

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

Event Date: March 9, 2018
 Date Submitted: April 20, 2018
 Primary Affected Locations: Sunnyside
 Primary Cause: Loss of Transmission
 Exclude from Reporting Status: Yes
 Report Prepared by: April Brewer
 Report Approved by: Heide Caswell / Kevin Putnam / David O'Neil / Pablo Arronte

Event Description

On March 9, 2018, Sunnyside, Washington, experienced a system average interruption frequency index (SAIFI)-based major event when the circuit breaker opened at Wine Country substation due to a lockout relay that failed. The outage affected 14,886¹ customers, approximately 60% of Sunnyside total customers served, with outage durations ranging from 7 minutes to 2 hours 31 minutes.

Event Outage Summary	
# Interruptions (sustained)	14
Total Customer Interrupted (sustained)	14,886
Total Customer Minutes Lost	528,424
State Event SAIDI	3.90 Minutes
CAIDI	35
Major Event Start	3/9/18 12:00 AM
Major Event End	3/10/18 12:00 AM

Restoration Summary

At 1:13 a.m. on March 9, 2018, the circuit breaker at the Wine County substation operated due to the associated lockout relay failure. This operation caused two additional circuit breakers at the Wine Country substation to operate, as well as operating two adjacent Bonneville Power Administration (BPA) substation circuit breakers. The breaker operations resulted in the loss of

¹ A SAIFI-based major event threshold (as identified in PacifiCorp’s reporting plan, under 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. Sunnyside operating area’s Calendar 2018 Frozen Customer Count is 24,752 customers.

37 MW of customer load to Sunnyside, Sulphur Creek and Grandview substations serving 14,886 customers.

At 1:21 a.m. the Region System Operations (RSO) operator restored Sunnyside substation via the Outlook substation source. At 1:36 a.m. Grid Operations received permission to restore Grandview substation via the BPA Grandview substation source.

After isolating the circuit breakers at Wine Country, RSO received permission from BPA to energize and pick up Sulphur Creek substation load from BPA Grandview. Prior to energizing Sulphur Creek, the RSO had opened distribution feeders to minimize the effects which could occur from inrush current resulting from extended cold conditions (called cold load pickup). At 3:25 a.m. RSO restored feed to circuit 5Y658, and at 3:45 a.m. RSO restored feed to circuit 5Y656 at Sulphur Creek restoring all customer load.

Between 3:46 a.m. and 7:30 p.m., efforts were undertaken to replace the failed lockout relay, and restore the Wine Country substation to its normal configuration.

There were no company or commission customer complaints made regarding the major event.

