a day in which the reasonable design and or operational limits of the electric power system were exceeded. MED's are determined via IEEE Standard 1366. See Section IX - Appendix for additional details.

² SAIDI values are rounded to the nearest whole number.

³ PGE's 2015 MEDs: March 15th, August 29th, November 17th-18th, December 8th-9th, and December 21st

⁴ MAIFle events for Major Event Days are not excluded.

Corporate Annual Summary Without Major Event Days

Year	Reported Outages	SAIFI Average Annual Outages per Customer (occurrences)	SAIDI Average Annual Outage Duration per Customer (minutes)	MAIFle Average Annual Momentary Interruptions per Customer (occurrences)
EASTERN	3,023	0.55	76	1.6
SOUTHERN	1,878	0.50	91	0.9
WESTERN	1,712	0.37	64	0.7
PGE:	6,613	0.48	75	1.2

Corporate Annual Summary With Major Event Days

Year	Reported Outages	SAIFI Average Annual Outages per Customer (occurrences)	SAIDI Average Annual Outage Duration per Customer (minutes)	MAIFle Average Annual Momentary Interruptions per Customer (occurrences)
EASTERN	4,310	1.03	236	1.6
SOUTHERN	2,283	0.69	156	0.9
WESTERN	2,159	0.49	97	0.7
PGE:	8,752	0.78	175	1.2

Section II

Outage Analysis

This section provides graphical representation of 2015 outage causes by both customer hours and event count. 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. Pie charts are utilized to reflect data from the most recent year and bar charts are utilized to capture the 4 year trend.

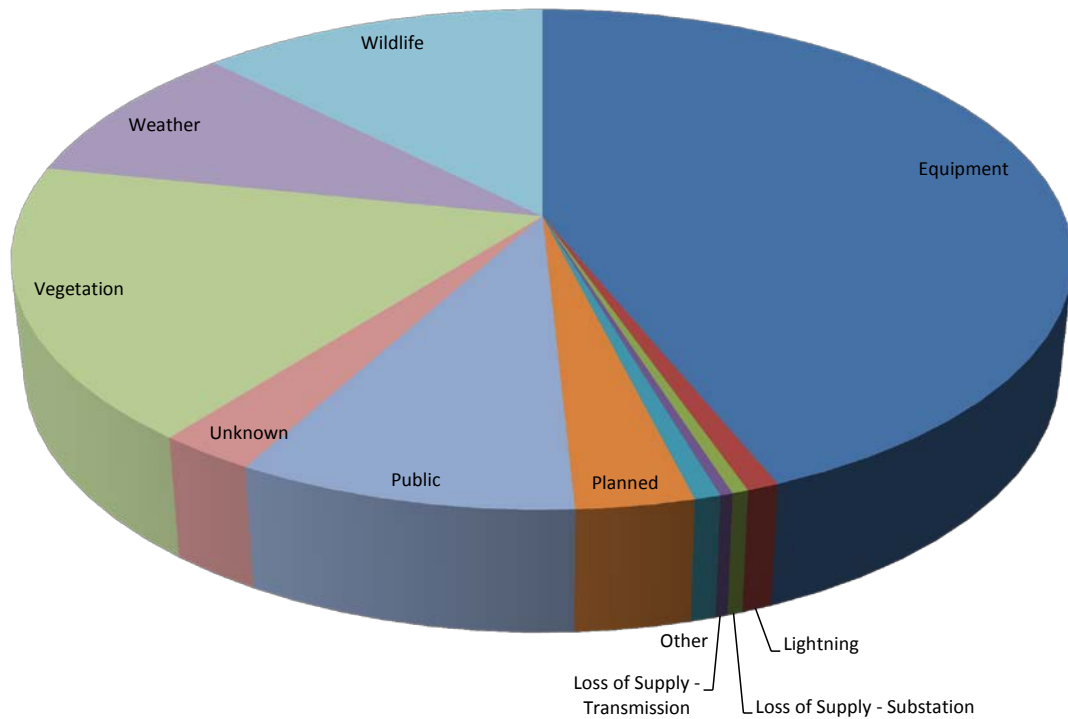
- Outage Causes by Events – Pie Chart
- Outage Causes by Events – 4 Year Comparison Bar Chart
- Outage Causes by Customer Hours – Pie Chart
- Outage Causes by Customer Hours – 4 Year Comparison Bar Chart

2015 Outages by Cause - Count

Equipment	2,899	43.8%
Lightning	55	0.8%
Loss of Supply - Substation	28	0.4%
Loss of Supply - Transmission	22	0.3%
Other	45	0.7%
Planned	203	3.1%
Public	583	8.8%
Unknown	170	2.6%
Vegetation	1,171	17.7%
Weather	613	9.3%
Wildlife	824	12.5%
Total:	6,613	100.0%

Vegetation:			
Limb on Line	831	71.0%	
Tree / Limb Burning	75	6.4%	
Tree Uprooted	265	22.6%	
Total Vegetation:	1,171	100.0%	

Equipment:			
Anchor / Guying	7	0.2%	
Arrestor	6	0.2%	
Capacitor	1	0.0%	
Cross Arm	8	0.3%	
Elbow	8	0.3%	
Fuse / Cutout	854	29.5%	
Insulator	12	0.4%	
Lateral	9	0.3%	
Meter	11	0.4%	
OH Connector / Clamp / Jumper	122	4.2%	
Other - Pole Hardware Failure	149	5.1%	
Other - Underground Hardware Failure	80	2.8%	
Overhead Transformer	288	9.9%	
Padmount Transformer	104	3.6%	
Pole / Structure	25	0.9%	
Primary Cable	601	20.7%	
Primary Conductor	284	9.8%	
Primary Splice	6	0.2%	
Recloser / Sectionalizer	3	0.1%	
Secondary Cable	110	3.8%	
Secondary Conductor	97	3.3%	
Secondary Deadend	3	0.1%	
Secondary Splice	8	0.3%	
Sleeve	14	0.5%	
Stress Cone	5	0.2%	
Submersible Transformer	18	0.6%	
Switch	21	0.7%	
UG Connector / Clamp / Jumper	45	1.6%	
Total Equipment:	2,899	100.0%	

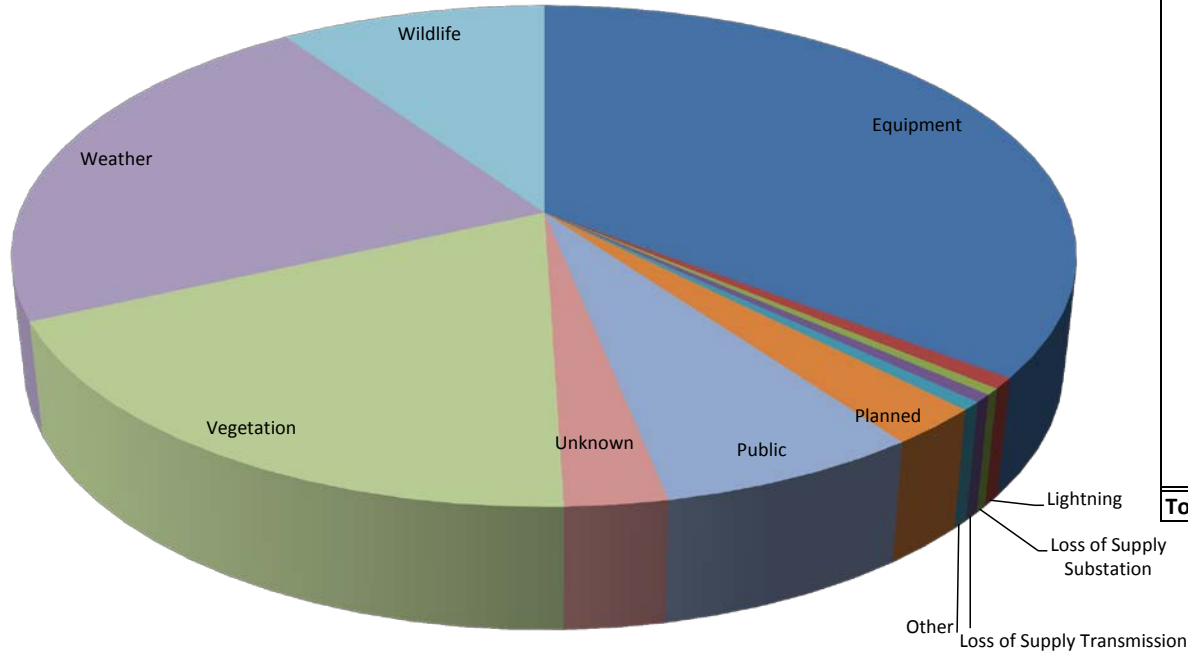


2015 Outages by Cause With Major Event Days - Count

Equipment	3,100	35.4%
Lightning	61	0.7%
Loss of Supply - Substation	36	0.4%
Loss of Supply - Transmission	45	0.5%
Other	48	0.5%
Planned	215	2.5%
Public	596	6.8%
Unknown	232	2.7%
Vegetation	1,633	18.7%
Weather	1,952	22.3%
Wildlife	834	9.5%
Total:	8,752	100.0%

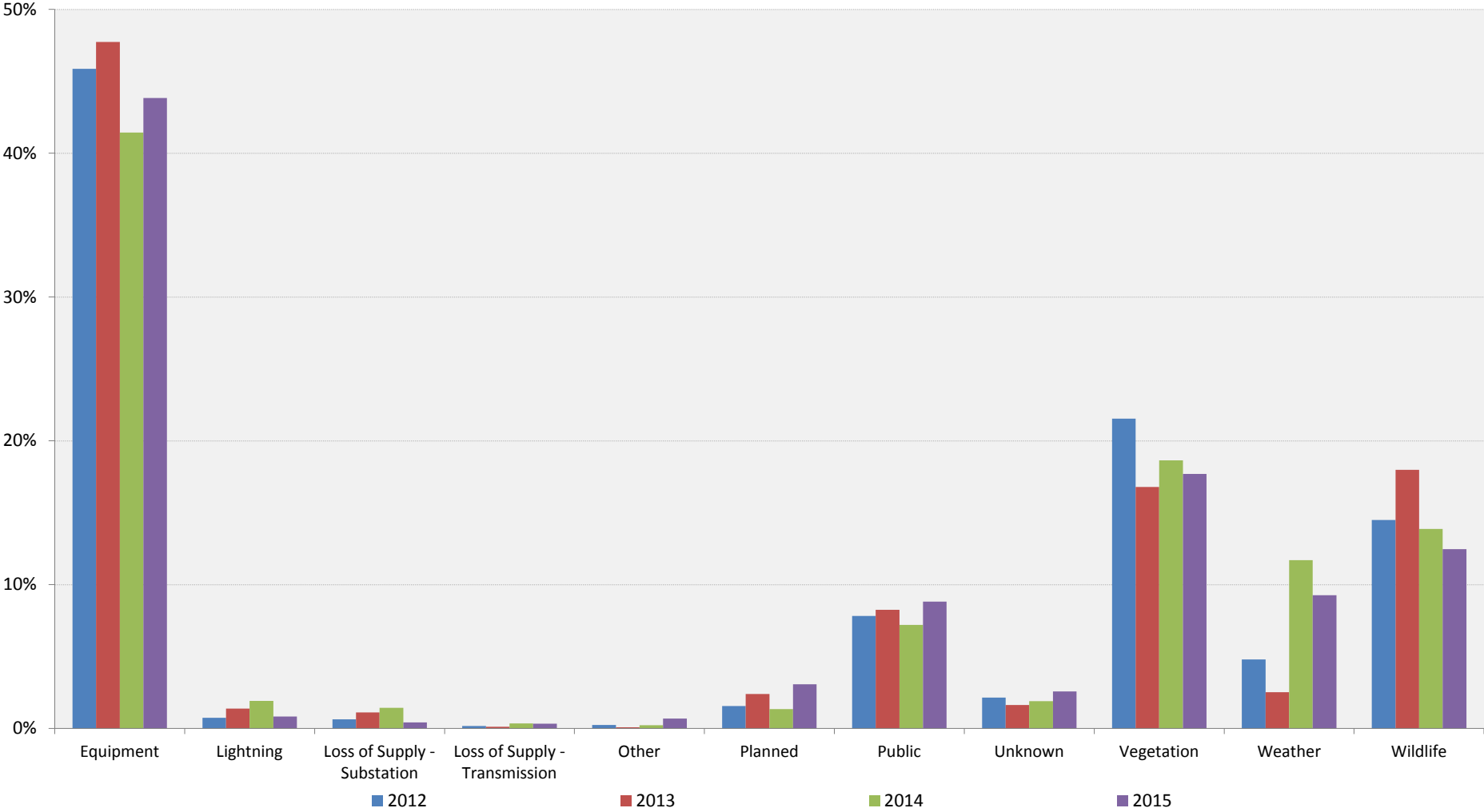
Vegetation:			
Limb on Line	1098	67.2%	
Tree / Limb Burning	107	6.6%	
Tree Uprooted	428	26.2%	
Total Vegetation:	1,633	100.0%	

Equipment:			
Anchor / Guying	9	0.3%	
Arrestor	6	0.2%	
Capacitor	1	0.0%	
Cross Arm	11	0.4%	
Elbow	8	0.3%	
Fuse / Cutout	901	29.1%	
Insulator	19	0.6%	
Lateral	9	0.3%	
Meter	14	0.5%	
OH Connector / Clamp / Jumper	143	4.6%	
Other - Pole Hardware Failure	162	5.2%	
Other - Underground Hardware Failure	86	2.8%	
Overhead Transformer	298	9.6%	
Padmount Transformer	104	3.4%	
Pole / Structure	26	0.8%	
Primary Cable	612	19.7%	
Primary Conductor	318	10.3%	
Primary Splice	6	0.2%	
Recloser / Sectionalizer	6	0.2%	
Secondary Cable	124	4.0%	
Secondary Conductor	115	3.7%	
Secondary Deadend	3	0.1%	
Secondary Splice	8	0.3%	
Sleeve	17	0.5%	
Stress Cone	7	0.2%	
Submersible Transformer	20	0.6%	
Switch	22	0.7%	
UG Connector / Clamp / Jumper	45	1.5%	
Total Equipment:	3,100	100.0%	



Outage Causes by Count

4 Year Comparison (2012-2015)

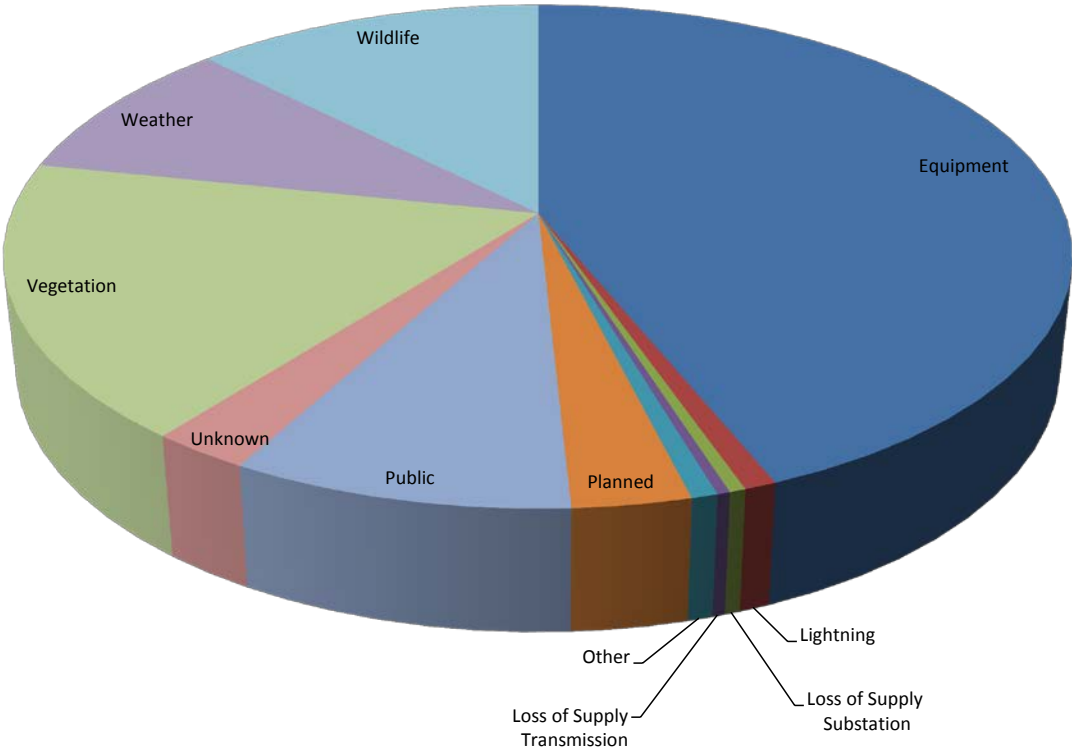


2015 Outages by Cause - Customer Hours

Equipment	405,248	37.3%
Lightning	8,131	0.7%
Loss of Supply - Substation	51,752	4.8%
Loss of Supply - Transmission	35,852	3.3%
Other	5,934	0.5%
Planned	17,847	1.6%
Public	147,675	13.6%
Unknown	17,634	1.6%
Vegetation	275,090	25.3%
Weather	79,432	7.3%
Wildlife	41,631	3.8%
Total:	1,086,226	100.0%

Vegetation:		
Limb on Line	162,149	58.9%
Tree / Limb Burning	16,268	5.9%
Tree Uprooted	96,673	35.1%
Total Vegetation:	275,090	100.0%

Equipment:		
Anchor / Guying	515	0.1%
Arrestor	2,906	0.7%
Capacitor	3	0.0%
Cross Arm	1,924	0.5%
Elbow	1,847	0.5%
Fuse / Cutout	47,027	11.6%
Insulator	5,594	1.4%
Lateral	4,850	1.2%
Meter	110	0.0%
OH Connector / Clamp / Jumper	12,375	3.1%
Other - Pole Hardware Failure	25,250	6.2%
Other - Underground Hardware Failure	5,883	1.5%
Overhead Transformer	12,245	3.0%
Padmount Transformer	10,543	2.6%
Pole / Structure	20,376	5.0%
Primary Cable	134,635	33.2%
Primary Conductor	90,596	22.4%
Primary Splice	1,039	0.3%
Recloser / Sectionalizer	865	0.2%
Secondary Cable	1,337	0.3%
Secondary Conductor	1,026	0.3%
Secondary Deadend	26	0.0%
Secondary Splice	135	0.0%
Sleeve	45	0.0%
Stress Cone	1,356	0.3%
Submersible Transformer	3,195	0.8%
Switch	19,024	4.7%
UG Connector / Clamp / Jumper	521	0.1%
Total Equipment:	405,248	100.0%

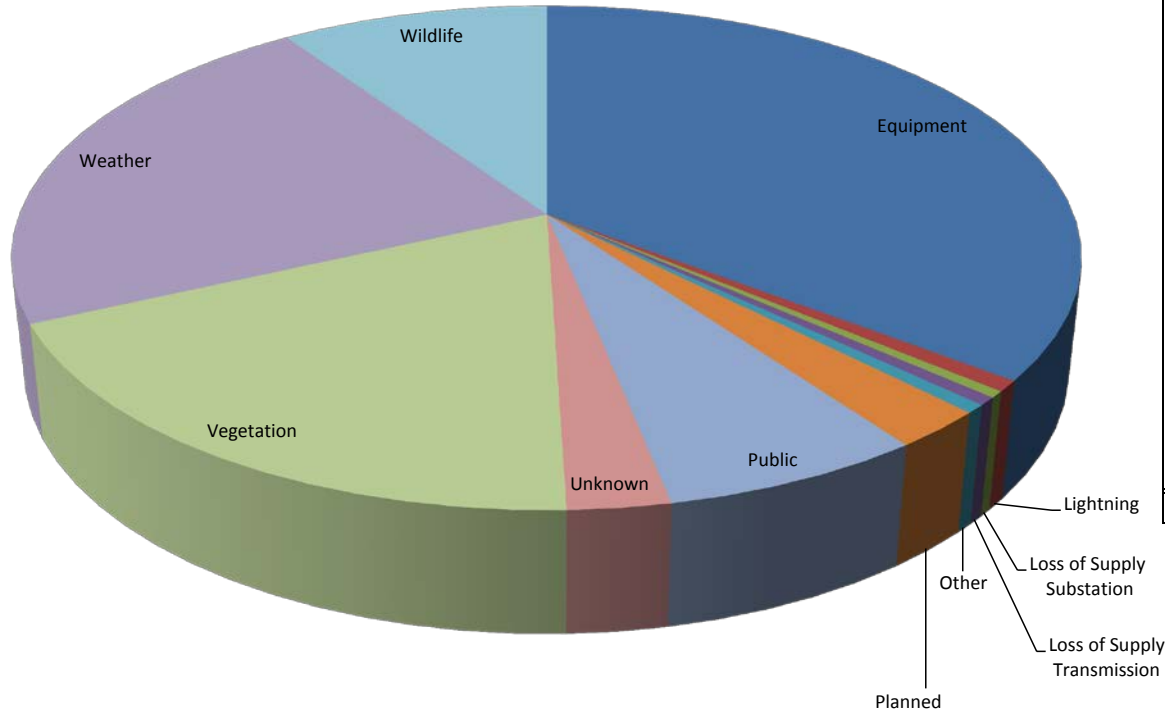


2015 Outages by Cause With Major Event Days - Customer Hours

Equipment	493,436	19.6%
Lightning	10,224	0.4%
Loss of Supply - Substation	93,435	3.7%
Loss of Supply - Transmission	59,735	2.4%
Other	6,708	0.3%
Planned	18,707	0.7%
Public	153,174	6.1%
Unknown	63,890	2.5%
Vegetation	608,746	24.2%
Weather	969,026	38.5%
Wildlife	42,134	1.7%
Total:	2,519,215	100.0%

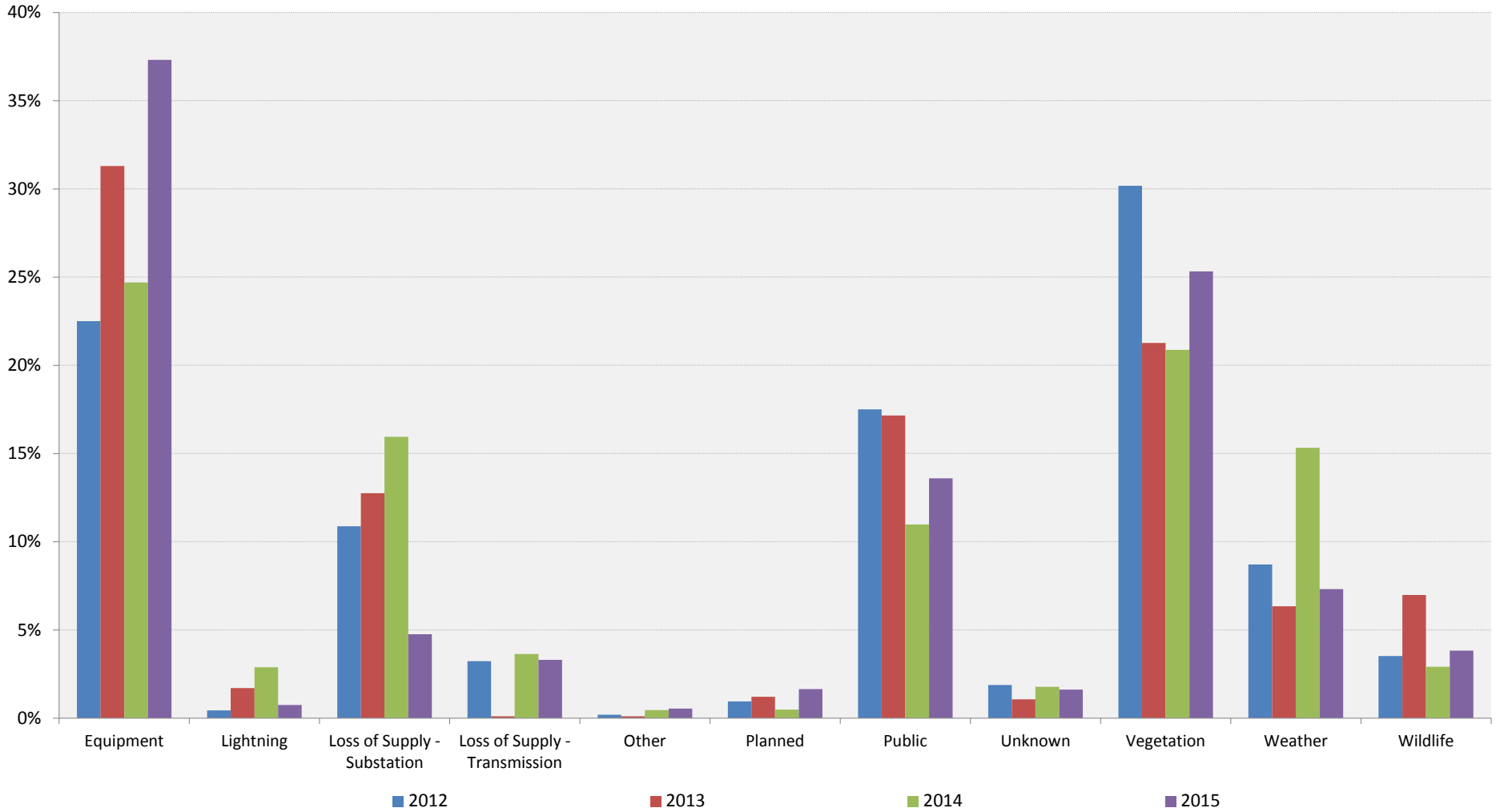
Vegetation:		
Limb on Line	342,793	56.3%
Tree / Limb Burning	21,183	3.5%
Tree Uprooted	244,770	40.2%
Total Vegetation:	608,746	100.0%

Equipment:		
Anchor / Guying	1,956	0.4%
Arrestor	2,906	0.6%
Capacitor	3	0.0%
Cross Arm	2,075	0.4%
Elbow	1,847	0.4%
Fuse / Cutout	58,005	11.8%
Insulator	10,197	2.1%
Lateral	4,850	1.0%
Meter	180	0.0%
OH Connector / Clamp / Jumper	24,924	5.1%
Other - Pole Hardware Failure	27,734	5.6%
Other - Underground Hardware Failure	6,377	1.3%
Overhead Transformer	13,283	2.7%
Padmount Transformer	10,543	2.1%
Pole / Structure	20,425	4.1%
Primary Cable	148,441	30.1%
Primary Conductor	120,098	24.3%
Primary Splice	1,039	0.2%
Recloser / Sectionalizer	9,167	1.9%
Secondary Cable	1,468	0.3%
Secondary Conductor	1,853	0.4%
Secondary Deadend	26	0.0%
Secondary Splice	135	0.0%
Sleeve	598	0.1%
Stress Cone	1,608	0.3%
Submersible Transformer	4,143	0.8%
Switch	19,032	3.9%
UG Connector / Clamp / Jumper	521	0.1%
Total Equipment:	493,436	100.0%



Outage Causes by Customer Hours

4 Year Comparison (2012-2015)



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:

- Remote
- Rural
- 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
Remote	7 hours (420 Minutes)	2.6 Occurrences	15
Rural	5 hours (300 Minutes)	2.6 Occurrences	10
Urban	2 hours (120 Minutes)	2.0 Occurrences	5

NOTE: Idle feeders are not included in this list. Feeders may be omitted if they are a part of an alternate/multiple feeder service.

