



e-FILING REPORT COVER SHEET

COMPANY NAME: PacifiCorp d/b/a Pacific Power

DOES REPORT CONTAIN CONFIDENTIAL INFORMATION? No Yes If yes, submit a redacted public version (or a cover letter) by email. Submit the confidential information as directed in OAR 860-001-0070 or the terms of an applicable protective order.

Select report type: RE (Electric) RG (Gas) RW (Water) RT (Telecommunications)
 RO (Other, for example, industry safety information)

Did you previously file a similar report? No Yes, report docket number: RE 107

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

Note: A one-time submission required by an order is a compliance filing and not a report (file compliance in the applicable docket)

Other
(For example, federal regulations, or requested by Staff)

Is this report associated with a specific docket/case? No Yes, docket number: RE 107

List Key Words for this report. We use these to improve search results.

Major Event Report

Send the completed Cover Sheet and the Report in an email addressed to PUC.FilingCenter@state.or.us

Send confidential information, voluminous reports, or energy utility Results of Operations Reports to PUC Filing Center, PO Box 1088, Salem, OR 97308-1088 or by delivery service to 201 High Street SE Suite 100, Salem, OR 97301.



825 NE Multnomah, Suite 2000
Portland, Oregon 97232

April 2, 2020

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

In compliance with OAR 860-023-0161, PacifiCorp d/b/a Pacific Power (PacifiCorp or the Company) submits the enclosed report describing the major event that occurred February 23, 2020, in the Company's Central Oregon reliability reporting region.

PacifiCorp 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,

Michael Wilding
Director, Regulation

Enclosure

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

Report to the Oregon Public Utility Commission
Electric Service Reliability - Major Event Report

Event Date: February 23, 2020
 Date Submitted: April 2, 2020
 Primary Affected Locations: Central Oregon
 Primary Cause: Wind Storm
 Exclude from Reporting Status: Yes
 Report Prepared by: April Brewer
 Report Approved by: Heide Caswell / Milton Buker

Event Outage Summary	
# Interruptions (sustained)	16
Total Customer Interrupted (sustained)	2,776
Total Customer Minutes Lost	1,205,515
State Event SAIDI	1.95 Minutes
CAIDI	434
Major Event Start	2/23/2020 12:00 AM
Major Event End	2/24/2020 12:00 AM

Event Description and Restoration Summary

On February 23, 2020, Central Oregon began experiencing a series of outages that triggered major event designation when a wind storm damaged trees that downed many electrical lines across the region (see figure 1). During the storm, the area experienced significant sustained winds, with gusts as high as 45 mph, causing multiple outages. The event started at approximately 9:00 a.m., when winds began to increase (figure 2) causing the outages throughout the region.

The most significant outages occurred in Bend, where downed trees damaged equipment. Of the 16 outages which occurred in Central Oregon during the day, two of them caused the bulk of customer minutes interrupted. The first outage occurred at 9:38 a.m., affecting 1,322 customers in the Deschutes River Woods area south of Bend. Upon arrival crews found several areas where trees had fallen through primary lines. Power was restored to these customers at 4:46 p.m. The second significant outage event during the storm occurred at 10:12 a.m. when a large pine tree fell across the trunk of the feeder, breaking four conductors, two poles and several crossarms. This outage affected a total of 1,192 customers with outage durations ranging from 2 hours 58 minutes to 9 hours 38 minutes. Both of these outages required crews to clear downed trees out of the right-of-way before equipment could be accessed to begin repair and restoration.

During the event all available lineman and tree crew resources were dispatched to trouble locations, including crews that were already out for the day performing scheduled maintenance work. When possible, crews isolated damaged sections by cutting jumpers and/or installing isolation devices so circuit breakers could be closed and undamaged sections of the line could be energized.

