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August 19, 2019

***VIA ELECTRONIC FILING***

Utah Public Service Commission  
Heber M. Wells Building, 4<sup>th</sup> Floor  
160 East 300 South  
Salt Lake City, UT 84114

Attention: Gary Widerburg  
Commission Secretary

RE: **Docket No. 19-035-32**  
Major Event Report for July 5-8, 2019

Rocky Mountain Power is requesting a major event exclusion for the weather-related events on July 5-8, 2019, which exceeded the Commission-approved threshold for customer minutes lost in a 24-hour period.

The attached provides details including costs incurred, restoration resources, number of customers off supply, customer minutes lost, and SAIDI, SAIFI, CAIDI figures.

Upon Commission approval, Rocky Mountain Power will exclude outage information for these events from its network performance reporting and from customer guarantee failure payments.

Informal inquiries may be made to Jana Saba at (801) 220-2823 or Heide Caswell, Director Asset Performance and Wildfire Mitigation, at (503) 813-6216.

Sincerely,

Joelle Steward  
Vice President, Regulation

Enclosures

**Report to the Utah Public Service Commission**  
**Electric Service Reliability - Major Event Report UT-19-2**

Event Dates: July 5-8, 2019

Date Submitted: August 19, 2019

Primary Affected Locations: Cedar City and Jordan Valley, Utah

Primary Cause: Loss of Substation/Car hit Pole

Exclude from Reporting Status: Yes

Report Prepared by: April Brewer

Report Approved by: Heide Caswell / Colby Fryer / Kevin Freestone / Christopher Spencer

**Event Description**

During the period between the evening of July 5<sup>th</sup> through the evening of July 8<sup>th</sup>, Utah experienced interruptions of sufficient magnitude to exceed major event threshold limits. Areas across the state began experiencing a series of outages that more commonly occur during late spring storm events, causing pole fires. These outages coincided with two large-impact outage events; all told they significantly impacted the company’s ability to quickly restore power.

On the morning of July 6<sup>th</sup>, the Parowan Valley Substation in Parowan, Utah, experienced an outage when a transformer bushing failed on the substation power transformer. The event affected feeds to four substations serving a total of six circuits providing power to 2,251 customers with outage durations ranging from 10 hours 54 minutes to 2 days 2 hours 38 minutes. Less than an hour after dispatch and field personnel had restored all the customers affected with the Parowan Valley Substation outage, 7,834 customers in the southeast area of the Salt Lake Valley lost power, when a car hit a pole. The incident blew the substation high-side fuses tripping out the customers served from the damaged line and de-energized two additional circuits fed from the Union Substation. Customers experienced outages ranging in duration from 1 hour 23 minutes to 11 hours 49 minutes. Details regarding these outages and the restoration actions taken are detailed in the next section.

<b>Event Outage Summary</b>	
<b># Interruptions (sustained)</b>	115
<b>Total Customer Interrupted (sustained)</b>	18,344
<b>Total Customer Minutes Lost</b>	8,314,354
<b>Event SAIDI</b>	8.79 Minutes
<b>CAIDI</b>	453
<b>Major Event Start</b>	7/5/19 6:39 PM
<b>Major Event End</b>	7/8/19 5:40 PM