Attachment A

PGE 2015 Annual Reliability Report

Confidential – Provided on CD Only
Section III, Feeder Performance Summary
Section VIII, 2015 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) – For more information see section VII.
- Unknown

NOTE: Idle feeders are not included in this list. Feeders may be omitted if they are a part of an alternate/multiple feeder service.

2015 Outages by Cause Natural

	Feeder Name	Total Natural		Adverse Environment		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	ABERNETHY-CLACKAMAS HEIGHTS														
2	ABERNETHY-OREGON CITY	7	162	2	124			2	28	2	7	1	4		
3	ABERNETHY-TRANSIT	14	1,734	6	881			3	269	5	583				
4	ALDER-ANKENY	5	895	1	4			3	886	1	4				
5	ALDER-IRVING	4	105					3	103	1	2				
6	ALDER-LINCOLN	10	1,171					9	694	1	477				
7	ALDER-STARK	3	741					1	18	1	721			1	2
8	ALDER-TAYLOR														
9	ALDER-YAMHILL														
10	AMITY-AMITY 13	9	172	1	2			1	1	4	112			3	57
11	AMITY-BELLEVUE	12	1,078	3	336			1	2	5	721			3	19
12	ARLETA-52ND	8	313			1	40	5	210	2	63				
13	ARLETA-FOSTER	6	37	1	3			4	33					1	1
14	ARLETA-HAROLD	8	102					6	99	2	3				
15	ARLETA-POWELL	4	266					4	266						
16	ARLETA-STEELE	5	67					3	65	2	2				
17	BANKS-BANKS 13	6	108	1	2			2	54	3	52				
18	BANKS-CEDAR CANYON	20	1,501	9	473	1	83	1	5	8	832			1	108
19	BARNES-BATTLE CREEK	2	997					1	993	1	4				
20	BARNES-BOONE	2	15							1	8			1	7
21	BARNES-COMMERCIAL	14	3,274	1	298			1	12	9	2,931			3	34
22	BARNES-SUNNYSIDE	6	102			1	3			4	81			1	18
23	BEAVERTON-ALLEN	7	341	1	4			3	105	3	231				
24	BEAVERTON-JAMIESON	4	7					1	1	3	6				
25	BEAVERTON-NORTHWEST	5	6,489					1	135	3	6,332			1	23
26	BEAVERTON-WEST SLOPE	4	152					4	152						
27	BELL-BATTIN	3	133	1	1			1	129	1	3				
28	BELL-BRENTWOOD														
29	BELL-FLAVEL	4	81	2	56			2	25						
30	BELL-JOHNSON CREEK														

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

Outs = Outages
Hrs = # of customers * duration hrs

2015 Outages by Cause Natural

	Feeder Name	Total Natural		Adverse Environment		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
31	BELL-KENDALL	7	150					5	108	1	1			1	41
32	BELL-KING	3	41					2	31	1	9				
33	BELL-SOUTHGATE	1	13							1	13				
34	BELL-WICHITA	3	132					1	93	2	40				
35	BETHANY-BURTON	1	665					1	665						
36	BETHANY-GERMANTOWN	13	1,760					3	40	7	1,455	1	2	2	263
37	BETHANY-KAISER														
38	BETHANY-LAIDLAW	4	4,253	1	13			1	5	1	363	1	3,872		
39	BETHANY-SPRINGVILLE	2	54							2	54				
40	BETHANY-THOMPSON														
41	BETHEL-FRUITLAND	12	820	2	235			7	505					3	80
42	BETHEL-GEER	6	437	3	349			1	10	2	78				
43	BETHEL-MACLEAY	3	27	2	19					1	8				
44	BLUE LAKE-BLUE LAKE 13	2	2,141					1	2,132	1	9				
45	BLUE LAKE-SUNDIAL	2	8	1	4					1	4				
46	BLUE LAKE-TOYO TANSO														
47	BOONES FERRY-GOODALL	6	1,643							5	1,228			1	416
48	BOONES FERRY-KRUSE	2	381					2	381						
49	BOONES FERRY-LAKE GROVE	9	272	4	64			3	200	1	6			1	2
50	BOONES FERRY-MOUNTAIN PARK														
51	BOONES FERRY-WEMBLEY PARK	8	1,995	4	1,957			1	1	3	36				
52	BORING-282ND	11	269	2	68			2	74	6	122	1	5		
53	BORING-CITY	11	999	2	5			1	1	7	966			1	27
54	BORING-TELFORD	16	7,282	3	68	2	92	1	78	7	1,182			3	5,862
55	BRIGHTWOOD-BRIGHTWOOD 13	24	986	7	436			3	118	14	432				
56	BRIGHTWOOD-NORTH BANK	11	116	6	82					5	34				
57	BROOKWOOD-BORWICK														
58	BROOKWOOD-BROOKWOOD 13														
59	BROOKWOOD-SUNRISE														
60	CANBY-13643	11	8,378	3	301	1	66	2	4	5	8,006				

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

Outs = Outages
Hrs = # of customers * duration hrs

2015 Outages by Cause Natural

	Feeder Name	Total Natural		Adverse Environment		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
61	CANBY-13644	2	65							1	1	1	64		
62	CANBY-BUTTEVILLE	5	191	2	177			1	2	2	11				
63	CANYON-13114 NETWORK #1														
64	CANYON-13115 NETWORK #1														
65	CANYON-13116 NETWORK #1														
66	CANYON-13117 NETWORK #1														
67	CANYON-13118 PSU														
68	CANYON-13119 PSU														
69	CANYON-13120														
70	CANYON-13121														
71	CANYON-13122 NETWORK #2														
72	CANYON-13123 NETWORK #2														
73	CANYON-13124 NETWORK #2														
74	CANYON-13125 NETWORK #2														
75	CANYON-13133 NETWORK #3														
76	CANYON-13134 NETWORK #3														
77	CANYON-13135 NETWORK #3														
78	CANYON-13136 NETWORK #3														
79	CANYON-21ST														
80	CANYON-23RD	10	1,012					2	133	6	590	2	288		
81	CANYON-BURNSIDE														
82	CANYON-CANYON 13	8	4,919	5	4,829			2	63	1	27				
83	CARVER-ALMOND														
84	CARVER-CARVER 13	7	284	5	105			1	39	1	139				
85	CARVER-NORTH														
86	CARVER-RIVERBEND														
87	CARVER-SOUTH														
88	CARVER-WOODS														
89	CEDAR HILLS-CEDAR HILLS 13														
90	CEDAR HILLS-LEAHY	6	362					5	305					1	56

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

Outs = Outages
Hrs = # of customers * duration hrs

2015 Outages by Cause Natural

	Feeder Name	Total Natural		Adverse Environment		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
91	CEDAR HILLS-SHOPPING CENTER	3	341					1	96	2	245				
92	CEDAR HILLS-SKYLINE														
93	CEDAR HILLS-ST VINCENT														
94	CEDAR HILLS-SYLVAN	5	52					3	41	2	11				
95	CENTENNIAL-BARKER	8	670	1	24			3	29	4	618				
96	CENTENNIAL-BRAECROFT	3	337					1	188	1	3			1	146
97	CENTENNIAL-CENTENNIAL 13	12	1,486	3	864			8	504	1	117				
98	CENTENNIAL-TREELAND	6	172	1	11			4	157	1	4				
99	CLACKAMAS-EVELYN														
100	CLACKAMAS-GLADSTONE	13	1,465	5	261					8	1,204				
101	CLACKAMAS-JENNIFER														
102	CLACKAMAS-TOLBERT	4	90	3	89					1	2				
103	CLAXTAR-CLAXTAR 13	1	292	1	292										
104	CLAXTAR-HAYESVILLE	1	60					1	60						
105	CLAXTAR-RIDGE	2	14			1	1							1	13
106	COFFEE CREEK-FREEMAN	4	14	2	9			1	1	1	5				
107	COFFEE CREEK-HOLIDAY	3	77											3	77
108	COLTON-DHOOGHE	10	257	2	13			1	9	5	223	1	1	1	10
109	COLTON-GRAYS HILL	35	3,794	8	2,798			5	13	18	756	2	218	2	10
110	CORNELIUS-ADAIR	1	2							1	2				
111	CORNELIUS-CORNELIUS 13	8	2,788	1	247			1	64	6	2,477				
112	CORNELIUS-VERBOORT	10	324	3	14			4	218	3	93				
113	CORNELL-BLUFFS	2	196					1	107					1	89
114	CORNELL-SALTZMAN														
115	CORNELL-WESTLAWN	8	2,100					6	533	2	1,567				
116	CULVER-SANYO #1														
117	CURTIS-11077														
118	CURTIS-CURTIS 13	8	553					7	354	1	198				
119	DAYTON-EAST	15	1,644					8	141	6	1,499			1	3
120	DAYTON-LAFAYETTE	5	231					1	3	3	194			1	34

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

Outs = Outages
Hrs = # of customers * duration hrs

2015 Outages by Cause Natural

	Feeder Name	Total Natural		Adverse Environment		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
121	DAYTON-SOUTHWEST	6	18					2	9	3	6			1	3
122	DELAWARE-DENVER	4	75					3	68	1	7				
123	DELAWARE-INTERSTATE	2	157					2	157						
124	DELAWARE-LOMBARD	8	1,058					6	1,055	2	4				
125	DENNY-EAST	3	400							2	315			1	85
126	DENNY-NORTH	2	97	1	36			1	62						
127	DENNY-SOUTH	1	131							1	131				
128	DENNY-WEST	5	221					4	183	1	38				
129	DILLEY-DILLEY 13	9	210	1	5	2	7	2	96	4	101				
130	DILLEY-SPRINGHILL	5	158					5	158						
131	DUNNS CORNER-DUNNS CORNER 13	27	1,421	5	127	1	47	5	73	12	1,137			4	37
132	DUNNS CORNER-KELSO	2	11	1	3			1	9						
133	DURHAM-BONITA	1	2,074							1	2,074				
134	DURHAM-BRIDGEPORT	1	835											1	835
135	DURHAM-DURHAM 13														
136	DURHAM-POOPLANT														
137	DURHAM-SATTLER	2	78	1	17					1	61				
138	DURHAM-SOUTH														
139	E-11021														
140	E-11039														
141	E-11040														
142	E-11041														
143	E-11042														
144	E-11043														
145	E-11047														
146	E-11064														
147	E-13139														
148	E-13140														
149	E-13141														
150	E-13144	3	332					1	4	1	271			1	56

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2015 Outages by Cause Natural

	Feeder Name	Total Natural		Adverse Environment		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
151	E-13145														
152	E-13148	1	37											1	37
153	E-13149														
154	E-13150														
155	EAGLE CREEK-BARTON	19	3,097	6	954			2	16	10	2,121			1	5
156	EAGLE CREEK-RIVER MILL	9	3,488	1	6					7	3,467	1	15		
157	EASTPORT-76TH	6	532					4	528	2	5				
158	EASTPORT-PLAZA	2	102					2	102						
159	ELMA-ELMA 13	1	4					1	4						
160	ELMA-FOUR CORNERS	3	1,295	1	8					2	1,287				
161	ELMA-HUDSON	2	44					2	44						
162	ELMA-STATE														
163	ESTACADA-ESTACADA 13	14	6,251							12	6,219	1	4	1	28
164	ESTACADA-FARADAY	46	7,491	16	845			4	19	21	5,957	2	657	3	12
165	FAIRMOUNT-CANDALARIA	7	421					3	259	2	4	1	1	1	157
166	FAIRMOUNT-MISSION	10	2,469	2	638					7	1,586	1	246		
167	FAIRVIEW-CLEAR CREEK	1	4,752							1	4,752				
168	FAIRVIEW-FAIRVIEW 13	1	170					1	170						
169	FAIRVIEW-KENNEL CLUB	3	947					1	56	2	891				
170	FAIRVIEW-TROUTDALE	7	18,166	3	18			1	236	3	17,912				
171	FAIRVIEW-WOOD VILLAGE	1	3							1	3				
172	FARGO-FARGO 13	6	157	1	15					2	123			3	19
173	GALES CREEK-GALES CREEK 13	26	1,521	4	255			4	144	18	1,122				
174	GARDEN HOME-MCKAY	3	2,870					2	127	1	2,743				
175	GARDEN HOME-METZGER	7	571					3	104	3	458			1	9
176	GLENCOE-GLISAN	5	63					4	54	1	9				
177	GLENCOE-PROVIDENCE	1	540							1	540				
178	GLENCOE-SUNNYSIDE	8	459					6	392	2	67				
179	GLENCULLEN-BRIDLEMILE	8	634	3	520			2	7	2	22			1	85
180	GLENCULLEN-SUNSET	8	2,116	4	117			1	140	2	1,617			1	243

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Hrs = # of customers * duration hrs

2015 Outages by Cause Natural

	Feeder Name	Total Natural		Adverse Environment		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
181	GLENDOVEER-13596	7	403	3	353			1	42	1	2	1	2	1	4
182	GLENDOVEER-13597	4	1,118	3	720					1	398				
183	GLENDOVEER-13598	8	172	2	29			6	143						
184	GLENDOVEER-13599	10	368	4	60			5	306			1	2		
185	GLENDOVEER-CLIFFGATE	12	1,183	3	101			7	926	1	51			1	105
186	GLENDOVEER-NORTHEAST	4	409	3	386			1	22						
187	GLISAN-FAB 2A														
188	GLISAN-UTILITY 1B														
189	GORMLEY-MCMINNVILLE WL														
190	GRAND RONDE-AGENCY	2	176							2	176				
191	GRAND RONDE-FORTHILL	9	817	5	414			1	4	3	398				
192	HARBORTON-BURLINGTON	36	4,355	10	355	1	45	5	122	20	3,833				
193	HARBORTON-HARBORTON 13	1	7							1	7				
194	HARBORTON-LINNTON	3	361	1	79					2	282				
195	HARMONY-HARMONY 13	5	50	2	16			2	32					1	2
196	HARMONY-INTERNATIONAL	4	703					3	139	1	564				
197	HARMONY-LAKE														
198	HARMONY-LINWOOD	3	1,073					2	139	1	934				
199	HARMONY-MILWAUKIE	11	5,082	9	680					2	4,402				
200	HARMONY-THIESSEN	4	905	3	862			1	42						
201	HARRISON-DAVIS														
202	HARRISON-HARRISON 13														
203	HARRISON-IVON														
204	HAYDEN ISLAND-MAINLAND														
205	HAYDEN ISLAND-NORTH SHORE														
206	HAYDEN ISLAND-SOUTH SHORE	4	485					3	423	1	62				
207	HEMLOCK-FREMONT														
208	HEMLOCK-HEMLOCK 13	1	7					1	7						
209	HEMLOCK-MASON	2	51	2	51										
210	HILLCREST-CASCADIA														

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2015 Outages by Cause Natural

	Feeder Name	Total Natural		Adverse Environment		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
211	HILLCREST-HILLCREST 13														
212	HILLCREST-SOUTH														
213	HILLSBORO-DAIRY CREEK	13	145					9	135	4	11				
214	HILLSBORO-DENNIS														
215	HILLSBORO-JACKSON	5	514					5	514						
216	HILLSBORO-LAUREL	23	3,858	2	17			6	170	13	3,616	2	56		
217	HILLSBORO-SCHOLLS	4	170					3	164	1	7				
218	HOGAN NORTH-BRIGADOON														
219	HOGAN NORTH-HOGAN NORTH 13	7	2,217	1	2					5	2,151	1	63		
220	HOGAN NORTH-LINKS	47	8,017	25	5,001					18	2,960	2	44	2	12
221	HOGAN NORTH-SALQUIST	3	420							3	420				
222	HOGAN SOUTH-CLEVELAND														
223	HOGAN SOUTH-LAWRENCE	9	202	3	26			3	5	3	170				
224	HOGAN SOUTH-MAIN	7	714	1	497			5	191	1	26				
225	HOGAN SOUTH-PAROPA	1	1					1	1						
226	HOGAN SOUTH-WALLULA	3	12			1	7	1	1	1	4				
227	HOLGATE-BYBEE														
228	HOLGATE-GIDEON	2	10					1	8					1	2
229	HOLGATE-HOLGATE 13	2	76					1	73	1	4				
230	HOLGATE-KENILWORTH	2	30					1	23	1	7				
231	HOLGATE-RHONE	3	683					3	683						
232	HUBER-BANY	4	45			4	45								
233	HUBER-FARMINGTON	11	298					3	182					8	116
234	HUBER-HUBER 13														
235	HUBER-KINNAMAN	2	424	1	243			1	182						
236	HUBER-MARYVILLE	1	7					1	7						
237	INDIAN-KEIZER	3	4,313			2	4,193			1	120				
238	INDIAN-LABISH	10	488	3	450	1	2	2	11	2	15	1	8	1	1
239	INDIAN-NORTH	6	157	2	114					3	40	1	4		
240	INDIAN-STATION	3	4,799							3	4,799				

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2015 Outages by Cause Natural

	Feeder Name	Total Natural		Adverse Environment		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
241	INDIAN-WEST	3	14							3	14				
242	ISLAND-13180	10	702	1	3			6	188	2	435			1	77
243	ISLAND-13187	17	2,532	2	286			10	1,801	4	436			1	8
244	ISLAND-13188	6	121					3	4	3	116				
245	ISLAND-ISLAND 13														
246	JENNINGS LODGE-ADDIE	4	106					1	44	1	59			2	3
247	JENNINGS LODGE-JENNINGS 13	7	68	1	1			4	60	2	7				
248	JENNINGS LODGE-MELDRUM	9	872	2	380			4	49	1	361	2	81		
249	JENNINGS LODGE-OAK GROVE	6	2,791	2	192			2	215	1	224			1	2,160
250	JENNINGS LODGE-WEBSTER	5	216	3	92			2	124						
251	KELLEY POINT-KELLEY POINT 13														
252	KELLEY POINT-LEDBETTER														
253	KELLEY POINT-MARINE														
254	KELLEY POINT-SIMMONS														
255	KELLEY POINT-SOLAR #1														
256	KELLEY POINT-SOLAR #2														
257	KELLY BUTTE-BINNSMEAD	5	271	2	32			1	13	2	225				
258	KELLY BUTTE-FAIRLAWN	5	182					2	84	1	6			2	91
259	KELLY BUTTE-MALL 205	2	73					1	4	1	69				
260	KELLY BUTTE-MCGREW	2	58							2	58				
261	KING CITY-BULL MOUNTAIN														
262	KING CITY-FISCHER	4	1,147			4	1,147								
263	KING CITY-HAZELBROOK														
264	KING CITY-NORTH	1	14					1	14						
265	KING CITY-SUMMERFIELD	1	41					1	41						
266	LAKE LABISH-LAKE LABISH														
267	LELAND-BEAVERCREEK	16	611	4	131			7	68	5	412				
268	LELAND-CARUS	30	3,365	9	1,730	2	10	4	28	14	1,567	1	31		
269	LELAND-KELM														
270	LENTS-13101	9	439					7	432	1	1			1	6

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2015 Outages by Cause Natural

	Feeder Name	Total Natural		Adverse Environment		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
271	LENTS-HAPPY VALLEY														
272	LENTS-MT SCOTT	2	165					2	165						
273	LENTS-NORTH	2	28	1	1			1	27						
274	LIBERAL-LIBERAL 13	15	1,239	1	1	2	134	6	12	6	1,092				
275	LIBERAL-SAWMILL														
276	LIBERTY-BROWNING	2	291					2	291						
277	LIBERTY-LONE OAK	1	1			1	1								
278	LIBERTY-MORNINGSIDE	10	498					4	149	5	343			1	6
279	LIBERTY-ROSEDALE	8	869	3	118					5	751				
280	LIBERTY-SKYLINE	6	1,323					4	480	1	760			1	83
281	LIBERTY-VISTA	5	80	1	6			2	19	1	20			1	36
282	MAIN-AIRPORT	8	596	2	413			2	68	2	4			2	111
283	MAIN-BENTLEY	2	36					1	9	1	26				
284	MAIN-EXPRESS	7	128					6	128	1	1				
285	MAIN-JONES FARM														
286	MAIN-RIVER	11	729	3	337			5	335	2	52			1	6
287	MARKET-ENGLEWOOD	4	135					2	125	1	7	1	3		
288	MARKET-FAIRGROUNDS	5	124			1	3	4	121						
289	MARKET-HAWTHORNE														
290	MARKET-PARK	4	666					1	1	3	665				
291	MCCLAIN-COTTAGE	3	106					2	104					1	2
292	MCCLAIN-FRONT	3	36					3	36						
293	MCCLAIN-HOLLYWOOD	5	84					4	84	1	1				
294	MCGILL-LSI AIR 1A														
295	MERIDIAN-65TH														
296	MERIDIAN-BORLAND														
297	MERIDIAN-CHILDS														
298	MERIDIAN-LAKEVIEW	3	55					3	55						
299	MERIDIAN-MERIDIAN 13	6	478	3	457			1	1	2	20				
300	MERIDIAN-NYBERG														

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2015 Outages by Cause Natural

Feeder Name	Total Natural		Adverse Environment		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
301	MERIDIAN-PILKINGTON	5	106	1	83			1	5	3	18			
302	MERIDIAN-SAGERT	1	7										1	7
303	MIDDLE GROVE-BROWN	5	1,450	1	2			3	25	1	1,423			
304	MIDDLE GROVE-CHEMEKETA	1	1					1	1					
305	MIDDLE GROVE-CORDON	5	940	1	224			2	23	2	694			
306	MIDDLE GROVE-SWEGLE													
307	MIDDLE GROVE-WEST	2	107					2	107					
308	MIDWAY-DIVISION	8	356	1	6			6	345			1	5	
309	MIDWAY-DOUGLAS	4	646	2	629			1	10	1	7			
310	MIDWAY-LYNCH	9	1,398	2	62	1	26	5	461	1	849			
311	MIDWAY-POWELLHURST	2	71					2	71					
312	MILL CREEK-EASTLAND	5	59					2	3	3	57			
313	MILL CREEK-KUEBLER													
314	MILL CREEK-MILL CREEK 13													
315	MOLALLA-BUCKAROO													
316	MOLALLA-FOREST	23	690	2	10			1	11	16	531	3	121	1 17
317	MOLALLA-MARQUAM	29	3,403	7	290	2	169	2	23	18	2,922			
318	MOLALLA-YODER	10	1,330	1	840	6	386			2	12			1 92
319	MT ANGEL-EAST	4	67	1	51			1	2	2	13			
320	MT ANGEL-WEST	18	2,911	2	334			1	1	12	2,571			3 5
321	MT PLEASANT-CLAIRMONT	2	72					1	69	1	3			
322	MT PLEASANT-MT VIEW	5	79	1	63			3	12	1	3			
323	MT PLEASANT-RIVERCREST	3	8					2	7	1	2			
324	MT PLEASANT-SOUTH END	11	545	3	18			6	517	1	6			1 4
325	MULINO-NORTH	2	156	2	156									
326	MULINO-SOUTH	17	3,320	1	26			4	61	11	3,232	1	2	
327	MULTNOMAH-13176	12	415	3	126			4	173	3	8	1	12	1 97
328	MULTNOMAH-13177	7	2,233	1	2			2	97	3	85	1	2,050	
329	MULTNOMAH-13181	6	1,138	2	712			2	326	2	100			
330	MULTNOMAH-MULTNOMAH 13	12	12,411	4	126			1	61	6	12,222			1 2

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2015 Outages by Cause Natural

	Feeder Name	Total Natural		Adverse Environment		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	MURRAYHILL-KINTON	1	3							1	3				
332	MURRAYHILL-MURRAYHILL 13														
333	MURRAYHILL-REUSSER	1	1					1	1						
334	MURRAYHILL-TEAL	2	457					2	457						
335	NEWBERG-CHEHALEM	17	1,987	3	15	2	205	4	844	5	681	1	2	2	239
336	NEWBERG-DUNDEE	8	548	2	173			2	108	2	248	2	18		
337	NEWBERG-HOOVER PARK	5	6,375					3	288	1	5,467			1	620
338	NEWBERG-NORTH COLLEGE	6	198					1	1	4	128			1	69
339	NORTH MARION-CROSBY	2	56	2	56										
340	NORTH MARION-FRONT	3	4,719	1	4,496			1	2	1	221				
341	NORTH MARION-HUBBARD	1	49							1	49				
342	NORTH MARION-MCLAREN	10	2,430	2	1,328			1	38	7	1,064				
343	NORTH PLAINS-MASON HILL	27	5,236	10	802			5	37	9	4,047	2	206	1	145
344	NORTH PLAINS-NORTH PLAINS 13	7	145	1	4			2	32	4	108				
345	NORTHERN-11009	3	24					3	24						
346	NORTHERN-11016														
347	NORTHERN-11071	5	248					4	156	1	92				
348	OAK GROVE-LAKE HARRIET														
349	OAK GROVE-WHITE WATER	1	19	1	19										
350	OAK HILLS-FIVE OAKS	1	324					1	324						
351	OAK HILLS-GREENBRIER														
352	OAK HILLS-OAK HILLS 13	1	3					1	3						
353	OAK HILLS-SOMERSET														
354	OAK HILLS-WALKER	1	1					1	1						
355	ORENCO-231ST														
356	ORENCO-AMBERGLEN														
357	ORENCO-BASELINE	2	289					1	170					1	120
358	ORENCO-ORENCO 13														
359	ORENCO-PRIMATE														
360	ORENCO-WILKINS														

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2015 Outages by Cause Natural

