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COMPANY NAME: PacifiCorp

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Report is required by: OAR 860-023-0151

Statute

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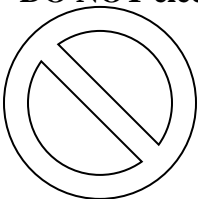
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825 NE Multnomah, Suite 2000  
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May 1, 2018

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Public Utility Commission of Oregon  
201 High Street SE, Suite 100  
Salem, OR 97301-3398

Attn: Filing Center

**RE: Annual Reliability Report for Calendar Year 2017**

PacifiCorp d/b/a Pacific Power submits for filing its Annual Reliability Report for calendar year 2017. This filing is made in compliance with OAR 860-023-0151.

Please direct any questions on this report to me at 503-813-6583.

Sincerely,

Natasha Soares  
Manager, Regulatory Affairs

Enclosure



**Pacific Power's  
Annual Report:**

**Oregon Administrative Rules  
860-023, 024 and 028**

**Calendar Year 2017 Review**  
(January 1 – December 31, 2017)

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# RELIABILITY

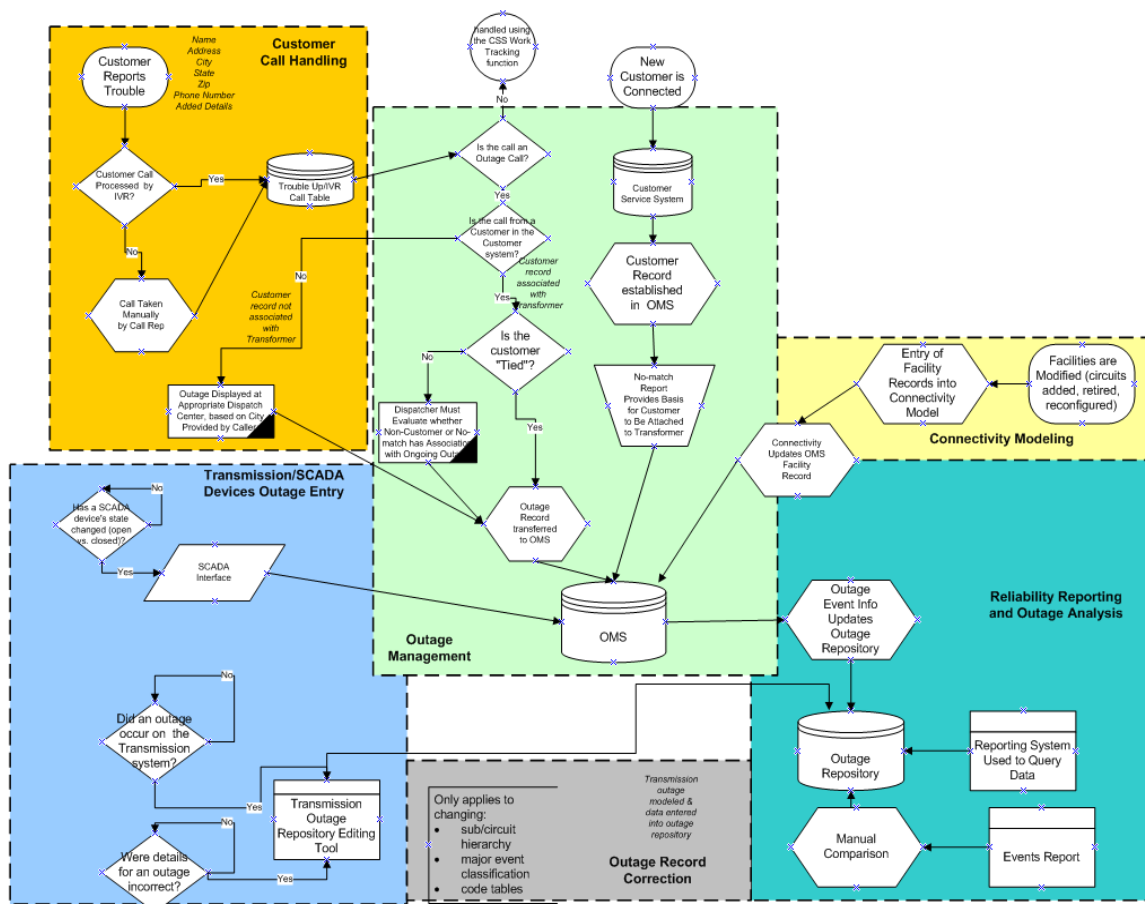
## Introduction and Reliability Discussion

This year's reliability report includes a brief overview of Pacific Power's programs and initiatives to evaluate and enhance reliability. Changes to this section have been made in compliance with administration rules 860-023, 024 and 028.

### Monitoring, Recording, and Reporting Reliability

#### *How Pacific Power Monitors Reliability*

Pacific Power operates automated outage management and reporting systems; a diagram of the data flow process is shown below. Customer trouble calls and SCADA events are interfaced with the Company's real-time network connectivity model, its CADOPS system (Computer Aided Distribution Operations System). By overlaying these events onto the network model, the program infers outages at the appropriate devices (such as a transformer, fuse or other interrupting device) for all customers down line of the interrupting device. The outage is then routed to appropriate field operations staff for restoration and the outage event is recorded in the Company's Prosper/US outage repository. In addition to this real-time model of the system's electrical flow, the Company relies heavily upon the SCADA system it has in place. This includes the Dispatch Log System (an SQL database application) which serves to collect all events on SCADA-operable circuits. That data is then analyzed for momentary interruptions to establish state-level and circuit-level momentary interruption indices, per agreement with the Oregon PUC Staff. The Company is in the midst of implementing an advanced metering infrastructure (AMI) system, after which modifications to the outage communication process and reliability will occur. As the Company rationalizes the effects of these changes it will apprise the Commission Staff about the changes and their measured impacts to reliability metrics.



## *Reliability Reporting: Interpreting Indices and Metrics*

Raw reliability data comes in the form of outage start and stop times, numbers of customers interrupted and outage cause codes. Out of these are derived an array of indices and acronyms that attempt to reduce complex data to a handful of numbers. This section briefly describes the metrics used by Pacific Power for reliability measurements.

SAIDI, SAIFI, CAIDI and MAIFI<sub>e</sub> are the most common indicators or indices used by utilities across the nation for measuring and reporting reliability. Along with other indices, they were first rigorously documented in Institute of Electrical and Electronics Engineers (IEEE) Standard 1366-1998, and since modified in IEEE 1366-2003/2012, IEEE Guide for Electric Power Distribution Reliability Indices. This standard for reporting reliability performance was adopted in OAR 860-023 and reports provided thereafter have adhered to this standard.

For performance reporting as contained within this document<sup>1</sup>, Pacific Power uses the current standard indices, applied at the state level as well as to its defined reliability reporting regions. In years preceding 2012 the major events excluded from performance during the period were determined using the historic “10% of operating area customers” method, not the IEEE 1366 “2.5 beta” TMed method applied to these reliability reporting regions. Therefore, year-on-year comparisons need to be made carefully.

Regional reliability reporting areas were established by using statistical tools to determine the granular level at which performance complied with assumptions underlying the development of the major event thresholds adopted within the standard. For the Customer Guarantee element of the Performance Standards Program, exceptions to the guarantees may also be determined based on data at a state level.

In order to devise circuit-level performance measures, Pacific Power performed research into which metrics are appropriate for ranking reliability investments in order to better serve the needs of customers. The need to reliably serve the areas with the greatest numbers of customers must be balanced against the need to maintain focus on service levels where there are fewer customers. To do this, Pacific Power implemented in 1999 a balanced set of circuit performance indices (known as CPI<sup>99</sup>) and methods that improve on those documented in IEEE 1366. Circuit performance is reviewed at least annually against these various metrics to determine the selection of circuits to be addressed within the Company’s Worst-Performing Feeders Program; as time has elapsed and tools have evolved the Company has focused its analysis at a lower level than circuit, i.e. sub-circuit selection may have been chosen as the optimal improvement activity. Mining of this data allows the company to optimize cost against reliability metric improvements.

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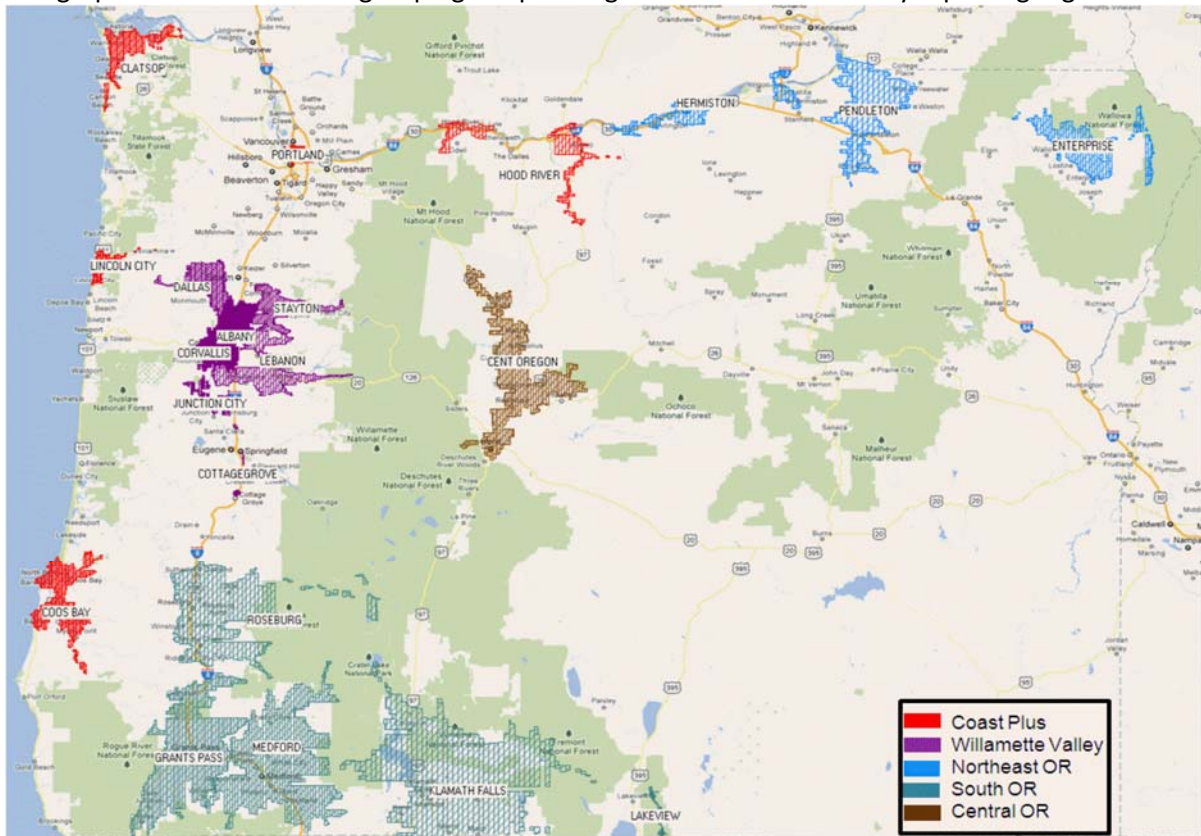
<sup>1</sup> State administrative rules regarding service reliability were modified during 2011, which has resulted in significant modifications to this section of the report.

## Reliability Tools: Improving Indices and Metrics

Pacific Power uses the reliability data in a variety of ways that are designed to improve reliability to its customers. It has devised methods that are contained in the recently-adopted industry guide for electric power reliability, IEEE 1782-2014<sup>2</sup>. Some of these analytical methods render the outage data in a tabular, graphical and geospatial manner. All of them serve as input to developing projects that improve reliability, including the Company's fuse coordination program, Fuse It or Lose It (FIOLI), its circuit hardening program, Saving SAIDI, and its capital construction program, Network Initiatives. These programs are evaluated for their forecast improvements to network reliability, as measured by the avoidance of customer interruptions, customer minutes interrupted and momentary customer interruptions. Each project is assigned a value for reduced interruptions along with the cost for that project, and based upon the best cost projects, selected to align with budget and resource capacity targets. Other tools the Company has created to deliver better reliability to customers include web-based notifications when interrupting devices (such as circuit breakers, reclosers or fuses) have experienced more operations within a given time period than expected. This enables field engineering and operations management team members to promptly evaluate means to modify performance in that area of the system. These ad-hoc activities augment the Company's reliability planning process (which is conducted annually with interim updates); review of historic reliability performance demonstrates the process' efficacy. Annually the Company identifies five circuits that are designated as "underperforming circuits" against which the Company reports blended reliability metrics (SAIDI, SAIFI, MAIFI and breaker lockouts) to highlight performance changes for that family of circuits over the next five years; these circuits are reported later in this section.

## Reliability Reporting Regions Map

The graphic below shows the grouping of operating areas into five reliability reporting regions.



<sup>2</sup> NEW P1782 (PE/T&D) Guide for Collecting, Categorizing and Utilization of Information Related to Electric Power Distribution Interruption Events was approved on March 27, 2014 and contains many of the approaches used by Pacific Power to evaluate system reliability and determine areas where improvements should be deployed.

## Major Event Thresholds

Effective CY2012, the administrative rules were modified to replace the 10% of operating area customers methodology with IEEE P1366 “2.5 beta” or TMed methodology for determining major events. For Pacific Power’s service territory in Oregon, all operating areas were grouped into five reliability reporting regions and each reliability region’s threshold determined according to IEEE 1366-2003/2012. The tables below depict the composition of each region and its threshold as used during CY2017 and for application during CY2018. Since certain major events may be filed as a statewide event, the state threshold and history is also supplied.

2017 Major Event Threshold			
Reliability Region	TMed SAIDI	TMed CMI	Operating Areas within Region
Central OR	5.40	429,381	Bend/Redmond, Madras
Coast Plus	11.09	1,687,255	Clatsop/Astoria, Coos Bay/Coquille, Hood River, Lincoln City, Portland
Northeast OR	12.27	302,667	Enterprise, Hermiston, Milton-Freewater, Pendleton, Walla Walla
South OR	12.35	2,740,682	Grants Pass, Klamath Falls, Lakeview, Medford, Roseburg/Myrtle Creek
Willamette Valley	20.28	2,439,916	Albany, Corvallis, Cottage Grove/J. City, Dallas/Independence, Lebanon, Stayton
Oregon	7.85	4,698,658	

2018 Major Event Threshold			
Reliability Region	TMed SAIDI	TMed CMI	Operating Areas within Region
Central OR	5.71	469,072	Bend/Redmond, Madras
Coast Plus	11.20	1,722,410	Clatsop/Astoria, Coos Bay/Coquille, Hood River, Lincoln City, Portland
Northeast OR	12.90	321,673	Enterprise, Hermiston, Milton-Freewater, Pendleton, Walla Walla
South OR	12.98	2,914,386	Grants Pass, Klamath Falls, Lakeview, Medford, Roseburg/Myrtle Creek
Willamette Valley	19.74	2,411,644	Albany, Corvallis, Cottage Grove/J. City, Dallas/Independence, Lebanon, Stayton
Oregon	7.41	4,501,730	

The following table is a 5-year view of each region’s TMed values.

Calendar Year	2018		2017		2016		2015		2014	
	CMI	SAIDI	CMI	SAIDI	CMI	SAIDI	CMI	SAIDI	CMI	SAIDI
Central OR	469,072	5.71	429,381	5.40	383,788	4.95	349,230	4.34	349,946	4.44
Coast Plus	1,722,410	11.20	1,687,255	11.09	1,421,626	9.45	1,452,428	9.60	1,449,117	9.57
Northeast OR	321,673	12.90	302,667	12.27	277,008	10.82	232,269	9.35	236,978	9.20
South OR	2,914,386	12.98	2,740,682	12.35	2,471,653	11.24	2,306,700	10.13	2,635,154	11.64
Willamette Valley	2,411,644	19.74	2,439,916	20.28	2,124,571	17.84	2,134,793	17.34	1,796,334	14.71
Oregon	4,501,730	7.41	4,698,658	7.85	4,262,263	7.21	4,317,671	7.11	4,535,521	7.50



## Major Events Excluded Report

Pacific Power filed written documentation for seven Major Events in 2017 that were excluded from underlying reliability performance results. They are summarized in the table below.

Oregon 2017 Major Events - Written Filings									
Event Date	Reliability Reporting Region – Description	CML	CI	PUC Report Required	Region TMed SAIDI	Region Event SAIDI	Oregon SAIDI	Oregon SAIFI	Oregon CAIDI
January 2-12	Oregon – Storm	48,115,558	84,431	Yes	80.38	0.14	80.38	0.14	570
February 20-21	Southern - Trees	2,918,385	6,933	Yes	13.15	0.03	4.88	0.01	421
April 6-9	Oregon - Wind Storm	46,415,429	180,617	Yes	77.54	0.30	77.54	0.30	257
May 21	Central - Equipment Failure	813,354	2,432	Yes	10.22	0.03	1.36	0.00	334
May 22-23	Coast Plus - Equipment Failure	2,743,566	2,285	Yes	18.03	0.02	4.58	0.00	1201
September 10-11	Willamette Valley - Loss of Substation	4,110,734	10,052	Yes	34.16	0.08	6.87	0.02	409
December 29-31	Northeast - Winter Storm Ice	967,315	1,254	Yes	39.22	0.05	1.62	0.00	771
<b>TOTAL Oregon Major Events Filed</b>		<b>967,315</b>	<b>1,254</b>	<b>Yes</b>	<b>39.22</b>	<b>0.05</b>	<b>1.62</b>	<b>0.00</b>	<b>771</b>

The company excluded five events where CAIDI was less than five hours (300 CAIDI minutes), for which no filing is required according to Oregon Administrative Rules.

Oregon 2017 Major Events - Low CAIDI (<300) No Filings									
Event Date	Reliability Reporting Region –Description	CML	CIS	PUC Report Required	Region TMed SAIDI	Region Event SAIDI	Oregon SAIDI	Oregon SAIFI	Oregon CAIDI
January 17-18	Coast Plus - Wind Storm	1,707,517	16,719	No	11.22	0.11	2.85	0.03	102
February 11-12	Southern - Tree and Loss of Transmission Outage Events	3,610,417	12,304	No	16.27	0.06	6.03	0.02	293
June 25	Southern - Lightning Storm/Loss of Transmission	2,821,165	17,178	No	12.72	0.08	4.71	0.03	164
August 8-9	Coast Plus - Pole Fire	1,947,817	15,331	No	12.80	0.10	3.25	0.03	127
November 12-13	Coast Plus - Loss of Transmission	2,439,566	49,651	No	16.04	0.33	4.08	0.08	49
<b>TOTAL Major Events with low CAIDI</b>		<b>12,526,482</b>	<b>111,183</b>				<b>20.93</b>	<b>0.19</b>	<b>113</b>

## Total Performance Summary

Oregon 2017 Major Events - Summary	CML	CIS	PUC Report Required	Oregon SAIDI	Oregon SAIFI	Oregon CAIDI
Total Oregon Major Events Filed	106,084,341	288,004	Yes	177.23	0.48	368
Total Major Events with low CAIDI (no filing required) <sup>2</sup>	12,526,482	111,183	No	20.93	0.19	113
<b>TOTAL MAJOR EVENTS</b>	<b>118,610,823</b>	<b>399,187</b>	-	<b>198.15</b>	<b>0.67</b>	<b>297</b>
Oregon Underlying Events - <u>Excludes</u> Major Event	68,164,952	754,918	-	113.88	1.26	90
Oregon Total Performance - <u>Includes</u> Major Event	186,775,774	1,154,105	-	312.03	1.93	162

## Under-Performing Circuits

After the completion of the development of reliability improvement plans, the Company evaluates those circuits whose blended reliability scores rank low, using its Circuit Performance Indicator (CPI). This is the primary basis for the next year's Worst Performing Feeders element of its Targeted Reliability Program. CPI is an acronym for Circuit Performance Indicator, which uses 3-year weighted reliability metrics of the circuit to identify underperformance. The Company has evaluated the effectiveness of the CPI, determining whether inclusion of major events and transmission outages produce better results. The inclusion of major event and transmission outages, reporting period comparisons yielded a limited ability to identify the benefits of improvements made on each of the circuits. The application of CPI99 proved to demonstrate more consistently how performance comparisons could be made. The variables and equation for calculating CPI are:

$$\text{CPI} = \text{Index} * ((\text{SAIDI} * \text{WF} * \text{NF}) + (\text{SAIFI} * \text{WF} * \text{NF}) + (\text{MAIFI} * \text{WF} * \text{NF}) + (\text{Lockouts} * \text{WF} * \text{NF}))$$

**Index:** 10.645

**SAIDI:** Weighting Factor 0.30, Normalizing Factor 0.029

**SAIFI:** Weighting Factor 0.30, Normalizing Factor 2.439

**MAIFI:** Weighting Factor 0.20, Normalizing Factor 0.70

**Lockouts:** Weighting Factor 0.20, Normalizing Factor 2.00

Therefore,  $10.645 * ((3\text{-year SAIDI} * 0.30 * 0.029) + (3\text{-year SAIFI} * 0.30 * 2.439) + (3\text{-year MAIFI} * 0.20 * 0.70) + (3\text{-year breaker lockouts} * 0.20 * 2.00)) = \text{CPI Score}$

The following distribution feeders were selected as under-performing based on CPI scores ending 12/31/2017 and identified as Program Year 19 (2018) circuits in the Network Initiatives program:

Program Year 19 (2018) UNDER-PERFORMING CIRCUITS				
CIRCUIT ID	CIRCUIT NAME	KV	OPERATING AREA	CPI <sup>99</sup>
L804	Bandon	20.8	Coos Bay/Coquille	138
4M238	Dallas	20.8	Dallas/Independence	161
4M94	Foster	20.8	Lebanon	199
4M125	Mint	20.8	Albany	151
4L50	Rocky Point Feeder (Running Y)	20.8	Klamath Falls	249
<b>TARGET SCORE</b>				<b>143</b>

The status of prior years' under-performing circuits is shown in the following table. (Targets for Program Years 1-10 were met and filed previously.)

UNDER-PERFORMING CIRCUITS				
CIRCUIT ID	CIRCUIT NAME	OPERATING AREA	BASELINE	Performance 12/31/17
<b>Circuit Performance Indicator (CPI99)</b>				
<b>Program Year 18 (2017):</b>				
4M25	Buena Vista	Dallas/Independence	163	208
4C106	Coos River	Coos Bay/Coquille	212	203
4M120	Mill City	Stayton	261	351
5A211	Olney	Clatsop/Astoria	183	137
5R55	Siskiyou	Medford	220	186
<b>TARGET SCORE = 166</b>			<b>208</b>	<b>217</b>

UNDER-PERFORMING CIRCUITS				
CIRCUIT ID	CIRCUIT NAME	OPERATING AREA	BASELINE	Performance 12/31/17
<b>Circuit Performance Indicator (CPI99)</b>				
<b>Program Year 17 (2016):</b>				
5A20	SOUTH (Warrenton)	Warrenton	124	46
4C67	INDUSTRIAL	Coos Bay/Coquille	82	80
5L57	CRATER LAKE	Klamath Falls	200	154
4A316	LAKE (DEVILS LAKE)	Lincoln City	172	204
5U52	BEALS CREEK FEEDER	Roseburg/Myrtle Creek	188	118
<b>TARGET MET</b>			<b>TARGET SCORE = 123</b>	<b>153</b>
<b>Program Year 16 (2015):</b>				
4C108	EMPIRE	Coos Bay/Coquille	16	7
5A93	BRADWOOD	Clatsop (Astoria)	114	200
5K43	BELMONT	Hood River	118	50
5R232	MERLIN-HUGO	Grants Pass	41	42
5R65	DEER CREEK	Grants Pass	59	166
			<b>TARGET SCORE = 56</b>	<b>70</b>
<b>Program Year 15 (2014):</b>				
4M268	KINGS ROAD	Corvallis	115	69
4M269	29 <sup>TH</sup> STREET	Corvallis	133	80
4U5	DOUGLAS	Roseburg/Myrtle Creek	34	49
4C50	BUNKERHILL	Coos Bay/Coquille	152	51
5R63	WOOD RIVER	Grants Pass	193	98
<b>TARGET MET</b>			<b>TARGET SCORE = 100</b>	<b>125</b>
<b>Program Year 14 (2013):</b>				
4C42	TERRES HGHTS	Coos Bay/Coquille	158	128
5K70	EASTSIDE (Hood River)	Hood River	110	53
5R133	GLENDALE	Grants Pass	171	145
5R259	CHINOOK (Grants Pass)	Grants Pass	131	66
5R53	ROUGH & READY	Grants Pass	69	91
<b>TARGET MET</b>			<b>TARGET SCORE = 102</b>	<b>128</b>
<b>Program Year 13 (2012):</b>				
5D144	D.R.W.	Bend/Redmond	124	25
5D2	DESCHUTES S	Bend/Redmond	104	24
4U39	GOEDECK	Roseburg/Myrtle Creek	24	21
5U84	LITTLE RIVER	Roseburg/Myrtle Creek	70	85
5L59	WEST	Klamath Falls	45	23
<b>TARGET MET</b>			<b>TARGET SCORE = 59</b>	<b>73</b>
<b>Program Year 12 (2011):</b>				
5L45	CRYSTAL SPR	Klamath Falls	154	56
4D68	WARM SPRINGS	Madras	157	144
5U83	IDLEYLD	Roseburg/Myrtle Creek	146	170
5R248	PLEASANT VLY- MERLIN	Grants Pass	39	96
4U10	DIAMOND	Roseburg/Myrtle Creek	40	41
			<b>TARGET SCORE = 86</b>	<b>107</b>

## Oregon Five-Year Reliability Reporting Region Metrics

Excluding Major Events	SAIDI					SAIFI					MAIFle				
	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017
<b>OR REGION</b>															
Central OR	56	63	60	45	52	0.36	1.10	0.49	0.40	0.41	2.67	2.97	2.59	2.50	3.29
CoastPlus	68	110	87	98	111	0.75	1.06	0.76	1.01	1.55	2.64	4.42	4.22	3.51	3.59
Northeast OR	96	108	120	87	95	0.78	1.18	1.04	0.66	1.05	4.10	1.37	4.41	5.34	4.63
South OR	120	128	133	123	106	0.98	1.12	0.83	1.01	0.98	3.07	3.32	4.02	3.54	4.41
Willamette Valley	148	172	176	157	177	1.36	1.32	1.66	1.76	2.02	3.77	6.88	3.16	2.79	2.70
<b>OREGON</b>	<b>103</b>	<b>123</b>	<b>120</b>	<b>111</b>	<b>114</b>	<b>0.91</b>	<b>1.15</b>	<b>0.94</b>	<b>1.07</b>	<b>1.26</b>	<b>3.12</b>	<b>4.23</b>	<b>3.65</b>	<b>3.23</b>	<b>3.54</b>

Including Major Events	SAIDI					SAIFI					MAIFle				
	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017
<b>OR REGION</b>															
Central OR	98	99	117	74	102	0.56	1.26	0.88	0.70	0.56	2.67	2.97	2.59	2.50	3.29
CoastPlus	137	211	175	336	213	1.14	1.54	1.21	1.97	2.31	2.64	4.42	4.22	3.51	3.59
Northeast OR	282	205	289	146	147	1.60	1.39	1.70	0.92	1.17	4.10	1.37	4.41	5.34	4.63
South OR	134	146	389	184	442	1.02	1.26	1.28	1.38	1.85	3.07	3.32	4.02	3.54	4.41
Willamette Valley	189	597	240	264	371	1.59	2.43	1.87	2.23	2.65	3.77	6.88	3.16	2.79	2.70
<b>OREGON</b>	<b>147</b>	<b>250</b>	<b>265</b>	<b>223</b>	<b>312</b>	<b>1.13</b>	<b>1.57</b>	<b>1.35</b>	<b>1.59</b>	<b>1.93</b>	<b>3.12</b>	<b>4.23</b>	<b>3.65</b>	<b>3.23</b>	<b>3.54</b>

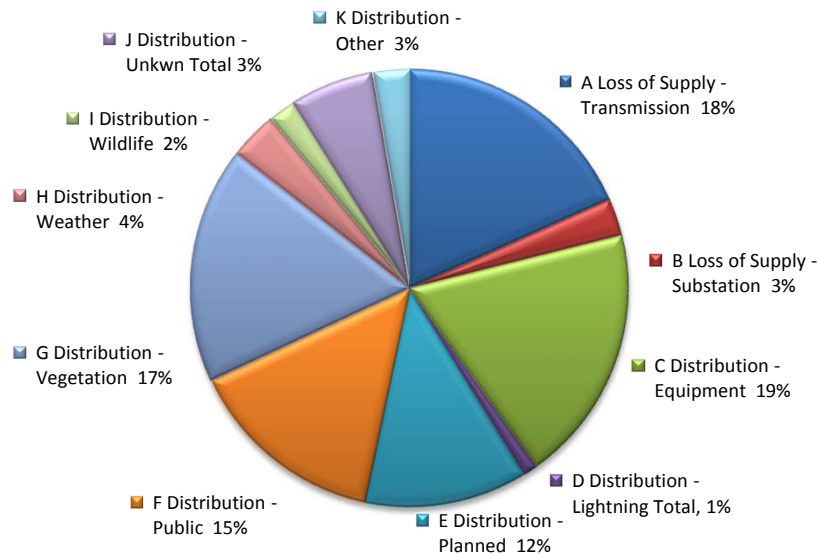
## Oregon Five-Year Customer Count by Reliability Region and Operating Area

Region	Op Area	CY2017	CY2016	CY2015	CY2014	CY2013
Central OR	BEND/REDMOND	62,949	61,061	63,110	61,724	60,345
Central OR	MADRAS	16,623	16,476	17,325	17,250	17,177
<b>Central OR</b>		<b>79,572</b>	<b>77,537</b>	<b>80,435</b>	<b>78,974</b>	<b>77,522</b>
CoastPlus	CLATSOP (ASTORIA)	24,422	24,146	24,462	24,367	24,215
CoastPlus	COOS BAY/COQUILLE	26,194	26,104	27,376	27,310	27,200
CoastPlus	HOOD RIVER	9,235	9,113	9,545	9,414	9,269
CoastPlus	LINCOLN CITY	12,047	11,926	12,060	12,071	12,052
CoastPlus	PORTLAND	80,241	79,156	77,877	78,281	77,501
<b>CoastPlus</b>		<b>152,139</b>	<b>150,445</b>	<b>151,320</b>	<b>151,443</b>	<b>150,237</b>
Northeast OR	ENTERPRISE	5,353	5,316	5,412	5,366	5,483
Northeast OR	HERMISTON	4,639	4,634	4,859	4,824	4,783
Northeast OR	MILTON/FREEWATER	-	-	102	1,010	1,003
Northeast OR	PENDLETON	12,795	12,762	13,299	13,180	13,151
Northeast OR	WALLA WALLA OR	1,876	1,723	1,177	1,372	1,360
<b>Northeast OR</b>		<b>24,663</b>	<b>24,435</b>	<b>24,849</b>	<b>25,752</b>	<b>25,780</b>
South OR	GRANTS PASS	51,217	50,709	52,490	52,220	51,957
South OR	KLAMATH FALLS	37,472	37,251	39,334	39,153	39,004
South OR	LAKEVIEW	2,328	2,410	2,543	2,529	2,557
South OR	MEDFORD	88,569	87,494	90,122	89,379	88,690
South OR	ROSEBURG/MYRTLECREEK	42,286	42,116	43,233	43,022	42,926
<b>South OR</b>		<b>221,872</b>	<b>219,980</b>	<b>227,722</b>	<b>226,303</b>	<b>225,134</b>
Willamette Valley	ALBANY	31,250	30,943	32,190	32,670	32,310
Willamette Valley	CORVALLIS	29,445	29,072	29,754	29,551	29,330
Willamette Valley	COTTAGE GROVE/J.CITY	11,092	10,983	11,271	11,371	11,329
Willamette Valley	DALLAS/INDEPENDENCE	14,918	14,717	15,044	14,854	14,725
Willamette Valley	LEBANON	20,297	20,090	20,914	19,818	19,644
Willamette Valley	STAYTON	13,329	13,254	13,951	13,851	13,764
<b>Willamette Valley</b>		<b>120,331</b>	<b>119,059</b>	<b>123,124</b>	<b>122,115</b>	<b>121,102</b>
<b>Oregon</b>		<b>598,577</b>	<b>591,456</b>	<b>607,450</b>	<b>604,587</b>	<b>599,775</b>

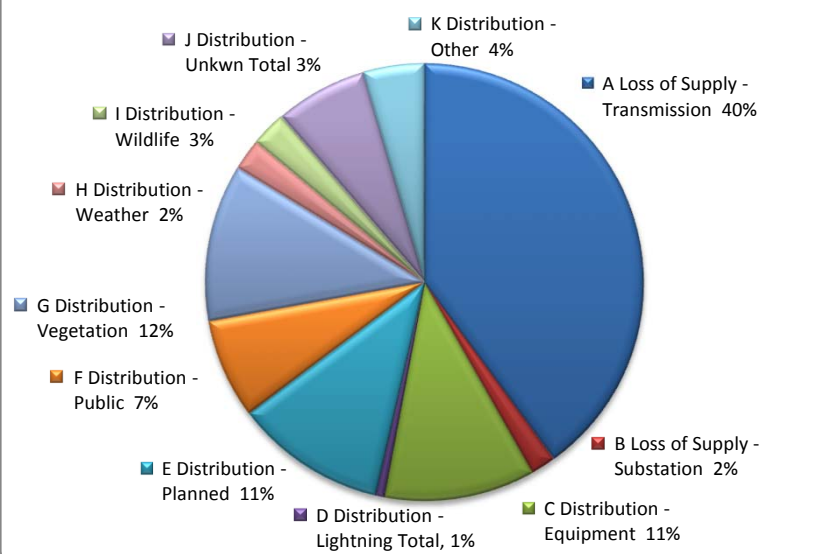
## Oregon Five-Year Cause Analysis by State (excluding major events)

OAR Cause	2013		2014		2015		2016		2017	
	SAIDI	SAIFI	SAIDI	SAIFI	SAIDI	SAIFI	SAIDI	SAIFI	SAIDI	SAIFI
<b>A Loss of Supply - Transmission</b>	13.68	0.219	12.58	0.376	9.69	0.156	16.12	0.336	22.88	0.536
<b>B Loss of Supply - Substation</b>	8.32	0.070	7.66	0.047	8.87	0.039	8.37	0.053	3.41	0.025
<b>C Distribution - Equipment</b>	25.58	0.161	30.12	0.186	27.24	0.171	26.33	0.156	23.72	0.150
<b>D Distribution - Lightning</b>	4.98	0.019	1.49	0.005	1.09	0.006	0.20	0.001	1.34	0.009
<b>E Distribution - Planned</b>	19.41	0.185	20.56	0.175	32.78	0.233	24.72	0.214	15.11	0.150
<b>F Distribution - Public</b>	11.48	0.071	16.31	0.096	17.66	0.116	16.42	0.095	18.37	0.099
<b>G Distribution - Vegetation</b>	14.17	0.097	31.56	0.194	24.86	0.134	18.65	0.116	21.76	0.156
<b>H Distribution - Weather</b>	1.22	0.007	3.65	0.021	4.52	0.035	3.17	0.014	4.40	0.031
<b>I Distribution - Wildlife</b>	2.37	0.031	2.16	0.026	5.19	0.047	3.31	0.040	2.50	0.035
<b>J Distribution - Unknown</b>	8.46	0.077	5.51	0.057	5.41	0.075	6.76	0.072	7.72	0.091
<b>K Distribution - Other</b>	3.03	0.020	0.86	0.008	1.46	0.025	1.33	0.046	3.41	0.061
<b>Grand Total</b>	<b>112.70</b>	<b>0.954</b>	<b>132.44</b>	<b>1.191</b>	<b>138.78</b>	<b>1.036</b>	<b>125.38</b>	<b>1.143</b>	<b>123.16</b>	<b>1.327</b>

### 2017 Oregon Cause Analysis - SAIDI



### 2017 Oregon Cause Analysis - SAIFI



## Oregon Five-Year Cause by Reliability Region (excluding major events)

Reliability Region	OAR Cause	2013		2014		2015		2016		2017	
		SAIDI	SAIFI	SAIDI	SAIFI	SAIDI	SAIFI	SAIDI	SAIFI	SAIDI	SAIFI
Central OR	A Loss of Supply - Transmission	0.74	0.000	4.91	0.557	2.25	0.046	0.56	0.027	-	-
	B Loss of Supply - Substation	9.60	0.037	5.38	0.130	-	-	-	-	1.58	0.013
	C Distribution - Equipment	19.55	0.108	29.98	0.197	31.30	0.193	26.37	0.130	17.70	0.098
	D Distribution - Lightning	0.16	0.001	0.62	0.004	0.05	0.002	0.17	0.002	0.17	0.001
	E Distribution - Planned	30.10	0.169	13.67	0.154	25.09	0.353	3.65	0.066	2.80	0.020
	F Distribution - Public	10.25	0.051	9.13	0.045	4.83	0.025	5.02	0.030	8.40	0.080
	G Distribution - Vegetation	3.17	0.043	3.18	0.034	3.79	0.032	5.38	0.044	12.62	0.113
	H Distribution - Weather	0.42	0.002	0.73	0.002	7.73	0.066	0.24	0.002	2.62	0.009
	I Distribution - Wildlife	0.33	0.004	1.11	0.012	0.68	0.006	1.51	0.026	2.07	0.020
	J Distribution - Unknown	3.18	0.019	2.62	0.018	2.49	0.035	1.73	0.066	5.76	0.052
	K Distribution - Other	0.10	0.001	0.09	0.001	1.69	0.009	1.01	0.008	0.73	0.017
	<b>Grand Total</b>	<b>77.60</b>	<b>0.435</b>	<b>71.43</b>	<b>1.155</b>	<b>79.92</b>	<b>0.768</b>	<b>45.64</b>	<b>0.400</b>	<b>54.44</b>	<b>0.424</b>
CoastPlus OR	A Loss of Supply - Transmission	3.72	0.189	9.84	0.341	0.00	0.000	15.79	0.353	25.83	0.791
	B Loss of Supply - Substation	6.84	0.071	4.06	0.011	-	-	3.15	0.035	3.16	0.035
	C Distribution - Equipment	20.24	0.143	29.08	0.177	22.98	0.167	22.82	0.142	17.51	0.131
	D Distribution - Lightning	0.13	0.001	0.01	0.000	0.04	0.000	0.03	0.000	0.17	0.001
	E Distribution - Planned	19.66	0.165	27.50	0.208	45.79	0.285	26.82	0.222	18.85	0.174
	F Distribution - Public	7.04	0.052	16.40	0.122	17.06	0.165	21.70	0.131	9.70	0.066
	G Distribution - Vegetation	8.92	0.080	31.28	0.225	21.10	0.130	21.38	0.168	30.48	0.228
	H Distribution - Weather	0.05	0.001	4.51	0.027	3.96	0.032	0.34	0.002	5.56	0.038
	I Distribution - Wildlife	1.45	0.022	0.84	0.011	1.14	0.010	2.68	0.041	1.83	0.020
	J Distribution - Unknown	2.21	0.040	1.88	0.015	3.04	0.041	1.98	0.022	4.82	0.050
	K Distribution - Other	7.01	0.041	0.09	0.002	0.29	0.022	0.72	0.031	5.01	0.075
	<b>Grand Total</b>	<b>77.29</b>	<b>0.804</b>	<b>125.50</b>	<b>1.138</b>	<b>115.41</b>	<b>0.852</b>	<b>117.42</b>	<b>1.147</b>	<b>122.92</b>	<b>1.609</b>
Northeast OR	A Loss of Supply - Transmission	19.85	0.190	24.67	0.439	9.05	0.075	1.82	0.034	19.39	0.490
	B Loss of Supply - Substation	8.30	0.055	5.00	0.033	0.51	0.007	7.40	0.019	2.91	0.011
	C Distribution - Equipment	32.87	0.241	22.42	0.165	32.46	0.181	17.24	0.101	31.72	0.169
	D Distribution - Lightning	2.05	0.010	2.01	0.010	0.36	0.003	0.43	0.006	1.48	0.008
	E Distribution - Planned	18.05	0.163	16.50	0.174	8.17	0.163	11.22	0.084	6.26	0.093
	F Distribution - Public	5.18	0.043	9.37	0.062	21.06	0.151	11.57	0.082	9.78	0.049
	G Distribution - Vegetation	4.16	0.021	10.84	0.145	23.83	0.247	18.85	0.154	5.32	0.028
	H Distribution - Weather	0.97	0.004	6.86	0.035	3.51	0.024	3.30	0.058	2.08	0.028
	I Distribution - Wildlife	3.49	0.041	2.37	0.038	8.85	0.092	12.28	0.097	5.72	0.037
	J Distribution - Unknown	6.55	0.056	6.22	0.065	9.61	0.093	5.30	0.038	7.93	0.110
	K Distribution - Other	0.51	0.003	4.60	0.044	4.39	0.019	0.01	0.000	3.44	0.058
	<b>Grand Total</b>	<b>101.98</b>	<b>0.825</b>	<b>110.86</b>	<b>1.210</b>	<b>121.80</b>	<b>1.055</b>	<b>89.42</b>	<b>0.674</b>	<b>96.04</b>	<b>1.082</b>