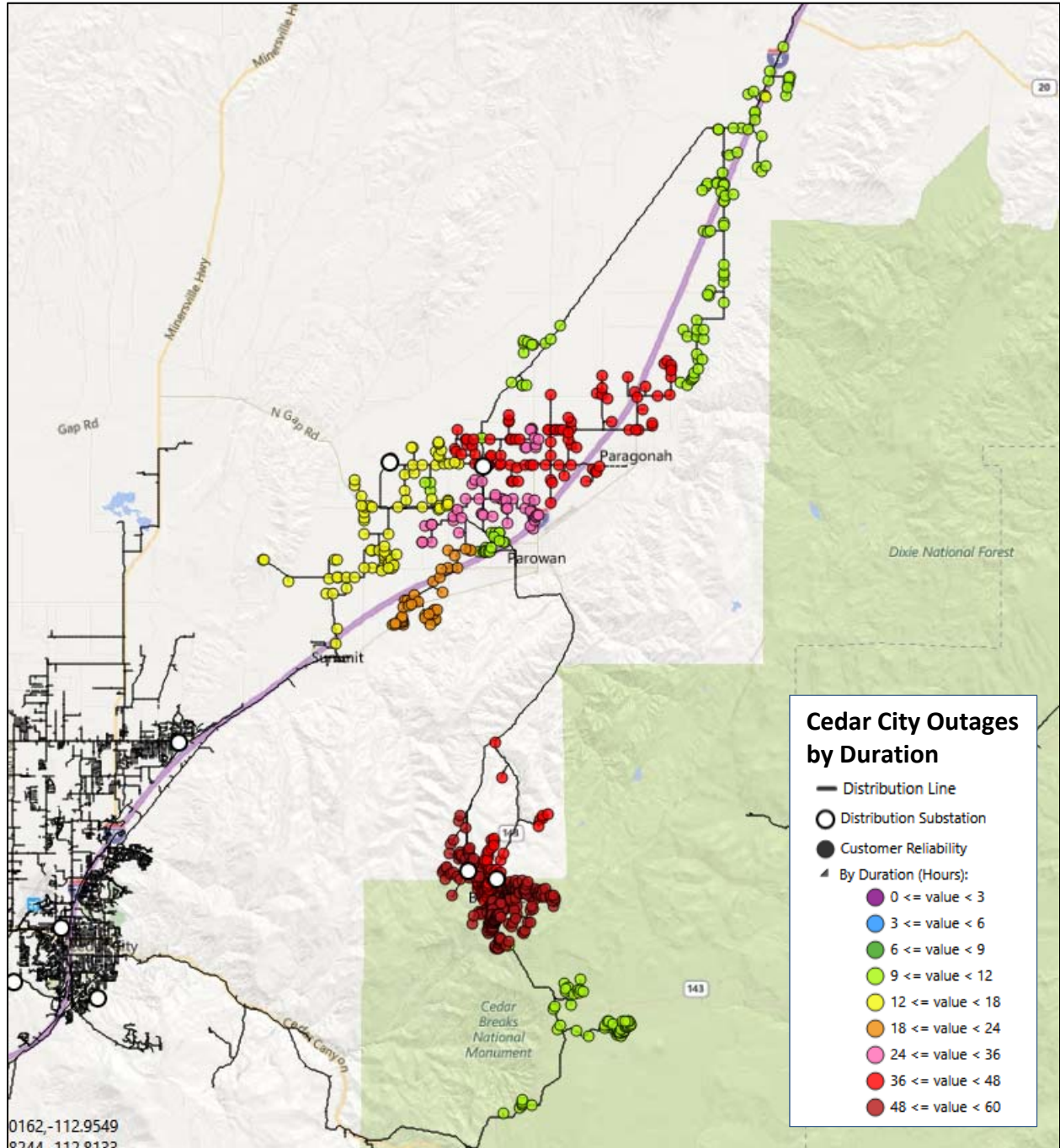
## **Parowan Valley, Loss of Substation**

At 2:20 a.m. on July 6<sup>th</sup>, the Parowan Valley Substation in Parowan, Utah, experienced an outage when a transformer bushing failed. The event affected feeds to four substations serving a total of six circuits providing power to 2,251 customers. The outage affected approximately 6% of the customers served in Cedar City area. Given the rural nature of the operating area there was little that could be done to provide temporary restoration from alternate sources. The situation was further complicated due to the operating voltage, which is 34.5 kV, resulting in contingency materials needed for step and permanent restorations being shipped from Wyoming, including a mobile substation transformer.

While crews in Wyoming were arranging to ship the mobile 230-34.5 kV transformer, local and regional crews were brought in to assist with switching; while the mobile transformer was being routed a mobile generator shipped from Las Vegas was temporarily placed to mitigate some of the impact of the loss of supply.

