ROCKY MOUNTAIN POWER
A DIVISION OF PACIFICORP

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October 1, 2021

VIA ELECTRONIC FILING

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

Attention: Gary Widerburg
Commission Administrator

RE: **Docket No. 21-035-28** – Rocky Mountain Power's Service Quality Review Report

In compliance with the Commission's June 11, 2009 order in Docket No. 08-035-55 and December 20, 2016 order in Docket Nos. 13-035-01 and 15-035-72, and pursuant to the requirements of Rule R746-313, PacifiCorp d.b.a. Rocky Mountain Power ("RMP" or "Company") submits the Service Quality Review Report for the period January through June, 2021.

The Company respectfully requests that all formal correspondence and requests for additional information regarding this filing be addressed to the following:

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Portland, OR 97232

Informal inquiries may be directed to Jana Saba at (801) 220-2823.

Sincerely,

Joelle Steward
Vice President, Regulation

Enclosures

ROCKY MOUNTAIN POWER
A DIVISION OF PACIFICORP

UTAH

SERVICE QUALITY REVIEW

January 1 – June 30, 2021
Report

Table of Contents

Table of Contents 2
Executive Summary 3
1 Reliability Performance 4
1.1 System Average Interruption Duration Index (SAIDI) 4
1.2 System Average Interruption Frequency Index (SAIFI) 5
1.3 Major and Significant Event Days 6
1.4 Restore Service to 80% of Customers within 3 Hours 7
1.5 CAIDI Performance 7
2 Reliability History 8
2.1 Utah Reliability Historical Performance 8
2.2 Controllable, Non-Controllable and Underlying Performance Review 9
2.3 Baseline Performance 11
2.4 Reliability Reporting Post-Rule R.746-313 Modifications 12
3 Improve Reliability Performance in Areas of Concern 14
3.1 Reliability Work Plans 14
3.2 Project approvals by district 14
4 Customer Response 16
4.1 Telephone Service and Response to Commission Complaints 16
4.2 Utah Commitment U1 16
4.3 Utah State Customer Guarantee Summary Status 18
5 Maintenance Compliance to Annual Plan 19
5.1 T&D Preventive and Corrective Maintenance Programs 19
5.2 Maintenance Spending - RMV 20
5.2.1 Maintenance Historical Spending - RMV 20
5.3 Distribution Priority “A” Conditions Correction History 21
6 Capital Investment 22
6.1 Capital Spending - Distribution and General Plant 22
6.2 Capital Spending – Transmission/Interconnections 23
6.3 New Connects 24
7 Vegetation Management 25
7.1 Production 25
7.2 Budget 26
7.2.1 Vegetation Historical Spending 26
8 Standard Guarantees/Program Summary 27
8.1 Service Standards Program Summary 27
8.1.1 Rocky Mountain Power Customer Guarantees 27
8.1.2 Rocky Mountain Power Performance Standards 28
8.1.3 Utah Distribution Service Area Map with Operating Areas/Districts 29
8.2 Cause Code Analysis 30
8.3 Reliability Definitions 31

UTAH January 1 – June 30, 2021

Executive Summary

Rocky Mountain Power developed its Customer Service Standards and Service Quality Measures nearly 20 years ago. The standards were developed as a way to demonstrate to customers that the company is serious about serving them well and willing to back its commitments with cash payments in cases where the company falls short. The standards also helps remind employees about the importance of good customer service. The Company developed these standards by benchmarking its performance against relevant industry reliability and customer service standards. In some cases, Rocky Mountain Power has expanded upon these standards. In other cases, largely where the industry has no established standard, Rocky Mountain Power developed its own metrics, targets and reporting methods.

Rocky Mountain Power is on target to deliver favorable network performance as measured by System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI). The Company extended its year-on-year improvement achieved by completion of reliability projects and efforts that have been put in place. In Docket No. 20-035-22, the Division of Public Utilities (DPU) reviewed Rocky Mountain Power's 2019 service quality and recommended the Public Service Commission of Utah (Commission) establish a work group to review RMP's reliability baseline standards related to SAIDI and SAIFI and make recommendations. The Commission accepted this recommendation and directed RMP and DPU to convene a work group, open to interested parties, to examine RMP's reliability baseline standards and to make recommendations. In accordance with the Commission directive, the parties convened a workgroup that met to discuss new baseline performance standards, which are reflected in this report.

However, even with these results, Rocky Mountain Power recognizes the continued impact of any outage to its customers. There have currently been no major events experienced during the reporting period for Utah customers. While major events often represent extreme events, Rocky Mountain Power recognizes the significant negative impacts to our customers, communities and other important stakeholders.

Our goal continues to be supplying safe, reliable power to Utah. We are dedicated to learning from our past service experiences and continuing to make improvements to our operations and customer service to ensure we meet Utah's needs.

Below is a summary of our mid-year 2021 performance serving the customers of Utah.

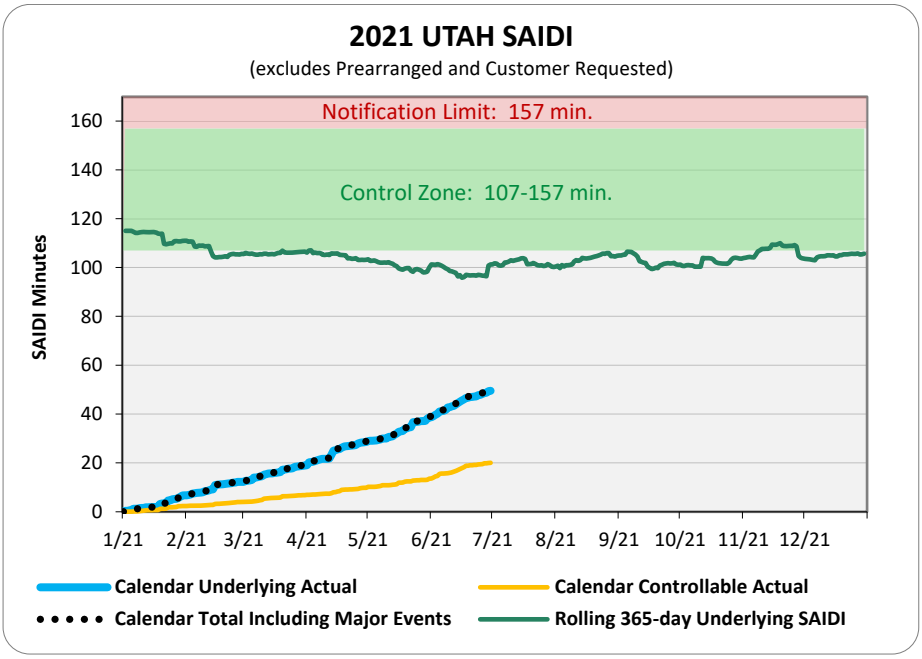
1 Reliability Performance

For the reporting period, the Company's performance is on target to meet the Commissions baseline performance ranges for System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI). For SAIDI the baseline range is 107-157 minutes, with a notification limit set at 157 minutes. For SAIFI the baseline range is 0.9-1.2 events, with a notification limit of 1.2 events. Graphics in sections 1.1 and 1.2 provide an overview of the biannual underlying and controllable results as they corelate to the control zones and notification limits. In addition, section 1.3 provides details regarding major event and significant event customers experienced. Finally, sections 1.4 and 1.5 shows company outage response performance.

1.1 System Average Interruption Duration Index (SAIDI)

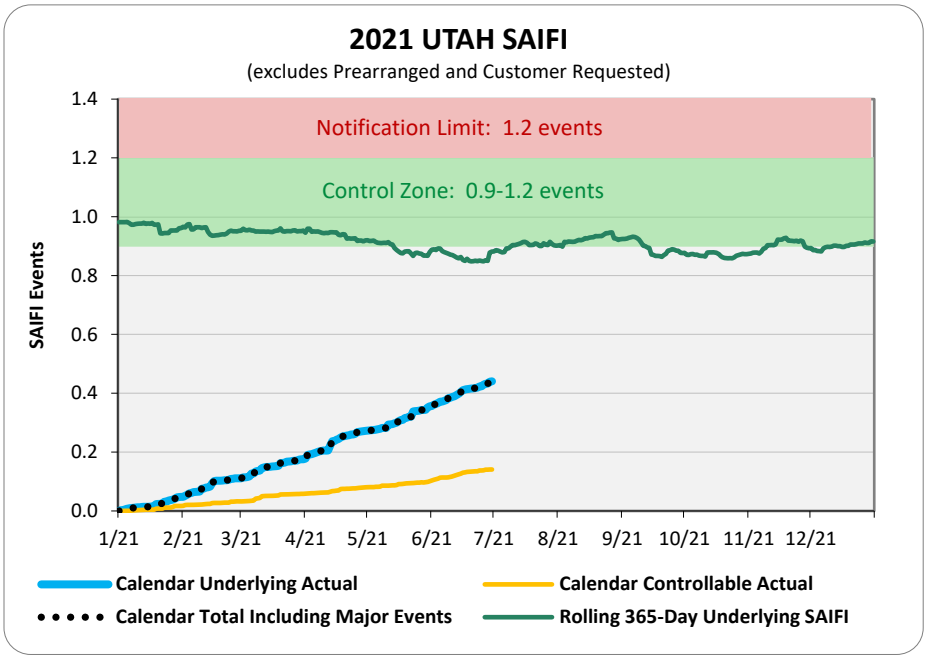
Over time the Company has made system changes to minimize how many customers are affected for any given outage. This approach has resulted in improvements to both outage duration and outage frequency, and has yielded improved performance as delivered to customers, as generally shown in the graphic below and in 1.2. The total value includes underlying and major events.

SAIDI	Reporting Period
Total	50
Underlying	50
Controllable Distribution	20



1.2 System Average Interruption Frequency Index (SAIFI)

SAIFI	Reporting Period
Total	0.441
Underlying	0.441
Controllable Distribution	0.141



1.3 Major and Significant Event Days

For the current reporting period, there were no major events[1] and three significant event days[2] during the reporting period. New to the report this year, Rocky Mountain Power has included regional major events to show events that are statistical outliers that may not show up on a state level. These events are still included in the underlying metrics and are found in section 1.1. Finally, sections 1.4 and 1.5 shows company outage response performance.

