



e-FILING REPORT COVER SHEET

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

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

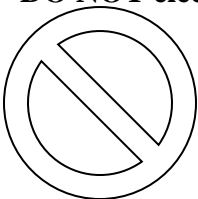
Other

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

DO NOT electronically file with the PUC Filing Center:



- 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

June 21, 2017

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 (PacifiCorp or Company) submits the enclosed report describing a major event that occurred May 22-23, 2017, in the Company's Coast Plus reliability reporting region.

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,



Etta Lockey
Vice President, 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: | May 22-23, 2017 |
| Date Submitted: | June 21, 2017 |
| Primary Affected Locations: | Portland Oregon |
| Primary Cause: | Equipment Failure |
| Exclude from Reporting Status: | Yes |
| Report Prepared by: | April Brewer |
| Report Approved by: | Heide Caswell / Debbie Guerra / Kevin Putnam / Chris Spencer |

Event Description

On May 22, 2017, at 5:24 p.m., 2,260 customers served out of the Albina Substation located at 981 N. River St experienced a service interruption to 57 blocks of the downtown Portland, Oregon, an area bounded by N.W. Davis St. to S.W. Jefferson Street and I-405 to S.W. Park Avenue. A fault that led to failure of circuit breaker 5P194 initiated a cascading sequence of events requiring manual disconnection of the low voltage secondary grid network¹ impacting six circuits.

| Event Outage Summary | |
|---|-----------------|
| # Interruptions (sustained) | 11 |
| Total Customer Interrupted (sustained) | 2,285 |
| Total Customer Minutes Lost | 2,743,566 |
| State Event SAIDI | 4.58 Minutes |
| CAIDI | 1201 |
| Major Event Start | 5/22/17 5:24 PM |
| Major Event End | 5/23/17 5:24 PM |

Restoration Summary

Crews quickly responded to the outage to assess the damage which had occurred. Upon inspection Pacific Power Operations immediately opened the Pacific Power Emergency Action Center to coordinate restoration activities. Reports of smoke coming from various vaults were received from Portland Fire Department for the downtown area. The impacted area reported was located on N.W. Couch Street and 9th Avenue. Assessments concluded that damage occurred to the network equipment located within the vault and adjoining manholes in this area.

¹ See attachment 2 – secondary network diagram.

A network transformer, primary and secondary network cables were severely damaged and needed to be replaced.

The damaged portion of the underground network was isolated, circuit breaker 5P194 was replaced, and network service restoration to 2,236 customers commenced on May 23, at 5:07 p.m. concluding at 10:50 p.m. Temporary generators were installed on May 25, at 10:30 a.m. to the remaining 24 customers whose power could not be restored until all damaged equipment was repaired and replaced. Network service was re-established to the remaining 24 customers at 1:45 a.m. on May 26, 2017. The company worked closely with the 24 customers affected during the final repair activities, directly contacting each customer, providing regular updates on repairs and the status of restoration.

Over 100 Pacific Power employees took part in restoration activities during the event, including journeymen, engineers, service coordinators, and several company directors. Internal resources were brought in from Albany, Yakima, Astoria, Hood River, and Bend. The company also activated mutual assistance with PGE. There no company or commission customer complaints made regarding the major event.

PacifiCorp provided immediate notice of this incident by telephone to Safety, Reliability, and Security Division Staff on May 22, 2017, as required by OAR 860-024-0050(2) and filed its written incident report on June 9, 2017.

Restoration Intervals

| Total Customers Sustained | < 3 Hrs. | 3 - 24 Hrs. | 24-48 Hrs. | 48-72Hrs. | 72-96 Hrs. |
|---------------------------|----------|-------------|------------|-----------|------------|
| 2,285 | 25 | 903 | 1,333 | 24 | - |

Restoration Resources ²

| Personnel Resources | |
|----------------------|-----------|
| Journeyman | 44 |
| Estimators | 3 |
| Engineer | 4 |
| Collectors | 3 |
| General Foreman | 4 |
| Mechanic | 3 |
| Meter Reader | 3 |
| Metermen | 1 |
| Service Coordinators | 4 |
| Manager | 6 |
| Sr. Warehouse Worker | 4 |
| TOTAL | 79 |

| Materials | |
|---------------------------------|-------|
| # Approx. Conductor Line (feet) | 5,642 |
| Network Transformer | 1 |
| Insulators | 1 |
| Network Protector | 1 |
| Conn Seal Flood | 3 |
| Line splices | 54 |
| Network Relay | 2 |