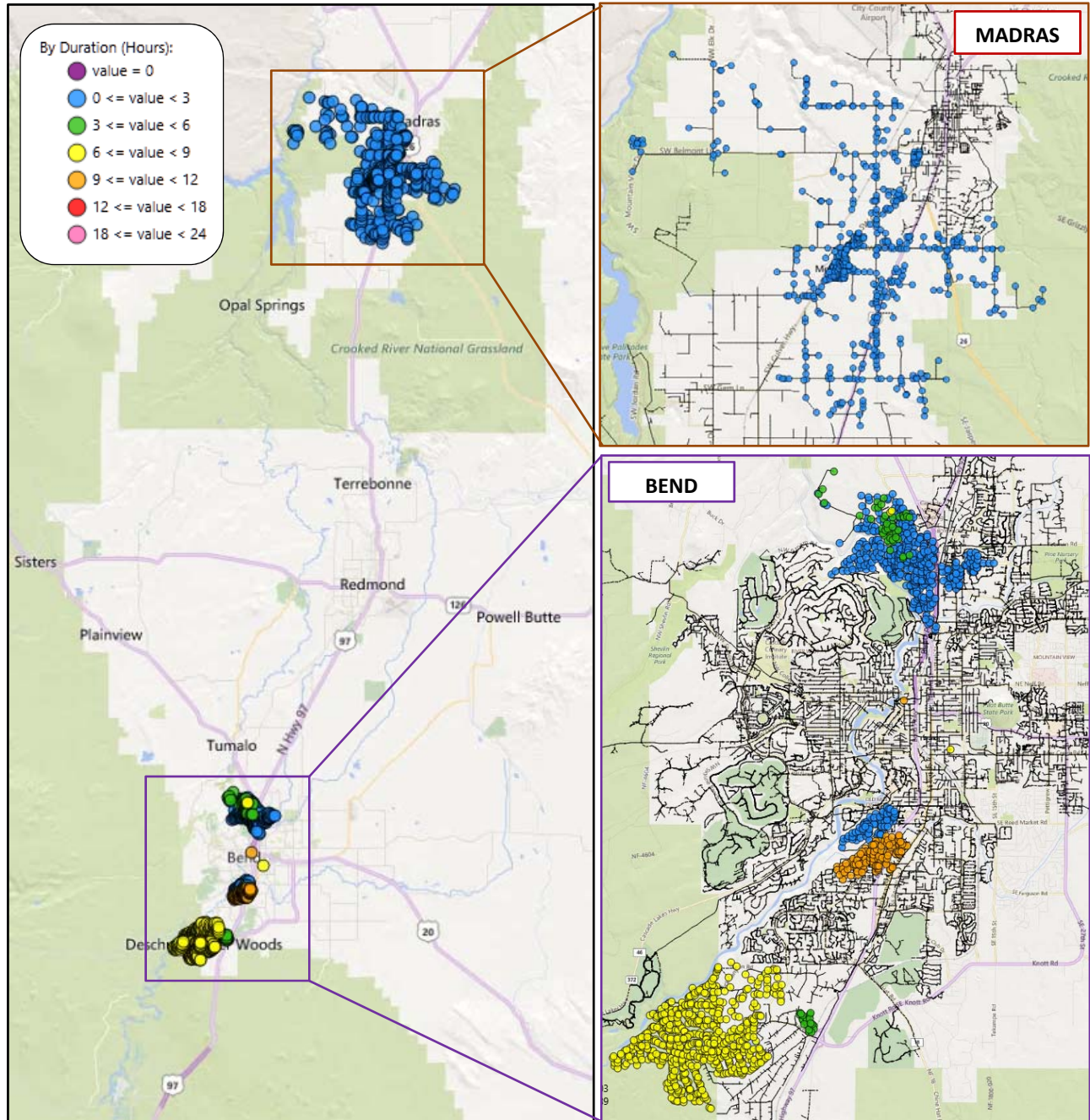


Figure 1: Outages experienced during the major event by duration.