Major Event Descriptions

No major events occurred during the reporting period.

Significant Events

Significant event days add substantially to year-on-year cumulative performance results; fewer significant event days generally result in better reliability for the reporting period, while more significant event days generally mean poorer reliability results. During the period, three significant event days were recorded, which account for 5.4 SAIDI minutes, or about 11% of the reporting period's underlying 50 SAIDI minutes. These significant events were triggered by weather and loss of supply outages.

Significant Event Days					
Dates	**Cause: General Description**	**Underlying SAIDI**	**Underlying SAIFI**	**% of Total Underlying SAIDI (50)**	**% of Total Underlying SAIFI (0.441)**
February 15, 2021	Loss of Substation due to Raccoon interference	1.7	0.012	3.4%	2.7%
April 14, 2021	Pole Fires	1.7	0.014	3.4%	3.2%
May 23, 2021	Wind and pole fires	2.0	0.018	4.0%	4.1%
	TOTAL	**5.4**	**0.044**	**10.8%**	**10.0%**

Regional Major Events

Beginning in 2020, Rocky Mountain Power began categorizing regions where outages in a diverse operating area can be identified as statistical outliers, which would otherwise be hidden by the statistical weighting of some districts. This is in accordance with IEEE Standard 1366-2012 which notes, "[the purpose of major event classification] is to allow major events to be studied separately from daily operation, and in the process, to better reveal trends in daily operation that would be hidden by the large statistical effect of major events." Any regional major events listed below are still included in the underlying metrics and are stated in this report for informational purposes. During the reporting period no regional major events were experienced.

[1] A Major Event (ME) is defined as a 24-hour period where SAIDI exceeds a statistically derived threshold value (Reliability Standard IEEE 1366-2012) based on the 2.5 beta methodology. The values used for the reporting period are shown below:

Effective Date	Customer Count	ME Threshold SAIDI	ME Customer Minutes Lost
1/1-12/31/2021	981,102	4.54	4,456,512

[2] Significant event days are 1.75 times the standard deviation of the company's natural log daily SAIDI results (by state or appropriate reliability reporting region).

1.4 Restore Service to 80% of Customers within 3 Hours

RESTORATIONS WITHIN 3 HOURS					
Reporting Period Cumulative = 87%					
January	February	March	April	May	June
81%	94%	86%	92%	84%	81%

1.5 CAIDI Performance

The table below shows the average time, during the reporting period, for outage restoration. This augments previous reporting for the percent of customers whose power was restored within 3 hours of notification of an outage event and uses IEEE industry indices.

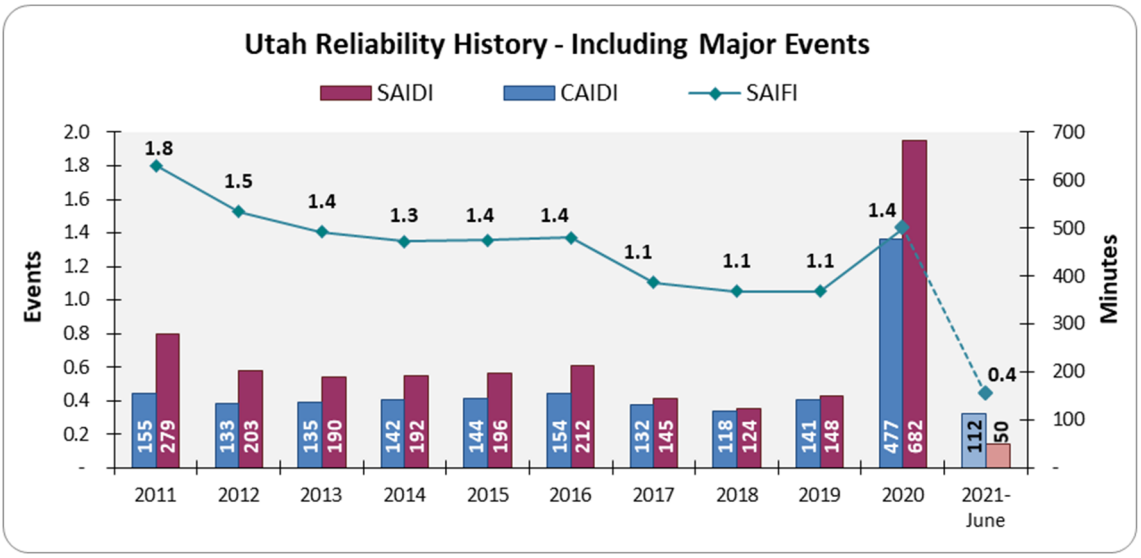
CAIDI (Average Outage Duration)	
Underlying Performance	112 minutes
Total Performance	112 minutes

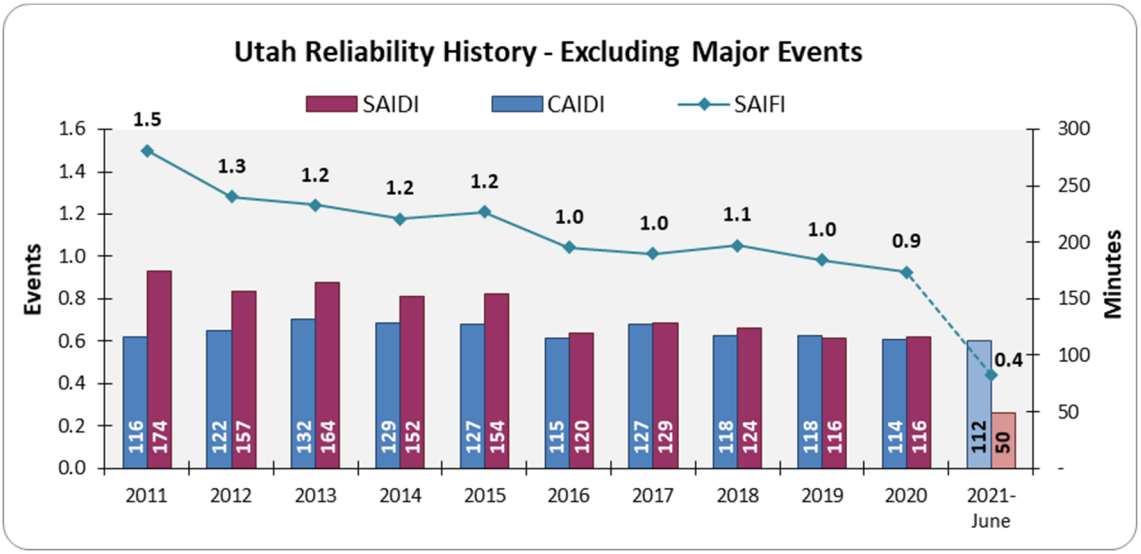
2 Reliability History

Historically the Company has improved reliability as measured by SAIDI and SAIFI reliability indices; at the same time outage response performance (CAIDI) has varied from year to year with no specific trend apparent. The SAIDI and SAIFI trends are further evidenced in Sections 2.2 and 2.3, where 365-day rolling performance trends are depicted. These indices demonstrate the efficacy of the long-term improvement strategies targeted toward reducing the frequency of interruptions that the company under-took after the implementation of its automated outage management system. As previously discussed, this report reflects the updated baselines, which are detailed further in Section 2.3.

It is particularly noteworthy that these two metrics show durable improvement for both underlying and major event performance within the state, meaning that the system is more resilient on a day-to-day basis as well as when extreme weather or other system impacting events occur.

