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REPORT NAME: Major Event Report

COMPANY NAME: Pacific Power

DOES REPORT CONTAIN CONFIDENTIAL INFORMATION? No Yes

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If known, please select designation: RE (Electric) RG (Gas) RW (Water) RO (Other)

Report is required by: OAR OAR 860-023-0161

Statute

Order

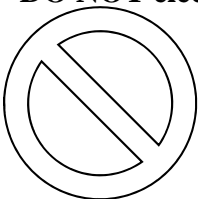
Other

Is this report associated with a specific docket/case? No Yes

If yes, enter docket number: RE 107

List applicable Key Words for this report to facilitate electronic search:
Major Event Report

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- Annual Fee Statement form and payment remittance or
- OUS or RSPF Surcharge form or surcharge remittance or
- Any other Telecommunications Reporting or
- Any daily safety or safety incident reports or
- Accident reports required by ORS 654.715

Please file the above reports according to their individual instructions.



825 NE Multnomah, Suite 2000
Portland, Oregon 97232

February 24, 2017

VIA ELECTRONIC FILING

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

Attn: Filing Center

RE: RE 107 – PacifiCorp Major Event Report - REVISED

In compliance with OAR 860-023-0161, on February 17, 2017, PacifiCorp d/b/a Pacific Power (PacifiCorp or Company) submitted a report describing a major event that occurred January 2-12, 2017, in the Company's Oregon service area. The Company recently identified a data error in the calculation of the 2017 Oregon reliability threshold included in that report. The attached revised report reflects the corrected threshold both in the written report and charts therein. The Company respectfully requests that the attached report replaces the previously-filed report in its entirety.

The Company requests to exclude the outage information for this event from both its network performance reporting and customer guarantee failure payments.

If you require further information regarding this report, please contact Heide Caswell, Director, Engineering and Environmental, at (503) 813-6216.

Sincerely,

R. Bryce Dalley
Vice President, Regulation

Enclosure

cc: Lori Koho/Administrator, Safety, Reliability, and Security Division

<p style="text-align: center;">Report to the Oregon Public Utility Commission Electric Service Reliability - Major Event Report</p>

Event Date:	January 2 - 12, 2017
Date Submitted:	February 24, 2017
Primary Affected Locations:	Oregon
Primary Cause:	Weather
Exclude from Reporting Status:	Yes
Report Prepared by:	April Brewer
Report Approved by:	Heide Caswell/Larry Young/David O'Neill/Debbie Guerra

