

**Report to the Washington Utilities and Transportation Commission**  
**Electric Service Reliability - Major Event Report**

Event Date: October 28-29, 2019

Date Submitted: December 10, 2019

Primary Affected Locations: Yakima

Primary Cause: Loss of Transmission Line

Exclude from Reporting Status: Yes

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Report Approved by: Heide Caswell / Carrie Laird / Pablo Arronte

| Event Outage Summary                    |                  |
|---|------------------|
| # Interruptions (sustained)             | 18               |
| Total Customers Interrupted (sustained) | 9,770            |
| Total Customer Minutes Lost             | 289,110          |
| State Event SAIDI                       | 2.11 Minutes     |
| CAIDI                                   | 30               |
| Major Event Start                       | 10/28/19 8:17 PM |
| Major Event End                         | 10/29/19 8:17 PM |

**Event Description and Restoration Summary**

At 8:17 P.M. on October, 28, 2019, Yakima, Washington, experienced a system average interruption frequency index (SAIFI)-based<sup>1</sup> major event due to a loss of transmission line event which occurred when high winds caused a tree to fall on the 115kV line between River Road and Orchard Substations. The event caused the Orchard Substation to de-energize, affecting all six distribution circuits fed from the substation, causing an outage to 9,179 customers. Operations quickly reacted to the de-energized substation by isolating the 115 kV line and energizing the substation through an alternate source, restoring power to the 9,179 customers within 6 minutes. Immediately following the switch to an alternate source, crews were dispatched to the area to investigate the loss of transmission feed; locally there was also awareness of several other outages that were the result of wind downed trees, and impacted another 591 customers.

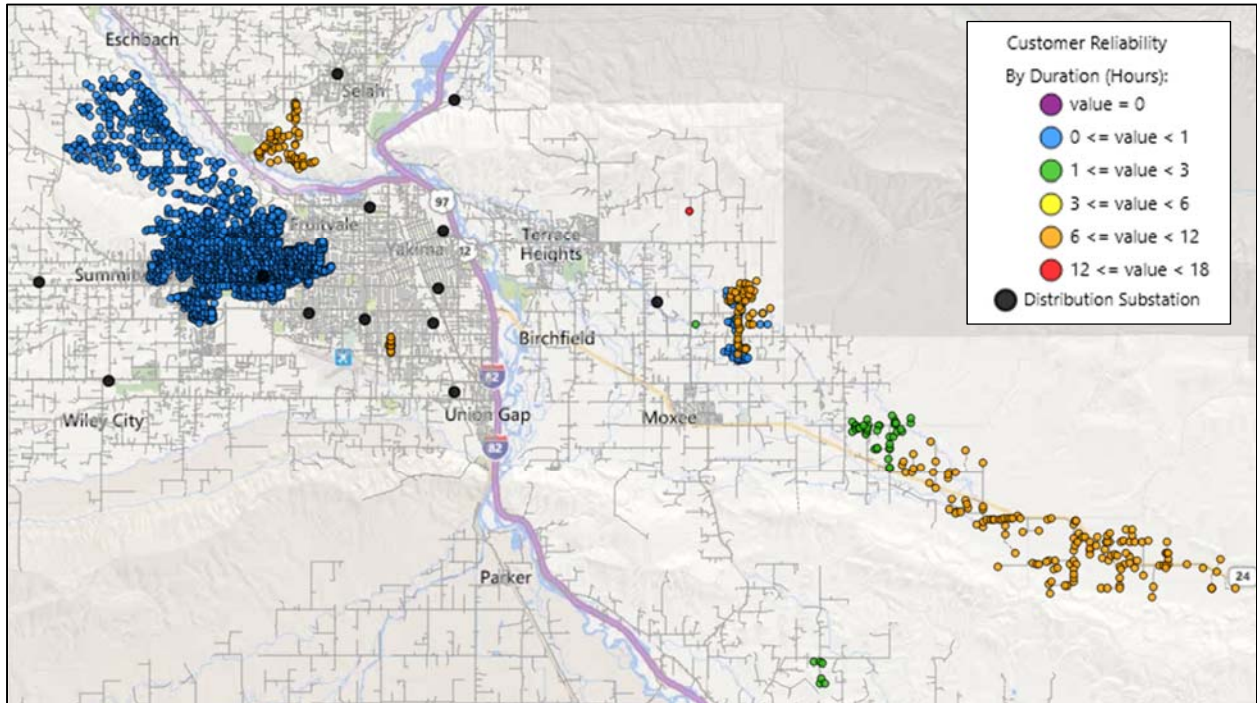
Upon inspection of the transmission line, crews determined that the tree which downed the transmission line had also taken down distribution under-build at the location, affecting

