

Report to the Washington Utilities and Transportation Commission

Electric Service Reliability - Major Event Report

Event Date: May 9, 2021
Date Submitted: June 18, 2021
Primary Affected Locations: Statewide
Primary Cause: Loss of Substation
Exclude from Reporting Status: Yes
Report Prepared by: April Brewer
Report Approved by: Heide Caswell / Carrie Laird

Event Description and Restoration Summary

Event Outage Summary	
# Interruptions (sustained)	9
Total Customers Interrupted (sustained)	6,833
Total Customer Minutes Lost	3,538,061
State Event SAIDI	25.9 Minutes
CAIDI	518
Major Event Start	5/9/21 12:00 AM
Major Event End	5/10/21 12:00 AM

On the morning of May 9, 2020, a squirrel was able to bypass animal guarding at the Grandview substation making contact with the 12 kV switchgear, resulting in damage to electrical bus and glass insulators, shown in figure 1. The event operated station protective equipment, de-energizing the entire substation and the six distribution circuit feeds. The event affected service to a total 6,792 customers with outage durations ranging from 7 hours 6 minutes to 9 hours 44 minutes (figure 2).

During the restoration process crews worked to assess damaged equipment and obtain replacement materials required. Responders accessed replacement materials at the local operating base, an hour away, and during the interim, area engineers developed switching plans to shorten customer outage duration.

Throughout the event more than 10 field responders completed damage assessments, switching, and multiple repairs to the substation bus, insulators, and additional animal guarding to restore customers.

To date, there has been no commission or company complaints concerning this major event.



Figure 1: Photos of damaged equipment.