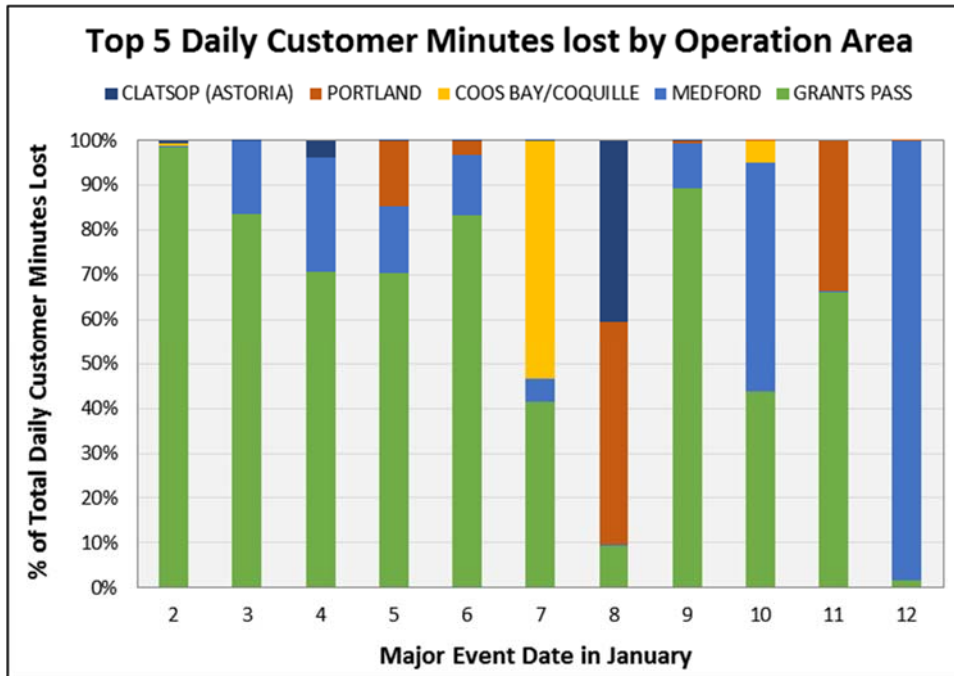
Event Description

During the month of January the Pacific Northwest was hit with a series of severe winter storms. The weather events significantly impacted service reliability for 10 days bringing heavy ice and large amounts of snow to service areas across the state. On January 2, 2017, the first weather event began impacting service to areas in the southern portion of the state, where Grants Pass and Medford experienced substantial snow fall. Large accumulations of snow heavily impacted equipment, as snow loaded conductor and trees caused numerous downed lines, damaging equipment. At 11 pm on the evening of January 3rd, the total customers out peaked at 15,212 customers. By January 5th, the snow accumulation from the first storm had slowed, however temperatures remained below freezing, which continued to hamper restoration efforts in accessing the many downed lines.

On January 7th, the next storm began, bringing more snow, freezing rain, and ice to areas across the state. Outage events occurring in the Coastal and Northern regions of the state were largely the result of freezing rain and rain. Coquille experienced impactful outages due to flooding, while customers served in Portland experienced several large outages due to ice and tree failures from heavy ice-loaded limbs. At the same time areas in the southern portion of the state continued to be impacted by snow and tree outages.

While snow fall continued in the southern region of the state, on the evening of January 10th, another snow event began, this time impacting areas in the northern portion of the state, prompting Governor Brown to declare a state of emergency for 13 counties. Measured amounts reported by the weather service were about a foot of snow.

Almost 1,000 outage events occurred over the course of 10 days, causing more than 84,000 customers interruptions. During the major event, 52% of customers outages were restored within 3 hours, 36% were restored within a day and 12% of customer outages were over 24 hours long. The graphic below shows the top five Oregon operating areas impacted by the storm and their % impact of the daily customer minute lost total.



Event Outage Summary	
# Interruptions (sustained)	994
Total Customer Interrupted (sustained)	84,431
Total Customer Minutes Lost	48,115,558
State Event SAIDI	61.7 Minutes
CAIDI	570
Major Event Start	1/2/17 12:00 AM
Major Event End	1/12/17 12:00 PM