## Oregon Five-Year Cause by Reliability Region (excluding major events)

Reliability Region	OAR Cause	2013		2014		2015		2016		2017	
		SAIDI	SAIFI	SAIDI	SAIFI	SAIDI	SAIFI	SAIDI	SAIFI	SAIDI	SAIFI
Southern OR	A Loss of Supply - Transmission	19.60	0.233	19.35	0.444	18.93	0.146	9.22	0.247	19.52	0.349
	B Loss of Supply - Substation	11.00	0.101	12.66	0.035	22.18	0.078	10.42	0.056	4.44	0.027
	C Distribution - Equipment	22.15	0.135	26.12	0.167	24.26	0.145	25.31	0.145	24.32	0.151
	D Distribution - Lightning	11.95	0.034	0.51	0.003	1.64	0.009	0.39	0.001	2.86	0.020
	E Distribution - Planned	16.84	0.169	15.63	0.125	27.79	0.157	30.91	0.243	15.23	0.150
	F Distribution - Public	14.32	0.103	13.63	0.059	11.62	0.065	18.59	0.117	17.03	0.095
	G Distribution - Vegetation	17.01	0.090	33.52	0.177	22.05	0.095	22.65	0.105	18.91	0.125
	H Distribution - Weather	1.50	0.009	1.90	0.010	2.36	0.012	7.17	0.025	4.22	0.036
	I Distribution - Wildlife	3.01	0.046	3.34	0.037	9.80	0.081	3.42	0.035	1.64	0.025
	J Distribution - Unknown	9.86	0.086	8.52	0.093	7.47	0.097	9.26	0.078	6.17	0.059
	K Distribution - Other	1.11	0.012	0.41	0.003	1.17	0.008	1.93	0.038	2.47	0.032
<b>Grand Total</b>		<b>128.37</b>	<b>1.018</b>	<b>135.62</b>	<b>1.152</b>	<b>149.27</b>	<b>0.894</b>	<b>139.25</b>	<b>1.092</b>	<b>116.80</b>	<b>1.070</b>
WImVly OR	A Loss of Supply - Transmission	22.02	0.374	5.83	0.164	9.50	0.454	42.34	0.743	39.86	0.892
	B Loss of Supply - Substation	4.37	0.033	4.87	0.063	2.64	0.048	16.84	0.113	2.95	0.017
	C Distribution - Equipment	40.86	0.248	40.54	0.231	34.28	0.207	34.47	0.220	31.41	0.194
	D Distribution - Lightning	1.71	0.026	5.59	0.016	2.15	0.011	0.03	0.000	0.69	0.002
	E Distribution - Planned	17.33	0.253	26.37	0.239	36.01	0.243	27.14	0.274	19.23	0.206
	F Distribution - Public	13.81	0.052	27.25	0.175	37.28	0.200	14.16	0.054	39.08	0.166
	G Distribution - Vegetation	24.56	0.180	51.00	0.301	48.66	0.253	16.41	0.109	24.13	0.168
	H Distribution - Weather	2.73	0.013	7.01	0.042	7.30	0.064	1.23	0.006	4.67	0.026
	I Distribution - Wildlife	3.40	0.032	2.21	0.032	3.85	0.046	3.24	0.045	4.43	0.080
	J Distribution - Unknown	17.37	0.146	6.15	0.066	5.57	0.100	11.78	0.136	15.05	0.218
	K Distribution - Other	4.08	0.021	2.35	0.022	2.72	0.072	1.49	0.113	4.69	0.123
<b>Grand Total</b>		<b>152.25</b>	<b>1.379</b>	<b>179.17</b>	<b>1.350</b>	<b>189.96</b>	<b>1.697</b>	<b>169.12</b>	<b>1.814</b>	<b>186.17</b>	<b>2.092</b>



## Oregon 2017 Active Circuits with Substation, Voltage and Customer Counts

Oregon Region	Op Area Name	Substation Name	Circuit Id	Circuit Name	kV	Circuit Customer Count
Central OR	BEND/REDMOND	BEND	5D10	PORTLAND AVE	12.5	2,350
Central OR	BEND/REDMOND	BEND	5D11	GLEN VISTA	12.5	1,118
Central OR	BEND/REDMOND	BEND	5D12	DIVISION ST.	12.5	214
Central OR	BEND/REDMOND	BEND	5D196	MALLARD	12.5	1,430
Central OR	BEND/REDMOND	BEND	CO08-1	BEND-PILOT BUTTE-69KV	69	0
Central OR	BEND/REDMOND	BEND	CO09B	PENSTOCK-JUNIPER RIDGE(COID)-69KV	69	0
Central OR	BEND/REDMOND	BOND STREET	5D411	BACHELOR	12.5	1,720
Central OR	BEND/REDMOND	BOND STREET	5D413	OLD MILL	12.5	383
Central OR	BEND/REDMOND	BOND STREET	5D418	BLAKELY	12.5	1,263
Central OR	BEND/REDMOND	CHINA HAT	5D140	LAVA (CHINA HAT)	12.5	2,221
Central OR	BEND/REDMOND	CHINA HAT	5D142	HIGH DESERT	12.5	1,665
Central OR	BEND/REDMOND	CHINA HAT	5D144	D.R.W.	12.5	2,395
Central OR	BEND/REDMOND	CLEVELAND AVE.	5D30	ARROWHEAD	12.5	1,193
Central OR	BEND/REDMOND	CLEVELAND AVE.	5D35	WICKIUP	12.5	983
Central OR	BEND/REDMOND	CLEVELAND AVE.	5D38	TOMAHAWK	12.5	1,397
Central OR	BEND/REDMOND	CLEVELAND AVE.	5D94	TEEPEE	12.5	3,315
Central OR	BEND/REDMOND	CLEVELAND AVE.	5D96	OBSIDIAN	12.5	907
Central OR	BEND/REDMOND	CLEVELAND AVE.	5D98	HUCKLEBERRY	12.5	996
Central OR	BEND/REDMOND	CLEVELAND AVE.	CO11	CLEVELAND-CHINA HAT-69KV	69	0
Central OR	BEND/REDMOND	COVE (OR)	CO20	COVE-ROUND BUTTE(PGE)#1-230KV	230	0
Central OR	BEND/REDMOND	COVE (OR)	CO21	COVE-ROUND BUTTE(PGE)#2-230KV	230	0
Central OR	BEND/REDMOND	CROOKED RIVER RANCH	4D131	CANYON	20.8	1,738
Central OR	BEND/REDMOND	CROOKED RIVER RANCH	4D30	CROOKED R.R.	20.8	757
Central OR	BEND/REDMOND	DESCHUTES	5D184	PRONGHORN	12.5	1,078
Central OR	BEND/REDMOND	DESCHUTES	5D2	DESCHUTES S	12.5	965
Central OR	BEND/REDMOND	HUNTERS CIRCLE	5D192	Mackinaw	12.5	638
Central OR	BEND/REDMOND	MIDPOINT	CO01-1	MIDPOINT-HEMMINGWAY-500KV	500	0
Central OR	BEND/REDMOND	OVERPASS	5D104	AWBREY	12.5	990
Central OR	BEND/REDMOND	OVERPASS	5D106	NEZ PERCE	12.5	2,592
Central OR	BEND/REDMOND	OVERPASS	5D120	CHINOOK	12.5	1,355
Central OR	BEND/REDMOND	OVERPASS	5D128	PAIUTE	12.5	2,071
Central OR	BEND/REDMOND	OVERPASS	5D155	APACHE	12.5	1,894
Central OR	BEND/REDMOND	PILOT BUTTE	5D261	KLONDIKE	12.5	2,970
Central OR	BEND/REDMOND	PILOT BUTTE	5D263	DRAKE FEEDER	12.5	2,381
Central OR	BEND/REDMOND	PILOT BUTTE	CO09	BEND-PILOT BUTTE-TAP TO REDMOND-69KV	69	2
Central OR	BEND/REDMOND	PILOT BUTTE	CO16	PILOT BUTTE-CLEVELAND-69KV	69	0
Central OR	BEND/REDMOND	PILOT BUTTE	CO17	PILOT BUTTE - CEC 69KV	69	1
Central OR	BEND/REDMOND	PILOT BUTTE	CO-1-BPA	PONDEROSA(BPA)-PILOT BUTTE-230KV	230	0
Central OR	BEND/REDMOND	PILOT BUTTE	CO-2-BPA	REDMOND(BPA)-PILOT BUTTE-230KV	230	0
Central OR	BEND/REDMOND	PILOT BUTTE	CO-3-BPA	LAPINE(BPA)-PILOT BUTTE-230KV	230	0
Central OR	BEND/REDMOND	REDMOND	5D21	SOUTH (REDMOND)	12.5	703
Central OR	BEND/REDMOND	REDMOND	5D22	INDUSTRIAL	12.5	1,381
Central OR	BEND/REDMOND	REDMOND	5D223	TETHEROW	12.5	796
Central OR	BEND/REDMOND	REDMOND	5D226	CLINE FALLS	12.5	1,415
Central OR	BEND/REDMOND	REDMOND	5D227	WINDSOR	12.5	2,848
Central OR	BEND/REDMOND	REDMOND	5D228	CITY	12.5	1,276
Central OR	BEND/REDMOND	REDMOND	5D229	JUNIPER	12.5	392
Central OR	BEND/REDMOND	REDMOND	CO006	REDMOND-COVE-69KV	69	0
Central OR	BEND/REDMOND	REDMOND	CO03-1	HOUSTON LAKE-REDMOND(BPA)-115KV	115	0
Central OR	BEND/REDMOND	REDMOND	CO03-3	POWELL BUTTE-REDMOND-115KV	115	0
Central OR	BEND/REDMOND	REDMOND	CO06A	TAP TO CROOKED RIVER-69KV	69	0
Central OR	BEND/REDMOND	REDMOND	CO06B	TAP TO OPAL SPRINGS-69KV	69	0
Central OR	BEND/REDMOND	REDMOND	CO07	REDMOND-REDMOND BPA-69KV	69	0
Central OR	BEND/REDMOND	REDMOND BPA	CO02	REDMOND BPA-REDMOND-115KV	115	0
Central OR	BEND/REDMOND	SHEVLIN PARK	5D238	WOLVERINE (SHP) (WAS 5D327)	12.5	2,554

## Oregon 2017 Active Circuits with Substation, Voltage and Customer Counts

Oregon Region	Op Area Name	Substation Name	Circuit Id	Circuit Name	kV	Circuit Customer Count
Central OR	BEND/REDMOND	SHEVLIN PARK	5D241	BADGER (SHP)	12.5	2,968
Central OR	BEND/REDMOND	SHEVLIN PARK	5D243	Black Bear	12.5	1,252
Central OR	BEND/REDMOND	SUMMER LAKE (BPA)	CO01-1A	SUMMER LAKE (BPA)-HEMMINGWAY-500KV	500	0
Central OR	BEND/REDMOND	YEW AVENUE	5D322	BIRDIE	12.5	1,582
Central OR	BEND/REDMOND	YEW AVENUE	5D323	FAIRWAY	12.5	379
Central OR	BEND/REDMOND	YEW AVENUE	5D325	EAGLE	12.5	2,420
Central OR	BEND/REDMOND	YEW AVENUE	C018	TAP TO YEW AVE-115KV	115	1
Central OR	MADRAS	CHERRY LANE	5D295	7 PEAKS	12.5	140
Central OR	MADRAS	COVE (OR)	CO005	COVE-WARM SPRINGS-69KV	69	1
Central OR	MADRAS	COVE (OR)	CO012	COVE-WARM SPRINGS-69KV	69	1
Central OR	MADRAS	CULVER	5D5	CULVER	12.5	1,734
Central OR	MADRAS	MADRAS	5D52	MADRAS RURAL	12.5	990
Central OR	MADRAS	MADRAS	5D53	AGATE	12.5	1,254
Central OR	MADRAS	MADRAS	5D57	QUARTZ	12.5	1,348
Central OR	MADRAS	MADRAS	5D61	MADRAS CITY	12.5	1,282
Central OR	MADRAS	PONDEROSA-P	CO14-2	BALDWIN ROAD-PONDEROSA-115KV	115	0
Central OR	MADRAS	PONDEROSA-P	CO14-3	BALDWIN ROAD-PRINEVILLE-115KV	115	0
Central OR	MADRAS	PONDEROSA-P	CO14-4	HOUSTON LAKE-PRINEVILLE-115KV	115	0
Central OR	MADRAS	PONDEROSA-P	CO19	HOUSTON LAKE-PONDEROSA#2-115KV	115	2
Central OR	MADRAS	POWELL BUTTE	5D1	POWELL BUTTE	12.5	601
Central OR	MADRAS	PRINEVILLE	5D126	RIMROCK	12.5	850
Central OR	MADRAS	PRINEVILLE	5D167	NORTHVILLE	12.5	2,589
Central OR	MADRAS	PRINEVILLE	5D25	OCHOCO	12.5	969
Central OR	MADRAS	PRINEVILLE	5D47	MC KAY (PRINEVILLE)	12.5	1,625
Central OR	MADRAS	PRINEVILLE	5D48	LAMONTA	12.5	607
Central OR	MADRAS	PRINEVILLE	5D50	PINE CONE	12.5	77
Central OR	MADRAS	PRINEVILLE	5D69	GRIMES FLAT	12.5	1,541
Central OR	MADRAS	WARM SPRINGS	4D68	WARM SPRINGS (OR)	20.8	1,009
Central OR	MADRAS	WARM SPRINGS	CO05	MADRAS-WARM SPRINGS-69KV	69	0
CoastPlus	CLATSOP (ASTORIA)	ASTORIA	CL01-3	ASTORIA-TILLAMOOK-115KV	115	1
CoastPlus	CLATSOP (ASTORIA)	ASTORIA	CL01-3A	ASTORIA-WARRENTON TAP-115KV	115	0
CoastPlus	CLATSOP (ASTORIA)	ASTORIA	CL01-3B	SEASIDE-WARRENTON TAP-115KV	115	0
CoastPlus	CLATSOP (ASTORIA)	ASTORIA	CL01-3C	CANNON BEACH TAP-SEASIDE-115KV	115	0
CoastPlus	CLATSOP (ASTORIA)	ASTORIA	CL01-3D	CANNON BEACH TAP-NEHALEM(TPUD)-115KV	115	0
CoastPlus	CLATSOP (ASTORIA)	ASTORIA	CL01-3E	MOHLER(TPUD)-NEHALEM(TPUD)-115KV	115	0
CoastPlus	CLATSOP (ASTORIA)	ASTORIA	CL01-3F	GARIBALDI(TPUD)-MOHLER(TPUD)-115KV	115	0
CoastPlus	CLATSOP (ASTORIA)	ASTORIA	CL01-3G	GARIBALDI(TPUD)-TILLAMOOK(BPA)-115KV	115	0
CoastPlus	CLATSOP (ASTORIA)	ASTORIA	CL01-4	ASTORIA-DRISCOLL(BPA)-115KV	115	0
CoastPlus	CLATSOP (ASTORIA)	ASTORIA	CL01-AST	ASTORIA SUB	0	0
CoastPlus	CLATSOP (ASTORIA)	ASTORIA	CL02	LEWIS&CLARK-WARRENTON-WARRENTON TAP-115KV	115	0
CoastPlus	CLATSOP (ASTORIA)	ASTORIA	CL04A	CANNON BEACH-CANNON BEACH TAP-115KV	115	0
CoastPlus	CLATSOP (ASTORIA)	ASTORIA	CL04B	CANNON BEACH TAP-NECANICUM(TPUD)-115KV	115	0
CoastPlus	CLATSOP (ASTORIA)	CANNON BEACH	5A10	HAYSTACK	12.5	1,583
CoastPlus	CLATSOP (ASTORIA)	CANNON BEACH	5A8	ECOLA	12.5	1,214
CoastPlus	CLATSOP (ASTORIA)	FERN HILL SUB	5A51	JOHN DAY	12.5	260
CoastPlus	CLATSOP (ASTORIA)	FERN HILL SUB	5A52	SCANDINAVIAN	12.5	377
CoastPlus	CLATSOP (ASTORIA)	KNAPPA SVENSEN	5A92	SVENSEN	12.5	699
CoastPlus	CLATSOP (ASTORIA)	KNAPPA SVENSEN	5A93	BRADWOOD	12.5	917
CoastPlus	CLATSOP (ASTORIA)	LEWIS & CLARK	CL03	LEWIS & CLARK-CLATSOP-BPA-115KV	115	0
CoastPlus	CLATSOP (ASTORIA)	SEASIDE	5A80	GROVE	12.5	2,395
CoastPlus	CLATSOP (ASTORIA)	SEASIDE	5A81	CENTRAL	12.5	1,618
CoastPlus	CLATSOP (ASTORIA)	SEASIDE	5A82	NECANICUM	12.5	1,177
CoastPlus	CLATSOP (ASTORIA)	SEASIDE	5A83	GEARHART	12.5	3,201
CoastPlus	CLATSOP (ASTORIA)	SEASIDE	CL01-SSD	SEASIDE SUB	115	0
CoastPlus	CLATSOP (ASTORIA)	WARRENTON	5A15	CITY	12.5	1,855

## Oregon 2017 Active Circuits with Substation, Voltage and Customer Counts

Oregon Region	Op Area Name	Substation Name	Circuit Id	Circuit Name	kV	Circuit Customer Count
CoastPlus	CLATSOP (ASTORIA)	WARRENTON	5A16	MILL (WARRENTON)	12.5	589
CoastPlus	CLATSOP (ASTORIA)	WARRENTON	5A20	SOUTH (WARRENTON)	12.5	1,589
CoastPlus	CLATSOP (ASTORIA)	YOUNGS BAY	5A202	PORT DOCK	12.5	1,198
CoastPlus	CLATSOP (ASTORIA)	YOUNGS BAY	5A204	MOO COW	12.5	1,126
CoastPlus	CLATSOP (ASTORIA)	YOUNGS BAY	5A205	FIFTH STREET	12.5	966
CoastPlus	CLATSOP (ASTORIA)	YOUNGS BAY	5A206	YOUNGS BAY #6	12.5	315
CoastPlus	CLATSOP (ASTORIA)	YOUNGS BAY	5A210	YOUNGS BAY #10	12.5	933
CoastPlus	CLATSOP (ASTORIA)	YOUNGS BAY	5A211	OLNEY	12.5	1,037
CoastPlus	CLATSOP (ASTORIA)	YOUNGS BAY	5A213	INDUSTRIAL	12.5	1,372
CoastPlus	CLATSOP (ASTORIA)	YOUNGS BAY	CL01-1	YOUNGS BAY-ASTORIA-115KV	115	0
CoastPlus	CLATSOP (ASTORIA)	YOUNGS BAY	CL01-YOU	YOUNGS BAY SUB	115	0
CoastPlus	COOS BAY/COQUILLE	BANDON TIE (BPA)	L804	BANDON	20.8	741
CoastPlus	COOS BAY/COQUILLE	COOS RIVER	4C106	COOS RIVER	20.8	1,358
CoastPlus	COOS BAY/COQUILLE	COOS RIVER	CB02-COO	COOS RIVER SUB	115	0
CoastPlus	COOS BAY/COQUILLE	COQUILLE	4C41	HENRY STREET	20.8	1,658
CoastPlus	COOS BAY/COQUILLE	COQUILLE	4C42	TERRES HGHTS	20.8	1,546
CoastPlus	COOS BAY/COQUILLE	COQUILLE	4C43	INDUSTRIAL	20.8	149
CoastPlus	COOS BAY/COQUILLE	COQUILLE	CB02-4	EMPIRE-RED DIKE TAP-115KV	115	0
CoastPlus	COOS BAY/COQUILLE	COQUILLE	CB02-5	COQUILLE-NORWAY SW STATION-115KV	115	0
CoastPlus	COOS BAY/COQUILLE	COQUILLE	CB02-6	MYRTLE POINT-NORWAY SW STATION-115KV	115	0
CoastPlus	COOS BAY/COQUILLE	COQUILLE	CB02-COQ	COQUILLE SUB	115	0
CoastPlus	COOS BAY/COQUILLE	EMPIRE NEW	4C108	EMPIRE	20.8	1,721
CoastPlus	COOS BAY/COQUILLE	EMPIRE NEW	4C89	SCOTT	20.8	1,405
CoastPlus	COOS BAY/COQUILLE	EMPIRE NEW	4C90	CHARLESTON	20.8	2,083
CoastPlus	COOS BAY/COQUILLE	EMPIRE NEW	CB02-EMP	EMPIRE SUB	115	0
CoastPlus	COOS BAY/COQUILLE	EMPIRE NEW	CB03-2	EMPIRE-STATE STREET-115KV	115	0
CoastPlus	COOS BAY/COQUILLE	FAIRVIEW (BPA)	CB01	FAIRVIEW-ISTHMUS-230KV	230	0
CoastPlus	COOS BAY/COQUILLE	FAIRVIEW (BPA)	CB02	COQUILLE-LOCKHART-MYRTLE POINT-BPA FAIRVIEW-115KV	115	0
CoastPlus	COOS BAY/COQUILLE	FAIRVIEW (BPA)	CB02-1	COQUILLE-BPA FAIRVIEW115KV	115	0
CoastPlus	COOS BAY/COQUILLE	ISTHMUS	CB01-IST	ISTHMUS SUB	115	0
CoastPlus	COOS BAY/COQUILLE	ISTHMUS	CB06	ISTHMUS-LOCKHART-115KV	115	0
CoastPlus	COOS BAY/COQUILLE	ISTHMUS	CB06-1	COOS RIVER-ISTHMUS-115KV	115	0
CoastPlus	COOS BAY/COQUILLE	JORDAN POINT	5C11	WEYCO#2	12.5	1
CoastPlus	COOS BAY/COQUILLE	JORDAN POINT	5C5	MENASHA	12.5	0
CoastPlus	COOS BAY/COQUILLE	JORDAN POINT	5C6	SAND DUNES (JORDAN POINT)	12.5	31
CoastPlus	COOS BAY/COQUILLE	LOCKHART	4C48	CITY CENTER	20.8	1,521
CoastPlus	COOS BAY/COQUILLE	LOCKHART	4C49	EASTSIDE	20.8	765
CoastPlus	COOS BAY/COQUILLE	LOCKHART	4C5	GEORGIA-PAC	20.8	95
CoastPlus	COOS BAY/COQUILLE	LOCKHART	4C50	BUNKERHILL	20.8	1,811
CoastPlus	COOS BAY/COQUILLE	LOCKHART	4C97	ENGLEWOOD	20.8	1,377
CoastPlus	COOS BAY/COQUILLE	LOCKHART	CB02-2	COQUILLE-RED DIKE TAP-115KV	115	0
CoastPlus	COOS BAY/COQUILLE	LOCKHART	CB02-3	LOCKHART-RED DIKE TAP-115KV	115	0
CoastPlus	COOS BAY/COQUILLE	LOCKHART	CB02-LHS	LOCKHART SUB	115	0
CoastPlus	COOS BAY/COQUILLE	LOCKHART	CB03	EMPIRE-LOCKHART-SOUTH DUNES-115KV	115	0
CoastPlus	COOS BAY/COQUILLE	LOCKHART	CB03-1	LOCKHART-STATE STREET-115KV	115	0
CoastPlus	COOS BAY/COQUILLE	LOCKHART	CB06-2	COOS RIVER-LOCKHART-115KV	115	0
CoastPlus	COOS BAY/COQUILLE	MYRTLE POINT	4C36	NORTH (MYRTLE POINT)	20.8	334
CoastPlus	COOS BAY/COQUILLE	MYRTLE POINT	4C37	MAPLE STREET	20.8	2,070
CoastPlus	COOS BAY/COQUILLE	SOUTH DUNES	5C9	DOUGLAS CHIP	12.5	2
CoastPlus	COOS BAY/COQUILLE	STATE STREET	4C112	WOODLAND	20.8	1,829
CoastPlus	COOS BAY/COQUILLE	STATE STREET	4C66	BAYSHORE	20.8	1,700
CoastPlus	COOS BAY/COQUILLE	STATE STREET	4C67	INDUSTRIAL	20.8	2,202
CoastPlus	COOS BAY/COQUILLE	STATE STREET	4C86	BANGOR	20.8	1,795
CoastPlus	COOS BAY/COQUILLE	STATE STREET	CB03-3	JORDAN POINT-STATE STREET-115KV	115	0
CoastPlus	COOS BAY/COQUILLE	STATE STREET	CB03-4	JORDAN POINT-SOUTH DUNES-115KV	115	0

## Oregon 2017 Active Circuits with Substation, Voltage and Customer Counts

Oregon Region	Op Area Name	Substation Name	Circuit Id	Circuit Name	kV	Circuit Customer Count
CoastPlus	COOS BAY/COQUILLE	STATE STREET	CB03-ST5	STATE STREET SUB	115	0
CoastPlus	HOOD RIVER	GORDON HOLLOW	4K1	SHERMAN 208	20.8	635
CoastPlus	HOOD RIVER	GORDON HOLLOW	WW13-1	DEMOSS(BPA)-GORDON HOLLOW-69KV	69	0
CoastPlus	HOOD RIVER	HOOD RIVER	5K37	RESIDENTIAL	12.5	2,055
CoastPlus	HOOD RIVER	HOOD RIVER	5K43	BELMONT	12.5	1,142
CoastPlus	HOOD RIVER	HOOD RIVER	5K44	NORTH (HOOD RIVER)	12.5	1,765
CoastPlus	HOOD RIVER	HOOD RIVER	5K70	EASTSIDE	7.2	1,014
CoastPlus	HOOD RIVER	HOOD RIVER	5K74	SOUTH (HOOD RIVER)	12.5	1,590
CoastPlus	HOOD RIVER	KENWOOD	5K50	OAKGROVE	12.5	699
CoastPlus	HOOD RIVER	MORO	8K6	MORO	2.4	66
CoastPlus	HOOD RIVER	POWERDALE JUNCTION SWITCHYARD 69KV	HR03-1	POWERDALE JUNCTION-BALD MOUNTAIN(BPA)-69KV	69	0
CoastPlus	HOOD RIVER	TUCKER	HR01	TUCKER-POWERDALE-69KV	69	0
CoastPlus	HOOD RIVER	TUCKER	HR04	TUCKER-POWERDALE-69KV	69	2
CoastPlus	HOOD RIVER	WASCO	7K1	WASCO	4.1	267
CoastPlus	LINCOLN CITY	BOYER	LC01	BOYER-DEVILS LAKE #1-115KV	115	0
CoastPlus	LINCOLN CITY	BOYER	LC01-A	BOYER-GRAND RONDE(PGE)-115KV	115	0
CoastPlus	LINCOLN CITY	BOYER	LC01-BOY	BOYER SUB	115	0
CoastPlus	LINCOLN CITY	BOYER	LC02	BOYER-DEVILS LAKE #2-115KV	115	0
CoastPlus	LINCOLN CITY	BOYER	LC03	BOYER-TILLAMOOK(BPA)-115KV	115	0
CoastPlus	LINCOLN CITY	DEVILS LAKE	4A310	INLAND FEEDER	20.8	1,825
CoastPlus	LINCOLN CITY	DEVILS LAKE	4A312	OCEAN	20.8	2,948
CoastPlus	LINCOLN CITY	DEVILS LAKE	4A316	LAKE (DEVILS LAKE)	20.8	4,478
CoastPlus	LINCOLN CITY	DEVILS LAKE	4A338	SIUSLAW	20.8	645
CoastPlus	LINCOLN CITY	DEVILS LAKE	LC01-DVK	DEVILS LAKE SUB	115	0
CoastPlus	LINCOLN CITY	GLENEDEN	7A364	GLENEDEN	4.1	707
CoastPlus	LINCOLN CITY	GLENEDEN	7A366	SALISHAN	4.1	359
CoastPlus	LINCOLN CITY	NELSCOTT	7A390	NELSCOTT	4.1	352
CoastPlus	LINCOLN CITY	PGE GRAND RONDE	R114	BOYER	12	19
CoastPlus	LINCOLN CITY	WECOMA BEACH	7A354	WECOMA	4.1	714
CoastPlus	PORTLAND	ALBINA	5P111	ALBINA 11C01-UG	11.7	683
CoastPlus	PORTLAND	ALBINA	5P150	ALBINA 11C15	11.7	0
CoastPlus	PORTLAND	ALBINA	5P194	11C24-UG	11.7	264
CoastPlus	PORTLAND	ALBINA	5P196	11C16-UG	11.7	409
CoastPlus	PORTLAND	ALBINA	5P200	11C20-UG	11.7	456
CoastPlus	PORTLAND	ALBINA	5P66	11C25	11.7	0
CoastPlus	PORTLAND	ALBINA	5P91	11C11-UG	11.7	329
CoastPlus	PORTLAND	ALBINA	5P92	11C12-UG	11.7	48
CoastPlus	PORTLAND	ALBINA	P12-2	ALBINA-KNOTT-115KV	115	0
CoastPlus	PORTLAND	ALDERWOOD 115/12.5	5P22	ALDERWOOD #2	12.5	304
CoastPlus	PORTLAND	ALDERWOOD 115/12.5	5P23	ALDERWOOD #1-UG	12.5	0
CoastPlus	PORTLAND	ALDERWOOD 115/12.5	5P33	ALDERWOOD #4	12.5	182
CoastPlus	PORTLAND	ALDERWOOD 115/12.5	5P604	ALDERWOOD #3	12.5	173
CoastPlus	PORTLAND	BLOSS	5P170	OFFICE	12.5	0
CoastPlus	PORTLAND	BLOSS	5P172	FURNACE	12.5	1
CoastPlus	PORTLAND	BPA ST JOHNS	P10-2	BPA ST JOHNS-ST JOHNS-115KV	115	0
CoastPlus	PORTLAND	BPA ST JOHNS	P11	ST JOHNS-KNOTT-115KV	115	0
CoastPlus	PORTLAND	COLUMBIA (OR)	5P266	#2	12.5	2,562
CoastPlus	PORTLAND	COLUMBIA (OR)	5P268	COLUMBIA #1	12.5	340
CoastPlus	PORTLAND	COLUMBIA (OR)	5P474	COLUMBIA #6	12.5	547
CoastPlus	PORTLAND	COLUMBIA (OR)	5P476	COLUMBIA #3	12.5	826
CoastPlus	PORTLAND	COLUMBIA (OR)	5P478	COLUMBIA #4	12.5	823
CoastPlus	PORTLAND	COLUMBIA (OR)	5P480	COLUMBIA #5	12.5	21
CoastPlus	PORTLAND	COLUMBIA (OR)	P23	COLUMBIA-KNOTT-57KV (OR)	57	0
CoastPlus	PORTLAND	COLUMBIA (OR)	P25	COLUMBIA-PARK ROSE-57KV	57	0
CoastPlus	PORTLAND	CULLY	5P288	CULLY #3-UG	12.5	808

## Oregon 2017 Active Circuits with Substation, Voltage and Customer Counts

Oregon Region	Op Area Name	Substation Name	Circuit Id	Circuit Name	kV	Circuit Customer Count
CoastPlus	PORTLAND	CULLY	5P290	CULLY #2	12.5	2,393
CoastPlus	PORTLAND	CULLY	5P292	CULLY #1	12.5	2,921
CoastPlus	PORTLAND	CULLY	P14-1	CULLY-PARKROSE TAP-115KV	115	0
CoastPlus	PORTLAND	CULLY	P14-2	PARKROSE TAP-HEMLOCK-TROUTDALE-115KV	115	0
CoastPlus	PORTLAND	CULLY	P14-3	CULLY-HOLLYWOOD-115KV	115	0
CoastPlus	PORTLAND	HARRISON	P17	HARRISON-PGE EASTPORT-115KV	115	0
CoastPlus	PORTLAND	HARRISON	P18	HARRISON-LINCOLN-115KV	115	0
CoastPlus	PORTLAND	HOLLADAY (OR)	5P145	HOLLADAY #1-UG	11.7	204
CoastPlus	PORTLAND	HOLLADAY (OR)	5P146	HOLLADAY #2-UG	11.7	342
CoastPlus	PORTLAND	HOLLADAY (OR)	5P147	HOLLADAY #3-UG	11.7	164
CoastPlus	PORTLAND	HOLLADAY (OR)	5P156	HOLLADAY #4-UG	11.7	296
CoastPlus	PORTLAND	HOLLADAY (OR)	5P157	HOLLADAY #5-UG	11.7	329
CoastPlus	PORTLAND	HOLLADAY (OR)	5P158	HOLLADAY #6	11.7	894
CoastPlus	PORTLAND	HOLLADAY (OR)	P13	HOLLADAY-HARRISON-115KV	115	0
CoastPlus	PORTLAND	HOLLADAY (OR)	P13-1	HOLLADAY-KNOTT-115KV	115	0
CoastPlus	PORTLAND	HOLLYWOOD	5P203	HOLLYWOOD #3	12.5	1,350
CoastPlus	PORTLAND	HOLLYWOOD	5P204	HOLLYWOOD #2	12.5	1,935
CoastPlus	PORTLAND	HOLLYWOOD	5P205	HOLLYWOOD #1	12.5	2,101
CoastPlus	PORTLAND	HOLLYWOOD	5P208	HOLLYWOOD #5	12.5	1,726
CoastPlus	PORTLAND	HOLLYWOOD	5P209	HOLLYWOOD #4	12.5	2,360
CoastPlus	PORTLAND	KILLINGSWORTH	5P123	KILLINGSWORTH #3	12.5	350
CoastPlus	PORTLAND	KILLINGSWORTH	5P217	KILLINGSWORTH #5	12.5	426
CoastPlus	PORTLAND	KILLINGSWORTH	5P41	KILLINGSWORTH #4	12.5	2,732
CoastPlus	PORTLAND	KILLINGSWORTH	5P88	KILLINGSWORTH #1-UG	12.5	15
CoastPlus	PORTLAND	KILLINGSWORTH	5P89	KILLINGSWORTH #2	12.5	3,097
CoastPlus	PORTLAND	KNOTT	5P231	KNOTT #1	12.5	3,263
CoastPlus	PORTLAND	KNOTT	5P232	KNOTT #2	12.5	1,628
CoastPlus	PORTLAND	KNOTT	5P233	KNOTT #3	12.5	2,276
CoastPlus	PORTLAND	KNOTT	5P366	11010	11.7	6
CoastPlus	PORTLAND	KNOTT	5P368	11022	11.7	173
CoastPlus	PORTLAND	KNOTT	5P372	11046	11.7	560
CoastPlus	PORTLAND	KNOTT	5P374	11020	11.7	974
CoastPlus	PORTLAND	KNOTT	P14-4	HOLLYWOOD-KNOTT-115KV	115	0
CoastPlus	PORTLAND	KNOTT	P26	KNOTT-PARKROSE-57KV	57	1
CoastPlus	PORTLAND	KNOTT	P26-1	KNOTT-SW3P278-57KV	57	0
CoastPlus	PORTLAND	KNOTT	P26-2	SW3P214-SW3P208-57KV	57	1
CoastPlus	PORTLAND	KNOTT	P26-3	SW3P278-SW3P214-57KV	57	0
CoastPlus	PORTLAND	LINCOLN (OR)	5P418	11D17	11.7	131
CoastPlus	PORTLAND	LINCOLN (OR)	5P420	11D14	11.7	15
CoastPlus	PORTLAND	LINCOLN (OR)	5P422	11D06-UG	11.7	543
CoastPlus	PORTLAND	LINCOLN (OR)	5P424	11D03-UG	11.7	1
CoastPlus	PORTLAND	LINCOLN (OR)	5P426	11D04-UG	11.7	322
CoastPlus	PORTLAND	LINCOLN (OR)	5P430	11D05-UG	11.7	367
CoastPlus	PORTLAND	LINCOLN (OR)	5P432	11D02-UG	11.7	475
CoastPlus	PORTLAND	LINCOLN (OR)	5P434	11D12-UG	11.7	15
CoastPlus	PORTLAND	LINCOLN (OR)	5P436	11G18-UG	11.7	102
CoastPlus	PORTLAND	LINCOLN (OR)	5P438	11D08-UG	11.7	17
CoastPlus	PORTLAND	LINCOLN (OR)	5P456	11D09-UG	11.7	184
CoastPlus	PORTLAND	LINCOLN (OR)	5P458	11D07-UG	11.7	216
CoastPlus	PORTLAND	LINCOLN (OR)	5P460	11D01-UG	11.7	1
CoastPlus	PORTLAND	LINCOLN (OR)	5P462	11G13-UG	11.7	32
CoastPlus	PORTLAND	LINCOLN (OR)	5P464	11G16-UG	11.6	171
CoastPlus	PORTLAND	LINCOLN (OR)	P16	LINCOLN-URBAN-115KV	115	1
CoastPlus	PORTLAND	MALLORY	5P162	MALLORY #1	12.8	2,021
CoastPlus	PORTLAND	MALLORY	5P164	MALLORY #2	12.8	3,076