Within the first 12 hours of the event crews were able to move approximately 270 customers on to feeds from alternative sources, and just over 23 hours into the event crews received a mobile generator from outside the region enabling additional step restorations while awaiting the arrival and installation of the mobile transformer. Two days, two hours, and 38 minutes after the failure at the Parowan Valley Substation, all customers were restored. Figure 1 below shows the Cedar City area customers out of power by the total outage duration during the event. Some customers experienced multiple outages during the event.

Figure 1: Cedar City customers out by duration.



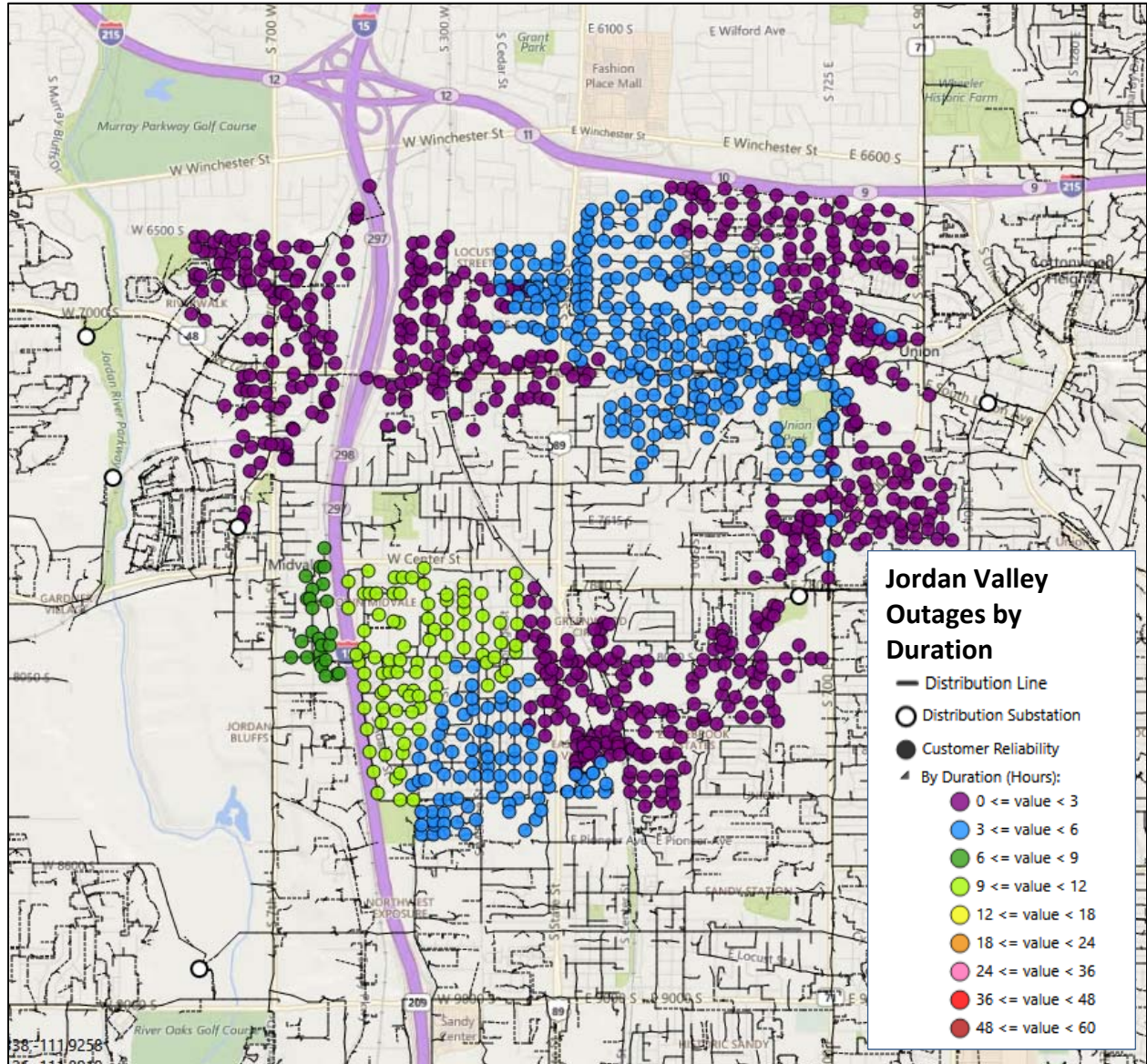
## **Car hit pole/Loss of Substation**

On the early morning of July 8<sup>th</sup>, 2019, just as personnel had wrapped up restoration activities in Cedar City, a car hit pole event occurred in the southeast area of the Salt Lake Valley. The car hit pole event caused a chain reaction of events to occur, where the downed wire from the car hit pole came in contact with a section of chain link fence, shrubs and pine trees. As the fault was attempting to clear the substation power fuses operated, de-energizing all circuits out of the substation. The outage affected 7,834 customers with durations ranging from 1 hour 23 minutes to 11 hours 49 minutes.

Crews were quickly dispatch to the location of the accident and the substation. The crew responding to the substation outage, began replacing the blown power fuses, energizing the first of the two de-energized circuits within 1 hour 23 minutes of