Restoration Summary

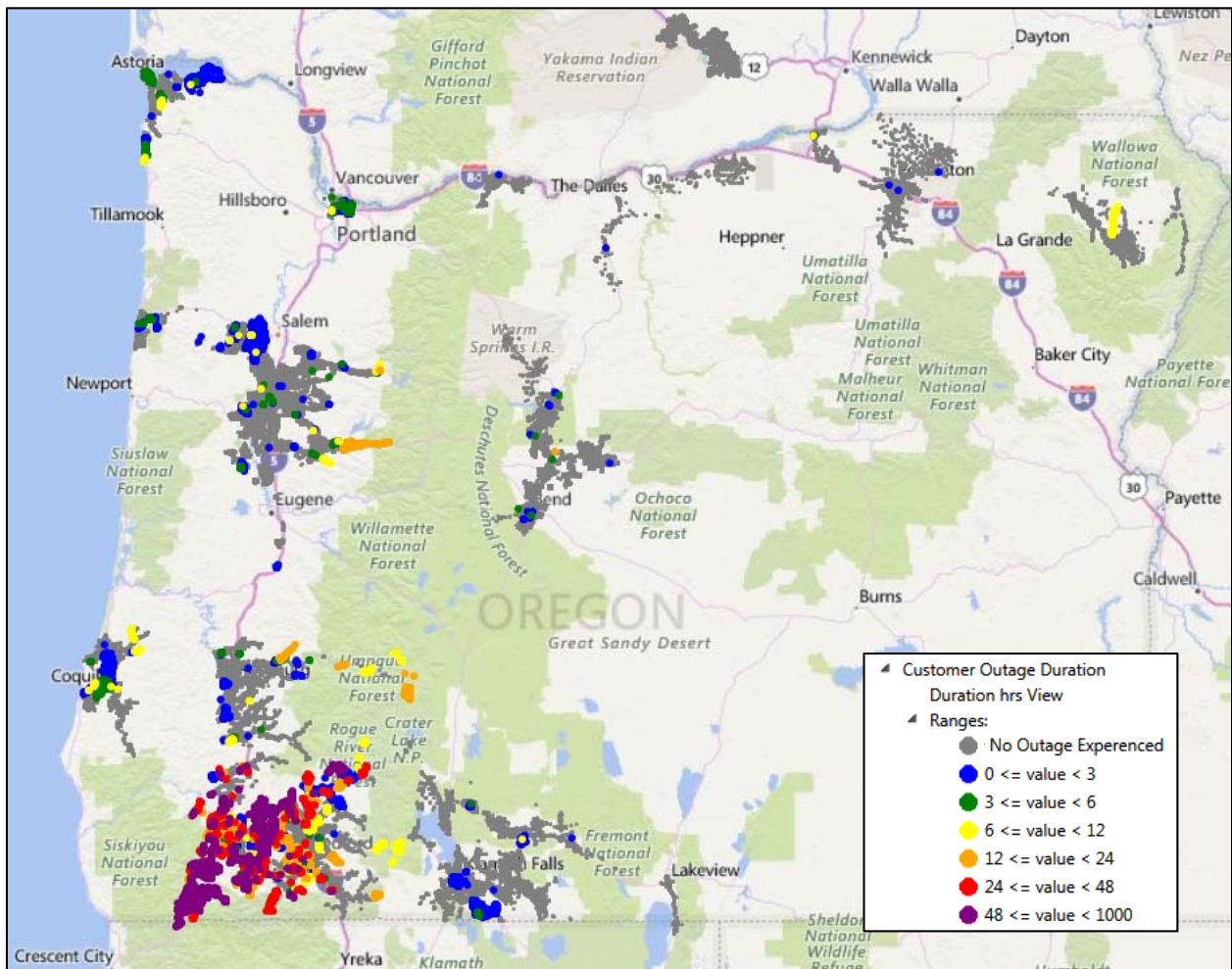
On the morning of January 2nd, Grants Pass began experiencing several large outages as the result of a winter storm. In several locations snow-loaded trees broke, downing lines and damaging poles. The extent of outages which occurred was more than local operations could handle, internal crew resources from across the state, including Astoria, Portland, Albany, Lincoln City, Hood River, Pendleton, Bend, Walla Walla, Roseburg, Klamath Falls and Crescent City were dispatched to assist in restoration activities. Snow-covered roads and limited access to many of the damaged poles and lines slowed restoration activities. Dispatch and crews worked to restore power to the many customers who were affected in remote locations through step restorations. However restoration activities to customers in rural areas often required the use of special equipment such as snow cats, snow shoes, helicopter patrols, and in some cases the building of roads to access damaged equipment and due to the repetition of storms, resulted in repeated outage events to earlier restored areas.

On January 6th, crews previously deployed to support staff in the southern portion of the state were called back to their operating areas in preparation for the next weather event set to impact

the entire state. Increased support employees, including contract line crews, tree crews, and additional call center agents, were mobilized in anticipation of the storm in various districts to assist as needed. As additional operating areas prepared for their own storm impact, crews in the Medford and Grants Pass continued to work, removing vegetation from lines and repairing damage. Outages in Southern Oregon were so expansive that the number of outages remained above the normal threshold for 6 days; dropping below the threshold for only 36 hours before spiking above the threshold, where it stayed above normal for 2 more days.

Overall these storms severely impacted the system with a large volume of outage events, many of which were difficult to access given heavy snow and fallen vegetation, making for slow restorations. Efforts were additionally impacted by the continuous nature of the storm, which deterred storm restoration. Nearly 450 Pacific Power linemen, tree trimmers, support staff, and contractors were utilized during the event. In addition to personnel, 44 poles, 58 transformers, 74 crossarms, and over 109,000 conductor feet were needed to restore power. There were four company and one commission customer complaints made regarding the major event.

The graphic below displays the customer outages during the event colored by cumulative outage duration.