Restoration Intervals

Total Customers Sustained	< 3 Hrs.	3 - 24 Hrs.	24+ Hrs.
14,886	14,886	0	0

Restoration Resources

Personnel Resources	
Wireman Journeyman	1
Line Crewman	1
Relay Tech	2
TOTAL	4

Materials	
Lockout Relay	1

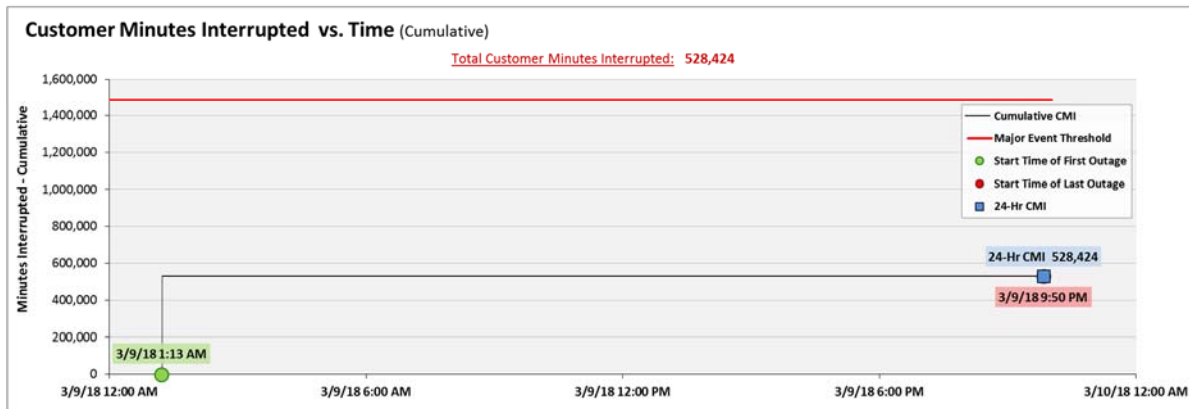
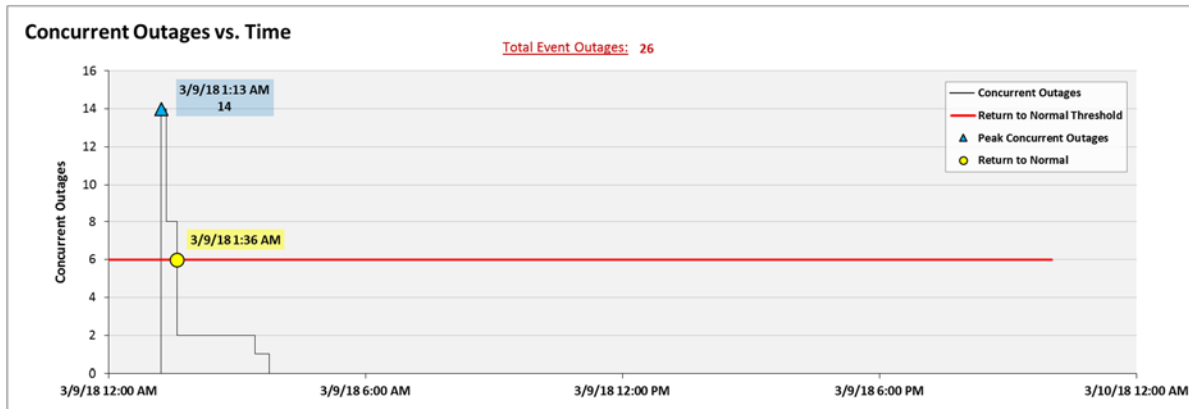
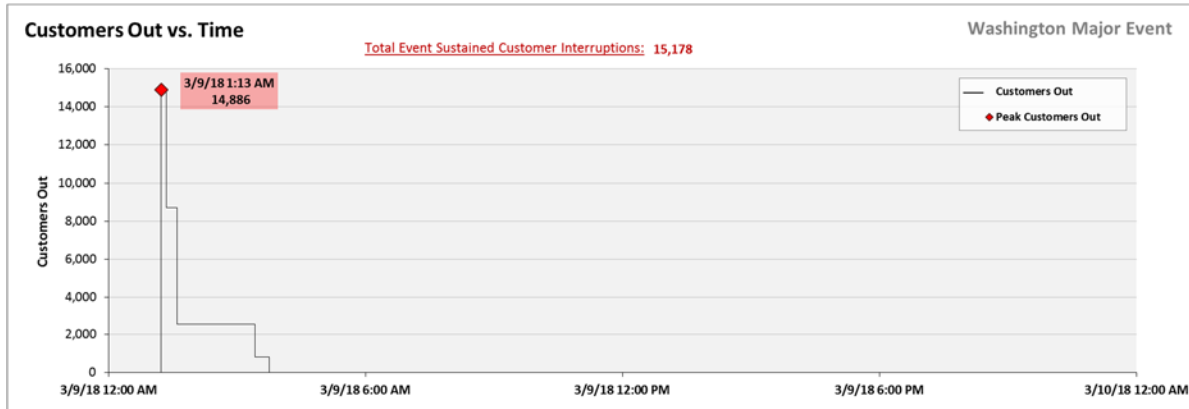
State Estimated Major Event Costs

Estimate \$	Labor	Material	Overheads	Total
Capital	\$5,318	\$643	\$1,036	\$6,997
Expense	\$0	\$0	\$0	\$0
Total	\$5,318	\$643	\$1,036	\$6,997

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 (14,886 customers interrupted out of 24,752 Sunnyside operating area customers, or 60% of the operating area customers) simultaneously in a 24-hour period.

Event Detail



SAIDI, SAIFI, CAIDI by Reliability Reporting Region

Please see the attached system-generated reports.