	Feeder Name	Total Natural		Adverse Environment		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
361	ORIENT-BARLOW	24	641	4	128			1	61	16	445	1	5	2	2
362	ORIENT-ORIENT 13	29	4,450	8	1,265	2	978	2	8	14	1,878	2	321	1	1
363	OSWEGO-IRON MOUNTAIN	1	30							1	30				
364	OSWEGO-MARYLHURST	10	4,146	1	928	1	9	1	32	6	3,175	1	2		
365	OSWEGO-PALATINE	10	6,405	5	1,795					5	4,610				
366	OSWEGO-STAFFORD	3	4	1	2			2	2						
367	OXFORD-FAIRVIEW	1	3	1	3										
368	OXFORD-LEE	1	4			1	4								
369	OXFORD-MADRONA														
370	OXFORD-OXFORD 13	1	11					1	11						
371	OXFORD-RURAL														
372	OXFORD-SHELTON														
373	PENINSULA PARK-OCKLEY GREEN														
374	PENINSULA PARK-PENINSULA PARK	4	11					1	2	3	9				
375	PLEASANT VALLEY-BAXTER	3	18	1	5					2	13				
376	PLEASANT VALLEY-CLATSOP	2	73					2	73						
377	PLEASANT VALLEY-MOON	2	166							2	166				
378	PLEASANT VALLEY-PLEASANT 13	12	620					4	173	5	152			3	295
379	PLEASANT VALLEY-SUN	5	49					3	16	2	34				
380	PORTSMOUTH-CARBIDE	2	42							1	3			1	39
381	PORTSMOUTH-DISPOSAL														
382	PORTSMOUTH-WILLIS	3	818					2	65					1	753
383	PROGRESS-GREENBURG	2	566					2	566						
384	PROGRESS-HALL	1	27					1	27						
385	PROGRESS-ROBINSON														
386	PROGRESS-SAWYER														
387	PROGRESS-WASHINGTON SQ #1														
388	PROGRESS-WASHINGTON SQ #2														
389	RALEIGH HILLS-DOGWOOD	5	109					4	75	1	34				
390	RALEIGH HILLS-MONTCLAIR	4	27					3	26	1	1				

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2015 Outages by Cause Natural

	Feeder Name	Total Natural		Adverse Environment		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
391	RALEIGH HILLS-OLESON	2	603					1	64	1	539				
392	RAMAPO-EMERALD	3	113					2	46	1	67				
393	RAMAPO-GILBERT	3	164	1	123			2	41						
394	RAMAPO-RAMAPO 13	15	953	6	94			4	30	4	467	1	363		
395	REDLAND-HENRICI	19	6,023	4	244			3	28	11	5,711			1	39
396	REDLAND-REDLAND 13	29	4,917	11	611			4	6	12	2,301	1	1,980	1	19
397	REEDVILLE-AUGUSTA	2	142					2	142						
398	REEDVILLE-BLANTON	5	159	1	1			3	155			1	3		
399	REEDVILLE-HAZELDALE	14	294	1	18			4	67	7	204			2	4
400	REEDVILLE-INTEL #4														
401	REEDVILLE-TV	2	30					2	30						
402	RIVERGATE SOUTH-11010														
403	RIVERGATE SOUTH-11011	3	2,442					1	1	1	2,385	1	56		
404	RIVERGATE SOUTH-PEARCY	1	30					1	30						
405	RIVERGATE SOUTH-SWIFT														
406	RIVERVIEW-FULTON	15	750	2	8			4	251	7	425	1	56	1	11
407	RIVERVIEW-MACADAM														
408	RIVERVIEW-TERWILLIGER	10	988	3	374			1	318	5	294			1	3
409	ROCKWOOD-AIRPORT														
410	ROCKWOOD-BOEING														
411	ROCKWOOD-INDUSTRIAL	1	17	1	17										
412	ROCKWOOD-REYNOLDS	2	76	1	1			1	75						
413	ROCKWOOD-ROCKWOOD 13	16	1,192	5	656			8	231	2	198			1	108
414	ROCKWOOD-WILKES	1	133	1	133										
415	ROSEMONT-HIDDEN SPRINGS	5	268					3	113	2	155				
416	ROSEMONT-MOSSY BRAE	1	16							1	16				
417	ROSEMONT-OVERLOOK	3	10					2	9					1	1
418	ROSEWAY-ALEXANDER	3	368					1	126	2	241				
419	ROSEWAY-ESPLANADE	2	160					2	160						
420	ROSEWAY-ROSEWAY 13	1	8							1	8				

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

Outs = Outages
Hrs = # of customers * duration hrs

2015 Outages by Cause Natural

	Feeder Name	Total Natural		Adverse Environment		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
421	RUBY-CARLINE	3	41	2	39			1	2						
422	RUBY-JUNCTION	2	48					2	48						
423	SALEM-13260														
424	SALEM-13261														
425	SALEM-13262														
426	SALEM-13263														
427	SALEM-13264														
428	SALEM-UNION														
429	SANDY-362ND	6	1,381	2	193			1	4	3	1,184				
430	SANDY-BLUFF	6	133	2	73			3	23					1	37
431	SANDY-SANDY 13	34	5,651	10	962			3	15	15	3,812	2	6	4	856
432	SANDY-WILDCAT	18	5,709	9	2,573			2	3	7	3,133				
433	SCHOLLS FERRY-KEMMER	6	56					4	27	2	29				
434	SCHOLLS FERRY-RAINBOW	24	4,184	2	649			4	50	16	3,396			2	89
435	SCHOLLS FERRY-ROY ROGERS	2	66					1	5					1	61
436	SCOGGINS-CHERRY GROVE	8	792	4	316			1	30	3	446				
437	SCOGGINS-LAURELWOOD	16	2,345					8	74	5	2,263			3	8
438	SCOTTS MILLS-SCOTTS MILLS 13	40	5,227	13	2,695	1	13	6	41	17	2,448	1	1	2	29
439	SELLWOOD-KELLOGG PARK	19	221	15	16			2	128	1	7	1	70		
440	SELLWOOD-SELLWOOD 13	7	71	4	4			2	57	1	10				
441	SELLWOOD-WAVERLY	4	36	3	22					1	13				
442	SHERIDAN-EAST	8	2,137	1	166			1	2	4	1,507	1	455	1	7
443	SHERIDAN-KADELL	4	51							2	26	1	4	1	21
444	SILVERTON-NORTH	7	2,241	2	1,650			4	242	1	349				
445	SILVERTON-SOUTH	9	1,488	3	222			3	7	3	1,259				
446	SILVERTON-WEST	20	2,354	7	1,369			2	46	9	651			2	288
447	SIX CORNERS-13359	15	3,334	1	745	4	274	4	21	4	2,271	1	18	1	5
448	SIX CORNERS-13360														
449	SIX CORNERS-BORCHERS	11	814	3	198			1	2	4	225			3	389
450	SIX CORNERS-CHAPMAN	11	695	1	3			7	643	2	7	1	42		

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

Outs = Outages
Hrs = # of customers * duration hrs

2015 Outages by Cause Natural

	Feeder Name	Total Natural		Adverse Environment		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
451	SIX CORNERS-SIX CORNERS 13	3	40					3	40						
452	SPRINGBROOK-FERNWOOD	4	354					2	7	2	347				
453	SPRINGBROOK-ST PAUL	13	2,419	2	1,117	2	7	2	5	5	1,265			2	25
454	SPRINGBROOK-VILLA	4	172	1	9			3	163						
455	SPRINGBROOK-ZIMRI	2	34					1	30			1	3		
456	ST LOUIS-EAST														
457	ST LOUIS-NORTH	4	20					1	10	3	10				
458	ST LOUIS-WEST	11	49	2	13			3	4	5	27			1	4
459	ST MARYS EAST-BETHANY	1	1							1	1				
460	ST MARYS EAST-BUTNER	15	1,777	3	94			9	1,580	1	7			2	95
461	ST MARYS EAST-ELMONICA	2	155					1	11	1	144				
462	ST MARYS EAST-JENKINS														
463	ST MARYS EAST-MILLIKAN														
464	ST MARYS EAST-ST MARYS 13														
465	STEPHENS-11001														
466	STEPHENS-11020														
467	STEPHENS-11054 NETWORK														
468	STEPHENS-11055 NETWORK														
469	STEPHENS-11092 NETWORK														
470	STEPHENS-11093 NETWORK														
471	STEPHENS-11094 NETWORK														
472	STEPHENS-11095 NETWORK														
473	STEPHENS-11097 NETWORK														
474	STEPHENS-11098	1	111											1	111
475	STEPHENS-11099 NETWORK														
476	SULLIVAN-ROBINWOOD	5	147					2	54	2	7			1	86
477	SULLIVAN-SALAMO	7	570							7	570				
478	SULLIVAN-SUSSEX	3	2,866					2	8	1	2,858				
479	SULLIVAN-TANNER	5	3,601	2	5					3	3,596				
480	SULLIVAN-WILLAMETTE	7	4,295	1	332			3	205	3	3,758				

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

Outs = Outages
Hrs = # of customers * duration hrs

2015 Outages by Cause Natural

	Feeder Name	Total Natural		Adverse Environment		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
481	SUMMIT-GOVERNMENT CAMP	1	23									1	23		
482	SUMMIT-MEADOWS	4	144	3	115									1	28
483	SUMMIT-SUMMIT 13	6	340	4	213					2	127				
484	SUNSET-BLANCHET														
485	SUNSET-COLFAX														
486	SUNSET-CORNELL														
487	SUNSET-DORION														
488	SUNSET-IDTB														
489	SUNSET-INTEL D1B1														
490	SUNSET-INTEL D1X1														
491	SUNSET-KOMATSU #1														
492	SUNSET-KOMATSU #3														
493	SUNSET-LANE														
494	SUNSET-LINDE PHASE 1														
495	SUNSET-MCCALL														
496	SUNSET-MEEK														
497	SUNSET-PAULING														
498	SUNSET-SPALDING														
499	SUNSET-WHITMAN														
500	SUNSET-YOUNG														
501	SWAN ISLAND-BASIN														
502	SWAN ISLAND-DOLPHIN														
503	SWAN ISLAND-FREIGHTLINER														
504	SWAN ISLAND-GOING														
505	SWAN ISLAND-SHIPYARD														
506	SYLVAN-BARNES	19	2,466	8	407			1	21	9	532	1	1,507		
507	SYLVAN-PATTON	23	10,417	5	706			10	181	6	9,082	1	442	1	5
508	TABOR-82ND	14	3,937					5	260	7	3,416			2	261
509	TABOR-HOSPITAL														
510	TABOR-TABOR 13	7	220					3	127	4	92				

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

Outs = Outages
Hrs = # of customers * duration hrs

2015 Outages by Cause Natural

	Feeder Name	Total Natural		Adverse Environment		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
511	TEKTRONIX-HOCKEN	1	48					1	48						
512	TEKTRONIX-NORTH														
513	TEKTRONIX-SHANNON	2	111					1	19	1	91				
514	TEKTRONIX-SOUTH	1	245							1	245				
515	TEKTRONIX-TEKTRONIX 13	1	23					1	23						
516	TEKTRONIX-WEST														
517	TEMP B-NORTH														
518	TEMP B-SOUTH														
519	TIGARD-13336	2	54					2	54						
520	TIGARD-13337														
521	TIGARD-13361	5	146					5	146						
522	TIGARD-13362														
523	TIGARD-TIGARD 13	5	84			1	15	3	18					1	51
524	TOWN CENTER-LAWNFIELD														
525	TOWN CENTER-MONTEREY	2	315					1	3	1	312				
526	TOWN CENTER-NORTH	1	7	1	7										
527	TOWN CENTER-PRECISION CASTPARTS														
528	TOWN CENTER-SOUTH														
529	TOWN CENTER-SUNNYBROOK														
530	TOWN CENTER-VALLEY VIEW														
531	TUALATIN-AVERY	1	83							1	83				
532	TUALATIN-CIPOLE														
533	TUALATIN-HERMAN	1	2					1	2						
534	TUALATIN-IBACH	5	2,119					2	109	3	2,010				
535	TUALATIN-LEVETON														
536	TUALATIN-TUALATIN 13	1	27							1	27				
537	TURNER-CASCADE	8	191	2	9			1	1	5	181				
538	TURNER-TURNER 13	6	73							4	61	1	10	1	2
539	TWILIGHT-BREMER	10	3,205	3	2,982	2	92			5	131				
540	UNIONVALE-UNIONVALE 13	16	1,097	1	6	1	29	2	5	8	1,046	1	3	3	8

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

Outs = Outages
Hrs = # of customers * duration hrs

2015 Outages by Cause Natural

Feeder Name	Total Natural		Adverse Environment		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
541 UNIVERSITY-MILL	1	37					1	37						
542 UNIVERSITY-TRADE	8	512					7	301	1	211				
543 URBAN-BARBUR	3	39					3	39						
544 URBAN-CAMPUS														
545 URBAN-CORBETT	3	19	1	4							1	4	1	11
546 URBAN-GAINES	5	249					3	36	1	1			1	212
547 URBAN-GIBBS														
548 URBAN-KELLY	3	3					3	3						
549 URBAN-LANDING														
550 URBAN-MEDICAL														
551 URBAN-OHSU														
552 WACONDA-NORPAC														
553 WACONDA-RIVER	7	57					4	7	3	51				
554 WACONDA-WACONDA 13	15	1,205	1	3			2	33	7	118	4	924	1	128
555 WALLACE-WALLACE 13	8	239					2	3	6	236				
556 WALLACE-WILLOW LAKE	1	2	1	2										
557 WELCHES-WELCHES 13	22	2,729	6	1,186			5	74	9	697	2	771		
558 WELCHES-ZIG ZAG	121	8,122	52	6,112					66	1,960	1	42	2	9
559 WEST PORTLAND-72ND	1	12					1	12						
560 WEST PORTLAND-NORTH	5	301	1	1			2	202	2	98				
561 WEST PORTLAND-PACIFIC	6	813					4	566	2	247				
562 WEST PORTLAND-WEST PORTLAND 13	7	2,533					5	470	2	2,062				
563 WEST UNION-CORNELIUS PASS	17	2,674	4	1,019			4	79	9	1,577				
564 WEST UNION-WEST UNION 13														
565 WILLAMINA-BRIDGE	7	140	1	20			4	94	1	9			1	16
566 WILLAMINA-BUELL	15	5,627	5	1,633			3	22	6	3,351	1	621		
567 WILLAMINA-LUMBER														
568 WILLBRIDGE-WILLBRIDGE #1														
569 WILLBRIDGE-WILLBRIDGE #4														
570 WILSONVILLE-BOECKMAN	7	881	2	36			2	86	2	712			1	47

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

Outs = Outages
Hrs = # of customers * duration hrs

2015 Outages by Cause Natural

	Feeder Name	Total Natural		Adverse Environment		Lightning		Animal		Non-Preventable Tree Contacts*		Preventable Tree Contacts*		Unknown	
		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
571	WILSONVILLE-CHARBONNEAU	6	268	3	256			3	12						
572	WILSONVILLE-CITY														
573	WILSONVILLE-MENTORTEK														
574	WILSONVILLE-PARKWAY														
575	WILSONVILLE-VILLEBOIS	3	398	2	363			1	36						
576	WILSONVILLE-WEST	9	801	2	13			4	24	3	763				
577	WOODBURN-CANNERY	3	383					3	383						
578	WOODBURN-EAST	9	524	1	84					5	265			3	176
579	WOODBURN-TOMLIN	3	19					2	17	1	2				
580	WOODBURN-WEST	8	189	1	4			7	184						
581	YAMHILL-CARLTON	25	7,405					4	41	20	7,039	1	325		
582	YAMHILL-YAMHILL 13	15	826	1	4			8	172	3	485	1	128	2	38
Grand Totals:		2,833	421,919	613	79,432	55	8,131	824	41,631	1,096	258,822	75	16,268	170	17,634

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

Outs = Outages
Hrs = # of customers * duration hrs

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 – For information about specific equipment categories please see section VI.
- Cutout, Fuse, Arrestor Failure – This category is included for reference. Outage events in this column are included in the PGE Equipment column.
- Loss of Substation
- Loss of Transmission
- Human Element
- Public
- Planned

NOTE: Idle feeders are not included in this list. Feeders may be omitted if they are a part of an alternate/multiple feeder service.

2015 Outages by Cause System

Feeder Name	Total System		PGE Equipment		Cutout, Fuse, Arrestor ¹		Loss of Substation		Loss of Transmission		Human Factor		Public		Planned	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
1 ABERNETHY-CLACKAMAS HEIGHTS	1	56	1	56												
2 ABERNETHY-OREGON CITY	12	1,576	9	196	3	55							2	1,378	1	1
3 ABERNETHY-TRANSIT	9	503	8	501	4	48							1	2		
4 ALDER-ANKENY	2	74	2	74												
5 ALDER-IRVING	4	207	3	133	1	115									1	73
6 ALDER-LINCOLN	10	518	10	518	3	164										
7 ALDER-STARK	7	178	3	9	1	3									4	168
8 ALDER-TAYLOR	4	116	3	115	1	43									1	1
9 ALDER-YAMHILL	2	8	2	8	1	2										
10 AMITY-AMITY 13	14	905	10	414	7	53			1	362			2	125	1	5
11 AMITY-BELLEVUE	20	458	17	98	7	18			1	293			1	66	1	0
12 ARLETA-52ND	7	268	7	268	3	230										
13 ARLETA-FOSTER	5	170	5	170	1	1										
14 ARLETA-HAROLD	6	503	5	499	1	7									1	4
15 ARLETA-POWELL	8	11,361	3	333	2	332							2	11,024	3	5
16 ARLETA-STEELE	16	1,016	8	889	3	35	1	8					2	32	5	88
17 BANKS-BANKS 13	12	323	10	321	4	99							2	2		
18 BANKS-CEDAR CANYON	24	550	19	474	8	108							2	18	3	58
19 BARNES-BATTLE CREEK	8	141	7	139	4	8					1	2				
20 BARNES-BOONE	5	454	1	5	1	5							4	449		
21 BARNES-COMMERCIAL	12	1,075	9	1,061	2	5							3	14		
22 BARNES-SUNNYSIDE	15	2,971	13	1,833	1	52							1	2	1	1,136
23 BEAVERTON-ALLEN	8	616	6	403											2	213
24 BEAVERTON-JAMIESON	16	1,376	9	422	1	14							1	162	6	792
25 BEAVERTON-NORTHWEST	5	3,564	3	1,780											2	1,784
26 BEAVERTON-WEST SLOPE	4	42	3	39											1	3
27 BELL-BATTIN	6	147	3	96	1	24							1	1	2	50
28 BELL-BRENTWOOD	2	6	2	6	1	1										
29 BELL-FLAVEL	6	253	5	247									1	5		
30 BELL-JOHNSON CREEK																
31 BELL-KENDALL	2	6											1	1	1	6
32 BELL-KING	7	62	4	53	2	29							3	9		
33 BELL-SOUTHGATE	2	9	1	2											1	7
34 BELL-WICHITA	8	200	6	195									2	5		
35 BETHANY-BURTON	7	1,813	6	1,812									1	2		
36 BETHANY-GERMANTOWN	12	938	9	889	3	24					1	2	2	47		
37 BETHANY-KAISER	4	1,237	4	1,237												
38 BETHANY-LAIDLAW	6	138	4	127	1	118							1	2	1	9

*For detailed equipment outage information, see Outages by PGE Equipment report

Outs = Outages
Hrs = # of customers * duration hrs

1-Cutout, Fuse, Arrestor failures are included in the PGE equipment total

2015 Outages by Cause System

Feeder Name	Total System		PGE Equipment		Cutout, Fuse, Arrestor ¹		Loss of Substation		Loss of Transmission		Human Factor		Public		Planned	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
39 BETHANY-SPRINGVILLE	4	93	2	51	2	51							2	42		
40 BETHANY-THOMPSON	7	3,689	7	3,689	2	3										
41 BETHEL-FRUITLAND	13	3,448	10	1,463	1	3							3	1,986		
42 BETHEL-GEER	11	122	8	119	1	3							3	4		
43 BETHEL-MACLEAY	6	27	6	27	1	15										
44 BLUE LAKE-BLUE LAKE 13	16	11,014	14	3,969	6	100	1	6,665					1	380		
45 BLUE LAKE-SUNDIAL	11	1,647	10	92	2	31	1	1,556								
46 BLUE LAKE-TOYO TANSO	1	66					1	66								
47 BOONES FERRY-GOODALL	8	4,182	7	4,180											1	2
48 BOONES FERRY-KRUSE	4	51	4	51												
49 BOONES FERRY-LAKE GROVE	1	8	1	8												
50 BOONES FERRY-MOUNTAIN PARK	10	2,181	5	2,076									2	4	3	102
51 BOONES FERRY-WEMBLEY PARK	12	510	8	212	1	13							3	179	1	119
52 BORING-282ND	13	679	9	417	6	407							3	261	1	1
53 BORING-CITY	15	847	12	81	4	14							3	766		
54 BORING-TELFORD	12	1,526	9	163	4	103					1	1	2	1,362		
55 BRIGHTWOOD-BRIGHTWOOD 13	10	53	9	52	5	39							1	2		
56 BRIGHTWOOD-NORTH BANK	11	586	8	551	2	24			1	20			1	8	1	6
57 BROOKWOOD-BORWICK	1	774	1	774	1	774										
58 BROOKWOOD-BROOKWOOD 13																
59 BROOKWOOD-SUNRISE	8	244	3	217									2	4	3	23
60 CANBY-13643	26	1,749	19	462	7	22							7	1,287		
61 CANBY-13644	5	18	4	15	2	6			1	2						
62 CANBY-BUTTEVILLE	17	963	13	211	6	48							3	751	1	2
63 CANYON-13114 NETWORK #1																
64 CANYON-13115 NETWORK #1																
65 CANYON-13116 NETWORK #1																
66 CANYON-13117 NETWORK #1																
67 CANYON-13118 PSU	1	9													1	9
68 CANYON-13119 PSU	1	382											1	382		
69 CANYON-13120																
70 CANYON-13121																
71 CANYON-13122 NETWORK #2																
72 CANYON-13123 NETWORK #2																
73 CANYON-13124 NETWORK #2																
74 CANYON-13125 NETWORK #2																
75 CANYON-13133 NETWORK #3																
76 CANYON-13134 NETWORK #3																

*For detailed equipment outage information, see Outages by PGE Equipment report

Outs = Outages
Hrs = # of customers * duration hrs

1-Cutout, Fuse, Arrestor failures are included in the PGE equipment total

2015 Outages by Cause System

Feeder Name	Total System		PGE Equipment		Cutout, Fuse, Arrestor ¹		Loss of Substation		Loss of Transmission		Human Factor		Public		Planned	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
77 CANYON-13135 NETWORK #3																
78 CANYON-13136 NETWORK #3																
79 CANYON-21ST	4	2,412	1	30	1	30							1	2,160	2	221
80 CANYON-23RD	4	596	3	595											1	1
81 CANYON-BURNSIDE	2	24	1	2	1	2							1	22		
82 CANYON-CANYON 13	4	43	3	36											1	7
83 CARVER-ALMOND	1	72	1	72	1	72										
84 CARVER-CARVER 13	16	2,092	14	2,056	4	10							2	36		
85 CARVER-NORTH	3	2,408	2	2,401	1	2,398							1	7		
86 CARVER-RIVERBEND																
87 CARVER-SOUTH																
88 CARVER-WOODS	2	16	1	15									1	1		
89 CEDAR HILLS-CEDAR HILLS 13																
90 CEDAR HILLS-LEAHY	13	1,814	12	1,673	2	236					1	142				
91 CEDAR HILLS-SHOPPING CENTER	9	918	3	24	1	21							2	250	4	644
92 CEDAR HILLS-SKYLINE																
93 CEDAR HILLS-ST VINCENT																
94 CEDAR HILLS-SYLVAN	9	131	9	131	4	79										
95 CENTENNIAL-BARKER	10	6,478	8	2,120	1	5							2	4,358		
96 CENTENNIAL-BRAECROFT	10	1,128	8	764	2	113							2	364		
97 CENTENNIAL-CENTENNIAL 13	17	15,005	11	7,082	1	1							5	7,916	1	8
98 CENTENNIAL-TREELAND	13	488	9	208	3	121							4	281		
99 CLACKAMAS-EVELYN	3	23	2	7	1	5					1	15				
100 CLACKAMAS-GLADSTONE	8	2,184	8	2,184	1	1,288										
101 CLACKAMAS-JENNIFER	2	6	1	3									1	3		
102 CLACKAMAS-TOLBERT	5	641	5	641	2	299										
103 CLAXTAR-CLAXTAR 13	3	364	2	50	1	2							1	314		
104 CLAXTAR-HAYESVILLE	5	334	5	334	1	3										
105 CLAXTAR-RIDGE	10	868	8	524	1	4	1	151							1	193
106 COFFEE CREEK-FREEMAN																
107 COFFEE CREEK-HOLIDAY	1	1	1	1	1	1										
108 COLTON-DHOOGHE	9	1,441	7	41	5	27							1	1,396	1	3
109 COLTON-GRAYS HILL	9	1,492	5	35	2	8							4	1,458		
110 CORNELIUS-ADAIR	1	2	1	2	1	2										
111 CORNELIUS-CORNELIUS 13	16	7,916	11	4,662	3	12					1	1	4	3,253		
112 CORNELIUS-VERBOORT	17	7,611	13	441	2	4	1	6,362					3	807		
113 CORNELL-BLUFFS	9	292	4	81	2	26							2	143	3	68
114 CORNELL-SALTZMAN	6	787	4	116	1	27							1	592	1	78

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		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
115	CORNELL-WESTLAWN	10	1,386	8	250	2	106							1	1	1	1,135
116	CULVER-SANYO #1																
117	CURTIS-11077	8	47	6	41	2	17							2	6		
118	CURTIS-CURTIS 13	8	415	6	360	4	168	1	13							1	42
119	DAYTON-EAST	18	414	17	319	8	78							1	96		
120	DAYTON-LAFAYETTE	13	1,324	9	803	6	676							4	521		
121	DAYTON-SOUTHWEST	6	68	6	68	5	62										
122	DELAWARE-DENVER	8	2,587	6	184	2	46							2	2,403		
123	DELAWARE-INTERSTATE																
124	DELAWARE-LOMBARD	9	399	8	106									1	293		
125	DENNY-EAST	6	76	5	35	2	23							1	41		
126	DENNY-NORTH	8	524	7	519									1	5		
127	DENNY-SOUTH	14	2,748	14	2,748												
128	DENNY-WEST	7	2,639	7	2,639												
129	DILLEY-DILLEY 13	9	698	8	49	5	21							1	649		
130	DILLEY-SPRINGHILL	1	7											1	7		
131	DUNNS CORNER-DUNNS CORNER 13	20	1,541	14	1,423	5	7							6	118		
132	DUNNS CORNER-KELSO	4	47	3	44	1	30							1	2		
133	DURHAM-BONITA																
134	DURHAM-BRIDGEPORT	7	493	6	487	4	406							1	6		
135	DURHAM-DURHAM 13	2	9	2	9	1	1										
136	DURHAM-POOPLANT																
137	DURHAM-SATTTLER	13	1,443	11	1,132	4	124							2	312		
138	DURHAM-SOUTH	1	1											1	1		
139	E-11021	1	13	1	13	1	13										
140	E-11039																
141	E-11040	1	3	1	3												
142	E-11041	3	15	3	15	2	11										
143	E-11042																
144	E-11043																
145	E-11047	1	2	1	2	1	2										
146	E-11064																
147	E-13139																
148	E-13140	1	2											1	2		
149	E-13141																
150	E-13144	5	1,490	3	1,467	1	4							1	1	1	22
151	E-13145																
152	E-13148																