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<sup>1</sup> A SAIFI-based major event threshold (as identified in PacifiCorp’s reporting plan, pursuant to Washington Administrative Code (WAC) 480-100-393 & 398 Electric Reliability Annual Monitoring and Reporting Plan) is defined as an event in which more than 10% of an operating area’s customers are simultaneously without service as a result of a sustained interruption. Yakima operating area’s Calendar 2019 Frozen Customer Count is 82,913 customers.

customers fed from another substation and circuit. Crews began working on repairs to the damaged equipment and at 6:26 A.M. the following day, 10 hours and four minutes after the reported outage, the structures were rebuilt, and the transmission and distribution line were re-energized; this restored power to the 127 customers affected by downed distribution line, and restored the standard transmission line configuration. Shortly thereafter the Orchard substation was restored to its normal configuration.

To date, there have been no company or commission customer complaints made regarding the major event.



### Restoration Intervals

| Total Customers Sustained | < 3 Hrs. | 3 - 24 Hrs. | 24+ Hrs. |
|---------------------------|----------|-------------|----------|
| 9,770                     | 9,306    | 464         | 0        |

## Restoration Resources <sup>2</sup>

| Personnel Resources      |           |
|--------------------------|-----------|
| Field Service Specialist | 1         |
| Line Patrolman           | 1         |
| Servicemen               | 3         |
| Lineman Journeyman       | 6         |
| Lineman Representative   | 2         |
| Line Foreman             | 3         |
| General Foreman          | 1         |
| Relay Tech               | 2         |
| Substation Wireman       | 1         |
| Tree Crewman             | 7         |
| <b>Total</b>             | <b>27</b> |

| Equipment                         |       |
|-----------------------------------|-------|
| # Poles (D)                       | 1     |
| Approximate Conductor Line (feet) | 1,030 |
| # Transformers                    | 5     |
| # Crossarms                       | 1     |
| Insulators                        | 20    |
| Line splices                      | 17    |
| Cutouts                           | 12    |

