

April 8, 2022

#### 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 Administration

**RE: Docket No. 22-035-12** 

Major Event Report for March 5-7, 2022

Rocky Mountain Power submits a request for a major event exclusion for the snowstorm in the Salt Lake City metro and Jordan Valley areas of Utah on March 5-7, 2022, 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 Alex Vaz, Director of Asset Management, at (801) 220-2112.

Sincerely,

Joelle Steward

Senior Vice President, Regulation

**Enclosures** 



# Report to the Utah Public Utility Commission Electric Service Reliability Major Event Report for March 5-7, 2022

Event Date: March 5-7, 2022

Date Submitted: April 5, 2022

Primary Affected Locations: SLC Metro and Jordan Valley, Utah

Primary Cause: Snowstorm

Exclude from Reporting Status: Yes

Report Prepared by: Kyle Williamson

Report Approved by:

Allen Berreth and Alex Vaz

### **Event Description and Restoration Summary**

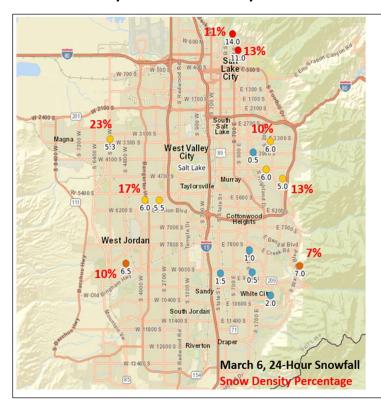
From March 5<sup>th</sup>, 2022, into March 7<sup>th</sup>, 2022, Utah experienced a high-density snow fall winter storm at the rate of two to three inches per hour. Typical water content in snow is around 8-10% and the event water content of the snow was observed, in areas, up to 23%. Significant high-density snow accumulated on vegetation, snapping branches, causing service interruptions, with the most severe impacts experienced in the Salt Lake City Metro and Jordan Valley operating districts in Utah.

The storm heavily impacted powerline areas located within backlots and mountain benches. Most of the restoration efforts were related to removing trees from lines or splicing wire back together that was split, and then restoring power. This included step restoration efforts while restoring customers from the substation all the way to the fused tap lines. Multiple line and vegetation crewman responded to the event to remove limbs from overhead lines, replace damage poles, and re-attach broken power lines. Damages were seen in wires, poles, crossarms, and insulators on both primary and secondary lines. Crews from outside the local area were needed to assist in the highest impacted areas. Internal and contracted crews from Idaho, Wyoming, and Southern Utah were mobilized to assist with power restoration. Restoration efforts faced challenges due to snow accumulation and blizzard conditions; in addition, access was difficult in certain areas because of heavy snow and mud.



Approximately 40,944 sustained customers were affected with outage durations ranging from eight minutes to 61 hours nine minutes. Customer outages peaked March 6, 2022, with 14,802 customers out of service. During the event approximately 82% of customer minutes lost and 78% of all customer outages were the result of damages from weather effects to equipment and downed trees, while approximately 10% of customer minutes lost and 7% of customer outages were the result of loss of transmission lines and substations.

### Snowfall Density in the Salt Lake City Metro Area



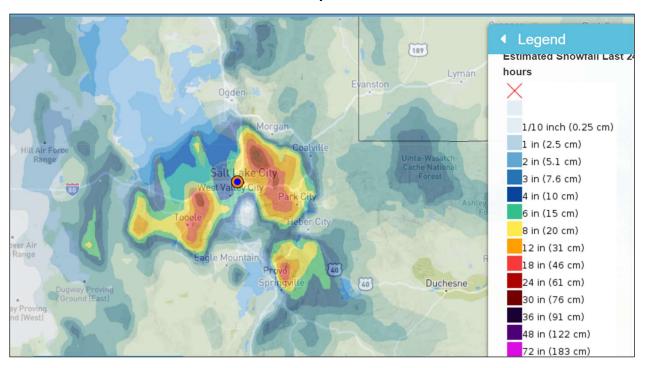
- The map on the left gives snowfall totals and a snow density percentage for each observation for the March 5-6 heavy, wet snow event in the SLC metro area.
- Snowfall Density rule of thumb:
  - High Snow Density: 11% or higher
  - Average Snow Density: 8-10%
  - Low Snow Density: 8% or lower

#### Overall

- Highest snowfall density was observed in the Upper Avenues and West Valley City areas.
- High snowfall rates were also observed in most locations of ~2 inches/hour.