State Estimated Major Event Costs ²

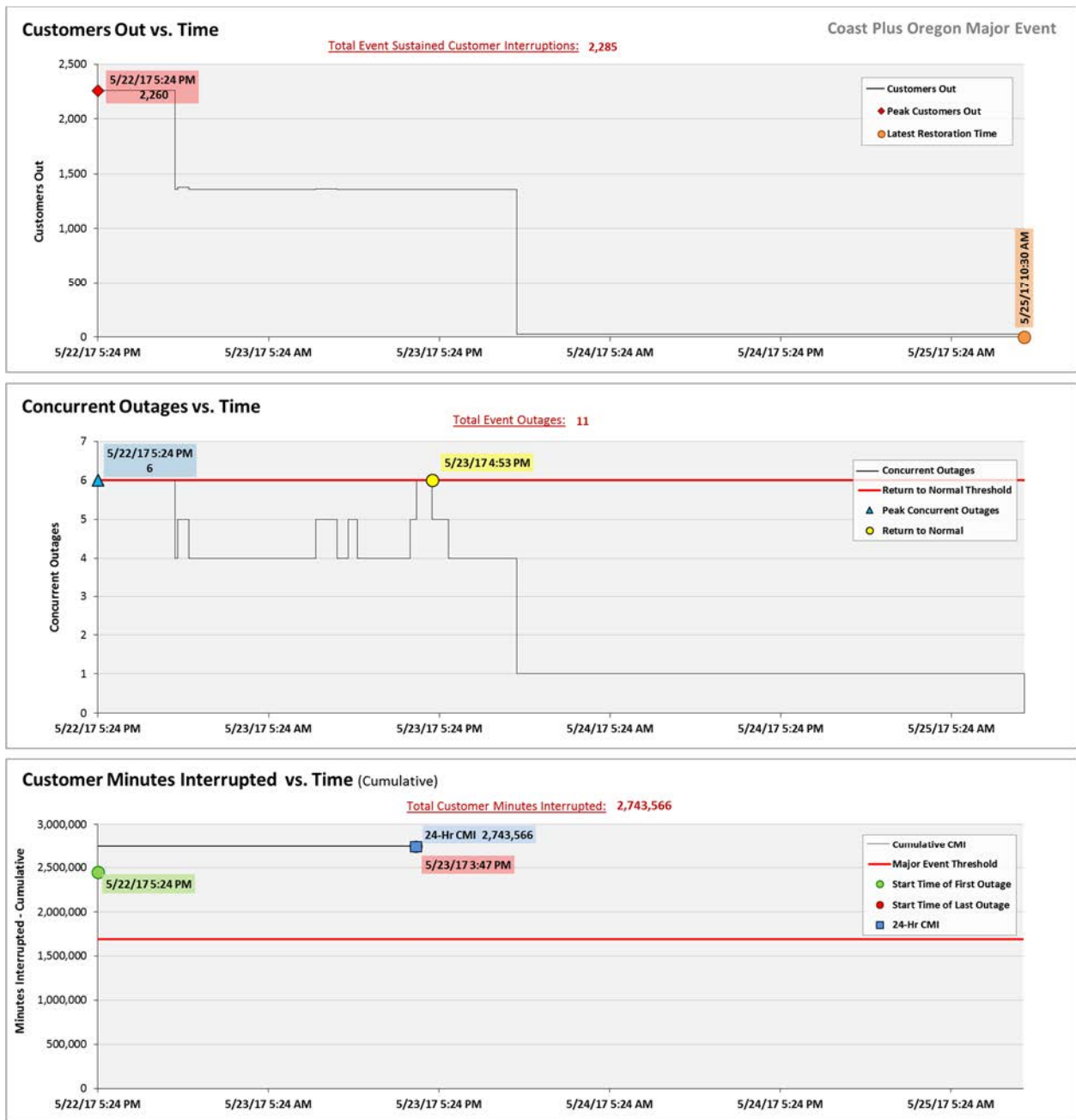
| Estimate \$ | Labor | Material | Contract Resources | Overhead | Total |
|------------------------|-------------------|-------------------|--------------------|------------------|-------------------|
| Capital Expense | \$ 648,374 | \$ 130,950 | \$ 60,643 | \$ 89,770 | \$ 929,737 |
| | \$ - | \$ - | \$ - | \$ - | \$ - |
| Total | \$ 648,374 | \$ 130,950 | \$ 60,643 | \$ 89,770 | \$ 929,737 |

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 CoastPlus 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 CoastPlus Oregon reliability threshold is 1,687,255 customer minutes lost (11.09 CoastPlus Oregon SAIDI minutes) in a 24-hour period.

² Data provided represents specific system records for personnel, resources, and costs. 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 Details



SAIDI, SAIFI, CAIDI by Reliability Reporting Region
 Please see the attached system-generated reports.