Maximum Wind Gust

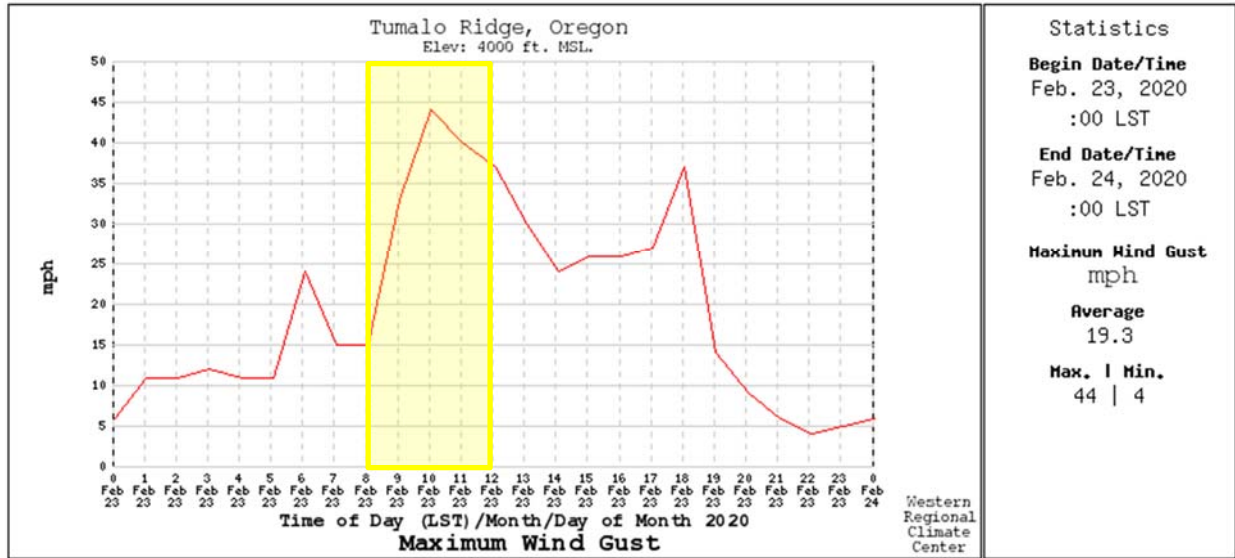


Figure 2: February 23, 2020 wind data.

Restoration Intervals for Customers during Major Event

Total Customers Sustained	< 3 Hrs.	3 - 24 Hrs.	24-48 Hrs.
2,776	356	2,420	0

Restoration Resources ¹

Personnel Resources	
Estimator	1
Field Journeyman	3
General Foreman	1
Line Foreman	3
Lineman	7
Meter Working Foreman	1
Serviceman	1
Substation Wireman	1
Vegetation crewmembers	5

Equipment Resources	
Transformers	3
Distribution poles	2
Crossarms	2
Insulators	12
Line Splice	9
Cutouts	2
Arrestors	4