2.1 Utah Reliability Historical Performance

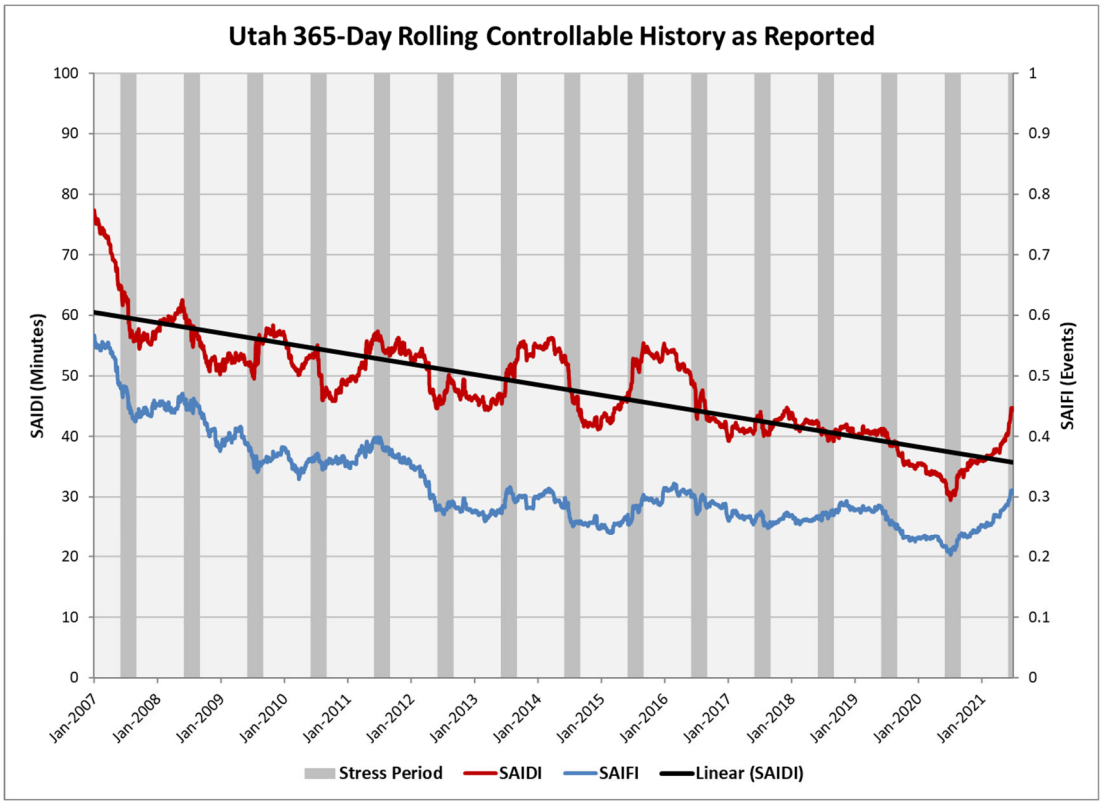


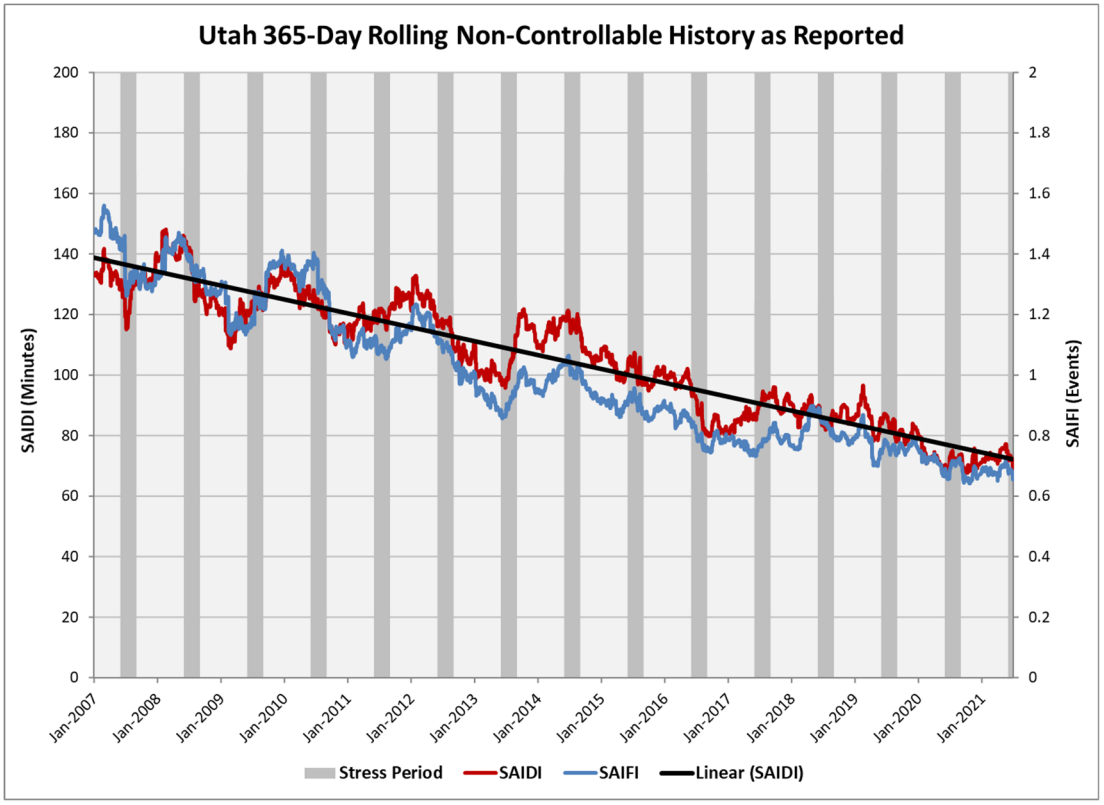


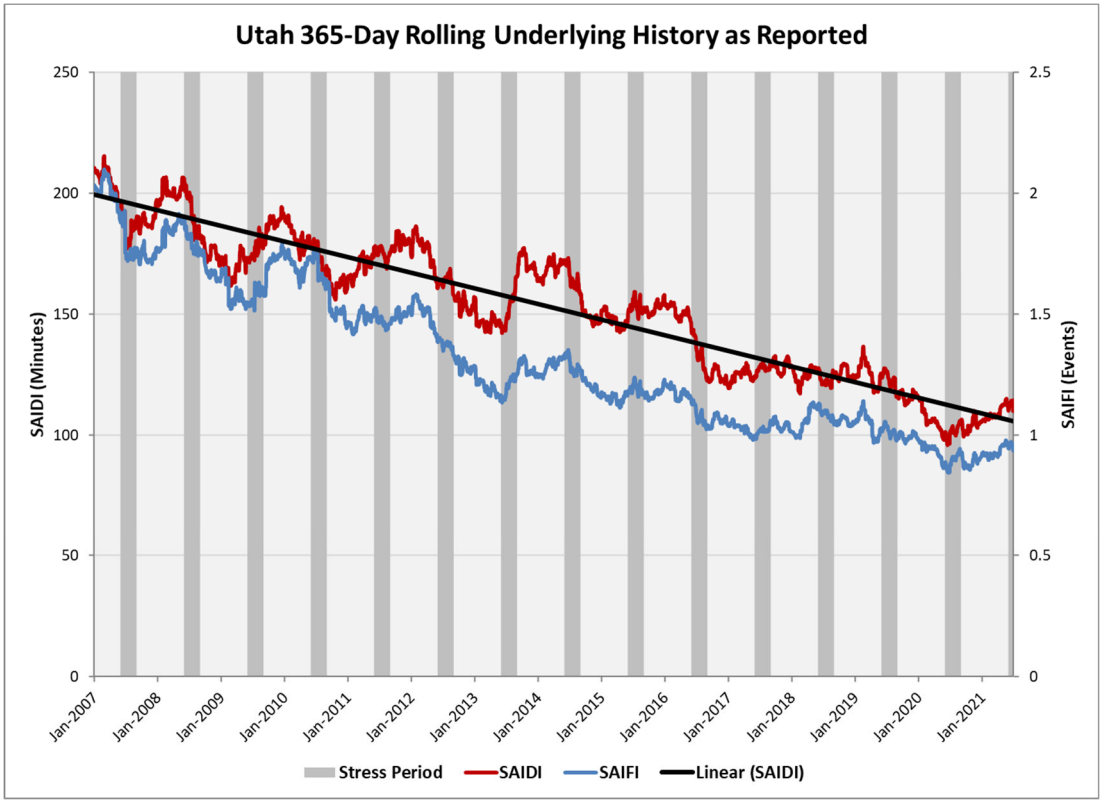
2.2 Controllable, Non-Controllable and Underlying Performance Review

In 2008, the Company introduced a further categorization of outage causes, which it subsequently used to develop improvement programs as developed by engineering resources. This categorization was titled Controllable Distribution Outages and recognized that certain types of outages can be cost-effectively avoided. As an example, animal-caused or equipment failure interruptions have a less random nature than lightning caused interruptions; other causes have also been determined and are specified in Section 2.4. Engineers can develop plans to mitigate against controllable distribution outages and provide better future reliability at the lowest possible cost. At that time, there was concern that the Company would lose focus on non-controllable outages. In order to provide insight into the response and history for those outages, the charts below distinguish amongst the outage groupings.

The graphic history demonstrates controllable, non-controllable, and underlying performance on a rolling 365-day basis. Analysis of the trends displayed in the charts below shows a general improving trend for all charts. In order to also focus on non-controllable outages, the Company has continued to improve its resilience to extreme weather using such programs as its visual assurance program to evaluate facility condition. It also has undertaken efforts to establish impacts of loss of supply events on its customers and deliver appropriate improvements when identified. It uses its web-based notification tool for alerting field engineering and operational resources when devices have exceeded performance thresholds in order to react as quickly as possible to trends in declining reliability. These notifications are conducted regardless of whether the outage cause was controllable or not.



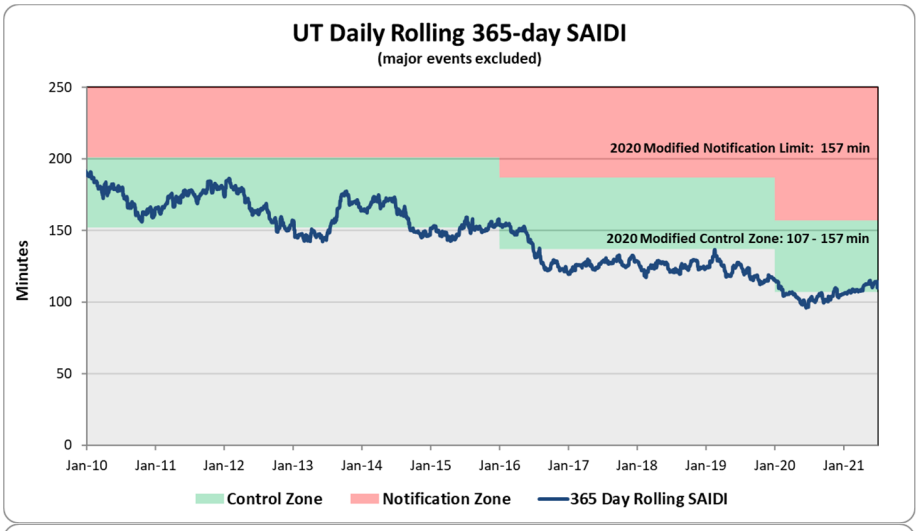

Utah 365-Day Rolling Non-Controllable History as Reported
SAIDI (Minutes)
SAIFI (Events)
0
20
40
60
80
100
120
140
160
180
200
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
Jan-2021
Stress Period
SAIDI
SAIFI
Linear (SAIDI)