Restoration Intervals

Total Customers Sustained	< 3 Hrs.	3 - 24 Hrs.	24-48 Hrs.	48-72 Hrs.	72-96 Hrs.	96+ Hrs.
84,431	43,932	30,074	7,256	2,375	702	92

Restoration Resources

Personnel Resources	
Service Coordinators	17
Collectors	9
Mechanic	8
Meter Reader	24
Metermen	7
Estimators	12
Warehouse Workers	20
General Foreman	13
Journeyman	181
Contract Personnel	147
General Help	1
Administrative	3
Mechanic Foreman	3
TOTAL	445

Materials	
# Poles (D)	44
# Approx. Conductor Line (feet)	109,280
# Transformers	58
# Crossarms	74
Insulators	271
Cutouts	243
Line fuses	1,813
Line splices	4,360
Guy wire (feet)	1,750

State Estimated Major Event Costs

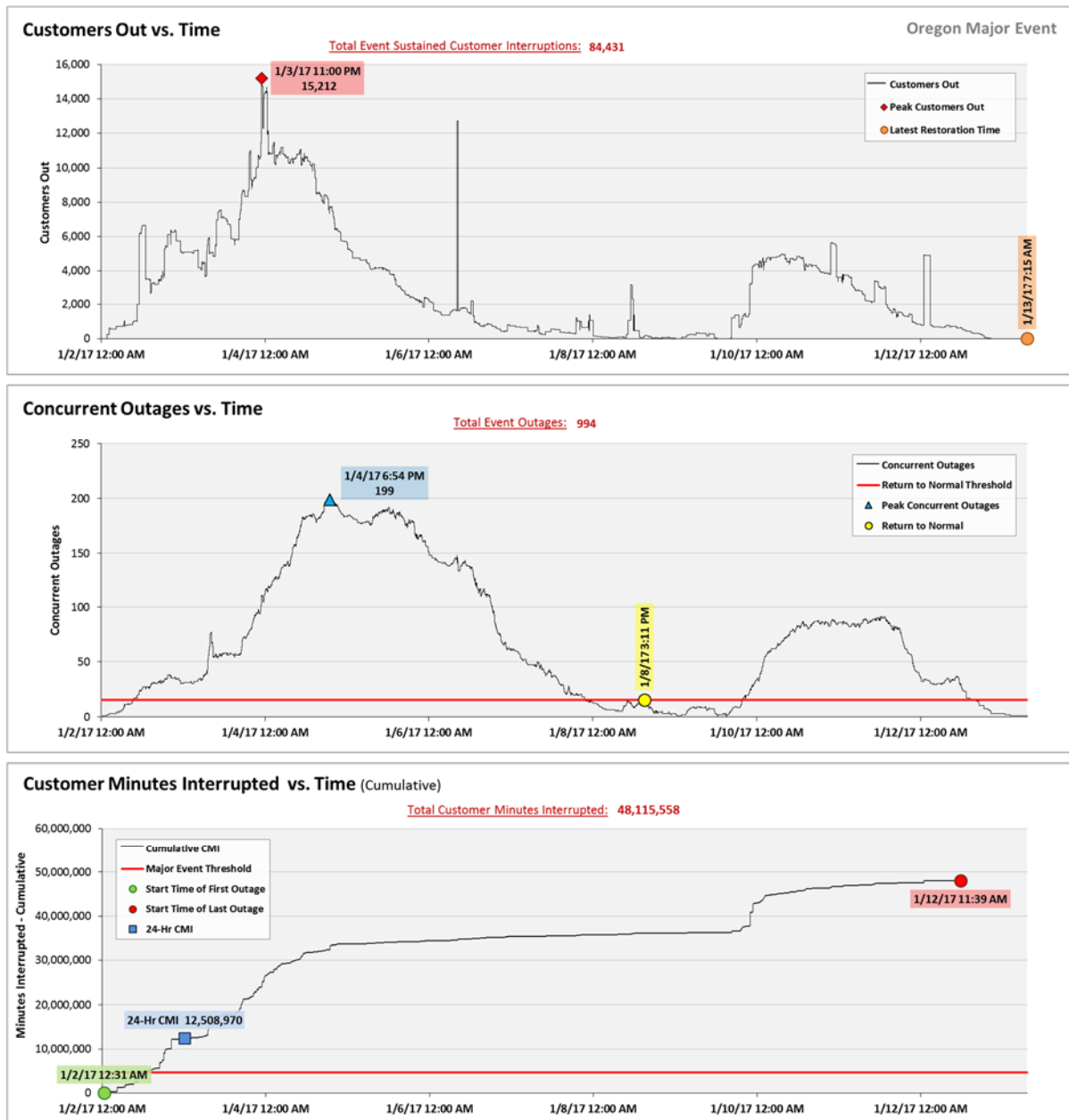
Estimate \$	Labor	Material	Contract Resources *	Total
Capital Expense	\$21,060	\$94,313	\$377,832	\$493,205
Total	\$2,331,756	\$232,234	\$3,511,970	\$6,075,960