State Estimated Major Event Costs ²

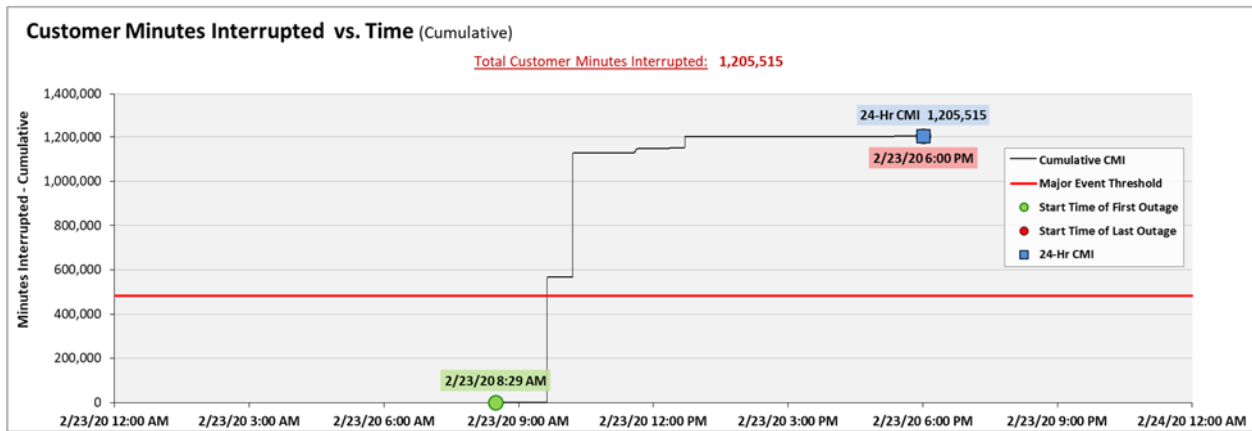
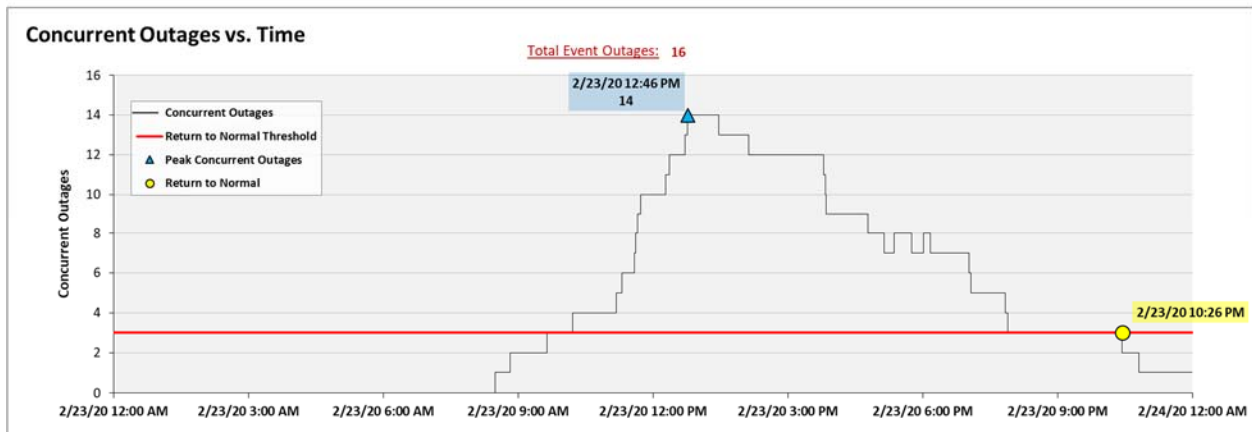
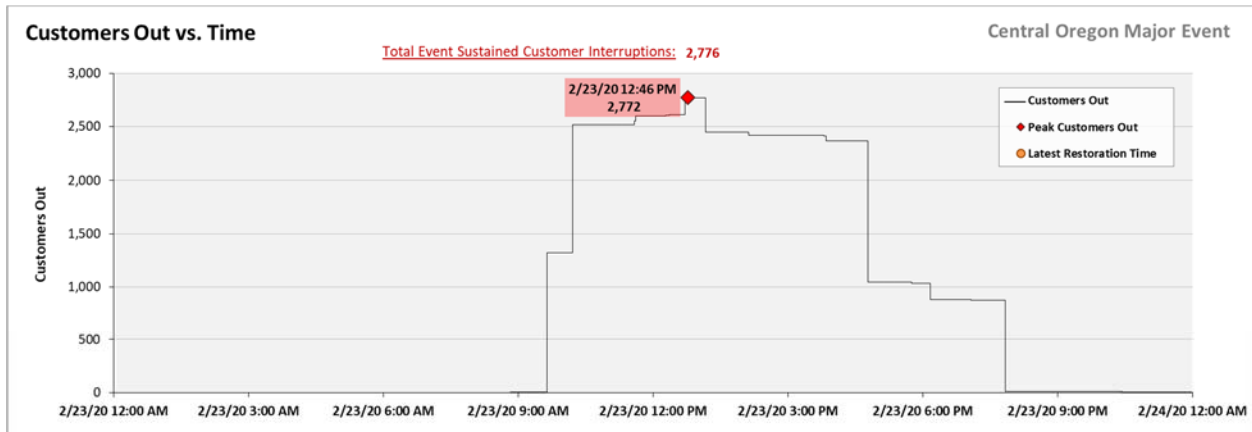
Estimate \$	Labor	Contracts	Materials	Overheads	Total
Capital	\$35,674	\$-	\$14,953	\$6,413	\$57,040
Expense	\$4,463	\$9,146	\$0	\$201	\$13,810
Total	\$40,137	\$9,146	\$14,953	\$6	\$70,850

