

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

Event Date: August 9-10, 2019

Date Submitted: September 20, 2019

Primary Affected Locations: Sunnyside

Primary Cause: Loss of Transmission line

Exclude from Reporting Status: Yes

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

Event Outage Summary	
# Interruptions (sustained)	22
Total Customer Interrupted (sustained)	10,435
Total Customer Minutes Lost	1,004,930
State Event SAIDI	7.35 Minutes
CAIDI	96
Major Event Start	8/9/19 11:03 PM
Major Event End	8/10/19 11:03 PM

**Event Description and Restoration Summary**

At 11:04 p.m., on August 9<sup>th</sup>, 2019, Sunnyside, Washington, experienced a system average interruption frequency index (SAIFI)-based<sup>1</sup> major event when a summer lightning storm struck; apparently lightning hit a section of the 115kV transmission line between the Sunnyside and Outlook Substations. The outage de-energized two substations (Sunnyside and Punkin), feeding nine circuits, serving 10,262 customers, approximately 41% of Sunnyside’s total customers served.

Crews were dispatched to inspect the line (which is normal operation prior to test energizing during “fire season”) and determined that the damage the line had sustained did not require immediate repair, rather restoration and follow up repair could occur. Therefore the substation breakers were cleared to close, re-energizing the transmission line. At 12:32 a.m. on August 10<sup>th</sup> the Sunnyside Substation was energized restoring feed to 6,239 customers. At 12:41 a.m.

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<sup>1</sup> A SAIFI-based major event threshold (as identified in PacifiCorp’s reporting plan, pursuant to 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 2019 Frozen Customer Count is 25,081 customers.

the Punkin Substation was energized restoring the remaining 4,023 customers. Permanent repairs to damaged insulators and arms on the 115kV line occurred on August 15<sup>th</sup>.

Figure 1 displays customer outages during the event as shown by their duration in reference to the restoration stages. Figure 2 shows the lighting strikes from August 9<sup>th</sup> at 5:00 p.m. through August 11<sup>th</sup> at 1:00 a.m.

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

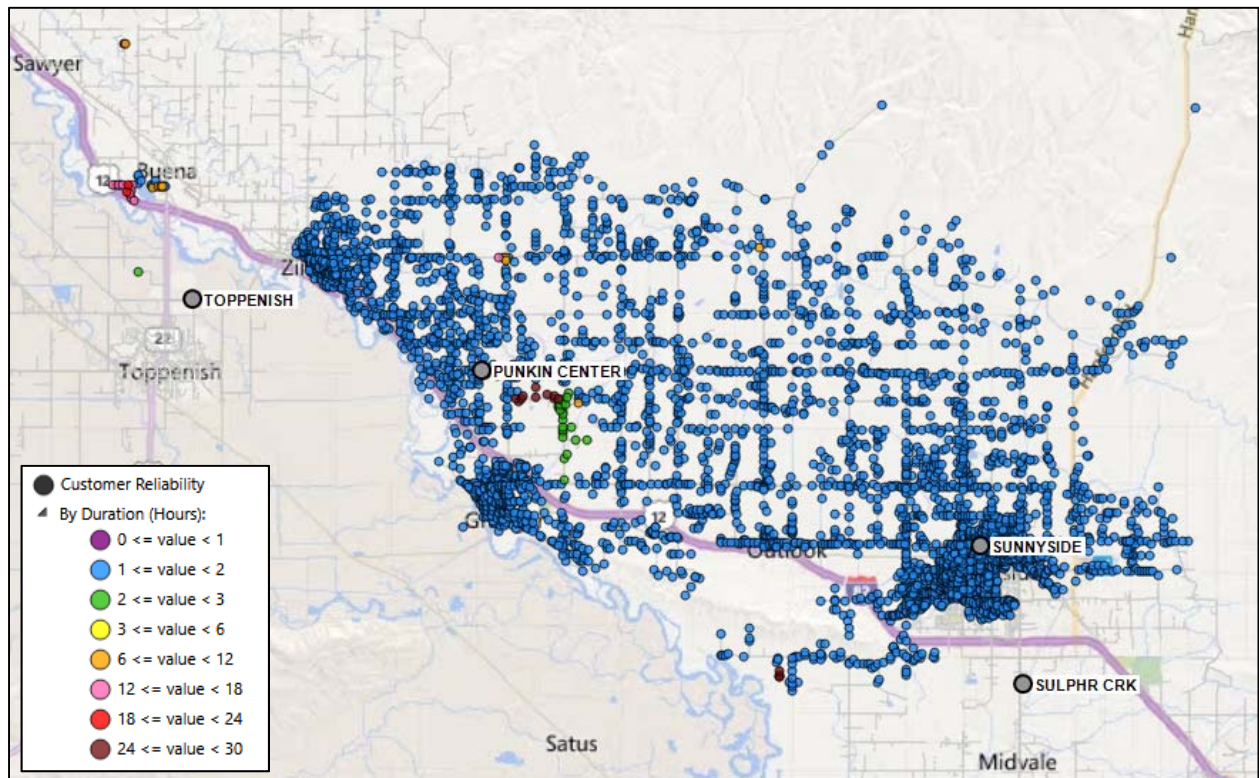
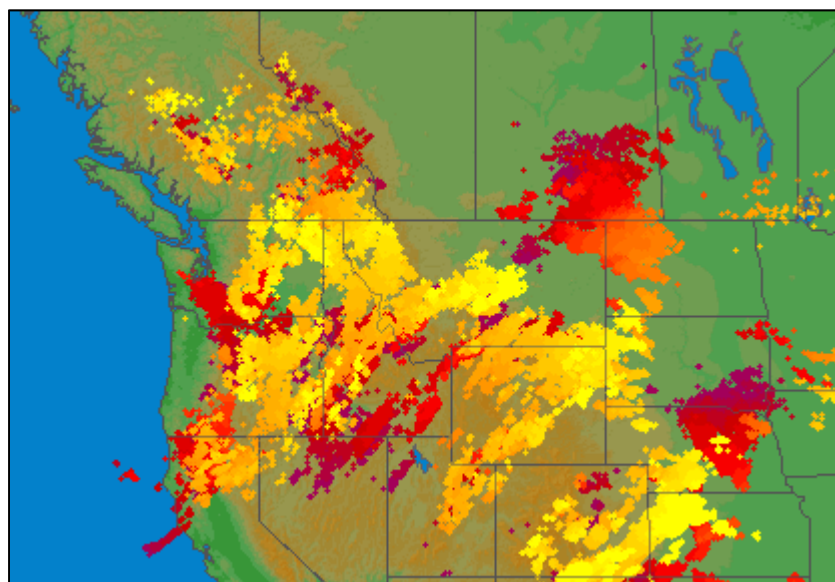