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	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
153 E-13149	3	10,278	1	1,826									2	8,452		
154 E-13150	2	44	1	41											1	3
155 EAGLE CREEK-BARTON	9	380	6	27	3	15							3	353		
156 EAGLE CREEK-RIVER MILL	13	422	10	265	3	172							3	157		
157 EASTPORT-76TH	11	5,860	9	114	2	45			1	5,042			1	704		
158 EASTPORT-PLAZA	8	2,602	4	172					1	2,424			1	2	2	4
159 ELMA-ELMA 13	6	744	6	744												
160 ELMA-FOUR CORNERS	5	1,224	5	1,224												
161 ELMA-HUDSON	7	325	6	324	3	20							1	1		
162 ELMA-STATE	2	51	1	26									1	25		
163 ESTACADA-ESTACADA 13	10	10,923	9	10,919	4	4,495							1	4		
164 ESTACADA-FARADAY	27	1,535	23	1,428	5	126					1	7	2	99	1	2
165 FAIRMOUNT-CANDALARIA	6	1,753	5	1,752	2	12							1	1		
166 FAIRMOUNT-MISSION	15	1,697	13	828	5	107							2	869		
167 FAIRVIEW-CLEAR CREEK																
168 FAIRVIEW-FAIRVIEW 13	1	103	1	103												
169 FAIRVIEW-KENNEL CLUB	10	565	7	553	1	1							2	9	1	4
170 FAIRVIEW-TROUTDALE	15	5,609	13	5,577	3	16							2	32		
171 FAIRVIEW-WOOD VILLAGE	11	1,546	10	1,534	1	7					1	12				
172 FARGO-FARGO 13	15	1,595	12	843	4	261							3	752		
173 GALES CREEK-GALES CREEK 13	17	923	11	392	2	5							6	531		
174 GARDEN HOME-MCKAY	7	1,642	7	1,642												
175 GARDEN HOME-METZGER	9	540	9	540	2	14										
176 GLENCOE-GLISAN	3	80	3	80	2	20										
177 GLENCOE-PROVIDENCE	1	5	1	5												
178 GLENCOE-SUNNYSIDE	8	352	7	350	2	251							1	1		
179 GLENCULLEN-BRIDLEMILE	16	6,258	9	3,224	2	20							5	2,800	2	234
180 GLENCULLEN-SUNSET	10	857	8	835	2	151							1	4	1	18
181 GLENDOVEER-13596	1	316	1	316												
182 GLENDOVEER-13597	5	482	5	482	2	19										
183 GLENDOVEER-13598	3	19	3	19	1	8										
184 GLENDOVEER-13599	6	147	5	59									1	88		
185 GLENDOVEER-CLIFFGATE	7	1,228	7	1,228												
186 GLENDOVEER-NORTHEAST	8	9,799	6	6,009	3	142							2	3,790		
187 GLISAN-FAB 2A																
188 GLISAN-UTILITY 1B																
189 GORMLEY-MCMINNVILLE WL	1	186	1	186	1	186										
190 GRAND RONDE-AGENCY	6	854	3	68	2	66							3	786		

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		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
191	GRAND RONDE-FORTHILL	9	148	7	141	3	70									2	7
192	HARBORTON-BURLINGTON	18	1,299	16	890	5	90							2	410		
193	HARBORTON-HARBORTON 13	1	26	1	26												
194	HARBORTON-LINNTON	4	49	3	37	1	2							1	12		
195	HARMONY-HARMONY 13	7	359	7	359	5	319										
196	HARMONY-INTERNATIONAL	1	18	1	18	1	18										
197	HARMONY-LAKE	5	303	5	303	1	2										
198	HARMONY-LINWOOD	8	492	8	492	2	5										
199	HARMONY-MILWAUKIE	6	628	4	340	2	79									2	288
200	HARMONY-THIESSEN	6	1,620	5	1,351											1	270
201	HARRISON-DAVIS	2	3	2	3	1	2										
202	HARRISON-HARRISON 13	6	5,504	5	5,456	1	1,940							1	48		
203	HARRISON-IVON	3	16	3	16												
204	HAYDEN ISLAND-MAINLAND	1	11	1	11												
205	HAYDEN ISLAND-NORTH SHORE	9	610	7	571	1	3							2	39		
206	HAYDEN ISLAND-SOUTH SHORE																
207	HEMLOCK-FREMONT	4	538	2	395									2	142		
208	HEMLOCK-HEMLOCK 13	14	1,093	14	1,093	2	7										
209	HEMLOCK-MASON	2	136	1	128									1	7		
210	HILLCREST-CASCADIA																
211	HILLCREST-HILLCREST 13	1	2											1	2		
212	HILLCREST-SOUTH																
213	HILLSBORO-DAIRY CREEK	7	1,549	6	1,548	1	3							1	1		
214	HILLSBORO-DENNIS	1	3	1	3	1	3										
215	HILLSBORO-JACKSON	9	283	4	212									5	72		
216	HILLSBORO-LAUREL	20	1,100	17	205	2	6							3	895		
217	HILLSBORO-SCHOLLS	3	511	3	511	1	31										
218	HOGAN NORTH-BRIGADOON	14	2,160	10	2,143	1	13							4	17		
219	HOGAN NORTH-HOGAN NORTH 13	5	1,280	4	356	1	3							1	924		
220	HOGAN NORTH-LINKS	39	2,883	29	1,729	4	7							8	1,151	2	3
221	HOGAN NORTH-SALQUIST	10	1,031	8	997	1	3							2	34		
222	HOGAN SOUTH-CLEVELAND	11	902	11	902	1	40										
223	HOGAN SOUTH-LAWRENCE	13	1,128	11	1,116	1	2							1	3	1	9
224	HOGAN SOUTH-MAIN	2	317	1	312											1	5
225	HOGAN SOUTH-PAROPA	9	1,023	9	1,023												
226	HOGAN SOUTH-WALLULA	6	146	5	144	2	83							1	2		
227	HOLGATE-BYBEE	6	183	6	183	2	11										
228	HOLGATE-GIDEON	1	2	1	2	1	2										

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Feeder Name	Total System		PGE Equipment		Cutout, Fuse, Arrestor ¹		Loss of Substation		Loss of Transmission		Human Factor		Public		Planned	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
229	HOLGATE-HOLGATE 13	2	4	2	4	1	1									
230	HOLGATE-KENILWORTH	12	2,640	6	1,136	2	214		1	1	1	1,459	3	42	1	2
231	HOLGATE-RHONE	10	1,004	9	484	4	24								1	520
232	HUBER-BANY	11	1,325	6	103	1	1						4	1,221	1	2
233	HUBER-FARMINGTON	13	622	12	618										1	3
234	HUBER-HUBER 13	6	126	6	126	2	58									
235	HUBER-KINNAMAN	10	1,288	9	1,286										1	2
236	HUBER-MARYVILLE	14	2,207	12	1,898										2	309
237	INDIAN-KEIZER	4	223	2	42								1	160	1	21
238	INDIAN-LABISH	13	494	9	39	4	7						2	448	2	7
239	INDIAN-NORTH	14	362	9	288	4	7						5	74		
240	INDIAN-STATION	3	738	2	735								1	3		
241	INDIAN-WEST	12	2,018	7	1,546	1	4						4	469	1	2
242	ISLAND-13180	12	612	9	210	5	177						1	1	2	401
243	ISLAND-13187	13	1,435	11	1,403	2	59						1	2	1	30
244	ISLAND-13188	7	765	5	703	1	5						1	1	1	61
245	ISLAND-ISLAND 13															
246	JENNINGS LODGE-ADDIE	3	87	3	87	1	4									
247	JENNINGS LODGE-JENNINGS 13	4	16	3	14	3	14								1	2
248	JENNINGS LODGE-MELDRUM	12	448	12	448	5	250									
249	JENNINGS LODGE-OAK GROVE	6	333	6	333	1	6									
250	JENNINGS LODGE-WEBSTER	11	1,036	8	925								2	24	1	86
251	KELLEY POINT-KELLEY POINT 13	1	21					1	21							
252	KELLEY POINT-LEDBETTER	3	76	2	11	1	8	1	65							
253	KELLEY POINT-MARINE	1	7					1	7							
254	KELLEY POINT-SIMMONS	1	48					1	48							
255	KELLEY POINT-SOLAR #1	1	1					1	1							
256	KELLEY POINT-SOLAR #2	1	4							1	4					
257	KELLY BUTTE-BINNSMEAD	9	624	8	621										1	3
258	KELLY BUTTE-FAIRLAWN	10	6,704	9	4,411	2	110						1	2,292		
259	KELLY BUTTE-MALL 205	9	823	5	804	1	14						2	12	2	7
260	KELLY BUTTE-MCGREW	8	298	8	298	2	114									
261	KING CITY-BULL MOUNTAIN	5	10,590	1	183			2	10,389				2	17		
262	KING CITY-FISCHER	5	1,558	3	1,527								2	31		
263	KING CITY-HAZELBROOK	5	7,002	3	10			2	6,992							
264	KING CITY-NORTH	5	7,392	4	1,315			1	6,076							
265	KING CITY-SUMMERFIELD															
266	LAKE LABISH-LAKE LABISH															

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	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
267 LELAND-BEAVERCREEK	22	886	20	881	9	249							2	5		
268 LELAND-CARUS	24	982	19	941	7	60					1	4	3	7	1	30
269 LELAND-KELM	10	298	9	296	3	154					1	2				
270 LENTS-13101	11	120	5	102	2	28							3	14	3	4
271 LENTS-HAPPY VALLEY	3	189	3	189												
272 LENTS-MT SCOTT																
273 LENTS-NORTH	5	250	4	117	2	42							1	133		
274 LIBERAL-LIBERAL 13	16	4,697	14	1,319	4	8	1	3,376					1	2		
275 LIBERAL-SAWMILL	1	5					1	5								
276 LIBERTY-BROWNING	2	23	2	23	1	21										
277 LIBERTY-LONE OAK	9	722	7	626									1	6	1	90
278 LIBERTY-MORNINGSIDE	6	312	6	312	4	246										
279 LIBERTY-ROSEDALE	9	381	7	377									2	4		
280 LIBERTY-SKYLINE	17	1,358	9	1,242	2	100							2	2	6	114
281 LIBERTY-VISTA	1	332	1	332												
282 MAIN-AIRPORT	7	642	6	471	4	193							1	171		
283 MAIN-BENTLEY	11	1,466	9	1,438	3	147							2	27		
284 MAIN-EXPRESS	7	394	6	383	2	51							1	11		
285 MAIN-JONES FARM																
286 MAIN-RIVER	21	1,896	16	1,677	4	87							5	219		
287 MARKET-ENGLEWOOD	7	90	7	90	1	6										
288 MARKET-FAIRGROUNDS	9	3,456	6	3,422	2	33							1	1	2	33
289 MARKET-HAWTHORNE	3	161	3	161	1	65										
290 MARKET-PARK	5	363	5	363	2	4										
291 MCCLAIN-COTTAGE	4	17	3	17	1	3							1	1		
292 MCCLAIN-FRONT	4	48	3	40	1	2									1	8
293 MCCLAIN-HOLLYWOOD	5	404	2	401									3	3		
294 MCGILL-LSI AIR 1A																
295 MERIDIAN-65TH	1	783	1	783												
296 MERIDIAN-BORLAND	3	847	3	847												
297 MERIDIAN-CHILDS	3	15	1	11									1	1	1	2
298 MERIDIAN-LAKEVIEW	1	8	1	8												
299 MERIDIAN-MERIDIAN 13	17	445	16	415	5	307							1	30		
300 MERIDIAN-NYBERG																
301 MERIDIAN-PILKINGTON	15	1,268	12	1,226	2	33									3	42
302 MERIDIAN-SAGERT	10	634	7	490	3	5							1	51	2	93
303 MIDDLE GROVE-BROWN	13	105	7	74	2	8							6	30		
304 MIDDLE GROVE-CHEMEKETA	4	2,952	4	2,952	1	471										

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	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
305 MIDDLE GROVE-CORDON	16	4,890	13	2,589	4	72							3	2,302		
306 MIDDLE GROVE-SWEGLE	1	1	1	1	1	1										
307 MIDDLE GROVE-WEST	4	384	3	384											1	0
308 MIDWAY-DIVISION	12	1,035	9	995	1	275							1	2	2	37
309 MIDWAY-DOUGLAS	8	843	5	823	1	31							3	20		
310 MIDWAY-LYNCH	4	254	4	254	3	254										
311 MIDWAY-POWELLHURST	15	1,817	13	1,762	5	678					1	2			1	53
312 MILL CREEK-EASTLAND	9	551	6	23	3	12							3	527		
313 MILL CREEK-KUEBLER	4	623	3	621									1	1		
314 MILL CREEK-MILL CREEK 13																
315 MOLALLA-BUCKAROO	12	45	8	23	4	7							2	14	2	7
316 MOLALLA-FOREST	13	133	7	97	5	70							4	26	2	9
317 MOLALLA-MARQUAM	18	2,623	13	2,310	5	12							5	314		
318 MOLALLA-YODER	22	2,263	12	138	5	14					1	4	7	2,111	2	9
319 MT ANGEL-EAST	4	18	4	18	3	9										
320 MT ANGEL-WEST	25	4,803	20	2,379	8	241							4	2,421	1	3
321 MT PLEASANT-CLAIRMONT	4	706	3	541	1	0									1	165
322 MT PLEASANT-MT VIEW	3	296	3	296	2	290										
323 MT PLEASANT-RIVERCREST	4	117	3	112									1	5		
324 MT PLEASANT-SOUTH END	15	6,000	9	5,249	1	10							4	554	2	197
325 MULINO-NORTH	5	565	2	25	1	1	1	454					2	85		
326 MULINO-SOUTH	9	1,616	4	21	3	13	1	1,087					4	508		
327 MULTNOMAH-13176	8	2,750	6	2,711	2	431									2	40
328 MULTNOMAH-13177	13	12,439	12	12,432	1	1							1	7		
329 MULTNOMAH-13181	14	640	13	636	1	27									1	4
330 MULTNOMAH-MULTNOMAH 13	14	4,971	12	4,663	2	90							2	308		
331 MURRAYHILL-KINTON	8	1,260	7	1,233	3	579							1	27		
332 MURRAYHILL-MURRAYHILL 13	4	6,884	4	6,884	1	1,507										
333 MURRAYHILL-REUSSER																
334 MURRAYHILL-TEAL	7	68	6	67	4	10									1	1
335 NEWBERG-CHEHALEM	19	1,225	17	991	6	71							2	233		
336 NEWBERG-DUNDEE	16	1,897	13	1,469	3	106							3	427		
337 NEWBERG-HOOVER PARK	6	995	6	995	2	100										
338 NEWBERG-NORTH COLLEGE	6	120	4	110	3	107							2	10		
339 NORTH MARION-CROSBY	7	2,981	3	20	2	9							4	2,961		
340 NORTH MARION-FRONT	4	1,036	3	1,035									1	1		
341 NORTH MARION-HUBBARD	3	279	3	279	2	30										
342 NORTH MARION-MCLAREN	11	186	9	59	6	26							1	1	1	126

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2015 Outages by Cause System

Feeder Name	Total System		PGE Equipment		Cutout, Fuse, Arrestor ¹		Loss of Substation		Loss of Transmission		Human Factor		Public		Planned	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
343 NORTH PLAINS-MASON HILL	19	3,356	13	487	4	64			1	2,760			3	18	2	91
344 NORTH PLAINS-NORTH PLAINS 13	14	4,449	9	398	4	16			1	3,077			3	973	1	1
345 NORTHERN-11009	8	277	8	277	3	36										
346 NORTHERN-11016	1	7	1	7												
347 NORTHERN-11071	5	363	5	363	2	300										
348 OAK GROVE-LAKE HARRIET	2	61	1	3	1	3	1	58								
349 OAK GROVE-WHITE WATER																
350 OAK HILLS-FIVE OAKS	3	44	2	13							1	31				
351 OAK HILLS-GREENBRIER																
352 OAK HILLS-OAK HILLS 13	4	235	2	5							1	1			1	230
353 OAK HILLS-SOMERSET	2	25	2	25												
354 OAK HILLS-WALKER	5	385	4	367									1	18		
355 ORENCO-231ST	4	42													4	42
356 ORENCO-AMBERGLEN	1	6											1	6		
357 ORENCO-BASELINE	7	1,051	3	17									3	935	1	99
358 ORENCO-ORENCO 13	2	28	2	28												
359 ORENCO-PRIMATE	2	257											1	7	1	250
360 ORENCO-WILKINS																
361 ORIENT-BARLOW	20	5,372	17	4,747	7	53							2	625	1	0
362 ORIENT-ORIENT 13	17	3,832	11	1,730	3	48			1	2,032			5	69		
363 OSWEGO-IRON MOUNTAIN	1	68													1	68
364 OSWEGO-MARYLHURST	6	256	5	254	3	244							1	2		
365 OSWEGO-PALATINE	3	1,296	2	1,283	1	23							1	13		
366 OSWEGO-STAFFORD	4	3,822	2	30	1	6							1	3,789	1	3
367 OXFORD-FAIRVIEW	15	2,688	12	2,672	2	4							3	16		
368 OXFORD-LEE	1	24	1	24												
369 OXFORD-MADRONA	2	42	2	42	2	42										
370 OXFORD-OXFORD 13	2	141	2	141	1	136										
371 OXFORD-RURAL																
372 OXFORD-SHELTON																
373 PENINSULA PARK-OCKLEY GREEN																
374 PENINSULA PARK-PENINSULA PARK	9	907	7	100	4	20									2	808
375 PLEASANT VALLEY-BAXTER	6	831	3	106					1	664			1	47	1	14
376 PLEASANT VALLEY-CLATSOP	2	96	2	96	1	67										
377 PLEASANT VALLEY-MOON	11	1,725	6	1,324	1	1							5	401		
378 PLEASANT VALLEY-PLEASANT 13	20	3,301	10	683	2	185			1	1,281			8	1,334	1	2
379 PLEASANT VALLEY-SUN	2	144											2	144		
380 PORTSMOUTH-CARBIDE	12	786	11	784											1	2

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Hrs = # of customers * duration hrs

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2015 Outages by Cause System

Feeder Name	Total System		PGE Equipment		Cutout, Fuse, Arrestor ¹		Loss of Substation		Loss of Transmission		Human Factor		Public		Planned	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
381 PORTSMOUTH-DISPOSAL	1	35					1	35								
382 PORTSMOUTH-WILLIS	4	4,793	3	2,546									1	2,248		
383 PROGRESS-GREENBURG	6	743	4	259									2	485		
384 PROGRESS-HALL	1	1													1	1
385 PROGRESS-ROBINSON	11	6,828	8	3,271	3	512							1	2	2	3,555
386 PROGRESS-SAWYER	3	486	3	486												
387 PROGRESS-WASHINGTON SQ #1																
388 PROGRESS-WASHINGTON SQ #2																
389 RALEIGH HILLS-DOGWOOD	4	57	4	57	1	1										
390 RALEIGH HILLS-MONTCLAIR	3	293	2	288	1	5							1	5		
391 RALEIGH HILLS-OLESON	2	352	2	352												
392 RAMAPO-EMERALD	14	6,604	12	6,601	8	6,411							1	1	1	2
393 RAMAPO-GILBERT	8	484	5	331	3	55					1	4	2	149		
394 RAMAPO-RAMAPO 13	6	989	4	984	1	596							1	3	1	2
395 REDLAND-HENRICI	11	48	10	47	5	9							1	1		
396 REDLAND-REDLAND 13	26	2,026	21	354	6	33					1	1	4	1,671		
397 REEDVILLE-AUGUSTA	10	734	10	734	1	6										
398 REEDVILLE-BLANTON	18	1,728	17	1,669	2	301					1	59				
399 REEDVILLE-HAZELDALE	17	3,774	11	3,529	2	206							3	153	3	92
400 REEDVILLE-INTEL #4																
401 REEDVILLE-TV	15	22,786	12	12,455	3	1,045							1	10,116	2	216
402 RIVERGATE SOUTH-11010																
403 RIVERGATE SOUTH-11011	5	262	4	257									1	5		
404 RIVERGATE SOUTH-PEARCY																
405 RIVERGATE SOUTH-SWIFT	1	85	1	85												
406 RIVERVIEW-FULTON	11	7,362	7	3,656	1	27			2	3,702			1	2	1	2
407 RIVERVIEW-MACADAM	2	67											2	67		
408 RIVERVIEW-TERWILLIGER	9	2,225	9	2,225												
409 ROCKWOOD-AIRPORT																
410 ROCKWOOD-BOEING																
411 ROCKWOOD-INDUSTRIAL	4	103	4	103	2	3										
412 ROCKWOOD-REYNOLDS	3	198	3	198												
413 ROCKWOOD-ROCKWOOD 13	21	4,373	17	3,715	4	1,198							4	658		
414 ROCKWOOD-WILKES	1	2	1	2	1	2										
415 ROSEMONT-HIDDEN SPRINGS	9	2,491	9	2,491	5	2,185										
416 ROSEMONT-MOSSY BRAE	6	850	6	850	1	372										
417 ROSEMONT-OVERLOOK	4	293	2	283					1	8			1	2		
418 ROSEWAY-ALEXANDER	2	78	2	78	1	68										

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Hrs = # of customers * duration hrs

1-Cutout, Fuse, Arrestor failures are included in the PGE equipment total

2015 Outages by Cause System

	Feeder Name	Total System		PGE Equipment		Cutout, Fuse, Arrestor ¹		Loss of Substation		Loss of Transmission		Human Factor		Public		Planned	
		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
419	ROSEWAY-ESPLANADE	5	160	4	153	1	4							1	8		
420	ROSEWAY-ROSEWAY 13	2	6,159	1	12									1	6,146		
421	RUBY-CARLINE	5	20	4	19	1	8							1	1		
422	RUBY-JUNCTION																
423	SALEM-13260																
424	SALEM-13261																
425	SALEM-13262	2	10											2	10		
426	SALEM-13263																
427	SALEM-13264																
428	SALEM-UNION																
429	SANDY-362ND	11	314	9	282	1	1							2	32		
430	SANDY-BLUFF	1	1	1	1	1	1										
431	SANDY-SANDY 13	19	5,072	15	486	9	205							4	4,586		
432	SANDY-WILDCAT	21	809	17	787	5	17							3	18	1	3
433	SCHOLLS FERRY-KEMMER	2	10	1	4									1	6		
434	SCHOLLS FERRY-RAINBOW	21	270	19	267	7	21							1	1	1	1
435	SCHOLLS FERRY-ROY ROGERS	1	3	1	3												
436	SCOGGINS-CHERRY GROVE	3	356	3	356	1	4										
437	SCOGGINS-LAURELWOOD	15	548	12	381	5	66							3	167		
438	SCOTTS MILLS-SCOTTS MILLS 13	30	7,582	18	3,115	4	917							12	4,467		
439	SELLWOOD-KELLOGG PARK	4	572	1	21							1	416	1	57	1	77
440	SELLWOOD-SELLWOOD 13	5	93	5	93	1	1										
441	SELLWOOD-WAVERLY	5	3,332	4	3,332	2	57							1	1		
442	SHERIDAN-EAST	22	2,544	15	2,432	5	35							6	111	1	1
443	SHERIDAN-KADELL	12	2,424	8	2,410	1	27							4	14		
444	SILVERTON-NORTH	13	479	10	469	7	344					1	2	2	8		
445	SILVERTON-SOUTH	19	3,741	15	1,748	3	12							2	1,344	2	649
446	SILVERTON-WEST	24	540	18	266	9	26							6	274		
447	SIX CORNERS-13359	13	485	10	461									1	3	2	21
448	SIX CORNERS-13360	2	96	1	53									1	43		
449	SIX CORNERS-BORCHERS	12	1,454	11	1,449	4	23							1	5		
450	SIX CORNERS-CHAPMAN	8	554	5	136	2	122							2	414	1	4
451	SIX CORNERS-SIX CORNERS 13	8	3,379	3	115	1	1							4	3,259	1	5
452	SPRINGBROOK-FERNWOOD	11	1,305	11	1,305	2	4										
453	SPRINGBROOK-ST PAUL	22	209	19	142	12	53							2	65	1	2
454	SPRINGBROOK-VILLA	4	1,288	4	1,288												
455	SPRINGBROOK-ZIMRI	14	1,383	12	1,104	2	248							2	279		
456	ST LOUIS-EAST	6	1,996	3	1,976	1	3									3	20

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2015 Outages by Cause System

Feeder Name	Total System		PGE Equipment		Cutout, Fuse, Arrestor ¹		Loss of Substation		Loss of Transmission		Human Factor		Public		Planned	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
457 ST LOUIS-NORTH	8	26	8	26	5	18										
458 ST LOUIS-WEST	31	6,691	26	5,145	10	80							4	1,182	1	364
459 ST MARYS EAST-BETHANY																
460 ST MARYS EAST-BUTNER	6	340	5	338	3	175									1	2
461 ST MARYS EAST-ELMONICA	5	357	3	286	1	27							1	1	1	70
462 ST MARYS EAST-JENKINS																
463 ST MARYS EAST-MILLIKAN	3	57											3	57		
464 ST MARYS EAST-ST MARYS 13																
465 STEPHENS-11001																
466 STEPHENS-11020	2	1,049	1	1,048											1	2
467 STEPHENS-11054 NETWORK																
468 STEPHENS-11055 NETWORK																
469 STEPHENS-11092 NETWORK																
470 STEPHENS-11093 NETWORK																
471 STEPHENS-11094 NETWORK																
472 STEPHENS-11095 NETWORK																
473 STEPHENS-11097 NETWORK																
474 STEPHENS-11098	2	53	2	53												
475 STEPHENS-11099 NETWORK																
476 SULLIVAN-ROBINWOOD	9	291	8	283	2	7							1	8		
477 SULLIVAN-SALAMO	13	4,106	13	4,106	2	6										
478 SULLIVAN-SUSSEX	3	15	3	15	1	6										
479 SULLIVAN-TANNER	4	146	2	34	2	34									2	112
480 SULLIVAN-WILLAMETTE	6	289	5	272	2	9							1	17		
481 SUMMIT-GOVERNMENT CAMP	2	7	2	7	1	3										
482 SUMMIT-MEADOWS	1	8	1	8	1	8										
483 SUMMIT-SUMMIT 13	1	3	1	3												
484 SUNSET-BLANCHET	1	44	1	44												
485 SUNSET-COLFAX																
486 SUNSET-CORNELL																
487 SUNSET-DORION																
488 SUNSET-IDTB																
489 SUNSET-INTEL D1B1																
490 SUNSET-INTEL D1X1																
491 SUNSET-KOMATSU #1																
492 SUNSET-KOMATSU #3																
493 SUNSET-LANE																
494 SUNSET-LINDE PHASE 1																