## State Estimated Major Event Costs <sup>2</sup>

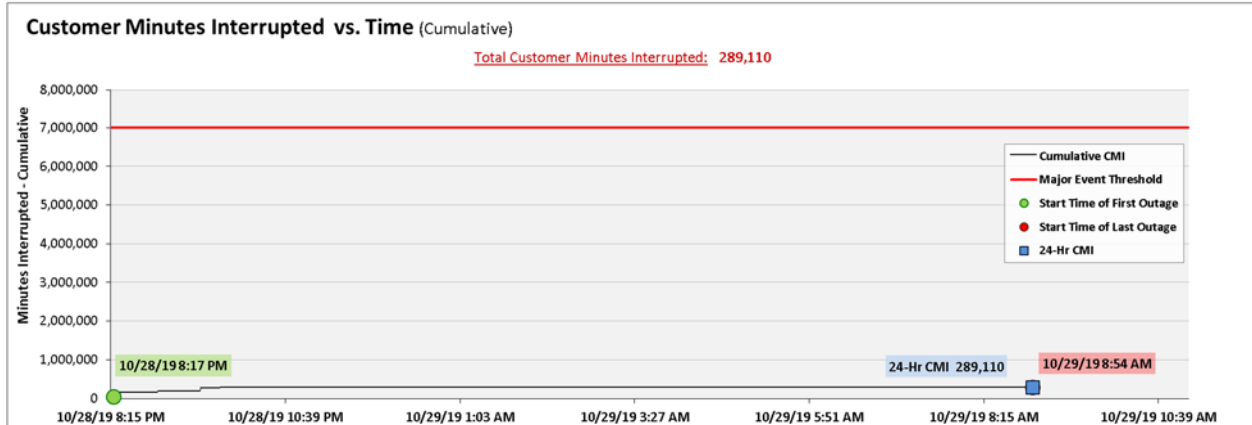
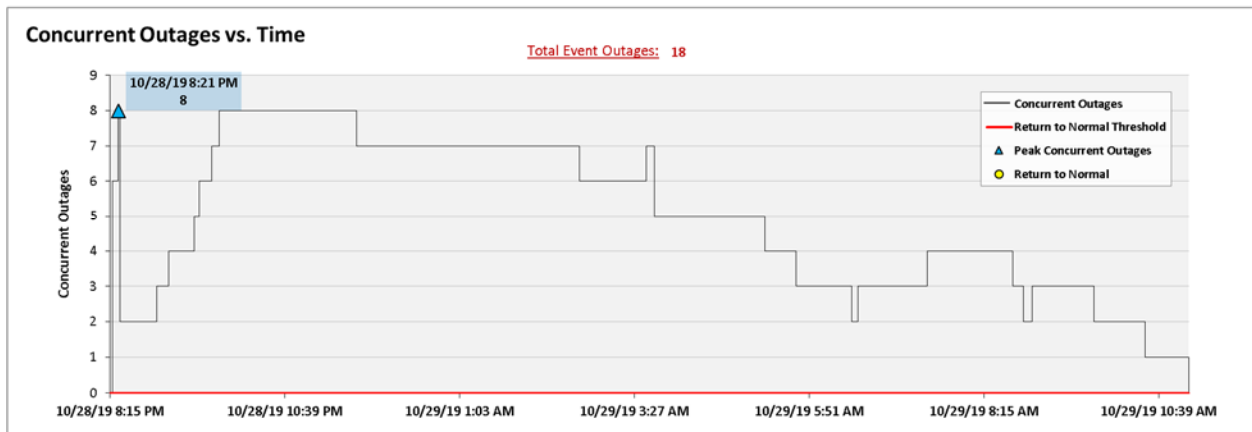
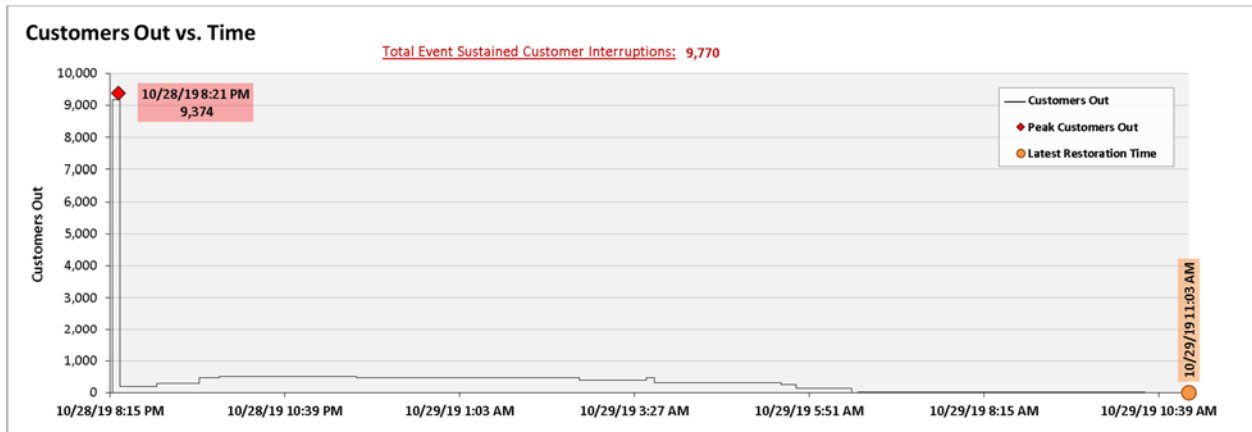
| Estimate \$    | Labor           | Contracts      | Material       | Overheads      | Total           |
|----------------|-----------------|----------------|----------------|----------------|-----------------|
| <b>Capital</b> | \$4,161         | \$0            | \$9,117        | \$2,146        | <b>\$15,424</b> |
| <b>Expense</b> | \$30,931        | \$4,916        | \$231          | \$1,181        | <b>\$37,259</b> |
| <b>Total</b>   | <b>\$35,092</b> | <b>\$4,916</b> | <b>\$9,348</b> | <b>\$3,327</b> | <b>\$52,683</b> |

## Major Event Declaration

Pacific Power is requesting designation of this event and its consequences to be classified as a “Major Event” for exclusion from underlying network performance reporting. This major event exceeded the company’s current Washington system average interruption frequency index-driven (SAIFI) threshold of 10% total operating area customers served sustained interruptions (9,374 customers were interrupted out of Yakima’s 82,913 operating area customers, or 11% of the operating area customers) simultaneously in a 24-hour period.

<sup>2</sup> 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.