*Includes vegetation costs

Major Event Declaration

PacifiCorp designates these events and the consequences thereof a major event in accordance with OAR 860-023-0161. This is a major event because it exceeded the design or operating limits of the system, and the Major Event Threshold for Oregon as calculated annually by the company according to IEEE 1366-2003 methodology (commonly referred to as the 2.5 beta method). The company's 2017 Oregon reliability threshold is 4,698,658 customer minutes lost (7.8 Oregon SAIDI minutes) in a 24-hour period.

Event Details



SAIDI, SAIFI, CAIDI by Reliability Reporting Region

Please see the attached system-generated reports.

PacifiCorp Major Event Report
Customer Analysis

Oregon	Customer Analysis through 1/12/2017				Customers Restored by Intervals								Major Event Only - metric by operating area customer counts			
	Sustained Customers Off	% Sustained Customers Off	CWIL	Number of Sustained Interruptions	Customer Count	< 5 min	5 min - 3 hrs	3 hrs - 24 hrs	24 hrs - 48 hrs	48 hrs - 72 hrs	72 hrs - 96 hrs	96 + hrs	% Sustained Customers Restored in 3 Hours P54	SAIDI	SAIFI	CAIDI
PC	84,431	4%	48,115,558	994	1,900,047	33,738	43,932	30,074	7,256	2,375	702	92	52%	25.32	0.044	570
PP	84,431	1.1%	48,115,558	994	779,477	33,738	43,932	30,074	7,256	2,375	702	92	52%	61.73	0.108	570
OR	84,431	1.4%	48,115,558	994	598,577	33,738	43,932	30,074	7,256	2,375	702	92	52%	80.38	0.141	570
OR	505	2%	85,204	10	31,250	-	237	268	-	-	-	-	47%	2.73	0.016	169
OR	96	0%	13,331	15	62,949	-	69	27	-	-	-	-	72%	0.21	0.002	139
OR	3,910	16%	480,354	17	24,422	1,583	2,728	1,182	-	-	-	-	70%	19.67	0.160	123
OR	3,737	14%	397,788	18	26,194	-	3,302	435	-	-	-	-	88%	15.19	0.143	106
OR	275	1%	23,878	9	29,445	2,541	253	22	-	-	-	-	92%	0.81	0.009	87
OR	165	1%	17,687	8	11,092	-	141	24	-	-	-	-	85%	1.59	0.015	107
OR	147	1%	24,502	16	14,918	3,311	109	38	-	-	-	-	74%	1.64	0.010	167
OR	639	12%	147,245	3	5,353	-	339	300	-	-	-	-	53%	27.51	0.119	230
OR	49,102	96%	37,920,780	542	51,217	4,113	21,457	18,534	6,117	2,201	701	92	44%	740.39	0.959	772
OR	126	3%	19,935	5	4,639	-	125	1	-	-	-	-	99%	4.30	0.027	158
OR	3	0%	262	3	9,235	-	3	-	-	-	-	-	100%	0.03	0.000	87
OR	4,619	12%	360,984	22	37,472	567	4,243	376	-	-	-	-	92%	9.63	0.123	78
OR	700	3%	231,313	17	20,297	19	131	569	-	-	-	-	19%	11.40	0.034	330
OR	449	4%	66,920	13	12,047	-	379	70	-	-	-	-	84%	5.55	0.037	149
OR	54	0%	7,272	7	16,623	-	52	2	-	-	-	-	96%	0.44	0.003	135
OR	13,966	16%	7,368,266	222	88,569	19,076	6,782	5,870	1,139	174	1	-	49%	83.19	0.158	528
OR	3	0%	340	3	12,795	-	3	-	-	-	-	-	100%	0.03	0.000	113
OR	4,343	5%	533,911	23	80,241	2,347	3,017	1,326	-	-	-	-	69%	6.65	0.054	123
OR	1,464	3%	389,100	33	42,286	181	488	976	-	-	-	-	33%	9.20	0.035	266
OR	128	1%	26,487	8	13,329	-	74	54	-	-	-	-	58%	1.99	0.010	207

