



e-FILING REPORT COVER SHEET

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REPORT NAME: Major Event Report

COMPANY NAME: Pacific Power

DOES REPORT CONTAIN CONFIDENTIAL INFORMATION? No Yes

If yes, please submit only the cover letter electronically. Submit confidential information as directed in OAR 860-001-0070 or the terms of an applicable protective order.

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

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

Statute

Order

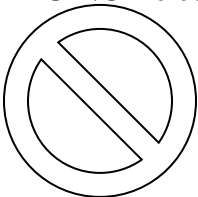
Other

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 9, 2018

VIA ELECTRONIC FILING

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

Attn: Filing Center

RE: PacifiCorp Major Event Report

In compliance with OAR 860-023-0161, PacifiCorp d/b/a Pacific Power submits the enclosed report describing a major event that occurred December 29-31, 2017, in the company's Northeast 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,

Natasha Siores
Manager, Regulatory Affairs

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:	December 29-31, 2017
Date Submitted:	February 9, 2018
Primary Affected Locations:	Northeast Oregon (Walla Walla Operating Area)
Primary Cause:	Weather
Exclude from Reporting Status:	Yes
Report Prepared by:	April Brewer
Report Approved by:	Heide Caswell / Kevin Putnam / David O’Neil

Event Description

On the morning of December 29, 2017, service areas across Southeastern Washington and Northeastern Oregon experienced a winter storm during which storm-related outages occurred as ice accumulated on lines and trees caused more than 145 outage events. During the three day weather event 14,224 customer outages were experienced by customers served from the Walla Walla Operating area;¹ 1,111 of these customers reside in Oregon. In Oregon, tree and ice related outages resulted in 92% of all customer minutes lost and 85% of all customer interruptions.

Event Outage Summary	
# Interruptions (sustained)	38
Total Customer Interrupted (sustained)	1,254
Total Customer Minutes Lost	967,315
State Event SAIDI	1.62 Minutes
CAIDI	771
Major Event Start	12/29/17 3:39 AM
Major Event End	1/1/18 12:00 AM

¹ The Walla Walla operating area serves customers in both Oregon and Washington. During the three day weather event, Washington and the Northeast reporting region of Oregon exceeded major event thresholds. The 2017 frozen customer count for Walla Walla is 30,263 customers (28,310 customers are served by substations originating in Washington and 1,723 customers are served by a substation originating in Oregon).

Restoration Summary

On December 29, 2017, Walla Walla, Washington and the surrounding areas, generally considered within the Blue Mountains, experienced a severe ice storm. With some locations accumulating as much as a half an inch of ice, Walla Walla County issued a “Shelter in Place” warning to its residents. The storm significantly damaged equipment across the operating area as ice-loaded conductor taxed structures beyond their strength limits and trees and tree limbs impacted and damaged multiple spans of lines.

The extent of outages that occurred was more than local operations could handle and internal and external crew resources from Pendleton, Hermiston, Yakima, and Spokane were dispatched to assist in restoration activities. Ice-covered roads and fallen trees limited and slowed access to damaged equipment, delaying patrols and repairs. The nature of the outages meant multiple zones within circuits were often damaged, which also delayed restoration activities. Feeders that experienced this extensive damage in multiple locations were step restored as hazards were cleared and patrolled from protective device to protective device. Further, many of these customers experienced multiple outages as circuit protective equipment, including fuses, reclosers and breakers were opened during these stage restoration efforts. Together, dispatch and crews worked to restore power through step restorations whenever possible, restoring power to as many customers as rapidly as possible.

During the event a total of 222 customers in Oregon experienced an outage over 24 hours, all were attributed to weather. On the morning of January 1, 2018 restoration efforts had stabilized and outage levels had returned to normal. Over 58 employees took part in the restoration efforts, replacing approximately 8,545 feet of conductor, 26 insulators, four poles, eight transformers, ten cross arms, 27 fuses, 1,150 line splices and replacing more than 11 cutouts.

Figure 1 below displays customer outages during the event as shown by their duration while Figure 2 shows the number of outage events each customer experienced. Figure 3 is a photo of an ice-laden tree which downed lines, blocking access, and creating dangerous situation.

