

Report to the Washington Utilities and Transportation Commission

Electric Service Reliability - Major Event Report

Event Date: July 24-25, 2020

Date Submitted: September 14, 2020

Primary Affected Locations: Statewide

Primary Cause: Weather

Exclude from Reporting Status: Yes

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Report Approved by: Heide Caswell / Carrie Laird / Chad Ooten

Event Description and Restoration Summary

Event Outage Summary	
# Interruptions (sustained)	11
Total Customers Interrupted (sustained)	2,336
Total Customer Minutes Lost	1,711,524
State Event SAIDI	12.6 Minutes
CAIDI	733
Major Event Start	7/24/2020 10:53 p.m.
Major Event End	7/25/2020 10:53 p.m.

On the evening of July 24th, 2020, customers in Yakima, Washington experienced a major event when high winds downed a tree which fell on equipment (Figure 1). Beginning on the morning of July 24th, winds related to a summer storm affected the area, beginning the day normal and calm; however, as the day progressed, wind speeds and significant gusts occurred, as shown Figures 2 and 3 below.¹



¹ Remote Automatic Weather Station (RAWS). <https://raws.dri.edu/>

Figure 1. Photos of damaged equipment from downed tree.

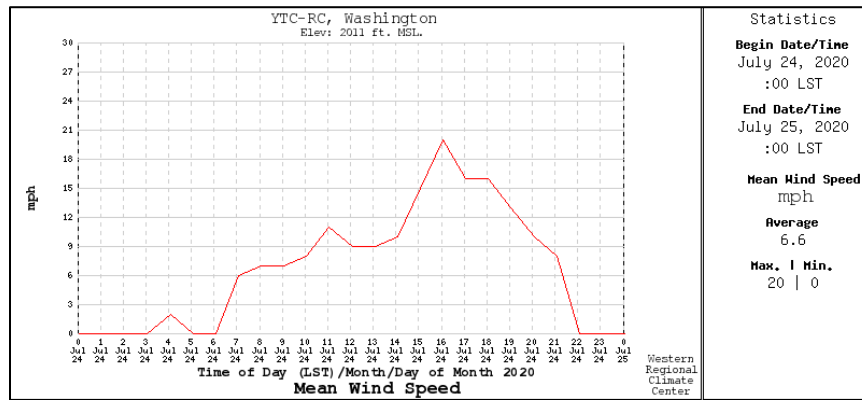


Figure 2. Yakima YTC-RC Washington mean wind speed during the major event.

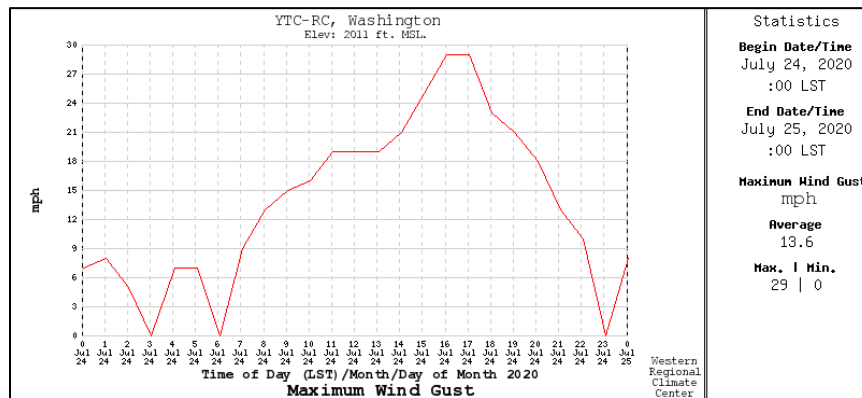


Figure 3. Yakima YTC-RC Washington maximum wind gust during the major event.

At 10:53 p.m. a large street tree fell. As it fell it damaged a pole, line, and related distribution equipment along seven spans of the circuit. The damaged equipment included heavy stranded mainline feeder, poles, cross-arms, transformers, and a gang switch that serves as a tie point to adjacent circuits (used as an isolation point to step restore customers from the breaker to the switch). Crews were quickly dispatched to the location to assess the damage; they determined that their options for stage restoration had been compromised by the tree’s damage of the feeder tie and switch, but that if they prioritized that repair they could quickly restore power to a large number of customers.

Repairing the feeder tie involved resetting the downed twisted conductor and repairing the switch, after which crews were able to perform the first step of restoration, restoring 1,686 customers in 11 hours and 59 minutes. During the second stage of repairs, crews worked to replace the damaged pole, cross-arms, insulators and reinstall conductor, with the final restoration stage occurring in 15 hours and 14 minutes, restoring the remaining 503 customers.