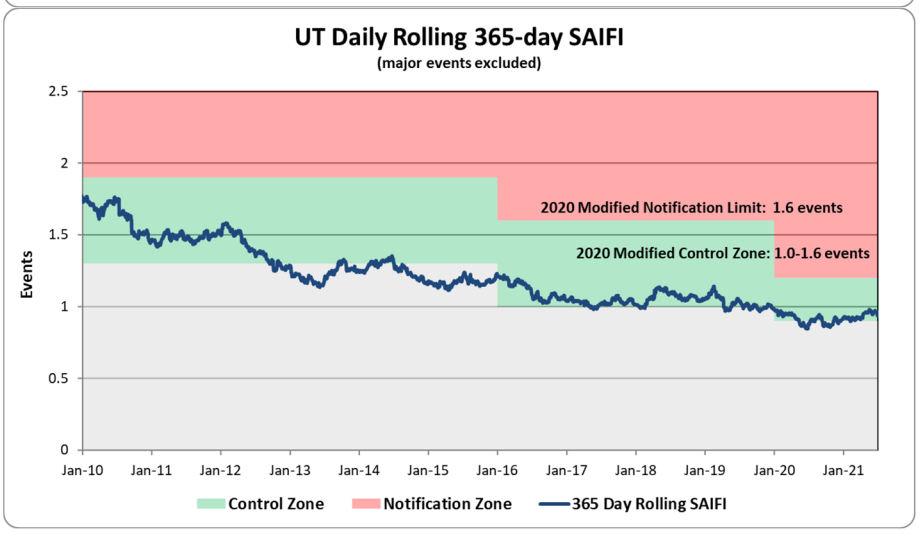

Utah 365-Day Rolling Underlying History as Reported
SAIDI (Minutes)
SAIFI (Events)
0
50
100
150
200
250
0
0.5
1
1.5
2
2.5
Jan-2007
Jan-2008
Jan-2009
Jan-2010
Jan-2011
Jan-2012
Jan-2013
Jan-2014
Jan-2015
Jan-2016
Jan-2017
Jan-2018
Jan-2019
Jan-2020
Jan-2021
Stress Period
SAIDI
SAIFI
Linear (SAIDI)

2.3 Baseline Performance

In compliance with Utah Reliability Reporting Rules, the Company developed performance baselines that it subsequently filed for approval (based on 2008-2012 history). The baseline values were calculated using the 12-month moving average data for SAIDI and SAIFI over a 5-year period as the mean, plus or minus approximately two standard deviations. These baselines were approved, but stakeholders advocated that periodically refreshing baseline levels would be beneficial. As a result, on December 20, 2016, the Public Service Commission of Utah approved modified electric service reliability performance baseline notification levels (Docket No. 13-035-01 and 15-035-72). On June 23, 2020, the Commission directed the Company to work with parties to review the baselines. The original and modified baselines are shown below.

	SAIDI (Minutes)		SAIFI (Events)	
	Lower Value Control Zone	Upper Value Control Zone	Lower Value Control Zone	Upper Value Control Zone
Prior Baseline	151	201	1.3	1.9
2016 Modified Baseline	137	187	1.0	1.6
2020 Modified Baseline	107	157	0.9	1.2





2.4 Reliability Reporting Post-Rule R.746-313 Modifications

In 2012, the Company and stakeholders developed reliability reporting rules that are codified in Utah Administrative Code R746.313. Certain reliability reporting details were outlined in these rules that had not been previously required in the Company's Service Quality Review Report. Certain elements may be at least partially redundant or segmented differently than has been provided in the past.

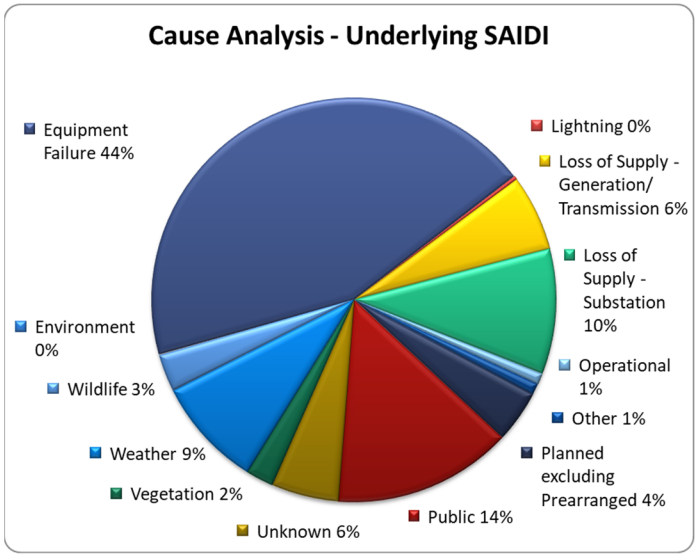
The final rule required five-year history at an operating area level for SAIDI, SAIFI and CAIDI. At a state level, these metrics in addition to $MAIFI_e$[3] are required.

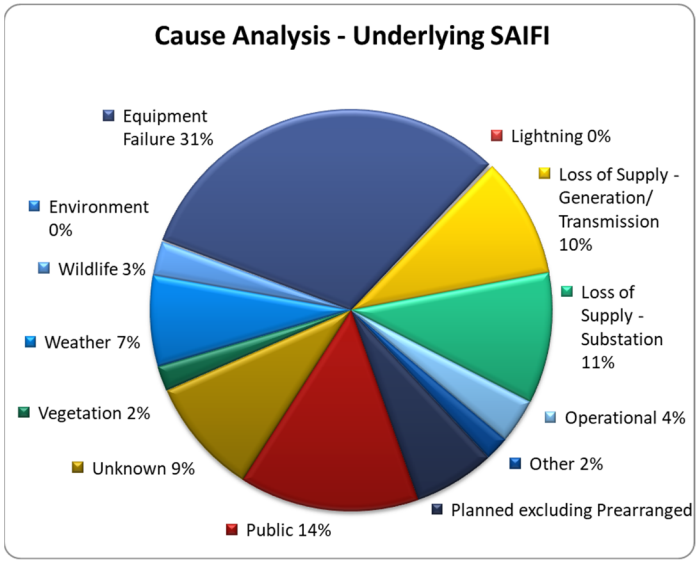
Major Events and Prearranged Excluded*	2016				2017				2018				2019				2020				2021-June			
STATE	**SAIDI**	**SAIFI**	**CAIDI**	**MAIFIe**	**SAIDI**	**SAIFI**	**CAIDI**	**MAIFIe**	**SAIDI**	**SAIFI**	**CAIDI**	**MAIFIe**	**SAIDI**	**SAIFI**	**CAIDI**	**MAIFIe**	**SAIDI**	**SAIFI**	**CAIDI**	**MAIFIe**	**SAIDI**	**SAIFI**	**CAIDI**	**MAIFIe**
Utah	120	1.0	115	1.76	129	1.0	127	1.11	124	1.1	118	2.17	116	1.0	118	2.64	106	0.9	114	3.46	50	0.4	112	0.72
OP AREA																								
AMERICAN FORK	92	1.0	93		77	0.8	102		85	0.8	109		59	0.6	100		65	0.7	91		24	0.2	128	
CEDAR CITY	174	1.5	116		183	1.7	109		157	1.2	136		160	1.4	114		149	1.3	111		65	0.7	93	
CEDAR CITY (MILFORD)	650	4.9	132		565	2.5	230		226	1.4	164		563	3.2	177		296	1.9	154		122	1.3	93	
EVANSTON	16	0.1	199		49	0.2	219		23	0.2	96		9	0.1	76		12	0.1	192		53	0.5	107	
JORDAN VALLEY	100	0.8	131		109	0.8	139		137	1.1	121		100	0.8	118		99	0.8	121		49	0.4	118	
LAYTON	90	0.9	103		115	0.8	149		90	0.9	101		83	0.9	90		71	0.8	93		40	0.4	103	
MOAB	278	3.0	93		190	2.4	80		111	1.1	103		171	2.0	87		239	1.9	123		44	0.3	150	
MONTPELIER	43	0.5	93		452	0.7	624		34	0.4	94		13	0.2	75		33	0.2	142		125	1.6	76	
OGDEN	120	1.0	120		119	0.9	138		116	1.0	114		153	1.1	139		116	0.9	128		60	0.5	123	
PARK CITY	183	1.6	117		227	1.4	159		165	1.2	143		187	1.1	171		251	1.9	132		43	0.3	163	
PRICE	340	3.3	104		171	2.5	69		203	2.3	90		101	1.9	53		140	1.3	109		42	0.8	50	
RICHFIELD	132	1.3	101		187	2.0	95		173	1.4	125		222	2.2	103		135	1.5	92		83	0.6	151	
RICHFIELD (DELTA)	215	2.1	103		139	1.3	105		171	1.0	163		100	0.7	136		203	1.0	197		87	0.9	102	
SLC METRO	104	0.9	113		114	1.0	111		120	1.0	118		113	0.9	125		95	0.9	108		52	0.5	109	
SMITHFIELD	117	1.0	118		139	0.9	149		96	1.0	99		127	1.5	83		88	0.9	100		25	0.4	64	
TOOELE	161	1.1	151		140	1.4	100		196	1.5	135		146	1.3	110		137	1.0	137		94	0.7	131	
TREMONTON	399	3.1	129		200	2.0	99		151	1.1	137		259	1.6	167		178	1.3	140		62	0.5	117	
VERNAL	53	0.6	84		77	0.8	96		48	0.6	82		58	0.6	98		68	0.7	94		25	0.2	122	