the initial event. The second of the two de-energized circuit initially failed to close due to a failed circuit breaker control. The circuit breaker was bypassed and customers were restored within 2 hours 59 minutes. The combined energization of these two circuits restored power to 4,366 customers.

In addition to the crews at the substation, field personnel were responding to the scene of the accident. Crews began isolating the damaged area from the car hit pole before re-energizing the circuit at the substation. Once the isolation occurred crews energized the circuit restoring power to 1,379 customers in 2 hours 32 minutes. Crews then began replacing the car hit pole, conductor, and failed transformer, while cleaning up the oil spill from the damaged transformer. As repairs were made crews were able to continue step restorations, restoring 1,052 customers in 3 hours 59 minutes, 317 customers in 8 hours 26 minutes, and the final 730 customers in 11 hours 49 minutes. Figure 2 below shows the customers out of power by the total outage duration during the event

Figure 2: customers out by duration from March 28 - 31, 2019.



## Restoration Intervals

Total Customers Sustained	< 3 Hrs.	3 - 24 Hrs.	24 - 48 Hrs.	48-72 Hrs.
18,344	12,859	3,677	978	830

## Restoration Resources

Personnel Resources	
Support staff	4
Line crewman	13
Troubleman/Assessor	4
Administrative	1
Substation crewmembers	6
Support Staff	4
<b>TOTAL</b>	<b>28</b>

Materials	
# Poles (distribution)	2
Approximate Line Feet (conductor)	7,703
# Transformers	1
# Crossarms	1
Insulators	17
Cutouts	1
Line splices	18
Guy wire	2
Controller	1