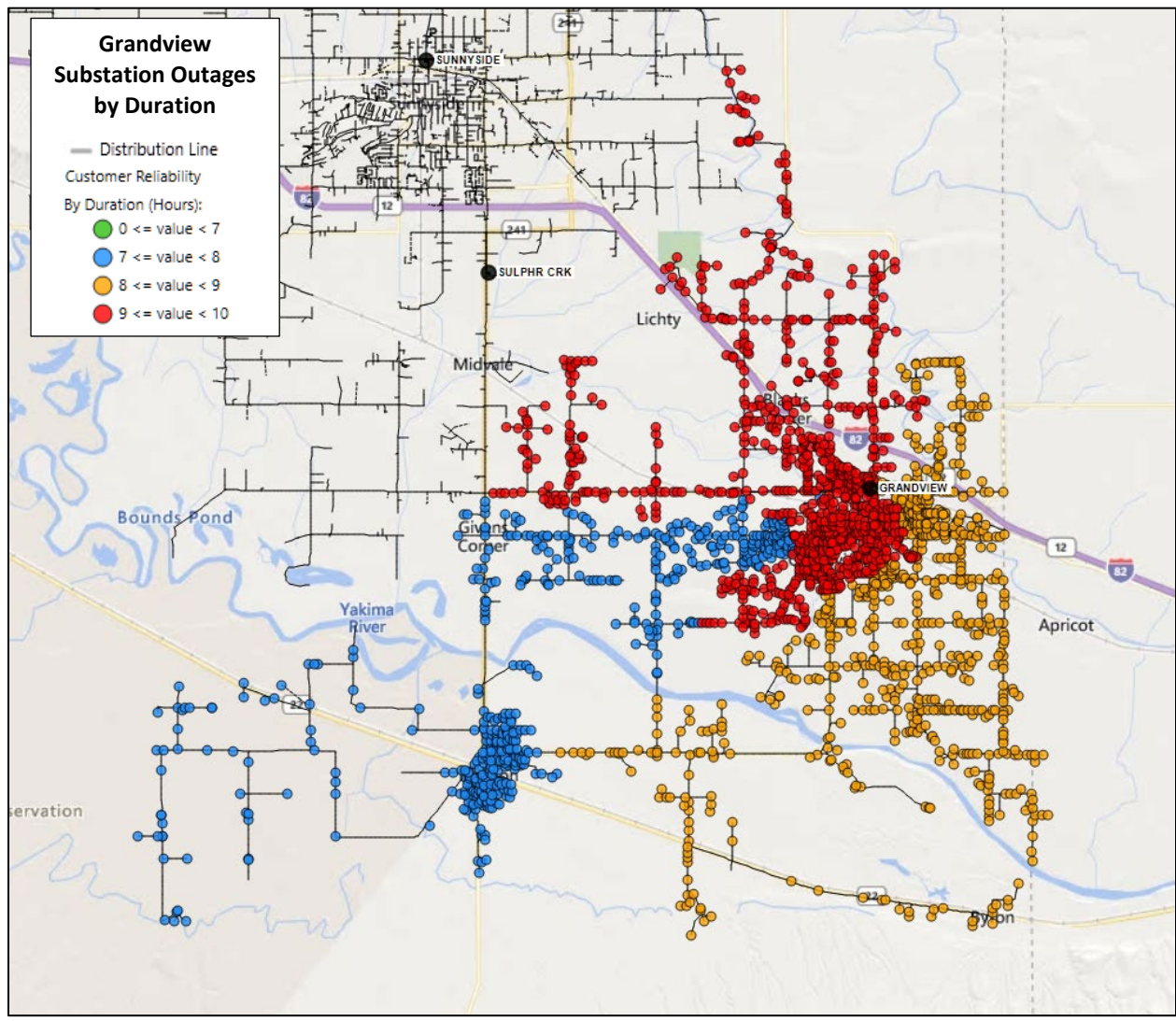


Figure 2. Grandview Substation Outages Duration by hour.

