

## Report to the Washington Utilities and Transportation Commission

### Electric Service Reliability - Major Event Report

Event Date:	August 23, 2018
Date Submitted:	October 4, 2018
Primary Affected Locations:	Yakima
Primary Cause:	Loss of Substation - Fire
Exclude from Reporting Status:	Yes
Report Prepared by:	April Brewer
Report Approved by:	Heide Caswell / David O'Neil / Pablo Arronte

#### Event Description and Restoration Summary

At 6:00 p.m. on August 23<sup>rd</sup>, Pacific Power experienced a major event in its Washington service territory when a fire occurred at the Tieton substation in Yakima. The fire severely damaged three single phase voltage regulators and two 12 kV feeder breakers, causing an outage to 2,651 customers. At 6:52 p.m. the Portland Control Center opened and de-energized the 115 kV/20 kV power transformer inside the substation, due to the fire's proximity. This affected an additional 1,195 customers bringing the total customers affected to 3,846 customers.

Personnel began de-energizing the lines feeding into the substation so the fire could be extinguished. Area engineers began reviewing the surrounding network configuration and developed switching plans to begin step restoration. Meanwhile, it was determined that the extensive damage to equipment would require a mobile substation to restore power to those customers whose service delivery could not be energized from an alternative source.

At 9:24 p.m. crews were able to restore 329 customers from an alternative source. After a detailed inspection throughout the substation the 115 kV/20 kV power transformer was energized, restoring power to 1,195 customers on August 24<sup>th</sup> at 7:49 a.m. Crews began preparing the distribution portion of the substation for connection to the mobile substation by installing temporary poles and wire, readying it for the mobile substation. At 11:36 a.m. the installation was completed and personnel began energizing the distribution feed. At 12:36 p.m. the final of the 2,322 customers were restored.

Event Outage Summary	
# Interruptions (sustained)	14
Total Customer Interrupted (sustained)	3,923
Total Customer Minutes Lost	3,533,109
State Event SAIDI	26.06 Minutes
CAIDI	901
Major Event Start	8/23/18 6:00 p.m.
Major Event End	8/24/18 6:00 p.m.



## Restoration Intervals

Total Customers Sustained	< 3 Hrs.	3 - 24 Hrs.	24+ Hrs.
3,923	72	3,851	0

## Restoration Resources <sup>1</sup>

Personnel Resources	
Internal local crewmembers	8
Internal out of area crewmembers	13
Substation crewmembers	10
Lineman	11
Substation	10
Transmission	4
Warehouseman	1
Mechanic	2
Engineer	2
<b>TOTAL</b>	<b>61</b>

<sup>1</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.

Materials	
# Transmission Poles	5
# Approximate conductor Line (feet)	2,860 ft.
# Transformers	2
# Crossarms	7
Insulators	55
Cutouts	2
Line splices	5
Recloser	2