## Oregon 2017 Active Circuits with Substation, Voltage and Customer Counts

Oregon Region	Op Area Name	Substation Name	Circuit Id	Circuit Name	kV	Circuit Customer Count
CoastPlus	PORTLAND	MERWIN	P08	MERWIN-BPA CARDWELL-115KV	115	1
CoastPlus	PORTLAND	MERWIN	P09	MERWIN-YALE-115KV	115	1
CoastPlus	PORTLAND	MERWIN	P10-1	MERWIN-ST JOHNS-115KV	115	0
CoastPlus	PORTLAND	MERWIN	P-GEN1	MERWIN #1-MERWIN-115KV	115	0
CoastPlus	PORTLAND	MERWIN	P-GEN2	MERWIN #2-MERWIN-115KV	115	0
CoastPlus	PORTLAND	MERWIN	P-GEN3	MERWIN #3-MERWIN-115KV	115	0
CoastPlus	PORTLAND	PARKROSE	5P244	PARKROSE#4	12.5	3,094
CoastPlus	PORTLAND	PARKROSE	5P246	PARKROSE#3	12.5	3,071
CoastPlus	PORTLAND	PARKROSE	5P250	PARKROSE#2	12.5	661
CoastPlus	PORTLAND	PARKROSE	5P252	PARKROSE#1	12.5	1,673
CoastPlus	PORTLAND	PARKROSE	5P717	PARKROSE 5	12.5	0
CoastPlus	PORTLAND	PARKROSE	5P728	PARKROSE 6	12.5	0
CoastPlus	PORTLAND	RUSSELLVILLE	5P274	RUSSELLVILLE #3	12.5	3,018
CoastPlus	PORTLAND	RUSSELLVILLE	5P276	RUSSELLVILLE #4	12.5	2,307
CoastPlus	PORTLAND	RUSSELLVILLE	5P278	RUSSELLVILLE #1	12.5	3,214
CoastPlus	PORTLAND	RUSSELLVILLE	5P280	RUSSELLVILLE #2	12.5	1,275
CoastPlus	PORTLAND	SWIFT	P-GEN4	SWIFT UNIT #1-SWIFT-230KV	230	0
CoastPlus	PORTLAND	SWIFT	P-GEN5	SWIFT UNIT #2-SWIFT-230KV	230	0
CoastPlus	PORTLAND	TROUTDALE	P14	TROUTDALE-KNOTT-115KV	115	0
CoastPlus	PORTLAND	TROUTDALE	P19	TROUTDALE-ALBINA-69KV	69	0
CoastPlus	PORTLAND	TROUTDALE	P22-1	TROUTDALE-LADY-SUB #8-69KV	69	0
CoastPlus	PORTLAND	TROUTDALE	P22-2	TROUTDALE-JAMES RIV WEST-69KV	69	1
CoastPlus	PORTLAND	TROUTDALE	P22-3	TROUTDALE-JAMES RIV EAST-69KV	69	0
CoastPlus	PORTLAND	TROUTDALE	P34	TROUTDALE-CPU RUNYAN-115KV	115	0
CoastPlus	PORTLAND	TROUTDALE TIE (BPA)	P03	BPA TROUTDALE-PGE GRESHAM-230KV	230	0
CoastPlus	PORTLAND	TROUTDALE TIE (BPA)	P04	BPA TROUTDALE-PGE LINNEMAN-230KV	230	0
CoastPlus	PORTLAND	VERNON	5P391	VERNON #1	12.5	1,817
CoastPlus	PORTLAND	VERNON	5P392	VERNON NO. 2	12.5	2,501
CoastPlus	PORTLAND	VERNON	5P393	VERNON #3	12.5	3,200
CoastPlus	PORTLAND	VERNON	5P394	VERNON # 4	12.5	3,229
CoastPlus	PORTLAND	VERNON	5P395	VERNON # 5	12.5	2,195
CoastPlus	PORTLAND	YALE	5P53	YALE VILLAGE	12.5	0
Northeast	ENTERPRISE	ENTERPRISE (OR)	4W8	CREIGHTON LN	20.8	1,436
Northeast	ENTERPRISE	ENTERPRISE (OR)	5W15	CITY	12.5	932
Northeast	ENTERPRISE	ENTERPRISE (OR)	5W26	RURAL (ENTERPRISE)	12.5	1,047
Northeast	ENTERPRISE	ENTERPRISE (OR)	WW07	ENTERPRISE-ELGIN-69KV	69	0
Northeast	ENTERPRISE	ENTERPRISE (OR)	WW07A	TAP TO MINAM-69KV	69	0
Northeast	ENTERPRISE	HURRICANE (OR)	WW01-2	HURRICANE-HELLS CANYON(IPCO)-230KV	230	0
Northeast	ENTERPRISE	HURRICANE (OR)	WW08	HURRICANE-ENTERPRISE-69KV	69	0
Northeast	ENTERPRISE	JOSEPH	5W21	PRAIRIE	12.5	837
Northeast	ENTERPRISE	MINAM	5W18	MINAM	12.5	12
Northeast	ENTERPRISE	PALLETTE	4W14	PALLETTE NORTH	19.9	173
Northeast	ENTERPRISE	PALLETTE	4W15	PALLETTE SOUTH	19.9	54
Northeast	ENTERPRISE	WALLOWA	5W28	CITY	12.5	862
Northeast	HERMISTON	ARLINGTON	5K25	ARLINGTON	12.5	509
Northeast	HERMISTON	BLALOCK	5K40	BLALOCK	12.5	19
Northeast	HERMISTON	COLD SPRINGS	WW16	COLD SPRINGS-HERMISTON-69KV	69	0
Northeast	HERMISTON	CREEK	4K30	WILLOW CREEK	34.5	0
Northeast	HERMISTON	CREEK	WW13	WILLOW CREEK-BPA DEMOSS-69KV	69	0
Northeast	HERMISTON	DALREED	4K16	WILLOW COVE	34.5	74
Northeast	HERMISTON	DALREED	4K36	SIMTAG	34.5	18
Northeast	HERMISTON	DALREED	4K46	BOEING	34.5	178
Northeast	HERMISTON	HERMISTON	5W602	RURAL (HERMISTON)	12.5	1,359
Northeast	HERMISTON	HERMISTON	WW14-1	HERMISTON-HINKLE-69KV	69	0
Northeast	HERMISTON	HINKLE	5W82	MEADOWS	12.5	373

## Oregon 2017 Active Circuits with Substation, Voltage and Customer Counts

Oregon Region	Op Area Name	Substation Name	Circuit Id	Circuit Name	kV	Circuit Customer Count
Northeast	HERMISTON	MCNARY (BPA)	WW15	BPA MCNARY-HERMISTON-69KV	69	0
Northeast	HERMISTON	UMATILLA	5W658	UMATILLA	12.5	1,155
Northeast	HERMISTON	UMATILLA	5W660	MCNARY	12.5	899
Northeast	HERMISTON	UMATILLA	5W664	PORT FEEDER	12.5	55
Northeast	PENDLETON	ATHENA	5W703	CITY	12.5	842
Northeast	PENDLETON	ATHENA	5W705	HELIX	12.5	419
Northeast	PENDLETON	BUCKAROO	5W201	STATE HOSP.	12.5	372
Northeast	PENDLETON	BUCKAROO	5W202	REITH	12.5	1,536
Northeast	PENDLETON	BUCKAROO	5W203	MONTEE	12.5	1,654
Northeast	PENDLETON	HERMISTON	WW14	HERMISTON-PENDLETON-69KV	69	0
Northeast	PENDLETON	PENDLETON	5W401	WEST HILLS	12.5	1,690
Northeast	PENDLETON	PENDLETON	5W402	HARRIS HTS	12.5	2,056
Northeast	PENDLETON	PENDLETON	5W403	MISSION	12.5	1,046
Northeast	PENDLETON	PENDLETON	7W451	BUSINESS	4.1	248
Northeast	PENDLETON	PENDLETON	7W452	NORTHWEST	4.1	512
Northeast	PENDLETON	PENDLETON	7W453	SOUTHWEST (PENDELTON)	4.1	333
Northeast	PENDLETON	PENDLETON	7W454	EAST END	4.1	244
Northeast	PENDLETON	PENDLETON	WW10	PENDLETON-BPA ROUNDUP-69KV	69	0
Northeast	PENDLETON	PENDLETON	WW12	PENDLETON-BPA ROUNDUP-69KV	69	0
Northeast	PENDLETON	PILOT ROCK	5W404	MILL (PILOT ROCK)	12.5	1
Northeast	PENDLETON	PILOT ROCK	5W406	PILOT ROCK CITY	12.5	1,381
Northeast	PENDLETON	ROUNDUP (BPA)	WW11	BPA ROUNDUP-PILOT ROCK-69KV	69	0
Northeast	PENDLETON	WESTON NEW (OR)	5W40	WESTON CANNERY	12.5	16
Northeast	PENDLETON	WESTON NEW (OR)	5W7	SCOTTS FEEDER	12.5	445
Northeast	WALLA WALLA	UMAPINE	5W105	UMAPINE FEEDER	12.5	962
Northeast	WALLA WALLA	UMAPINE	5W106	FERNDALE	12.5	1,344
Southern OR	GRANTS PASS	AGNESS AVE	5R172	SPALDING MILL	12.5	877
Southern OR	GRANTS PASS	AGNESS AVE	5R173	JONES CREEK	12.5	869
Southern OR	GRANTS PASS	AGNESS AVE	5R322	ANTEATER	12.5	965
Southern OR	GRANTS PASS	APPLEGATE	5R267	MURPHY	12.5	1,032
Southern OR	GRANTS PASS	APPLEGATE	5R278	HIGHWAY	12.5	1,602
Southern OR	GRANTS PASS	APPLEGATE	R02-3	APPLEGATE-CAVE JUNCTION-115KV	115	0
Southern OR	GRANTS PASS	APPLEGATE	R23-2	APPLEGATE-HUMBUG CREEK-69KV	69	0
Southern OR	GRANTS PASS	APPLEGATE	R23-21	APPLEGATE-PROVOLT-69KV	69	0
Southern OR	GRANTS PASS	APPLEGATE	R23-22	PROVOLT-HUMBUG CREEK-69KV	69	0
Southern OR	GRANTS PASS	APPLEGATE	R23-A	TAP TO PROVOLT-69KV	69	0
Southern OR	GRANTS PASS	BEACON	5R104	SAVAGE ST	12.5	1,243
Southern OR	GRANTS PASS	BEACON	5R105	BEACON ST	12.5	830
Southern OR	GRANTS PASS	CAVE JUNCTION	5R52	FREE& EASY	12.5	2,340
Southern OR	GRANTS PASS	CAVE JUNCTION	5R53	ROUGH & READY	12.5	1,516
Southern OR	GRANTS PASS	CAVE JUNCTION	R02	CAVE JUNCTION-GRANTS PASS-115KV	115	0
Southern OR	GRANTS PASS	CAVE JUNCTION	R02-2	CAVE JCTN-DEL NORTE-115KV	115	0
Southern OR	GRANTS PASS	CAVE JUNCTION	R04	CAVE JCTN-DEL NORTE-115KV	115	0
Southern OR	GRANTS PASS	CAVE JUNCTION	R04-1	CAVE JCTN-O BRIEN-115KV	115	0
Southern OR	GRANTS PASS	CAVE JUNCTION	R04-2	O BRIEN-PATRICK CREEK-115KV	115	0
Southern OR	GRANTS PASS	CAVE JUNCTION	S15	CAVE JCTN-HAPPY CAMP-69KV	69	0
Southern OR	GRANTS PASS	CAVEMAN	5R295	QUAIL	12.5	1,119
Southern OR	GRANTS PASS	CAVEMAN	5R82	WASHINGTON	12.5	1,187
Southern OR	GRANTS PASS	CAVEMAN	5R98	MANZANITA	12.5	573
Southern OR	GRANTS PASS	CAVEMAN	5R99	CAVEMAN	12.5	1,184
Southern OR	GRANTS PASS	DOWELL	5R330	DOWELL CB 5R330	12.5	0
Southern OR	GRANTS PASS	DOWELL	5R331	DOVE	12.5	1,468
Southern OR	GRANTS PASS	DOWELL	5R334	DUCK	12.5	2,488
Southern OR	GRANTS PASS	EASY VALLEY	5R123	G STREET	12.5	2,121
Southern OR	GRANTS PASS	EASY VALLEY	5R125	ROGUE	12.5	1,742

## Oregon 2017 Active Circuits with Substation, Voltage and Customer Counts

Oregon Region	Op Area Name	Substation Name	Circuit Id	Circuit Name	kV	Circuit Customer Count
Southern OR	GRANTS PASS	EASY VALLEY	5R259	CHINOOK	12.5	1,291
Southern OR	GRANTS PASS	FIELDER CREEK	4R33	ELK FDR.	20.8	1,574
Southern OR	GRANTS PASS	FIELDER CREEK	4R34	BEAR FDR	20.8	862
Southern OR	GRANTS PASS	GLENDALE SUBSTATION	5R133	GLENDALE	12.5	1,880
Southern OR	GRANTS PASS	GLENDALE SUBSTATION	5R143	INDUSTRIAL	12.5	637
Southern OR	GRANTS PASS	GLENDALE SUBSTATION	BB08-3	GLENDALE-HANNA TAP-230KV	230	0
Southern OR	GRANTS PASS	GRANTS PASS	BB08-4	GRANTS PASS-GLENDALE-230KV	230	0
Southern OR	GRANTS PASS	GRANTS PASS	BB13-2	GRANTS PASS-WHETSTONE-230KV	230	0
Southern OR	GRANTS PASS	GRANTS PASS	R01-B	GRANTS PASS-WHITE CITY-115KV	115	0
Southern OR	GRANTS PASS	GRANTS PASS	R02-1	APPLEGATE-GRANTS PASS-115KV	115	0
Southern OR	GRANTS PASS	GRANTS PASS	R03	GRANTS PASS-CAVE JCTN-115KV	115	0
Southern OR	GRANTS PASS	GRANTS PASS	R03-1	GRANTS PASS-PARK DALE JCT-115KV	115	0
Southern OR	GRANTS PASS	GRANTS PASS	R03-2	JEROME PRAIRIE-PARK DALE JCT-115KV	115	0
Southern OR	GRANTS PASS	GRANTS PASS	R03-3	JEROME PRAIRIE-SELMA-115KV	115	0
Southern OR	GRANTS PASS	GRANTS PASS	R03-4	CAVE JCTN-SELMA-115KV	115	0
Southern OR	GRANTS PASS	GRANTS PASS	R06	DOWELL-GRANTS PASS-115KV	115	0
Southern OR	GRANTS PASS	GRANTS PASS	R06-1	AGNESS AVE-GRANTS PASS-115KV	115	0
Southern OR	GRANTS PASS	GRANTS PASS	R06-2	AGNESS AVE-PARK ST-115KV	115	0
Southern OR	GRANTS PASS	GRANTS PASS	R06-3	PARK ST-PARK DALE JCT-115KV	115	0
Southern OR	GRANTS PASS	GRANTS PASS	R06-4	DOWELL-PARK DALE JCT-115KV	115	0
Southern OR	GRANTS PASS	GRANTS PASS	R1	GRANTS PASS-WHETSTONE-115KV	115	0
Southern OR	GRANTS PASS	GRANTS PASS	R1-1	GRANTS PASS-FIELDER CREEK-115KV	115	0
Southern OR	GRANTS PASS	GRANTS PASS	R13	GRANTS PASS-TOLO-69KV	69	0
Southern OR	GRANTS PASS	GRANTS PASS	R13-1	GRANTS PASS-ROGUE RIVER-69KV	69	0
Southern OR	GRANTS PASS	GRANTS PASS	R13-6	GRANTS PASS-SAVAGE RAPIDS-69KV	69	0
Southern OR	GRANTS PASS	GRANTS PASS	R13-7	ROGUE RIVER-SAVAGE RAPIDS-69KV	69	0
Southern OR	GRANTS PASS	GRANTS PASS	R24	GRANTS PASS-BEACON-69KV	69	0
Southern OR	GRANTS PASS	GRANTS PASS	R7	DOWELL-GRANTS PASS 2-115KV	115	0
Southern OR	GRANTS PASS	GRANTS PASS	R7-1	CAVEMAN-GRANTS PASS-115KV	115	0
Southern OR	GRANTS PASS	GRANTS PASS	R7-2	CAVEMAN-MERLIN-115KV	115	0
Southern OR	GRANTS PASS	GRANTS PASS	R7-3	EASY VALLEY-MERLIN-115KV	115	0
Southern OR	GRANTS PASS	GRANTS PASS	R7-4	DOWELL-EASY VALLEY-115KV	115	0
Southern OR	GRANTS PASS	JEROME PRAIRIE	5R62	WILD PRAIRIE	12.5	1,589
Southern OR	GRANTS PASS	JEROME PRAIRIE	5R63	WOOD RIVER	12.5	1,567
Southern OR	GRANTS PASS	MERLIN	5R232	MERLIN-HUGO	12.5	2,043
Southern OR	GRANTS PASS	MERLIN	5R234	PARADISE	12.5	1,184
Southern OR	GRANTS PASS	MERLIN	5R248	PLEASANT VALLEY-MERLIN FEEDER	12.5	1,782
Southern OR	GRANTS PASS	MERLIN	5R251	BADGER	12.5	916
Southern OR	GRANTS PASS	NEW O'BRIEN	5R106	O'BRIEN	12.5	430
Southern OR	GRANTS PASS	PARK STREET (OR)	5R114	FRUITDALE	12.5	2,143
Southern OR	GRANTS PASS	PARK STREET (OR)	5R115	ALLEN CREEK	12.5	974
Southern OR	GRANTS PASS	PARK STREET (OR)	5R121	NEW HOPE	12.5	1,834
Southern OR	GRANTS PASS	PARK STREET (OR)	5R164	EXPRESS	12.5	319
Southern OR	GRANTS PASS	PARK STREET (OR)	5R169	PORTOLA	12.5	1,374
Southern OR	GRANTS PASS	PROVOLT	5R67	NORTH-SOUTH	12.5	1,408
Southern OR	GRANTS PASS	ROGUE RIVER	4R7	EVANS VALLEY	20.8	224
Southern OR	GRANTS PASS	ROGUE RIVER	5R77	SAVAGE/WIMER	12.5	1,820
Southern OR	GRANTS PASS	ROGUE RIVER	5R78	ROCKY POINT (ROGUE RIVER)	12.5	1,046
Southern OR	GRANTS PASS	ROGUE RIVER	R13-3	GOLD HILL-ROGUE RIVER-69KV	69	0
Southern OR	GRANTS PASS	SELMA	5R65	DEER CREEK	12.5	1,181
Southern OR	KLAMATH FALLS	BEATTY	5L1	BEATTY	12.5	400
Southern OR	KLAMATH FALLS	BLY	5L14	TOWN (BLY)	12.5	431
Southern OR	KLAMATH FALLS	BOISE CASCADE	7L9	BOISE CASCAD	4.1	1
Southern OR	KLAMATH FALLS	BONANZA (OR)	5L7	POE VALLEY	12.5	467
Southern OR	KLAMATH FALLS	BRYANT	5L2	GARY STREET	12.5	2,106



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Oregon Region	Op Area Name	Substation Name	Circuit Id	Circuit Name	kV	Circuit Customer Count
Southern OR	KLAMATH FALLS	BRYANT	5L3	WASHBURN	12.5	1,811
Southern OR	KLAMATH FALLS	BRYANT	5L4	SUMMERS LANE	12.5	1,944
Southern OR	KLAMATH FALLS	BRYANT	5L5	MOYINA HTS.	12.5	2,406
Southern OR	KLAMATH FALLS	CASEBEER SUB	4L16	LANGELL VLY	20.8	1,157
Southern OR	KLAMATH FALLS	CHILOQUIN	5L57	CRATER LAKE	12	1,040
Southern OR	KLAMATH FALLS	CHILOQUIN	BB04-1	KLAMATH FALLS-CHILOQUIN-230KV	230	0
Southern OR	KLAMATH FALLS	CHILOQUIN	BB04-2	CHILOQUIN-LA PINE-230KV	230	0
Southern OR	KLAMATH FALLS	CHILOQUIN	K02	CHILOQUIN-MILE HI-115KV	115	0
Southern OR	KLAMATH FALLS	CHILOQUIN	K02-1	CHILOQUIN-FISH HOLE-115KV	115	0
Southern OR	KLAMATH FALLS	CHILOQUIN	K02-2	FISH HOLE-MILE HI-115KV	115	0
Southern OR	KLAMATH FALLS	CHILOQUIN	K11	CHILOQUIN-CHILOQUIN MARKET-69KV	69	0
Southern OR	KLAMATH FALLS	CHILOQUIN	K11-1	BOISE CASCADE-CHILOQUIN-69KV	69	0
Southern OR	KLAMATH FALLS	CHILOQUIN	K11-2	BOISE CASCADE-MODOC-69KV	69	0
Southern OR	KLAMATH FALLS	CHILOQUIN	K11-3	CHILOQUIN MARKET-MODOC-69KV	69	0
Southern OR	KLAMATH FALLS	CHILOQUIN MARKET	5L37	WILLIAMSON	12.5	543
Southern OR	KLAMATH FALLS	DAIRY	5L42	SWAN LAKE	12.5	276
Southern OR	KLAMATH FALLS	DAIRY	5L43	DAIRY	12.5	465
Southern OR	KLAMATH FALLS	DORRIS	K10	DORRIS-TUNNEL TAP-69KV	69	0
Southern OR	KLAMATH FALLS	FISHHOLE	K05-4	BONANZA TAP-FISHHOLE-69KV	69	0
Southern OR	KLAMATH FALLS	FISHHOLE	K05-4A	BONANZA TAP-SPRAGUE RIVER-69KV	69	0
Southern OR	KLAMATH FALLS	FISHHOLE	K05-4B	BEATTY-SPRAGUE RIVER-69KV	69	0
Southern OR	KLAMATH FALLS	FISHHOLE	K05-4C	BEATTY-BLY-69KV	69	0
Southern OR	KLAMATH FALLS	FISHHOLE	K05-4D	BLY-FISHHOLE-69KV	69	0
Southern OR	KLAMATH FALLS	HAMAKER	5L55	KENO	12.5	1,675
Southern OR	KLAMATH FALLS	HAMAKER	5L56	MOUNTAIN	12.5	160
Southern OR	KLAMATH FALLS	HENLEY	5L58	HENLEY	12.5	235
Southern OR	KLAMATH FALLS	HENLEY	5L59	WEST	12.5	530
Southern OR	KLAMATH FALLS	HORNET	5L44	HOMEDALE	12.5	2,731
Southern OR	KLAMATH FALLS	HORNET	5L45	CRYSTAL SPR	12.5	1,458
Southern OR	KLAMATH FALLS	HORNET	K04-2K	HENLEY TAP-MERRILL-69KV	69	0
Southern OR	KLAMATH FALLS	HORNET	K04-2L	HENLEY TAP-HENLEY-69KV	69	0
Southern OR	KLAMATH FALLS	HORNET	K04-2M	HENLEY TAP-HORNET-69KV	69	0
Southern OR	KLAMATH FALLS	JOHN C. BOYLE SUB	BB06-4	BOYLE-COPCO 2-230KV	230	0
Southern OR	KLAMATH FALLS	JOHN C. BOYLE SUB	K12-3	JC BOYLE TAP-KLAMATH FALLS-WEYERHAUSER-69KV	69	0
Southern OR	KLAMATH FALLS	JOHN C. BOYLE SUB	K12-3A	HAMAKER-JC BOYLE TAP-69KV	69	0
Southern OR	KLAMATH FALLS	JOHN C. BOYLE SUB	K12-3B	HAMAKER-WEYERHAUSER TAP-69KV	69	0
Southern OR	KLAMATH FALLS	KLAMATH	BB06-1	BOYLE-KLAMATH FALLS-230KV	230	0
Southern OR	KLAMATH FALLS	KLAMATH	K05-1	KLAMATH FALLS-BONANZA-69KV	69	0
Southern OR	KLAMATH FALLS	KLAMATH	K05-1A	KLAMATH FALLS-HORNET-TEXUM TAP-69KV	69	0
Southern OR	KLAMATH FALLS	KLAMATH	K05-1B	DAIRY-HORNET-LAKEVIEW JCT-69KV	69	0
Southern OR	KLAMATH FALLS	KLAMATH	K05-1C	BONANZA TAP-DAIRY-69KV	69	0
Southern OR	KLAMATH FALLS	KLAMATH	K05-A	TEXUM-TEXUM TAP-69KV	69	0
Southern OR	KLAMATH FALLS	KLAMATH	K05-B	BONANZA-BONANZA TAP-CASEBEER-69KV	69	0
Southern OR	KLAMATH FALLS	KLAMATH	K07-1	KLAMATH FALLS-WESTSIDE-69KV	69	0
Southern OR	KLAMATH FALLS	KLAMATH	K07-2	KLAMATH FALLS-LAKEVIEW JCT-LAKEPORT-69KV	69	0
Southern OR	KLAMATH FALLS	KLAMATH	K07-2A	KLAMATH FALLS-TEXUM-69KV	69	0
Southern OR	KLAMATH FALLS	KLAMATH	K07-2B	BRYANT-TEXUM-69KV	69	0
Southern OR	KLAMATH FALLS	KLAMATH	K07-2C	BRYANT-BRYANT TAP-ROSS AVE-69KV	69	0
Southern OR	KLAMATH FALLS	KLAMATH	K07-2D	LAKEPORT-ROSS AVE-69KV	69	0
Southern OR	KLAMATH FALLS	KLAMATH	K07-B	BRYANT TAP-LAKEVIEW JCT-69KV	69	0
Southern OR	KLAMATH FALLS	KLAMATH	K08	KLAMATH FALLS-WEYERHAUSER-69KV	69	0
Southern OR	KLAMATH FALLS	KLAMATH	K12-3C	RUNNING Y TAP-WEYERHAUSER TAP-69KV	69	0
Southern OR	KLAMATH FALLS	KLAMATH	K12-3D	KLAMATH FALLS-RUNNING Y TAP-WESTSIDE-69KV	69	0
Southern OR	KLAMATH FALLS	KLAMATH	K12B	WEYERHAUSER-WEYERHAUSER TAP-69KV	69	0
Southern OR	KLAMATH FALLS	KLAMATH	K12F	RUNNING Y-RUNNING Y TAP-69KV	69	0

## Oregon 2017 Active Circuits with Substation, Voltage and Customer Counts

Oregon Region	Op Area Name	Substation Name	Circuit Id	Circuit Name	kV	Circuit Customer Count
Southern OR	KLAMATH FALLS	KLAMATH	K13-2	KLAMATH FALLS-WESTSIDE-69KV	69	0
Southern OR	KLAMATH FALLS	KLAMATH	K13-3	EASTSIDE-LAKEPORT-WESTSIDE-69KV	69	0
Southern OR	KLAMATH FALLS	KLAMATH	K14-2	KLAMATH FALLS-PICARD SW STATION-69KV	69	0
Southern OR	KLAMATH FALLS	KLAMATH	K14-2A	DORRIS-KLAMATH FALLS-69KV	69	0
Southern OR	KLAMATH FALLS	KLAMATH	K14-2B	DORRIS-PICARD SW STATION-69KV	69	0
Southern OR	KLAMATH FALLS	KLAMATH COGEN 500KV SWITCH	BB02-1	KLAMATH CO-GEN - CAPT JACK	500	0
Southern OR	KLAMATH FALLS	KLAMATH COGEN 500KV SWITCH	BB02-2	KLAMATH COGEN-MERIDAN 500KV LINE	500	0
Southern OR	KLAMATH FALLS	LAKEPORT	5L49	WOCUS	12.5	193
Southern OR	KLAMATH FALLS	LAKEPORT	5L54	SOUTH (LAKEPORT)	12.5	2,391
Southern OR	KLAMATH FALLS	LAKEPORT	5L61	JELDWEN	12.5	7
Southern OR	KLAMATH FALLS	MALIN	BB01	MALIN-ROUND MOUNTAIN #2-525KV	500	0
Southern OR	KLAMATH FALLS	MALIN	BB05	KLAMATH FALLS-MALIN-230KV	230	0
Southern OR	KLAMATH FALLS	MALIN	BB14	CAPTAIN JACK-MALIN-500KV	500	0
Southern OR	KLAMATH FALLS	MALIN	BB17	MALIN-BPA WARNER-230KV	230	0
Southern OR	KLAMATH FALLS	MALIN	K04-2E	MALIN TAP-TULELAKE TAP-69KV	69	0
Southern OR	KLAMATH FALLS	MALIN	K04-2F	MALIN TAP-TURKEY HILL-69KV	69	0
Southern OR	KLAMATH FALLS	MALIN	K04-2G	MERRILL JCT-TURKEY HILL-69KV	69	0
Southern OR	KLAMATH FALLS	MALIN	K04-2H	MERRILL JCT-TUNNEL TAP-69KV	69	0
Southern OR	KLAMATH FALLS	MALIN	K04-2J	MERRILL -MERRILL JCT-69KV	69	0
Southern OR	KLAMATH FALLS	MALIN	K09-1	MALIN-MALIN TAP-69KV	69	0
Southern OR	KLAMATH FALLS	MERRILL (OR)	5L26	LAKE (MERRILL)	12.5	973
Southern OR	KLAMATH FALLS	MERRILL (OR)	5L27	NORTH (MERRILL)	12.5	553
Southern OR	KLAMATH FALLS	MERRILL (OR)	K04-3	MERRILL-HORNET-69KV	69	1
Southern OR	KLAMATH FALLS	MERRILL (OR)	K04B	MERRILL JCT-TUNNEL TAP-69KV	69	0
Southern OR	KLAMATH FALLS	MODOC	5L36	MODOC	12.5	838
Southern OR	KLAMATH FALLS	ROSS AVENUE	5L46	ELDORADO	12.5	1,382
Southern OR	KLAMATH FALLS	ROSS AVENUE	5L47	FORT ROAD	12.5	0
Southern OR	KLAMATH FALLS	ROSS AVENUE	5L48	BROAD ST.	12.5	1,187
Southern OR	KLAMATH FALLS	RUNNING Y	4L50	ROCKY POINT FEEDER (RUNNING Y)	20.8	1,425
Southern OR	KLAMATH FALLS	SHASTA WAY	7L25	SHASTA WAY	4.1	429
Southern OR	KLAMATH FALLS	SNOW GOOSE	5L490	SNOW GOOSE CB 5L490	12.5	0
Southern OR	KLAMATH FALLS	SNOW GOOSE	5L491	SNOW GOOSE CB 5L491	12.5	0
Southern OR	KLAMATH FALLS	SPRAGUE RIVER	5L8	SPRAGUE RIVER	12.5	495
Southern OR	KLAMATH FALLS	SUMMER LAKE (BPA)	CO01-2	MALIN-SUMMER LAKE-500KV	500	0
Southern OR	KLAMATH FALLS	TEXUM	5L112	ANDERSON	12.5	1,194
Southern OR	KLAMATH FALLS	TEXUM	5L113	TOWER	12.5	278
Southern OR	KLAMATH FALLS	TEXUM	5L116	ALTAMONT	12.5	1,493
Southern OR	KLAMATH FALLS	TURKEY HILL	5L20	MALIN CITY	12.5	821
Southern OR	KLAMATH FALLS	TURKEY HILL	5L23	RURAL (TURKEY HILL)	12.5	320
Southern OR	KLAMATH FALLS	WEST SIDE HE PLANT	5L12	ORINDALE	12.5	770
Southern OR	KLAMATH FALLS	WEST SIDE HE PLANT	5L15	CALIFORNIA	12.5	1,344
Southern OR	KLAMATH FALLS	WEST SIDE HE PLANT	5L16	MAIN ST (WEST SIDE HE PLANT)	12.5	109
Southern OR	KLAMATH FALLS	WEST SIDE HE PLANT	5L17	PINE ST (WEST SIDE HE PLANT)	12.5	492
Southern OR	KLAMATH FALLS	WEST SIDE HE PLANT	5L18	RIVERSIDE (WEST SIDE HE PLANT)	12.5	572
Southern OR	KLAMATH FALLS	WEST SIDE HE PLANT	5L19	LAKESHORE	12.5	298
Southern OR	KLAMATH FALLS	WEST SIDE HE PLANT	8L10	CITY WTR PMP	2.4	1
Southern OR	LAKEVIEW	MILE-HI	5L104	INDUSTRIAL	12.5	715
Southern OR	LAKEVIEW	MILE-HI	5L105	BUSINESS	12.5	1,711
Southern OR	LAKEVIEW	MILE-HI	K03	MILE HI-ALTURAS-115KV	115	2
Southern OR	LAKEVIEW	MILE-HI	K03-3	DAVIS CREEK-MILE HI-115KV	115	0
Southern OR	LAKEVIEW	MILE-HI	K15-1	MILE HI-SVEC-69KV	69	0
Southern OR	MEDFORD	ASHLAND (MTN.AVE, PUD)	5R241	CITY	12.5	9
Southern OR	MEDFORD	ASHLAND (MTN.AVE, PUD)	5R245	VALLEY VIEW	12.5	962
Southern OR	MEDFORD	ASHLAND (MTN.AVE, PUD)	R08-2	ASHLAND-MOUNTAIN AVE(BPA)-115KV	115	0
Southern OR	MEDFORD	ASHLAND (MTN.AVE, PUD)	R08-3	MOUNTAIN AVE(BPA)-OAK KNOLL-115KV	115	0

## Oregon 2017 Active Circuits with Substation, Voltage and Customer Counts

Oregon Region	Op Area Name	Substation Name	Circuit Id	Circuit Name	kV	Circuit Customer Count
Southern OR	MEDFORD	ASHLAND (MTN.AVE, PUD)	R18	ASHLAND-BELKNAP-115KV	115	0
Southern OR	MEDFORD	ASHLAND (MTN.AVE, PUD)	R18-1	ASHLAND-BALDY SW STA-BELKNAP-GRIFFIN CREEK-115KV	115	0
Southern OR	MEDFORD	ASHLAND (MTN.AVE, PUD)	R18-2	ASHLAND-TALENT-115KV	115	0
Southern OR	MEDFORD	ASHLAND (MTN.AVE, PUD)	R18-3	TALENT-VOORHEES CROSSING-115KV	115	0
Southern OR	MEDFORD	ASHLAND (MTN.AVE, PUD)	R18-4	GRIFFIN CREEK-VOORHEES CROSSING-115KV	115	0
Southern OR	MEDFORD	ASHLAND (MTN.AVE, PUD)	R18-5	BELKNAP-VOORHEES CROSSING-115KV	115	0
Southern OR	MEDFORD	ASHLAND (MTN.AVE, PUD)	R18-6	CAMPBELL-VOORHEES CROSSING-115KV	115	0
Southern OR	MEDFORD	ASHLAND (MTN.AVE, PUD)	R18-7	BALDY SW STA-CAMPBELL-115KV	115	0
Southern OR	MEDFORD	BEALL LANE	5R359	BEEHIVE	12.5	2
Southern OR	MEDFORD	BEALL LANE	5R361	BULLDOG	12.5	1,710
Southern OR	MEDFORD	BEALL LANE	5R364	BOBCAT	12.5	2,121
Southern OR	MEDFORD	BELKNAP	5R1	KOGAP	12.5	998
Southern OR	MEDFORD	BELKNAP	5R2	RIVERSIDE (BELKNAP)	12.5	660
Southern OR	MEDFORD	BELKNAP	5R3	BARNETT	12.5	1,628
Southern OR	MEDFORD	BELKNAP	5R47	STEWART	12.5	2,078
Southern OR	MEDFORD	BROOKHURST	5R118	SPRINGBROOK	12.5	1,784
Southern OR	MEDFORD	BROOKHURST	5R135	ROBERTS (BROOKHURST)	12.5	1,619
Southern OR	MEDFORD	BROOKHURST	5R32	ROXY	12.5	1,713
Southern OR	MEDFORD	BROOKHURST	5R33	CRATER LAKE	12.5	1,662
Southern OR	MEDFORD	BROOKHURST	5R75	SUNRISE (BROOKHURST)	12.5	1,232
Southern OR	MEDFORD	CAMPBELL	5R216	VOORHIES	12.5	844
Southern OR	MEDFORD	CAMPBELL	5R218	PHOENIX	12.5	1,505
Southern OR	MEDFORD	CAMPBELL	5R227	FERN VALLEY	12.5	1,244
Southern OR	MEDFORD	CAMPBELL	5R312	COBRA	12.5	1,425
Southern OR	MEDFORD	DODGE BRIDGE	4R1	SALMON	20.8	1,597
Southern OR	MEDFORD	DODGE BRIDGE	4R35	MEADOWS ROAD	20.8	1,348
Southern OR	MEDFORD	FOOTHILLS	5R252	HILLCREST ROAD	12.5	0
Southern OR	MEDFORD	FOOTHILLS	5R38	HOSPITAL	12.5	763
Southern OR	MEDFORD	FOOTHILLS	5R39	PIERCE ROAD	12.5	1,155
Southern OR	MEDFORD	FRALEY	5R87	TABLE ROCK	12.5	513
Southern OR	MEDFORD	FRALEY	5R88	DODGE BRIDGE	12.5	362
Southern OR	MEDFORD	GOLD HILL	5R103	GOLD HILL	12.5	1,981
Southern OR	MEDFORD	GOLD HILL	R13-4	GOLD HILL-TOLO-69KV	69	0
Southern OR	MEDFORD	GRIFFIN CREEK	5R200	ARNOLD LANE	12.5	0
Southern OR	MEDFORD	GRIFFIN CREEK	5R204	HULL RD	12.5	2,616
Southern OR	MEDFORD	GRIFFIN CREEK	5R206	GRIFFIN CREEK	12.5	1,711
Southern OR	MEDFORD	HUMBUG CREEK	5R287	HUMMINGBIRD	12.5	676
Southern OR	MEDFORD	LONE PINE	R10-1	LONE PINE-WHETSTONE-115KV	115	0
Southern OR	MEDFORD	LONE PINE	R10-1B	WHETSTONE-WHITE CITY-115KV	115	0
Southern OR	MEDFORD	LONE PINE	R10-1C	LONE PINE-VILAS ROAD-115KV	115	0
Southern OR	MEDFORD	LONE PINE	R10-1D	VILAS ROAD-WHITE CITY115KV	115	0
Southern OR	MEDFORD	LONE PINE	R12	LONE PINE-PROSPECT CENTRAL-69KV	69	0
Southern OR	MEDFORD	LONE PINE	R12-1	FRALEY-LONE PINE-69KV	69	0
Southern OR	MEDFORD	LONE PINE	R12-2	DODGE BRIDGE-FRALEY-69KV	69	0
Southern OR	MEDFORD	LONE PINE	R12-3	DODGE BRIDGE-PROSPECT CENTRAL-69KV	69	0
Southern OR	MEDFORD	LONE PINE	R19-1	LONE PINE-BELKNAP-69KV	69	0
Southern OR	MEDFORD	LONE PINE	R19-11	FOOTHILL-LONE PINE-69KV	69	0
Southern OR	MEDFORD	LONE PINE	R19-12	BELKNAP-FOOTHILL-69KV	69	0
Southern OR	MEDFORD	LONE PINE	R25	LONE PINE-MEDFORD-69KV	69	0
Southern OR	MEDFORD	LONE PINE	R26	LONE PINE-SAGE ROAD-115KV	115	0
Southern OR	MEDFORD	LONE PINE	R26-1	BROOKHURST-LONE PINE-115KV	115	0
Southern OR	MEDFORD	LONE PINE	R26-2	BROOKHURST-MEDFORD-115KV	115	0
Southern OR	MEDFORD	LONE PINE	R26-3	MEDFORD-SAGE ROAD-115KV	115	0
Southern OR	MEDFORD	LONE PINE	R27-1	LONE PINE-BALDY SW STA-115KV	115	0
Southern OR	MEDFORD	LONE PINE	R27-1A	LONE PINE-ROXY ANN-115KV	115	0