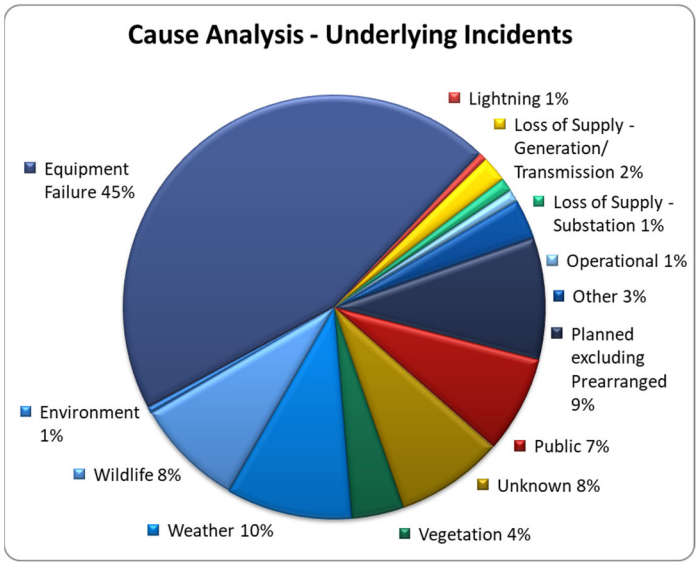
* except MAIFIe

Utah Cause Category	2016		2017		2018		2019		2020		June 2021	
	SAIDI	**SAIFI**	**SAIDI**	**SAIFI**	**SAIDI**	**SAIFI**	**SAIDI**	**SAIFI**	**SAIDI**	**SAIFI**	**SAIDI**	**SAIFI**
Environment	1	0.0	1	0.0	1	0.0	0	0.0	1	0.0	0	0.0
Equipment Failure	45	0.2	44	0.2	48	0.3	40	0.2	39	0.2	22	0.1
Lightning	3	0.0	3	0.0	3	0.0	3	0.0	1	0.0	0	0.0
Loss of Supply - Generation/Transmission	13	0.2	13	0.1	13	0.2	9	0.1	15	0.2	3	0.0
Loss of Supply - Substation	13	0.1	11	0.1	9	0.1	11	0.1	6	0.1	5	0.0
Operational	1	0.0	1	0.0	0	0.0	0	0.0	1	0.0	0	0.0
Other	0	0.0	0	0.0	0	0.0	1	0.0	1	0.0	0	0.0
Planned (excl. Prearranged)	11	0.2	8	0.1	10	0.1	9	0.1	6	0.1	2	0.0
Public	14	0.1	15	0.1	15	0.1	16	0.1	16	0.1	7	0.1
Unknown	7	0.1	6	0.1	6	0.1	5	0.1	5	0.1	3	0.0
Vegetation	5	0.0	6	0.0	5	0.0	7	0.0	7	0.0	1	0.0
Weather	5	0.0	16	0.1	9	0.1	11	0.1	7	0.1	4	0.0
Wildlife	2	0.0	3	0.0	3	0.0	2	0.0	3	0.0	1	0.0
UTAH Underlying	**120**	**1.0**	**129**	**1.0**	**124**	**1.1**	**116**	**1.0**	**106**	**0.9**	**50**	**0.4**

[3] MAIFIe events are measured using the circuit customer count for those circuits where a trip and reclose occurred during the reporting period, and do not include customer counts for circuits where no event was recorded.


Cause Analysis - Underlying SAIDI
Equipment Failure 44%
Lightning 0%
Loss of Supply - Generation/ Transmission 6%
Loss of Supply - Substation 10%
Operational 1%
Other 1%
Planned excluding Prearranged 4%
Public 14%
Unknown 6%
Vegetation 2%
Weather 9%
Wildlife 3%
Environment 0%


Cause Analysis - Underlying SAIFI
Equipment Failure 31%
Lightning 0%
Loss of Supply - Generation/ Transmission 10%
Loss of Supply - Substation 11%
Operational 4%
Other 2%
Planned excluding Prearranged
Public 14%
Unknown 9%
Vegetation 2%
Weather 7%
Wildlife 3%
Environment 0%


Cause Analysis - Underlying Incidents
Lightning 1%
Loss of Supply - Generation/ Transmission 2%
Loss of Supply - Substation 1%
Operational 1%
Other 3%
Planned excluding Prearranged 9%
Public 7%
Unknown 8%
Vegetation 4%
Weather 10%
Wildlife 8%
Environment 1%
Equipment Failure 45%

3 Improve Reliability Performance in Areas of Concern

Over the past decade the Company has developed approaches, including tools, automated and manual processes and methods to improve reliability. As it has done so, the Company's ability to diagnose portions of the system requiring improvement has improved, which yields its legacy "Worst Performing Circuit" program obsolete. As a result it devised a more contemporary approach to identifying improvement plans, determining the value of those plans and monitoring to ensure that results delivered meet or exceed expected targets. This program was named Open Reliability Reporting (ORR).

The ORR process shifts the Company's reliability program from a circuit-based view reliant on blended reliability metrics (using circuit SAIDI, SAIFI and MAIFI) to a more strategic and targeted approach based upon recent trends in performance of the local area, as measured by customer minutes interrupted (from which SAIDI is derived). The decision to fund one performance improvement project versus another is based on cost effectiveness as measured by the cost per avoided annual customer minute interrupted. However, the cost effectiveness measure will not limit funding of improvement projects in areas of low customer density where cost effectiveness per customer may not be as high as projects in more densely populated areas.

3.1 Reliability Work Plans

The Company has worked to improve reliability through Reliability Work Plans. To assist in identification of problem areas, Area Improvement Teams (AIT) meetings and Frequent Interrupters Requiring Evaluation (FIRE) reports have been established. On a daily basis the Company systems alert operations and engineering team members regarding outages experienced at interrupting devices (circuit breakers, line reclosers and fuses). When repetition occurs, it is an indicator that system improvements may be needed. On a routine basis, local operations and engineering team members review the performance of the network using geospatial and tabular tools to look for opportunities to improve reliability. As system improvement projects are identified, cost estimates of reliability improvement and costs to deliver that improvement are prepared. If the project's cost effectiveness metrics are favorable, i.e. low cost and high avoidance of future customer minutes interrupted, the project is approved for funding and the forecast customer minutes interrupted are recorded for subsequent comparison. This process allows individual districts to take ownership and identify the greatest impact to their customers. Rather than focusing on a large area at high costs, districts can focus on problem areas or devices.

3.2 Project approvals by district

The identification of projects is an ongoing process throughout the year. An approval team reviews projects periodically and, once approved, design and construction begins. Upon completion of the construction, the project is identified for follow up review of effectiveness. One year after completion, routine assessments of performance are prepared. This comparison is summarized for all projects for each year's plans, and actual versus forecast results are assessed to determine whether targets were met or if additional work may be required. The table below is provided to demonstrate the measures the Company believes represents cost/effectiveness measures that are important in determining the success of the projects that have been completed.

2018-2021 District Projects*									
Approval Metrics			Effectiveness Metrics						In Progress
District	Project count	Budgeted Cost/CML	Plans Meeting Goals (>1 year since project completion)	Estimated Avoided annual CML	Actual Avoided annual CML	Budgeted Cost per annual avoided CML	Actual Cost per annual avoided CML	Plans Not Meeting Goals (not included in metrics)	Plans waiting for information
American Fork	14	$1.43	4	102,529	181,348	$2.12	$0.74	0	10
Cedar City	1	$3.39							1
Jordan Valley	31	$1.74	11	842,463	2,637,739	$1.46	$0.39	1	19
Layton	2	$0.81							2
Moab	1	$6.77							1
Montpelier	1	$0.53							1
Ogden	17	$1.23	12	1,128,510	3,555,729	$1.15	$0.26	0	5
Park City	13	$0.53	5	243,486	471,506	$0.45	$0.35	0	8
Price	2	$7.20	1	156,189	446,255	$7.04	$2.34	0	1
Richfield	2	$169.59							2
SLC Metro	26	$2.52	8	472,841	1,748,987	$2.59	$0.31	0	18
Smithfield	2	$0.88	1	138,377	395,363	$0.23	$0.12	0	1
Tooele	7	$2.24	2	150,797	432,141	$7.32	$1.21	0	5
Tremonton	1	-							1
Total	126	$2.08	44	3,235,192	9,869,068	$1.95	$0.45	1	81

*Metrics cover RWP's approved between 7/1/2018 and 6/30/2021

4 Customer Response

4.1 Telephone Service and Response to Commission Complaints

COMMITMENT	GOAL	PERFORMANCE
PS5-Answer calls within 30 seconds	80%	86%
PS6a) Respond to commission complaints within 3 days	95%	100%
PS6b) Respond to commission complaints regarding service disconnects within 4 hours	95%	100%
PS6c) Address commission[4] complaints within 30 days	100%	100%

4.2 Utah Commitment U1

To identify when a 'wide-scale' outage has occurred, the company examines call data for customers who have selected either the power emergency or power outage option within the company's call menu. However, in order to report on performance during a 'wide-scale' outage, the company must use network information, which provides information for all call types, not just outage calls. Therefore, using the menu level data the company has identified the time intervals that exceed the agreed upon standard 2,000 calls/hour, and reports the network level statistics for the same intervals.

For the reporting period, there were three days identified as a wide-scale outage days; call statistics are shown in the table below. On January 4th Jordan Valley experienced an outage due to contractor interference in addition to several tree and weather-related outage in Southern Oregon. On January 27th regions of Southern Oregon and Northern California experienced a loss of substation outage which affected approximately 67,000 customers. On February 26th Oregon experienced a loss of transmission line and a tree related outage which affected approximately 13,500 customers

Date	Interval start/finish (MT Time)		Network Total Calls*	Calls received but not delivered**	# of Calls Abandoned from Agent Queue	Max Delay Time Seconds***	ASA Seconds
1/4/2021	10:00	10:14	431	0	80	593	346
	10:15	10:29	476	0	83	645	351
	10:30	10:44	542	0	81	602	345
	10:45	10:59	559	0	79	571	349
	11:00	11:14	569	0	73	621	382
	11:15	11:29	584	0	85	546	343
	11:30	11:44	548	0	73	631	354
	11:45	11:59	522	0	82	581	367
	12:00	12:14	492	0	66	547	364
	12:15	12:29	576	0	81	594	358
	12:30	12:44	636	0	88	633	315
	12:45	12:59	532	0	106	644	350
	13:00	13:14	507	0	93	661	394
	13:15	13:29	516	0	79	625	382

[4] Rocky Mountain Power follows the definitions for informal and formal complaints as set forth in the Utah Code, Title 54, Public Utilities Statutes and Public Service Commission Rules, R746-200-8 Informal review (A) and Commission review (D).