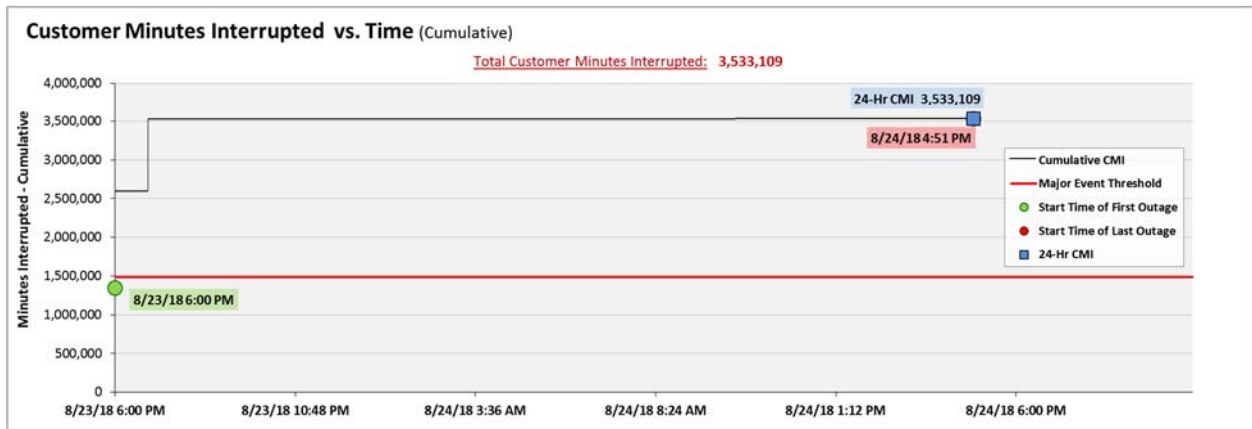
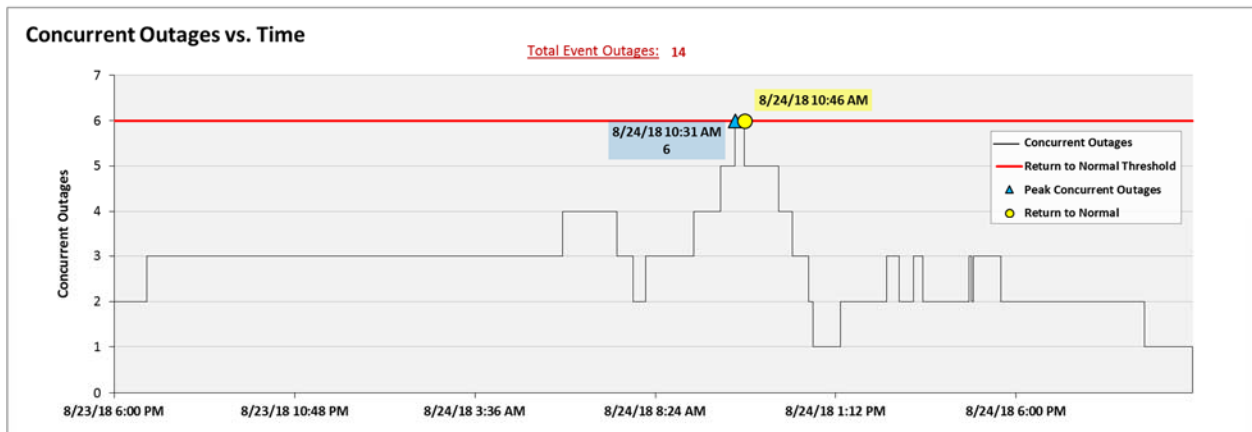
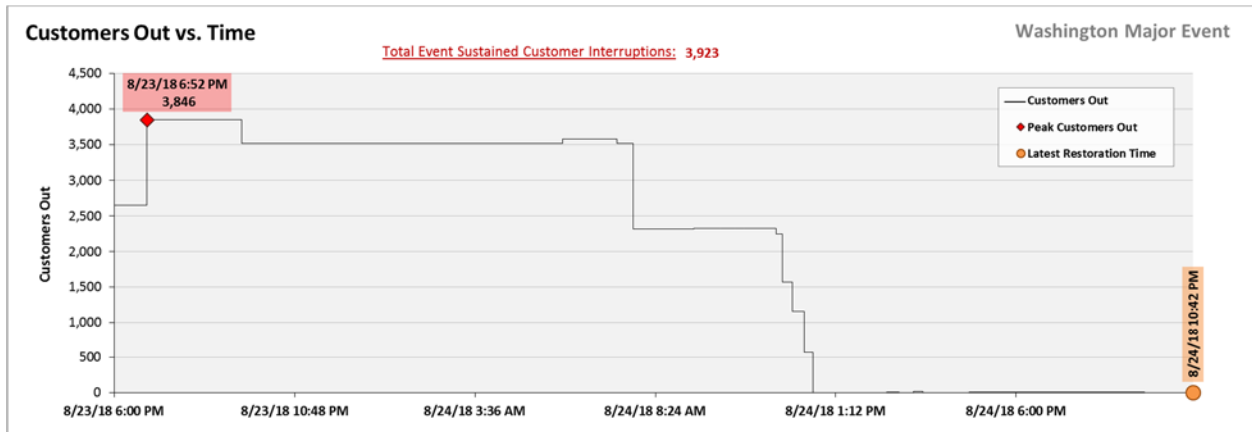
### State Estimated Major Event Costs <sup>1</sup>

	Labor	Contracts	Material	Overheads	Total
<b>Actual \$</b>					
<b>Capital</b>	\$123,092	\$0	\$55,601	\$19,391	<b>\$198,084</b>
<b>Expense</b>	\$10,875	\$0	\$0	\$3,468	<b>\$14,343</b>
<b>Total</b>	<b>\$133,967</b>	<b>\$0</b>	<b>\$55,601</b>	<b>\$22,859</b>	<b>\$212,427</b>
<b>Addition Forecasted \$</b>					
<b>Capital</b>	\$150,000	\$100,000	\$191,000	\$0	<b>\$441,000</b>
<b>Expense</b>	\$13,000	\$0	\$7,000	\$0	<b>\$20,000</b>
<b>Forecasted Total</b>	<b>\$163,000</b>	<b>\$100,000</b>	<b>\$198,000</b>	<b>\$0</b>	<b>\$461,000</b>
<b>Estimated Total</b>	<b>\$296,967</b>	<b>\$100,000</b>	<b>\$253,601</b>	<b>\$22,859</b>	<b>\$673,427</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 network performance reporting with the IEEE 1366-2003/2012. This major event exceeded the company's 2018 Washington threshold of 1,488,256 customer minutes lost (10.98 state SAIDI minutes) in a 24-hour period.

# Event Detail



## SAIDI, SAIFI, CAIDI by Reliability Reporting Region

Please see the attached system-generated reports.