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2015 Outages by Cause System

Feeder Name	Total System		PGE Equipment		Cutout, Fuse, Arrestor ¹		Loss of Substation		Loss of Transmission		Human Factor		Public		Planned	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
495	SUNSET-MCCALL															
496	SUNSET-MEEK															
497	SUNSET-PAULING															
498	SUNSET-SPALDING	1	24												1	24
499	SUNSET-WHITMAN	3	10	1	4								2	6		
500	SUNSET-YOUNG	1	4	1	4											
501	SWAN ISLAND-BASIN															
502	SWAN ISLAND-DOLPHIN															
503	SWAN ISLAND-FREIGHTLINER															
504	SWAN ISLAND-GOING															
505	SWAN ISLAND-SHIPYARD															
506	SYLVAN-BARNES	10	548	8	481	5	135						2	67		
507	SYLVAN-PATTON	21	2,141	16	1,854	5	515						3	252	2	35
508	TABOR-82ND	9	9,321	5	6,297	1	10				1	3,021	3	3		
509	TABOR-HOSPITAL	2	124	1	2								1	121		
510	TABOR-TABOR 13	8	5,594	7	5,591	1	45								1	2
511	TEKTRONIX-HOCKEN	1	173										1	173		
512	TEKTRONIX-NORTH															
513	TEKTRONIX-SHANNON	11	2,566	9	2,536	2	126						2	30		
514	TEKTRONIX-SOUTH	7	3,361	4	3,348								2	12	1	0
515	TEKTRONIX-TEKTRONIX 13	3	410	3	410	1	393									
516	TEKTRONIX-WEST															
517	TEMP B-NORTH	1	343								1	343				
518	TEMP B-SOUTH															
519	TIGARD-13336	4	163	3	143								1	20		
520	TIGARD-13337	7	732	5	725	3	368						2	7		
521	TIGARD-13361	5	93	4	93	1	10								1	1
522	TIGARD-13362	6	2,538	5	1,220	1	26						1	1,318		
523	TIGARD-TIGARD 13	6	3,022	4	3,001								1	14	1	7
524	TOWN CENTER-LAWNFIELD	3	56	1	3										2	53
525	TOWN CENTER-MONTEREY	4	301	3	20	1	1								1	280
526	TOWN CENTER-NORTH															
527	TOWN CENTER-PRECISION CASTPARTS															
528	TOWN CENTER-SOUTH															
529	TOWN CENTER-SUNNYBROOK	2	276	2	276	1	35									
530	TOWN CENTER-VALLEY VIEW															
531	TUALATIN-AVERY	7	3,281	7	3,281	1	1,187									
532	TUALATIN-CIPOLE	1	1	1	1	1	1									

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2015 Outages by Cause System

Feeder Name	Total System		PGE Equipment		Cutout, Fuse, Arrestor ¹		Loss of Substation		Loss of Transmission		Human Factor		Public		Planned	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
533 TUALATIN-HERMAN																
534 TUALATIN-IBACH	8	30	6	21	3	9							2	9		
535 TUALATIN-LEVETON	1	4	1	4												
536 TUALATIN-TUALATIN 13																
537 TURNER-CASCADE	11	141	8	131	2	3							3	10		
538 TURNER-TURNER 13	17	399	8	340	4	50							2	5	7	54
539 TWILIGHT-BREMER	9	3,170	5	304			1	2,704					2	160	1	3
540 UNIONVALE-UNIONVALE 13	29	7,312	22	1,744	15	40			2	4,974			4	588	1	5
541 UNIVERSITY-MILL	2	36	1	7									1	28		
542 UNIVERSITY-TRADE	5	10,414	5	10,414	4	61										
543 URBAN-BARBUR	3	843	1	833											2	10
544 URBAN-CAMPUS																
545 URBAN-CORBETT	3	809	3	809	3	809										
546 URBAN-GAINES	3	105	2	99	2	99									1	6
547 URBAN-GIBBS	2	929	2	929	1	133										
548 URBAN-KELLY	2	6	2	6												
549 URBAN-LANDING																
550 URBAN-MEDICAL	2	333	1	109									1	224		
551 URBAN-OHSU																
552 WACONDA-NORPAC																
553 WACONDA-RIVER	26	2,339	20	206	7	12							6	2,133		
554 WACONDA-WACONDA 13	27	103	20	77	13	43							5	10	2	15
555 WALLACE-WALLACE 13	14	6,859	9	155	3	49	1	1,797	1	3,653			3	1,254		
556 WALLACE-WILLOW LAKE	4	4,830					1	1,873	2	2,954			1	3		
557 WELCHES-WELCHES 13	15	794	14	792	2	17									1	2
558 WELCHES-ZIG ZAG	15	4,911	12	385	1	2			1	4,249			2	277		
559 WEST PORTLAND-72ND	5	71	2	9	2	9							3	62		
560 WEST PORTLAND-NORTH	8	192	6	178	3	138							1	1	1	13
561 WEST PORTLAND-PACIFIC	7	1,286	7	1,286												
562 WEST PORTLAND-WEST PORTLAND 13	1	364													1	364
563 WEST UNION-CORNELIUS PASS	10	1,826	7	942									3	884		
564 WEST UNION-WEST UNION 13	20	4,490	19	4,490	1	5									1	1
565 WILLAMINA-BRIDGE	11	6,138	11	6,138	3	19										
566 WILLAMINA-BUELL	13	1,402	11	1,397	2	7							2	5		
567 WILLAMINA-LUMBER																
568 WILLBRIDGE-WILLBRIDGE #1	3	171	2	3	2	3			1	168						
569 WILLBRIDGE-WILLBRIDGE #4	2	130							1	127					1	3
570 WILSONVILLE-BOECKMAN	5	27	2	13									2	6	1	8

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Outs = Outages
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1-Cutout, Fuse, Arrestor failures are included in the PGE equipment total

2015 Outages by Cause System

	Feeder Name	Total System		PGE Equipment		Cutout, Fuse, Arrestor ¹		Loss of Substation		Loss of Transmission		Human Factor		Public		Planned	
		Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
571	WILSONVILLE-CHARBONNEAU	18	1,906	8	1,281									8	543	2	82
572	WILSONVILLE-CITY	5	174	4	173									1	1		
573	WILSONVILLE-MENTORTEK																
574	WILSONVILLE-PARKWAY																
575	WILSONVILLE-VILLEBOIS	4	248	2	110	1	3							1	133	1	4
576	WILSONVILLE-WEST	6	187	5	183	1	78							1	4		
577	WOODBURN-CANNERY	7	404	7	404	1	4										
578	WOODBURN-EAST	11	460	10	449	3	7							1	11		
579	WOODBURN-TOMLIN	5	1,236	4	1,234	1	1,139							1	1		
580	WOODBURN-WEST	14	247	11	241	8	228							3	6		
581	YAMHILL-CARLTON	33	5,126	27	2,843	6	35							6	2,282		
582	YAMHILL-YAMHILL 13	19	1,261	15	982	4	11							4	279		
Grand Totals:		3,780	664,308	2,899	405,248	860	49,933	28	51,752	22	35,852	22	5,532	583	147,675	226	18,250

*For detailed equipment outage information, see Outages by PGE Equipment report

Outs = Outages
Hrs = # of customers * duration hrs

1-Cutout, Fuse, Arrestor failures are included in the PGE equipment total

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 events. The information is presented by feeder and attributed to one of the following causes:

- Total PGE Equipment – This category is the sum of the following categories
 - Underground Conductor
 - Primary Device
 - Underground Accessory
 - Transformer
 - Overhead Conductor
 - Overhead Hardware
 - Cutout, Fuse, Arrestor
 - Meter
 - Pole

- Substation Equipment – This category is included for reference, but is not included in the Total PGE Equipment. Outages related to this category are included in the Loss of Substation column in Section V.

NOTE: Idle feeders are not included in this list. Feeders may be omitted if they are a part of an alternate/multiple feeder service.

2015 Outages by Cause PGE Equipment

Feeder Name	Total PGE Equipment		UG Conductor		Primary Device ¹		UG Accessory		Transformer		OH Conductor		OH Hardware		Cutout, Fuse, Arrestor		Meter		Pole		Substation ²	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
1 ABERNETHY-CLACKAMAS HEIGHTS	1	56									1	56										
2 ABERNETHY-OREGON CITY	9	196	2	131			3	9	1	1					3	55						
3 ABERNETHY-TRANSIT	8	501							2	428			2	25	4	48						
4 ALDER-ANKENY	2	74									1	74	1	1								
5 ALDER-IRVING	3	133					1	3			1	15			1	115						
6 ALDER-LINCOLN	10	518	1	12			1	1	3	310			2	31	3	164						
7 ALDER-STARK	3	9							1	5					1	3			1	1		
8 ALDER-TAYLOR	3	115					1	42					1	30	1	43						
9 ALDER-YAMHILL	2	8									1	6			1	2						
10 AMITY-AMITY 13	10	414	2	356									1	5	7	53						
11 AMITY-BELLEVUE	17	98					1	2	6	65	2	7	1	6	7	18						
12 ARLETA-52ND	7	268							4	38					3	230						
13 ARLETA-FOSTER	5	170					1	35	1	94			2	40	1	1						
14 ARLETA-HAROLD	5	499	2	314					1	176	1	2			1	7						
15 ARLETA-POWELL	3	333									1	1			2	332						
16 ARLETA-STEELE	8	889	1	396			1	406	1	49			2	4	3	35						
17 BANKS-BANKS 13	10	321	3	213							1	3	2	7	4	99						
18 BANKS-CEDAR CANYON	19	474	3	58			1	4	5	92			2	212	8	108						
19 BARNES-BATTLE CREEK	7	139	3	131											4	8						
20 BARNES-BOONE	1	5													1	5						
21 BARNES-COMMERCIAL	9	1,061	4	316					1	9	2	731			2	5						
22 BARNES-SUNNYSIDE	13	1,833	5	1,067			1	19	2	107	3	588	1	2	1	52						
23 BEAVERTON-ALLEN	6	403	1	312					1	53	1	4	3	33								
24 BEAVERTON-JAMIESON	9	422	6	383					1	6			1	20	1	14						
25 BEAVERTON-NORTHWEST	3	1,780	1	531							2	1,249										
26 BEAVERTON-WEST SLOPE	3	39	1	5					1	7							1	28				
27 BELL-BATTIN	3	96	1	5					1	67					1	24						
28 BELL-BRENTWOOD	2	6					1	4							1	1						
29 BELL-FLAVEL	5	247	1	148							2	2	2	97								
30 BELL-JOHNSON CREEK																						
31 BELL-KENDALL																						
32 BELL-KING	4	53							1	11			1	14	2	29						
33 BELL-SOUTHGATE	1	2											1	2								
34 BELL-WICHITA	6	195	1	172							4	21	1	2								
35 BETHANY-BURTON	6	1,812							1	65	5	1,747										
36 BETHANY-GERMANTOWN	9	889							2	49	4	816			3	24						
37 BETHANY-KAISER	4	1,237	2	444					1	789			1	4								
38 BETHANY-LAIDLAW	4	127	1	4			1	2			1	3			1	118						
39 BETHANY-SPRINGVILLE	2	51													2	51						
40 BETHANY-THOMPSON	7	3,689	3	3,525			2	161							2	3						

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2015 Outages by Cause PGE Equipment

Feeder Name	Total PGE Equipment		UG Conductor		Primary Device ¹		UG Accessory		Transformer		OH Conductor		OH Hardware		Cutout, Fuse, Arrestor		Meter		Pole		Substation ²	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
41	BETHEL-FRUITLAND	10	1,463	7	569					2	890					1	3					
42	BETHEL-GEER	8	119	1	2			3	100	1	4	1	5	1	7	1	3					
43	BETHEL-MACLEAY	6	27							2	7	2	4	1	1	1	15					
44	BLUE LAKE-BLUE LAKE 13	14	3,969	4	598					3	53	1	3,218			6	100				1	6,665
45	BLUE LAKE-SUNDIAL	10	92	3	41	4	15			1	4					2	31				1	1,556
46	BLUE LAKE-TOYO TANSO																				1	66
47	BOONES FERRY-GOODALL	7	4,180	6	4,154					1	26											
48	BOONES FERRY-KRUSE	4	51	2	15							2	36									
49	BOONES FERRY-LAKE GROVE	1	8											1	8							
50	BOONES FERRY-MOUNTAIN PARK	5	2,076	5	2,076																	
51	BOONES FERRY-WEMBLEY PARK	8	212	2	15			1	2			4	182			1	13					
52	BORING-282ND	9	417							2	8	1	1			6	407					
53	BORING-CITY	12	81	1	7					3	14	1	33	3	13	4	14					
54	BORING-TELFORD	9	163							4	45			1	15	4	103					
55	BRIGHTWOOD-BRIGHTWOOD 13	9	52							1	6			2	3	5	39	1	3			
56	BRIGHTWOOD-NORTH BANK	8	551	4	522			1	2					1	4	2	24					
57	BROOKWOOD-BORWICK	1	774													1	774					
58	BROOKWOOD-BROOKWOOD 13																					
59	BROOKWOOD-SUNRISE	3	217	2	203									1	13							
60	CANBY-13643	19	462	3	33			1	2	4	56	1	22	2	324	7	22			1	3	
61	CANBY-13644	4	15							1	7			1	3	2	6					
62	CANBY-BUTTEVILLE	13	211	3	115			1	7			2	40	1	1	6	48					
63	CANYON-13114 NETWORK #1																					
64	CANYON-13115 NETWORK #1																					
65	CANYON-13116 NETWORK #1																					
66	CANYON-13117 NETWORK #1																					
67	CANYON-13118 PSU																					
68	CANYON-13119 PSU																					
69	CANYON-13120																					
70	CANYON-13121																					
71	CANYON-13122 NETWORK #2																					
72	CANYON-13123 NETWORK #2																					
73	CANYON-13124 NETWORK #2																					
74	CANYON-13125 NETWORK #2																					
75	CANYON-13133 NETWORK #3																					
76	CANYON-13134 NETWORK #3																					
77	CANYON-13135 NETWORK #3																					
78	CANYON-13136 NETWORK #3																					
79	CANYON-21ST	1	30													1	30					
80	CANYON-23RD	3	595	1	120					1	156			1	319							

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Feeder Name	Total PGE Equipment		UG Conductor		Primary Device ¹		UG Accessory		Transformer		OH Conductor		OH Hardware		Cutout, Fuse, Arrestor		Meter		Pole		Substation ²	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
81 CANYON-BURNSIDE	1	2												1	2							
82 CANYON-CANYON 13	3	36	2	19									1	17								
83 CARVER-ALMOND	1	72													1	72						
84 CARVER-CARVER 13	14	2,056	7	1,936			1	1	2	109					4	10						
85 CARVER-NORTH	2	2,401											1	3	1	2,398						
86 CARVER-RIVERBEND																						
87 CARVER-SOUTH																						
88 CARVER-WOODS	1	15	1	15																		
89 CEDAR HILLS-CEDAR HILLS 13																						
90 CEDAR HILLS-LEAHY	12	1,673	4	627			1	1	3	211	1	22	1	576	2	236						
91 CEDAR HILLS-SHOPPING CENTER	3	24							2	3					1	21						
92 CEDAR HILLS-SKYLINE																						
93 CEDAR HILLS-ST VINCENT																						
94 CEDAR HILLS-SYLVAN	9	131					1	1	1	5	1	36	2	10	4	79						
95 CENTENNIAL-BARKER	8	2,120	2	137							2	1,962	3	17	1	5						
96 CENTENNIAL-BRAECROFT	8	764	2	471			1	113			2	8	1	59	2	113						
97 CENTENNIAL-CENTENNIAL 13	11	7,082	1	327					2	152	3	283	4	6,318	1	1						
98 CENTENNIAL-TREELAND	9	208	3	51					1	29	2	7			3	121						
99 CLACKAMAS-EVELYN	2	7													1	5	1	2				
100 CLACKAMAS-GLADSTONE	8	2,184	3	602							2	241	2	54	1	1,288						
101 CLACKAMAS-JENNIFER	1	3											1	3								
102 CLACKAMAS-TOLBERT	5	641	2	342							1	0			2	299						
103 CLAXTAR-CLAXTAR 13	2	50									1	49			1	2						
104 CLAXTAR-HAYESVILLE	5	334	2	254			1	52	1	26					1	3						
105 CLAXTAR-RIDGE	8	524	3	266			1	68	2	171	1	14			1	4						
106 COFFEE CREEK-FREEMAN																						
107 COFFEE CREEK-HOLIDAY	1	1													1	1						
108 COLTON-DHOOGHE	7	41							2	15					5	27						
109 COLTON-GRAYS HILL	5	35	1	7					2	20					2	8						
110 CORNELIUS-ADAIR	1	2													1	2						
111 CORNELIUS-CORNELIUS 13	11	4,662	2	234					2	301	2	455	2	3,660	3	12						
112 CORNELIUS-VERBOORT	13	441	2	315			2	8	1	7	2	6	4	102	2	4						
113 CORNELL-BLUFFS	4	81	1	4					1	52					2	26						
114 CORNELL-SALTZMAN	4	116	3	90											1	27						
115 CORNELL-WESTLAWN	8	250	2	18			2	32			1	90	1	4	2	106						
116 CULVER-SANYO #1																						
117 CURTIS-11077	6	41					1	5	1	1	1	17	1	2	2	17						
118 CURTIS-CURTIS 13	6	360							1	1	1	192			4	168					1	13
119 DAYTON-EAST	17	319	1	12			1	9	3	200	2	12			8	78	2	8				
120 DAYTON-LAFAYETTE	9	803							1	3	1	13	1	111	6	676						

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2015 Outages by Cause PGE Equipment

Feeder Name	Total PGE Equipment		UG Conductor		Primary Device ¹		UG Accessory		Transformer		OH Conductor		OH Hardware		Cutout, Fuse, Arrestor		Meter		Pole		Substation ²	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
121 DAYTON-SOUTHWEST	6	68							1	6					5	62						
122 DELAWARE-DENVER	6	184							1	109	1	26	2	3	2	46						
123 DELAWARE-INTERSTATE																						
124 DELAWARE-LOMBARD	8	106	1	2					1	7			4	92					2	6		
125 DENNY-EAST	5	35	1	2			2	10							2	23						
126 DENNY-NORTH	7	519	7	519																		
127 DENNY-SOUTH	14	2,748	4	326			3	504	5	1,914	2	4										
128 DENNY-WEST	7	2,639	3	557			2	652			2	1,430										
129 DILLEY-DILLEY 13	8	49	1	17					1	6	1	5			5	21						
130 DILLEY-SPRINGHILL																						
131 DUNNS CORNER-DUNNS CORNER 13	14	1,423	2	158					3	29	4	1,228			5	7						
132 DUNNS CORNER-KELSO	3	44							1	3	1	11			1	30						
133 DURHAM-BONITA																						
134 DURHAM-BRIDGEPORT	6	487	1	78					1	4					4	406						
135 DURHAM-DURHAM 13	2	9	1	8											1	1						
136 DURHAM-POOPLANT																						
137 DURHAM-SATTTLER	11	1,132	5	989					1	5	1	13			4	124						
138 DURHAM-SOUTH																						
139 E-11021	1	13													1	13						
140 E-11039																						
141 E-11040	1	3											1	3								
142 E-11041	3	15	1	4											2	11						
143 E-11042																						
144 E-11043																						
145 E-11047	1	2													1	2						
146 E-11064																						
147 E-13139																						
148 E-13140																						
149 E-13141																						
150 E-13144	3	1,467	1	215							1	1,248			1	4						
151 E-13145																						
152 E-13148																						
153 E-13149	1	1,826	1	1,826																		
154 E-13150	1	41									1	41										
155 EAGLE CREEK-BARTON	6	27							1	3			2	9	3	15						
156 EAGLE CREEK-RIVER MILL	10	265	1	27			1	3	2	19	2	42	1	2	3	172						
157 EASTPORT-76TH	9	114							1	3	3	29	3	37	2	45						
158 EASTPORT-PLAZA	4	172	2	148					1	21			1	2								
159 ELMA-ELMA 13	6	744	4	311			1	2	1	430												
160 ELMA-FOUR CORNERS	5	1,224	3	1,180								2	44									

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Feeder Name	Total PGE Equipment		UG Conductor		Primary Device ¹		UG Accessory		Transformer		OH Conductor		OH Hardware		Cutout, Fuse, Arrestor		Meter		Pole		Substation ²	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
161 ELMA-HUDSON	6	324	3	304											3	20						
162 ELMA-STATE	1	26					1	26														
163 ESTACADA-ESTACADA 13	9	10,919	3	1,584					1	4	1	4,837			4	4,495						
164 ESTACADA-FARADAY	23	1,428	5	1,014			5	27	5	95	1	145	2	21	5	126						
165 FAIRMOUNT-CANDALARIA	5	1,752	1	13							1	1,721	1	7	2	12						
166 FAIRMOUNT-MISSION	13	828	2	687					1	13	4	19	1	2	5	107						
167 FAIRVIEW-CLEAR CREEK																						
168 FAIRVIEW-FAIRVIEW 13	1	103									1	103										
169 FAIRVIEW-KENNEL CLUB	7	553	4	547							2	5			1	1						
170 FAIRVIEW-TROUTDALE	13	5,577	6	590	1	1			1	99	1	4,867	1	3	3	16						
171 FAIRVIEW-WOOD VILLAGE	10	1,534	5	844	1	378	1	301	2	3				1	7							
172 FARGO-FARGO 13	12	843	2	258			1	10	1	26	2	258	2	30	4	261						
173 GALES CREEK-GALES CREEK 13	11	392					1	2	3	231	3	143	2	11	2	5						
174 GARDEN HOME-MCKAY	7	1,642	3	628					1	38	2	4						1	973			
175 GARDEN HOME-METZGER	9	540	4	352							3	174			2	14						
176 GLENCOE-GLISAN	3	80					1	60							2	20						
177 GLENCOE-PROVIDENCE	1	5									1	5										
178 GLENCOE-SUNNYSIDE	7	350							4	94	1	5			2	251						
179 GLENCULLEN-BRIDLEMILE	9	3,224							1	492	3	2,699	3	13	2	20						
180 GLENCULLEN-SUNSET	8	835	2	20			1	74	2	77	1	514			2	151						
181 GLENDOVEER-13596	1	316	1	316																		
182 GLENDOVEER-13597	5	482	2	457											2	19						
183 GLENDOVEER-13598	3	19									1	10	1	2	1	8						
184 GLENDOVEER-13599	5	59							2	32	1	9	2	18								
185 GLENDOVEER-CLIFFGATE	7	1,228	2	546	1	31	1	625			3	25										
186 GLENDOVEER-NORTHEAST	6	6,009							1	36					3	142			2	5,832		
187 GLISAN-FAB 2A																						
188 GLISAN-UTILITY 1B																						
189 GORMLEY-MCMINNVILLE WL	1	186													1	186						
190 GRAND RONDE-AGENCY	3	68							1	2					2	66						
191 GRAND RONDE-FORTHILL	7	141							2	17	2	55			3	70						
192 HARBORTON-BURLINGTON	16	890	3	35					1	7	6	737	1	22	5	90						
193 HARBORTON-HARBORTON 13	1	26							1	26												
194 HARBORTON-LINNTON	3	37							1	2			1	33	1	2						
195 HARMONY-HARMONY 13	7	359											2	41	5	319						
196 HARMONY-INTERNATIONAL	1	18													1	18						
197 HARMONY-LAKE	5	303	2	199					2	102					1	2						
198 HARMONY-LINWOOD	8	492	2	114					2	342			2	31	2	5						
199 HARMONY-MILWAUKIE	4	340	1	235					1	26					2	79						
200 HARMONY-THIESSEN	5	1,351	4	777									1	573								

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Feeder Name	Total PGE Equipment		UG Conductor		Primary Device ¹		UG Accessory		Transformer		OH Conductor		OH Hardware		Cutout, Fuse, Arrestor		Meter		Pole		Substation ²	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
201	HARRISON-DAVIS	2	3											1	1	1	2					
202	HARRISON-HARRISON 13	5	5,456					1	0	1	6	1	4	1	3,506	1	1,940					
203	HARRISON-IVON	3	16					3	16													
204	HAYDEN ISLAND-MAINLAND	1	11									1	11									
205	HAYDEN ISLAND-NORTH SHORE	7	571	5	506					1	62					1	3					
206	HAYDEN ISLAND-SOUTH SHORE																					
207	HEMLOCK-FREMONT	2	395	1	343					1	52											
208	HEMLOCK-HEMLOCK 13	14	1,093	4	407	1	2	2	212	1	252			4	213	2	7					
209	HEMLOCK-MASON	1	128																1	128		
210	HILLCREST-CASCADIA																					
211	HILLCREST-HILLCREST 13																					
212	HILLCREST-SOUTH																					
213	HILLSBORO-DAIRY CREEK	6	1,548			1	287	1	739			3	520			1	3					
214	HILLSBORO-DENNIS	1	3													1	3					
215	HILLSBORO-JACKSON	4	212	1	2			1	4	1	15			1	191							
216	HILLSBORO-LAUREL	17	205	1	2			1	6	3	13	6	24	4	154	2	6					
217	HILLSBORO-SCHOLLS	3	511							1	1			1	480	1	31					
218	HOGAN NORTH-BRIGADOON	10	2,143	6	1,858					1	117	1	142	1	14	1	13					
219	HOGAN NORTH-HOGAN NORTH 13	4	356	2	352									1	1	1	3					
220	HOGAN NORTH-LINKS	29	1,729	13	1,440			3	177	5	54	3	48	1	2	4	7					
221	HOGAN NORTH-SALQUIST	8	997	1	313			3	497			3	184			1	3					
222	HOGAN SOUTH-CLEVELAND	11	902	3	477			3	221	2	159	1	3	1	3	1	40					
223	HOGAN SOUTH-LAWRENCE	11	1,116	4	822					6	293					1	2					
224	HOGAN SOUTH-MAIN	1	312					1	312													
225	HOGAN SOUTH-PAROPA	9	1,023	7	1,018					1	4	1	1									
226	HOGAN SOUTH-WALLULA	5	144	1	55					1	5					2	83	1	1			
227	HOLGATE-BYBEE	6	183							2	159	1	3	1	10	2	11					
228	HOLGATE-GIDEON	1	2													1	2					
229	HOLGATE-HOLGATE 13	2	4	1	2											1	1					
230	HOLGATE-KENILWORTH	6	1,136	3	818					1	104					2	214					
231	HOLGATE-RHONE	9	484	1	189			1	235	2	33	1	3			4	24					
232	HUBER-BANY	6	103	3	74					1	3	1	24			1	1					
233	HUBER-FARMINGTON	12	618	11	513			1	105													
234	HUBER-HUBER 13	6	126	3	66			1	2							2	58					
235	HUBER-KINNAMAN	9	1,286	5	433					1	6	3	846									
236	HUBER-MARYVILLE	12	1,898	10	1,529					2	369											
237	INDIAN-KEIZER	2	42	1	40									1	1							
238	INDIAN-LABISH	9	39	3	30			1	1			1	1			4	7					
239	INDIAN-NORTH	9	288	2	13					1	259	2	9			4	7					
240	INDIAN-STATION	2	735	2	735																	