UTAH

January 1 – June 30, 2021

Date	Interval start/finish (MT Time)		Network Total Calls*	Calls received but not delivered**	# of Calls Abandoned from Agent Queue	Max Delay Time Seconds***	ASA Seconds
	13:30	13:44	517	0	68	627	347
	13:45	13:59	449	0	75	735	412
	14:00	14:14	490	0	104	807	431
	14:15	14:29	505	0	105	733	437
	14:30	14:44	502	0	80	851	462
	14:45	14:59	476	0	88	831	466
	15:00	15:14	489	0	92	841	450
	15:15	15:29	533	0	94	661	428
	15:30	15:44	493	0	90	677	432
	15:45	15:59	486	0	68	721	407
	16:00	16:14	467	0	80	753	461
	16:15	16:29	483	0	109	852	469
1/27/2021	11:00	11:14	249	0	2	138	9
	11:15	11:29	213	0	2	260	12
	11:30	11:44	140	0	3	125	6
	11:45	11:59	138	0	0	34	3
	12:00	12:14	113	0	12	206	29
	12:15	12:29	275	0	28	415	144
	12:30	12:44	364	0	0	3	2
	12:45	12:59	187	0	0	3	2
2/26/2021	12:00	12:14	66	0	3	130	9
	12:15	12:29	53	0	2	278	7
	12:30	12:44	75	0	0	2	5
	12:45	12:59	58	0	0	9	0
	13:00	13:14	33	0	9	406	2
	13:15	13:29	48	0	0	253	10
	13:30	13:44	41	0	0	20	0
	13:45	13:59	36	0	0	3	2
	14:00	14:14	40	0	0	5	1
	14:15	14:29	39	0	0	47	1
	14:30	14:44	24	0	0	10	2
	14:45	14:59	28	0	0	4	0
	15:00	15:14	25	0	0	1	1
	15:15	15:29	22	0	0	1	0
	15:30	15:44	16	0	0	8	0
	15:45	15:59	8	0	0	268	0
	16:00	16:14	19	0	0	2	0
	16:15	16:29	0	0	0	0	0
	16:30	16:44	17,219	338	1600	870	8

4.3 Utah State Customer Guarantee Summary Status

customer*guarantees*

January to June 2021

Utah

	Description	2021 Events	2021 Failures	2021 % Success	2021 Paid	2020 Events	2020 Failures	2020 % Success	2020 Paid
CG1	Restoring Supply	688,877	0	100%	$0	422,870	0	100%	$0
CG2	Appointments	4,982	1	99.98%	$50	4,519	0	100%	$0
CG3	Switching on Power	828	0	100%	$0	1,394	0	100%	$0
CG4	Estimates	928	0	100%	$0	782	0	100%	$0
CG5	Respond to Billing Inquiries	1,067	0	100%	$0	941	0	100%	$0
CG6	Respond to Meter Problems	299	0	100%	$0	302	0	100%	$0
CG7	Notification of Planned Interruptions	108,847	17	99.98%	$850	71,744	8	99.99%	$400
		805,828	**18**	**99.99%**	**$900**	**502,552**	**8**	**99.99%**	**$400**

Overall Customer Guarantee performance remains above 99%, demonstrating Rocky Mountain Power's continued commitment to customer satisfaction.

Major Events are excluded from the Customer Guarantees program. The program also defines certain exemptions, which are primarily for safety, access to outage site, and emergencies.

5 Maintenance Compliance to Annual Plan

5.1 T&D Preventive and Corrective Maintenance Programs

Preventive Maintenance

The primary focus of the preventive maintenance plan is to inspect facilities, identify abnormal conditions[5], and perform appropriate preventive actions upon those facilities. Assessment of policies, including the costs and benefits of delivery of these policies, will result in modifications to them. Thus, local triggers that result in more frequent or more burdensome inspection and maintenance practices have resulted in refinement to some of these PM activities. As the Company continues this assessment, further variations of the policies will result in refinement to the maintenance plan.

Transmission and Distribution Lines

- Visual assurance inspections are designed to identify damage or defects that may endanger public safety or adversely affect the integrity of the electric system.
- Detailed inspections are in depth visual inspections of each structure and the spans between each structure or pad-mounted distribution equipment.[6]
- Pole testing includes a sound and bore to identify decay pockets that would compromise the wood pole's structural integrity.

Substations and Major Equipment

- Rocky Mountain Power inspects and maintains substations and associated equipment to ascertain all components within the substation are operating as expected. Abnormal conditions that are identified are prioritized for repair (corrective maintenance).
- Rocky Mountain Power has a condition based maintenance program for substation equipment including load tap changers, regulators, and transmission circuit breakers. Diagnostic testing is performed on a time based interval and the results are analyzed to determine if the equipment is suitable for service or maintenance tasks to be performed. Protection system and communication system maintenance is performed based on a time interval basis.

Corrective Maintenance

The primary focus of the corrective maintenance plan is to correct the abnormal conditions found during the preventive maintenance process.

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[5] The primary focus of the preventive maintenance plan is to inspect facilities, identify abnormal conditions, and perform appropriate preventive actions upon those facilities. Condition priorities are as follows:

Priority A: Conditions that pose a potential but not immediate hazard to the public or employees, or that risk loss of supply or damage to the electrical system.

Priority B: Conditions that are nonconforming, but that in the opinion of the inspector do not pose a hazard.

Priority C: Conditions that are nonconforming, but that in the opinion of the inspector do not need to be corrected until the next scheduled work is performed on that facility point.

Priority D: Conditions that conform to the NESC and are not reportable to the associated State Commission. Priority G: Conditions that conform to the regulations requirement that was in place when construction took place but do not conform to more recent code adoptions. These conditions are "grandfathered" and are considered conforming.

[6] Effective 1/1/2007, Rocky Mountain Power modified its reliability & preventive planning methods to utilize repeated reliability events to prioritize localized preventive maintenance activities, using its Reliability Work Planning methodology. At this time, repeated outage events experienced by customers will result in localized inspection and correction activities, rather than being programmatically performed at either the entire circuit or map section level.

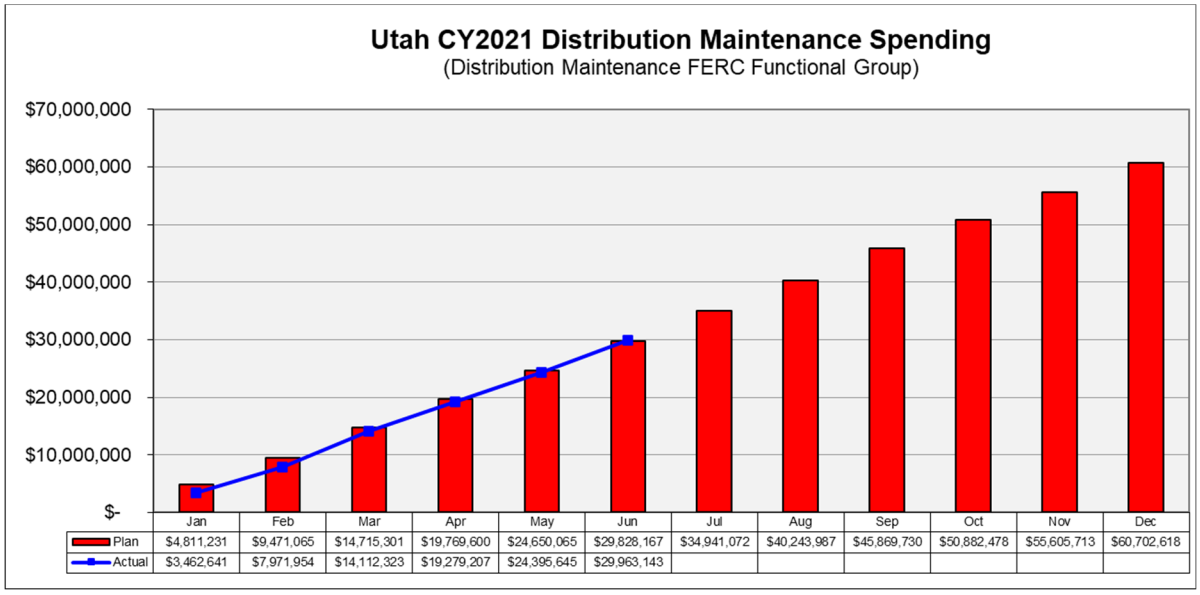
Transmission and Distribution Lines

- Correctable conditions are identified through the preventive maintenance process.
- Outstanding conditions are recorded in a database and remain until corrected.

Substations and Major Equipment

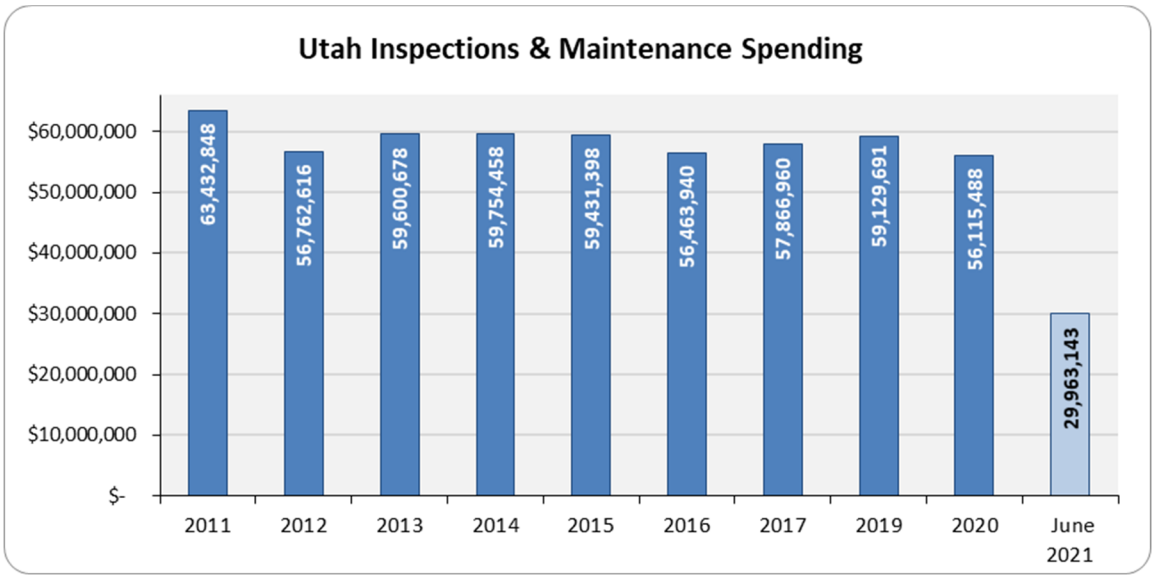
- Correctable conditions are identified through the preventive maintenance process, often associated with actions performed on major equipment.
- Corrections consist of repairing equipment or responding to a failed condition.