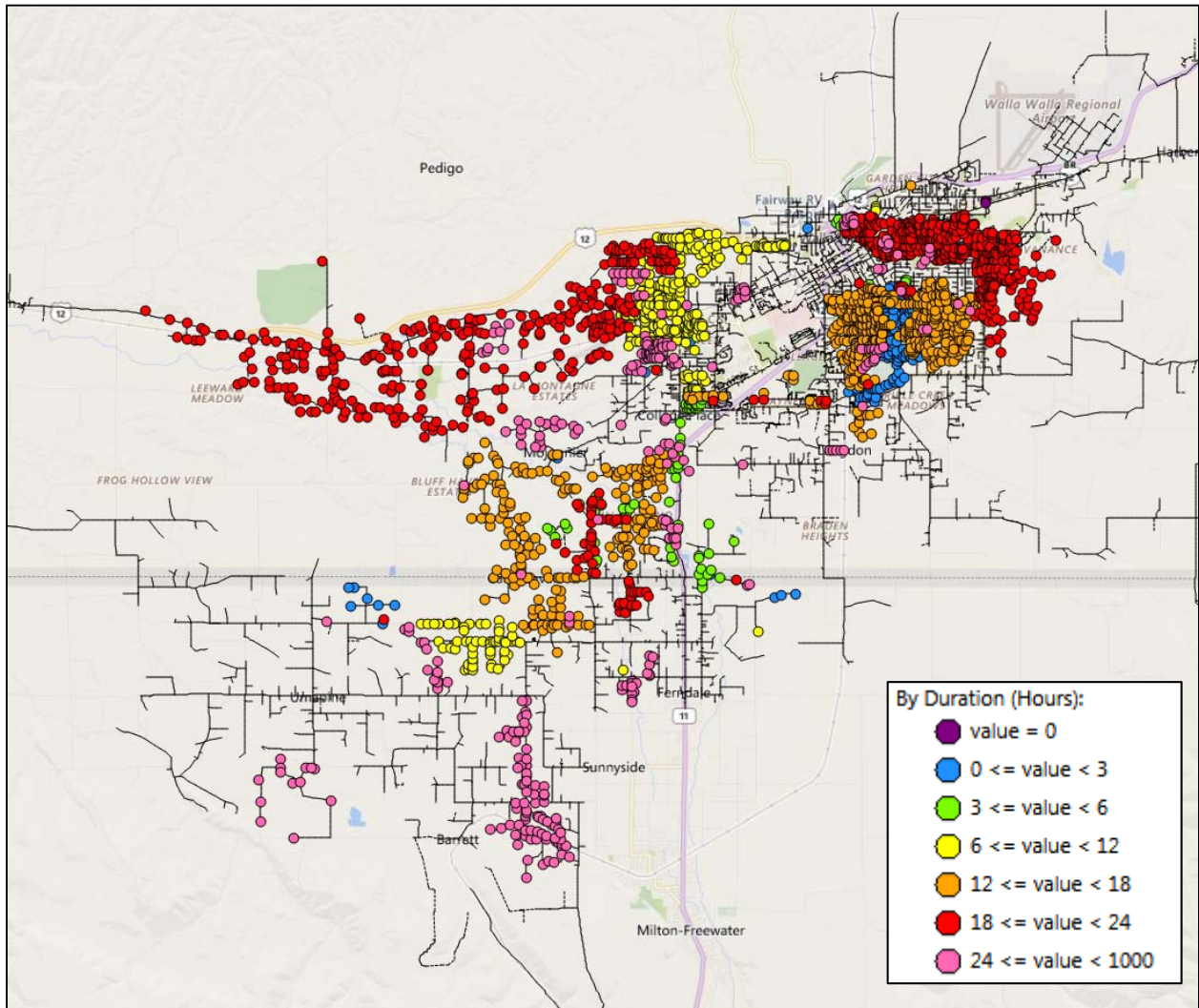


Figure 1 Customer outages by duration

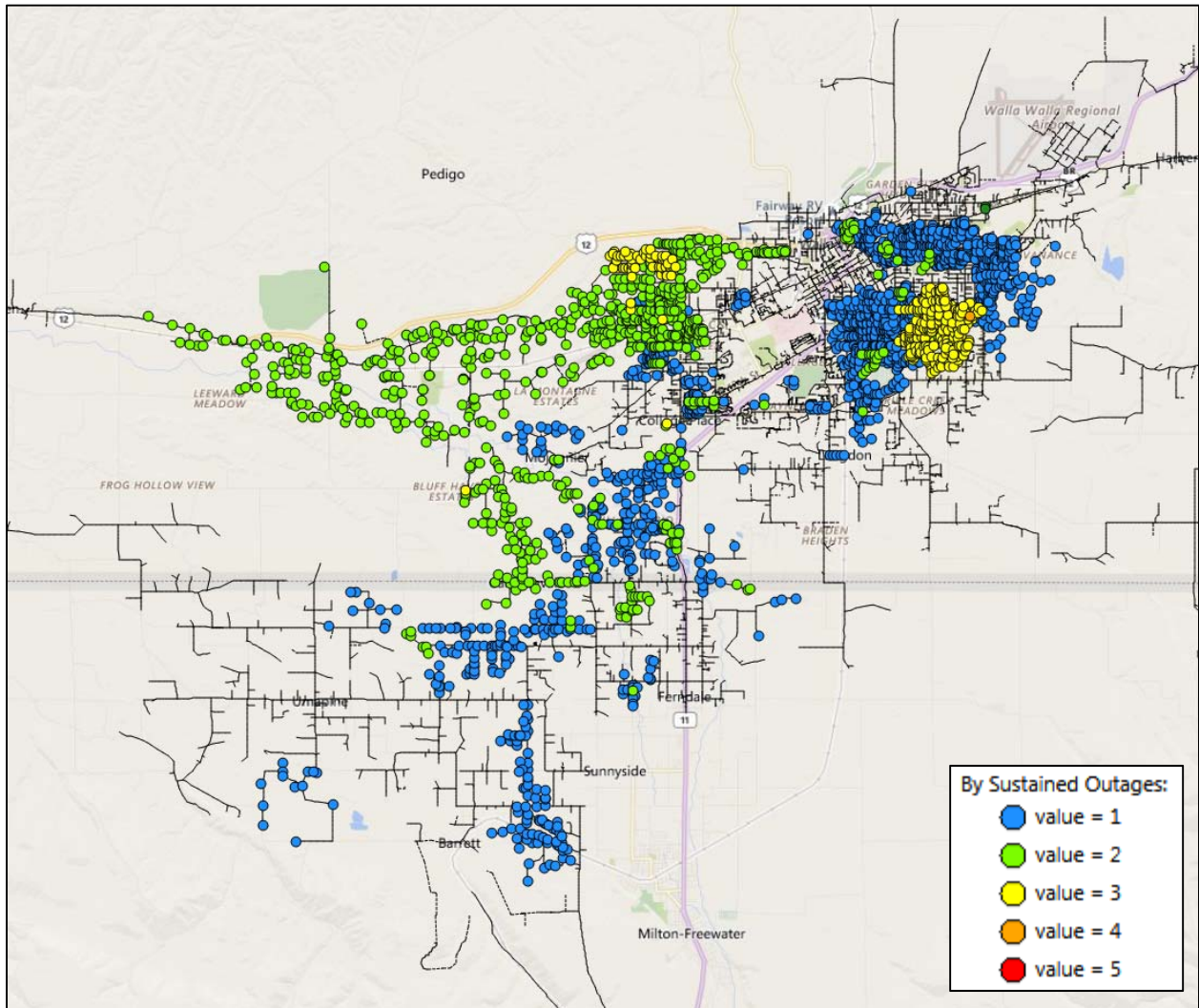


Figure 2 Number of outage events experienced by a customer



Figure 3 One of several ice-loaded trees which downed lines.