Date*	Customer Interrupted by Date through 1/12/2017				Customers Restored by Intervals								Major Event Only - metric by state customer counts			
	Sustained Customers Off	% Sustained Customers Off	CWIL	Number of Sustained Interruptions	Average Customer Count	< 5 min	5 min - 3 hrs	3 hrs - 24 hrs	24 hrs - 48 hrs	48 hrs - 72 hrs	72 hrs - 96 hrs	96 + hrs	% Sustained Customers Restored in 3 Hours P54	SAIDI	SAIFI	CAIDI
1/2/2017	12,721	2%	12,233,302	65	598,577	1,814	4,221	6,139	878	904	488	91	33%	20.44	0.021	962
1/3/2017	21,054	4%	14,292,492	170	598,577	4,473	8,666	9,282	2,418	490	197	1	41%	23.88	0.035	679
1/4/2017	7,571	1%	7,165,337	170	598,577	11,092	1,353	4,422	1,554	225	17	-	18%	11.97	0.013	946
1/5/2017	1,935	0%	792,506	110	598,577	2,669	959	884	65	27	-	-	50%	1.32	0.003	410
1/6/2017	13,461	2%	914,099	105	598,577	3,385	12,158	1,233	70	-	-	-	90%	1.53	0.022	68
1/7/2017	3,695	1%	446,436	58	598,577	1	3,003	691	1	-	-	-	81%	0.75	0.006	121
1/8/2017	4,497	1%	290,398	39	598,577	1	4,357	140	-	-	-	-	97%	0.49	0.008	65
1/9/2017	5,764	1%	6,858,534	64	598,577	2,812	985	2,694	1,432	653	-	-	17%	11.46	0.010	1,190
1/10/2017	5,908	1%	3,695,380	110	598,577	7,300	2,392	2,711	729	76	-	-	40%	6.17	0.010	625
1/11/2017	3,503	1%	899,129	82	598,577	186	1,585	1,809	109	-	-	-	45%	1.50	0.006	257
1/12/2017	4,322	1%	527,944	21	598,577	5	4,253	69	-	-	-	-	98%	0.88	0.007	122