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 Central 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 2020 Central Oregon reliability threshold is 482,924 customer minutes lost (5.71 Central Oregon SAIDI minutes) in a 24-hour period.

¹ Data provided represents specific system records for personnel, resources, and costs; and is specific to the event, not inclusive of state delineation. However additional resources whose participation did not get individually captured in transaction recording systems were utilized during the event, thus the data presented here effectively understates the resources, including cost, involved in restoring the system to normal.

Event Detail



SAIDI, SAIFI, CAIDI by Reliability Reporting Region

Please see the attached system-generated reports.

PacifiCorp Major Event Report
Customer Analysis

Central Oregon		Customer Analysis 2/23/2020 through 2/24/2020					Customers Restored by Intervals								Major Event Only - metric by operating area customer counts		
PacifiCorp Major Events Report Customer Analysis*		Sustained Customers Off	% Sustained Customers Off	CML	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 PS4	SAIDI	SAIFI	CAIDI
PC	PACIFICORP	2,776	0%	1,205,515	16	1,982,346	2,837	356	2,420	-	-	-	-	14%	0.61	0.001	434
PP	Pacific Power	2,776	0%	1,205,515	16	799,297	2,837	356	2,420	-	-	-	-	14%	1.51	0.003	434
OR	Oregon	2,776	1%	1,205,515	16	617,333	2,837	356	2,420	-	-	-	-	14%	1.95	0.004	434
OR	BEND/REDMOND	2,728	4%	1,195,708	10	67,328	1,775	321	2,407	-	-	-	-	12%	17.76	0.041	438
OR	MADRAS	48	0%	9,807	6	17,235	1,062	35	13	-	-	-	-	73%	0.57	0.003	204

*Only current event specific metric impact shown. Does not include values from other events which may have occurred in other regions during the same time period.

Customer Interrupted by Date 2/23/2020 through 2/24/2020		Customers Restored by Intervals								Major Event Only - metric by state customer counts						
Date*	Sustained Customers Off	% Sustained Customers Off	CML	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 PS4	SAIDI	SAIFI	CAIDI
2/23/2020	2,776	0%	1,205,515	16	617,333	2,837	356	2,420	-	-	-	-	13%	1.95	0.004	434