Restoration Intervals for Customers served in Oregon

Total Customers Sustained	< 3 Hrs.	3 - 24 Hrs.	24-48 Hrs.	48+ Hrs.
16,679	5,646	10,504	524	5

Restoration Resources ²

Personnel Resources	
Lineman/Journeyman	20
Contract Personnel	9
Substation Journeyman	2
General Foreman	1
Estimator	4
Relay Technician	1
Logistics Worker	4
Mechanic	1
Collector	1
Dispatcher	1
Administrative	13
Clerk	1
Materials	
Distribution Poles	4
Approximate Conductor Line (feet)	8,545
Transformers	8
Crossarms	10
Insulators	26
Cutouts	11
Line Fuses	27
Line Splices	1,150
Guy Wire	15

State Estimated Major Event Costs ²

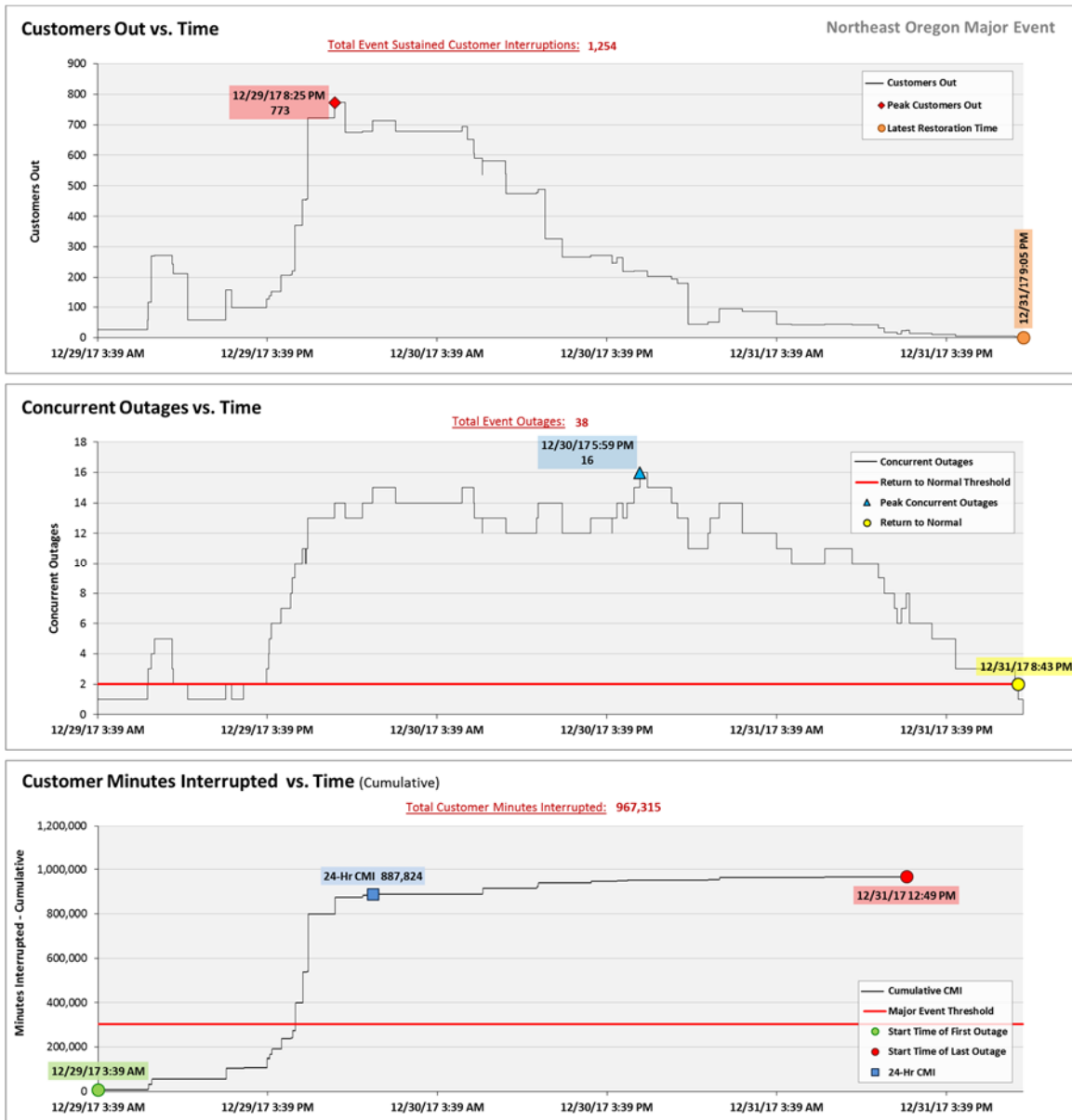
Estimate \$	Labor	Contracts	Materials	Overheads	Total
Capital	\$6,031	\$56,939	\$19,595	\$6,358	\$88,923
Expense	\$316,373	\$221,320	\$2,274	\$3,541	\$543,508
Total	\$322,404	\$278,259	\$21,869	\$9,899	\$632,431