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	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
241 INDIAN-WEST	7	1,546							2	317	3	759	1	466	1	4						
242 ISLAND-13180	9	210	1	5					3	28					5	177						
243 ISLAND-13187	11	1,403	3	454					2	107	3	777	1	6	2	59						
244 ISLAND-13188	5	703							1	3	3	695			1	5						
245 ISLAND-ISLAND 13																						
246 JENNINGS LODGE-ADDIE	3	87	1	7					1	77					1	4						
247 JENNINGS LODGE-JENNINGS 13	3	14													3	14						
248 JENNINGS LODGE-MELDRUM	12	448	3	111					2	67	1	4	1	16	5	250						
249 JENNINGS LODGE-OAK GROVE	6	333	2	312			2	13					1	1	1	6						
250 JENNINGS LODGE-WEBSTER	8	925	3	533					1	251	2	123	2	18								
251 KELLEY POINT-KELLEY POINT 13																					1	21
252 KELLEY POINT-LEDBETTER	2	11							1	3					1	8					1	65
253 KELLEY POINT-MARINE																					1	7
254 KELLEY POINT-SIMMONS																					1	48
255 KELLEY POINT-SOLAR #1																					1	1
256 KELLEY POINT-SOLAR #2																						
257 KELLY BUTTE-BINNSMEAD	8	621							5	599	1	1	2	21								
258 KELLY BUTTE-FAIRLAWN	9	4,411	2	31	1	4,241	1	3			1	2	2	24	2	110						
259 KELLY BUTTE-MALL 205	5	804	1	6							1	4	1	1	1	14			1	778		
260 KELLY BUTTE-MCGREW	8	298	2	139			1	21	1	4	1	1	1	19	2	114						
261 KING CITY-BULL MOUNTAIN	1	183	1	183																	2	10,389
262 KING CITY-FISCHER	3	1,527	1	302							2	1,226										
263 KING CITY-HAZELBROOK	3	10							1	4	1	4							1	2	2	6,992
264 KING CITY-NORTH	4	1,315	2	509			1	337	1	470											1	6,076
265 KING CITY-SUMMERFIELD																						
266 LAKE LABISH-LAKE LABISH																						
267 LELAND-BEAVERCREEK	20	881	3	358	1	3	1	4	2	186			4	81	9	249						
268 LELAND-CARUS	19	941					1	28	5	26	3	247	3	580	7	60						
269 LELAND-KELM	9	296	1	86			1	10	1	6			3	40	3	154						
270 LENTS-13101	5	102							2	69			1	5	2	28						
271 LENTS-HAPPY VALLEY	3	189	3	189																		
272 LENTS-MT SCOTT																						
273 LENTS-NORTH	4	117							1	72	1	3			2	42						
274 LIBERAL-LIBERAL 13	14	1,319	2	21	1	1,243			3	32	1	3	3	12	4	8					1	3,376
275 LIBERAL-SAWMILL																					1	5
276 LIBERTY-BROWNING	2	23									1	3			1	21						
277 LIBERTY-LONE OAK	7	626	2	517					2	63	1	31	1	7			1	7				
278 LIBERTY-MORNINGSIDE	6	312	1	65			1	1							4	246						
279 LIBERTY-ROSEDALE	7	377	5	372							1	4	1	1								
280 LIBERTY-SKYLINE	9	1,242							2	355	2	337	3	451	2	100						

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2015 Outages by Cause PGE Equipment

Feeder Name	Total PGE Equipment		UG Conductor		Primary Device ¹		UG Accessory		Transformer		OH Conductor		OH Hardware		Cutout, Fuse, Arrestor		Meter		Pole		Substation ²	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
281	LIBERTY-VISTA	1	332	1	332																	
282	MAIN-AIRPORT	6	471	2	277										4	193						
283	MAIN-BENTLEY	9	1,438	3	722			1	116	1	310	1	144		3	147						
284	MAIN-EXPRESS	6	383	3	330							1	2		2	51						
285	MAIN-JONES FARM																					
286	MAIN-RIVER	16	1,677	6	656			3	777			2	154	1	4	4	87					
287	MARKET-ENGLEWOOD	7	90							1	3	5	81		1	6						
288	MARKET-FAIRGROUNDS	6	3,422	2	134							2	3,254		2	33						
289	MARKET-HAWTHORNE	3	161	2	96										1	65						
290	MARKET-PARK	5	363							1	258	1	3	1	98	2	4					
291	MCCLAIN-COTTAGE	3	17									1	5	1	8	1	3					
292	MCCLAIN-FRONT	3	40									1	34	1	5	1	2					
293	MCCLAIN-HOLLYWOOD	2	401					1	394	1	8											
294	MCGILL-LSI AIR 1A																					
295	MERIDIAN-65TH	1	783							1	783											
296	MERIDIAN-BORLAND	3	847					1	13	1	29	1	804									
297	MERIDIAN-CHILDS	1	11	1	11																	
298	MERIDIAN-LAKEVIEW	1	8	1	8																	
299	MERIDIAN-MERIDIAN 13	16	415	6	64			1	4	3	39			1	1	5	307					
300	MERIDIAN-NYBERG																					
301	MERIDIAN-PILKINGTON	12	1,226	3	226					6	964	1	3		2	33						
302	MERIDIAN-SAGERT	7	490	3	483									1	2	3	5					
303	MIDDLE GROVE-BROWN	7	74					1	19	2	18	1	3		2	8	1	26				
304	MIDDLE GROVE-CHEMEKETA	4	2,952	3	2,481										1	471						
305	MIDDLE GROVE-CORDON	13	2,589	6	1,127	1	1,384			1	5	1	1		4	72						
306	MIDDLE GROVE-SWEGLE	1	1												1	1						
307	MIDDLE GROVE-WEST	3	384	2	382							1	1									
308	MIDWAY-DIVISION	9	995	1	518					1	8	2	5	4	189	1	275					
309	MIDWAY-DOUGLAS	5	823	2	299							1	18	1	475	1	31					
310	MIDWAY-LYNCH	4	254											1	1	3	254					
311	MIDWAY-POWELLHURST	13	1,762							4	808	2	119	2	157	5	678					
312	MILL CREEK-EASTLAND	6	23	1	6							1	3	1	3	3	12					
313	MILL CREEK-KUEBLER	3	621	2	620							1	1									
314	MILL CREEK-MILL CREEK 13																					
315	MOLALLA-BUCKAROO	8	23	1	4							1	2	2	10	4	7					
316	MOLALLA-FOREST	7	97							1	13	1	15		5	70						
317	MOLALLA-MARQUAM	13	2,310					3	25	2	9	3	2,264		5	12						
318	MOLALLA-YODER	12	138	2	86					1	8	2	5	2	25	5	14					
319	MT ANGEL-EAST	4	18											1	10	3	9					
320	MT ANGEL-WEST	20	2,379	1	7			1	3	2	17	6	2,092	1	6	8	241			1	14	

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2015 Outages by Cause PGE Equipment

Feeder Name	Total PGE Equipment		UG Conductor		Primary Device ¹		UG Accessory		Transformer		OH Conductor		OH Hardware		Cutout, Fuse, Arrester		Meter		Pole		Substation ²		
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	
321	MT PLEASANT-CLAIRMONT	3	541	1	519			1	22							1	0						
322	MT PLEASANT-MT VIEW	3	296							1	6					2	290						
323	MT PLEASANT-RIVERCREST	3	112	3	112																		
324	MT PLEASANT-SOUTH END	9	5,249	5	5,209					1	11			1	3	1	10			1	17		
325	MULINO-NORTH	2	25					1	24							1	1					1	454
326	MULINO-SOUTH	4	21					1	8							3	13					1	1,087
327	MULTNOMAH-13176	6	2,711					2	489	2	1,790					2	431						
328	MULTNOMAH-13177	12	12,432	2	1,292					2	7	4	4,459	1	1	1	1	1	5	1	6,666		
329	MULTNOMAH-13181	13	636	7	167					2	427	1	3	2	13	1	27						
330	MULTNOMAH-MULTNOMAH 13	12	4,663	4	3,474			3	1,076	1	4			2	20	2	90						
331	MURRAYHILL-KINTON	7	1,233	3	646					1	8					3	579						
332	MURRAYHILL-MURRAYHILL 13	4	6,884	2	4,711					1	666					1	1,507						
333	MURRAYHILL-REUSSER																						
334	MURRAYHILL-TEAL	6	67	1	53					1	3					4	10						
335	NEWBERG-CHEHALEM	17	991	5	584			1	13			2	132	2	7	6	71			1	184		
336	NEWBERG-DUNDEE	13	1,469	4	1,047					2	156	3	158	1	3	3	106						
337	NEWBERG-HOOVER PARK	6	995	4	895											2	100						
338	NEWBERG-NORTH COLLEGE	4	110					1	3							3	107						
339	NORTH MARION-CROSBY	3	20							1	11					2	9						
340	NORTH MARION-FRONT	3	1,035									3	1,035										
341	NORTH MARION-HUBBARD	3	279							1	249					2	30						
342	NORTH MARION-MCLAREN	9	59	2	28							1	5			6	26						
343	NORTH PLAINS-MASON HILL	13	487	1	2			1	1	3	16	4	404			4	64						
344	NORTH PLAINS-NORTH PLAINS 13	9	398					1	4			2	140	1	2	4	16			1	236		
345	NORTHERN-11009	8	277	1	8					2	223	2	10			3	36						
346	NORTHERN-11016	1	7									1	7										
347	NORTHERN-11071	5	363							2	51			1	13	2	300						
348	OAK GROVE-LAKE HARRIET	1	3													1	3						
349	OAK GROVE-WHITE WATER																						
350	OAK HILLS-FIVE OAKS	2	13							1	5			1	8								
351	OAK HILLS-GREENBRIER																						
352	OAK HILLS-OAK HILLS 13	2	5					1	3			1	1										
353	OAK HILLS-SOMERSET	2	25	2	25																		
354	OAK HILLS-WALKER	4	367	4	367																		
355	ORENCO-231ST																						
356	ORENCO-AMBERGLEN																						
357	ORENCO-BASELINE	3	17									2	15	1	2								
358	ORENCO-ORENCO 13	2	28							2	28												
359	ORENCO-PRIMATE																						
360	ORENCO-WILKINS																						

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2015 Outages by Cause PGE Equipment

Feeder Name	Total PGE Equipment		UG Conductor		Primary Device ¹		UG Accessory		Transformer		OH Conductor		OH Hardware		Cutout, Fuse, Arrestor		Meter		Pole		Substation ²	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
361	ORIENT-BARLOW	17	4,747	1	11					1	5	5	98	1	4,342	7	53			2	237	
362	ORIENT-ORIENT 13	11	1,730	3	333					2	10	2	99	1	1,240	3	48					
363	OSWEGO-IRON MOUNTAIN																					
364	OSWEGO-MARYLHURST	5	254	2	11											3	244					
365	OSWEGO-PALATINE	2	1,283											1	1,260	1	23					
366	OSWEGO-STAFFORD	2	30							1	24					1	6					
367	OXFORD-FAIRVIEW	12	2,672	6	783			1	1	2	41	1	1,842			2	4					
368	OXFORD-LEE	1	24	1	24																	
369	OXFORD-MADRONA	2	42													2	42					
370	OXFORD-OXFORD 13	2	141							1	4					1	136					
371	OXFORD-RURAL																					
372	OXFORD-SHELTON																					
373	PENINSULA PARK-OCKLEY GREEN																					
374	PENINSULA PARK-PENINSULA PARK	7	100							1	1			2	79	4	20					
375	PLEASANT VALLEY-BAXTER	3	106							1	81	2	25								1	664
376	PLEASANT VALLEY-CLATSOP	2	96							1	29					1	67					
377	PLEASANT VALLEY-MOON	6	1,324	4	392									1	931	1	1					
378	PLEASANT VALLEY-PLEASANT 13	10	683	2	253					2	9	4	237			2	185				1	1,281
379	PLEASANT VALLEY-SUN																					
380	PORTSMOUTH-CARBIDE	11	784	4	331			1	5	2	120	1	154	3	173							
381	PORTSMOUTH-DISPOSAL																				1	35
382	PORTSMOUTH-WILLIS	3	2,546			1	2,512			1	28	1	6									
383	PROGRESS-GREENBURG	4	259	3	28									1	231							
384	PROGRESS-HALL																					
385	PROGRESS-ROBINSON	8	3,271	2	2,516			1	8	1	208					3	512	1	27			
386	PROGRESS-SAWYER	3	486	1	6			1	8	1	472											
387	PROGRESS-WASHINGTON SQ #1																					
388	PROGRESS-WASHINGTON SQ #2																					
389	RALEIGH HILLS-DOGWOOD	4	57	1	31					1	10			1	15	1	1					
390	RALEIGH HILLS-MONTCLAIR	2	288	1	283											1	5					
391	RALEIGH HILLS-OLESON	2	352	1	17							1	335									
392	RAMAPO-EMERALD	12	6,601	1	2					1	45	1	141	1	1	8	6,411					
393	RAMAPO-GILBERT	5	331									2	276			3	55					
394	RAMAPO-RAMAPO 13	4	984	2	33										1	596				1	355	
395	REDLAND-HENRICI	10	47					1	2	1	7	1	14	2	15	5	9					
396	REDLAND-REDLAND 13	21	354	6	294			1	3	1	7	3	9	4	9	6	33					
397	REEDVILLE-AUGUSTA	10	734	5	544					1	174	1	6	2	3	1	6					
398	REEDVILLE-BLANTON	17	1,669	10	1,171			3	139	2	58					2	301					
399	REEDVILLE-HAZELDALE	11	3,529	6	2,672					1	6	1	640	1	5	2	206					
400	REEDVILLE-INTEL #4																					

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2015 Outages by Cause PGE Equipment

Feeder Name	Total PGE Equipment		UG Conductor		Primary Device ¹		UG Accessory		Transformer		OH Conductor		OH Hardware		Cutout, Fuse, Arrestor		Meter		Pole		Substation ²	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
401 REEDVILLE-TV	12	12,455	8	11,274			1	136							3	1,045						
402 RIVERGATE SOUTH-11010																						
403 RIVERGATE SOUTH-11011	4	257							1	143	2	93	1	21								
404 RIVERGATE SOUTH-PEARCY																						
405 RIVERGATE SOUTH-SWIFT	1	85			1	85																
406 RIVERVIEW-FULTON	7	3,656							1	45	1	100	2	4	1	27			2	3,481		
407 RIVERVIEW-MACADAM																						
408 RIVERVIEW-TERWILLIGER	9	2,225	1	93			1	6	6	214	1	1,913										
409 ROCKWOOD-AIRPORT																						
410 ROCKWOOD-BOEING																						
411 ROCKWOOD-INDUSTRIAL	4	103					2	99							2	3						
412 ROCKWOOD-REYNOLDS	3	198	2	197									1	2								
413 ROCKWOOD-ROCKWOOD 13	17	3,715	7	1,841			2	6	2	573	1	86	1	10	4	1,198						
414 ROCKWOOD-WILKES	1	2													1	2						
415 ROSEMONT-HIDDEN SPRINGS	9	2,491	2	249					2	57					5	2,185						
416 ROSEMONT-MOSSY BRAE	6	850	2	77			1	161			1	2	1	237	1	372						
417 ROSEMONT-OVERLOOK	2	283	2	283																		
418 ROSEWAY-ALEXANDER	2	78											1	10	1	68						
419 ROSEWAY-ESPLANADE	4	153	1	6							1	136	1	6	1	4						
420 ROSEWAY-ROSEWAY 13	1	12							1	12												
421 RUBY-CARLINE	4	19							2	10			1	1	1	8						
422 RUBY-JUNCTION																						
423 SALEM-13260																						
424 SALEM-13261																						
425 SALEM-13262																						
426 SALEM-13263																						
427 SALEM-13264																						
428 SALEM-UNION																						
429 SANDY-362ND	9	282	4	98					4	182					1	1						
430 SANDY-BLUFF	1	1													1	1						
431 SANDY-SANDY 13	15	486							3	218	2	58	1	5	9	205						
432 SANDY-WILDCAT	17	787	1	400			1	35	6	47	3	221	1	68	5	17						
433 SCHOLLS FERRY-KEMMER	1	4									1	4										
434 SCHOLLS FERRY-RAINBOW	19	267	4	18					2	27	1	163	5	38	7	21						
435 SCHOLLS FERRY-ROY ROGERS	1	3	1	3																		
436 SCOGGINS-CHERRY GROVE	3	356											2	352	1	4						
437 SCOGGINS-LAURELWOOD	12	381	1	22							3	24	3	268	5	66						
438 SCOTTS MILLS-SCOTTS MILLS 13	18	3,115	3	63			1	4	5	38	3	2,070	2	23	4	917						
439 SELLWOOD-KELLOGG PARK	1	21											1	21								
440 SELLWOOD-SELLWOOD 13	5	93	1	19							2	63	1	10	1	1						

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2015 Outages by Cause PGE Equipment

Feeder Name	Total PGE Equipment		UG Conductor		Primary Device ¹		UG Accessory		Transformer		OH Conductor		OH Hardware		Cutout, Fuse, Arrestor		Meter		Pole		Substation ²	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
441 SELLWOOD-WAVERLY	4	3,332					2	3,275							2	57						
442 SHERIDAN-EAST	15	2,432	5	184					1	95	3	2,109	1	9	5	35						
443 SHERIDAN-KADELL	8	2,410							2	61	4	2,318	1	5	1	27						
444 SILVERTON-NORTH	10	469	1	79							1	4	1	42	7	344						
445 SILVERTON-SOUTH	15	1,748	3	50					3	26	5	1,656	1	5	3	12						
446 SILVERTON-WEST	18	266							4	15	2	198	3	27	9	26						
447 SIX CORNERS-13359	10	461	5	326	2	22					3	112										
448 SIX CORNERS-13360	1	53							1	53												
449 SIX CORNERS-BORCHERS	11	1,449	1	7			2	10	1	7	2	1,082			4	23			1	320		
450 SIX CORNERS-CHAPMAN	5	136									1	6	2	9	2	122						
451 SIX CORNERS-SIX CORNERS 13	3	115			1	112			1	1					1	1						
452 SPRINGBROOK-FERNWOOD	11	1,305	2	219	2	540	1	8			4	532			2	4						
453 SPRINGBROOK-ST PAUL	19	142	4	37			2	12			1	40			12	53						
454 SPRINGBROOK-VILLA	4	1,288	1	66			1	114			1	2							1	1,105		
455 SPRINGBROOK-ZIMRI	12	1,104	5	237							5	619			2	248						
456 ST LOUIS-EAST	3	1,976			1	1,967			1	6					1	3						
457 ST LOUIS-NORTH	8	26					1	3			1	2	1	3	5	18						
458 ST LOUIS-WEST	26	5,145	4	77					6	51	2	4,882	3	50	10	80			1	5		
459 ST MARYS EAST-BETHANY																						
460 ST MARYS EAST-BUTNER	5	338							2	163					3	175						
461 ST MARYS EAST-ELMONICA	3	286	1	255											1	27	1	3				
462 ST MARYS EAST-JENKINS																						
463 ST MARYS EAST-MILLIKAN																						
464 ST MARYS EAST-ST MARYS 13																						
465 STEPHENS-11001																						
466 STEPHENS-11020	1	1,048											1	1,048								
467 STEPHENS-11054 NETWORK																						
468 STEPHENS-11055 NETWORK																						
469 STEPHENS-11092 NETWORK																						
470 STEPHENS-11093 NETWORK																						
471 STEPHENS-11094 NETWORK																						
472 STEPHENS-11095 NETWORK																						
473 STEPHENS-11097 NETWORK																						
474 STEPHENS-11098	2	53											1	20					1	33		
475 STEPHENS-11099 NETWORK																						
476 SULLIVAN-ROBINWOOD	8	283	1	3					1	17			4	256	2	7						
477 SULLIVAN-SALAMO	13	4,106	7	3,901					3	185	1	15			2	6						
478 SULLIVAN-SUSSEX	3	15	1	5			1	4							1	6						
479 SULLIVAN-TANNER	2	34													2	34						
480 SULLIVAN-WILLAMETTE	5	272	1	3							1	1	1	259	2	9						

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2015 Outages by Cause PGE Equipment

Feeder Name	Total PGE Equipment		UG Conductor		Primary Device ¹		UG Accessory		Transformer		OH Conductor		OH Hardware		Cutout, Fuse, Arrestor		Meter		Pole		Substation ²	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
481	SUMMIT-GOVERNMENT CAMP	2	7							1	4					1	3					
482	SUMMIT-MEADOWS	1	8													1	8					
483	SUMMIT-SUMMIT 13	1	3											1	3							
484	SUNSET-BLANCHET	1	44			1	44															
485	SUNSET-COLFAX																					
486	SUNSET-CORNELL																					
487	SUNSET-DORION																					
488	SUNSET-IDTB																					
489	SUNSET-INTEL D1B1																					
490	SUNSET-INTEL D1X1																					
491	SUNSET-KOMATSU #1																					
492	SUNSET-KOMATSU #3																					
493	SUNSET-LANE																					
494	SUNSET-LINDE PHASE 1																					
495	SUNSET-MCCALL																					
496	SUNSET-MEEK																					
497	SUNSET-PAULING																					
498	SUNSET-SPALDING																					
499	SUNSET-WHITMAN	1	4							1	4											
500	SUNSET-YOUNG	1	4					1	4													
501	SWAN ISLAND-BASIN																					
502	SWAN ISLAND-DOLPHIN																					
503	SWAN ISLAND-FREIGHTLINER																					
504	SWAN ISLAND-GOING																					
505	SWAN ISLAND-SHIPYARD																					
506	SYLVAN-BARNES	8	481							1	105	1	232	1	9	5	135					
507	SYLVAN-PATTON	16	1,854	3	38	1	752	1	2	1	419	4	126	1	2	5	515					
508	TABOR-82ND	5	6,297			1	6,271					1	1	2	15	1	10					
509	TABOR-HOSPITAL	1	2									1	2									
510	TABOR-TABOR 13	7	5,591	2	4,612					1	5			3	929	1	45					
511	TEKTRONIX-HOCKEN																					
512	TEKTRONIX-NORTH																					
513	TEKTRONIX-SHANNON	9	2,536	4	1,778							2	627	1	6	2	126					
514	TEKTRONIX-SOUTH	4	3,348	4	3,348																	
515	TEKTRONIX-TEKTRONIX 13	3	410	1	12			1	5							1	393					
516	TEKTRONIX-WEST																					
517	TEMP B-NORTH																					
518	TEMP B-SOUTH																					
519	TIGARD-13336	3	143							2	136	1	7									
520	TIGARD-13337	5	725	2	357											3	368					

1-Primary Device = Switch, Recloser, Regulator, Capacitor, Net. Protector

Outs = Outages
Hrs = # of customers * duration hrs

2-Substation Equipment failures are a part of the Loss of Substation System category; not included in Total PGE Equipment

2015 Outages by Cause PGE Equipment

Feeder Name	Total PGE Equipment		UG Conductor		Primary Device ¹		UG Accessory		Transformer		OH Conductor		OH Hardware		Cutout, Fuse, Arrestor		Meter		Pole		Substation ²	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
521 TIGARD-13361	4	93	2	11					1	72					1	10						
522 TIGARD-13362	5	1,220	4	1,193											1	26						
523 TIGARD-TIGARD 13	4	3,001	2	1,131			1	959			1	911										
524 TOWN CENTER-LAWNFIELD	1	3	1	3																		
525 TOWN CENTER-MONTEREY	3	20					1	12			1	8			1	1						
526 TOWN CENTER-NORTH																						
527 TOWN CENTER-PRECISION CASTPARTS																						
528 TOWN CENTER-SOUTH																						
529 TOWN CENTER-SUNNYBROOK	2	276	1	242											1	35						
530 TOWN CENTER-VALLEY VIEW																						
531 TUALATIN-AVERY	7	3,281	5	2,068					1	27					1	1,187						
532 TUALATIN-CIPOLE	1	1													1	1						
533 TUALATIN-HERMAN																						
534 TUALATIN-IBACH	6	21	1	5			2	7							3	9						
535 TUALATIN-LEVETON	1	4											1	4								
536 TUALATIN-TUALATIN 13																						
537 TURNER-CASCADE	8	131	3	117			1	1			1	9	1	1	2	3						
538 TURNER-TURNER 13	8	340	3	282							1	8			4	50						
539 TWILIGHT-BREMER	5	304	1	58					1	9	3	237									1	2,704
540 UNIONVALE-UNIONVALE 13	22	1,744	1	7					1	7	1	1,666	4	25	15	40						
541 UNIVERSITY-MILL	1	7							1	7												
542 UNIVERSITY-TRADE	5	10,414											1	10,354	4	61						
543 URBAN-BARBUR	1	833	1	833																		
544 URBAN-CAMPUS																						
545 URBAN-CORBETT	3	809													3	809						
546 URBAN-GAINES	2	99													2	99						
547 URBAN-GIBBS	2	929	1	796											1	133						
548 URBAN-KELLY	2	6									1	2	1	4								
549 URBAN-LANDING																						
550 URBAN-MEDICAL	1	109	1	109																		
551 URBAN-OHSU																						
552 WACONDA-NORPAC																						
553 WACONDA-RIVER	20	206	7	85			1	2	1	4	2	96	2	6	7	12						
554 WACONDA-WACONDA 13	20	77					1	1	3	26			3	8	13	43						
555 WALLACE-WALLACE 13	9	155	3	92					1	9			2	5	3	49					1	1,797
556 WALLACE-WILLOW LAKE																					1	1,873
557 WELCHES-WELCHES 13	14	792	2	245			2	337	4	71	2	58	2	62	2	17						
558 WELCHES-ZIG ZAG	12	385	1	8					4	68	4	294	1	12	1	2			1	2		
559 WEST PORTLAND-72ND	2	9													2	9						
560 WEST PORTLAND-NORTH	6	178									1	31	2	9	3	138						

1-Primary Device = Switch, Recloser, Regulator, Capacitor, Net. Protector

Outs = Outages
Hrs = # of customers * duration hrs

2-Substation Equipment failures are a part of the Loss of Substation System category; not included in Total PGE Equipment

2015 Outages by Cause PGE Equipment

Feeder Name	Total PGE Equipment		UG Conductor		Primary Device ¹		UG Accessory		Transformer		OH Conductor		OH Hardware		Cutout, Fuse, Arrestor		Meter		Pole		Substation ²	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
561 WEST PORTLAND-PACIFIC	7	1,286	3	242					1	101	1	122	2	821								
562 WEST PORTLAND-WEST PORTLAND 13																						
563 WEST UNION-CORNELIUS PASS	7	942	1	56			1	2	2	8	2	871	1	4								
564 WEST UNION-WEST UNION 13	19	4,490	17	4,408					1	76					1	5						
565 WILLAMINA-BRIDGE	11	6,138	1	14					3	10	4	6,095			3	19						
566 WILLAMINA-BUELL	11	1,397	3	24					1	6	4	1,099	1	261	2	7						
567 WILLAMINA-LUMBER																						
568 WILLBRIDGE-WILLBRIDGE #1	2	3													2	3						
569 WILLBRIDGE-WILLBRIDGE #4																						
570 WILSONVILLE-BOECKMAN	2	13	1	8									1	5								
571 WILSONVILLE-CHARBONNEAU	8	1,281	3	344			3	887	2	49												
572 WILSONVILLE-CITY	4	173	4	173																		
573 WILSONVILLE-MENTORTEK																						
574 WILSONVILLE-PARKWAY																						
575 WILSONVILLE-VILLEBOIS	2	110	1	108											1	3						
576 WILSONVILLE-WEST	5	183	2	100							2	5			1	78						
577 WOODBURN-CANNERY	7	404	2	272					1	55	3	74			1	4						
578 WOODBURN-EAST	10	449	1	6	1	0	1	1	1	6			3	429	3	7						
579 WOODBURN-TOMLIN	4	1,234	1	2					2	94					1	1,139						
580 WOODBURN-WEST	11	241					1	3					2	10	8	228						
581 YAMHILL-CARLTON	27	2,843	1	14					6	37	10	2,560	4	198	6	35						
582 YAMHILL-YAMHILL 13	15	982	4	89			3	38	2	10			2	834	4	11						
Grand Totals:	2,899	405,248	711	135,971	25	19,892	161	15,631	410	25,984	398	91,693	860	49,933	25	20,376	24	45,173	25	20,376	24	45,173

1-Primary Device = Switch, Recloser, Regulator, Capacitor, Net. Protector

Outs = Outages
Hrs = # of customers * duration hrs

2-Substation Equipment failures are a part of the Loss of Substation System category; not included in Total PGE Equipment

Section VII

Outages by Cause 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.
 - o Tree Uprooted: Outages caused by a whole tree uprooting. This does not include broken tree parts (e.g. limb or tree top)
 - o Limb on Line: Outages caused by broken tree tops or limbs
- Total Preventable (Tree / Limb Burning): Total number of outages caused by a tree growing into the conductor. This also includes tree burning events.
- Felled Tree/Limb: This category is included for reference, but is not included in Total Trees. Outages related to this category are included in the Public column in section V.