5.2 Maintenance Spending - RMV



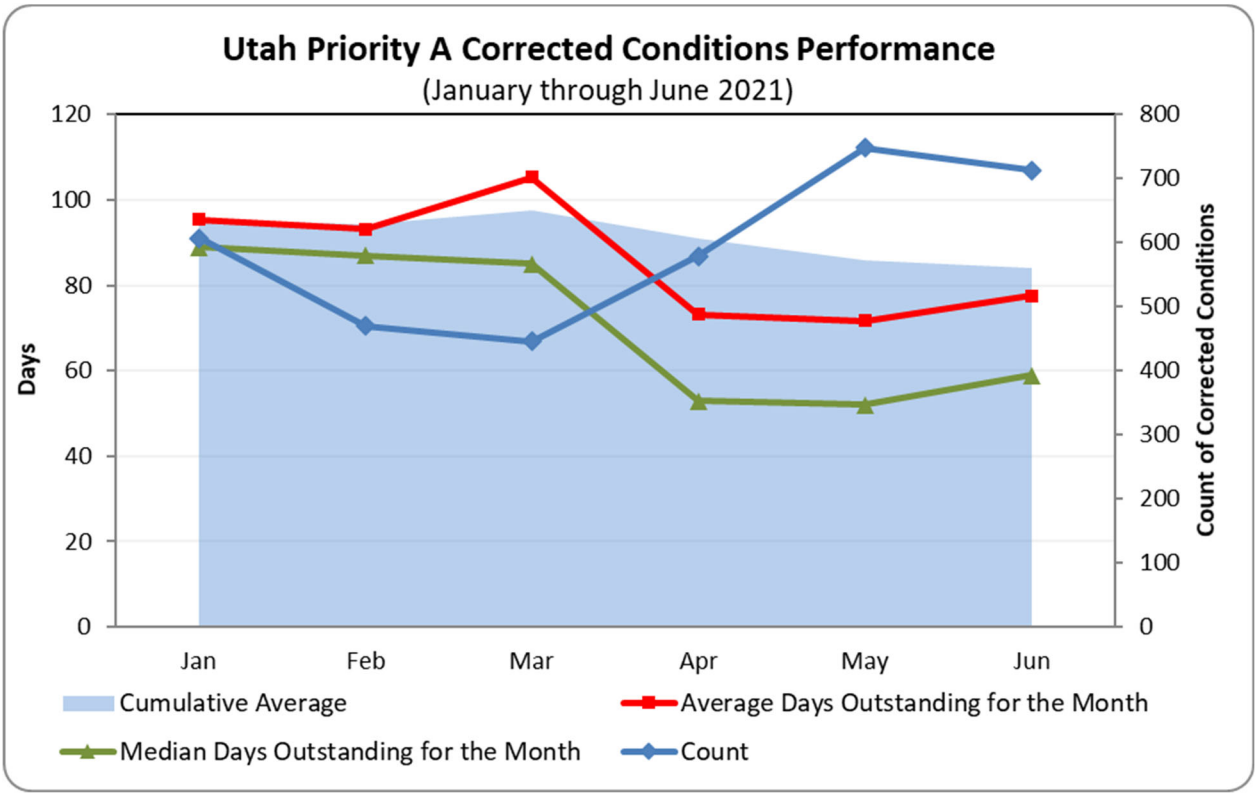
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Plan	$4,811,231	$9,471,065	$14,715,301	$19,769,600	$24,650,065	$29,828,167	$34,941,072	$40,243,987	$45,869,730	$50,882,478	$55,605,713	$60,702,618
Actual	$3,462,641	$7,971,954	$14,112,323	$19,279,207	$24,395,645	$29,963,143						

5.2.1 Maintenance Historical Spending - RMV



5.3 Distribution Priority "A" Conditions Correction History

Rocky Mountain Power is committed to correcting Priority "A" Conditions with an average age or 120 days or less. The Company believes that it is a useful indicator of its commitment to providing safe and reliable service to its Utah customers. As shown in the graph below, Rocky Mountain Power consistently delivers an average age of Priority "A" Conditions well below the 120-day target.

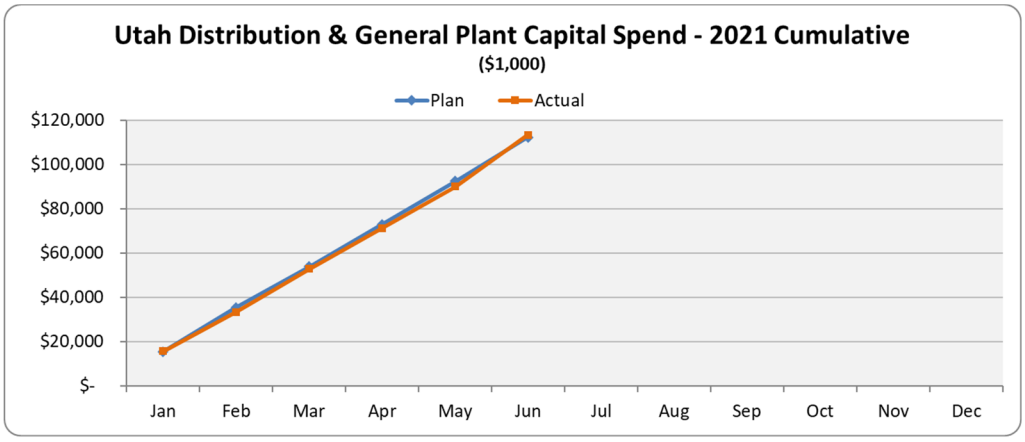


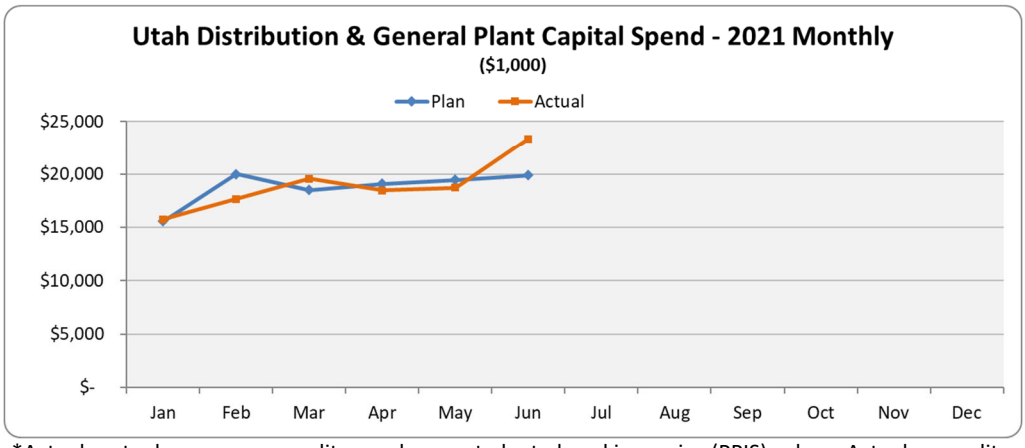
6 Capital Investment

6.1 Capital Spending - Distribution and General Plant

January – June 2021

Investment	Actual ($M)	Plan ($M)	Significant Variances
1. Mandated	$7.6	$17.1	Mandated road relocations over plan, (+$1.0M); mandated wildfire mitigation under plan, (–$10.1M).
2. New Connect	$48.6	$25.1	Residential, commercial, and industrial new revenue connections over plan, (+$23.5M — including NWQ +$3.2M, Cal-Maine Foods +$1.8M, Ramsey Hill Exploration +$1.3M, and Healthy Mountain Farms –$1.4M). Plan anticipated significant slowdown due to Covid.
3. System Reinforcement	$18.6	$23.0	Feeder reinforcements over plan, (+$3.0M); substation reinforcements under plan, (–$7.7M — including 126th South Sub –$7.7M, Timp 30 MVA Xfmr –$1.4M, 90th South 30 MVA Xfmr –$1.4M, and Coleman Incr Capacity +$2.9M).
4. Replacement	$28.8	$34.4	Replacements for underground vaults/equipment over plan, (+$1.5M); replacements for substation equipment, overhead distribution lines/other, and underground cable under plan, (–$5.9M).
5. Upgrade & Modernize	$10.0	$12.8	Automated Metering Infrastructure under plan due to project timing, (–$2.3M).
Total	**$113.4**	**$112.4**	