## Oregon 2017 Active Circuits with Substation, Voltage and Customer Counts

Oregon Region	Op Area Name	Substation Name	Circuit Id	Circuit Name	kV	Circuit Customer Count
Southern OR	MEDFORD	LONE PINE	R27-1B	BALDY SW STA-ROXY ANN-115KV	115	0
Southern OR	MEDFORD	LONE PINE	R27-2	LONE PINE-PROSPECT CENTRAL-115KV	115	0
Southern OR	MEDFORD	LONE PINE	R27-2A	LONE PINE-STEVENS ROAD-115KV	115	0
Southern OR	MEDFORD	LONE PINE	R27-2B	EAGLE POINT-STEVENS ROAD-115KV	115	0
Southern OR	MEDFORD	LONE PINE	R27-2C	EAGLE POINT-LOST CREEK-115KV	115	0
Southern OR	MEDFORD	LONE PINE	R27-2D	LOST CREEK-TAKELMA-115KV	115	0
Southern OR	MEDFORD	LONE PINE	R27-2E	PROSPECT CENTRAL-TAKELMA-115KV	115	0
Southern OR	MEDFORD	MEDCO	5R280	BOISE CASCADE	12.5	1
Southern OR	MEDFORD	MEDFORD	5R21	MELROSE	12.5	1593
Southern OR	MEDFORD	MEDFORD	5R23	SPRING ST.	12.5	1587
Southern OR	MEDFORD	MEDFORD	5R250	BIG Y	12.5	1860
Southern OR	MEDFORD	MEDFORD	5R253	APPLE	12.5	1105
Southern OR	MEDFORD	MEDFORD	5R257	PEAR	12.5	633
Southern OR	MEDFORD	MEDFORD	5R659	MCLEAN	12.5	679
Southern OR	MEDFORD	MEDFORD	R23-10	HUMBUG CREEK-JACKSONVILLE-MEDFORD-69KV	69	0
Southern OR	MEDFORD	MEDFORD	R23-11	MEDFORD-JACKSONVILLE-69KV	69	0
Southern OR	MEDFORD	MEDFORD	R23-13	JACKSONVILLE-RUCH-69KV	69	0
Southern OR	MEDFORD	MEDFORD	R23-14	HUMBUG CREEK-RUCH-69KV	69	0
Southern OR	MEDFORD	MERIDIAN	BB07	LONE PINE #1-MERIDIAN-230KV	230	0
Southern OR	MEDFORD	MERIDIAN	BB13-1	MERIDIAN-WHETSTONE-230KV	230	0
Southern OR	MEDFORD	MERIDIAN	BB16	LONE PINE #2-MERIDIAN-230KV	230	0
Southern OR	MEDFORD	NEW JACKSONVILLE SUB-DIST	5R284	STAGE RD	12.5	2039
Southern OR	MEDFORD	NEW JACKSONVILLE SUB-DIST	5R285	JACKSONVILLE HWY	12.5	2136
Southern OR	MEDFORD	OAK KNOLL	5R55	SISKIYOU	12.5	1469
Southern OR	MEDFORD	OAK KNOLL	5R56	HIGHWAY 99	12.5	116
Southern OR	MEDFORD	OAK KNOLL	R08	TAP TO OAK KNOLL-115KV	115	0
Southern OR	MEDFORD	OAK KNOLL	R08-1	OAK KNOLL-ASHLAND-115KV	115	1
Southern OR	MEDFORD	OAK KNOLL	R11-2A	BLADY SW STA-OAK KNOLL-115KV	115	0
Southern OR	MEDFORD	OAK KNOLL	R11-2C	GREEN SPRINGS-OAK KNOLL-115KV	115	0
Southern OR	MEDFORD	OAK KNOLL	R11-2E	BALDY SW STA-COPCO2-OAK KNOLL-115KV	115	0
Southern OR	MEDFORD	PROSPECT 3 HE PLANT	5R290	P-3 FOREBAY	12.5	1
Southern OR	MEDFORD	PROSPECT CENTRAL	5R40	NEW CASCADE	12.5	334
Southern OR	MEDFORD	PROSPECT CENTRAL	8R5	COTTAGES	2.4	0
Southern OR	MEDFORD	PROSPECT CENTRAL	8R8	DAM & FOREBAY	2.4	0
Southern OR	MEDFORD	PROSPECT CENTRAL	R14	PROSPECT CNTRL-PROSPECT #3-69KV	69	1
Southern OR	MEDFORD	PROSPECT CENTRAL	R14-1	PROSPECT CENTRAL-RED BLANKET-69KV	69	0
Southern OR	MEDFORD	PROSPECT CENTRAL	R14-2	PROSPECT 3-RED BLANKET-69KV	69	1
Southern OR	MEDFORD	PROSPECT CENTRAL	R15	PROSPECT-PROSPECT CNTRL #1-69KV	69	0
Southern OR	MEDFORD	PROSPECT CENTRAL	R16	PROSPECT-PROSPECT CNTRL #2-69KV	69	0
Southern OR	MEDFORD	PROSPECT CENTRAL	R17	PROSPECT-PROSPECT CNTRL #2-69KV	69	0
Southern OR	MEDFORD	RED BLANKET	7R5	PROSPECT	4.1	386
Southern OR	MEDFORD	ROXY ANN	5R350	St. Bernard	12.5	1194
Southern OR	MEDFORD	ROXY ANN	5R352	ROXYANN2	12.5	0
Southern OR	MEDFORD	ROXY ANN	5R354	RACCOON	12.5	1461
Southern OR	MEDFORD	ROXY ANN	5R356	ROXY ANN CB5R356	12.5	0
Southern OR	MEDFORD	RUCH	5R68	APPLEGATE	12.5	909
Southern OR	MEDFORD	RUCH	5R69	RUCH	12.5	541
Southern OR	MEDFORD	SAGE ROAD (OR)	5R209	TIMBER PROD	12.5	1
Southern OR	MEDFORD	SAGE ROAD (OR)	5R211	COLUMBUS	12.5	1934
Southern OR	MEDFORD	SAGE ROAD (OR)	5R226	BOISE	12.5	905
Southern OR	MEDFORD	SAGE ROAD (OR)	5R27	MCANDREWS	12.5	113
Southern OR	MEDFORD	SAGE ROAD (OR)	5R28	ROSS	12.5	1902
Southern OR	MEDFORD	SAGE ROAD (OR)	5R29	EDWARDS	12.5	724
Southern OR	MEDFORD	SAGE ROAD (OR)	R10-2	SAGE ROAD-WHETSTONE-115KV	115	0
Southern OR	MEDFORD	SAGE ROAD (OR)	R10-2A	BEALL LANE-MEDCO-115KV	115	0

## Oregon 2017 Active Circuits with Substation, Voltage and Customer Counts

Oregon Region	Op Area Name	Substation Name	Circuit Id	Circuit Name	kV	Circuit Customer Count
Southern OR	MEDFORD	SAGE ROAD (OR)	R10-2B	BEALL LANE-SCENIC-115KV	115	0
Southern OR	MEDFORD	SAGE ROAD (OR)	R10-2D	MEDCO-SAGE ROAD-115KV	115	0
Southern OR	MEDFORD	SAGE ROAD (OR)	R27-3	BALDY SW STA-SAGE ROAD-115KV	115	0
Southern OR	MEDFORD	SAGE ROAD (OR)	R27-4	GRIFFIN CREEK-SAGE ROAD-115KV	115	0
Southern OR	MEDFORD	SAGE ROAD (OR)	R27-4A	GRIFFIN CREEK-JACKSONVILLE-115KV	115	0
Southern OR	MEDFORD	SAGE ROAD (OR)	R27-4B	JACKSONVILLE-SAGE ROAD-115KV	115	0
Southern OR	MEDFORD	SCENIC	5R174	UPTON	12.5	1978
Southern OR	MEDFORD	SCENIC	5R180	HEAD RD	12.5	1171
Southern OR	MEDFORD	SCENIC	5R182	TAYLOR RD	12.5	1578
Southern OR	MEDFORD	SCENIC	5R184	CHENEY	12.5	1416
Southern OR	MEDFORD	SCENIC	R13-2	GOLD HILL-SCENIC-69KV	69	0
Southern OR	MEDFORD	SCENIC	R13-5	SCENIC-TOLO-69KV	69	0
Southern OR	MEDFORD	STEVENS ROAD	4R13	HENRY MILLER	20.8	2146
Southern OR	MEDFORD	STEVENS ROAD	4R17	Stingray	20.8	2499
Southern OR	MEDFORD	STEVENS ROAD	4R41	ANTELOPE	20.8	1117
Southern OR	MEDFORD	TAKELMA	4R9	LOST CK. (TAKELMA)	20.8	2587
Southern OR	MEDFORD	TALENT	5R237	TALENT	12.5	2437
Southern OR	MEDFORD	TALENT	5R238	ANDERSON CRK	12.5	1693
Southern OR	MEDFORD	TALENT	5R239	HARTLEY ROAD	12.5	1532
Southern OR	MEDFORD	TALENT	5R240	NORTH HWY	12.5	1170
Southern OR	MEDFORD	TOLO	5R90	TBL ROCK LBR	12.5	158
Southern OR	MEDFORD	TOLO	5R91	SAMS VALLEY	12.5	641
Southern OR	MEDFORD	TOLO	5R92	KIRTLAND RD	12.5	194
Southern OR	MEDFORD	VILAS ROAD	5R110	MCLAUGHLIN	12.5	937
Southern OR	MEDFORD	VILAS ROAD	5R146	KING CENTER	12.5	1391
Southern OR	MEDFORD	VILAS ROAD	5R305	WEBFOOT	12.5	785
Southern OR	MEDFORD	WHETSTONE	R10-2C	SCENIC-WHETSTONE-115KV	115	0
Southern OR	MEDFORD	WHETSTONE	R1-2	FIELDER CREEK-WHETSTONE115KV	115	0
Southern OR	MEDFORD	WHITE CITY	5R11	EAGLE POINT	12.5	1475
Southern OR	MEDFORD	WHITE CITY	5R12	INDUSTRIAL	12.5	31
Southern OR	MEDFORD	WHITE CITY	5R13	FIR-PLY	12.5	22
Southern OR	MEDFORD	WHITE CITY	5R14	AGATE	12.5	105
Southern OR	MEDFORD	WHITE CITY	5R19	3M	12.5	105
Southern OR	MEDFORD	WHITE CITY	5R66	4 CORNERS	12.5	1719
Southern OR	MEDFORD	WHITE CITY	5R76	AVE C	12.5	76
Southern OR	ROSEBURG/MYRTLECREEK	ALVEY (BPA)	BB03	ALVEY-DIXONVILLE-500KV	500	0
Southern OR	ROSEBURG/MYRTLECREEK	ALVEY (BPA)	WI03	ALVEY-DIXONVILLE-230KV	230	0
Southern OR	ROSEBURG/MYRTLECREEK	CANYONVILLE	5U46	CANYONVILLE	12.5	391
Southern OR	ROSEBURG/MYRTLECREEK	CANYONVILLE	5U52	BEALS CREEK FEEDER	12.5	866
Southern OR	ROSEBURG/MYRTLECREEK	CARNES	5U44	RND PRARIE	12.5	413
Southern OR	ROSEBURG/MYRTLECREEK	CARNES	5U45	GREEN	12.5	0
Southern OR	ROSEBURG/MYRTLECREEK	CLEARWATER	U07	CLEARWATER-LEMOLO #1-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	CLEARWATER	U08	CLEARWATER-LEMOLO #2-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	CLEARWATER	U09	CLEARWATER-CLEARWATER #1-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	CLEARWATER #1 SUB	6U17	BRIGGS	7.2	2
Southern OR	ROSEBURG/MYRTLECREEK	CLEARWATER #2 SUB	6U33	CLEARWATER	7.2	98
Southern OR	ROSEBURG/MYRTLECREEK	CLOAKE	4U37	RUSA	20.8	1
Southern OR	ROSEBURG/MYRTLECREEK	CLOAKE	4U38	HARVARD	20.8	2,922
Southern OR	ROSEBURG/MYRTLECREEK	CLOAKE	4U39	GOEDECK	20.8	1,282
Southern OR	ROSEBURG/MYRTLECREEK	DAYS CREEK	U01	DAYS CREEK-PROSPECT CNTRL-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	DAYS CREEK	U01-1	DAYS CREEK-TILLER-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	DAYS CREEK	U01-2	PROSPECT CENTRAL-TILLER-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	DAYS CREEK	U14-1	CANYONVILLE-DAYS CREEK-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	DAYS CREEK	U14-2	CANYONVILLE-RIDDLE-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	DAYS CREEK	U14-3	RIDDLE-RIDDLE VENEER-115KV	115	0

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Oregon Region	Op Area Name	Substation Name	Circuit Id	Circuit Name	kV	Circuit Customer Count
Southern OR	ROSEBURG/MYRTLECREEK	DAYS CREEK	U14-4	NICKEL MOUNTAIN-RIDDLE VENEER-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	DAYS CREEK	U17-2	DAYS CREEK-NICKEL MOUNTAIN-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	DIXONVILLE	BB08-1	DIXONVILLE-NICKEL MOUNTAIN-GRANTS PASS-230KV	230	0
Southern OR	ROSEBURG/MYRTLECREEK	DIXONVILLE	BB08-2	DIXONVILLE-HANNA TAP-230KV	230	0
Southern OR	ROSEBURG/MYRTLECREEK	DIXONVILLE	BB09	DIXONVILLE-RESTON-230KV	230	0
Southern OR	ROSEBURG/MYRTLECREEK	DIXONVILLE	BB09-1	DIXONVILLE-BPA-FAIRVIEW-230KV	230	0
Southern OR	ROSEBURG/MYRTLECREEK	DIXONVILLE	BB10	DIXONVILLE-MERIDIAN-500KV	500	0
Southern OR	ROSEBURG/MYRTLECREEK	DIXONVILLE	BB12	DIXONVILLE 500KV-DIXONVILLE-230KV	230	0
Southern OR	ROSEBURG/MYRTLECREEK	DIXONVILLE	U02	DIXONVILLE-DAYS CREEK-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	DIXONVILLE	U03	DIXONVILLE-TOKETEE SW STA-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	DIXONVILLE	U03-1	DIXONVILLE-GLIDE-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	DIXONVILLE	U03-2	GLIDE-STEAMBOAT-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	DIXONVILLE	U03-3	ILLAHEE FLAT-STEAMBOAT-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	DIXONVILLE	U03-4	ILLAHEE FLAT-TOKETEE SW STA-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	DIXONVILLE	U05	DIXONVILLE-SODA SPRINGS-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	DIXONVILLE	U05-1	BOUNDARY ROAD-DIXONVILLE-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	DIXONVILLE	U05-2	BOUNDARY ROAD-ILLAHEE FLAT-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	DIXONVILLE	U05-3	ILLAHEE FLAT-SODA SPRINGS-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	DIXONVILLE	U10	CLOAKE-DIXONVILLE-GREEN-69KV	69	0
Southern OR	ROSEBURG/MYRTLECREEK	DIXONVILLE	U10-4	DIXONVILLE-SOUTHGATE-69KV	69	0
Southern OR	ROSEBURG/MYRTLECREEK	DIXONVILLE	U10-5	SOUTHGATE-SOUTHGATE TAP-69KV	69	0
Southern OR	ROSEBURG/MYRTLECREEK	DIXONVILLE	U10-6	CLOAKE-SOUTHGATE TAP-69KV	69	0
Southern OR	ROSEBURG/MYRTLECREEK	DIXONVILLE	U10-7	LOOKINGGLASS TAP-SOUTHGATE TAP-69KV	69	0
Southern OR	ROSEBURG/MYRTLECREEK	DIXONVILLE	U10-8	GREEN-LOOKINGGLASS TAP-69KV	69	0
Southern OR	ROSEBURG/MYRTLECREEK	DIXONVILLE	U11	DIXONVILLE-ROBERTS CREEK-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	DIXONVILLE	U12-3	DIXONVILLE-WINCHESTER #1-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	DIXONVILLE	U12-3A	DIXONVILLE-SUTHERLIN-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	DIXONVILLE	U12-3B	OAKLAND-SUTHERLIN-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	DIXONVILLE	U12-3C	DOUGLAS COUNTY FOREST PRODUCTS TAP-OAKLAND-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	DIXONVILLE	U12-3D	DOUGLAS COUNTY FOREST PROD TAP-WINCHESTER-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	DIXONVILLE	U12-4	DIXONVILLE-WINCHESTER #2-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	DIXONVILLE	U12-4A	DIXONVILLE-ROSEBURG-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	DIXONVILLE	U12-4B	ROSEBURG-WINCHESTER-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	DIXONVILLE	U15	DIXONVILLE-DOUGLAS VENEER-69KV	69	0
Southern OR	ROSEBURG/MYRTLECREEK	GARDEN VALLEY	4U80	EDENBOWER	20.8	806
Southern OR	ROSEBURG/MYRTLECREEK	GARDEN VALLEY	4U81	VALLEY	20.8	1,348
Southern OR	ROSEBURG/MYRTLECREEK	GLIDE SUBSTATION	5U83	IDLEYLD	12.5	992
Southern OR	ROSEBURG/MYRTLECREEK	GLIDE SUBSTATION	5U84	LITTLE RIVER	12.5	1,357
Southern OR	ROSEBURG/MYRTLECREEK	GREEN SUBSTATION	5U32	SAFARI	12.5	2,074
Southern OR	ROSEBURG/MYRTLECREEK	GREEN SUBSTATION	5U33	SUNNYSLOPE	12.5	1,620
Southern OR	ROSEBURG/MYRTLECREEK	GREEN SUBSTATION	U10-3A	CARNES-GREEN-69KV	69	0
Southern OR	ROSEBURG/MYRTLECREEK	GREEN SUBSTATION	U10-3B	CARNES-ROBERTS MOUNTAIN TAP-WINSTON-69KV	69	0
Southern OR	ROSEBURG/MYRTLECREEK	GREEN SUBSTATION	U10-3C	CARNES-ROBERTS CREEK-69KV	69	0
Southern OR	ROSEBURG/MYRTLECREEK	ILLAHEE FLATS	6U13	ILLAHEE FLATS SINGLE PHASE RECLOSER	7.2	24
Southern OR	ROSEBURG/MYRTLECREEK	LEMOLO # 1	5U920	DIAMOND LAKE	12.5	181
Southern OR	ROSEBURG/MYRTLECREEK	MYRTLE CREEK	5U76	SUPER Y	12.5	1,529
Southern OR	ROSEBURG/MYRTLECREEK	MYRTLE CREEK	5U77	BOOMER HILL	12.5	2,284
Southern OR	ROSEBURG/MYRTLECREEK	NICKEL MOUNTAIN	BB11	NICKEL MOUNTAIN-HANNA TAP SW STATION-230KV	230	0
Southern OR	ROSEBURG/MYRTLECREEK	OAKLAND (OR)	5U11	UMPQUA	12.5	1,296
Southern OR	ROSEBURG/MYRTLECREEK	OAKLAND (OR)	5U12	STAGECOACH	12.5	550
Southern OR	ROSEBURG/MYRTLECREEK	RIDDLE	5U1	TRI CITY	12.5	981
Southern OR	ROSEBURG/MYRTLECREEK	RIDDLE	5U2	COW CREEK	12.5	1,541
Southern OR	ROSEBURG/MYRTLECREEK	RIDDLE	5U3	HANNA	12.5	282
Southern OR	ROSEBURG/MYRTLECREEK	RIDDLE	U13-2	MYRTLE CREEK-RIDDLE-69KV	69	0

## Oregon 2017 Active Circuits with Substation, Voltage and Customer Counts

Oregon Region	Op Area Name	Substation Name	Circuit Id	Circuit Name	kV	Circuit Customer Count
Southern OR	ROSEBURG/MYRTLECREEK	RIDDLE-VENEER	5U23	FORD MILL	12.5	1
Southern OR	ROSEBURG/MYRTLECREEK	RIDDLE-VENEER	5U50	RFP-LVL (EWP)	12	29
Southern OR	ROSEBURG/MYRTLECREEK	ROBERTS CREEK	U10-3	GREEN-ROBERTS CREEK-69KV	69	0
Southern OR	ROSEBURG/MYRTLECREEK	ROBERTS CREEK	U13	MYRTLE CREEK-ROBERTS CREEK-69KV	69	0
Southern OR	ROSEBURG/MYRTLECREEK	ROBERTS CREEK	U13-3	DILLARD TAP-ROBERTS CREEK-ROBERTS MTN TAP-69KV	69	0
Southern OR	ROSEBURG/MYRTLECREEK	ROBERTS CREEK	U13-4	DILLARD TAP-ROSEBURG LUMBER-69KV	69	0
Southern OR	ROSEBURG/MYRTLECREEK	ROBERTS CREEK	U13-5	DILLARD TAP-MYRTLE CREEK-69KV	69	0
Southern OR	ROSEBURG/MYRTLECREEK	ROSEBURG	4U10	DIAMOND	20.8	2,480
Southern OR	ROSEBURG/MYRTLECREEK	ROSEBURG	4U22	DIXON	20.8	1,105
Southern OR	ROSEBURG/MYRTLECREEK	ROSEBURG	4U5	DOUGLAS	20.8	2,058
Southern OR	ROSEBURG/MYRTLECREEK	SLIDE CREEK	6U76	SLIDE CREEK CAMP	7.2	4
Southern OR	ROSEBURG/MYRTLECREEK	SODA SPRINGS HE PLT	6U1	DRY CREEK	7.2	1
Southern OR	ROSEBURG/MYRTLECREEK	SODA SPRINGS HE PLT	U04	SODA SPRINGS-TOKETEE SW STA-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	SODA SPRINGS HE PLT	U04-1	SLIDE CREEK-SODA SPRINGS-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	SODA SPRINGS HE PLT	U04-2	FISH CREEK-SLIDE CREEK-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	SODA SPRINGS HE PLT	U04-3	FISH CREEK-TOKETEE-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	SODA SPRINGS HE PLT	U04-4	TOKETEE-TOKETEE SW STA-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	SOUTHGATE	4U30	SHADY POINT	20.8	1,572
Southern OR	ROSEBURG/MYRTLECREEK	SOUTHGATE	4U31	BOOTH	20.8	1,569
Southern OR	ROSEBURG/MYRTLECREEK	STEAMBOAT	6U18	STEAMBOAT	7.2	22
Southern OR	ROSEBURG/MYRTLECREEK	SUTHERLIN	5U35	NON-PAREIL	12.5	1,300
Southern OR	ROSEBURG/MYRTLECREEK	SUTHERLIN	5U36	DEADY	12.5	1,322
Southern OR	ROSEBURG/MYRTLECREEK	SUTHERLIN	5U56	Industrial	12.5	479
Southern OR	ROSEBURG/MYRTLECREEK	TILLER	5U89	JACKSON CRK	12.5	308
Southern OR	ROSEBURG/MYRTLECREEK	TOKETEE	6U21	BACK UP FOR CLEARWATER 6U33	6.9	0
Southern OR	ROSEBURG/MYRTLECREEK	TOKETEE	8U12	TOKETEE CITY	2.4	19
Southern OR	ROSEBURG/MYRTLECREEK	TOKETEE	U06	TOKETEE-CLEARWATER-115KV	115	0
Southern OR	ROSEBURG/MYRTLECREEK	WINCHESTER	4U18	WILBUR	20.8	1,637
Southern OR	ROSEBURG/MYRTLECREEK	WINCHESTER	5U15	NEWTON CREEK	12.5	1,717
Southern OR	ROSEBURG/MYRTLECREEK	WINCHESTER	5U17	FISHER	12.5	761
Southern OR	ROSEBURG/MYRTLECREEK	WINCHESTER	5U19	EVANS	12.5	757
Southern OR	ROSEBURG/MYRTLECREEK	WINCHESTER	U10-9	CLOAKE-WINCHESTER-69KV	69	0
Southern OR	ROSEBURG/MYRTLECREEK	WINCHESTER	U10-9A	GARDEN VALLEY-WINCHESTER-69KV	69	0
Southern OR	ROSEBURG/MYRTLECREEK	WINCHESTER	U10-9B	CLOAKE-GARDEN VALLEY-69KV	69	0
Southern OR	ROSEBURG/MYRTLECREEK	WINSTON	5U48	BROCKWAY	12.5	861
Southern OR	ROSEBURG/MYRTLECREEK	WINSTON	5U49	DILLARD	12.5	1,444
Willamette Valley	ALBANY	BPA ALBANY	WI09	BPA ALBANY-HAZELWOOD-115KV	115	0
Willamette Valley	ALBANY	HAZELWOOD	4M335	WEST HIGH	20.8	1,471
Willamette Valley	ALBANY	HAZELWOOD	4M336	RIVERVIEW (HAZELWOOD)	20.8	1,232
Willamette Valley	ALBANY	HAZELWOOD	WI07	HAZELWOOD-FRY-115KV	115	0
Willamette Valley	ALBANY	HAZELWOOD	WI10	HAZELWOOD-MARYS RIVER-115KV	115	0
Willamette Valley	ALBANY	HAZELWOOD	WI10-1	HAZELWOOD-GRANT-115KV	115	0
Willamette Valley	ALBANY	HAZELWOOD	WI13-1	HAZELWOOD-VINE ST-69KV	69	0
Willamette Valley	ALBANY	HAZELWOOD	WI14-1	HAZELWOOD-QUEEN AVE-69KV	69	0
Willamette Valley	ALBANY	JEFFERSON (OR)	4M117	MARION	20.8	711
Willamette Valley	ALBANY	JEFFERSON (OR)	4M125	MINT	20.8	2,443
Willamette Valley	ALBANY	MURDER CREEK	4M243	SCRAVEL HILL	20.8	3,573
Willamette Valley	ALBANY	MURDER CREEK	4M245	RURAL NW	20.8	1,967
Willamette Valley	ALBANY	MURDER CREEK	4M249	DURA-PACIFIC	20.8	7
Willamette Valley	ALBANY	MURDER CREEK	4M250	INDUSTRIAL	20.8	1,211
Willamette Valley	ALBANY	MURDER CREEK	5M131	WAH CHANG SOUTH	12.5	1

## Oregon 2017 Active Circuits with Substation, Voltage and Customer Counts

Oregon Region	Op Area Name	Substation Name	Circuit Id	Circuit Name	kV	Circuit Customer Count
Willamette Valley	ALBANY	MURDER CREEK	5M132	WAH CHANG WEST	12.5	0
Willamette Valley	ALBANY	OREMET	4M295	OAK CREEK	20.8	103
Willamette Valley	ALBANY	OREMET	4M296	ROGERSDALE	20.8	2,155
Willamette Valley	ALBANY	OREMET	5M19	OREMET	12.5	3
Willamette Valley	ALBANY	OREMET	5M20	OREMET-BPA	12.5	0
Willamette Valley	ALBANY	PARRISH GAP	WI15-1	PARRISH GAP-STAYTON-69KV	69	0
Willamette Valley	ALBANY	PARRISH GAP	WI15-3	PARRISH GAP-JEFFERSON-69KV	69	0
Willamette Valley	ALBANY	PARRISH GAP	WI15-4	JEFFERSON-JEFFERSON TAP-69KV	69	1
Willamette Valley	ALBANY	QUEEN AVE	4M217	SANTIAM	20.8	1,884
Willamette Valley	ALBANY	QUEEN AVE	4M258	HILL STREET	20.8	2,188
Willamette Valley	ALBANY	QUEEN AVE	4M261	WAVERLY	20.8	3,390
Willamette Valley	ALBANY	QUEEN AVE	4M262	GEARY STREET	20.8	2,736
Willamette Valley	ALBANY	QUEEN AVE	WI14-2	QUEEN-SCIO-69KV	69	0
Willamette Valley	ALBANY	QUEEN AVE	WI17	JEFFERSON JCT-JEFFERSON TAP-69KV	69	0
Willamette Valley	ALBANY	VINE STREET	4M15	FERRY	20.8	2,161
Willamette Valley	ALBANY	VINE STREET	4M16	WATER STREET	20.8	4,011
Willamette Valley	ALBANY	VINE STREET	WI13-3	VINE ST-INDEPENDENCE-69KV	69	0
Willamette Valley	ALBANY	VINE STREET	WI13-3A	VINE ST-SW3M215-69KV	69	0
Willamette Valley	ALBANY	VINE STREET	WI13-3B	INDEPENDENCE-SW3M215-69KV	69	0
Willamette Valley	ALBANY	VINE STREET	WI16	VINE STREET-JEFFERSON TAP-69KV	69	0
Willamette Valley	ALBANY	WESTERN KRAFT	5M24	WEST MAIN	12.5	1
Willamette Valley	ALBANY	WESTERN KRAFT	5M25	EAST MAIN	12.5	1
Willamette Valley	CORVALLIS	BUCHANAN	4M130	HEWLETT PACKARD	20.8	2,631
Willamette Valley	CORVALLIS	BUCHANAN	4M133	PEORIA	20.8	2,442
Willamette Valley	CORVALLIS	BUCHANAN	4M134	N. NINTH ST.	20.8	2,589
Willamette Valley	CORVALLIS	BUCHANAN	WI06-3	BUCHANAN-DIXON-115KV	115	0
Willamette Valley	CORVALLIS	CIRCLE BLVD	4M394	H. P. #1	20.8	1
Willamette Valley	CORVALLIS	CIRCLE BLVD	4M396	H. P. #2	20.8	0
Willamette Valley	CORVALLIS	CIRCLE BLVD	4M427	H. P. #3	20.8	1
Willamette Valley	CORVALLIS	CIRCLE BLVD	4M428	H. P. #4	20.8	0
Willamette Valley	CORVALLIS	CIRCLE BLVD	4M429	H. P. #5	20.8	1
Willamette Valley	CORVALLIS	CIRCLE BLVD	4M430	H. P. #6	20.8	0
Willamette Valley	CORVALLIS	CIRCLE BLVD	WI06-2	CIRCLE BLVD-BUCHANAN-115KV	115	0
Willamette Valley	CORVALLIS	DIXON	7M26	FOURTH ST.	4.1	235
Willamette Valley	CORVALLIS	DIXON	7M29	SECOND ST.	4.1	275
Willamette Valley	CORVALLIS	GRANT	4M265	HIGH SCHOOL	20.8	2,490
Willamette Valley	CORVALLIS	GRANT	4M266	CHINTIMINI	20.8	2,541
Willamette Valley	CORVALLIS	GRANT	4M268	KINGS ROAD	20.8	2,541
Willamette Valley	CORVALLIS	GRANT	4M269	29TH STREET	20.8	3,292
Willamette Valley	CORVALLIS	GRANT	WI10-2	GRANT-HILLVIEW-115KV	115	0
Willamette Valley	CORVALLIS	HILLVIEW	4M180	WEST HILLS	20.8	1,852
Willamette Valley	CORVALLIS	HILLVIEW	4M181	PHILOMATH	20.8	640
Willamette Valley	CORVALLIS	HILLVIEW	4M182	SUNSET	20.8	1,751
Willamette Valley	CORVALLIS	HILLVIEW	4M185	PLYMOUTH	20.8	2,225
Willamette Valley	CORVALLIS	MARYS RIVER	4M151	GREENBERRY	20.8	3,591
Willamette Valley	CORVALLIS	MARYS RIVER	4M152	AVERY	20.8	188
Willamette Valley	CORVALLIS	MARYS RIVER	4M153	GALLAGHER	20.8	159
Willamette Valley	CORVALLIS	MARYS RIVER	WI06-4	MARY'S RIVER-DIXON-115KV	115	0
Willamette Valley	CORVALLIS	MARYS RIVER	WI10-3	MARY'S RIVER-HILLVIEW-115KV	115	0
Willamette Valley	COTTAGE GROVE/J.CITY	ALVEY (BPA)	WI12	BPA ALVEY-VILLAGE GREEN-115KV	115	1
Willamette Valley	COTTAGE GROVE/J.CITY	COBURG	4M220	DETERING	20.8	542



## Oregon 2017 Active Circuits with Substation, Voltage and Customer Counts

Oregon Region	Op Area Name	Substation Name	Circuit Id	Circuit Name	kV	Circuit Customer Count
Willamette Valley	COTTAGE GROVE/J.CITY	DIAMOND HILL	WI02-2	DIAMOND HILL-BPA ALVEY-230KV	230	0
Willamette Valley	COTTAGE GROVE/J.CITY	DIAMOND HILL	WI02-2A	DIAMOND HILL-MCKENZIE(EWEB)-230KV	230	0
Willamette Valley	COTTAGE GROVE/J.CITY	DIAMOND HILL	WI02-2B	BPA ALVEY-MCKENZIE(EWEB)-230KV	230	0
Willamette Valley	COTTAGE GROVE/J.CITY	DIAMOND HILL	WI19-2	DIAMOND HILL-LANCASTER TAP-69KV	69	0
Willamette Valley	COTTAGE GROVE/J.CITY	DIAMOND HILL	WI20	DIAMOND HILL-EWEB MCKENZIE-69KV	69	0
Willamette Valley	COTTAGE GROVE/J.CITY	DIAMOND HILL	WI21	DIAMOND HILL-JUNCTION CITY-69KV	69	0
Willamette Valley	COTTAGE GROVE/J.CITY	GOSHEN (OR)	4M360	GOSHEN FDR	20.8	1,595
Willamette Valley	COTTAGE GROVE/J.CITY	HARRISBURG SUB	4M400	TERRITORIAL	20.8	1,815
Willamette Valley	COTTAGE GROVE/J.CITY	JUNCTION CITY	4M102	6TH STREET	20.8	1,140
Willamette Valley	COTTAGE GROVE/J.CITY	JUNCTION CITY	4M99	PRAIRIE ROAD	20.8	990
Willamette Valley	COTTAGE GROVE/J.CITY	JUNCTION CITY	W121-1	WILKINS CORNER-VAUGHN TAP-69KV	69	0
Willamette Valley	COTTAGE GROVE/J.CITY	JUNCTION CITY	W121-2	JUNCTION CITY-VAUGHN TAP-69KV	69	0
Willamette Valley	COTTAGE GROVE/J.CITY	LANCASTER	4M209	MONROE	20.8	1,078
Willamette Valley	COTTAGE GROVE/J.CITY	MARTIN CREEK (BPA)	WI12B	BPA MARTIN CREEK-VLG GREEN-115KV	115	2
Willamette Valley	COTTAGE GROVE/J.CITY	VILLAGE GREEN	4M84	NORTH SIDE	20.8	2,346
Willamette Valley	COTTAGE GROVE/J.CITY	VILLAGE GREEN	4M86	MADISON	20.8	1,583
Willamette Valley	DALLAS/INDEPENDENCE	DALLAS	4M100	RURAL (DALLAS)	20.8	4,547
Willamette Valley	DALLAS/INDEPENDENCE	DALLAS	4M201	INDUSTRIAL	20.8	27
Willamette Valley	DALLAS/INDEPENDENCE	DALLAS	4M202	ELLEDALE	20.8	2,863
Willamette Valley	DALLAS/INDEPENDENCE	DALLAS	4M238	DALLAS	20.8	2,257
Willamette Valley	DALLAS/INDEPENDENCE	INDEPENDENCE	4M22	RICKREAL	20.8	3,266
Willamette Valley	DALLAS/INDEPENDENCE	INDEPENDENCE	4M25	BUENA VISTA	20.8	1,958
Willamette Valley	DALLAS/INDEPENDENCE	MONPAC	WI05	MONPAC-BPA SALEM-115KV	115	0
Willamette Valley	DALLAS/INDEPENDENCE	MONPAC	WI05-1	DALLAS-MONPOC-115KV	115	0
Willamette Valley	DALLAS/INDEPENDENCE	MONPAC	WI05-2	BPA SALEM-DALLAS-115KV	115	0
Willamette Valley	DALLAS/INDEPENDENCE	MONPAC	WI13-4	MONPAC-INDEPENDENCE-69KV	69	0
Willamette Valley	LEBANON	BROWNSVILLE	4M17	CALAPOOYA	12.5	2,779
Willamette Valley	LEBANON	BROWNSVILLE	WI18-2	HALSEY-BROWNSVILLE-69KV	69	0
Willamette Valley	LEBANON	CALAPOOYA	4M850	SPAULDING	20.8	1,091
Willamette Valley	LEBANON	CALAPOOYA	4M851	BEAR	20.8	31
Willamette Valley	LEBANON	CALAPOOYA	WI118-1	CALAPOOYA-BROWNSVILLE-69KV	69	0
Willamette Valley	LEBANON	CALAPOOYA	WI23	CALAPOOYA-HALSEY-69KV	69	0
Willamette Valley	LEBANON	CROWFOOT	4M204	CROWFOOT	20.8	1,491
Willamette Valley	LEBANON	CROWFOOT	4M206	US PLYWOOD (LEBANON)	20.8	1,793
Willamette Valley	LEBANON	DIAMOND HILL	WI02-1A	CALAPOOYA-DIAMOND HILL-230KV	230	0
Willamette Valley	LEBANON	DIAMOND HILL	WI19	DIAMOND HILL-BROWNSVILLE-69KV	69	0
Willamette Valley	LEBANON	FRY	WI01-A	FRY-PARRISH GAP-230KV	230	0
Willamette Valley	LEBANON	FRY	WI02-1	FRY-DIAMOND HILL	230	0
Willamette Valley	LEBANON	FRY	WI02-1B	CALAPOOYA-FRY-230KV	230	0
Willamette Valley	LEBANON	FRY	WI06	FRY-MARYS RIVER-115KV	115	0
Willamette Valley	LEBANON	FRY	WI06-1	FRY-CIRCLE BLVD-115KV	115	0
Willamette Valley	LEBANON	FRY	WI08	FRY-WESTERN KRAFT-115KV	115	0
Willamette Valley	LEBANON	FRY	WI08-1	FRY-MURDER CREEK-115KV	115	0
Willamette Valley	LEBANON	FRY	WI08-2	MURDER CREEK-WESTREN KRAFT-115KV	115	0
Willamette Valley	LEBANON	FRY	WI08-3	WESTERN KRAFT-CONSER TAP-115KV	115	0
Willamette Valley	LEBANON	FRY	WI11	FRY-FOSTER-115KV	115	0
Willamette Valley	LEBANON	FRY	WI11-1	FOSTER-BPA LEBANON-115KV	115	0
Willamette Valley	LEBANON	FRY	WI11-2	FRY-LEBANON-115KV	115	0
Willamette Valley	LEBANON	FRY	WI11-3	CROWFOOT-LEBANON-115KV	115	0
Willamette Valley	LEBANON	FRY	WI11-4	CROWFOOT-SWEET HOME-115KV	115	0
Willamette Valley	LEBANON	FRY	WI11-5	FOSTER-SWEET HOME-115KV	115	0