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

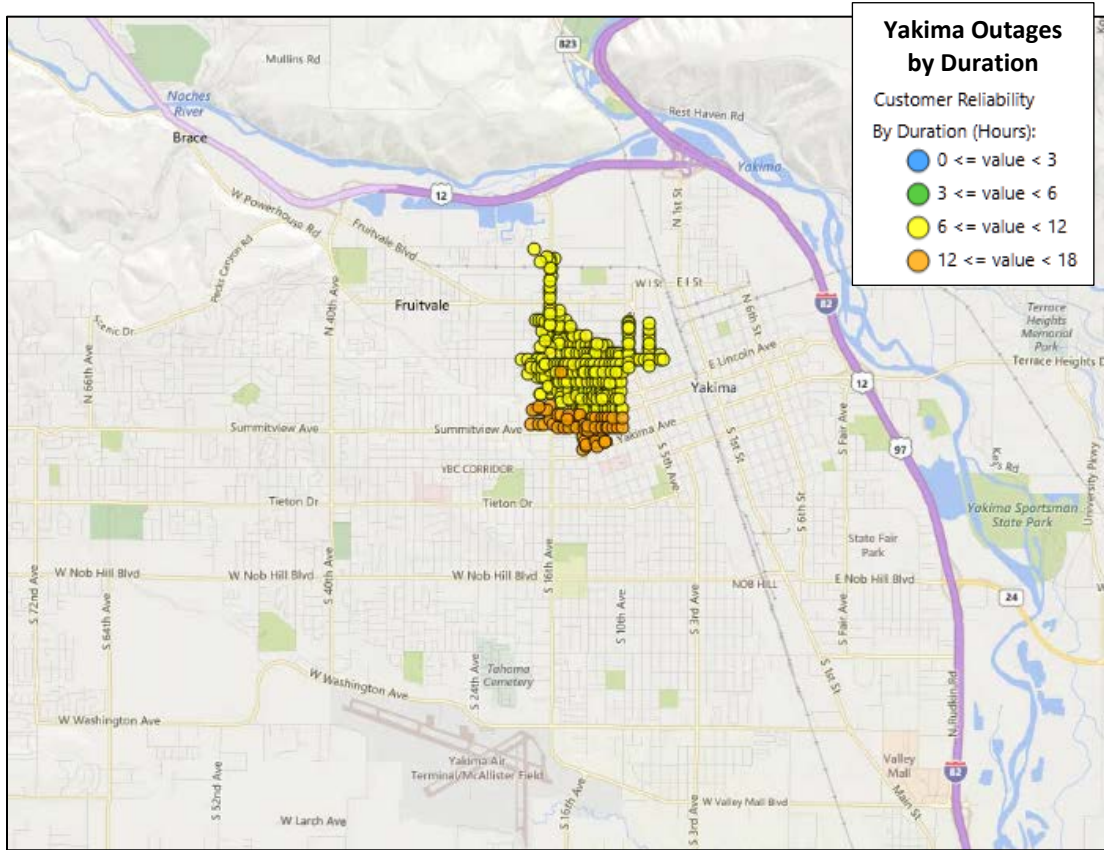


Figure 3. Yakima Outage Duration by hour.

Restoration Intervals

Total Customers Sustained	< 3 Hrs.	3 - 24 Hrs.	24+ Hrs.
2,336	4	2,332	0

Restoration Resources ²

Personnel Resources	
Collector	2
Field Journeyman	7
Substation Relay Tech	2
Substation Wireman	1
Vegetation Crew Members	4
Total	16

Materials	
# Distribution Poles	1
# Approx. conductor Line (feet)	465 ft.
# Crossarms	7
Insulators	43
Line splices	11

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. The current values do not reflect the current procurement of a replacement transformer nor the future personnel work billed to the project when installed.