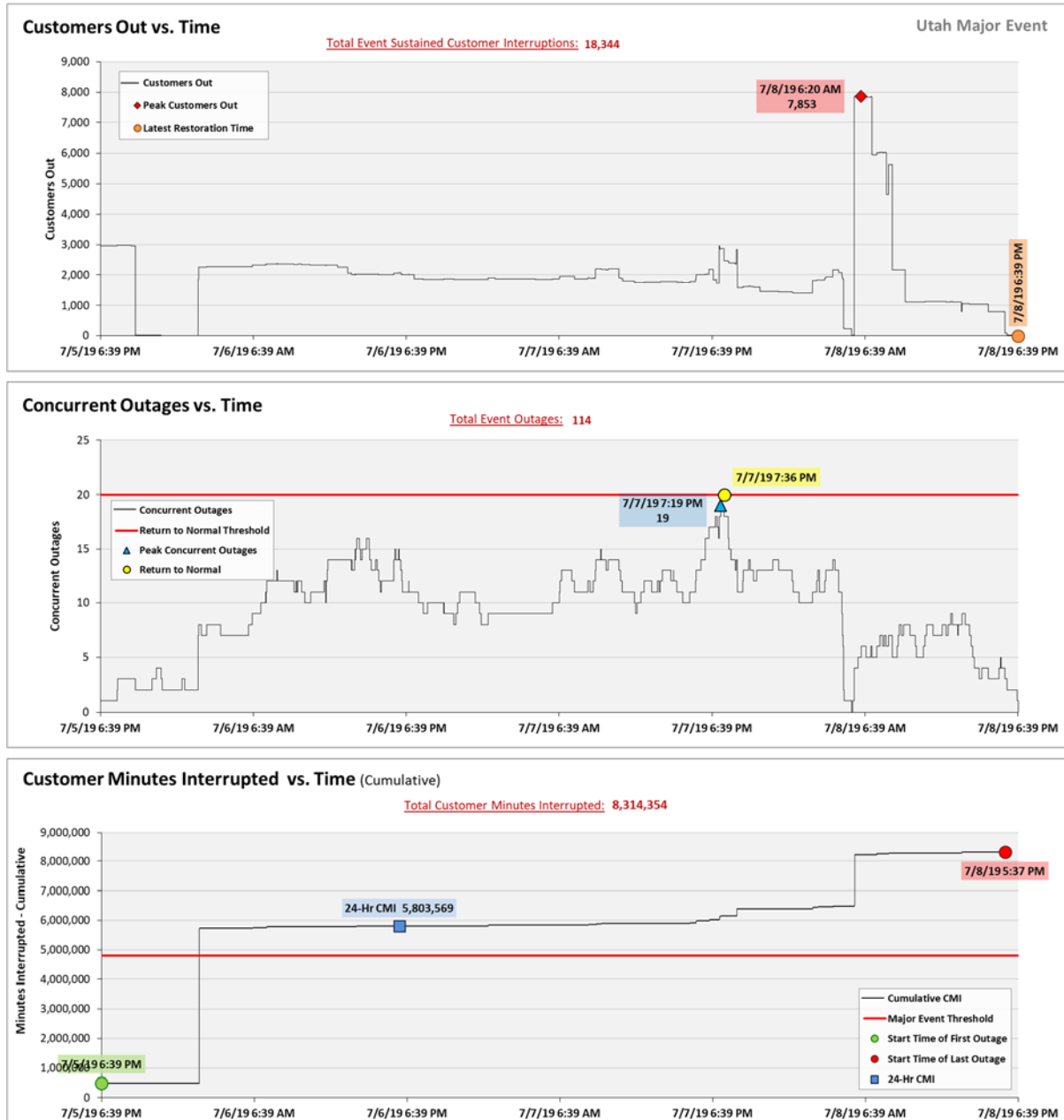
## State Estimated Major Event Costs

Estimate \$	Labor	Contracts	Materials	Overhead	Total
Capital	\$29,979	\$563	\$16,348	\$4,688	\$46,890
Expense	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$29,979</b>	<b>\$563</b>	<b>\$16,348</b>	<b>\$4,688</b>	<b>\$46,890</b>

## Major Event Declaration

Rocky Mountain Power is requesting designation of this storm and its consequences to be classified as a “Major Event” for exclusion from network performance reporting. This major event exceeded the Company’s current Utah threshold for customer minutes lost in a 24-hour period, consistent with Utah Administrative Code R746-313. The 2019 annual threshold for Utah is 4,809,295 minutes (i.e., 5.08 state SAIDI minutes).

## Event Detail



## SAIDI, SAIFI, CAIDI by Reliability Reporting Region

Please see the attached system-generated reports.