## Oregon 2017 Active Circuits with Substation, Voltage and Customer Counts

Oregon Region	Op Area Name	Substation Name	Circuit Id	Circuit Name	kV	Circuit Customer Count
Willamette Valley	LEBANON	HALSEY SW STA	WI19-1	HALSEY-LANCASTER TAP-69KV	69	0
Willamette Valley	LEBANON	LEBANON	4M61	TANGENT	20.8	2,431
Willamette Valley	LEBANON	LEBANON	4M62	RALSTON	20.8	1,985
Willamette Valley	LEBANON	LEBANON	4M63	TENNESSEE	20.8	1,774
Willamette Valley	LEBANON	LEBANON	4M79	CROWN Z	20.8	1,112
Willamette Valley	LEBANON	SWEET HOME	4M37	HOLLEY	20.8	1,982
Willamette Valley	LEBANON	SWEET HOME	4M38	NARROWS	20.8	960
Willamette Valley	LEBANON	SWEET HOME	4M93	AMES CREEK	20.8	1,666
Willamette Valley	LEBANON	SWEET HOME	4M94	FOSTER	20.8	2,324
Willamette Valley	PRINEVILLE	BALDWIN ROAD	CO14-5	BALDWIN ROAD-HOUSTON LAKE-115KV	115	0
Willamette Valley	PRINEVILLE	BALDWIN ROAD	CO29	BALDWIN ROAD-PILLAR(APPLE)	115	1
Willamette Valley	PRINEVILLE	HOUSTON LAKE	CO03-2	HOUSTON LAKE-POWELL BUTTE-115KV	115	0
Willamette Valley	PRINEVILLE	HOUSTON LAKE	CO22	HOUSTON LAKE-PRN1(FACEBOOK)-115KV	115	0
Willamette Valley	PRINEVILLE	HOUSTON LAKE	CO23	HOUSTON LAKE-PRN2(FACEBOOK)-115KV	115	0
Willamette Valley	PRINEVILLE	PONDEROSA-P	CO24	GALA SOLAR-PONDEROSA-115KV	115	0
Willamette Valley	STAYTON	BPA SANTIAM	ZB001	BPA SANTIAM-BPA ALBANY#1-230KV	230	0
Willamette Valley	STAYTON	LYONS	4M120	MILL CITY	20.8	715
Willamette Valley	STAYTON	LYONS	4M70	MEHAMA	20.8	2,080
Willamette Valley	STAYTON	OLD LYONS	WI14-3A	TAP TO EVERGREEN BIO POWER-69KV	69	1
Willamette Valley	STAYTON	OLD LYONS	WI14-4	LYONS-SANTIAM SWITCH STATION-69KV	69	0
Willamette Valley	STAYTON	PARRISH GAP	WI01-B	PARRISH GAP-PGE BETHEL-230KV	230	0
Willamette Valley	STAYTON	SCIO	5M126	THOMAS	12.5	1,540
Willamette Valley	STAYTON	SCIO	WI14-3	SCIO-LYONS-69KV	69	0
Willamette Valley	STAYTON	STAYTON	4M19	AUMSVILLE	20.8	3,088
Willamette Valley	STAYTON	STAYTON	4M353	WEST STAYTON	20.8	3,427
Willamette Valley	STAYTON	STAYTON	4M370	CASCADE	20.8	1,572
Willamette Valley	STAYTON	STAYTON	4M50	3RD STREET	20.8	906
Willamette Valley	STAYTON	STAYTON CITY	WI15-2	STAYTON-SANTIAM SWITCH STATION-69KV	69	0
Willamette Valley	STAYTON	STAYTON CITY	WI15A	SANTIAM SW STA-SANTIAM(BPA)-69KV	69	0

## Oregon 2017 Circuit Metrics (excluding major events)

Oregon Regions	Op Area Name	Substation Name	Circuit Id	Circuit Name	Customers in Incident Sustained	Customer Minutes Lost	Circuit Customer Count	SAIDI	SAIFI
Central OR	BEND/REDMOND	BEND	5D10	PORTLAND AVE	104	19,845	2,350	8.44	0.044
Central OR	BEND/REDMOND	BEND	5D11	GLEN VISTA	1,157	77,595	1,118	69.41	1.035
Central OR	BEND/REDMOND	BEND	5D12	DIVISION ST.	134	28,395	214	132.69	0.626
Central OR	BEND/REDMOND	BEND	5D196	MALLARD	170	15,414	1,430	10.78	0.119
Central OR	BEND/REDMOND	BOND STREET	5D411	BACHELOR	896	176,895	1,720	102.85	0.521
Central OR	BEND/REDMOND	BOND STREET	5D418	BLAKELY	33	3,656	1,263	2.89	0.026
Central OR	BEND/REDMOND	CHINA HAT	5D140	LAVA (CHINA HAT)	229	73,069	2,221	32.90	0.103
Central OR	BEND/REDMOND	CHINA HAT	5D142	HIGH DESERT	41	6,594	1,665	3.96	0.025
Central OR	BEND/REDMOND	CHINA HAT	5D144	D.R.W.	188	28,005	2,395	11.69	0.078
Central OR	BEND/REDMOND	CLEVELAND AVE.	5D30	ARROWHEAD	1,471	256,499	1,193	215.00	1.233
Central OR	BEND/REDMOND	CLEVELAND AVE.	5D35	WICKIUP	19	2,716	983	2.76	0.019
Central OR	BEND/REDMOND	CLEVELAND AVE.	5D38	TOMAHAWK	177	15,595	1,397	11.16	0.127
Central OR	BEND/REDMOND	CLEVELAND AVE.	5D94	TEEPER	4,249	417,289	3,315	125.88	1.282
Central OR	BEND/REDMOND	CLEVELAND AVE.	5D96	OBSIDIAN	99	11,202	907	12.35	0.109
Central OR	BEND/REDMOND	CLEVELAND AVE.	5D98	HUCKLEBERRY	46	11,906	996	11.95	0.046
Central OR	BEND/REDMOND	CROOKED RIVER RANCH	4D131	CANYON	211	24,324	1,738	14.00	0.121
Central OR	BEND/REDMOND	CROOKED RIVER RANCH	4D30	CROOKED R.R.	14	3,100	757	4.09	0.018
Central OR	BEND/REDMOND	DESCHUTES	5D184	PRONGHORN	2,207	253,296	1,078	234.97	2.047
Central OR	BEND/REDMOND	DESCHUTES	5D2	DESCHUTES S	150	17,771	965	18.42	0.155
Central OR	BEND/REDMOND	HUNTERS CIRCLE	5D192	Mackinaw	229	33,407	638	52.36	0.359
Central OR	BEND/REDMOND	OVERPASS	5D104	AWBREY	17	3,788	990	3.83	0.017
Central OR	BEND/REDMOND	OVERPASS	5D106	NEZ PERCE	2,917	227,863	2,592	87.91	1.125
Central OR	BEND/REDMOND	OVERPASS	5D120	CHINOOK	30	7,622	1,355	5.63	0.022
Central OR	BEND/REDMOND	OVERPASS	5D128	PAIUTE	165	20,106	2,071	9.71	0.080
Central OR	BEND/REDMOND	OVERPASS	5D155	APACHE	1,080	180,040	1,894	95.06	0.570
Central OR	BEND/REDMOND	PILOT BUTTE	5D261	KLONDIKE	1,016	92,484	2,970	31.14	0.342
Central OR	BEND/REDMOND	PILOT BUTTE	5D263	DRAKE FEEDER	3,248	165,258	2,381	69.41	1.364
Central OR	BEND/REDMOND	REDMOND	5D21	SOUTH (REDMOND)	21	3,380	703	4.81	0.030
Central OR	BEND/REDMOND	REDMOND	5D22	INDUSTRIAL	155	43,062	1,381	31.18	0.112
Central OR	BEND/REDMOND	REDMOND	5D223	TETHEROW	823	44,622	796	56.06	1.034
Central OR	BEND/REDMOND	REDMOND	5D226	CLINE FALLS	301	22,499	1,415	15.90	0.213
Central OR	BEND/REDMOND	REDMOND	5D227	WINDSOR	243	37,817	2,848	13.28	0.085
Central OR	BEND/REDMOND	REDMOND	5D228	CITY	47	5,333	1,276	4.18	0.037
Central OR	BEND/REDMOND	REDMOND	5D229	JUNIPER	141	31,189	392	79.56	0.360
Central OR	BEND/REDMOND	SHEVLIN PARK	5D238	WOLVERINE (SHP) (WAS 5D327)	253	107,819	2,554	42.22	0.099
Central OR	BEND/REDMOND	SHEVLIN PARK	5D241	BADGER (SHP)	661	128,784	2,968	43.39	0.223
Central OR	BEND/REDMOND	SHEVLIN PARK	5D243	Black Bear	77	38,732	1,252	30.94	0.062
Central OR	BEND/REDMOND	YEW AVENUE	5D322	BIRDIE	135	21,193	1,582	13.40	0.085
Central OR	BEND/REDMOND	YEW AVENUE	5D323	FAIRWAY	10	3,976	379	10.49	0.026
Central OR	BEND/REDMOND	YEW AVENUE	5D325	EAGLE	10	2,017	2,420	0.83	0.004
Central OR	MADRAS	CHERRY LANE	5D295	7 PEAKS	143	5,267	140	37.62	1.021
Central OR	MADRAS	CULVER	5D5	CULVER	669	132,413	1,734	76.36	0.386
Central OR	MADRAS	MADRAS	5D52	MADRAS RURAL	288	28,552	990	28.84	0.291

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Central OR	MADRAS	MADRAS	5D53	AGATE	107	15,596	1,254	12.44	0.085
Central OR	MADRAS	MADRAS	5D57	QUARTZ	131	10,399	1,348	7.71	0.097
Central OR	MADRAS	MADRAS	5D61	MADRAS CITY	152	17,623	1,282	13.75	0.119
Central OR	MADRAS	POWELL BUTTE	5D1	POWELL BUTTE	157	24,914	601	41.45	0.261
Central OR	MADRAS	PRINEVILLE	5D126	RIMROCK	20	6,798	850	8.00	0.024
Central OR	MADRAS	PRINEVILLE	5D167	NORTHVILLE	704	115,031	2,589	44.43	0.272
Central OR	MADRAS	PRINEVILLE	5D25	OCHOCO	1,082	218,126	969	225.10	1.117
Central OR	MADRAS	PRINEVILLE	5D47	MC KAY (PRINEVILLE)	691	70,514	1,625	43.39	0.425
Central OR	MADRAS	PRINEVILLE	5D48	LAMONTA	45	13,964	607	23.01	0.074
Central OR	MADRAS	PRINEVILLE	5D69	GRIMES FLAT	2,060	141,721	1,541	91.97	1.337
Central OR	MADRAS	WARM SPRINGS	4D68	WARM SPRINGS (OR)	3,090	672,992	1,009	666.99	3.062
CoastPlus	CLATSOP (ASTORIA)	CANNON BEACH	5A10	HAYSTACK	11,814	1,079,654	1,583	682.03	7.463
CoastPlus	CLATSOP (ASTORIA)	CANNON BEACH	5A8	ECOLA	6,445	186,051	1,214	153.25	5.309
CoastPlus	CLATSOP (ASTORIA)	FERN HILL SUB	5A51	JOHN DAY	646	95,267	260	366.41	2.485
CoastPlus	CLATSOP (ASTORIA)	FERN HILL SUB	5A52	SCANDINAVIAN	663	236,729	377	627.93	1.759
CoastPlus	CLATSOP (ASTORIA)	KNAPPA SVENSEN	5A92	SVENSEN	1,137	194,264	699	277.92	1.627
CoastPlus	CLATSOP (ASTORIA)	KNAPPA SVENSEN	5A93	BRADWOOD	2,581	249,816	917	272.43	2.815
CoastPlus	CLATSOP (ASTORIA)	SEASIDE	5A80	GROVE	10,583	190,805	2,395	79.67	4.419
CoastPlus	CLATSOP (ASTORIA)	SEASIDE	5A81	CENTRAL	7,493	177,624	1,618	109.78	4.631
CoastPlus	CLATSOP (ASTORIA)	SEASIDE	5A82	NECANICUM	6,719	292,389	1,177	248.42	5.709
CoastPlus	CLATSOP (ASTORIA)	SEASIDE	5A83	GEARHART	15,384	537,633	3,201	167.96	4.806
CoastPlus	CLATSOP (ASTORIA)	WARRENTON	5A15	CITY	7,523	286,893	1,855	154.66	4.056
CoastPlus	CLATSOP (ASTORIA)	WARRENTON	5A16	MILL (WARRENTON)	5,078	328,478	589	557.69	8.621
CoastPlus	CLATSOP (ASTORIA)	WARRENTON	5A20	SOUTH (WARRENTON)	7,642	386,708	1,589	243.37	4.809
CoastPlus	CLATSOP (ASTORIA)	YOUNGS BAY	5A202	PORT DOCK	350	38,441	1,198	32.09	0.292
CoastPlus	CLATSOP (ASTORIA)	YOUNGS BAY	5A204	MOO COW	1,923	159,393	1,126	141.56	1.708
CoastPlus	CLATSOP (ASTORIA)	YOUNGS BAY	5A205	FIFTH STREET	131	25,879	966	26.79	0.136
CoastPlus	CLATSOP (ASTORIA)	YOUNGS BAY	5A206	YOUNGS BAY #6	1	185	315	0.59	0.003
CoastPlus	CLATSOP (ASTORIA)	YOUNGS BAY	5A210	YOUNGS BAY #10	888	86,372	933	92.57	0.952
CoastPlus	CLATSOP (ASTORIA)	YOUNGS BAY	5A211	OLNEY	2,892	350,435	1,037	337.93	2.789
CoastPlus	CLATSOP (ASTORIA)	YOUNGS BAY	5A213	INDUSTRIAL	162	18,776	1,372	13.69	0.118
CoastPlus	COOS BAY/COQUILLE	BANDON TIE (BPA)	L804	BANDON	1,772	382,845	741	516.66	2.391
CoastPlus	COOS BAY/COQUILLE	COOS RIVER	4C106	COOS RIVER	5,692	1,012,920	1,358	745.89	4.191
CoastPlus	COOS BAY/COQUILLE	COQUILLE	4C41	HENRY STREET	220	41,906	1,658	25.27	0.133
CoastPlus	COOS BAY/COQUILLE	COQUILLE	4C42	TERRES HGHTS	1,938	164,517	1,546	106.41	1.254
CoastPlus	COOS BAY/COQUILLE	COQUILLE	4C43	INDUSTRIAL	12	1,736	149	11.65	0.081
CoastPlus	COOS BAY/COQUILLE	EMPIRE NEW	4C108	EMPIRE NEW	18	2,152	1,721	1.25	0.010
CoastPlus	COOS BAY/COQUILLE	EMPIRE NEW	4C89	SCOTT	49	3,833	1,405	2.73	0.035
CoastPlus	COOS BAY/COQUILLE	EMPIRE NEW	4C90	CHARLESTON	4,433	311,696	2,083	149.64	2.128
CoastPlus	COOS BAY/COQUILLE	JORDAN POINT	5C11	WEYCO#2	1	19	1	19.40	1.000
CoastPlus	COOS BAY/COQUILLE	JORDAN POINT	5C6	SAND DUNES (JORDAN POINT)	31	602	31	19.43	1.000
CoastPlus	COOS BAY/COQUILLE	LOCKHART	4C48	CITY CENTER	1,579	35,322	1,521	23.22	1.038
CoastPlus	COOS BAY/COQUILLE	LOCKHART	4C49	EASTSIDE	814	22,371	765	29.24	1.064

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CoastPlus	COOS BAY/COQUILLE	LOCKHART	4C5	GEORGIA-PAC	94	1,896	95	19.95	0.989
CoastPlus	COOS BAY/COQUILLE	LOCKHART	4C50	BUNKERHILL	2,691	188,675	1,811	104.18	1.486
CoastPlus	COOS BAY/COQUILLE	LOCKHART	4C97	ENGLEWOOD	2,568	119,980	1,377	87.13	1.865
CoastPlus	COOS BAY/COQUILLE	MYRTLE POINT	4C36	NORTH (MYRTLE POINT)	135	20,810	334	62.31	0.404
CoastPlus	COOS BAY/COQUILLE	MYRTLE POINT	4C37	MAPLE STREET	133	18,415	2,070	8.90	0.064
CoastPlus	COOS BAY/COQUILLE	SOUTH DUNES	5C9	DOUGLAS CHIP	2	40	2	20.10	1.000
CoastPlus	COOS BAY/COQUILLE	STATE STREET	4C112	WOODLAND	2,486	88,109	1,829	48.17	1.359
CoastPlus	COOS BAY/COQUILLE	STATE STREET	4C66	BAYSHORE	1,771	41,172	1,700	24.22	1.042
CoastPlus	COOS BAY/COQUILLE	STATE STREET	4C67	INDUSTRIAL	2,679	67,417	2,202	30.62	1.217
CoastPlus	COOS BAY/COQUILLE	STATE STREET	4C86	BANGOR	1,864	53,409	1,795	29.75	1.038
CoastPlus	HOOD RIVER	GORDON HOLLOW	4K1	SHERMAN 208	945	149,839	635	235.97	1.488
CoastPlus	HOOD RIVER	HOOD RIVER	5K37	RESIDENTIAL	2,809	194,676	2,055	94.73	1.367
CoastPlus	HOOD RIVER	HOOD RIVER	5K43	BELMONT	2,985	248,493	1,142	217.59	2.614
CoastPlus	HOOD RIVER	HOOD RIVER	5K44	NORTH (HOOD RIVER)	1,979	117,601	1,765	66.63	1.121
CoastPlus	HOOD RIVER	HOOD RIVER	5K70	EASTSIDE	2,790	230,332	1,014	227.15	2.751
CoastPlus	HOOD RIVER	HOOD RIVER	5K74	SOUTH (HOOD RIVER)	1,957	135,132	1,590	84.99	1.231
CoastPlus	HOOD RIVER	KENWOOD	5K50	OAKGROVE	294	42,619	699	60.97	0.421
CoastPlus	HOOD RIVER	WASCO	7K1	WASCO	6	268	267	1.00	0.022
CoastPlus	LINCOLN CITY	DEVILS LAKE	4A310	INLAND FEEDER	4,058	200,839	1,825	110.05	2.224
CoastPlus	LINCOLN CITY	DEVILS LAKE	4A312	OCEAN	7,551	419,128	2,948	142.17	2.561
CoastPlus	LINCOLN CITY	DEVILS LAKE	4A316	LAKE (DEVILS LAKE)	21,872	1,830,890	4,478	408.86	4.884
CoastPlus	LINCOLN CITY	DEVILS LAKE	4A338	SIUSLAW	2,085	163,157	645	252.96	3.233
CoastPlus	LINCOLN CITY	GLENEDEN	7A364	GLENEDEN	1,455	46,972	707	66.44	2.058
CoastPlus	LINCOLN CITY	GLENEDEN	7A366	SALISHAN	1,067	96,908	359	269.94	2.972
CoastPlus	LINCOLN CITY	NELSCOTT	7A390	NELSCOTT	1,219	49,099	352	139.49	3.463
CoastPlus	LINCOLN CITY	PGE GRAND RONDE	R114	BOYER	29	18,197	19	957.75	1.526
CoastPlus	LINCOLN CITY	WECOMA BEACH	7A354	WECOMA	1,497	53,613	714	75.09	2.097
CoastPlus	PORTLAND	ALDERWOOD 115/12.5	5P22	ALDERWOOD #2	14	5,577	304	18.35	0.046
CoastPlus	PORTLAND	ALDERWOOD 115/12.5	5P33	ALDERWOOD #4	369	28,216	182	155.03	2.027
CoastPlus	PORTLAND	ALDERWOOD 115/12.5	5P604	ALDERWOOD #3	4	246	173	1.42	0.023
CoastPlus	PORTLAND	COLUMBIA (OR)	5P266	#2	2,763	184,499	2,562	72.01	1.078
CoastPlus	PORTLAND	COLUMBIA (OR)	5P268	COLUMBIA #1	16	11,620	340	34.18	0.047
CoastPlus	PORTLAND	COLUMBIA (OR)	5P474	COLUMBIA #6	562	75,655	547	138.31	1.027
CoastPlus	PORTLAND	COLUMBIA (OR)	5P476	COLUMBIA #3	1,040	138,178	826	167.29	1.259
CoastPlus	PORTLAND	COLUMBIA (OR)	5P478	COLUMBIA #4	846	147,104	823	178.74	1.028
CoastPlus	PORTLAND	CULLY	5P288	CULLY #3-UG	1,654	82,791	808	102.46	2.047
CoastPlus	PORTLAND	CULLY	5P290	CULLY #2	4,819	234,373	2,393	97.94	2.014
CoastPlus	PORTLAND	CULLY	5P292	CULLY #1	5,940	293,904	2,921	100.62	2.034
CoastPlus	PORTLAND	HOLLADAY (OR)	5P145	HOLLADAY #1-UG	1	456	204	2.24	0.005
CoastPlus	PORTLAND	HOLLADAY (OR)	5P147	HOLLADAY #3-UG	1	177	164	1.08	0.006
CoastPlus	PORTLAND	HOLLADAY (OR)	5P158	HOLLADAY #6	21	1,956	894	2.19	0.023
CoastPlus	PORTLAND	HOLLYWOOD	5P203	HOLLYWOOD #3	1,362	14,662	1,350	10.86	1.009
CoastPlus	PORTLAND	HOLLYWOOD	5P204	HOLLYWOOD #2	586	5,684	1,935	2.94	0.303

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CoastPlus	PORTLAND	HOLLYWOOD	5P205	HOLLYWOOD #1	4,346	303,626	2,101	144.51	2.069
CoastPlus	PORTLAND	HOLLYWOOD	5P208	HOLLYWOOD #5	3,160	43,990	1,726	25.49	1.831
CoastPlus	PORTLAND	HOLLYWOOD	5P209	HOLLYWOOD #4	2,529	41,737	2,360	17.69	1.072
CoastPlus	PORTLAND	KILLINGSWORTH	5P123	KILLINGSWORTH #3	9	3,995	350	11.41	0.026
CoastPlus	PORTLAND	KILLINGSWORTH	5P217	KILLINGSWORTH #5	2	197	426	0.46	0.005
CoastPlus	PORTLAND	KILLINGSWORTH	5P41	KILLINGSWORTH #4	616	210,103	2,732	76.90	0.225
CoastPlus	PORTLAND	KILLINGSWORTH	5P89	KILLINGSWORTH #2	94	12,455	3,097	4.02	0.030
CoastPlus	PORTLAND	KNOTT	5P231	KNOTT #1	14	933	3,263	0.29	0.004
CoastPlus	PORTLAND	KNOTT	5P232	KNOTT #2	2	847	1,628	0.52	0.001
CoastPlus	PORTLAND	KNOTT	5P233	KNOTT #3	2,316	203,968	2,276	89.62	1.018
CoastPlus	PORTLAND	KNOTT	5P368	11022	176	36,304	173	209.85	1.017
CoastPlus	PORTLAND	KNOTT	5P372	11046	60	6,397	560	11.42	0.107
CoastPlus	PORTLAND	KNOTT	5P374	11020	1	153	974	0.16	0.001
CoastPlus	PORTLAND	LINCOLN (OR)	5P432	11D02-UG	477	2,836	475	5.97	1.004
CoastPlus	PORTLAND	MALLORY	5P162	MALLORY #1	150	23,821	2,021	11.79	0.074
CoastPlus	PORTLAND	MALLORY	5P164	MALLORY #2	158	36,215	3,076	11.77	0.051
CoastPlus	PORTLAND	PARKROSE	5P244	PARKROSE#4	3,292	498,699	3,094	161.18	1.064
CoastPlus	PORTLAND	PARKROSE	5P246	PARKROSE#3	4,416	620,367	3,071	202.01	1.438
CoastPlus	PORTLAND	PARKROSE	5P250	PARKROSE#2	1,389	150,138	661	227.14	2.101
CoastPlus	PORTLAND	PARKROSE	5P252	PARKROSE#1	5,386	578,958	1,673	346.06	3.219
CoastPlus	PORTLAND	RUSSELLVILLE	5P274	RUSSELLVILLE #3	951	149,898	3,018	49.67	0.315
CoastPlus	PORTLAND	RUSSELLVILLE	5P276	RUSSELLVILLE #4	2,356	447,091	2,307	193.80	1.021
CoastPlus	PORTLAND	RUSSELLVILLE	5P278	RUSSELLVILLE #1	696	99,658	3,214	31.01	0.217
CoastPlus	PORTLAND	RUSSELLVILLE	5P280	RUSSELLVILLE #2	1,285	122,713	1,275	96.25	1.008
CoastPlus	PORTLAND	VERNON	5P391	VERNON #1	3,693	186,291	1,817	102.53	2.032
CoastPlus	PORTLAND	VERNON	5P392	VERNON NO. 2	2,717	348,734	2,501	139.44	1.086
CoastPlus	PORTLAND	VERNON	5P393	VERNON #3	186	44,184	3,200	13.81	0.058
CoastPlus	PORTLAND	VERNON	5P394	VERNON # 4	67	18,397	3,229	5.70	0.021
CoastPlus	PORTLAND	VERNON	5P395	VERNON # 5	92	12,257	2,195	5.58	0.042
Northeast OR	ENTERPRISE	ENTERPRISE (OR)	4W8	CREIGHTON LN	2,423	169,717	1,436	118.19	1.687
Northeast OR	ENTERPRISE	ENTERPRISE (OR)	5W15	CITY	1,315	68,672	932	73.68	1.411
Northeast OR	ENTERPRISE	ENTERPRISE (OR)	5W26	RURAL (ENTERPRISE)	2,305	306,915	1,047	293.14	2.202
Northeast OR	ENTERPRISE	JOSEPH	5W21	PRAIRIE	1,230	71,491	837	85.41	1.470
Northeast OR	ENTERPRISE	MINAM	5W18	MINAM	14	1,062	12	88.48	1.167
Northeast OR	ENTERPRISE	PALLETTE	4W14	PALLETTE NORTH	525	152,655	173	882.40	3.035
Northeast OR	ENTERPRISE	PALLETTE	4W15	PALLETTE SOUTH	109	38,317	54	709.58	2.019
Northeast OR	ENTERPRISE	WALLOWA	5W28	CITY	1,172	58,557	862	67.93	1.360
Northeast OR	HERMISTON	ARLINGTON	5K25	ARLINGTON	4	521	509	1.02	0.008
Northeast OR	HERMISTON	BLALOCK	5K40	BLALOCK	11	1,785	19	93.96	0.579
Northeast OR	HERMISTON	DALREED	4K16	WILLOW COVE	289	40,775	74	551.02	3.905
Northeast OR	HERMISTON	DALREED	4K36	SIMTAG	72	6,374	18	354.13	4.000
Northeast OR	HERMISTON	DALREED	4K46	BOEING	393	94,060	178	528.43	2.208
Northeast OR	HERMISTON	HERMISTON	5W602	RURAL (HERMISTON)	6,986	204,566	1,359	150.53	5.141

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Northeast OR	HERMISTON	HINKLE	5W82	MEADOWS	1,242	37,113	373	99.50	3.330
Northeast OR	HERMISTON	UMATILLA	5W658	UMATILLA	10	1,727	1,155	1.49	0.009
Northeast OR	HERMISTON	UMATILLA	5W660	MCNARY	265	58,345	899	64.90	0.295
Northeast OR	HERMISTON	UMATILLA	5W664	PORT FEEDER	-	-	55	-	-
Northeast OR	PENDLETON	ATHENA	5W703	CITY	1,849	225,485	842	267.80	2.196
Northeast OR	PENDLETON	ATHENA	5W705	HELIX	669	138,175	419	329.77	1.597
Northeast OR	PENDLETON	BUCKAROO	5W201	STATE HOSP.	772	38,964	372	104.74	2.075
Northeast OR	PENDLETON	BUCKAROO	5W202	REITH	280	63,016	1,536	41.03	0.182
Northeast OR	PENDLETON	BUCKAROO	5W203	MONTEE	318	65,558	1,654	39.64	0.192
Northeast OR	PENDLETON	PENDLETON	5W401	WEST HILLS	338	27,334	1,690	16.17	0.200
Northeast OR	PENDLETON	PENDLETON	5W402	HARRIS HTS	476	68,980	2,056	33.55	0.232
Northeast OR	PENDLETON	PENDLETON	5W403	MISSION	529	107,266	1,046	102.55	0.506
Northeast OR	PENDLETON	PENDLETON	7W451	BUSINESS	7	495	248	1.99	0.028
Northeast OR	PENDLETON	PENDLETON	7W452	NORTHWEST	13	404	512	0.79	0.025
Northeast OR	PENDLETON	PENDLETON	7W453	SOUTHWEST (PENDELTON)	1	64	333	0.19	0.003
Northeast OR	PENDLETON	PILOT ROCK	5W406	PILOT ROCK CITY	724	56,363	1,381	40.81	0.524
Northeast OR	PENDLETON	WESTON NEW (OR)	5W7	SCOTTS FEEDER	582	67,844	445	152.46	1.308
Northeast OR	WALLA WALLA	UMAPINE	5W105	UMAPINE FEEDER	606	75,845	962	78.84	0.630
Northeast OR	WALLA WALLA	UMAPINE	5W106	FERNDALE	459	84,794	1,344	63.09	0.342
South OR	GRANTS PASS	AGNESS AVE	5R172	SPALDING MILL	203	15,282	877	17.43	0.231
South OR	GRANTS PASS	AGNESS AVE	5R173	JONES CREEK	52	10,748	869	12.37	0.060
South OR	GRANTS PASS	AGNESS AVE	5R322	ANTEATER	62	2,690	965	2.79	0.064
South OR	GRANTS PASS	APPLEGATE	5R267	MURPHY	1,465	95,031	1,032	92.08	1.420
South OR	GRANTS PASS	APPLEGATE	5R278	HIGHWAY	3,700	394,170	1,602	246.05	2.310
South OR	GRANTS PASS	BEACON	5R104	SAVAGE ST	2,595	201,260	1,243	161.91	2.088
South OR	GRANTS PASS	BEACON	5R105	BEACON ST	1,723	135,284	830	162.99	2.076
South OR	GRANTS PASS	CAVE JUNCTION	5R52	FREE& EASY	2,064	430,729	2,340	184.07	0.882
South OR	GRANTS PASS	CAVE JUNCTION	5R53	ROUGH & READY	1,199	326,330	1,516	215.26	0.791
South OR	GRANTS PASS	CAVEMAN	5R295	QUAIL	122	63,268	1,119	56.54	0.109
South OR	GRANTS PASS	CAVEMAN	5R82	WASHINGTON	281	47,419	1,187	39.95	0.237
South OR	GRANTS PASS	CAVEMAN	5R98	MANZANITA	19	1,926	573	3.36	0.033
South OR	GRANTS PASS	CAVEMAN	5R99	CAVEMAN	33	13,499	1,184	11.40	0.028
South OR	GRANTS PASS	DOWELL	5R331	DOVE	97	7,204	1,468	4.91	0.066
South OR	GRANTS PASS	DOWELL	5R334	DUCK	525	67,057	2,488	26.95	0.211
South OR	GRANTS PASS	EASY VALLEY	5R123	G STREET	2,971	383,328	2,121	180.73	1.401
South OR	GRANTS PASS	EASY VALLEY	5R125	ROGUE	250	25,084	1,742	14.40	0.144
South OR	GRANTS PASS	EASY VALLEY	5R259	CHINOOK	620	87,089	1,291	67.46	0.480
South OR	GRANTS PASS	FIELDER CREEK	4R33	ELK FDR.	1,616	168,859	1,574	107.28	1.027
South OR	GRANTS PASS	FIELDER CREEK	4R34	BEAR FDR	737	97,633	862	113.26	0.855
South OR	GRANTS PASS	GLENDALE SUBSTATION	5R133	GLENDALE	7,410	1,055,770	1,880	561.58	3.941
South OR	GRANTS PASS	GLENDALE SUBSTATION	5R143	INDUSTRIAL	59	5,280	637	8.29	0.093
South OR	GRANTS PASS	JEROME PRAIRIE	5R62	WILD PRAIRIE	1,387	356,176	1,589	224.15	0.873
South OR	GRANTS PASS	JEROME PRAIRIE	5R63	WOOD RIVER	3,370	400,407	1,567	255.52	2.151

## Oregon 2017 Circuit Metrics (excluding major events)

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South OR	GRANTS PASS	MERLIN	5R232	MERLIN-HUGO	759	144,985	2,043	70.97	0.372
South OR	GRANTS PASS	MERLIN	5R234	PARADISE	477	169,208	1,184	142.91	0.403
South OR	GRANTS PASS	MERLIN	5R248	PLEASANT VALLEY-MERLIN FEEDER	359	12,895	1,782	7.24	0.201
South OR	GRANTS PASS	MERLIN	5R251	BADGER	1,196	49,232	916	53.75	1.306
South OR	GRANTS PASS	NEW O'BRIEN	5R106	O'BRIEN	432	162,767	430	378.53	1.005
South OR	GRANTS PASS	PARK STREET (OR)	5R114	FRUITDALE	239	25,622	2,143	11.96	0.112
South OR	GRANTS PASS	PARK STREET (OR)	5R115	ALLEN CREEK	63	12,349	974	12.68	0.065
South OR	GRANTS PASS	PARK STREET (OR)	5R121	NEW HOPE	405	144,291	1,834	78.68	0.221
South OR	GRANTS PASS	PARK STREET (OR)	5R169	PORTOLA	1,418	143,813	1,374	104.67	1.032
South OR	GRANTS PASS	PROVOLT	5R67	NORTH-SOUTH	2,618	171,405	1,408	121.74	1.859
South OR	GRANTS PASS	ROGUE RIVER	5R77	SAVAGE/WIMMER	2,318	268,831	1,820	147.71	1.274
South OR	GRANTS PASS	ROGUE RIVER	5R78	ROCKY POINT (ROGUE RIVER)	2,088	294,065	1,046	281.13	1.996
South OR	GRANTS PASS	SELMA	5R65	DEER CREEK	1,181	204,329	1,181	173.01	1.000
South OR	KLAMATH FALLS	BEATTY	5L1	BEATTY	2,958	179,024	400	447.56	7.395
South OR	KLAMATH FALLS	BLY	5L14	TOWN (BLY)	3,160	168,917	431	391.92	7.332
South OR	KLAMATH FALLS	BOISE CASCADE	7L9	BOISE CASCAD	1	50	1	50.13	1.000
South OR	KLAMATH FALLS	BONANZA (OR)	5L7	POE VALLEY	561	139,817	467	299.39	1.201
South OR	KLAMATH FALLS	BRYANT	5L2	GARY STREET	2,131	102,710	2,106	48.77	1.012
South OR	KLAMATH FALLS	BRYANT	5L3	WASHBURN	2,294	128,538	1,811	70.98	1.267
South OR	KLAMATH FALLS	BRYANT	5L4	SUMMERS LANE	2,008	100,862	1,944	51.88	1.033
South OR	KLAMATH FALLS	BRYANT	5L5	MOYINA HTS.	2,701	148,725	2,406	61.81	1.123
South OR	KLAMATH FALLS	CASEBEER SUB	4L16	LANGELL VLY	1,431	354,766	1,157	306.63	1.237
South OR	KLAMATH FALLS	CHILOQUIN	5L57	CRATER LAKE	1,219	147,439	1,040	141.77	1.172
South OR	KLAMATH FALLS	CHILOQUIN MARKET	5L37	WILLIAMSON	16	2,531	543	4.66	0.029
South OR	KLAMATH FALLS	DAIRY	5L42	SWAN LAKE	426	48,078	276	174.20	1.543
South OR	KLAMATH FALLS	DAIRY	5L43	DAIRY	1,794	118,527	465	254.90	3.858
South OR	KLAMATH FALLS	HAMAKER	5L55	KENO	3,145	256,340	1,675	153.04	1.878
South OR	KLAMATH FALLS	HAMAKER	5L56	MOUNTAIN	200	27,448	160	171.55	1.250
South OR	KLAMATH FALLS	HENLEY	5L58	HENLEY	276	7,511	235	31.96	1.174
South OR	KLAMATH FALLS	HENLEY	5L59	WEST	634	25,995	530	49.05	1.196
South OR	KLAMATH FALLS	HORNET	5L44	HOMEDALE	2,874	256,526	2,731	93.93	1.052
South OR	KLAMATH FALLS	HORNET	5L45	CRYSTAL SPR	2,974	342,310	1,458	234.78	2.040
South OR	KLAMATH FALLS	LAKEPORT	5L49	WOCUS	280	35,139	193	182.07	1.451
South OR	KLAMATH FALLS	LAKEPORT	5L54	SOUTH (LAKEPORT)	1,127	90,379	2,391	37.80	0.471
South OR	KLAMATH FALLS	MERRILL (OR)	5L26	LAKE (MERRILL)	1,084	62,811	973	64.55	1.114
South OR	KLAMATH FALLS	MERRILL (OR)	5L27	NORTH (MERRILL)	1,322	51,038	553	92.29	2.391
South OR	KLAMATH FALLS	MODOC	5L36	MODOC	1,550	101,047	838	120.58	1.850
South OR	KLAMATH FALLS	ROSS AVENUE	5L46	ELDORADO	90	22,078	1,382	15.98	0.065
South OR	KLAMATH FALLS	ROSS AVENUE	5L48	BROAD ST.	44	5,434	1,187	4.58	0.037
South OR	KLAMATH FALLS	RUNNING Y	4L50	ROCKY POINT FEEDER (RUNNING Y)	4,750	941,597	1,425	660.77	3.333
South OR	KLAMATH FALLS	SPRAGUE RIVER	5L8	SPRAGUE RIVER	3,504	454,469	495	918.12	7.079
South OR	KLAMATH FALLS	TEXUM	5L112	ANDERSON	1,212	57,438	1,194	48.11	1.015
South OR	KLAMATH FALLS	TEXUM	5L113	TOWER	977	46,077	278	165.75	3.514



