

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

Event Date:	June 4, 2017
Date Submitted:	July 13, 2017
Primary Affected Locations:	Sunnyside
Primary Cause:	Animal Interference
Exclude from Reporting Status:	Yes
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Event Description

On the morning of June 4, 2017 at 07:50 a.m., six circuit feeds from the Sunnyside substation experienced an interruption, when an encroaching squirrel resulted in an electrical fault, which damaged buss work, disconnect switches, and insulators within the substation. The outage event affected 6,458 customers with outage durations ranging from 5 hours 14 minutes to 10 hours. The event affected 26% of the total customers served within the Sunnyside operating area.

Event Outage Summary	
# Interruptions (sustained)	17
Total Customer Interrupted (sustained)	6,458
Total Customer Minutes Lost	3,357,306
Event SAIDI	25.02 Minutes
CAIDI	518
Major Event Start	6/4/17 12:00 AM
Major Event End	6/5/17 12:00 AM

Restoration Summary

At 7:50 a.m. on the morning of June 4, 2017, Sunnyside, Washington, experienced a loss of supply event when transformer high side fuses operated at the Sunnyside substation, causing a loss of feed to six distribution circuits, serving 6,458 customers. Crews were quickly dispatched to the area to assess damage and begin restoration activities. Once personnel arrived at the substation it was determined that a squirrel had encroached into the animal-guarded substation, resulting in a fault that damaged 9 main bus insulators, main bus, three disconnect switches, and various animal guarding pieces, with the majority of the damage in the 5Y316 feeder bay.

Crews began working with dispatch and area engineers to develop the appropriate substation switching orders in an effort to begin restoring power to customers concurrent with isolating power feeds to the equipment needing repair. The station transformers were inspected and tested

for damage, with satisfactory test results. Feeder 5Y316 bay sustained significant damage and it was identified that repairs would take the longest so field switching efforts were undertaken outside the substation to restore customers from other sources. All customers served by feeder 5Y316 were step restored at 1:04 p.m., 1:53 p.m., 2:37 p.m., 4:26 p.m., and 4:40p.m.

At 4:17 p.m. the first of the six circuits was re-energized, restoring power to 1,434 customers. By 4:26 p.m. three additional circuit feeds were re-energized, restoring power to another 2,645 customers. And at 5:50 p.m. the last 1,206 customers without power were restored. Once all customers were restored focus shifted to completing repairs to 5Y316 feeder bay and to restore the substation and feeders in the field to a normal configuration. 5Y316 breaker was restored to normal configuration at 11:02 p.m., with the remaining restoration actions completed the morning of June 5. There were no company or commission customer complaints made regarding the major event.

Restoration Intervals¹

Total Customers Sustained	< 3 Hrs.	3 - 24 Hrs.	24+ Hrs.
6,485	8	6,477	0

Restoration Resources

Personnel Resources	
Collector	2
Journeyman	10
Relay Technician	4
SR Warehouse Worker	1
Materials	
15KV Post Insulators	9
Line Fuses	6
Animal Guarding Material	22

State Estimated Major Event Costs

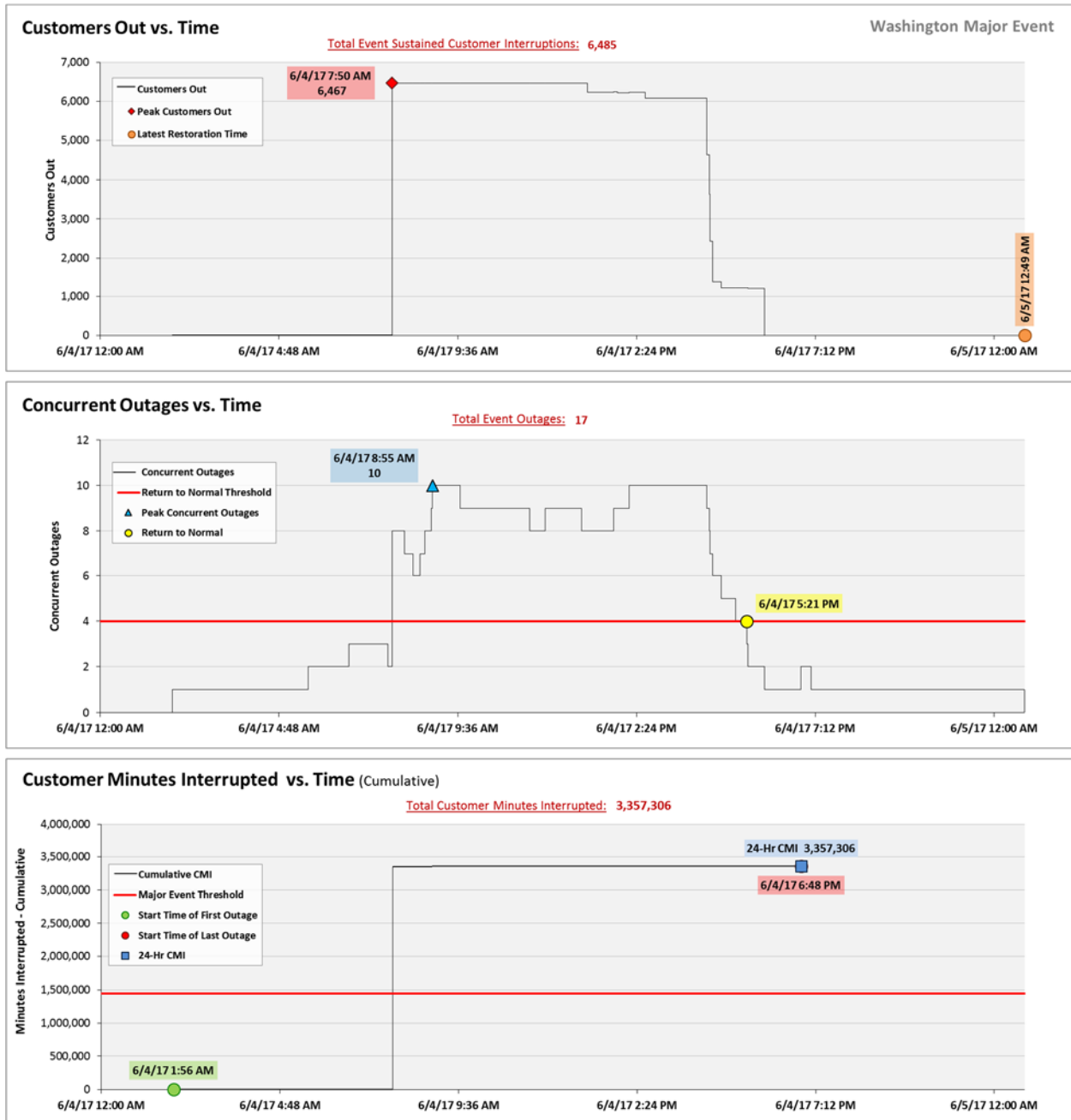
Estimate \$	Labor	Contracts	Materials	Overheads	Total
Capital Expense	\$29,887	\$173	\$20,201	\$3,239	\$50,261
	-	-	-	-	-
Total	\$29,887	\$173	\$20,201	\$3,239	\$50,261

¹ 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.

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 2017 Washington threshold of 1,444,820 customer minutes lost (10.77 state SAIDI minutes) in a 24-hour period.

Event Detail



SAIDI, SAIFI, CAIDI by Reliability Reporting Region

Please see the attached system-generated reports.