NOTE: Idle feeders are not included in this list. Feeders may be omitted if they are a part of an alternate/multiple feeder service.

2015 Outages by Cause Vegetation

Feeder Name	Total Trees ¹		Total Preventable (Tree/Limb Burning)		Total Non-Preventable ²		Tree Uprooted		Limb on Line		Felled Tree/Limb ³	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
1 ABERNETHY-CLACKAMAS HEIGHTS												
2 ABERNETHY-OREGON CITY	3	10	1	4	2	7	1	1	1	6	1	1
3 ABERNETHY-TRANSIT	5	583			5	583	1	2	4	581		
4 ALDER-ANKENY	1	4			1	4			1	4		
5 ALDER-IRVING	1	2			1	2			1	2		
6 ALDER-LINCOLN	1	477			1	477			1	477		
7 ALDER-STARK	1	721			1	721			1	721		
8 ALDER-TAYLOR												
9 ALDER-YAMHILL												
10 AMITY-AMITY 13	4	112			4	112	1	34	3	78		
11 AMITY-BELLEVUE	5	721			5	721	2	124	3	597		
12 ARLETA-52ND	2	63			2	63			2	63		
13 ARLETA-FOSTER												
14 ARLETA-HAROLD	2	3			2	3	1	1	1	2		
15 ARLETA-POWELL												
16 ARLETA-STEELE	2	2			2	2			2	2	2	32
17 BANKS-BANKS 13	3	52			3	52			3	52		
18 BANKS-CEDAR CANYON	8	832			8	832			8	832		
19 BARNES-BATTLE CREEK	1	4			1	4			1	4		
20 BARNES-BOONE	1	8			1	8			1	8		
21 BARNES-COMMERCIAL	9	2,931			9	2,931			9	2,931		
22 BARNES-SUNNYSIDE	4	81			4	81			4	81		
23 BEAVERTON-ALLEN	3	231			3	231			3	231		
24 BEAVERTON-JAMIESON	3	6			3	6			3	6		
25 BEAVERTON-NORTHWEST	3	6,332			3	6,332	1	4,068	2	2,264		
26 BEAVERTON-WEST SLOPE												
27 BELL-BATTIN	1	3			1	3			1	3		
28 BELL-BRENTWOOD												
29 BELL-FLAVEL												
30 BELL-JOHNSON CREEK												
31 BELL-KENDALL	1	1			1	1			1	1		
32 BELL-KING	1	9			1	9			1	9		
33 BELL-SOUTHGATE	1	13			1	13			1	13		
34 BELL-WICHITA	2	40			2	40			2	40		
35 BETHANY-BURTON												
36 BETHANY-GERMANTOWN	8	1,457	1	2	7	1,455	2	1,241	5	214		
37 BETHANY-KAISER												
38 BETHANY-LAIDLAW	2	4,235	1	3,872	1	363			1	363		
39 BETHANY-SPRINGVILLE	2	54			2	54			2	54		
40 BETHANY-THOMPSON												

1-Total Trees = Total Prev. + Total Non-Prev.
 2-Total Non-Prev. = Tree Uprooted + Limb on Line

Outs = Outages
 Hrs = # of customers * duration hrs

3-Felled Tree/Limb events are included in the Public System category;
 not included in Total Trees

2015 Outages by Cause Vegetation

Feeder Name	Total Trees ¹		Total Preventable (Tree/Limb Burning)		Total Non-Preventable ²		Tree Uprooted		Limb on Line		Felled Tree/Limb ³	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
41	BETHEL-FRUITLAND											
42	BETHEL-GEER	2	78			2	78			2	78	
43	BETHEL-MACLEAY	1	8			1	8	1	8			
44	BLUE LAKE-BLUE LAKE 13	1	9			1	9	1	9			
45	BLUE LAKE-SUNDIAL	1	4			1	4			1	4	
46	BLUE LAKE-TOYO TANSO											
47	BOONES FERRY-GOODALL	5	1,228			5	1,228	1	417	4	810	
48	BOONES FERRY-KRUSE											
49	BOONES FERRY-LAKE GROVE	1	6			1	6			1	6	
50	BOONES FERRY-MOUNTAIN PARK											
51	BOONES FERRY-WEMBLEY PARK	3	36			3	36			3	36	1 2
52	BORING-282ND	7	128	1	5	6	122	2	38	4	84	
53	BORING-CITY	7	966			7	966	1	3	6	963	
54	BORING-TELFORD	7	1,182			7	1,182	3	797	4	385	
55	BRIGHTWOOD-BRIGHTWOOD 13	14	432			14	432	4	29	10	403	
56	BRIGHTWOOD-NORTH BANK	5	34			5	34	2	15	3	18	
57	BROOKWOOD-BORWICK											
58	BROOKWOOD-BROOKWOOD 13											
59	BROOKWOOD-SUNRISE											
60	CANBY-13643	5	8,006			5	8,006	2	7,981	3	25	
61	CANBY-13644	2	65	1	64	1	1			1	1	
62	CANBY-BUTTEVILLE	2	11			2	11			2	11	
63	CANYON-13114 NETWORK #1											
64	CANYON-13115 NETWORK #1											
65	CANYON-13116 NETWORK #1											
66	CANYON-13117 NETWORK #1											
67	CANYON-13118 PSU											
68	CANYON-13119 PSU											
69	CANYON-13120											
70	CANYON-13121											
71	CANYON-13122 NETWORK #2											
72	CANYON-13123 NETWORK #2											
73	CANYON-13124 NETWORK #2											
74	CANYON-13125 NETWORK #2											
75	CANYON-13133 NETWORK #3											
76	CANYON-13134 NETWORK #3											
77	CANYON-13135 NETWORK #3											
78	CANYON-13136 NETWORK #3											
79	CANYON-21ST											
80	CANYON-23RD	8	878	2	288	6	590	2	306	4	285	

1-Total Trees = Total Prev. + Total Non-Prev.
 2-Total Non-Prev. = Tree Uprooted + Limb on Line

Outs = Outages
 Hrs = # of customers * duration hrs

3-Felled Tree/Limb events are included in the Public System category;
 not included in Total Trees

2015 Outages by Cause Vegetation

Feeder Name	Total Trees ¹		Total Preventable (Tree/Limb Burning)		Total Non-Preventable ²		Tree Uprooted		Limb on Line		Felled Tree/Limb ³	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
81	CANYON-BURNSIDE											
82	CANYON-CANYON 13	1	27			1	27			1	27	
83	CARVER-ALMOND											
84	CARVER-CARVER 13	1	139			1	139			1	139	
85	CARVER-NORTH											
86	CARVER-RIVERBEND											
87	CARVER-SOUTH											
88	CARVER-WOODS											
89	CEDAR HILLS-CEDAR HILLS 13											
90	CEDAR HILLS-LEAHY											
91	CEDAR HILLS-SHOPPING CENTER	2	245			2	245			2	245	
92	CEDAR HILLS-SKYLINE											
93	CEDAR HILLS-ST VINCENT											
94	CEDAR HILLS-SYLVAN	2	11			2	11			2	11	
95	CENTENNIAL-BARKER	4	618			4	618			4	618	
96	CENTENNIAL-BRAECROFT	1	3			1	3			1	3	
97	CENTENNIAL-CENTENNIAL 13	1	117			1	117			1	117	
98	CENTENNIAL-TREELAND	1	4			1	4			1	4	
99	CLACKAMAS-EVELYN											
100	CLACKAMAS-GLADSTONE	8	1,204			8	1,204	2	8	6	1,196	
101	CLACKAMAS-JENNIFER											
102	CLACKAMAS-TOLBERT	1	2			1	2			1	2	
103	CLAXTAR-CLAXTAR 13											
104	CLAXTAR-HAYESVILLE											
105	CLAXTAR-RIDGE											
106	COFFEE CREEK-FREEMAN	1	5			1	5			1	5	
107	COFFEE CREEK-HOLIDAY											
108	COLTON-DHOOGHE	6	224	1	1	5	223	1	14	4	210	
109	COLTON-GRAYS HILL	20	974	2	218	18	756	3	173	15	583	
110	CORNELIUS-ADAIR	1	2			1	2			1	2	
111	CORNELIUS-CORNELIUS 13	6	2,477			6	2,477			6	2,477	
112	CORNELIUS-VERBOORT	3	93			3	93			3	93	
113	CORNELL-BLUFFS											
114	CORNELL-SALTZMAN											
115	CORNELL-WESTLAWN	2	1,567			2	1,567			2	1,567	
116	CULVER-SANYO #1											
117	CURTIS-11077											
118	CURTIS-CURTIS 13	1	198			1	198			1	198	
119	DAYTON-EAST	6	1,499			6	1,499	2	9	4	1,490	
120	DAYTON-LAFAYETTE	3	194			3	194			3	194	

1-Total Trees = Total Prev. + Total Non-Prev.
2-Total Non-Prev. = Tree Uprooted + Limb on Line

Outs = Outages
Hrs = # of customers * duration hrs

3-Felled Tree/Limb events are included in the Public System category; not included in Total Trees

2015 Outages by Cause Vegetation

Feeder Name	Total Trees ¹		Total Preventable (Tree/Limb Burning)		Total Non-Preventable ²		Tree Uprooted		Limb on Line		Felled Tree/Limb ³	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
121 DAYTON-SOUTHWEST	3	6			3	6			3	6		
122 DELAWARE-DENVER	1	7			1	7			1	7		
123 DELAWARE-INTERSTATE												
124 DELAWARE-LOMBARD	2	4			2	4			2	4		
125 DENNY-EAST	2	315			2	315			2	315		
126 DENNY-NORTH												
127 DENNY-SOUTH	1	131			1	131			1	131		
128 DENNY-WEST	1	38			1	38			1	38		
129 DILLEY-DILLEY 13	4	101			4	101			4	101		
130 DILLEY-SPRINGHILL												
131 DUNNS CORNER-DUNNS CORNER 13	12	1,137			12	1,137	3	10	9	1,127		
132 DUNNS CORNER-KELSO												
133 DURHAM-BONITA	1	2,074			1	2,074	1	2,074				
134 DURHAM-BRIDGEPORT												
135 DURHAM-DURHAM 13												
136 DURHAM-POOPLANT												
137 DURHAM-SATTLER	1	61			1	61	1	61				
138 DURHAM-SOUTH												
139 E-11021												
140 E-11039												
141 E-11040												
142 E-11041												
143 E-11042												
144 E-11043												
145 E-11047												
146 E-11064												
147 E-13139												
148 E-13140												
149 E-13141												
150 E-13144	1	271			1	271			1	271		
151 E-13145												
152 E-13148												
153 E-13149												
154 E-13150												
155 EAGLE CREEK-BARTON	10	2,121			10	2,121	5	1,691	5	431		
156 EAGLE CREEK-RIVER MILL	8	3,482	1	15	7	3,467	1	3,365	6	102	1	143
157 EASTPORT-76TH	2	5			2	5			2	5		
158 EASTPORT-PLAZA												
159 ELMA-ELMA 13												
160 ELMA-FOUR CORNERS	2	1,287			2	1,287			2	1,287		

1-Total Trees = Total Prev. + Total Non-Prev.
2-Total Non-Prev. = Tree Uprooted + Limb on Line

Outs = Outages
Hrs = # of customers * duration hrs

3-Felled Tree/Limb events are included in the Public System category; not included in Total Trees

2015 Outages by Cause Vegetation

Feeder Name	Total Trees ¹		Total Preventable (Tree/Limb Burning)		Total Non-Preventable ²		Tree Uprooted		Limb on Line		Felled Tree/Limb ³	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
161 ELMA-HUDSON												
162 ELMA-STATE												
163 ESTACADA-ESTACADA 13	13	6,223	1	4	12	6,219	4	1,592	8	4,627		
164 ESTACADA-FARADAY	23	6,614	2	657	21	5,957	4	724	17	5,233	1	96
165 FAIRMOUNT-CANDALARIA	3	5	1	1	2	4	1	2	1	2		
166 FAIRMOUNT-MISSION	8	1,832	1	246	7	1,586	3	609	4	977		
167 FAIRVIEW-CLEAR CREEK	1	4,752			1	4,752			1	4,752		
168 FAIRVIEW-FAIRVIEW 13												
169 FAIRVIEW-KENNEL CLUB	2	891			2	891			2	891		
170 FAIRVIEW-TROUTDALE	3	17,912			3	17,912			3	17,912		
171 FAIRVIEW-WOOD VILLAGE	1	3			1	3			1	3		
172 FARGO-FARGO 13	2	123			2	123			2	123		
173 GALES CREEK-GALES CREEK 13	18	1,122			18	1,122	5	58	13	1,064	1	167
174 GARDEN HOME-MCKAY	1	2,743			1	2,743			1	2,743		
175 GARDEN HOME-METZGER	3	458			3	458			3	458		
176 GLENCOE-GLISAN	1	9			1	9			1	9		
177 GLENCOE-PROVIDENCE	1	540			1	540			1	540		
178 GLENCOE-SUNNYSIDE	2	67			2	67			2	67		
179 GLENCULLEN-BRIDLEMILE	2	22			2	22			2	22		
180 GLENCULLEN-SUNSET	2	1,617			2	1,617	2	1,617				
181 GLENDOVEER-13596	2	4	1	2	1	2			1	2		
182 GLENDOVEER-13597	1	398			1	398			1	398		
183 GLENDOVEER-13598												
184 GLENDOVEER-13599	1	2	1	2								
185 GLENDOVEER-CLIFFGATE	1	51			1	51	1	51				
186 GLENDOVEER-NORTHEAST												
187 GLISAN-FAB 2A												
188 GLISAN-UTILITY 1B												
189 GORMLEY-MCMINNVILLE WL												
190 GRAND RONDE-AGENCY	2	176			2	176			2	176	1	776
191 GRAND RONDE-FORTHILL	3	398			3	398	1	11	2	388		
192 HARBORTON-BURLINGTON	20	3,833			20	3,833	5	1,695	15	2,138		
193 HARBORTON-HARBORTON 13	1	7			1	7			1	7		
194 HARBORTON-LINNTON	2	282			2	282			2	282		
195 HARMONY-HARMONY 13												
196 HARMONY-INTERNATIONAL	1	564			1	564	1	564				
197 HARMONY-LAKE												
198 HARMONY-LINWOOD	1	934			1	934			1	934		
199 HARMONY-MILWAUKIE	2	4,402			2	4,402			2	4,402		
200 HARMONY-THIESSEN												

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 not included in Total Trees

2015 Outages by Cause Vegetation

Feeder Name	Total Trees ¹		Total Preventable (Tree/Limb Burning)		Total Non-Preventable ²		Tree Uprooted		Limb on Line		Felled Tree/Limb ³	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
201	HARRISON-DAVIS											
202	HARRISON-HARRISON 13											
203	HARRISON-IVON											
204	HAYDEN ISLAND-MAINLAND											
205	HAYDEN ISLAND-NORTH SHORE											
206	HAYDEN ISLAND-SOUTH SHORE	1	62			1	62	1	62			
207	HEMLOCK-FREMONT											
208	HEMLOCK-HEMLOCK 13											
209	HEMLOCK-MASON											
210	HILLCREST-CASCADIA											
211	HILLCREST-HILLCREST 13											
212	HILLCREST-SOUTH											
213	HILLSBORO-DAIRY CREEK	4	11			4	11	2	6	2	5	
214	HILLSBORO-DENNIS											
215	HILLSBORO-JACKSON											
216	HILLSBORO-LAUREL	15	3,672	2	56	13	3,616	2	394	11	3,222	
217	HILLSBORO-SCHOLLS	1	7			1	7			1	7	
218	HOGAN NORTH-BRIGADOON											
219	HOGAN NORTH-HOGAN NORTH 13	6	2,214	1	63	5	2,151	3	1,808	2	343	
220	HOGAN NORTH-LINKS	20	3,004	2	44	18	2,960	6	1,324	12	1,637	
221	HOGAN NORTH-SALQUIST	3	420			3	420	1	7	2	412	
222	HOGAN SOUTH-CLEVELAND											
223	HOGAN SOUTH-LAWRENCE	3	170			3	170			3	170	
224	HOGAN SOUTH-MAIN	1	26			1	26			1	26	
225	HOGAN SOUTH-PAROPA											
226	HOGAN SOUTH-WALLULA	1	4			1	4			1	4	
227	HOLGATE-BYBEE											
228	HOLGATE-GIDEON											
229	HOLGATE-HOLGATE 13	1	4			1	4			1	4	
230	HOLGATE-KENILWORTH	1	7			1	7			1	7	
231	HOLGATE-RHONE											
232	HUBER-BANY											
233	HUBER-FARMINGTON											
234	HUBER-HUBER 13											
235	HUBER-KINNAMAN											
236	HUBER-MARYVILLE											
237	INDIAN-KEIZER	1	120			1	120			1	120	
238	INDIAN-LABISH	3	24	1	8	2	15			2	15	
239	INDIAN-NORTH	4	44	1	4	3	40			3	40	
240	INDIAN-STATION	3	4,799			3	4,799	3	4,799			

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Feeder Name	Total Trees ¹		Total Preventable (Tree/Limb Burning)		Total Non-Preventable ²		Tree Uprooted		Limb on Line		Felled Tree/Limb ³	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
241 INDIAN-WEST	3	14			3	14			3	14		
242 ISLAND-13180	2	435			2	435			2	435		
243 ISLAND-13187	4	436			4	436	1	3	3	433		
244 ISLAND-13188	3	116			3	116			3	116		
245 ISLAND-ISLAND 13												
246 JENNINGS LODGE-ADDIE	1	59			1	59	1	59				
247 JENNINGS LODGE-JENNINGS 13	2	7			2	7			2	7		
248 JENNINGS LODGE-MELDRUM	3	442	2	81	1	361			1	361		
249 JENNINGS LODGE-OAK GROVE	1	224			1	224			1	224		
250 JENNINGS LODGE-WEBSTER												
251 KELLEY POINT-KELLEY POINT 13												
252 KELLEY POINT-LEDBETTER												
253 KELLEY POINT-MARINE												
254 KELLEY POINT-SIMMONS												
255 KELLEY POINT-SOLAR #1												
256 KELLEY POINT-SOLAR #2												
257 KELLY BUTTE-BINNSMEAD	2	225			2	225			2	225		
258 KELLY BUTTE-FAIRLAWN	1	6			1	6			1	6		
259 KELLY BUTTE-MALL 205	1	69			1	69			1	69		
260 KELLY BUTTE-MCGREW	2	58			2	58			2	58		
261 KING CITY-BULL MOUNTAIN												
262 KING CITY-FISCHER												
263 KING CITY-HAZELBROOK												
264 KING CITY-NORTH												
265 KING CITY-SUMMERFIELD												
266 LAKE LABISH-LAKE LABISH												
267 LELAND-BEAVERCREEK	5	412			5	412	2	398	3	15		
268 LELAND-CARUS	15	1,597	1	31	14	1,567	2	1,085	12	482		
269 LELAND-KELM												
270 LENTS-13101	1	1			1	1			1	1		
271 LENTS-HAPPY VALLEY												
272 LENTS-MT SCOTT												
273 LENTS-NORTH												
274 LIBERAL-LIBERAL 13	6	1,092			6	1,092	2	1,078	4	13		
275 LIBERAL-SAWMILL												
276 LIBERTY-BROWNING												
277 LIBERTY-LONE OAK												
278 LIBERTY-MORNINGSIDE	5	343			5	343	2	155	3	188		
279 LIBERTY-ROSEDALE	5	751			5	751			5	751		
280 LIBERTY-SKYLINE	1	760			1	760			1	760		

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Feeder Name	Total Trees ¹		Total Preventable (Tree/Limb Burning)		Total Non-Preventable ²		Tree Uprooted		Limb on Line		Felled Tree/Limb ³	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
281	LIBERTY-VISTA	1	20			1	20	1	20			
282	MAIN-AIRPORT	2	4			2	4			2	4	
283	MAIN-BENTLEY	1	26			1	26			1	26	
284	MAIN-EXPRESS	1	1			1	1			1	1	
285	MAIN-JONES FARM											
286	MAIN-RIVER	2	52			2	52			2	52	
287	MARKET-ENGLEWOOD	2	10	1	3	1	7	1	7			
288	MARKET-FAIRGROUNDS											
289	MARKET-HAWTHORNE											
290	MARKET-PARK	3	665			3	665			3	665	
291	MCCLAIN-COTTAGE											
292	MCCLAIN-FRONT											
293	MCCLAIN-HOLLYWOOD	1	1			1	1			1	1	
294	MCGILL-LSI AIR 1A											
295	MERIDIAN-65TH											
296	MERIDIAN-BORLAND											
297	MERIDIAN-CHILDS											
298	MERIDIAN-LAKEVIEW											
299	MERIDIAN-MERIDIAN 13	2	20			2	20			2	20	1 30
300	MERIDIAN-NYBERG											
301	MERIDIAN-PILKINGTON	3	18			3	18			3	18	
302	MERIDIAN-SAGERT											
303	MIDDLE GROVE-BROWN	1	1,423			1	1,423	1	1,423			
304	MIDDLE GROVE-CHEMEKETA											
305	MIDDLE GROVE-CORDON	2	694			2	694			2	694	1 4
306	MIDDLE GROVE-SWEGLE											
307	MIDDLE GROVE-WEST											
308	MIDWAY-DIVISION	1	5	1	5							
309	MIDWAY-DOUGLAS	1	7			1	7			1	7	
310	MIDWAY-LYNCH	1	849			1	849			1	849	
311	MIDWAY-POWELLHURST											
312	MILL CREEK-EASTLAND	3	57			3	57			3	57	
313	MILL CREEK-KUEBLER											
314	MILL CREEK-MILL CREEK 13											
315	MOLALLA-BUCKAROO											
316	MOLALLA-FOREST	19	652	3	121	16	531	6	341	10	189	
317	MOLALLA-MARQUAM	18	2,922			18	2,922	2	1,107	16	1,815	
318	MOLALLA-YODER	2	12			2	12			2	12	
319	MT ANGEL-EAST	2	13			2	13	1	5	1	8	
320	MT ANGEL-WEST	12	2,571			12	2,571	2	30	10	2,541	