# Estimated 24-hour Snowfall in the Salt Lake City Metro Area



# **Outage Summary**

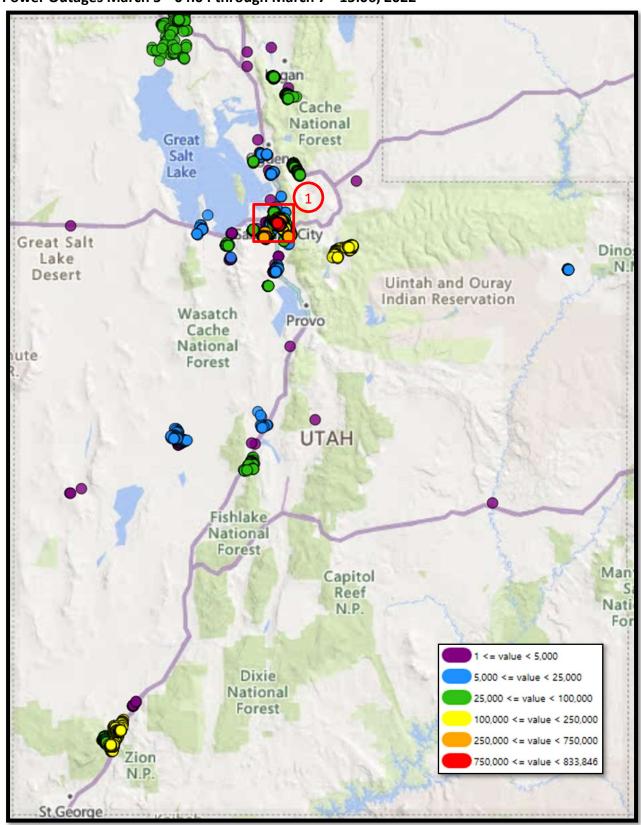
Event Outage Summary								
Number Interruptions (sustained events)	390							
Total Customers Interrupted (sustained events)	40,944							
Total Customer Minutes Lost	10,361,707							
State Event SAIDI Impact	8.39							
CAIDI	253							
Major Event Start	03/05/2022 4:04 AM							
Major Event End	03/07/2022 3:36 PM							

### **Restoration Intervals**

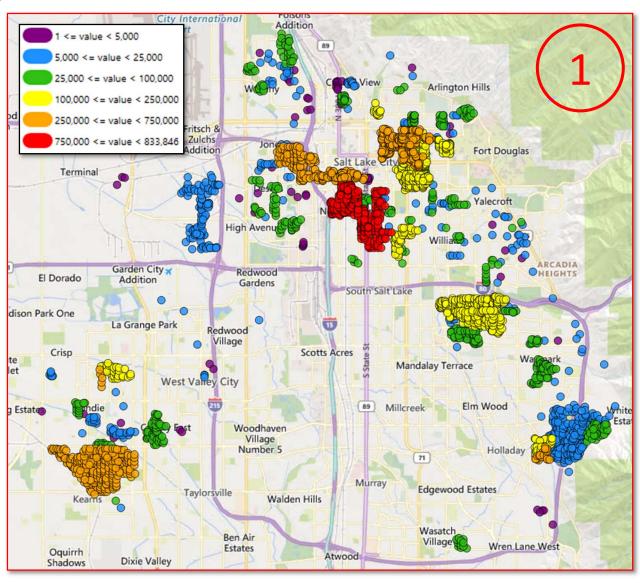
Total Customer Sustained Outage Events	< 3 Hrs.	3 – 24 Hrs.	24+ Hrs.
40,944	21,908	18,683	349



Power Outages March 5<sup>th</sup> 04:04 through March 7<sup>th</sup> 15:06, 2022









## **Restoration Resources**

Personnel	
Internal Local Crewmembers	118
Internal borrowed crewmembers	34
External (Contract) Crewmembers	85
Troubleman	19
Substation Crewmembers	5
Support Staff	5
Tree Crewman	79
Foreman	4
Transportation	3
Warehouseman	2
Total	354

Materials	
# Poles (Distribution)	3
# Poles (Transmission)	2
Approximate Line Conductor (Feet)	8,250
# Transformers	5
# Crossarms	26
Insulators	112
Cutouts	28
Line fuses	175
Line splices	466
Guy Wire	750
Arresters	38

# **Estimated Major Event Costs**

Estimate	Labor	Contracts	Materials	Overheads	Total
Capital	\$65,392	\$51,697	\$13,570	\$3,114	\$133,773
Expense	\$580,448	\$433,523	\$16,389	\$28,156	\$1,058,515
Total	\$645,840	\$485,220	\$29,959	\$31,270	\$1,192,289