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South OR	KLAMATH FALLS	TEXUM	5L116	ALTAMONT	1,551	77,192	1,493	51.70	1.039
South OR	KLAMATH FALLS	TURKEY HILL	5L20	MALIN CITY	2,277	205,954	821	250.86	2.773
South OR	KLAMATH FALLS	TURKEY HILL	5L23	RURAL (TURKEY HILL)	381	42,237	320	131.99	1.191
South OR	KLAMATH FALLS	WEST SIDE HE PLANT	5L12	ORINDALE	2,342	623,461	770	809.69	3.042
South OR	KLAMATH FALLS	WEST SIDE HE PLANT	5L15	CALIFORNIA	1,378	194,166	1,344	144.47	1.025
South OR	KLAMATH FALLS	WEST SIDE HE PLANT	5L16	MAIN ST (WEST SIDE HE PLANT)	110	19,778	109	181.45	1.009
South OR	KLAMATH FALLS	WEST SIDE HE PLANT	5L18	RIVERSIDE (WEST SIDE HE PLANT)	6	387	572	0.68	0.010
South OR	KLAMATH FALLS	WEST SIDE HE PLANT	5L19	LAKESHORE	5	542	298	1.82	0.017
South OR	LAKEVIEW	MILE-HI	5L104	INDUSTRIAL	422	47,068	715	65.83	0.590
South OR	LAKEVIEW	MILE-HI	5L105	BUSINESS	46	7,930	1,711	4.63	0.027
South OR	MEDFORD	ASHLAND (MTN.AVE, PUD)	5R241	CITY	26	8,681	9	964.50	2.889
South OR	MEDFORD	ASHLAND (MTN.AVE, PUD)	5R245	VALLEY VIEW	2,128	386,910	962	402.19	2.212
South OR	MEDFORD	BEALL LANE	5R361	BULLDOG	1,814	85,706	1,710	50.12	1.061
South OR	MEDFORD	BEALL LANE	5R364	BOBCAT	214	18,307	2,121	8.63	0.101
South OR	MEDFORD	BELKNAP	5R1	KOGAP	162	37,986	998	38.06	0.162
South OR	MEDFORD	BELKNAP	5R2	RIVERSIDE (BELKNAP)	714	48,538	660	73.54	1.082
South OR	MEDFORD	BELKNAP	5R3	BARNETT	134	23,068	1,628	14.17	0.082
South OR	MEDFORD	BELKNAP	5R47	STEWART	4,456	228,057	2,078	109.75	2.144
South OR	MEDFORD	BROOKHURST	5R118	SPRINGBROOK	24	3,982	1,784	2.23	0.013
South OR	MEDFORD	BROOKHURST	5R135	ROBERTS (BROOKHURST)	91	15,193	1,619	9.38	0.056
South OR	MEDFORD	BROOKHURST	5R32	ROXY	135	12,621	1,713	7.37	0.079
South OR	MEDFORD	BROOKHURST	5R33	CRATER LAKE	361	102,387	1,662	61.60	0.217
South OR	MEDFORD	BROOKHURST	5R75	SUNRISE (BROOKHURST)	11	1,122	1,232	0.91	0.009
South OR	MEDFORD	CAMPBELL	5R216	VOORHIES	-	-	844	-	-
South OR	MEDFORD	CAMPBELL	5R218	PHOENIX	315	53,708	1,505	35.69	0.209
South OR	MEDFORD	CAMPBELL	5R227	FERN VALLEY	112	11,212	1,244	9.01	0.090
South OR	MEDFORD	CAMPBELL	5R312	COBRA	5,126	477,778	1,425	335.28	3.597
South OR	MEDFORD	DODGE BRIDGE	4R1	SALMON	839	175,992	1,597	110.20	0.525
South OR	MEDFORD	DODGE BRIDGE	4R35	MEADOWS ROAD	1,989	413,421	1,348	306.69	1.476
South OR	MEDFORD	FOOTHILLS	5R38	HOSPITAL	55	23,814	763	31.21	0.072
South OR	MEDFORD	FOOTHILLS	5R39	PIERCE ROAD	322	52,344	1,155	45.32	0.279
South OR	MEDFORD	FRALEY	5R87	TABLE ROCK	241	52,416	513	102.18	0.470
South OR	MEDFORD	FRALEY	5R88	DODGE BRIDGE	12	1,291	362	3.57	0.033
South OR	MEDFORD	GOLD HILL	5R103	GOLD HILL	5,287	595,900	1,981	300.81	2.669
South OR	MEDFORD	GRIFFIN CREEK	5R204	HULL RD	10	752	2,616	0.29	0.004
South OR	MEDFORD	GRIFFIN CREEK	5R206	GRIFFIN CREEK	660	69,049	1,711	40.36	0.386
South OR	MEDFORD	HUMBUG CREEK	5R287	HUMMINGBIRD	2,434	543,263	676	803.64	3.601
South OR	MEDFORD	MEDCO	5R280	BOISE CASCADE	1	357	1	357.07	1.000
South OR	MEDFORD	MEDFORD	5R21	MELROSE	3,315	95,682	1,593	60.06	2.081
South OR	MEDFORD	MEDFORD	5R23	SPRING ST.	2,011	405,666	1,587	255.62	1.267
South OR	MEDFORD	MEDFORD	5R250	BIG Y	2,120	141,591	1,860	76.12	1.140
South OR	MEDFORD	MEDFORD	5R253	APPLE	1,129	33,588	1,105	30.40	1.022
South OR	MEDFORD	MEDFORD	5R257	PEAR	77	5,521	633	8.72	0.122

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South OR	MEDFORD	MEDFORD	5R659	MCLEAN	56	9,461	679	13.93	0.082
South OR	MEDFORD	NEW JACKSONVILLE SUB-DIST	5R284	STAGE RD	1,117	29,173	2,039	14.31	0.548
South OR	MEDFORD	NEW JACKSONVILLE SUB-DIST	5R285	JACKSONVILLE HWY	4,649	585,938	2,136	274.32	2.176
South OR	MEDFORD	OAK KNOLL	5R55	SISKIYOU	2,648	372,610	1,469	253.65	1.803
South OR	MEDFORD	OAK KNOLL	5R56	HIGHWAY 99	142	19,979	116	172.23	1.224
South OR	MEDFORD	PROSPECT CENTRAL	5R40	NEW CASCADE	999	138,853	334	415.73	2.991
South OR	MEDFORD	RED BLANKET	7R5	PROSPECT	941	197,534	386	511.75	2.438
South OR	MEDFORD	ROXY ANN	5R350	St. Bernard	249	43,735	1,194	36.63	0.209
South OR	MEDFORD	ROXY ANN	5R354	RACCOON	224	28,635	1,461	19.60	0.153
South OR	MEDFORD	RUCH	5R68	APPLEGATE	1,503	190,539	909	209.61	1.653
South OR	MEDFORD	RUCH	5R69	RUCH	636	120,128	541	222.05	1.176
South OR	MEDFORD	SAGE ROAD (OR)	5R211	COLUMBUS	2,103	82,374	1,934	42.59	1.087
South OR	MEDFORD	SAGE ROAD (OR)	5R226	BOISE	65	3,289	905	3.63	0.072
South OR	MEDFORD	SAGE ROAD (OR)	5R28	ROSS	31	1,604	1,902	0.84	0.016
South OR	MEDFORD	SAGE ROAD (OR)	5R29	EDWARDS	69	7,017	724	9.69	0.095
South OR	MEDFORD	SCENIC	5R174	UPTON	5,317	403,491	1,978	203.99	2.688
South OR	MEDFORD	SCENIC	5R180	HEAD RD	275	12,492	1,171	10.67	0.235
South OR	MEDFORD	SCENIC	5R182	TAYLOR RD	2,359	217,449	1,578	137.80	1.495
South OR	MEDFORD	SCENIC	5R184	CHENEY	135	32,683	1,416	23.08	0.095
South OR	MEDFORD	STEVENS ROAD	4R13	HENRY MILLER	2,293	51,535	2,146	24.01	1.068
South OR	MEDFORD	STEVENS ROAD	4R17	Stingray	3,191	175,617	2,499	70.28	1.277
South OR	MEDFORD	STEVENS ROAD	4R41	ANTELOPE	2,553	374,545	1,117	335.31	2.286
South OR	MEDFORD	TAKELMA	4R9	LOST CK. (TAKELMA)	3,442	169,596	2,587	65.56	1.330
South OR	MEDFORD	TALENT	5R237	TALENT	154	29,808	2,437	12.23	0.063
South OR	MEDFORD	TALENT	5R238	ANDERSON CRK	279	33,128	1,693	19.57	0.165
South OR	MEDFORD	TALENT	5R239	HARTLEY ROAD	35	7,243	1,532	4.73	0.023
South OR	MEDFORD	TALENT	5R240	NORTH HWY	130	38,117	1,170	32.58	0.111
South OR	MEDFORD	TOLO	5R90	TBL ROCK LBR	328	151,992	158	961.98	2.076
South OR	MEDFORD	TOLO	5R91	SAMS VALLEY	2,044	332,753	641	519.12	3.189
South OR	MEDFORD	TOLO	5R92	KIRTLAND RD	616	81,110	194	418.09	3.175
South OR	MEDFORD	VILAS ROAD	5R110	MCLAUGHLIN	1,312	68,011	937	72.58	1.400
South OR	MEDFORD	VILAS ROAD	5R146	KING CENTER	342	45,099	1,391	32.42	0.246
South OR	MEDFORD	VILAS ROAD	5R305	WEBFOOT	4	707	785	0.90	0.005
South OR	MEDFORD	WHITE CITY	5R11	EAGLE POINT	303	87,368	1,475	59.23	0.205
South OR	MEDFORD	WHITE CITY	5R14	AGATE	108	3,658	105	34.83	1.029
South OR	MEDFORD	WHITE CITY	5R66	4 CORNERS	562	67,577	1,719	39.31	0.327
South OR	ROSEBURG/MYRTLECREEK	CANYONVILLE	5U46	CANYONVILLE	58	6,590	391	16.86	0.148
South OR	ROSEBURG/MYRTLECREEK	CANYONVILLE	5U52	BEALS CREEK FEEDER	201	49,622	866	57.30	0.232
South OR	ROSEBURG/MYRTLECREEK	CARNES	5U44	RND PRARIE	740	56,196	413	136.07	1.792
South OR	ROSEBURG/MYRTLECREEK	CLEARWATER #1 SUB	6U17	BRIGGS	22	4,808	2	2,403.83	11.000
South OR	ROSEBURG/MYRTLECREEK	CLEARWATER #2 SUB	6U33	CLEARWATER	293	12,645	98	129.04	2.990
South OR	ROSEBURG/MYRTLECREEK	CLOAKE	4U37	RUSA	1	7	1	7.12	1.000
South OR	ROSEBURG/MYRTLECREEK	CLOAKE	4U38	HARVARD	3,275	55,033	2,922	18.83	1.121

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South OR	ROSEBURG/MYRTLECREEK	CLOAKE	4U39	GOEDECK	2,030	60,737	1,282	47.38	1.583
South OR	ROSEBURG/MYRTLECREEK	GARDEN VALLEY	4U80	EDENBOWER	833	9,702	806	12.04	1.033
South OR	ROSEBURG/MYRTLECREEK	GARDEN VALLEY	4U81	VALLEY	251	31,576	1,348	23.42	0.186
South OR	ROSEBURG/MYRTLECREEK	GLIDE SUBSTATION	5U83	IDLEYLD	2,938	402,117	992	405.36	2.962
South OR	ROSEBURG/MYRTLECREEK	GLIDE SUBSTATION	5U84	LITTLE RIVER	1,817	66,288	1,357	48.85	1.339
South OR	ROSEBURG/MYRTLECREEK	GREEN SUBSTATION	5U32	SAFARI	210	18,851	2,074	9.09	0.101
South OR	ROSEBURG/MYRTLECREEK	GREEN SUBSTATION	5U33	SUNNYSLOPE	25	2,942	1,620	1.82	0.015
South OR	ROSEBURG/MYRTLECREEK	ILLAHEE FLATS	6U13	ILLAHEE FLATS SINGLE PHASE RECLOSER	72	147,331	24	6,138.77	3.000
South OR	ROSEBURG/MYRTLECREEK	LEMOLO # 1	5U920	DIAMOND LAKE	1,263	170,863	181	943.99	6.978
South OR	ROSEBURG/MYRTLECREEK	MYRTLE CREEK	5U76	SUPER Y	902	324,921	1,529	212.51	0.590
South OR	ROSEBURG/MYRTLECREEK	MYRTLE CREEK	5U77	BOOMER HILL	2,047	181,727	2,284	79.57	0.896
South OR	ROSEBURG/MYRTLECREEK	OAKLAND (OR)	5U11	UMPQUA	285	52,598	1,296	40.59	0.220
South OR	ROSEBURG/MYRTLECREEK	OAKLAND (OR)	5U12	STAGECOACH	33	7,184	550	13.06	0.060
South OR	ROSEBURG/MYRTLECREEK	RIDDLE	5U1	TRI CITY	385	54,158	981	55.21	0.392
South OR	ROSEBURG/MYRTLECREEK	RIDDLE	5U2	COW CREEK	764	69,990	1,541	45.42	0.496
South OR	ROSEBURG/MYRTLECREEK	RIDDLE	5U3	HANNA	10	1,121	282	3.97	0.035
South OR	ROSEBURG/MYRTLECREEK	RIDDLE-VENEER	5U50	RFP-LVL (EWP)	2	145	29	5.00	0.069
South OR	ROSEBURG/MYRTLECREEK	ROSEBURG	4U10	DIAMOND	2,660	95,627	2,480	38.56	1.073
South OR	ROSEBURG/MYRTLECREEK	ROSEBURG	4U22	DIXON	2,674	179,531	1,105	162.47	2.420
South OR	ROSEBURG/MYRTLECREEK	ROSEBURG	4U5	DOUGLAS	2,124	68,239	2,058	33.16	1.032
South OR	ROSEBURG/MYRTLECREEK	SOUTHGATE	4U30	SHADY POINT	1,712	22,386	1,572	14.24	1.089
South OR	ROSEBURG/MYRTLECREEK	SOUTHGATE	4U31	BOOTH	3,401	229,668	1,569	146.38	2.168
South OR	ROSEBURG/MYRTLECREEK	STEAMBOAT	6U18	STEAMBOAT	22	164	22	7.47	1.000
South OR	ROSEBURG/MYRTLECREEK	SUTHERLIN	5U35	NON-PAREIL	54	11,821	1,300	9.09	0.042
South OR	ROSEBURG/MYRTLECREEK	SUTHERLIN	5U36	DEADY	432	77,914	1,322	58.94	0.327
South OR	ROSEBURG/MYRTLECREEK	SUTHERLIN	5U56	Industrial	562	79,012	479	164.95	1.173
South OR	ROSEBURG/MYRTLECREEK	TILLER	5U89	JACKSON CRK	133	18,243	308	59.23	0.432
South OR	ROSEBURG/MYRTLECREEK	TOKETEE	6U21	BACK UP FOR CLEARWATER 6U33	19	11,772	0	#DIV/0	#DIV/0
South OR	ROSEBURG/MYRTLECREEK	TOKETEE	8U12	TOKETEE CITY	20	495	19	26.05	1.053
South OR	ROSEBURG/MYRTLECREEK	WINCHESTER	4U18	WILBUR	745	74,410	1,637	45.46	0.455
South OR	ROSEBURG/MYRTLECREEK	WINCHESTER	5U15	NEWTON CREEK	51	5,991	1,717	3.49	0.030
South OR	ROSEBURG/MYRTLECREEK	WINCHESTER	5U17	FISHER	169	11,775	761	15.47	0.222
South OR	ROSEBURG/MYRTLECREEK	WINCHESTER	5U19	EVANS	147	16,234	757	21.44	0.194
South OR	ROSEBURG/MYRTLECREEK	WINSTON	5U48	BROCKWAY	885	43,538	861	50.57	1.028
South OR	ROSEBURG/MYRTLECREEK	WINSTON	5U49	DILLARD	3,720	500,598	1,444	346.67	2.576
Willamette Valley	ALBANY	HAZELWOOD	4M335	WEST HIGH	1,863	109,525	1,471	74.46	1.266
Willamette Valley	ALBANY	HAZELWOOD	4M336	RIVERVIEW (HAZELWOOD)	2,007	95,355	1,232	77.40	1.629
Willamette Valley	ALBANY	JEFFERSON (OR)	4M117	MARION	343	58,558	711	82.36	0.482
Willamette Valley	ALBANY	JEFFERSON (OR)	4M125	MINT	1,472	209,629	2,443	85.81	0.603
Willamette Valley	ALBANY	MURDER CREEK	4M243	SCRAVEL HILL	3,396	210,023	3,573	58.78	0.950
Willamette Valley	ALBANY	MURDER CREEK	4M245	RURAL NW	5,711	560,974	1,967	285.19	2.903
Willamette Valley	ALBANY	MURDER CREEK	4M250	INDUSTRIAL	937	69,253	1,211	57.19	0.774
Willamette Valley	ALBANY	OREMET	4M296	ROGERSDALE	743	141,351	2,155	65.59	0.345

## Oregon 2017 Circuit Metrics (excluding major events)

Oregon Regions	Op Area Name	Substation Name	Circuit Id	Circuit Name	Customers in Incident Sustained	Customer Minutes Lost	Circuit Customer Count	SAIDI	SAIFI
Willamette Valley	ALBANY	QUEEN AVE	4M217	SANTIAM	842	193,116	1,884	102.50	0.447
Willamette Valley	ALBANY	QUEEN AVE	4M258	HILL STREET	1,281	106,519	2,188	48.68	0.585
Willamette Valley	ALBANY	QUEEN AVE	4M261	WAVERLY	113	20,432	3,390	6.03	0.033
Willamette Valley	ALBANY	QUEEN AVE	4M262	GEARY STREET	132	20,933	2,736	7.65	0.048
Willamette Valley	ALBANY	VINE STREET	4M15	FERRY	281	12,353	2,161	5.72	0.130
Willamette Valley	ALBANY	VINE STREET	4M16	WATER STREET	13,517	624,404	4,011	155.67	3.370
Willamette Valley	CORVALLIS	BUCHANAN	4M130	HEWLETT PACKARD	5,344	147,315	2,631	55.99	2.031
Willamette Valley	CORVALLIS	BUCHANAN	4M133	PEORIA	9,066	1,189,720	2,442	487.19	3.713
Willamette Valley	CORVALLIS	BUCHANAN	4M134	N. NINTH ST.	9,953	1,017,349	2,589	392.95	3.844
Willamette Valley	CORVALLIS	CIRCLE BLVD	4M394	H. P. #1	2	50	1	49.50	2.000
Willamette Valley	CORVALLIS	CIRCLE BLVD	4M427	H. P. #3	2	49	1	49.37	2.000
Willamette Valley	CORVALLIS	CIRCLE BLVD	4M429	H. P. #5	2	49	1	49.42	2.000
Willamette Valley	CORVALLIS	DIXON	7M26	FOURTH ST.	471	12,807	235	54.50	2.004
Willamette Valley	CORVALLIS	DIXON	7M29	SECOND ST.	551	14,767	275	53.70	2.004
Willamette Valley	CORVALLIS	GRANT	4M265	HIGH SCHOOL	8,889	383,936	2,490	154.19	3.570
Willamette Valley	CORVALLIS	GRANT	4M266	CHINTIMINI	8,106	733,928	2,541	288.83	3.190
Willamette Valley	CORVALLIS	GRANT	4M268	KINGS ROAD	8,628	496,903	2,541	195.55	3.396
Willamette Valley	CORVALLIS	GRANT	4M269	29TH STREET	12,544	915,710	3,292	278.16	3.810
Willamette Valley	CORVALLIS	HILLVIEW	4M180	WEST HILLS	4,103	68,735	1,852	37.11	2.215
Willamette Valley	CORVALLIS	HILLVIEW	4M181	PHILOMATH	1,305	16,679	640	26.06	2.039
Willamette Valley	CORVALLIS	HILLVIEW	4M182	SUNSET	3,541	47,131	1,751	26.92	2.022
Willamette Valley	CORVALLIS	HILLVIEW	4M185	PLYMOUTH	4,772	93,513	2,225	42.03	2.145
Willamette Valley	CORVALLIS	MARYS RIVER	4M151	GREENBERRY	7,997	1,088,387	3,591	303.09	2.227
Willamette Valley	CORVALLIS	MARYS RIVER	4M152	AVERY	384	47,619	188	253.29	2.043
Willamette Valley	CORVALLIS	MARYS RIVER	4M153	GALLAGHER	318	39,941	159	251.20	2.000
Willamette Valley	COTTAGE GROVE/J.CITY	COBURG	4M220	DETERING	304	145,091	542	267.69	0.561
Willamette Valley	COTTAGE GROVE/J.CITY	GOSHEN (OR)	4M360	GOSHEN FDR	252	42,184	1,595	26.45	0.158
Willamette Valley	COTTAGE GROVE/J.CITY	HARRISBURG SUB	4M400	TERRITORIAL	2,450	271,446	1,815	149.56	1.350
Willamette Valley	COTTAGE GROVE/J.CITY	JUNCTION CITY	4M102	6TH STREET	1,543	144,005	1,140	126.32	1.354
Willamette Valley	COTTAGE GROVE/J.CITY	JUNCTION CITY	4M99	PRAIRIE ROAD	1,869	102,383	990	103.42	1.888
Willamette Valley	COTTAGE GROVE/J.CITY	LANCASTER	4M209	MONROE	1,801	304,225	1,078	282.21	1.671
Willamette Valley	COTTAGE GROVE/J.CITY	VILLAGE GREEN	4M84	NORTH SIDE	199	22,608	2,346	9.64	0.085
Willamette Valley	COTTAGE GROVE/J.CITY	VILLAGE GREEN	4M86	MADISON	419	72,511	1,583	45.81	0.265
Willamette Valley	DALLAS/INDEPENDENCE	DALLAS	4M100	RURAL (DALLAS)	15,282	940,342	4,547	206.81	3.361
Willamette Valley	DALLAS/INDEPENDENCE	DALLAS	4M201	INDUSTRIAL	54	1,846	27	68.37	2.000
Willamette Valley	DALLAS/INDEPENDENCE	DALLAS	4M202	ELLENDAL	6,624	348,873	2,863	121.86	2.314
Willamette Valley	DALLAS/INDEPENDENCE	DALLAS	4M238	DALLAS	9,558	869,362	2,257	385.18	4.235
Willamette Valley	DALLAS/INDEPENDENCE	INDEPENDENCE	4M22	RICKREAL	8,130	339,956	3,266	104.09	2.489
Willamette Valley	DALLAS/INDEPENDENCE	INDEPENDENCE	4M25	BUENA VISTA	12,943	1,005,866	1,958	513.72	6.610
Willamette Valley	LEBANON	BROWNSVILLE	4M17	CALAPOOIA	6,706	372,270	2,779	133.96	2.413
Willamette Valley	LEBANON	CALAPOOYA	4M850	SPAULDING	2,276	117,632	1,091	107.82	2.086
Willamette Valley	LEBANON	CALAPOOYA	4M851	BEAR	5	176	31	5.68	0.161
Willamette Valley	LEBANON	CROWFOOT	4M204	CROWFOOT	2,947	206,640	1,491	138.59	1.977

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Willamette Valley	LEBANON	CROWFOOT	4M206	US PLYWOOD (LEBANON)	2,183	243,951	1,793	136.06	1.218
Willamette Valley	LEBANON	LEBANON	4M61	TANGENT	168	18,976	2,431	7.81	0.069
Willamette Valley	LEBANON	LEBANON	4M62	RALSTON	84	9,774	1,985	4.92	0.042
Willamette Valley	LEBANON	LEBANON	4M63	TENNESSEE	3,112	684,595	1,774	385.90	1.754
Willamette Valley	LEBANON	LEBANON	4M79	CROWN Z	76	16,960	1,112	15.25	0.068
Willamette Valley	LEBANON	SWEET HOME	4M37	HOLLEY	994	87,296	1,982	44.04	0.502
Willamette Valley	LEBANON	SWEET HOME	4M38	NARROWS	1,378	115,470	960	120.28	1.435
Willamette Valley	LEBANON	SWEET HOME	4M93	AMES CREEK	640	92,140	1,666	55.31	0.384
Willamette Valley	LEBANON	SWEET HOME	4M94	FOSTER	9,314	2,658,517	2,324	1,143.94	4.008
Willamette Valley	STAYTON	LYONS	4M120	MILL CITY	1,596	34,159	715	47.77	2.232
Willamette Valley	STAYTON	LYONS	4M70	MEHAMA	10,126	610,526	2,080	293.52	4.868
Willamette Valley	STAYTON	SCIO	5M126	THOMAS	7,146	317,184	1,540	205.96	4.640
Willamette Valley	STAYTON	STAYTON	4M19	AUMSVILLE	3,417	1,128,019	3,088	365.29	1.107
Willamette Valley	STAYTON	STAYTON	4M353	WEST STAYTON	6,348	939,926	3,427	274.27	1.852
Willamette Valley	STAYTON	STAYTON	4M370	CASCADE	3,684	258,773	1,572	164.61	2.344
Willamette Valley	STAYTON	STAYTON	4M50	3RD STREET	995	73,940	906	81.61	1.098

## Oregon 2017 Circuit Metrics (including major events)

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Central OR	BEND/REDMOND	BEND	5D10	PORTLAND AVE	351	215,999	2,350	91.91	0.149
Central OR	BEND/REDMOND	BEND	5D11	GLEN VISTA	1,157	77,595	1,118	69.41	1.035
Central OR	BEND/REDMOND	BEND	5D12	DIVISION ST.	134	28,395	214	132.69	0.626
Central OR	BEND/REDMOND	BEND	5D196	MALLARD	170	15,414	1,430	10.78	0.119
Central OR	BEND/REDMOND	BOND STREET	5D411	BACHELOR	1,041	296,279	1,720	172.26	0.605
Central OR	BEND/REDMOND	BOND STREET	5D418	BLAKELY	34	3,840	1,263	3.04	0.027
Central OR	BEND/REDMOND	CHINA HAT	5D140	LAVA (CHINA HAT)	229	73,069	2,221	32.90	0.103
Central OR	BEND/REDMOND	CHINA HAT	5D142	HIGH DESERT	47	13,717	1,665	8.24	0.028
Central OR	BEND/REDMOND	CHINA HAT	5D144	D.R.W.	204	50,120	2,395	20.93	0.085
Central OR	BEND/REDMOND	CLEVELAND AVE.	5D30	ARROWHEAD	1,779	569,434	1,193	477.31	1.491
Central OR	BEND/REDMOND	CLEVELAND AVE.	5D35	WICKIUP	1,877	273,397	983	278.13	1.909
Central OR	BEND/REDMOND	CLEVELAND AVE.	5D38	TOMAHAWK	2,353	590,834	1,397	422.93	1.684
Central OR	BEND/REDMOND	CLEVELAND AVE.	5D94	TEEPEE	9,080	1,663,287	3,315	501.75	2.739
Central OR	BEND/REDMOND	CLEVELAND AVE.	5D96	OBSIDIAN	99	11,202	907	12.35	0.109
Central OR	BEND/REDMOND	CLEVELAND AVE.	5D98	HUCKLEBERRY	1,215	571,596	996	573.89	1.220
Central OR	BEND/REDMOND	CROOKED RIVER RANCH	4D131	CANYON	215	25,219	1,738	14.51	0.124
Central OR	BEND/REDMOND	CROOKED RIVER RANCH	4D30	CROOKED R.R.	155	16,159	757	21.35	0.205
Central OR	BEND/REDMOND	DESCHUTES	5D184	PRONGHORN	2,207	253,296	1,078	234.97	2.047
Central OR	BEND/REDMOND	DESCHUTES	5D2	DESCHUTES S	250	99,044	965	102.64	0.259
Central OR	BEND/REDMOND	HUNTERS CIRCLE	5D192	Mackinaw	229	33,407	638	52.36	0.359
Central OR	BEND/REDMOND	OVERPASS	5D104	AWBREY	17	3,788	990	3.83	0.017
Central OR	BEND/REDMOND	OVERPASS	5D106	NEZ PERCE	3,152	496,741	2,592	191.64	1.216
Central OR	BEND/REDMOND	OVERPASS	5D120	CHINOOK	30	7,622	1,355	5.63	0.022
Central OR	BEND/REDMOND	OVERPASS	5D128	PAIUTE	165	20,106	2,071	9.71	0.080
Central OR	BEND/REDMOND	OVERPASS	5D155	APACHE	1,265	252,391	1,894	133.26	0.668
Central OR	BEND/REDMOND	PILOT BUTTE	5D261	KLONDIKE	1,016	92,484	2,970	31.14	0.342
Central OR	BEND/REDMOND	PILOT BUTTE	5D263	DRAKE FEEDER	3,258	177,266	2,381	74.45	1.368
Central OR	BEND/REDMOND	REDMOND	5D21	SOUTH (REDMOND)	21	3,380	703	4.81	0.030
Central OR	BEND/REDMOND	REDMOND	5D22	INDUSTRIAL	217	56,962	1,381	41.25	0.157
Central OR	BEND/REDMOND	REDMOND	5D223	TETHEROW	823	44,622	796	56.06	1.034
Central OR	BEND/REDMOND	REDMOND	5D226	CLINE FALLS	309	24,831	1,415	17.55	0.218
Central OR	BEND/REDMOND	REDMOND	5D227	WINDSOR	255	41,426	2,848	14.55	0.090
Central OR	BEND/REDMOND	REDMOND	5D228	CITY	47	5,333	1,276	4.18	0.037
Central OR	BEND/REDMOND	REDMOND	5D229	JUNIPER	142	31,291	392	79.82	0.362
Central OR	BEND/REDMOND	SHEVLIN PARK	5D238	WOLVERINE (SHP) (WAS 5D327)	254	108,164	2,554	42.35	0.099
Central OR	BEND/REDMOND	SHEVLIN PARK	5D241	BADGER (SHP)	730	162,926	2,968	54.89	0.246
Central OR	BEND/REDMOND	SHEVLIN PARK	5D243	Black Bear	77	38,732	1,252	30.94	0.062
Central OR	BEND/REDMOND	YEW AVENUE	5D322	BIRDIE	138	22,865	1,582	14.45	0.087
Central OR	BEND/REDMOND	YEW AVENUE	5D323	FAIRWAY	10	3,976	379	10.49	0.026
Central OR	BEND/REDMOND	YEW AVENUE	5D325	EAGLE	10	2,017	2,420	0.83	0.004
Central OR	MADRAS	CHERRY LANE	5D295	7 PEAKS	143	5,267	140	37.62	1.021
Central OR	MADRAS	CULVER	5D5	CULVER	718	151,679	1,734	87.47	0.414
Central OR	MADRAS	MADRAS	5D52	MADRAS RURAL	715	146,351	990	147.83	0.722

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Central OR	MADRAS	MADRAS	5D53	AGATE	151	21,918	1,254	17.48	0.120
Central OR	MADRAS	MADRAS	5D57	QUARTZ	131	10,399	1,348	7.71	0.097
Central OR	MADRAS	MADRAS	5D61	MADRAS CITY	158	18,107	1,282	14.12	0.123
Central OR	MADRAS	POWELL BUTTE	5D1	POWELL BUTTE	164	25,797	601	42.92	0.273
Central OR	MADRAS	PRINEVILLE	5D126	RIMROCK	20	6,798	850	8.00	0.024
Central OR	MADRAS	PRINEVILLE	5D167	NORTHVILLE	706	115,220	2,589	44.50	0.273
Central OR	MADRAS	PRINEVILLE	5D25	OCHOCO	1,084	218,257	969	225.24	1.119
Central OR	MADRAS	PRINEVILLE	5D47	MC KAY (PRINEVILLE)	691	70,514	1,625	43.39	0.425
Central OR	MADRAS	PRINEVILLE	5D48	LAMONTA	45	13,964	607	23.01	0.074
Central OR	MADRAS	PRINEVILLE	5D69	GRIMES FLAT	2,256	197,314	1,541	128.04	1.464
Central OR	MADRAS	WARM SPRINGS	4D68	WARM SPRINGS (OR)	3,091	673,163	1,009	667.16	3.063
CoastPlus	CLATSOP (ASTORIA)	CANNON BEACH	5A10	HAYSTACK	19,050	1,640,259	1,583	1,036.17	12.034
CoastPlus	CLATSOP (ASTORIA)	CANNON BEACH	5A8	ECOLA	10,462	461,870	1,214	380.45	8.618
CoastPlus	CLATSOP (ASTORIA)	FERN HILL SUB	5A51	JOHN DAY	1,155	217,353	260	835.97	4.442
CoastPlus	CLATSOP (ASTORIA)	FERN HILL SUB	5A52	SCANDINAVIAN	663	236,729	377	627.93	1.759
CoastPlus	CLATSOP (ASTORIA)	KNAPPA SVENSEN	5A92	SVENSEN	1,892	302,049	699	432.12	2.707
CoastPlus	CLATSOP (ASTORIA)	KNAPPA SVENSEN	5A93	BRADWOOD	4,731	428,855	917	467.67	5.159
CoastPlus	CLATSOP (ASTORIA)	SEASIDE	5A80	GROVE	18,757	860,030	2,395	359.09	7.832
CoastPlus	CLATSOP (ASTORIA)	SEASIDE	5A81	CENTRAL	10,769	451,886	1,618	279.29	6.656
CoastPlus	CLATSOP (ASTORIA)	SEASIDE	5A82	NECANICUM	12,571	840,357	1,177	713.98	10.681
CoastPlus	CLATSOP (ASTORIA)	SEASIDE	5A83	GEARHART	25,832	1,351,664	3,201	422.26	8.070
CoastPlus	CLATSOP (ASTORIA)	WARRENTON	5A15	CITY	13,989	750,417	1,855	404.54	7.541
CoastPlus	CLATSOP (ASTORIA)	WARRENTON	5A16	MILL (WARRENTON)	7,050	453,214	589	769.46	11.969
CoastPlus	CLATSOP (ASTORIA)	WARRENTON	5A20	SOUTH (WARRENTON)	12,980	667,736	1,589	420.22	8.169
CoastPlus	CLATSOP (ASTORIA)	YOUNGS BAY	5A202	PORT DOCK	2,781	124,692	1,198	104.08	2.321
CoastPlus	CLATSOP (ASTORIA)	YOUNGS BAY	5A204	MOO COW	4,795	350,062	1,126	310.89	4.258
CoastPlus	CLATSOP (ASTORIA)	YOUNGS BAY	5A205	FIFTH STREET	2,108	96,586	966	99.99	2.182
CoastPlus	CLATSOP (ASTORIA)	YOUNGS BAY	5A206	YOUNGS BAY #6	677	36,418	315	115.61	2.149
CoastPlus	CLATSOP (ASTORIA)	YOUNGS BAY	5A210	YOUNGS BAY #10	2,774	159,522	933	170.98	2.973
CoastPlus	CLATSOP (ASTORIA)	YOUNGS BAY	5A211	OLNEY	5,617	547,637	1,037	528.10	5.417
CoastPlus	CLATSOP (ASTORIA)	YOUNGS BAY	5A213	INDUSTRIAL	2,894	113,982	1,372	83.08	2.109
CoastPlus	COOS BAY/COQUILLE	BANDON TIE (BPA)	L804	BANDON	3,662	1,262,456	741	1,703.72	4.942
CoastPlus	COOS BAY/COQUILLE	COOS RIVER	4C106	COOS RIVER	6,039	1,250,172	1,358	920.60	4.447
CoastPlus	COOS BAY/COQUILLE	COQUILLE	4C41	HENRY STREET	7,091	886,931	1,658	534.94	4.277
CoastPlus	COOS BAY/COQUILLE	COQUILLE	4C42	TERRES HGHTS	7,070	883,524	1,546	571.49	4.573
CoastPlus	COOS BAY/COQUILLE	COQUILLE	4C43	INDUSTRIAL	12	1,736	149	11.65	0.081
CoastPlus	COOS BAY/COQUILLE	EMPIRE NEW	4C108	EMPIRE	18	2,152	1,721	1.25	0.010
CoastPlus	COOS BAY/COQUILLE	EMPIRE NEW	4C89	SCOTT	85	70,108	1,405	49.90	0.060
CoastPlus	COOS BAY/COQUILLE	EMPIRE NEW	4C90	CHARLESTON	4,622	628,088	2,083	301.53	2.219
CoastPlus	COOS BAY/COQUILLE	JORDAN POINT	5C11	WEYCO#2	1	19	1	19.40	1.000
CoastPlus	COOS BAY/COQUILLE	JORDAN POINT	5C6	SAND DUNES (JORDAN POINT)	31	602	31	19.43	1.000
CoastPlus	COOS BAY/COQUILLE	LOCKHART	4C48	CITY CENTER	1,580	35,459	1,521	23.31	1.039
CoastPlus	COOS BAY/COQUILLE	LOCKHART	4C49	EASTSIDE	814	22,371	765	29.24	1.064