Figure 1: Outages experienced during the major event by duration.



**Figure 2** Recorded lightning strikes from August 9th at 5:00 p.m. through August 11th at 1:00 a.m.<sup>2</sup>

### Restoration Intervals

Total Customers Sustained	< 3 Hrs.	3 - 24 Hrs.	24-27 Hrs.
<b>10,435</b>	10,367	45	23

### Restoration Resources <sup>3</sup>

Personnel Resources	
Field Journeyman	17
Estimator	1
Support	1
Substation Journeymen	1
Total	3
<b>Total</b>	<b>23</b>

Equipment	
# Transformers	16
# Crossarms	5
Insulators	43
Cutouts	35
Line splices	67

### State Estimated Major Event Costs <sup>3</sup>

Estimate \$	Labor	Material	Overheads	Total
<b>Capital</b>	\$21,098	\$18,971	\$5,704	<b>\$45,773</b>
<b>Expense</b>	\$41,184	\$7,787	\$7,634	<b>\$56,605</b>
<b>Total</b>	<b>\$62,268</b>	<b>\$26,758</b>	<b>\$13,338</b>	<b>\$102,378</b>

### Major Event Declaration

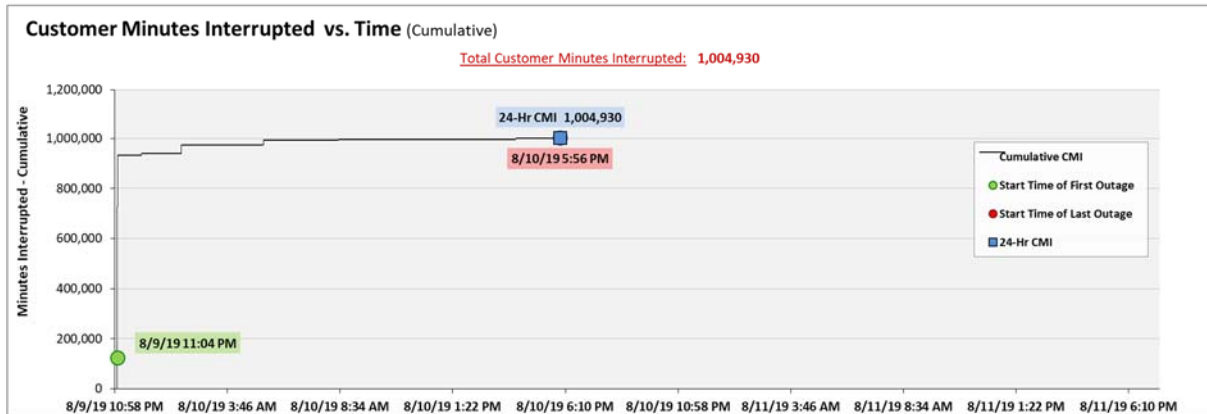
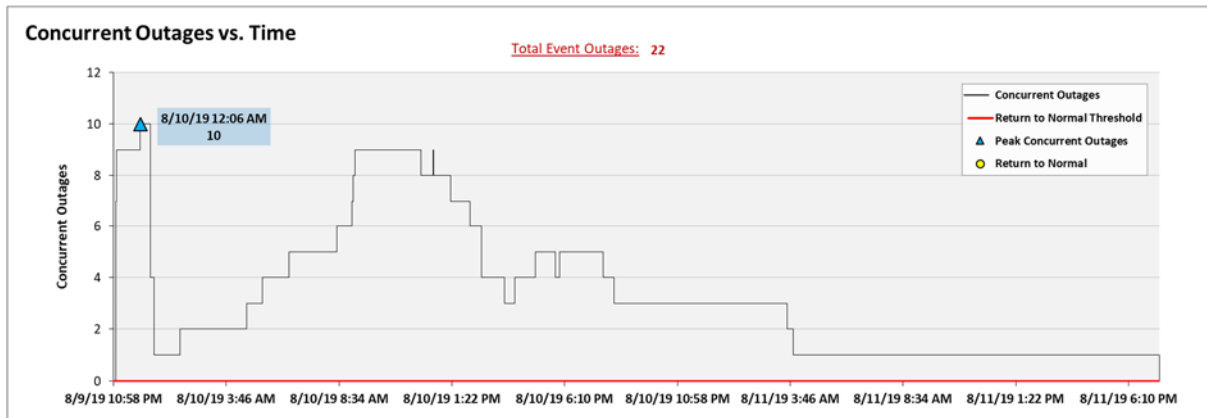