Data as of
3/17/2020

PacifiCorp Major Event Report

Customer Analysis

	Central Oregon	Event 02/23/20 through 02/24/20						Month 02/01/20 through 02/29/20						YTD FY2021 01/01/20 through 02/29/20					
		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
	PacifiCorp Major Events Report SSC by State																		
PC	PacifiCorp	1.44	0.008	186	0.65	0.006	111	7.16	0.066	108	6.38	0.065	99	40.31	0.180	224	12.08	0.126	96
Comp	Power Company	2.85	0.010	285	0.90	0.005	165	8.66	0.058	148	6.72	0.054	125	80.26	0.227	353	14.23	0.132	108
ST	State	3.05	0.010	297	0.53	0.004	120	8.33	0.057	146	5.81	0.051	113	91.59	0.221	414	12.67	0.127	100
OR	ALBANY	0.00	0.000	115	0.00	0.000	115	0.13	0.001	184	0.13	0.001	184	0.58	0.005	129	0.54	0.004	123
OR	BEND/REDMOND **	1.94	0.004	438	-	-	-	2.11	0.007	296	0.18	0.003	65	2.19	0.008	280	0.25	0.003	75
OR	CLATSOP (ASTORIA)	0.08	0.000	321	0.079	0.000	321	0.83	0.006	131	0.83	0.006	131	1.62	0.030	53	1.43	0.029	50
OR	COOS BAY/COQUILLE	-	-	-	-	-	-	0.21	0.001	168	0.21	0.001	168	0.76	0.005	142	0.68	0.004	160
OR	CORVALLIS	0.02	0.000	322	0.02	0.000	322	0.03	0.000	180	0.03	0.000	180	0.23	0.002	130	0.23	0.002	132
OR	COTTAGE GROVE/J.CITY	-	-	-	-	-	-	0.91	0.011	83	0.91	0.011	83	1.25	0.014	91	1.21	0.014	89
OR	DALLAS/INDEPENDENCE	0.02	0.000	216	0.021	0.000	216	0.05	0.000	122	0.05	0.000	122	0.26	0.002	169	0.26	0.002	170
OR	ENTERPRISE *	0.25	0.001	445	-	-	-	0.37	0.001	316	0.12	0.001	197	0.43	0.002	286	0.17	0.001	192
OR	GRANTS PASS	0.01	0.000	141	0.01	0.000	141	0.54	0.003	213	0.54	0.003	213	69.96	0.052	1,333	1.11	0.007	155
OR	HERMISTON *	-	-	-	-	-	-	0.24	0.002	98	0.24	0.002	98	0.27	0.003	110	0.25	0.002	104
OR	HOOD RIVER	0.01	0.000	107	0.011	0.000	107	0.11	0.001	113	0.11	0.001	113	0.22	0.002	131	0.21	0.002	129
OR	KLAMATH FALLS	-	-	-	-	-	-	0.01	0.000	117	0.01	0.000	117	0.31	0.002	170	0.26	0.002	158
OR	LAKEVIEW	-	-	-	-	-	-	0.00	0.000	227	0.00	0.000	227	0.02	0.000	94	0.02	0.000	94
OR	LEBANON	0.00	0.000	21	0.00	0.000	21	0.06	0.000	239	0.06	0.000	239	0.13	0.001	160	0.11	0.001	156
OR	LINCOLN CITY	-	-	-	-	-	-	0.62	0.008	80	0.62	0.008	80	1.35	0.016	84	1.35	0.016	84
OR	MADRAS **	0.02	0.000	204	-	-	-	0.06	0.000	148	0.05	0.000	135	0.11	0.001	96	0.08	0.001	129
OR	MEDFORD	0.00	0.000	174	0.000	0.000	174	0.38	0.007	58	0.38	0.007	58	4.06	0.020	205	1.37	0.012	118
OR	PENDLETON *	0.27	0.001	484	-	-	-	0.43	0.001	432	0.16	0.000	364	0.56	0.002	354	0.25	0.001	287
OR	PORTLAND	0.00	0.000	58	0.00	0.000	58	0.53	0.002	218	0.53	0.002	218	1.27	0.004	304	0.83	0.003	241
OR	ROSEBURG/MYRTLECREEK	-	-	-	-	-	-	0.24	0.000	597	0.24	0.000	597	5.01	0.042	118	1.26	0.014	91
OR	STAYTON	0.39	0.004	101	0.39	0.004	101	0.40	0.004	102	0.40	0.004	102	0.78	0.009	90	0.68	0.008	89
OR	WALLA WALLA *	0.05	0.000	182	-	-	-	0.07	0.000	219	0.02	0.000	517	0.20	0.001	198	0.13	0.001	191

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

* Northeast Oregon Major event exlusions

** Central Oregon Major event exlusions

Data as/of
3/17/2020