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Oregon Regions	Op Area Name	Substation Name	Circuit Id	Circuit Name	Customers in Incident Sustained	Customer Minutes Lost	Circuit Customer Count	SAIDI	SAIFI
CoastPlus	COOS BAY/COQUILLE	LOCKHART	4C5	GEORGIA-PAC	94	1,896	95	19.95	0.989
CoastPlus	COOS BAY/COQUILLE	LOCKHART	4C50	BUNKERHILL	6,567	1,591,553	1,811	878.83	3.626
CoastPlus	COOS BAY/COQUILLE	LOCKHART	4C97	ENGLEWOOD	2,577	126,264	1,377	91.69	1.871
CoastPlus	COOS BAY/COQUILLE	MYRTLE POINT	4C36	NORTH (MYRTLE POINT)	245	153,174	334	458.61	0.734
CoastPlus	COOS BAY/COQUILLE	MYRTLE POINT	4C37	MAPLE STREET	133	18,415	2,070	8.90	0.064
CoastPlus	COOS BAY/COQUILLE	SOUTH DUNES	5C9	DOUGLAS CHIP	2	40	2	20.10	1.000
CoastPlus	COOS BAY/COQUILLE	STATE STREET	4C112	WOODLAND	2,486	88,109	1,829	48.17	1.359
CoastPlus	COOS BAY/COQUILLE	STATE STREET	4C66	BAYSHORE	3,204	344,773	1,700	202.81	1.885
CoastPlus	COOS BAY/COQUILLE	STATE STREET	4C67	INDUSTRIAL	3,724	268,214	2,202	121.80	1.691
CoastPlus	COOS BAY/COQUILLE	STATE STREET	4C86	BANGOR	1,872	53,868	1,795	30.01	1.043
CoastPlus	HOOD RIVER	GORDON HOLLOW	4K1	SHERMAN 208	946	149,933	635	236.11	1.490
CoastPlus	HOOD RIVER	HOOD RIVER	5K37	RESIDENTIAL	2,809	194,676	2,055	94.73	1.367
CoastPlus	HOOD RIVER	HOOD RIVER	5K43	BELMONT	2,985	248,493	1,142	217.59	2.614
CoastPlus	HOOD RIVER	HOOD RIVER	5K44	NORTH (HOOD RIVER)	1,980	117,710	1,765	66.69	1.122
CoastPlus	HOOD RIVER	HOOD RIVER	5K70	EASTSIDE	2,791	230,493	1,014	227.31	2.752
CoastPlus	HOOD RIVER	HOOD RIVER	5K74	SOUTH (HOOD RIVER)	1,958	135,192	1,590	85.03	1.231
CoastPlus	HOOD RIVER	KENWOOD	5K50	OAKGROVE	294	42,619	699	60.97	0.421
CoastPlus	HOOD RIVER	WASCO	7K1	WASCO	6	268	267	1.00	0.022
CoastPlus	LINCOLN CITY	DEVILS LAKE	4A310	INLAND FEEDER	7,612	410,847	1,825	225.12	4.171
CoastPlus	LINCOLN CITY	DEVILS LAKE	4A312	OCEAN	10,609	634,872	2,948	215.36	3.599
CoastPlus	LINCOLN CITY	DEVILS LAKE	4A316	LAKE (DEVILS LAKE)	23,112	2,153,021	4,478	480.80	5.161
CoastPlus	LINCOLN CITY	DEVILS LAKE	4A338	SIUSLAW	2,672	278,561	645	431.88	4.143
CoastPlus	LINCOLN CITY	GLENEDEN	7A364	GLENEDEN	2,163	177,583	707	251.18	3.059
CoastPlus	LINCOLN CITY	GLENEDEN	7A366	SALISHAN	1,427	134,750	359	375.35	3.975
CoastPlus	LINCOLN CITY	NELSCOTT	7A390	NELSCOTT	1,245	57,811	352	164.23	3.537
CoastPlus	LINCOLN CITY	PGE GRAND RONDE	R114	BOYER	48	22,863	19	1,203.32	2.526
CoastPlus	LINCOLN CITY	WECOMA BEACH	7A354	WECOMA	2,219	106,057	714	148.54	3.108
CoastPlus	PORTLAND	ALBINA	5P111	ALBINA 11C01-UG	687	223,859	683	327.76	1.006
CoastPlus	PORTLAND	ALBINA	5P194	11C24-UG	216	70,384	264	266.60	0.818
CoastPlus	PORTLAND	ALBINA	5P196	11C16-UG	486	858,276	409	2,098.47	1.188
CoastPlus	PORTLAND	ALBINA	5P200	11C20-UG	458	860,188	456	1,886.38	1.004
CoastPlus	PORTLAND	ALBINA	5P91	11C11-UG	325	573,950	329	1,744.53	0.988
CoastPlus	PORTLAND	ALBINA	5P92	11C12-UG	88	155,408	48	3,237.67	1.833
CoastPlus	PORTLAND	ALDERWOOD 115/12.5	5P22	ALDERWOOD #2	215	43,555	304	143.27	0.707
CoastPlus	PORTLAND	ALDERWOOD 115/12.5	5P33	ALDERWOOD #4	369	28,216	182	155.03	2.027
CoastPlus	PORTLAND	ALDERWOOD 115/12.5	5P604	ALDERWOOD #3	4	246	173	1.42	0.023
CoastPlus	PORTLAND	COLUMBIA (OR)	5P266	#2	2,764	184,557	2,562	72.04	1.079
CoastPlus	PORTLAND	COLUMBIA (OR)	5P268	COLUMBIA #1	16	11,620	340	34.18	0.047
CoastPlus	PORTLAND	COLUMBIA (OR)	5P474	COLUMBIA #6	562	75,655	547	138.31	1.027
CoastPlus	PORTLAND	COLUMBIA (OR)	5P476	COLUMBIA #3	1,048	141,162	826	170.90	1.269
CoastPlus	PORTLAND	COLUMBIA (OR)	5P478	COLUMBIA #4	847	147,400	823	179.10	1.029
CoastPlus	PORTLAND	CULLY	5P288	CULLY #3-UG	1,654	82,791	808	102.46	2.047
CoastPlus	PORTLAND	CULLY	5P290	CULLY #2	4,819	234,373	2,393	97.94	2.014



## Oregon 2017 Circuit Metrics (including major events)

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CoastPlus	PORTLAND	CULLY	5P292	CULLY #1	5,940	293,904	2,921	100.62	2.034
CoastPlus	PORTLAND	HOLLADAY (OR)	5P145	HOLLADAY #1-UG	1	456	204	2.24	0.005
CoastPlus	PORTLAND	HOLLADAY (OR)	5P147	HOLLADAY #3-UG	1	177	164	1.08	0.006
CoastPlus	PORTLAND	HOLLADAY (OR)	5P158	HOLLADAY #6	21	1,956	894	2.19	0.023
CoastPlus	PORTLAND	HOLLYWOOD	5P203	HOLLYWOOD #3	1,362	14,662	1,350	10.86	1.009
CoastPlus	PORTLAND	HOLLYWOOD	5P204	HOLLYWOOD #2	586	5,684	1,935	2.94	0.303
CoastPlus	PORTLAND	HOLLYWOOD	5P205	HOLLYWOOD #1	6,484	441,283	2,101	210.03	3.086
CoastPlus	PORTLAND	HOLLYWOOD	5P208	HOLLYWOOD #5	3,171	45,302	1,726	26.25	1.837
CoastPlus	PORTLAND	HOLLYWOOD	5P209	HOLLYWOOD #4	5,110	299,357	2,360	126.85	2.165
CoastPlus	PORTLAND	KILLINGSWORTH	5P123	KILLINGSWORTH #3	397	46,655	350	133.30	1.134
CoastPlus	PORTLAND	KILLINGSWORTH	5P217	KILLINGSWORTH #5	431	48,052	426	112.80	1.012
CoastPlus	PORTLAND	KILLINGSWORTH	5P41	KILLINGSWORTH #4	617	210,268	2,732	76.96	0.226
CoastPlus	PORTLAND	KILLINGSWORTH	5P88	KILLINGSWORTH #1-UG	-	-	15	-	-
CoastPlus	PORTLAND	KILLINGSWORTH	5P89	KILLINGSWORTH #2	107	15,178	3,097	4.90	0.035
CoastPlus	PORTLAND	KNOTT	5P231	KNOTT #1	673	100,466	3,263	30.79	0.206
CoastPlus	PORTLAND	KNOTT	5P232	KNOTT #2	2	847	1,628	0.52	0.001
CoastPlus	PORTLAND	KNOTT	5P233	KNOTT #3	2,335	209,104	2,276	91.87	1.026
CoastPlus	PORTLAND	KNOTT	5P368	11022	176	36,304	173	209.85	1.017
CoastPlus	PORTLAND	KNOTT	5P372	11046	620	114,604	560	204.65	1.107
CoastPlus	PORTLAND	KNOTT	5P374	11020	2	265	974	0.27	0.002
CoastPlus	PORTLAND	LINCOLN (OR)	5P432	11D02-UG	477	2,836	475	5.97	1.004
CoastPlus	PORTLAND	MALLORY	5P162	MALLORY #1	150	23,821	2,021	11.79	0.074
CoastPlus	PORTLAND	MALLORY	5P164	MALLORY #2	170	38,836	3,076	12.63	0.055
CoastPlus	PORTLAND	PARKROSE	5P244	PARKROSE#4	3,299	499,802	3,094	161.54	1.066
CoastPlus	PORTLAND	PARKROSE	5P246	PARKROSE#3	4,433	623,261	3,071	202.95	1.444
CoastPlus	PORTLAND	PARKROSE	5P250	PARKROSE#2	1,391	150,415	661	227.56	2.104
CoastPlus	PORTLAND	PARKROSE	5P252	PARKROSE#1	5,386	578,958	1,673	346.06	3.219
CoastPlus	PORTLAND	RUSSELLVILLE	5P274	RUSSELLVILLE #3	965	152,041	3,018	50.38	0.320
CoastPlus	PORTLAND	RUSSELLVILLE	5P276	RUSSELLVILLE #4	4,242	843,142	2,307	365.47	1.839
CoastPlus	PORTLAND	RUSSELLVILLE	5P278	RUSSELLVILLE #1	742	105,952	3,214	32.97	0.231
CoastPlus	PORTLAND	RUSSELLVILLE	5P280	RUSSELLVILLE #2	2,562	343,507	1,275	269.42	2.009
CoastPlus	PORTLAND	VERNON	5P391	VERNON #1	3,693	186,291	1,817	102.53	2.032
CoastPlus	PORTLAND	VERNON	5P392	VERNON NO. 2	2,729	350,887	2,501	140.30	1.091
CoastPlus	PORTLAND	VERNON	5P393	VERNON #3	187	44,346	3,200	13.86	0.058
CoastPlus	PORTLAND	VERNON	5P394	VERNON # 4	68	18,902	3,229	5.85	0.021
CoastPlus	PORTLAND	VERNON	5P395	VERNON # 5	93	12,337	2,195	5.62	0.042
Northeast OR	ENTERPRISE	ENTERPRISE (OR)	4W8	CREIGHTON LN	2,423	169,717	1,436	118.19	1.687
Northeast OR	ENTERPRISE	ENTERPRISE (OR)	5W15	CITY	1,315	68,672	932	73.68	1.411
Northeast OR	ENTERPRISE	ENTERPRISE (OR)	5W26	RURAL (ENTERPRISE)	2,976	457,712	1,047	437.17	2.842
Northeast OR	ENTERPRISE	JOSEPH	5W21	PRAIRIE	1,230	71,491	837	85.41	1.470
Northeast OR	ENTERPRISE	MINAM	5W18	MINAM	14	1,062	12	88.48	1.167
Northeast OR	ENTERPRISE	PALLETTE	4W14	PALLETTE NORTH	525	152,655	173	882.40	3.035
Northeast OR	ENTERPRISE	PALLETTE	4W15	PALLETTE SOUTH	109	38,317	54	709.58	2.019

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Northeast OR	ENTERPRISE	WALLOWA	5W28	CITY	1,274	74,335	862	86.24	1.478
Northeast OR	HERMISTON	ARLINGTON	5K25	ARLINGTON	4	521	509	1.02	0.008
Northeast OR	HERMISTON	BLALOCK	5K40	BLALOCK	11	1,785	19	93.96	0.579
Northeast OR	HERMISTON	DALREED	4K16	WILLOW COVE	289	40,775	74	551.02	3.905
Northeast OR	HERMISTON	DALREED	4K36	SIMTAG	72	6,374	18	354.13	4.000
Northeast OR	HERMISTON	DALREED	4K46	BOEING	393	94,060	178	528.43	2.208
Northeast OR	HERMISTON	HERMISTON	5W602	RURAL (HERMISTON)	6,987	204,821	1,359	150.71	5.141
Northeast OR	HERMISTON	HINKLE	5W82	MEADOWS	1,242	37,113	373	99.50	3.330
Northeast OR	HERMISTON	UMATILLA	5W658	UMATILLA	136	21,462	1,155	18.58	0.118
Northeast OR	HERMISTON	UMATILLA	5W660	MCNARY	265	58,345	899	64.90	0.295
Northeast OR	HERMISTON	UMATILLA	5W664	PORT FEEDER	-	-	55	-	-
Northeast OR	PENDLETON	ATHENA	5W703	CITY	1,850	225,606	842	267.94	2.197
Northeast OR	PENDLETON	ATHENA	5W705	HELIX	670	138,424	419	330.37	1.599
Northeast OR	PENDLETON	BUCKAROO	5W201	STATE HOSP.	772	38,964	372	104.74	2.075
Northeast OR	PENDLETON	BUCKAROO	5W202	REITH	281	63,094	1,536	41.08	0.183
Northeast OR	PENDLETON	BUCKAROO	5W203	MONTEE	1,171	217,075	1,654	131.24	0.708
Northeast OR	PENDLETON	PENDLETON	5W401	WEST HILLS	356	29,643	1,690	17.54	0.211
Northeast OR	PENDLETON	PENDLETON	5W402	HARRIS HTS	476	68,980	2,056	33.55	0.232
Northeast OR	PENDLETON	PENDLETON	5W403	MISSION	530	107,406	1,046	102.68	0.507
Northeast OR	PENDLETON	PENDLETON	7W451	BUSINESS	7	495	248	1.99	0.028
Northeast OR	PENDLETON	PENDLETON	7W452	NORTHWEST	13	404	512	0.79	0.025
Northeast OR	PENDLETON	PENDLETON	7W453	SOUTHWEST (PENDELTON)	1	64	333	0.19	0.003
Northeast OR	PENDLETON	PILOT ROCK	5W406	PILOT ROCK CITY	724	56,363	1,381	40.81	0.524
Northeast OR	PENDLETON	WESTON NEW (OR)	5W7	SCOTTS FEEDER	582	67,844	445	152.46	1.308
Northeast OR	WALLA WALLA	UMAPINE	5W105	UMAPINE FEEDER	891	420,154	962	436.75	0.926
Northeast OR	WALLA WALLA	UMAPINE	5W106	FERNDALE	1,285	687,218	1,344	511.32	0.956
South OR	GRANTS PASS	AGNESS AVE	5R172	SPALDING MILL	1,976	417,366	877	475.90	2.253
South OR	GRANTS PASS	AGNESS AVE	5R173	JONES CREEK	1,837	463,837	869	533.76	2.114
South OR	GRANTS PASS	AGNESS AVE	5R322	ANTEATER	1,034	218,887	965	226.83	1.072
South OR	GRANTS PASS	APPLEGATE	5R267	MURPHY	3,846	1,362,151	1,032	1,319.91	3.727
South OR	GRANTS PASS	APPLEGATE	5R278	HIGHWAY	5,923	1,433,728	1,602	894.96	3.697
South OR	GRANTS PASS	BEACON	5R104	SAVAGE ST	3,846	424,178	1,243	341.25	3.094
South OR	GRANTS PASS	BEACON	5R105	BEACON ST	2,562	299,908	830	361.33	3.087
South OR	GRANTS PASS	CAVE JUNCTION	5R52	FREE& EASY	13,255	9,726,318	2,340	4,156.55	5.665
South OR	GRANTS PASS	CAVE JUNCTION	5R53	ROUGH &READY	7,618	4,544,662	1,516	2,997.80	5.025
South OR	GRANTS PASS	CAVEMAN	5R295	QUAIL	2,379	426,476	1,119	381.12	2.126
South OR	GRANTS PASS	CAVEMAN	5R82	WASHINGTON	2,659	411,253	1,187	346.46	2.240
South OR	GRANTS PASS	CAVEMAN	5R98	MANZANITA	1,179	183,456	573	320.17	2.058
South OR	GRANTS PASS	CAVEMAN	5R99	CAVEMAN	2,596	491,603	1,184	415.21	2.193
South OR	GRANTS PASS	DOWELL	5R331	DOVE	1,529	230,572	1,468	157.07	1.042
South OR	GRANTS PASS	DOWELL	5R334	DUCK	3,397	576,424	2,488	231.68	1.365
South OR	GRANTS PASS	EASY VALLEY	5R123	G STREET	7,280	773,755	2,121	364.81	3.432
South OR	GRANTS PASS	EASY VALLEY	5R125	ROGUE	3,977	602,118	1,742	345.65	2.283

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South OR	GRANTS PASS	EASY VALLEY	5R259	CHINOOK	4,231	1,165,670	1,291	902.92	3.277
South OR	GRANTS PASS	FIELDER CREEK	4R33	ELK FDR.	5,847	4,319,208	1,574	2,744.10	3.715
South OR	GRANTS PASS	FIELDER CREEK	4R34	BEAR FDR	5,024	3,297,842	862	3,825.80	5.828
South OR	GRANTS PASS	GLENDALE SUBSTATION	5R133	GLENDALE	10,388	1,924,335	1,880	1,023.58	5.526
South OR	GRANTS PASS	GLENDALE SUBSTATION	5R143	INDUSTRIAL	722	139,859	637	219.56	1.133
South OR	GRANTS PASS	JEROME PRAIRIE	5R62	WILD PRAIRIE	8,893	3,568,822	1,589	2,245.95	5.597
South OR	GRANTS PASS	JEROME PRAIRIE	5R63	WOOD RIVER	9,837	1,963,644	1,567	1,253.12	6.278
South OR	GRANTS PASS	MERLIN	5R232	MERLIN-HUGO	8,109	2,557,220	2,043	1,251.70	3.969
South OR	GRANTS PASS	MERLIN	5R234	PARADISE	4,813	1,110,098	1,184	937.58	4.065
South OR	GRANTS PASS	MERLIN	5R248	PLEASANT VALLEY-MERLIN FEEDER	3,938	357,717	1,782	200.74	2.210
South OR	GRANTS PASS	MERLIN	5R251	BADGER	3,221	388,937	916	424.60	3.516
South OR	GRANTS PASS	NEW O'BRIEN	5R106	O'BRIEN	2,199	2,322,423	430	5,400.98	5.114
South OR	GRANTS PASS	PARK STREET (OR)	5R114	FRUITDALE	6,556	1,188,410	2,143	554.55	3.059
South OR	GRANTS PASS	PARK STREET (OR)	5R115	ALLEN CREEK	2,112	498,455	974	511.76	2.168
South OR	GRANTS PASS	PARK STREET (OR)	5R121	NEW HOPE	2,300	572,414	1,834	312.11	1.254
South OR	GRANTS PASS	PARK STREET (OR)	5R164	EXPRESS	322	71,617	319	224.51	1.009
South OR	GRANTS PASS	PARK STREET (OR)	5R169	PORTOLA	2,800	451,632	1,374	328.70	2.038
South OR	GRANTS PASS	PROVOLT	5R67	NORTH-SOUTH	10,134	4,333,408	1,408	3,077.70	7.197
South OR	GRANTS PASS	ROGUE RIVER	5R77	SAVAGE/WIMMER	7,316	2,488,909	1,820	1,367.53	4.020
South OR	GRANTS PASS	ROGUE RIVER	5R78	ROCKY POINT (ROGUE RIVER)	5,577	2,976,791	1,046	2,845.88	5.332
South OR	GRANTS PASS	SELMA	5R65	DEER CREEK	7,841	5,839,409	1,181	4,944.46	6.639
South OR	KLAMATH FALLS	BEATTY	5L1	BEATTY	2,960	180,112	400	450.28	7.400
South OR	KLAMATH FALLS	BLY	5L14	TOWN (BLY)	3,162	169,488	431	393.24	7.336
South OR	KLAMATH FALLS	BOISE CASCADE	7L9	BOISE CASCAD	1	50	1	50.13	1.000
South OR	KLAMATH FALLS	BONANZA (OR)	5L7	POE VALLEY	561	139,817	467	299.39	1.201
South OR	KLAMATH FALLS	BRYANT	5L2	GARY STREET	2,139	103,441	2,106	49.12	1.016
South OR	KLAMATH FALLS	BRYANT	5L3	WASHBURN	2,294	128,538	1,811	70.98	1.267
South OR	KLAMATH FALLS	BRYANT	5L4	SUMMERS LANE	2,009	100,937	1,944	51.92	1.033
South OR	KLAMATH FALLS	BRYANT	5L5	MOYINA HTS.	2,701	148,725	2,406	61.81	1.123
South OR	KLAMATH FALLS	CASEBEER SUB	4L16	LANGELL VLY	1,433	355,187	1,157	306.99	1.239
South OR	KLAMATH FALLS	CHILOQUIN	5L57	CRATER LAKE	1,237	150,386	1,040	144.60	1.189
South OR	KLAMATH FALLS	CHILOQUIN MARKET	5L37	WILLIAMSON	16	2,531	543	4.66	0.029
South OR	KLAMATH FALLS	DAIRY	5L42	SWAN LAKE	428	48,238	276	174.77	1.551
South OR	KLAMATH FALLS	DAIRY	5L43	DAIRY	1,794	118,527	465	254.90	3.858
South OR	KLAMATH FALLS	HAMAKER	5L55	KENO	3,145	256,340	1,675	153.04	1.878
South OR	KLAMATH FALLS	HAMAKER	5L56	MOUNTAIN	200	27,448	160	171.55	1.250
South OR	KLAMATH FALLS	HENLEY	5L58	HENLEY	748	68,921	235	293.28	3.183
South OR	KLAMATH FALLS	HENLEY	5L59	WEST	1,164	40,208	530	75.86	2.196
South OR	KLAMATH FALLS	HORNET	5L44	HOMEDALE	2,875	256,732	2,731	94.01	1.053
South OR	KLAMATH FALLS	HORNET	5L45	CRYSTAL SPR	2,974	342,310	1,458	234.78	2.040
South OR	KLAMATH FALLS	LAKEPORT	5L49	WOCUS	280	35,139	193	182.07	1.451
South OR	KLAMATH FALLS	LAKEPORT	5L54	SOUTH (LAKEPORT)	1,127	90,379	2,391	37.80	0.471
South OR	KLAMATH FALLS	MERRILL (OR)	5L26	LAKE (MERRILL)	2,057	182,863	973	187.94	2.114

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South OR	KLAMATH FALLS	MERRILL (OR)	5L27	NORTH (MERRILL)	1,891	70,424	553	127.35	3.420
South OR	KLAMATH FALLS	MODOC	5L36	MODOC	1,657	114,303	838	136.40	1.977
South OR	KLAMATH FALLS	ROSS AVENUE	5L46	ELDORADO	90	22,078	1,382	15.98	0.065
South OR	KLAMATH FALLS	ROSS AVENUE	5L48	BROAD ST.	52	6,231	1,187	5.25	0.044
South OR	KLAMATH FALLS	RUNNING Y	4L50	ROCKY POINT FEEDER (RUNNING Y)	5,107	1,077,626	1,425	756.23	3.584
South OR	KLAMATH FALLS	SPRAGUE RIVER	5L8	SPRAGUE RIVER	3,504	454,469	495	918.12	7.079
South OR	KLAMATH FALLS	TEXUM	5L112	ANDERSON	1,217	58,283	1,194	48.81	1.019
South OR	KLAMATH FALLS	TEXUM	5L113	TOWER	982	46,722	278	168.07	3.532
South OR	KLAMATH FALLS	TEXUM	5L116	ALTAMONT	1,551	77,192	1,493	51.70	1.039
South OR	KLAMATH FALLS	TURKEY HILL	5L20	MALIN CITY	3,098	228,312	821	278.09	3.773
South OR	KLAMATH FALLS	TURKEY HILL	5L23	RURAL (TURKEY HILL)	701	51,112	320	159.73	2.191
South OR	KLAMATH FALLS	WEST SIDE HE PLANT	5L12	ORINDALE	3,113	650,123	770	844.32	4.043
South OR	KLAMATH FALLS	WEST SIDE HE PLANT	5L15	CALIFORNIA	1,378	194,166	1,344	144.47	1.025
South OR	KLAMATH FALLS	WEST SIDE HE PLANT	5L16	MAIN ST (WEST SIDE HE PLANT)	110	19,778	109	181.45	1.009
South OR	KLAMATH FALLS	WEST SIDE HE PLANT	5L18	RIVERSIDE (WEST SIDE HE PLANT)	6	387	572	0.68	0.010
South OR	KLAMATH FALLS	WEST SIDE HE PLANT	5L19	LAKESHORE	5	542	298	1.82	0.017
South OR	LAKEVIEW	MILE-HI	5L104	INDUSTRIAL	424	47,343	715	66.21	0.593
South OR	LAKEVIEW	MILE-HI	5L105	BUSINESS	46	7,930	1,711	4.63	0.027
South OR	MEDFORD	ASHLAND (MTN.AVE, PUD)	5R241	CITY	26	8,681	9	964.50	2.889
South OR	MEDFORD	ASHLAND (MTN.AVE, PUD)	5R245	VALLEY VIEW	3,228	487,828	962	507.10	3.356
South OR	MEDFORD	BEALL LANE	5R361	BULLDOG	1,814	85,706	1,710	50.12	1.061
South OR	MEDFORD	BEALL LANE	5R364	BOBCAT	316	176,832	2,121	83.37	0.149
South OR	MEDFORD	BELKNAP	5R1	KOGAP	199	47,912	998	48.01	0.199
South OR	MEDFORD	BELKNAP	5R2	RIVERSIDE (BELKNAP)	729	91,455	660	138.57	1.105
South OR	MEDFORD	BELKNAP	5R3	BARNETT	140	25,091	1,628	15.41	0.086
South OR	MEDFORD	BELKNAP	5R47	STEWART	6,549	442,775	2,078	213.08	3.152
South OR	MEDFORD	BROOKHURST	5R118	SPRINGBROOK	25	4,238	1,784	2.38	0.014
South OR	MEDFORD	BROOKHURST	5R135	ROBERTS (BROOKHURST)	91	15,193	1,619	9.38	0.056
South OR	MEDFORD	BROOKHURST	5R32	ROXY	135	12,621	1,713	7.37	0.079
South OR	MEDFORD	BROOKHURST	5R33	CRATER LAKE	408	126,976	1,662	76.40	0.245
South OR	MEDFORD	BROOKHURST	5R75	SUNRISE (BROOKHURST)	95	94,016	1,232	76.31	0.077
South OR	MEDFORD	CAMPBELL	5R216	VOORHIES	844	131,341	844	155.62	1.000
South OR	MEDFORD	CAMPBELL	5R218	PHOENIX	1,824	288,574	1,505	191.74	1.212
South OR	MEDFORD	CAMPBELL	5R227	FERN VALLEY	1,390	210,090	1,244	168.88	1.117
South OR	MEDFORD	CAMPBELL	5R312	COBRA	7,477	788,690	1,425	553.47	5.247
South OR	MEDFORD	DODGE BRIDGE	4R1	SALMON	1,019	324,176	1,597	202.99	0.638
South OR	MEDFORD	DODGE BRIDGE	4R35	MEADOWS ROAD	2,616	1,121,188	1,348	831.74	1.941
South OR	MEDFORD	FOOTHILLS	5R38	HOSPITAL	83	29,101	763	38.14	0.109
South OR	MEDFORD	FOOTHILLS	5R39	PIERCE ROAD	357	85,335	1,155	73.88	0.309
South OR	MEDFORD	FRALEY	5R87	TABLE ROCK	304	62,488	513	121.81	0.593
South OR	MEDFORD	FRALEY	5R88	DODGE BRIDGE	54	86,215	362	238.16	0.149
South OR	MEDFORD	GOLD HILL	5R103	GOLD HILL	6,034	1,503,612	1,981	759.02	3.046
South OR	MEDFORD	GRIFFIN CREEK	5R204	HULL RD	783	149,957	2,616	57.32	0.299

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South OR	MEDFORD	GRIFFIN CREEK	5R206	GRIFFIN CREEK	1,136	336,977	1,711	196.95	0.664
South OR	MEDFORD	HUMBUG CREEK	5R287	HUMMINGBIRD	3,543	1,328,384	676	1,965.06	5.241
South OR	MEDFORD	MEDCO	5R280	BOISE CASCADE	1	357	1	357.07	1.000
South OR	MEDFORD	MEDFORD	5R21	MELROSE	3,496	170,278	1,593	106.89	2.195
South OR	MEDFORD	MEDFORD	5R23	SPRING ST.	2,022	408,583	1,587	257.46	1.274
South OR	MEDFORD	MEDFORD	5R250	BIG Y	2,120	141,591	1,860	76.12	1.140
South OR	MEDFORD	MEDFORD	5R253	APPLE	1,129	33,588	1,105	30.40	1.022
South OR	MEDFORD	MEDFORD	5R257	PEAR	77	5,521	633	8.72	0.122
South OR	MEDFORD	MEDFORD	5R659	MCLEAN	56	9,461	679	13.93	0.082
South OR	MEDFORD	NEW JACKSONVILLE SUB-DIST	5R284	STAGE RD	2,294	332,094	2,039	162.87	1.125
South OR	MEDFORD	NEW JACKSONVILLE SUB-DIST	5R285	JACKSONVILLE HWY	5,083	803,246	2,136	376.05	2.380
South OR	MEDFORD	OAK KNOLL	5R55	SISKIYOU	4,290	509,517	1,469	346.85	2.920
South OR	MEDFORD	OAK KNOLL	5R56	HIGHWAY 99	291	84,322	116	726.91	2.509
South OR	MEDFORD	PROSPECT CENTRAL	5R40	NEW CASCADE	1,098	272,920	334	817.12	3.287
South OR	MEDFORD	RED BLANKET	7R5	PROSPECT	1,110	395,895	386	1,025.63	2.876
South OR	MEDFORD	ROXY ANN	5R350	St. Bernard	249	43,735	1,194	36.63	0.209
South OR	MEDFORD	ROXY ANN	5R354	RACCOON	224	28,635	1,461	19.60	0.153
South OR	MEDFORD	RUCH	5R68	APPLEGATE	2,152	736,651	909	810.40	2.367
South OR	MEDFORD	RUCH	5R69	RUCH	839	197,469	541	365.01	1.551
South OR	MEDFORD	SAGE ROAD (OR)	5R211	COLUMBUS	2,103	82,374	1,934	42.59	1.087
South OR	MEDFORD	SAGE ROAD (OR)	5R226	BOISE	65	3,289	905	3.63	0.072
South OR	MEDFORD	SAGE ROAD (OR)	5R28	ROSS	33	2,091	1,902	1.10	0.017
South OR	MEDFORD	SAGE ROAD (OR)	5R29	EDWARDS	69	7,017	724	9.69	0.095
South OR	MEDFORD	SCENIC	5R174	UPTON	5,352	416,768	1,978	210.70	2.706
South OR	MEDFORD	SCENIC	5R180	HEAD RD	275	12,492	1,171	10.67	0.235
South OR	MEDFORD	SCENIC	5R182	TAYLOR RD	2,494	401,325	1,578	254.33	1.580
South OR	MEDFORD	SCENIC	5R184	CHENEY	150	45,531	1,416	32.15	0.106
South OR	MEDFORD	STEVENS ROAD	4R13	HENRY MILLER	2,775	449,109	2,146	209.28	1.293
South OR	MEDFORD	STEVENS ROAD	4R17	Stingray	3,808	337,769	2,499	135.16	1.524
South OR	MEDFORD	STEVENS ROAD	4R41	ANTELOPE	2,873	486,223	1,117	435.29	2.572
South OR	MEDFORD	TAKELMA	4R9	LOST CK. (TAKELMA)	4,470	1,249,663	2,587	483.05	1.728
South OR	MEDFORD	TALENT	5R237	TALENT	5,044	807,241	2,437	331.24	2.070
South OR	MEDFORD	TALENT	5R238	ANDERSON CRK	3,936	697,592	1,693	412.04	2.325
South OR	MEDFORD	TALENT	5R239	HARTLEY ROAD	1,687	432,001	1,532	281.98	1.101
South OR	MEDFORD	TALENT	5R240	NORTH HWY	1,344	392,522	1,170	335.49	1.149
South OR	MEDFORD	TOLO	5R90	TBL ROCK LBR	338	159,451	158	1,009.19	2.139
South OR	MEDFORD	TOLO	5R91	SAMS VALLEY	2,331	654,286	641	1,020.73	3.637
South OR	MEDFORD	TOLO	5R92	KIRTLAND RD	617	81,933	194	422.34	3.180
South OR	MEDFORD	VILAS ROAD	5R110	MCLAUGHLIN	1,339	108,654	937	115.96	1.429
South OR	MEDFORD	VILAS ROAD	5R146	KING CENTER	436	61,518	1,391	44.23	0.313
South OR	MEDFORD	VILAS ROAD	5R305	WEBFOOT	8	2,454	785	3.13	0.010
South OR	MEDFORD	WHITE CITY	5R11	EAGLE POINT	305	87,872	1,475	59.57	0.207
South OR	MEDFORD	WHITE CITY	5R14	AGATE	108	3,658	105	34.83	1.029

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South OR	MEDFORD	WHITE CITY	5R19	3M	1	68	105	0.64	0.010
South OR	MEDFORD	WHITE CITY	5R66	4 CORNERS	831	99,559	1,719	57.92	0.483
South OR	ROSEBURG/MYRTLECREEK	CANYONVILLE	5U46	CANYONVILLE	1,162	118,945	391	304.21	2.972
South OR	ROSEBURG/MYRTLECREEK	CANYONVILLE	5U52	BEALS CREEK FEEDER	2,042	878,505	866	1,014.44	2.358
South OR	ROSEBURG/MYRTLECREEK	CARNES	5U44	RND PRARIE	740	56,196	413	136.07	1.792
South OR	ROSEBURG/MYRTLECREEK	CLEARWATER #1 SUB	6U17	BRIGGS	22	4,808	2	2,403.83	11.000
South OR	ROSEBURG/MYRTLECREEK	CLEARWATER #2 SUB	6U33	CLEARWATER	391	51,175	98	522.20	3.990
South OR	ROSEBURG/MYRTLECREEK	CLOAKE	4U37	RUSA	1	7	1	7.12	1.000
South OR	ROSEBURG/MYRTLECREEK	CLOAKE	4U38	HARVARD	3,357	72,185	2,922	24.70	1.149
South OR	ROSEBURG/MYRTLECREEK	CLOAKE	4U39	GOEDECK	2,220	100,506	1,282	78.40	1.732
South OR	ROSEBURG/MYRTLECREEK	GARDEN VALLEY	4U80	EDENBOWER	833	9,702	806	12.04	1.033
South OR	ROSEBURG/MYRTLECREEK	GARDEN VALLEY	4U81	VALLEY	296	39,400	1,348	29.23	0.220
South OR	ROSEBURG/MYRTLECREEK	GLIDE SUBSTATION	5U83	IDLEYLD	4,124	970,191	992	978.01	4.157
South OR	ROSEBURG/MYRTLECREEK	GLIDE SUBSTATION	5U84	LITTLE RIVER	4,253	905,718	1,357	667.44	3.134
South OR	ROSEBURG/MYRTLECREEK	GREEN SUBSTATION	5U32	SAFARI	1,893	152,911	2,074	73.73	0.913
South OR	ROSEBURG/MYRTLECREEK	GREEN SUBSTATION	5U33	SUNNYSLOPE	25	2,942	1,620	1.82	0.015
South OR	ROSEBURG/MYRTLECREEK	ILLAHEE FLATS	6U13	ILLAHEE FLATS SINGLE PHASE RECLOSER	120	165,164	24	6,881.82	5.000
South OR	ROSEBURG/MYRTLECREEK	LEMOLO # 1	5U920	DIAMOND LAKE	1,735	368,073	181	2,033.55	9.586
South OR	ROSEBURG/MYRTLECREEK	MYRTLE CREEK	5U76	SUPER Y	3,260	624,465	1,529	408.41	2.132
South OR	ROSEBURG/MYRTLECREEK	MYRTLE CREEK	5U77	BOOMER HILL	4,339	452,686	2,284	198.20	1.900
South OR	ROSEBURG/MYRTLECREEK	OAKLAND (OR)	5U11	UMPQUA	320	57,538	1,296	44.40	0.247
South OR	ROSEBURG/MYRTLECREEK	OAKLAND (OR)	5U12	STAGECOACH	33	7,184	550	13.06	0.060
South OR	ROSEBURG/MYRTLECREEK	RIDDLE	5U1	TRI CITY	2,359	240,363	981	245.02	2.405
South OR	ROSEBURG/MYRTLECREEK	RIDDLE	5U2	COW CREEK	2,764	484,459	1,541	314.38	1.794
South OR	ROSEBURG/MYRTLECREEK	RIDDLE	5U3	HANNA	408	152,173	282	539.62	1.447
South OR	ROSEBURG/MYRTLECREEK	RIDDLE-VENEER	5U23	FORD MILL	1	691	1	690.95	1.000
South OR	ROSEBURG/MYRTLECREEK	RIDDLE-VENEER	5U50	RFP-LVL (EWP)	31	20,185	29	696.03	1.069
South OR	ROSEBURG/MYRTLECREEK	ROSEBURG	4U10	DIAMOND	2,700	108,555	2,480	43.77	1.089
South OR	ROSEBURG/MYRTLECREEK	ROSEBURG	4U22	DIXON	2,872	305,093	1,105	276.10	2.599
South OR	ROSEBURG/MYRTLECREEK	ROSEBURG	4U5	DOUGLAS	2,799	315,762	2,058	153.43	1.360
South OR	ROSEBURG/MYRTLECREEK	SOUTHGATE	4U30	SHADY POINT	1,712	22,386	1,572	14.24	1.089
South OR	ROSEBURG/MYRTLECREEK	SOUTHGATE	4U31	BOOTH	3,401	229,668	1,569	146.38	2.168
South OR	ROSEBURG/MYRTLECREEK	STEAMBOAT	6U18	STEAMBOAT	22	164	22	7.47	1.000
South OR	ROSEBURG/MYRTLECREEK	SUTHERLIN	5U35	NON-PAREIL	116	37,058	1,300	28.51	0.089
South OR	ROSEBURG/MYRTLECREEK	SUTHERLIN	5U36	DEADY	450	106,379	1,322	80.47	0.340
South OR	ROSEBURG/MYRTLECREEK	SUTHERLIN	5U56	Industrial	562	79,012	479	164.95	1.173
South OR	ROSEBURG/MYRTLECREEK	TILLER	5U89	JACKSON CRK	681	132,626	308	430.60	2.211
South OR	ROSEBURG/MYRTLECREEK	TOKETEE	6U21	BACK UP FOR CLEARWATER 6U33	19	11,772	0	#DIV/0	#DIV/0
South OR	ROSEBURG/MYRTLECREEK	TOKETEE	8U12	TOKETEE CITY	39	8,383	19	441.22	2.053
South OR	ROSEBURG/MYRTLECREEK	WINCHESTER	4U18	WILBUR	2,076	258,949	1,637	158.19	1.268
South OR	ROSEBURG/MYRTLECREEK	WINCHESTER	5U15	NEWTON CREEK	124	34,521	1,717	20.11	0.072
South OR	ROSEBURG/MYRTLECREEK	WINCHESTER	5U17	FISHER	254	53,690	761	70.55	0.334
South OR	ROSEBURG/MYRTLECREEK	WINCHESTER	5U19	EVANS	266	61,305	757	80.98	0.351