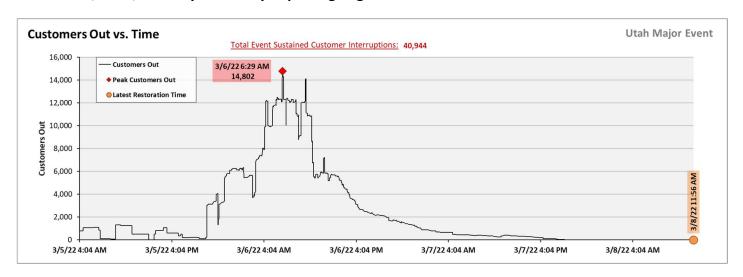


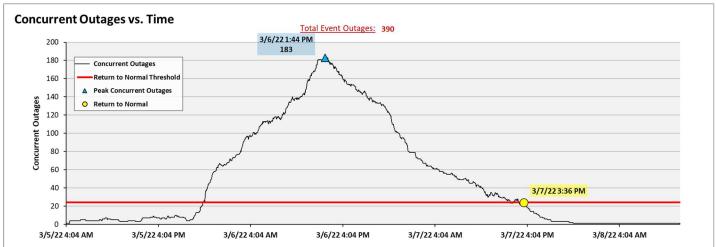
# **Major Event Declaration**

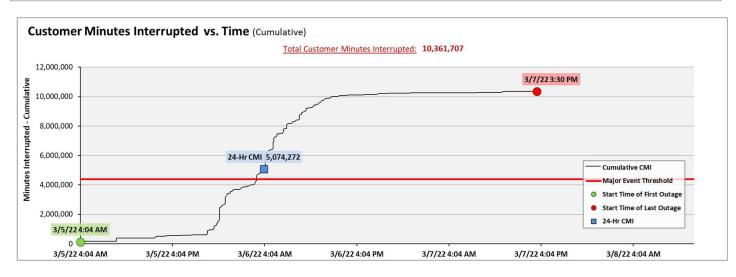
Rocky Mountain Power is requesting designation of these events and its consequences to be classified as a "Major Event" for exclusion from network performance reporting. This major event exceeded the Company's current Utah threshold for customer minutes lost in a 24-hour period, consistent with Utah Administrative Code R746-313. The 2022 annual threshold for Utah is 4,418,888 customer minutes lost (4.41 State SAIDI minutes).



## SAIDI, SAIFI, CAIDI by Reliability Reporting Region









# **PacifiCorp Major Event Report - Customer Analysis**

	Utah	Utah Customer Analysis 3/5/2022 through 3/7/2022							Customers Restored by Intervals								
	PacifiCorp Major Events Report Customer Analysis*	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	40,944	2%	10,361,707	390	2,048,818	22,812	21,908	18,683	349	4		F	54%	5.06	0.020	253
RMP	Rocky Mountain Power	40,944	3%	10,361,707	390	1,234,878	22,812	21,908	18,683	349	4	-		54%	8.39	0.033	253
UT	Utah	40,944	4%	10,361,707	390	1,002,258	22,812	21,908	18,683	349	4	-		54%	10.34	0.020	253
UT	AMERICAN FORK	96	0%	30,950	4	120,574	-	2	94	-	-	-	-	2%	0.26	0.001	322
UT	CEDAR CITY	1,243	3%	221,182	4	36,829	-	760	483	-	-	-	-	61%	6.01	0.034	178
UT	JORDAN VALLEY	8,218	3%	1,406,272	48	247,019	2,296	6,266	1,890	62	-		-	76%	5.69	0.033	171
UT	LAYTON	327	0%	74,543	11	76,120	-	79	248	-	-	-	-	24%	0.98	0.004	228
UT	MOAB	2	0%	415	1	9,225	-	-	2	-	-	-	-	0%	0.04	0.000	207
UT	OGDEN	490	0%	137,498	6	113,954	-	111	379	-	-	-	-	23%	1.21	0.004	281
UT	PARK CITY	761	2%	124,794	2	34,919	-	755	6	-	-	-	-	99%	3.57	0.022	164
UT	RICHFIELD	543	3%	75,828	5	16,063	-	483	60	-	-	-	-	89%	4.72	0.034	140
UT	RICHFIELD (DELTA)	112	3%	27,953	4	3,924	-	41	71	-	-	-	-	37%	7.12	0.029	250
UT	SLC METRO	27,750	12%	7,989,086	278	228,261	20,370	12,783	14,676	287	4	-	-	46%	35.00	0.122	288
UT	SMITHFIELD	649	2%	112,674	6	26,253	-	485	164	-	-	-	-	75%	4.29	0.025	174
UT	TOOELE	328	1%	77,516	15	26,010	146	46	282	-	-	-	-	14%	2.98	0.013	236
UT	TREMONTON	330	3%	68,942	5	11,262	-	2	328	-	-	-	-	1%	6.12	0.029	209
UT	VERNAL	95	1%	14,055	1	12,946	-	95	-	-	-	-	-	100%	1.09	0.007	148

<sup>\*</sup>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.