Data as of
2/10/2017

PacifiCorp Major Event Report

SSC by State Analysis

	Oregon	Event						Month						YTD											
		01/02/17			01/12/17			01/01/17			01/31/17			FY2018			01/01/17			01/31/17					
		Major Events Included			Major Event Excluded			Major Events Included			Major Events Excluded*			Major Events Included			Major Events Excluded*								
	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI	
PC	PACIFICORP	33.68	0.084	403	3.74	0.024	153	45.36	0.144	315	9.64	0.063	152	45.36	0.144	315	9.64	0.063	152	45.36	0.144	315	9.64	0.063	152
PP	Pacific Power	71.66	0.152	473	1.84	0.014	129	91.78	0.251	366	7.87	0.061	128	91.78	0.251	366	7.87	0.061	128	91.78	0.251	366	7.87	0.061	128
OR	Oregon	80.54	0.143	564	0.16	0.002	88	89.81	0.223	402	6.57	0.054	121	89.81	0.223	402	6.57	0.054	121	89.81	0.223	402	6.57	0.054	121
OR	ALBANY	0.14	0.001	169	0.0002	0.000002	104	0.47	0.007	69	0.33	0.006	55	0.47	0.007	69	0.33	0.006	55	0.47	0.007	69	0.33	0.006	55
OR	BEND/REDMOND	0.02	0.000	142	0.0013	0.000005	252	0.26	0.001	265	0.24	0.001	289	0.26	0.001	265	0.24	0.001	289	0.26	0.001	265	0.24	0.001	289
OR	CLATSOP (ASTORIA)	0.80	0.007	123	-	-	-	1.99	0.017	114	0.24	0.002	97	1.99	0.017	114	0.24	0.002	97	1.99	0.017	114	0.24	0.002	97
OR	COOS BAY/COQUILLE	0.80	0.008	101	0.1369	0.001677	82	1.69	0.016	105	0.79	0.007	120	1.69	0.016	105	0.79	0.007	120	1.69	0.016	105	0.79	0.007	120
OR	CORVALLIS	0.04	0.000	87	-	-	-	0.66	0.006	102	0.62	0.006	103	0.66	0.006	102	0.62	0.006	103	0.66	0.006	102	0.62	0.006	103
OR	COTTAGE GROVE/J.CITY	0.03	0.000	107	-	-	-	0.04	0.000	116	0.01	0.000	147	0.04	0.000	116	0.01	0.000	147	0.04	0.000	116	0.01	0.000	147
OR	DALLAS/INDEPENDENCE	0.04	0.000	167	-	-	-	0.13	0.001	246	0.09	0.000	313	0.13	0.001	246	0.09	0.000	313	0.13	0.001	246	0.09	0.000	313
OR	ENTERPRISE	0.25	0.001	230	-	-	-	0.38	0.010	39	0.13	0.009	16	0.38	0.010	39	0.13	0.009	16	0.38	0.010	39	0.13	0.009	16
OR	GRANTS PASS	63.37	0.082	771	0.0228	0.000140	162	64.01	0.086	747	0.66	0.004	180	64.01	0.086	747	0.66	0.004	180	64.01	0.086	747	0.66	0.004	180
OR	HERMISTON	0.03	0.000	158	-	-	-	0.09	0.000	201	0.06	0.000	239	0.09	0.000	201	0.06	0.000	239	0.09	0.000	201	0.06	0.000	239
OR	HOOD RIVER	0.00	0.000	87	-	-	-	0.13	0.001	116	0.13	0.001	116	0.13	0.001	116	0.13	0.001	116	0.13	0.001	116	0.13	0.001	116
OR	KLAMATH FALLS	0.60	0.008	78	-	-	-	0.78	0.009	83	0.17	0.002	105	0.78	0.009	83	0.17	0.002	105	0.78	0.009	83	0.17	0.002	105
OR	LEBANON	0.39	0.001	330	-	-	-	0.66	0.003	245	0.28	0.002	180	0.66	0.003	245	0.28	0.002	180	0.66	0.003	245	0.28	0.002	180
OR	LINCOLN CITY	0.11	0.001	149	-	-	-	1.73	0.016	105	0.04	0.000	155	1.73	0.016	105	0.04	0.000	155	1.73	0.016	105	0.04	0.000	155
OR	MADRAS	0.01	0.000	135	-	-	-	0.04	0.000	188	0.03	0.000	223	0.04	0.000	188	0.03	0.000	223	0.04	0.000	188	0.03	0.000	223
OR	MEDFORD	12.31	0.023	528	0.0001	0.000002	67	13.49	0.029	473	1.18	0.005	227	13.49	0.029	473	1.18	0.005	227	13.49	0.029	473	1.18	0.005	227
OR	PENDLETON	0.00	0.000	113	-	-	-	0.11	0.001	173	0.11	0.001	174	0.11	0.001	173	0.11	0.001	174	0.11	0.001	173	0.11	0.001	174
OR	PORTLAND	0.89	0.007	123	-	-	-	1.75	0.014	126	0.77	0.006	131	1.75	0.014	126	0.77	0.006	131	1.75	0.014	126	0.77	0.006	131
OR	ROSEBURG/MYRTLECREEK	0.65	0.002	266	-	-	-	1.30	0.005	260	0.65	0.003	255	1.30	0.005	260	0.65	0.003	255	1.30	0.005	260	0.65	0.003	255
OR	STAYTON	0.04	0.000	207	-	-	-	0.07	0.000	143	0.02	0.000	87	0.07	0.000	143	0.02	0.000	87	0.07	0.000	143	0.02	0.000	87

*may include other regional major event exclusions during the same period. Operating areas are calculated by the state frozen customer count metrics.

Data as of 2/10/2017