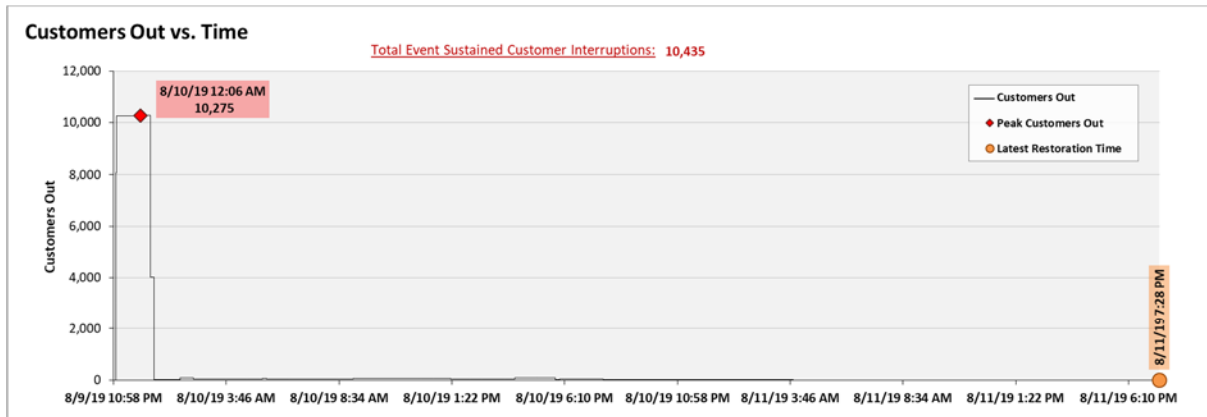
Pacific Power is requesting designation of this event and its consequences to be classified as a “Major Event” for exclusion from underlying network performance reporting. This major event exceeded the company’s current Washington system average interruption frequency index-

<sup>2</sup> [http://www.lightningmaps.org/blitzortung/america/index.php?bo\\_page=archive&lang=en](http://www.lightningmaps.org/blitzortung/america/index.php?bo_page=archive&lang=en)

<sup>3</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. The current values do not reflect the current procurement of a replacement transformer nor the future personnel work billed to the project when installed.

driven (SAIFI) threshold of 10% total operating area customers served sustained interruptions (10,275 customers were interrupted out of 25,081 Sunnyside operating area customers, or 41% 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.