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	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	
321	MT PLEASANT-CLAIRMONT	1	3			1	3			1	3		
322	MT PLEASANT-MT VIEW	1	3			1	3			1	3		
323	MT PLEASANT-RIVERCREST	1	2			1	2			1	2		
324	MT PLEASANT-SOUTH END	1	6			1	6			1	6		
325	MULINO-NORTH											1	79
326	MULINO-SOUTH	12	3,233	1	2	11	3,232	4	3,008	7	224		
327	MULTNOMAH-13176	4	20	1	12	3	8			3	8		
328	MULTNOMAH-13177	4	2,134	1	2,050	3	85			3	85		
329	MULTNOMAH-13181	2	100			2	100			2	100		
330	MULTNOMAH-MULTNOMAH 13	6	12,222			6	12,222	2	11,576	4	646		
331	MURRAYHILL-KINTON	1	3			1	3			1	3		
332	MURRAYHILL-MURRAYHILL 13												
333	MURRAYHILL-REUSSER												
334	MURRAYHILL-TEAL												
335	NEWBERG-CHEHALEM	6	683	1	2	5	681	1	85	4	596		
336	NEWBERG-DUNDEE	4	267	2	18	2	248			2	248		
337	NEWBERG-HOOVER PARK	1	5,467			1	5,467			1	5,467		
338	NEWBERG-NORTH COLLEGE	4	128			4	128			4	128		
339	NORTH MARION-CROSBY												
340	NORTH MARION-FRONT	1	221			1	221			1	221		
341	NORTH MARION-HUBBARD	1	49			1	49			1	49		
342	NORTH MARION-MCLAREN	7	1,064			7	1,064	1	85	6	979		
343	NORTH PLAINS-MASON HILL	11	4,252	2	206	9	4,047	4	1,649	5	2,398		
344	NORTH PLAINS-NORTH PLAINS 13	4	108			4	108	1	51	3	57	1	74
345	NORTHERN-11009												
346	NORTHERN-11016												
347	NORTHERN-11071	1	92			1	92			1	92		
348	OAK GROVE-LAKE HARRIET												
349	OAK GROVE-WHITE WATER												
350	OAK HILLS-FIVE OAKS												
351	OAK HILLS-GREENBRIER												
352	OAK HILLS-OAK HILLS 13												
353	OAK HILLS-SOMERSET												
354	OAK HILLS-WALKER												
355	ORENCO-231ST												
356	ORENCO-AMBERGLEN												
357	ORENCO-BASELINE												
358	ORENCO-ORENCO 13												
359	ORENCO-PRIMATE												
360	ORENCO-WILKINS												

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	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	
361	ORIENT-BARLOW	17	450	1	5	16	445	4	328	12	116		
362	ORIENT-ORIENT 13	16	2,199	2	321	14	1,878	6	102	8	1,776		
363	OSWEGO-IRON MOUNTAIN	1	30			1	30			1	30		
364	OSWEGO-MARYLHURST	7	3,177	1	2	6	3,175	2	3,059	4	116	1	2
365	OSWEGO-PALATINE	5	4,610			5	4,610	1	374	4	4,236	1	13
366	OSWEGO-STAFFORD												
367	OXFORD-FAIRVIEW												
368	OXFORD-LEE												
369	OXFORD-MADRONA												
370	OXFORD-OXFORD 13												
371	OXFORD-RURAL												
372	OXFORD-SHELTON												
373	PENINSULA PARK-OCKLEY GREEN												
374	PENINSULA PARK-PENINSULA PARK	3	9			3	9	1	7	2	3		
375	PLEASANT VALLEY-BAXTER	2	13			2	13	2	13				
376	PLEASANT VALLEY-CLATSOP												
377	PLEASANT VALLEY-MOON	2	166			2	166			2	166		
378	PLEASANT VALLEY-PLEASANT 13	5	152			5	152	2	34	3	118		
379	PLEASANT VALLEY-SUN	2	34			2	34	1	2	1	31		
380	PORTSMOUTH-CARBIDE	1	3			1	3			1	3		
381	PORTSMOUTH-DISPOSAL												
382	PORTSMOUTH-WILLIS												
383	PROGRESS-GREENBURG												
384	PROGRESS-HALL												
385	PROGRESS-ROBINSON												
386	PROGRESS-SAWYER												
387	PROGRESS-WASHINGTON SQ #1												
388	PROGRESS-WASHINGTON SQ #2												
389	RALEIGH HILLS-DOGWOOD	1	34			1	34			1	34		
390	RALEIGH HILLS-MONTCLAIR	1	1			1	1			1	1		
391	RALEIGH HILLS-OLESON	1	539			1	539			1	539		
392	RAMAPO-EMERALD	1	67			1	67	1	67				
393	RAMAPO-GILBERT												
394	RAMAPO-RAMAPO 13	5	830	1	363	4	467	1	18	3	449		
395	REDLAND-HENRICI	11	5,711			11	5,711	3	139	8	5,572		
396	REDLAND-REDLAND 13	13	4,281	1	1,980	12	2,301	3	1,526	9	775		
397	REEDVILLE-AUGUSTA												
398	REEDVILLE-BLANTON	1	3	1	3								
399	REEDVILLE-HAZELDALE	7	204			7	204	2	102	5	101		
400	REEDVILLE-INTEL #4												

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	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
401 REEDVILLE-TV												
402 RIVERGATE SOUTH-11010												
403 RIVERGATE SOUTH-11011	2	2,440	1	56	1	2,385	1	2,385				
404 RIVERGATE SOUTH-PEARCY												
405 RIVERGATE SOUTH-SWIFT												
406 RIVERVIEW-FULTON	8	480	1	56	7	425	2	203	5	221		
407 RIVERVIEW-MACADAM												
408 RIVERVIEW-TERWILLIGER	5	294			5	294	1	3	4	291		
409 ROCKWOOD-AIRPORT												
410 ROCKWOOD-BOEING												
411 ROCKWOOD-INDUSTRIAL												
412 ROCKWOOD-REYNOLDS												
413 ROCKWOOD-ROCKWOOD 13	2	198			2	198			2	198		
414 ROCKWOOD-WILKES												
415 ROSEMONT-HIDDEN SPRINGS	2	155			2	155	1	98	1	56		
416 ROSEMONT-MOSSY BRAE	1	16			1	16	1	16				
417 ROSEMONT-OVERLOOK												
418 ROSEWAY-ALEXANDER	2	241			2	241			2	241		
419 ROSEWAY-ESPLANADE												
420 ROSEWAY-ROSEWAY 13	1	8			1	8			1	8		
421 RUBY-CARLINE												
422 RUBY-JUNCTION												
423 SALEM-13260												
424 SALEM-13261												
425 SALEM-13262												
426 SALEM-13263												
427 SALEM-13264												
428 SALEM-UNION												
429 SANDY-362ND	3	1,184			3	1,184			3	1,184		
430 SANDY-BLUFF												
431 SANDY-SANDY 13	17	3,818	2	6	15	3,812	3	2,010	12	1,802		
432 SANDY-WILDCAT	7	3,133			7	3,133	2	754	5	2,379		
433 SCHOLLS FERRY-KEMMER	2	29			2	29			2	29		
434 SCHOLLS FERRY-RAINBOW	16	3,396			16	3,396	2	345	14	3,050		
435 SCHOLLS FERRY-ROY ROGERS												
436 SCOGGINS-CHERRY GROVE	3	446			3	446	1	7	2	438		
437 SCOGGINS-LAURELWOOD	5	2,263			5	2,263	1	24	4	2,238	1	158
438 SCOTTS MILLS-SCOTTS MILLS 13	18	2,449	1	1	17	2,448	2	55	15	2,393	1	114
439 SELLWOOD-KELLOGG PARK	2	77	1	70	1	7			1	7		
440 SELLWOOD-SELLWOOD 13	1	10			1	10	1	10				

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	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
441 SELLWOOD-WAVERLY	1	13			1	13	1	13				
442 SHERIDAN-EAST	5	1,963	1	455	4	1,507	2	464	2	1,044		
443 SHERIDAN-KADELL	3	30	1	4	2	26	1	12	1	14		
444 SILVERTON-NORTH	1	349			1	349			1	349		
445 SILVERTON-SOUTH	3	1,259			3	1,259	2	1,199	1	60		
446 SILVERTON-WEST	9	651			9	651	2	157	7	494		
447 SIX CORNERS-13359	5	2,289	1	18	4	2,271	1	1,884	3	387		
448 SIX CORNERS-13360												
449 SIX CORNERS-BORCHERS	4	225			4	225			4	225		
450 SIX CORNERS-CHAPMAN	3	49	1	42	2	7	1	6	1	1		
451 SIX CORNERS-SIX CORNERS 13												
452 SPRINGBROOK-FERNWOOD	2	347			2	347			2	347		
453 SPRINGBROOK-ST PAUL	5	1,265			5	1,265			5	1,265		
454 SPRINGBROOK-VILLA												
455 SPRINGBROOK-ZIMRI	1	3	1	3								
456 ST LOUIS-EAST												
457 ST LOUIS-NORTH	3	10			3	10			3	10		
458 ST LOUIS-WEST	5	27			5	27	2	10	3	18		
459 ST MARYS EAST-BETHANY	1	1			1	1	1	1				
460 ST MARYS EAST-BUTNER	1	7			1	7			1	7		
461 ST MARYS EAST-ELMONICA	1	144			1	144			1	144		
462 ST MARYS EAST-JENKINS												
463 ST MARYS EAST-MILLIKAN												
464 ST MARYS EAST-ST MARYS 13												
465 STEPHENS-11001												
466 STEPHENS-11020												
467 STEPHENS-11054 NETWORK												
468 STEPHENS-11055 NETWORK												
469 STEPHENS-11092 NETWORK												
470 STEPHENS-11093 NETWORK												
471 STEPHENS-11094 NETWORK												
472 STEPHENS-11095 NETWORK												
473 STEPHENS-11097 NETWORK												
474 STEPHENS-11098												
475 STEPHENS-11099 NETWORK												
476 SULLIVAN-ROBINWOOD	2	7			2	7			2	7		
477 SULLIVAN-SALAMO	7	570			7	570	1	45	6	524		
478 SULLIVAN-SUSSEX	1	2,858			1	2,858	1	2,858				
479 SULLIVAN-TANNER	3	3,596			3	3,596	2	3,439	1	157		
480 SULLIVAN-WILLAMETTE	3	3,758			3	3,758			3	3,758		

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	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
481	SUMMIT-GOVERNMENT CAMP	1	23	1	23							
482	SUMMIT-MEADOWS											
483	SUMMIT-SUMMIT 13	2	127			2	127			2	127	
484	SUNSET-BLANCHET											
485	SUNSET-COLFAX											
486	SUNSET-CORNELL											
487	SUNSET-DORION											
488	SUNSET-IDTB											
489	SUNSET-INTEL D1B1											
490	SUNSET-INTEL D1X1											
491	SUNSET-KOMATSU #1											
492	SUNSET-KOMATSU #3											
493	SUNSET-LANE											
494	SUNSET-LINDE PHASE 1											
495	SUNSET-MCCALL											
496	SUNSET-MEEK											
497	SUNSET-PAULING											
498	SUNSET-SPALDING											
499	SUNSET-WHITMAN											
500	SUNSET-YOUNG											
501	SWAN ISLAND-BASIN											
502	SWAN ISLAND-DOLPHIN											
503	SWAN ISLAND-FREIGHTLINER											
504	SWAN ISLAND-GOING											
505	SWAN ISLAND-SHIPYARD											
506	SYLVAN-BARNES	10	2,039	1	1,507	9	532	2	12	7	520	
507	SYLVAN-PATTON	7	9,524	1	442	6	9,082	2	6,328	4	2,755	
508	TABOR-82ND	7	3,416			7	3,416			7	3,416	
509	TABOR-HOSPITAL											
510	TABOR-TABOR 13	4	92			4	92			4	92	
511	TEKTRONIX-HOCKEN											
512	TEKTRONIX-NORTH											
513	TEKTRONIX-SHANNON	1	91			1	91			1	91	
514	TEKTRONIX-SOUTH	1	245			1	245			1	245	
515	TEKTRONIX-TEKTRONIX 13											
516	TEKTRONIX-WEST											
517	TEMP B-NORTH											
518	TEMP B-SOUTH											
519	TIGARD-13336											
520	TIGARD-13337											

1-Total Trees = Total Prev. + Total Non-Prev.
 2-Total Non-Prev. = Tree Uprooted + Limb on Line

Outs = Outages
 Hrs = # of customers * duration hrs

3-Felled Tree/Limb events are included in the Public System category;
 not included in Total Trees

2015 Outages by Cause Vegetation

Feeder Name	Total Trees ¹		Total Preventable (Tree/Limb Burning)		Total Non-Preventable ²		Tree Uprooted		Limb on Line		Felled Tree/Limb ³	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
521	TIGARD-13361											
522	TIGARD-13362											
523	TIGARD-TIGARD 13											
524	TOWN CENTER-LAWNFIELD											
525	TOWN CENTER-MONTEREY	1	312			1	312	1	312			
526	TOWN CENTER-NORTH											
527	TOWN CENTER-PRECISION CASTPARTS											
528	TOWN CENTER-SOUTH											
529	TOWN CENTER-SUNNYBROOK											
530	TOWN CENTER-VALLEY VIEW											
531	TUALATIN-AVERY	1	83			1	83			1	83	
532	TUALATIN-CIPOLE											
533	TUALATIN-HERMAN											
534	TUALATIN-IBACH	3	2,010			3	2,010	2	2,003	1	6	
535	TUALATIN-LEVETON											
536	TUALATIN-TUALATIN 13	1	27			1	27			1	27	
537	TURNER-CASCADE	5	181			5	181	1	7	4	174	
538	TURNER-TURNER 13	5	72	1	10	4	61			4	61	
539	TWILIGHT-BREMER	5	131			5	131	1	2	4	129	1 158
540	UNIONVALE-UNIONVALE 13	9	1,049	1	3	8	1,046	1	7	7	1,039	
541	UNIVERSITY-MILL											
542	UNIVERSITY-TRADE	1	211			1	211			1	211	
543	URBAN-BARBUR											
544	URBAN-CAMPUS											
545	URBAN-CORBETT	1	4	1	4							
546	URBAN-GAINES	1	1			1	1			1	1	
547	URBAN-GIBBS											
548	URBAN-KELLY											
549	URBAN-LANDING											
550	URBAN-MEDICAL											
551	URBAN-OHSU											
552	WACONDA-NORPAC											
553	WACONDA-RIVER	3	51			3	51			3	51	
554	WACONDA-WACONDA 13	11	1,042	4	924	7	118	3	17	4	101	
555	WALLACE-WALLACE 13	6	236			6	236	1	13	5	223	
556	WALLACE-WILLOW LAKE											
557	WELCHES-WELCHES 13	11	1,469	2	771	9	697	3	91	6	606	
558	WELCHES-ZIG ZAG	67	2,001	1	42	66	1,960	33	969	33	991	
559	WEST PORTLAND-72ND											
560	WEST PORTLAND-NORTH	2	98			2	98			2	98	

1-Total Trees = Total Prev. + Total Non-Prev.
2-Total Non-Prev. = Tree Uprooted + Limb on Line

Outs = Outages
Hrs = # of customers * duration hrs

3-Felled Tree/Limb events are included in the Public System category; not included in Total Trees

2015 Outages by Cause Vegetation

Feeder Name	Total Trees ¹		Total Preventable (Tree/Limb Burning)		Total Non-Preventable ²		Tree Uprooted		Limb on Line		Felled Tree/Limb ³	
	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs	Outs	Hrs
561 WEST PORTLAND-PACIFIC	2	247			2	247			2	247		
562 WEST PORTLAND-WEST PORTLAND 13	2	2,062			2	2,062	2	2,062				
563 WEST UNION-CORNELIUS PASS	9	1,577			9	1,577	3	8	6	1,569		
564 WEST UNION-WEST UNION 13												
565 WILLAMINA-BRIDGE	1	9			1	9	1	9				
566 WILLAMINA-BUELL	7	3,972	1	621	6	3,351	2	1,084	4	2,267		
567 WILLAMINA-LUMBER												
568 WILLBRIDGE-WILLBRIDGE #1												
569 WILLBRIDGE-WILLBRIDGE #4												
570 WILSONVILLE-BOECKMAN	2	712			2	712	1	495	1	218		
571 WILSONVILLE-CHARBONNEAU												
572 WILSONVILLE-CITY												
573 WILSONVILLE-MENTORTEK												
574 WILSONVILLE-PARKWAY												
575 WILSONVILLE-VILLEBOIS												
576 WILSONVILLE-WEST	3	763			3	763	2	72	1	692		
577 WOODBURN-CANNERY												
578 WOODBURN-EAST	5	265			5	265	1	1	4	264		
579 WOODBURN-TOMLIN	1	2			1	2			1	2		
580 WOODBURN-WEST												
581 YAMHILL-CARLTON	21	7,364	1	325	20	7,039	7	958	13	6,080		
582 YAMHILL-YAMHILL 13	4	612	1	128	3	485	3	485				
Grand Totals:	1,171	275,090	75	16,268	1,096	258,822	265	96,673	831	162,149	17	1,849

1-Total Trees = Total Prev. + Total Non-Prev.
 2-Total Non-Prev. = Tree Uprooted + Limb on Line

Outs = Outages
 Hrs = # of customers * duration hrs

3-Felled Tree/Limb events are included in the Public System category;
 not included in Total Trees

Section VIII

2015 Feeder Information

- 2015 Feeder List with Customer Counts and Feeder Classifications

Attachment A

PGE 2015 Annual Reliability Report

Confidential – Provided on CD Only
Section III, Feeder Performance Summary
Section VIII, 2015 Feeder Information

Section IX

Appendix

- Reliability Measure Definitions
- IEEE 1366 TMED Definition and Classification
- Cause Code Categories
- 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.

$$\text{MAIFle} = \frac{\text{Total number of customer momentary interruption events}}{\text{Total number of PGE customers served on Feeders with MV90 or SCADA}}$$

Major Event Day (MED) Definition and Classification¹

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 α (Alpha), the average of the logarithms (also known as the log-average) of the data set.
- e) Find β (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.

¹ Per IEEE Standard 1366-2012: IEEE Guide for Electric Power Distribution Reliability Indices

Cause Code Categories and Mapping

Due to implementation of a new OMS system, a more detailed list of cause codes have been created and mapped to performance categories

Cause Code Category Mapping - Natural		Cause Code Category Mapping - System			
Category	Cause	Category	Cause	Category	Cause
Adverse Weather	Earthquake	Cutout, Fuse, Arrestor	Arrestor	PGE Equipment	Primary Splice
Adverse Weather	Flooding	Cutout, Fuse, Arrestor	Fuse / Cutout	PGE Equipment	Recloser / Sectionalizer
Adverse Weather	Forest Fire	Human Factor	Design Error	PGE Equipment	Regulator
Adverse Weather	High Winds	Human Factor	Installation Error - Improper Install	PGE Equipment	Secondary Cable
Adverse Weather	Severe Heat	Human Factor	Installation Error - Wrong Equipment	PGE Equipment	Secondary Conductor
Adverse Weather	Snow / Ice	Human Factor	Operational Error	PGE Equipment	Secondary Deadend
Animal	Other - Animal	Human Factor	Utility Made Contact	PGE Equipment	Secondary Splice
Animal	Reportable Bird	PGE Equipment	Anchor / Guying	PGE Equipment	Sleeve
Animal	Squirrel	PGE Equipment	Arrestor	PGE Equipment	Stress Cone
Lightning	Lightning	PGE Equipment	Capacitor	PGE Equipment	Submersible Transformer
Unknown	Other - Environment / Weather	PGE Equipment	Cross Arm	PGE Equipment	Switch
Unknown	Pole Fire	PGE Equipment	Elbow	PGE Equipment	UG Connector / Clamp / Jumper
Non-Preventable Tree	Limb on Line	PGE Equipment	Fuse / Cutout	Planned	Other-PGE Intentional
Non-Preventable Tree	Tree Uprooted	PGE Equipment	Insulator	Planned	Planned Outage
Preventable Tree	Tree / Limb Burning	PGE Equipment	Lateral	Planned	Unplanned - Safety
		PGE Equipment	Meter	Public	Car Hit Equipment
		PGE Equipment	Network Protector	Public	Electrical Contact
		PGE Equipment	OH Connector / Clamp / Jumper	Public	Felled Tree / Limb
		PGE Equipment	Other - Pole Hardware Failure	Public	Non Residential Fire
		PGE Equipment	Other - Underground Hardware Failure	Public	Object Contact
		PGE Equipment	Overhead Transformer	Public	Other - Public
		PGE Equipment	Padmount Transformer	Public	Residential Fire
		PGE Equipment	Pole / Structure	Public	Underground Dig In
		PGE Equipment	Primary Cable	Public	Vandalism / Theft
		PGE Equipment	Primary Conductor		

NOTE: Outages where the System is Substation are grouped into Loss of Supply - Substation and outages where the System is Transmission are grouped into Loss of Supply - Transmission

Cause Code Categories and Mapping

Cause Code Category Mapping - Equipment			
Category	Cause	Category	Cause
Cutout, Fuse, Arrestor	Arrestor	Pole	Pole / Structure
Cutout, Fuse, Arrestor	Fuse / Cutout	Substation	Other - Substation Equipment Failure
Meter	Meter	Substation	Protection System
OH Conductor	Primary Conductor	Substation	Terminal Equipment
OH Conductor	Secondary Conductor	Transformer	Overhead Transformer
OH Conductor	Secondary Deadend	Transformer	Padmount Transformer
OH Conductor	Sleeve	Transformer	Submersible Transformer
Primary Device	Capacitor	UG Accessory	Elbow
Primary Device	Network Protector	UG Accessory	Lateral
Primary Device	Recloser / Sectionalizer	UG Accessory	Other - Underground Hardware Failure
Primary Device	Regulator	UG Accessory	Primary Splice
Primary Device	Switch	UG Accessory	Secondary Splice
OH Hardware	Anchor / Guying	UG Accessory	Stress Cone
OH Hardware	Cross Arm	UG Accessory	UG Connector / Clamp / Jumper
OH Hardware	Insulator	UG Conductor	Primary Cable
OH Hardware	OH Connector / Clamp / Jumper	UG Conductor	Secondary Cable
OH Hardware	Other - Pole Hardware Failure		

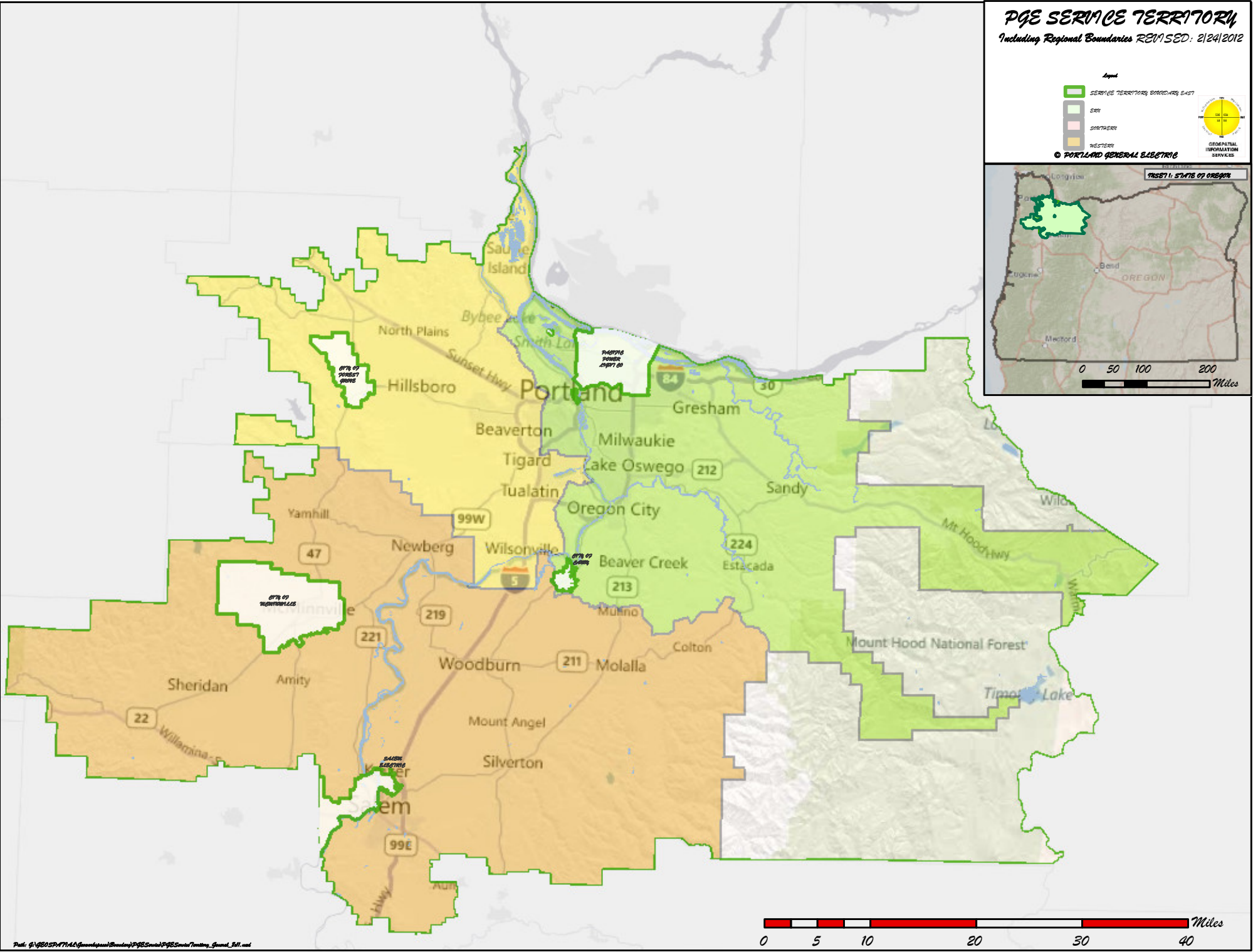
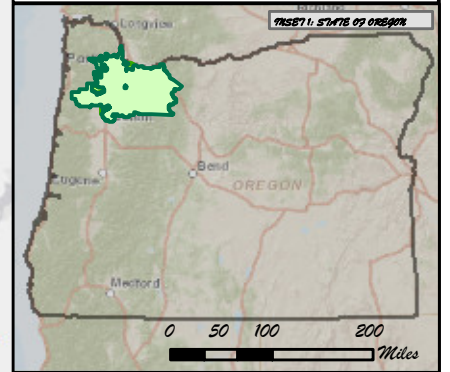
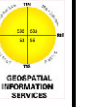
Cause Code Category Mapping - Tree	
Category	Cause
Non-Preventable Tree	Limb on Line
Non-Preventable Tree	Tree Uprooted
Preventable Tree	Tree / Limb Burning

PGE SERVICE TERRITORY
Including Regional Boundaries REVISION: 2/24/2012

Legend

- SERVICE TERRITORY BOUNDARY EAST
- SEI
- SOUTHWEST
- WESTERN

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

April 29, 2016

Public Utility Commission of Oregon
Attn: Filing Center
201 High Street SE
P.O. Box 1088
Salem, OR 97308-1088

RE: PGE 2015 Annual Reliability Report

Pursuant to OAR 860-023-0151, PGE hereby submits the Company's 2015 Annual Reliability Report.

Attachment A provides Section III, Feeder Performance Summary and Section VIII 2015 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 regarding this filing, please contact Terri Bowman at (503) 464-8854 or Mary Widman at (503) 464-8223.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Karla Wenzel". The signature is fluid and cursive, written over a white background.

Karla Wenzel
Manager, Pricing and Tariffs

Enclosure
cc: Lori Koho, OPUC