Restoration Intervals

Total Customers Sustained	< 3 Hrs.	3 - 24 Hrs.	24-48 Hrs.
6,833	36	6,797	0

Restoration Resources ¹

Personnel Resources	
Line Crewman	1
Substation crewmembers	11
Foreman	2
Total	14

Materials	
Animal Guard Shield	12
Insulators	8

State Estimated Major Event Costs

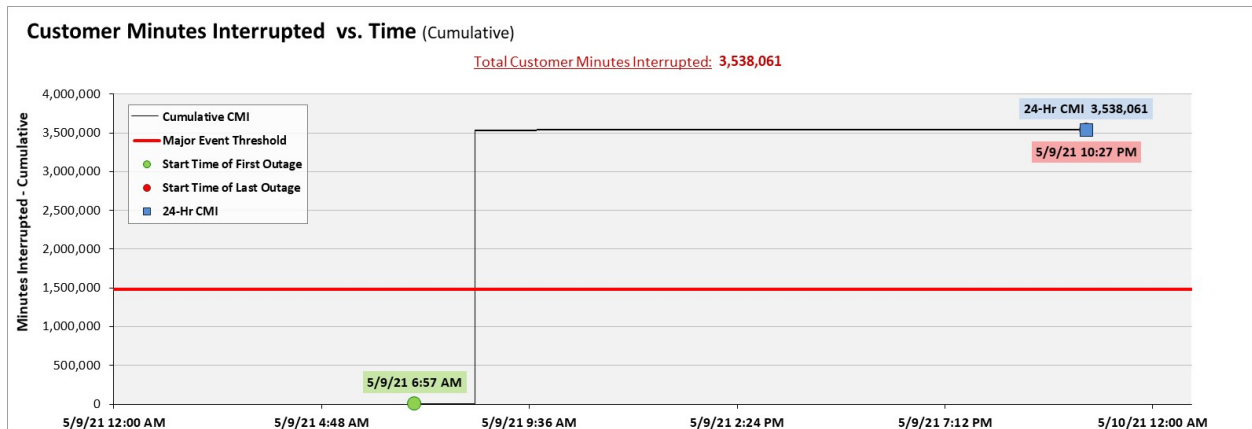
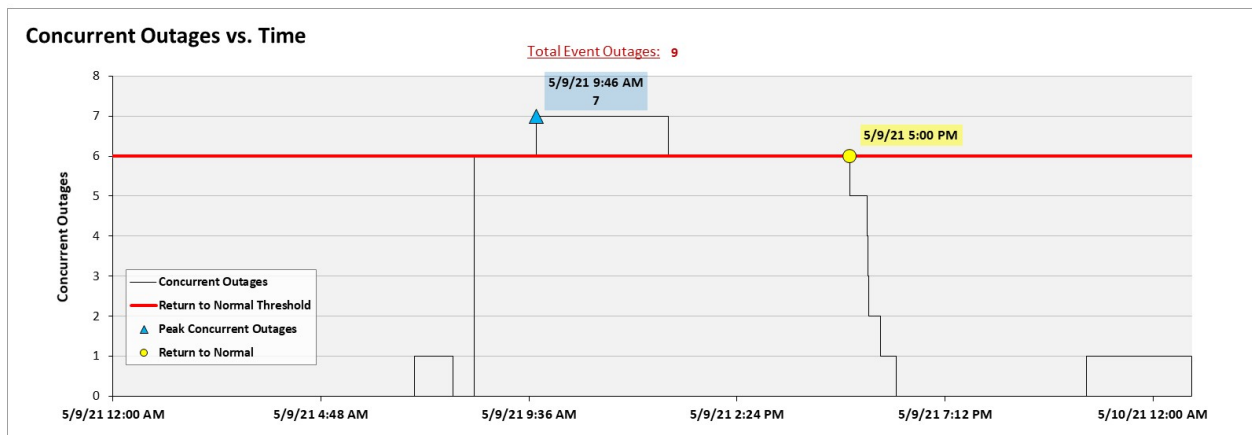
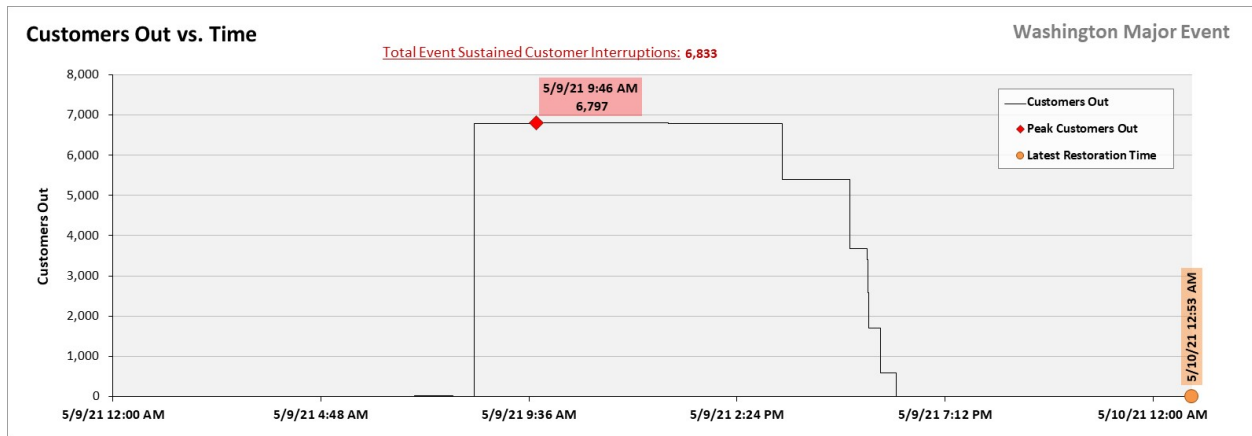
Estimate \$	Labor	Material	Overhead/Other	Total
Capital	\$15,847	\$3,850	\$2,922	\$22,619
Expense	\$0	\$0	\$0	\$0
Total	\$15,847	\$3,850	\$2,922	\$22,619

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 2021 Washington threshold of 1,482,928 customer minutes lost (10.8 state SAIDI minutes) in a 24-hour period.

¹ 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.