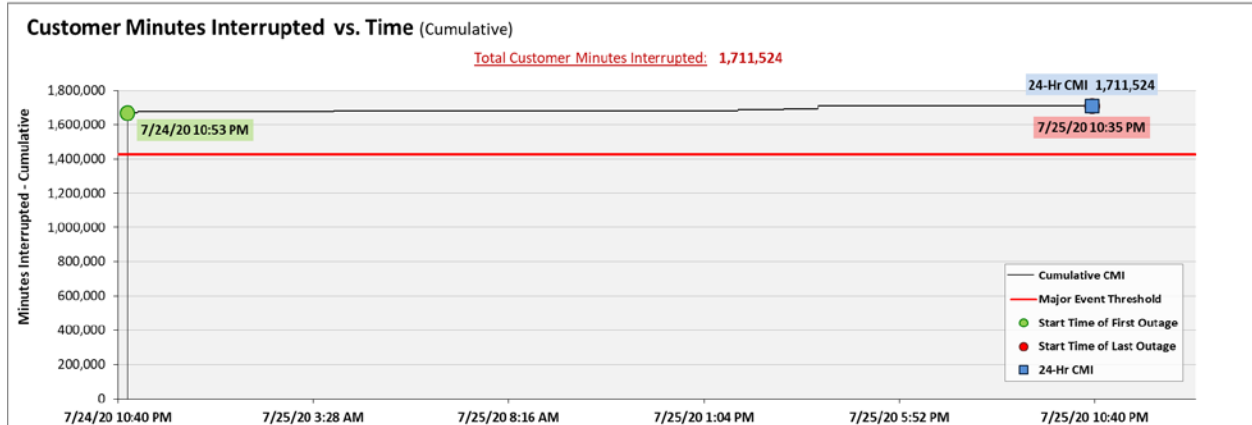
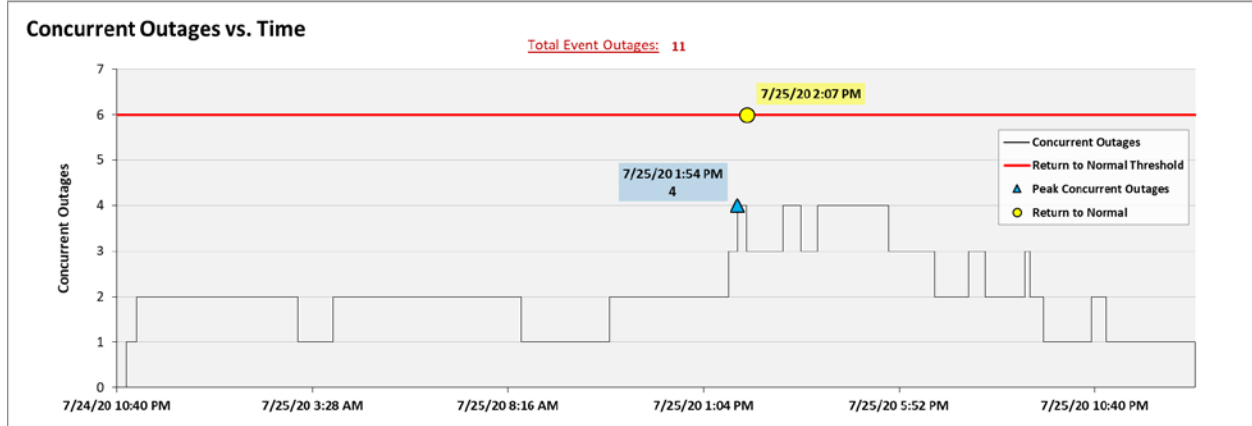
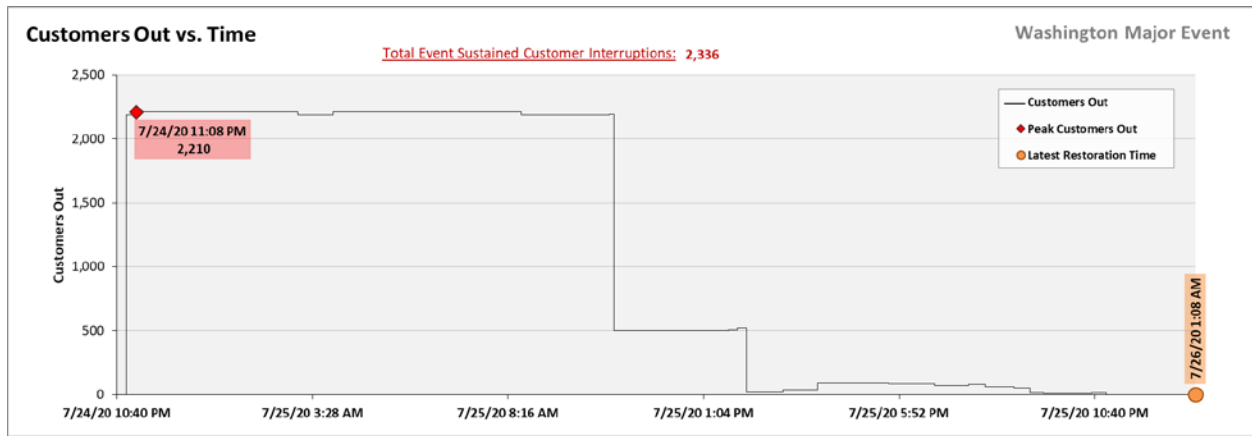
State Estimated Major Event Costs

Estimate \$	Labor	Contracts	Material	Overheads	Total
Capital	\$21,627	\$2,142	\$3,122	\$3,202	\$30,094
Expense	\$0	\$0	\$0	\$0	\$0
Total	\$21,627	\$2,142	\$3,122	\$3,202	\$30,094

Major Event Declaration

Pacific Power is requesting designation of this event and its consequences to be classified as a “Major Event” for exclusion from network performance reporting with the IEEE 1366-2003/2012. This major event exceeded the company’s 2020 Washington threshold of 1,427,191 customer minutes lost (10.5 state SAIDI minutes) in a 24-hour period.

Event Detail



SAIDI, SAIFI, CAIDI by Reliability Reporting Region

Please see the attached system-generated reports.