PacifiCorp Major Event Report

Customer Analysis

| Coast Plus - Oregon | | Customer Analysis 5/22/2017 through 5/23/2017 | | | | | 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 | 2,285 | 0% | 2,743,566 | 11 | 1,900,047 | - | 25 | 903 | 1,333 | 24 | - | - | 1% | 1.44 | 0.001 | 1,201 | |
| PP | Pacific Power | 2,285 | 0% | 2,743,566 | 11 | 779,477 | - | 25 | 903 | 1,333 | 24 | - | - | 1% | 3.52 | 0.003 | 1,201 | |
| OR | Oregon | 2,285 | 0% | 2,743,566 | 11 | 598,577 | - | 25 | 903 | 1,333 | 24 | - | - | 1% | 4.58 | 0.004 | 1,201 | |
| OR | CLATSOP (ASTORIA) | 2 | 0% | 105 | 2 | 24,422 | - | 2 | - | - | - | - | - | 100% | 0.00 | 0.000 | 52 | |
| OR | COOS BAY/COQUILLE | 4 | 0% | 355 | 1 | 26,194 | - | 4 | - | - | - | - | - | 100% | 0.01 | 0.000 | 89 | |
| OR | PORTLAND | 2,279 | 3% | 2,743,106 | 8 | 80,241 | - | 19 | 903 | 1,333 | 24 | - | - | 1% | 34.19 | 0.028 | 1,204 | |

*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 5/22/2017 through 5/23/2017 | | | | | 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 | |
| 5/22/2017 | | 2,278 | 0% | 2,742,944 | 7 | 598,577 | - | 18 | 903 | 1,333 | 24 | - | - | 1% | 4.58 | 0.004 | 1,204 | |
| 5/23/2017 | | 7 | 0% | 622 | 4 | 598,577 | - | 7 | - | - | - | - | - | 100% | 0.00 | 0.000 | 89 | |

| |
|------------|
| Data as of |
| 6/13/2017 |

PacifiCorp Major Event Report
SSC by State Analysis

| | Coast Plus - Oregon | Event 05/22/17 through 05/23/17 | | | | | | Month 05/01/17 through 05/31/17 | | | | | | YTD FY2018 01/01/17 through 05/31/17 | | | | | |
|----|--|---------------------------------|---------|-------|----------------------|-------|-------|---------------------------------|-------|-------|------------------------|-------|-------|--------------------------------------|-------|-------|------------------------|-------|-------|
| | | 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 |
| | PacifiCorp Major Events Report SSC by State | | | | | | | | | | | | | | | | | | |
| PC | PACIFICORP | 1.86 | 0.009 | 215 | 0.42 | 0.007 | 56 | 12.89 | 0.111 | 117 | 11.01 | 0.108 | 102 | 128.76 | 0.715 | 180 | 52.45 | 0.474 | 111 |
| PP | Pacific Power | 3.79 | 0.006 | 602 | 0.27 | 0.003 | 80 | 18.45 | 0.131 | 140 | 13.89 | 0.125 | 111 | 219.06 | 1.070 | 205 | 50.74 | 0.573 | 89 |
| OR | Oregon | 4.75 | 0.007 | 646 | 0.16 | 0.004 | 47 | 18.59 | 0.130 | 143 | 12.65 | 0.122 | 104 | 226.07 | 1.111 | 203 | 48.45 | 0.601 | 81 |
| OR | CLATSOP (ASTORIA) | 0.0005 | 0.00001 | 98 | - | - | - | 0.08 | 0.001 | 137 | 0.08 | 0.001 | 138 | 6.44 | 0.110 | 58 | 3.92 | 0.091 | 43 |
| OR | COOS BAY/COQUILLE | 0.0007 | 0.00001 | 88 | - | - | - | 0.16 | 0.001 | 147 | 0.16 | 0.001 | 148 | 10.36 | 0.065 | 159 | 3.00 | 0.039 | 77 |
| OR | HOOD RIVER | 0.0019 | 0.00002 | 90 | - | - | - | 0.13 | 0.001 | 104 | 0.13 | 0.001 | 104 | 0.41 | 0.003 | 119 | 0.41 | 0.003 | 119 |
| OR | LINCOLN CITY | - | - | - | - | - | - | 0.01 | 0.000 | 133 | 0.01 | 0.000 | 133 | 3.66 | 0.029 | 126 | 1.87 | 0.012 | 153 |
| OR | PORTLAND | 4.5833 | 0.00381 | 1,202 | - | - | - | 4.75 | 0.005 | 979 | 0.17 | 0.001 | 160 | 8.78 | 0.041 | 216 | 1.89 | 0.020 | 96 |

*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 |
| 6/13/2017 |

How Secondary Networks Operate (page 1 of 3)