² 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.

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 Northeast 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 Northeast Oregon reliability threshold is 302,667 customer minutes lost (12.27 Northeast Oregon SAIDI minutes) in a 24-hour period.

Event Detail



SAIDI, SAIFI, CAIDI by Reliability Reporting Region

Please see the attached system-generated reports.

PacifiCorp Major Event Report

Customer Analysis

Northeast Oregon		Customer Analysis 12/29/2017 to 1/1/2018					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	1,254	0%	967,315	38	1,900,047	-	274	758	222	-	-	-	22%	0.51	0.001	771
PP	Pacific Power	1,254	0%	967,315	38	779,477	-	274	758	222	-	-	-	22%	1.24	0.002	771
OR	Oregon	1,254	0%	967,315	38	598,577	-	274	758	222	-	-	-	22%	1.62	0.002	771
OR	ENTERPRISE	125	2%	18,272	4	5,353	-	82	43	-	-	-	-	66%	3.41	0.023	146
OR	PENDLETON	18	0%	2,310	1	12,795	-	18	-	-	-	-	-	100%	0.18	0.001	128
OR	WALLA WALLA	1,111	59%	946,733	33	1,876	-	174	715	222	-	-	-	16%	504.66	0.592	852

*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 12/29/2017 to 1/1/2018					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
12/29/2017		1,086	0%	887,824	22	598,577	-	225	655	206	-	-	-	21%	1.48	0.002	818
12/30/2017		154	0%	76,839	13	598,577	-	39	99	16	-	-	-	25%	0.13	0.000	499
12/31/2017		14	0%	2,652	3	598,577	-	10	4	-	-	-	-	71%	0.00	0.000	189

Data as of
2/5/2018

PacifiCorp Major Event Report
SSC by State Analysis

Northeast Oregon		Event 12/29/17 through 01/01/18						Month 12/01/17 through 12/31/17						YTD FY2019 01/01/17 through 12/31/17					
		Major Events Included			Major Event Excluded			Major Events Included			Major Events Excluded*			Major Events Included			Major Events Excluded*		
PacifiCorp Major Events Report SSC by State		SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI
PC	PACIFICORP	5.80	0.013	443	0.36	0.004	98	13.23	0.069	191	7.78	0.060	130	227.66	1.534	148	129.33	1.186	109
PP	Pacific Power	14.03	0.031	459	0.76	0.008	101	20.23	0.081	249	6.96	0.058	120	324.64	1.912	170	114.41	1.204	95
OR	Oregon	2.59	0.012	219	0.98	0.010	100	9.43	0.066	142	7.81	0.064	121	312.03	1.928	162	113.88	1.261	90
OR	ENTERPRISE	0.03	0.000	146	-	-	-	0.05	0.000	104	0.02	0.000	72	1.73	0.016	105	1.45	0.015	95
OR	HERMISTON	-	-	-	-	-	-	0.00	0.000	187	0.00	0.000	187	0.78	0.016	50	0.74	0.015	48
OR	PENDLETON	0.00	0.000	128	-	-	-	0.02	0.000	120	0.02	0.000	118	1.69	0.012	136	1.44	0.011	131
OR	WALLA WALLA	1.58	0.002	852	-	-	-	1.58	0.002	851	0.00	0.000	65	1.85	0.004	509	0.27	0.002	151

*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
2/5/2018