Data as of	
4/1/2022	



# PacifiCorp Major Event Report – SSC by State Analysis

	Utah	Event		03/05/22	through	03/07/22		Month		03/01/22	through	03/31/22		YTD	FY2023	01/01/22	through	03/31/22		
	Utan	Major Events Included Ma				Major Event Excluded			Major Events Included			Major Events Excluded*			Major Events Included			Major Events Excluded*		
	PacifiCorp Major Events Report SSC by State	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI	SAIDI	SAIFI	CAIDI	
PC	PacifiCorp	3.49	0.016	220	0.22	0.002	111	16.16	0.093	174	6.03	0.051	118	36.83	0.242	152	16.28	0.153	106	
RMP	Rocky Mountain Power	5.68	0.026	221	0.26	0.003	98	15.16	0.095	159	6.77	0.062	118	24.56	0.187	132	16.17	0.154	105	
UT	Utah	6.92	0.031	221	0.23	0.003	81	16.95	0.106	160	6.61	0.065	118	27.25	0.205	133	16.91	0.164	103	
UT	AMERICAN FORK	0.03	0.000	322	-	-	-	0.38	0.004	86	0.35	0.004	81	1.13	0.009	118	1.09	0.009	116	
UT	CEDAR CITY	0.00	0.000	29	-	-	-	0.80	0.007	122	0.58	0.005	109	1.09	0.008	137	0.87	0.007	129	
UT	CEDAR CITY (MILFORD)	-	•		-	•		0.08	0.000	190	0.08	0.000	190	0.09	0.000	186	0.09	0.000	186	
UT	EVANSTON	-		-	-	-	-	-	-	-		-	-	0.02	0.000	258	0.02	0.000	258	
UT	JORDAN VALLEY	0.98	0.005	200 187	0.00	0.000	212	0.20	0.020	118 199	0.97	0.012	82 185	4.79 0.50	0.047	102 142	3.39 0.43	0.039	87 134	
UT	LAYTON MOAB	0.05	0.000	207	0.00	0.000	213	0.00	0.001	97	0.12	0.001	85	0.50	0.004	99	0.43	0.000	98	
UT	MONTPELIER	0.00	0.000	207				0.00	0.000	110	0.00	0.000	110	0.01	0.000	108	0.01	0.000	108	
UT	OGDEN	0.33	0.003	104	0.22	0.003	79	1.21	0.006	194	1.07	0.006	186	3.53	0.000	156	3.39	0.000	154	
UT	PARK CITY	0.55	0.003	104	0.22	0.003	- 75	0.38	0.003	129	0.25	0.002	117	0.63	0.023	156	0.50	0.022	154	
UT	PRICE		_	-	_	_	_	0.02	0.000	141	0.02	0.002	141	0.22	0.002	99	0.22	0.003	99	
UT	RICHFIELD	0.00	0.000	99				0.66	0.006	103	0.59	0.006	99	1.38	0.010	139	1.30	0.002	139	
UT	RICHFIELD (DELTA)	0.03	0.000	250				0.12	0.001	85	0.09	0.001	70	0.12	0.001	88	0.10	0.001	74	
UT	SLC METRO	5.38	0.022	242	0.01	0.000	145	9.38	0.044	213	1.41	0.016	87	11.49	0.068	170	3.52	0.040	88	
UT	SMITHFIELD	0.06	0.000	392				0.12	0.001	168	0.01	0.000	110	0.21	0.001	184	0.10	0.000	198	
UT	TOOELE	0.06	0.000	198	0.00	0.000	289	0.34	0.002	142	0.26	0.002	126	0.89	0.012	73	0.81	0.012	68	
UT	TREMONTON	0.00	0.000	138				0.46	0.006	75	0.39	0.006	67	0.69	0.012	56	0.62	0.012	52	
UT	VERNAL		-	-	-	-	-	0.42	0.003	155	0.40	0.003	156	0.43	0.003	157	0.42	0.003	157	

<sup>\*</sup>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	
4/1/2022	

## **CERTIFICATE OF SERVICE**

Docket No. 22-035-12

I hereby certify that on April 8, 2022, 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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