# PacifiCorp Major Event Report

## SSC by State Analysis

Oregon		Customer Analysis 7/5/2019 through 7/8/2019					Customers Restored by Intervals								Major Event Only - metric by operating area customer counts		
<b>PacifiCorp Major Events Report Customer Analysis*</b>		Sustained Customers Off	% Sustained Customers Off	CML	Number of Sustained Interruptions	Customer Count	< 5 min	5 min - 3 hrs	3 hrs - 24 hrs	24 hrs - 48 hrs	48 hrs - 72 hrs	72 hrs - 96 hrs	96 + hrs	% Sustained Customers Restored in 3 Hours PS4	SAIDI	SAIFI	CAIDI
PC	PACIFICORP	18,344	1%	8,314,354	115	1,976,599	15,365	12,859	3,677	978	830	-	-	70%	4.21	0.009	453
RMP	Rocky Mountain Power	18,344	2%	8,314,354	115	1,174,759	15,365	12,859	3,677	978	830	-	-	70%	7.08	0.016	453
UT	Utah	18,344	2%	8,314,354	115	946,168	15,365	12,859	3,677	978	830	-	-	70%	8.79	0.019	453
UT	AMERICAN FORK	131	0%	16,169	10	110,595	-	101	30	-	-	-	-	77%	0.15	0.001	123
UT	CEDAR CITY	3,349	10%	5,611,579	13	34,923	-	536	1,012	971	830	-	-	16%	160.68	0.096	1,676
UT	EVANSTON	16	2%	1,009	1	832	-	16	-	-	-	-	-	100%	1.21	0.019	63
UT	JORDAN VALLEY	9,335	4%	1,834,939	27	237,816	6,441	7,005	2,330	-	-	-	-	75%	7.72	0.039	197
UT	LAYTON	41	0%	18,436	4	74,441	-	2	39	-	-	-	-	5%	0.25	0.001	450
UT	MOAB	1	0%	120	1	8,986	-	1	-	-	-	-	-	100%	0.01	0.000	120
UT	MONTPELIER	10	0%	818	1	3,327	-	10	-	-	-	-	-	100%	0.25	0.003	82
UT	OGDEN	250	0%	22,607	10	111,197	-	246	4	-	-	-	-	98%	0.20	0.002	90
UT	PARK CITY	78	0%	58,661	6	33,748	3,235	2	69	7	-	-	-	3%	1.74	0.002	752
UT	PRICE	1	0%	8	2	10,623	1	1	-	-	-	-	-	100%	0.00	0.000	8
UT	RICHFIELD	1,566	10%	145,205	5	15,805	2	1,551	15	-	-	-	-	99%	9.19	0.099	93
UT	SLC METRO	3,561	2%	604,245	30	223,343	5,686	3,384	177	-	-	-	-	95%	2.71	0.016	170
UT	SMITHFIELD	2	0%	185	2	25,316	-	2	-	-	-	-	-	100%	0.01	0.000	92
UT	TREMONTON	1	0%	67	1	10,797	-	1	-	-	-	-	-	100%	0.01	0.000	67
UT	VERNAL	2	0%	307	2	13,057	-	1	1	-	-	-	-	50%	0.02	0.000	153

\*Only current event specific metric impact shown. Does not include values from other events which may have occurred in other regions during the same time period.

Customer Interrupted by Date 7/5/2019 through 7/8/2019		Customers Restored by Intervals								Major Event Only - metric by state customer counts						
Date*	Sustained Customers Off	% Sustained Customers Off	CML	Number of Sustained Interruptions	Average Customer Count	< 5 min	5 min - 3 hrs	3 hrs - 24 hrs	24 hrs - 48 hrs	48 hrs - 72 hrs	72 hrs - 96 hrs	96 + hrs	% Sustained Customers Restored in 3 Hours PS4	SAIDI	SAIFI	CAIDI
7/5/2019	2,973	0%	490,396	5	946,168	4,118	2,961	12	-	-	-	-	100%	0.52	0.003	165
7/6/2019	2,581	0%	5,317,753	43	946,168	2	201	572	978	830	-	-	8%	5.62	0.003	2,060
7/7/2019	2,816	0%	586,434	35	946,168	1,934	1,896	920	-	-	-	-	67%	0.62	0.003	208
7/8/2019	9,974	1%	1,919,771	32	946,168	9,311	7,801	2,173	-	-	-	-	78%	2.03	0.011	192