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South OR	ROSEBURG/MYRTLECREEK	WINSTON	5U48	BROCKWAY	885	43,538	861	50.57	1.028
South OR	ROSEBURG/MYRTLECREEK	WINSTON	5U49	DILLARD	4,031	700,191	1,444	484.90	2.792
Willamette Valley	ALBANY	HAZELWOOD	4M335	WEST HIGH	2,197	278,666	1,471	189.44	1.494
Willamette Valley	ALBANY	HAZELWOOD	4M336	RIVERVIEW (HAZELWOOD)	3,037	874,298	1,232	709.66	2.465
Willamette Valley	ALBANY	JEFFERSON (OR)	4M117	MARION	1,910	304,561	711	428.36	2.686
Willamette Valley	ALBANY	JEFFERSON (OR)	4M125	MINT	6,900	1,382,474	2,443	565.89	2.824
Willamette Valley	ALBANY	MURDER CREEK	4M243	SCRAVEL HILL	7,620	1,817,254	3,573	508.61	2.133
Willamette Valley	ALBANY	MURDER CREEK	4M245	RURAL NW	6,029	691,596	1,967	351.60	3.065
Willamette Valley	ALBANY	MURDER CREEK	4M250	INDUSTRIAL	939	72,602	1,211	59.95	0.775
Willamette Valley	ALBANY	OREMET	4M295	OAK CREEK	1	2,937	103	28.52	0.010
Willamette Valley	ALBANY	OREMET	4M296	ROGERSDALE	743	141,351	2,155	65.59	0.345
Willamette Valley	ALBANY	OREMET	5M19	OREMET	1	2,644	3	881.39	0.333
Willamette Valley	ALBANY	QUEEN AVE	4M217	SANTIAM	887	232,227	1,884	123.26	0.471
Willamette Valley	ALBANY	QUEEN AVE	4M258	HILL STREET	1,281	106,519	2,188	48.68	0.585
Willamette Valley	ALBANY	QUEEN AVE	4M261	WAVERLY	175	27,619	3,390	8.15	0.052
Willamette Valley	ALBANY	QUEEN AVE	4M262	GEARY STREET	132	20,933	2,736	7.65	0.048
Willamette Valley	ALBANY	VINE STREET	4M15	FERRY	667	78,499	2,161	36.33	0.309
Willamette Valley	ALBANY	VINE STREET	4M16	WATER STREET	17,713	1,296,458	4,011	323.23	4.416
Willamette Valley	CORVALLIS	BUCHANAN	4M130	HEWLETT PACKARD	5,344	147,315	2,631	55.99	2.031
Willamette Valley	CORVALLIS	BUCHANAN	4M133	PEORIA	9,822	1,527,183	2,442	625.38	4.022
Willamette Valley	CORVALLIS	BUCHANAN	4M134	N. NINTH ST.	9,953	1,017,349	2,589	392.95	3.844
Willamette Valley	CORVALLIS	CIRCLE BLVD	4M394	H. P. #1	2	50	1	49.50	2.000
Willamette Valley	CORVALLIS	CIRCLE BLVD	4M427	H. P. #3	2	49	1	49.37	2.000
Willamette Valley	CORVALLIS	CIRCLE BLVD	4M429	H. P. #5	2	49	1	49.42	2.000
Willamette Valley	CORVALLIS	DIXON	7M26	FOURTH ST.	471	12,807	235	54.50	2.004
Willamette Valley	CORVALLIS	DIXON	7M29	SECOND ST.	551	14,767	275	53.70	2.004
Willamette Valley	CORVALLIS	GRANT	4M265	HIGH SCHOOL	8,937	394,173	2,490	158.30	3.589
Willamette Valley	CORVALLIS	GRANT	4M266	CHINTIMINI	8,139	739,787	2,541	291.14	3.203
Willamette Valley	CORVALLIS	GRANT	4M268	KINGS ROAD	8,628	496,903	2,541	195.55	3.396
Willamette Valley	CORVALLIS	GRANT	4M269	29TH STREET	12,632	926,423	3,292	281.42	3.837
Willamette Valley	CORVALLIS	HILLVIEW	4M180	WEST HILLS	4,103	68,735	1,852	37.11	2.215
Willamette Valley	CORVALLIS	HILLVIEW	4M181	PHILOMATH	1,305	16,679	640	26.06	2.039
Willamette Valley	CORVALLIS	HILLVIEW	4M182	SUNSET	3,542	47,448	1,751	27.10	2.023
Willamette Valley	CORVALLIS	HILLVIEW	4M185	PLYMOUTH	4,778	98,537	2,225	44.29	2.147
Willamette Valley	CORVALLIS	MARYS RIVER	4M151	GREENBERRY	17,167	4,973,028	3,591	1,384.86	4.781
Willamette Valley	CORVALLIS	MARYS RIVER	4M152	AVERY	951	260,662	188	1,386.50	5.059
Willamette Valley	CORVALLIS	MARYS RIVER	4M153	GALLAGHER	818	199,777	159	1,256.46	5.145
Willamette Valley	COTTAGE GROVE/J.CITY	COBURG	4M220	DETERING	304	145,091	542	267.69	0.561
Willamette Valley	COTTAGE GROVE/J.CITY	GOSHEN (OR)	4M360	GOSHEN FDR	257	43,005	1,595	26.96	0.161
Willamette Valley	COTTAGE GROVE/J.CITY	HARRISBURG SUB	4M400	TERRITORIAL	2,451	272,204	1,815	149.97	1.350
Willamette Valley	COTTAGE GROVE/J.CITY	JUNCTION CITY	4M102	6TH STREET	1,543	144,005	1,140	126.32	1.354
Willamette Valley	COTTAGE GROVE/J.CITY	JUNCTION CITY	4M99	PRAIRIE ROAD	2,002	325,915	990	329.21	2.022
Willamette Valley	COTTAGE GROVE/J.CITY	LANCASTER	4M209	MONROE	1,926	325,701	1,078	302.13	1.787

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Willamette Valley	COTTAGE GROVE/J.CITY	VILLAGE GREEN	4M84	NORTH SIDE	2,563	72,911	2,346	31.08	1.092
Willamette Valley	COTTAGE GROVE/J.CITY	VILLAGE GREEN	4M86	MADISON	683	92,458	1,583	58.41	0.431
Willamette Valley	DALLAS/INDEPENDENCE	DALLAS	4M100	RURAL (DALLAS)	15,365	949,052	4,547	208.72	3.379
Willamette Valley	DALLAS/INDEPENDENCE	DALLAS	4M201	INDUSTRIAL	54	1,846	27	68.37	2.000
Willamette Valley	DALLAS/INDEPENDENCE	DALLAS	4M202	ELLENDALE	6,644	350,439	2,863	122.40	2.321
Willamette Valley	DALLAS/INDEPENDENCE	DALLAS	4M238	DALLAS	9,590	876,877	2,257	388.51	4.249
Willamette Valley	DALLAS/INDEPENDENCE	INDEPENDENCE	4M22	RICKREAL	8,406	574,447	3,266	175.89	2.574
Willamette Valley	DALLAS/INDEPENDENCE	INDEPENDENCE	4M25	BUENA VISTA	12,996	1,019,588	1,958	520.73	6.637
Willamette Valley	LEBANON	BROWNSVILLE	4M17	CALAPOOIA	9,410	1,006,626	2,779	362.23	3.386
Willamette Valley	LEBANON	CALAPOOYA	4M850	SPAULDING	2,276	117,632	1,091	107.82	2.086
Willamette Valley	LEBANON	CALAPOOYA	4M851	BEAR	5	176	31	5.68	0.161
Willamette Valley	LEBANON	CROWFOOT	4M204	CROWFOOT	5,485	967,485	1,491	648.88	3.679
Willamette Valley	LEBANON	CROWFOOT	4M206	US PLYWOOD (LEBANON)	3,988	281,856	1,793	157.20	2.224
Willamette Valley	LEBANON	LEBANON	4M61	TANGENT	2,830	1,014,565	2,431	417.34	1.164
Willamette Valley	LEBANON	LEBANON	4M62	RALSTON	2,077	152,142	1,985	76.65	1.046
Willamette Valley	LEBANON	LEBANON	4M63	TENNESSEE	4,560	1,474,692	1,774	831.28	2.570
Willamette Valley	LEBANON	LEBANON	4M79	CROWN Z	1,198	40,522	1,112	36.44	1.077
Willamette Valley	LEBANON	SWEET HOME	4M37	HOLLEY	3,652	1,771,128	1,982	893.61	1.843
Willamette Valley	LEBANON	SWEET HOME	4M38	NARROWS	2,580	677,278	960	705.50	2.688
Willamette Valley	LEBANON	SWEET HOME	4M93	AMES CREEK	2,316	191,698	1,666	115.06	1.390
Willamette Valley	LEBANON	SWEET HOME	4M94	FOSTER	12,809	3,461,827	2,324	1,489.60	5.512
Willamette Valley	STAYTON	LYONS	4M120	MILL CITY	2,339	725,513	715	1,014.70	3.271
Willamette Valley	STAYTON	LYONS	4M70	MEHAMA	14,359	2,545,926	2,080	1,224.00	6.903
Willamette Valley	STAYTON	SCIO	5M126	THOMAS	10,748	2,252,663	1,540	1,462.77	6.979
Willamette Valley	STAYTON	STAYTON	4M19	AUMSVILLE	8,426	2,498,610	3,088	809.14	2.729
Willamette Valley	STAYTON	STAYTON	4M353	WEST STAYTON	9,926	1,059,152	3,427	309.06	2.896
Willamette Valley	STAYTON	STAYTON	4M370	CASCADE	6,146	748,533	1,572	476.17	3.910
Willamette Valley	STAYTON	STAYTON	4M50	3RD STREET	1,968	147,087	906	162.35	2.172



### Oregon 2017 Circuit Metrics (Zero Outage Circuits)

Reliability Region	Op Area Name	Substation Name	Circuit Id	Circuit Name	Kv	Customer Count	SAIDI	SAIFI
Central OR	BEND/REDMOND	BOND STREET	5D413	OLD MILL.	12.50	383	0	0
Central OR	MADRAS	PRINEVILLE	5D50	PINE CONE	12.50	77	0	0
CoastPlus	HOOD RIVER	MORO	8K6	MORO	2.40	66	0	0
CoastPlus	PORTLAND	BLOSS	5P172	FURNACE	12.50	1	0	0
CoastPlus	PORTLAND	COLUMBIA (OR)	5P480	COLUMBIA #5	12.50	21	0	0
CoastPlus	PORTLAND	HOLLADAY (OR)	5P146	HOLLADAY #2-UG	11.70	342	0	0
CoastPlus	PORTLAND	HOLLADAY (OR)	5P156	HOLLADAY #4-UG	11.70	296	0	0
CoastPlus	PORTLAND	HOLLADAY (OR)	5P157	HOLLADAY #5-UG	11.70	329	0	0
CoastPlus	PORTLAND	KNOTT	5P366	11010	11.70	6	0	0
CoastPlus	PORTLAND	LINCOLN (OR)	5P418	11D17	11.70	131	0	0
CoastPlus	PORTLAND	LINCOLN (OR)	5P420	11D14	11.70	15	0	0
CoastPlus	PORTLAND	LINCOLN (OR)	5P422	11D06-UG	11.70	543	0	0
CoastPlus	PORTLAND	LINCOLN (OR)	5P424	11D03-UG	11.70	1	0	0
CoastPlus	PORTLAND	LINCOLN (OR)	5P426	11D04-UG	11.70	322	0	0
CoastPlus	PORTLAND	LINCOLN (OR)	5P430	11D05-UG	11.70	367	0	0
CoastPlus	PORTLAND	LINCOLN (OR)	5P434	11D12-UG	11.70	15	0	0
CoastPlus	PORTLAND	LINCOLN (OR)	5P436	11G18-UG	11.70	102	0	0
CoastPlus	PORTLAND	LINCOLN (OR)	5P438	11D08-UG	11.70	17	0	0
CoastPlus	PORTLAND	LINCOLN (OR)	5P456	11D09-UG	11.70	184	0	0
CoastPlus	PORTLAND	LINCOLN (OR)	5P458	11D07-UG	11.70	216	0	0
CoastPlus	PORTLAND	LINCOLN (OR)	5P460	11D01-UG	11.70	1	0	0
CoastPlus	PORTLAND	LINCOLN (OR)	5P462	11G13-UG	11.70	32	0	0
CoastPlus	PORTLAND	LINCOLN (OR)	5P464	11G16-UG	11.60	171	0	0
Northeast	PENDLETON	PENDLETON	7W454	EAST END	4.10	244	0	0
Northeast	PENDLETON	PILOT ROCK	5W404	MILL (PILOT ROCK)	12.50	1	0	0
Northeast	PENDLETON	WESTON NEW (OR)	5W40	WESTON CANNERY	12.50	16	0	0
Southern OR	GRANTS PASS	ROGUE RIVER	4R7	EVANS VALLEY	20.80	224	0	0
Southern OR	KLAMATH FALLS	LAKEPORT	5L61	JELDWEN	12.50	7	0	0
Southern OR	KLAMATH FALLS	SHASTA WAY	7L25	SHASTA WAY	4.10	429	0	0
Southern OR	KLAMATH FALLS	WEST SIDE HE PLANT	5L17	PINE ST (WEST SIDE HE PLANT)	12.50	492	0	0
Southern OR	KLAMATH FALLS	WEST SIDE HE PLANT	8L10	CITY WTR PMP	2.40	1	0	0
Southern OR	MEDFORD	BEALL LANE	5R359	BEEHIVE	12.50	2	0	0
Southern OR	MEDFORD	PROSPECT 3 HE PLANT	5R290	P-3 FOREBAY	12.50	1	0	0
Southern OR	MEDFORD	SAGE ROAD (OR)	5R209	TIMBER PROD	12.50	1	0	0
Southern OR	MEDFORD	SAGE ROAD (OR)	5R27	MCANDREWS	12.50	113	0	0
Southern OR	MEDFORD	WHITE CITY	5R12	INDUSTRIAL	12.50	31	0	0
Southern OR	MEDFORD	WHITE CITY	5R13	FIR-PLY	12.50	22	0	0
Southern OR	MEDFORD	WHITE CITY	5R76	AVE C	12.50	76	0	0

Vegetation Management

**OREGON**  
**Tree Program Reporting**  
**Report as of December 31, 2017**  
**Distribution Four Year Cycle 1/1/2016-12/31/2019**

	Total	Current Year Reporting				Total Cycle Reporting			
	Total Line Miles	1/1/2017- 12/31/2017	1/1/2017- 12/31/2017	1/1/2017- 12/31/2017	1/1/2017- 12/31/2017	1/1/2016 through end of cycle	1/1/2016 through end of cycle	1/1/2016 through end of cycle	1/1/2016 through end of cycle
		Miles Planned	Actual Miles	Ahead/Behind	% Ahead/Behind	Miles Planned	Miles Actual	Ahead/ Behind	% Ahead/ Behind
	column a	column b	column c	column d	column e	column f	column g	column h	column i
<b>Oregon</b>	<b>14,004</b>	<b>3,415</b>	<b>3,463</b>	<b>46</b>	<b>101.4%</b>	<b>7,223</b>	<b>7,206</b>	<b>-19</b>	<b>99.8%</b>
ALBANY	536	0	0	0	n/a	268	317	49	118.3%
CORVALLIS	301	80	80	0	100.0%	151	80	-71	53.0%
COTTAGE GROVE	52	0	0	0	n/a	26	0	-26	0.0%
DALLAS	411	177	177	0	100.0%	206	176	-30	85.4%
JUNCTION CITY	156	0	0	0	n/a	78	0	-78	0.0%
LEBANON	700	355	355	0	100.0%	350	355	5	101.4%
LINCOLN CITY	165	36	36	0	100.0%	83	36	-47	43.4%
STAYTON	444	0	0	0	n/a	222	383	161	172.5%
COOS BAY	649	148	161	13	108.8%	325	351	26	108.0%
GRANTS PASS	1,624	374	398	24	106.4%	812	812	0	100.0%
ROSEBURG	1,201	261	283	22	108.4%	600	600	0	100.0%
KLAMATH FALLS	1,870	489	489	0	100.0%	935	998	63	106.7%
LAKEVIEW	60	39	39	0	100.0%	30	39	9	130.0%
MEDFORD	1,918	503	503	0	100.0%	959	949	-10	99.0%
CENTRAL OREGON	1,344	221	207	-14	93.7%	672	663	-9	98.7%
CLATSOP	375	93	98	5	105.4%	188	227	39	120.7%
ENTERPRISE	434	128	128	0	100.0%	217	205	-12	94.5%
HERMISTON	258	37	37	0	100.0%	129	115	-14	89.1%
HOOD RIVER	308	28	28	0	100.0%	154	111	-43	72.1%
PENDLETON	631	129	129	0	100.0%	316	288	-28	91.1%
PORTLAND	436	312	308	-4	98.7%	436	411	-25	94.3%
WALLA WALLA	131	7	7	0	100.0%	66	90	24	134.5%

Distribution cycle \$/tree:\* \$82.39  
 Distribution cycle \$/mile: \$3,844  
 Distribution cycle removal %\* 27%

Transmission

Total	Line	Line	Miles	Miles	% of miles
Line	Miles	Miles	Ahead(behind)	on	on/behind
Miles	Scheduled	Worked	Schedule	Schedule	Schedule
2,948	22	28	6	2,954	100%

Notes:

- Column a: Total overhead pole miles by district
- Column b: Total overhead pole miles planned for the period January 1, 2017 through December 31, 2017
- Column c: Actual overhead pole miles worked during the period January 1 2017 through December 31, 2017
- Column d: Miles ahead or behind for the period January 1, 2017 through December 31, 2017 (column c-column b)
- Column e: Percent of actual compared to planned for the period January 1, 2017 through December 31 ((column c-b)/b)x100)
- Column f: Total overhead pole miles planned for the period January 1, 2016 through end of cycle
- Column g: Actual overhead pole miles worked during the period January 1 2016 through end of cycle
- Column h: Miles ahead or behind for the period January 1, 2016 through end of cycle (column g-column f)
- Column i: Percent of actual compared to planned for the period January 1, 2016 through end of cycle ((column g-f)/f)x100).

**OREGON**  
**Tree Program Reporting (C)**

	2017 est.	2018 est.	2019 est.	2020 est.	2021 est.	2022 est.
<b>Distribution Tree Budget</b>	17,897,000	18,210,000	18,529,000	18,853,000	19,183,000	19,519,000
<b>Transmission Tree Budget</b>	3,225,795	3,225,795	3,225,795	3,225,795	3,225,795	3,225,795
<b>Total Tree Budget</b>	\$ 21,122,795	\$ 21,435,795	\$ 21,754,795	\$ 22,078,795	\$ 22,408,795	\$ 22,744,795

	2011	2012	2013	2014	2015	2016
<b>Distribution Tree Actuals</b>	13,853,185	16,995,719	18,251,251	23,191,320	21,923,393	17,489,336
<b>Transmission Tree Actuals</b>	3,762,895	3,734,977	4,363,149	2,370,822	2,355,070	3,745,786
<b>Total Tree Actuals</b>	\$ 17,616,080	\$ 20,730,696	\$ 22,614,400	\$ 25,562,142	\$ 24,278,463	\$ 21,235,122

	Distribution			Transmission		
	Actuals	Budget	Variance	Actuals	Budget	Variance
<b>Calendar year 2017</b>						
Jan	\$ 541,168	1,354,787	\$ (813,620)	\$ 105,337	\$ 244,184	\$ (138,847)
Feb	\$ 1,680,562	1,497,396	\$ 183,166	\$ 55,000	\$ 269,887	\$ (214,887)
Mar	\$ 1,547,326	1,640,005	\$ (92,679)	\$ 60,116	\$ 295,591	\$ (235,475)
Apr	\$ 1,546,785	1,497,396	\$ 49,389	\$ 212,904	\$ 269,887	\$ (56,983)
May	\$ 1,521,062	1,497,396	\$ 23,666	\$ 263,705	\$ 269,887	\$ (6,182)
Jun	\$ 1,799,990	1,568,701	\$ 231,289	\$ 214,248	\$ 282,739	\$ (68,491)
Jul	\$ 1,651,210	1,354,787	\$ 296,423	\$ 168,854	\$ 244,184	\$ (75,330)
Aug	\$ 1,814,233	1,640,005	\$ 174,228	\$ 338,964	\$ 295,591	\$ 43,373
Sep	\$ 1,224,191	1,497,396	\$ (273,205)	\$ 108,966	\$ 269,887	\$ (160,921)
Oct	\$ 2,353,946	1,497,396	\$ 856,550	\$ 398,380	\$ 269,887	\$ 128,493
Nov	\$ 1,611,358	1,354,787	\$ 256,571	\$ 375,670	\$ 244,184	\$ 131,486
Dec	\$ 1,354,809	\$ 1,497,396	\$ (142,587)	\$ 358,676	\$ 269,887	\$ 88,789
<b>Total</b>	\$ 18,646,639	\$ 17,897,448	\$ 749,191	\$ 2,660,821	\$ 3,225,795	\$ (564,974)

Average # Tree Crews on Property (YTD)

66

## INSPECTION AND MAINTENANCE PROGRAMS

### Inspection and Repairs<sup>1</sup>

In Calendar Year 2017 (January 01 through December 31, 2017), among distribution and transmission facilities (both overhead and underground), 1,735 'A' Priority conditions were recorded and 1,767 were corrected.

For 'B' priority conditions, 14,385 were identified and 18,490 were corrected in CY2017.

For 'C' priority conditions, 278 were corrected in CY2017. Reporting of 'C' priority conditions was terminated early 2014, however some are still occasionally entered into the inspection system inadvertently. 96 were identified in 2017 and these will be reviewed and reprioritized as required.

### Pole and Overhead Facilities

- PacifiCorp is currently on a 10-year cycle for the Detail inspection and treatment of overhead Distribution and Transmission facilities. In CY2017, 39,448 Distribution, 3,411 Local Transmission and 7,420 Main Grid Transmission Detail inspections were performed. Detail inspections were performed on 11.0% of the total 456,645 overhead facilities. Additionally 277 Distribution poles were given a second Detail inspection in CY2017 due to failure of the internal audit process of the initial inspection results or as a follow up aerial inspection of woodpecker damage.
- 39,234 Distribution poles, 2,644 Local Transmission poles and 1,138 Main Grid Transmission poles were Tested and Treated. Test and Treatment was performed on 9.4% of the total 456,645 overhead facilities.
- PacifiCorp replaced or reinforced 814 poles that were rejected through the Test and Treat inspection program. The CY2017 rejection rate was 1.94% for Distribution, 3.86% for Local Transmission and 7.47% for Main Grid Transmission. The overall reject rate for CY2017 was 2.20%.

#### A. Visual Inspections

The visual inspection of the Distribution and Transmission system is on a 2-year cycle. In CY2017, 223,659 Distribution, 20,997 Local Transmission and 19,325 Main Grid inspections were performed for a total of 263,981 inspections which equates to 57.8% of the total overhead facilities. Random re-inspections were performed by operations managers to ensure uniform results and adherence.

#### B. Underground Facilities

The inspection of underground facilities is on a 10-year cycle. It includes a detail inspection of primary underground facilities and an infrared inspection of accessible terminals and splices. During CY2017, 10,483 inspections were performed; 8.8% of 119,316 underground facilities.

#### C. Marina Inspection Program

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<sup>1</sup> On March 15, 2018 PacifiCorp filed a progress report of Detail Inspections on PacifiCorp Owned Structures from 2008-2017, which addresses compliance with Oregon Administrative Rules since the adoption of inspection and correction requirements that became effective on January 1, 2007.

The inspection of marinas is annual. In CY2017, 100% of marinas were inspected.

*D. Line Equipment Maintenance*

Line Equipment – Overhead Reclosers, Sectionalizers, Regulators, Switches

Line equipment is inspected during the 2-year cycle Visual Survey; therefore, inspection requirements have been met for Reclosers, Sectionalizers and Regulators and Switches.

**SUBSTATION MAINTENANCE PROGRAMS**

*A. Performance Measure X3 Substation Maintenance Programs*

1. Description - Substations are critical utility network facilities requiring more frequent inspections and testing of all its equipment. The Company will provide, at the annual meetings, information of its Substation maintenance programs.
2. Program Interval - The program interval will be dictated by the substation equipment operational requirements.
3. Program Expenditures - PacifiCorp is to submit an annual actual versus budgeted expenditures for all substations equipment maintenance programs.

*B. Substation Security Inspections*

Substation security inspections are performed on cycles based on policy. This includes a detailed inspection of the fence, gates, warning signs, grounding systems, etc. The inspector is trained to look for security violations and public hazards. Copies of the inspection results are filed at the substation and field office. Field personnel are instructed to immediately correct all perimeter security violations.

Reference PacifiCorp Maintenance Policy 034 - Substation Inspection Policy and form 3274F-Substation Inspection.

PacifiCorp operates 276 substation and communication facilities in Oregon. PacifiCorp performed 98% of the planned substation security inspections within the required 45-day interval in CY2017.

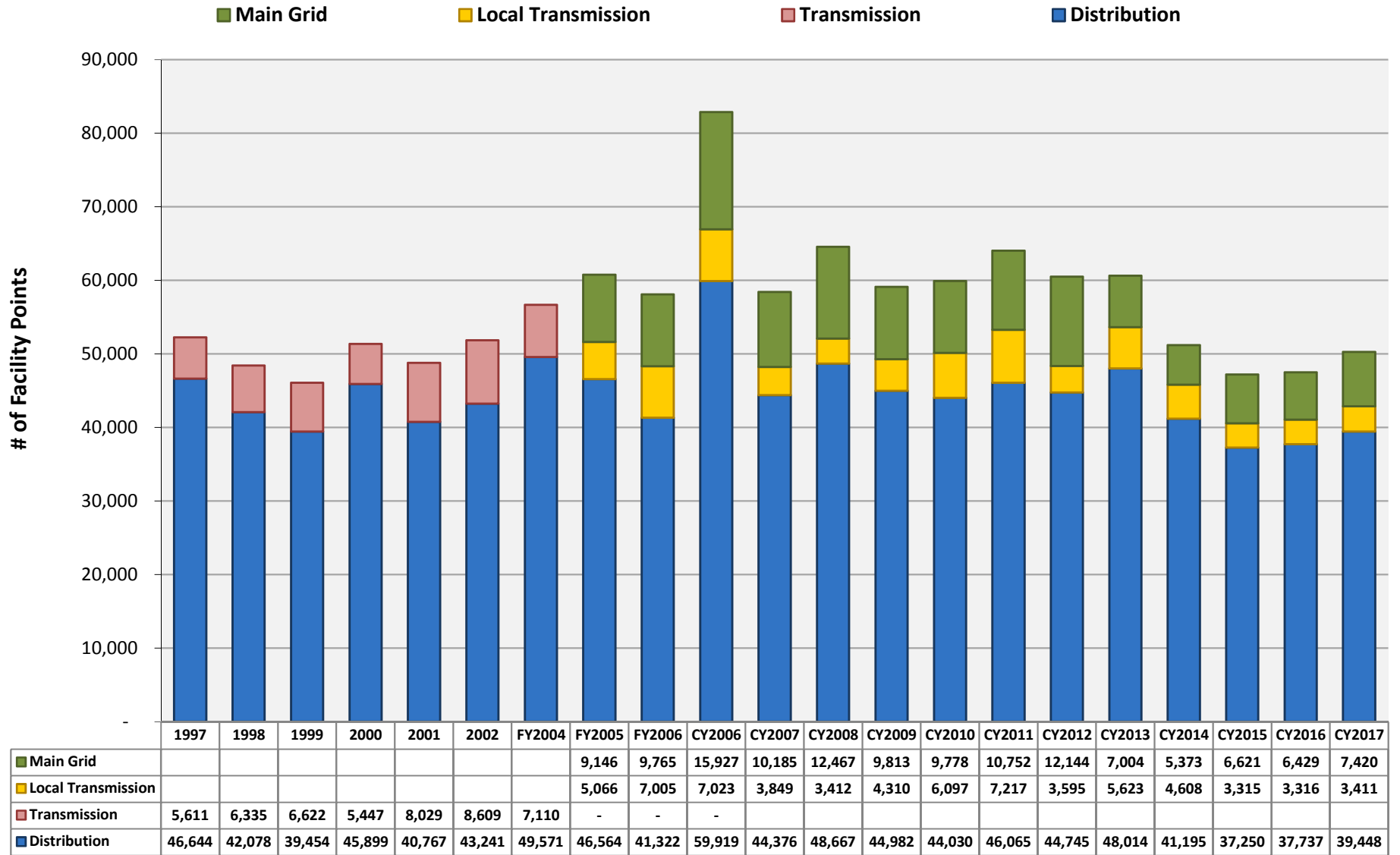
*C. Substation Equipment Inspections*

Batteries, Capacitor Banks, Circuit Breakers, Switches, LTC's, Regulators, Transformers, and protective relays are inspected on cycles based on policy. Inspections check pressure, temperature, voltage, LTC and regulator operation, cooling equipment, insulators, relay targets, etc.

Reference PacifiCorp Maintenance Policy 034 - Substation Inspection Policy and form 3274F-Substation Inspection.

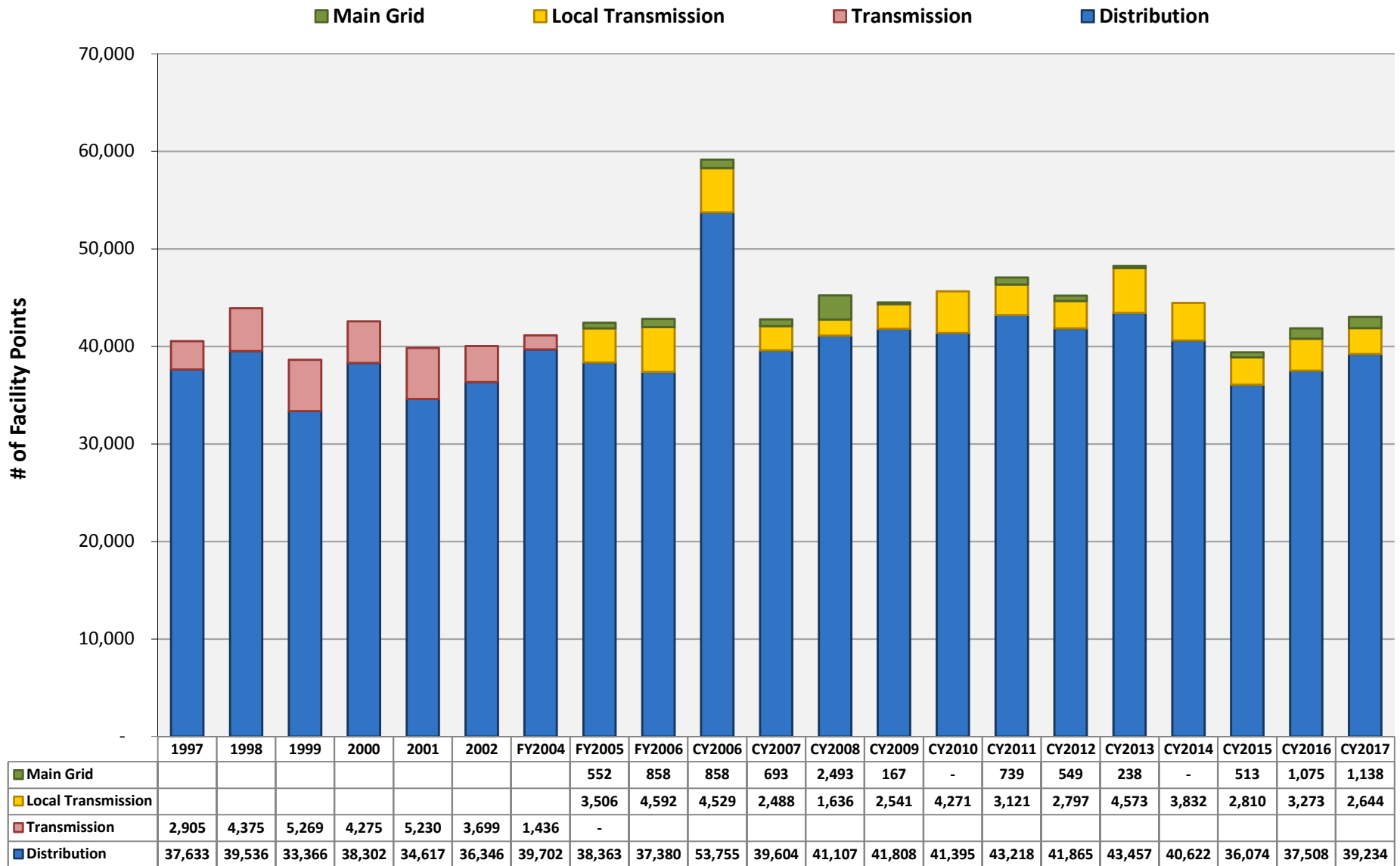
PacifiCorp performed 98% of the planned substation equipment inspections, within the required 45-day interval in Oregon in CY2017.

## CY2017 Overhead Detail Inspection History



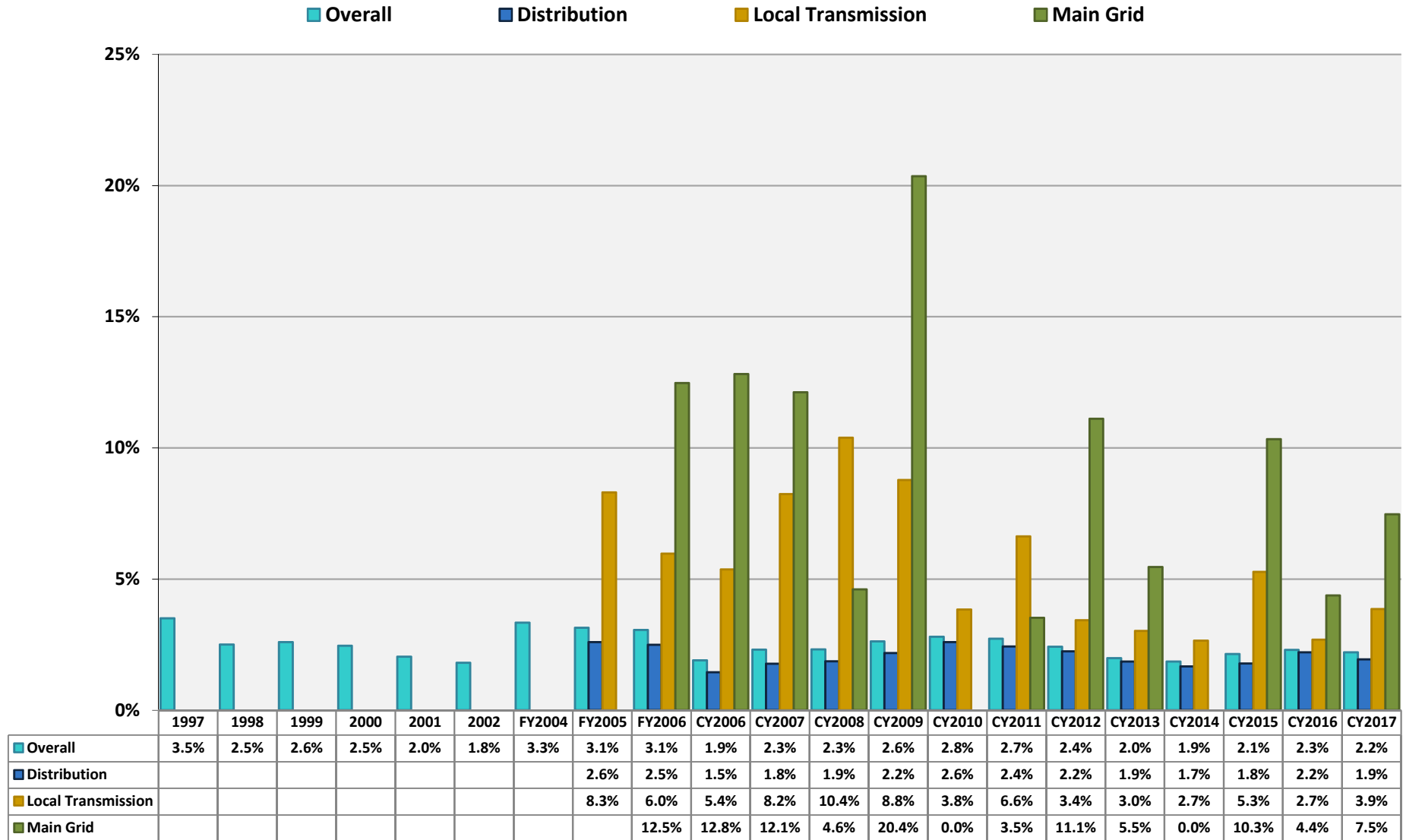
(Transmission breakout not available for years prior FY2005)

## CY2017 Pole Test and Treat History



(Transmission breakout not available for years prior FY2005)

## CY2017 Pole Reject Rate History



(Breakout not available for years prior FY2005; in FY2005, Distribution and blended Transmission breakout available; effective FY2006, full breakout views available. Main Grid rates combine intrusive inspection rejects with detail inspection BOPOLE.)



# Budget

## Inspection and Maintenance Budget

Pole Inspect & Treat			ACTUALS	BUDGET
Distribution	T&T	515	\$2,137,625	\$2,213,743
	Detail	520	\$0	\$0
Transmission	T&T	843, 883	\$232,662	\$282,022
	Detail	840, 880	\$263,135	\$262,044
<b>Total</b>			<b>\$2,633,422</b>	<b>\$2,757,810</b>

Pole Replacements			ACTUALS	BUDGET
Distribution			\$4,104,659	\$3,694,454
Transmission			\$4,575,014	\$3,397,093
<b>Total</b>			<b>\$8,679,673</b>	<b>\$7,091,547</b>

Repair and Replace Facilities			ACTUALS	BUDGET
Distribution	500, 501, 502, 503, 504, 505, 509, 518, 526, 527, 595, 624, 625, 626, 905		\$13,232,172	\$12,244,031
Transmission	845, 847, 846, 865, 884, 886, 848, 889		\$249,267	\$389,052
<b>Total</b>			<b>\$13,481,439</b>	<b>\$12,633,083</b>

Visual Inspections (Includes Equipment Inspections)			ACTUALS	BUDGET
Distribution		521	\$356,242	\$335,658
Transmission		841, 881	\$198,861	\$206,560
<b>Total</b>			<b>\$555,103</b>	<b>\$542,218</b>

Underground Inspections			ACTUALS	BUDGET
Distribution		508	\$303,684	\$325,962
<b>Total</b>			<b>\$303,684</b>	<b>\$325,962</b>

Substation Maintenance			ACTUALS	BUDGET
Distribution Preventative Maintenance			\$1,210,377	\$1,527,891
Distribution Corrective Maintenance			\$860,486	\$1,102,950
Transmission Preventative Maintenance			\$1,138,441	\$1,068,477
Transmission Corrective Maintenance			\$517,459	\$651,421
<b>Total</b>			<b>\$3,726,763</b>	<b>\$4,350,738</b>