Data as of
8/13/2019

**PacifiCorp Major Event Report**  
SSC by State Analysis

	Oregon	Event 07/05/19 through 07/08/19						Month 07/01/19 through 07/31/19						YTD FY2019 01/01/19 through 07/31/19					
		Major Events Included			Major Event Excluded			Major Events Included			Major Events Excluded*			Major Events Included			Major Events Excluded*		
		SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI
	<b>PacifiCorp Major Events Report SSC by State</b>																		
PC	PACIFICORP	4.58	0.013	340	0.37	0.004	88	18.60	0.135	138	10.74	0.096	112	186.18	0.817	228	69.07	0.618	112
RMP	Rocky Mountain Power	7.49	0.021	356	0.42	0.005	77	19.81	0.112	177	11.29	0.094	120	102.09	0.716	143	70.95	0.637	111
UT	Utah	8.94	0.023	393	0.16	0.003	47	20.36	0.106	193	11.57	0.086	134	103.80	0.686	151	71.05	0.618	115
UT	AMERICAN FORK	0.0699	0.002697	26	0.053	0.003	21	1.14	0.010	109	1.12	0.010	109	4.71	0.052	91	4.61	0.050	92
UT	CEDAR CITY	5.9310	0.003541	1,675	0.0001	0.00000	109	6.08	0.005	1,311	0.15	0.001	133	10.09	0.042	241	4.16	0.038	108
UT	CEDAR CITY (MILFORD)	0.0063	0.000054	116	0.0063	0.00005	116	0.05	0.001	94	0.05	0.001	94	0.68	0.005	147	0.68	0.005	147
UT	EVANSTON	0.0011	0.000017	63				0.00	0.000	68	0.00	0.000	151	0.04	0.001	46	0.04	0.001	45
UT	JORDAN VALLEY	1.9661	0.010009	196	0.0267	0.00014	187	3.23	0.019	167	1.29	0.009	136	18.48	0.131	142	15.37	0.118	130
UT	LAYTON	0.0195	0.000043	450				0.80	0.012	67	0.79	0.012	66	4.34	0.051	84	4.22	0.051	83
UT	MOAB	0.0003	0.000002	122	0.0001	0.00000	124	0.03	0.000	83	0.03	0.000	83	0.48	0.004	116	0.48	0.004	115
UT	MONTPELIER	0.0009	0.000011	82				0.05	0.000	128	0.05	0.000	129	0.15	0.002	72	0.15	0.002	71
UT	OGDEN	0.0263	0.000279	94	0.0024	0.00001	165	3.15	0.013	234	3.12	0.013	237	13.27	0.090	147	12.55	0.084	149
UT	PARK CITY	0.1093	0.000454	241	0.0473	0.00037	127	0.46	0.002	220	0.40	0.002	198	2.98	0.022	137	2.90	0.022	134
UT	PRICE	0.0003	0.000002	146	0.0003	0.00000	284	0.04	0.001	41	0.04	0.001	41	0.79	0.013	61	0.79	0.013	61
UT	RICHFIELD	0.1683	0.001823	92	0.0148	0.00017	88	0.23	0.002	96	0.07	0.001	104	2.51	0.024	106	2.35	0.022	107
UT	RICHFIELD (DELTA)	0.0002	0.000001	225	0.0002	0.00000	225	0.09	0.001	96	0.09	0.001	96	0.37	0.002	157	0.36	0.002	157
UT	SLC METRO	0.6424	0.003790	169	0.0038	0.00003	142	4.41	0.034	131	3.77	0.030	126	39.12	0.179	218	16.59	0.137	121
UT	SMITHFIELD	0.0003	0.000003	83	0.0001	0.00000	64	0.08	0.001	108	0.08	0.001	108	1.13	0.026	43	1.13	0.026	43
UT	TOOELE	0.0008	0.000003	249	0.0008	0.00000	249	0.41	0.003	162	0.41	0.003	162	2.90	0.028	104	2.89	0.028	104
UT	TREMONTON	0.0001	0.000002	52	0.0000	0.00000	36	0.04	0.001	78	0.04	0.001	78	1.19	0.008	145	1.19	0.008	145
UT	VERNAL	0.0003	0.000002	153				0.07	0.001	115	0.07	0.001	115	0.57	0.006	93	0.57	0.006	93

\*may include other regional major event exclusions during the same period. Operating areas are calculated by the state frozen customer count metrics.

Data as/of
<b>8/13/2019</b>

**CERTIFICATE OF SERVICE**

Docket No. 19-035-32

I hereby certify that on August 19, 2019, a true and correct copy of the foregoing was served by electronic mail to the following:

**Utah Office of Consumer Services**

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**Rocky Mountain Power**

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Katie Savarin  
Coordinator, Regulatory Operations