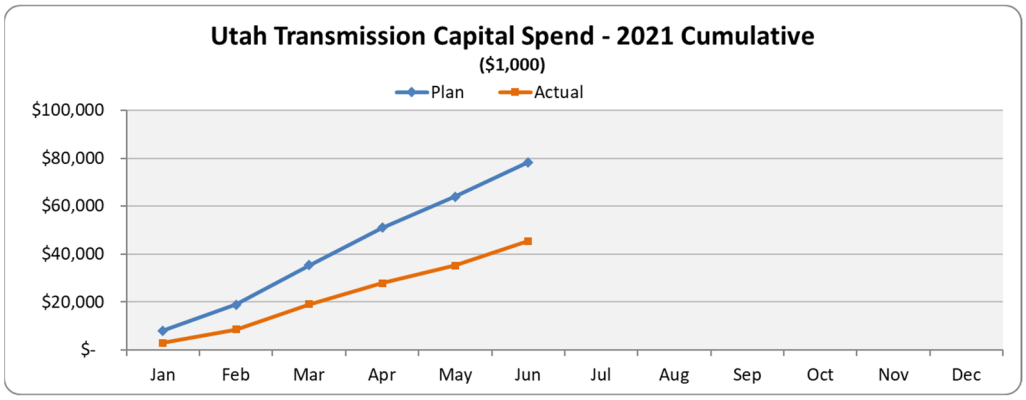


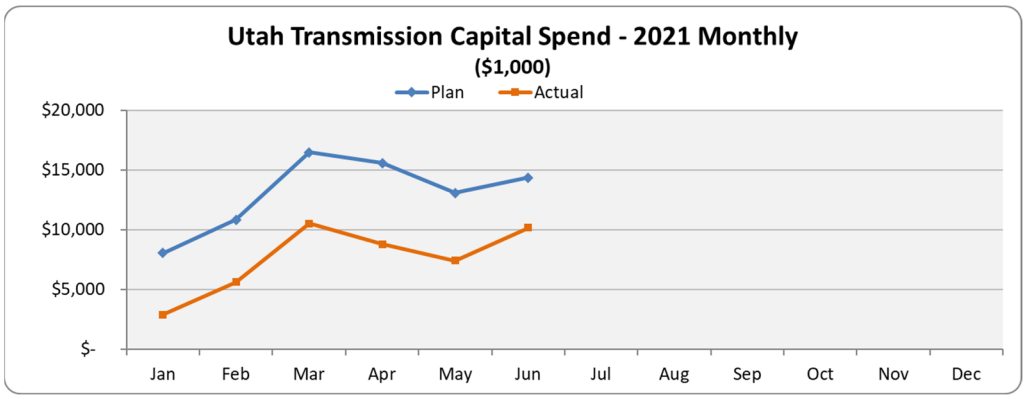
*Actual costs shown are expenditure values, not plant placed in service (PPIS) values. Actual expenditures are not directly tied to PPIS values.

6.2 Capital Spending – Transmission/Interconnections

January – June 2020

Investment	Actual ($M)	Plan ($M)	Significant Variances
1. Mandated	8.9	19.4	Mandated right of way renewals over plan, (+$3.3M); mandated wildfire mitigation under plan, (–$12.9M).
2. New Connect	6.2	3.9	Industrial new revenue connections over plan, (+$1.5M).
3. Local Trans-mission System Reinforcements	7.8	10.6	Subtransmission reinforcements under plan, (–$2.9M — including Blue Crk-Bothwell 46kV Reconductor –$2.0M, and Magna Cap/Tooele-Pine Canyon Rebuild –$1.1M).
**4. Main Grid Reinforcements / Interconnections	11.2	29.2***	Q2469 PAC ESA Milford Solar TSR over plan, (+$2.4M); Q0155 UAMPS Heber Light & Power delayed by customer, (–$2.7M); Path C Transmission Improvements under plan, (–$1.4M); TPL Overdutied Circuit Breaker Replacement under plan, (–$1.1M); unidentified main grid/generation interconnections under plan, see note below*** (–$15.2M).
**5. Energy Gateway Transmission	0.7	0.5	
6. Replacement	9.1	14.0	Replacements for storm & casualty, and substation transformers under plan, (–$3.7M — including Mobile #6 Failed Xfmr Replacement –$1.2M).
7. Upgrade & Modernize	1.5	0.7	
Total	**45.4**	**78.4**	





* Actual costs shown are expenditure values, not plant placed in service (PPIS) values. Actual expenditures are not directly tied to PPIS values. ** Main Grid Reinforcement/Interconnections and Energy Gateway Transmission values include a small amount of General Plant $ for communications work. *** Unidentified main grid/generation interconnection projects are managed at the program level. Plan funding is 100% allocated to Utah, by necessity, for Plan application purposes only. Actual funding is reallocated to specific projects across PacifiCorp as identified or as customer agreements are signed, not necessarily within the state of Utah.

6.3 New Connects

	2020	2021												
	YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YEAR
Residential														
UT South	1,943	173	182	175	203	172	201							1,106
UT North/Metro	9,214	689	780	1,024	817	888	951							5,149
UT Central	17,542	1,337	1,336	1,926	1,594	1,522	1,568							9,283
Total Residential	**28,699**	**2,199**	**2,298**	**3,125**	**2,614**	**2,582**	**2,720**							**15,538**
Commercial														
UT South	305	23	22	31	37	20	31							164
UT North/Metro	1,185	99	107	84	159	110	151							710
UT Central	1,721	197	148	188	180	113	139							965
Total Commercial	**3,211**	**319**	**277**	**303**	**376**	**243**	**321**							**1,839**
Industrial														
UT South	1	0	0	0	0	0	0							0
UT North/Metro	0	0	0	0	1	0	0							1
UT Central	4	0	0	1	0	0	0							1
Total Industrial	**5**	**0**	**0**	**1**	**1**	**0**	**0**							**2**
Irrigation														
UT South	47	2	2	1	7	10	1							23
UT North/Metro	7	0	0	0	0	0	0							0
UT Central	9	0	1	0	1	3	2							7
Total Irrigation	**63**	**2**	**3**	**1**	**8**	**13**	**3**							**30**
TOTAL New Connects														
UT South	2,296	198	206	207	247	202	233							1,293
UT North/Metro	10,406	788	887	1,108	977	998	1,102							5,860
UT Central	19,276	1,534	1,485	2,115	1,775	1,638	1,709							10,256
TOTAL New Connects	**31,978**	**2,520**	**2,578**	**3,430**	**2,999**	**2,838**	**3,044**							**17,409**

Utah South region includes Moab, Price, Cedar City and Richfield
Utah North/Metro region includes SLC Metro, Ogden and Layton
Utah Central region included American Fork, Vernal, Toole, Jordan Valley and Park City
Region areas are subject to change for operational purposes and may differ from historical reporting.
Smithfield, Tremonton and Laketown are excluded for consistency with earlier reports that included them under ID/WY WEST and not Utah.
Adapting to a new data processing tool in 2021 several process improvements were implemented. Temporary connections, previously excluded, are included again allowing earlier reporting of actual installation dates. There is no double counting of new connections because when a permanent connection is established the temporary is replaced, with the original installation date maintained. In 2015 it was decided by our regulation department that we must code all temporary connections as Commercial to be able to apply the commercial billing rates to the contractors who would be using the electricity until a homeowner is in place. As there are quite a lot of residential customers and a much smaller proportion of commercial customers, this skews the volumes considerably, so temporaries were excluded. To include temporary connections now, without misrepresenting the commercial volumes, Commercially classed connections are converted to Residential connections when residential dwelling codes are used. This new process is also based on actual installation data rather than customer contract data and is expected to eliminate customer change based interference of historical volumes. 2020 volumes have also been converted to allow comparison of like volumes.

7 Vegetation Management

7.1 Production

UTAH
Tree Program Reporting
January 1, 2021 through June 30, 2021
Distribution

	Total	Calendar Year Reporting				Cycle Reporting			
	3 Year Program/Total Line Miles	1/1/2021-12/31/2021 Miles Planned	1/1/2021-12/31/2021 Actual Miles	1/1/2021-12/31/2021 Ahead/ Behind	1/1/2021-12/31/2021 % Ahead/ Behind	1/1/2020-12/31/2022 Miles Planned	1/1/2020-12/31/2022 Actual Miles	01/01/2020-12/31/2022 Ahead/ Behind	1/1/2020-12/31/2022 % Ahead/ Behind
	column a	*column b*	*column c*	*column d*	*column e*	*column f*	*column g*	*column h*	*column i*
UTAH	10,840	3,158	1,477	-1,681	46.8%	10,840	4,772	-6,068	44.0%
AMERICAN FORK	942	300	120	-180	39.9%	942	228	-714	24.2%
CEDAR CITY	1,379	123	74	-49	60.0%	1,379	705	-674	51.1%
JORDAN VALLEY	802	192	98	-94	51.0%	802	340	-462	42.4%
LAYTON	296	272	111	-161	40.8%	296	135	-161	45.6%
MOAB	625	346	281	-65	81.2%	625	447	-178	71.5%
OGDEN	958	238	128	-110	53.8%	958	439	-519	45.8%
PARK CITY	546	0	0	0	0.0%	546	221	-325	40.5%
PRICE	595	167	0	-167	0.0%	595	266	-329	44.7%
RICHFIELD	1,243	676	292	-384	43.2%	1,243	450	-793	36.2%
SL METRO	1,261	322	207	-115	64.3%	1,261	541	-720	42.9%
SMITHFIELD	766	190	107	-83	56.3%	766	383	-383	50.0%
TOOELE	494	135	0	-135	0.0%	494	71	-423	14.4%
TREMONTON	678	111	0	-111	0.0%	678	459	-219	67.7%
VERNAL	255	86	59	-27	68.6%	255	87	-168	34.1%

Distribution cycle $/tree: $145
Distribution cycle $/mile: $2,863
Distribution cycle removal %: 8.54%

Transmission

Total Line Miles	Line Miles Scheduled	Line Miles Worked	Miles Ahead(behind) Schedule	% of miles on/behind Schedule
6,588	277	122	(155)	44%

Current distribution cycle began January 1, 2020 and extends until December 31, 2022.

Notes:
Column a: Total overhead distribution pole miles by district
Column b: Total overhead distribution pole miles planned for the period January 1, 2021 through December 31, 2021
Column c: Actual overhead distribution pole miles worked during the period January 1, 2021 through December 31, 2021
Column d: Miles ahead or behind for the period January 1, 2021 through December 31, 2021 (column c-column b)
Column e: Percent of actual compared to planned for the period January 1, 2021 through December 31, 2021 ((column c÷b)×100)
Column f: Total overhead distribution pole miles planned for the period January 1, 2020 through December 31, 2022
Column g: Actual overhead distribution pole miles worked during the period January 1 2020 through December 31, 2022
Column h: Miles ahead or behind for the period January 1, 2020 through December 31, 2022 (column g-column f)
Column i: Percent of actual compared to planned for the period January 1, 2020 through December 31, 2022 ((column g÷f)×100). Max = 100%

7.2 Budget

UTAH

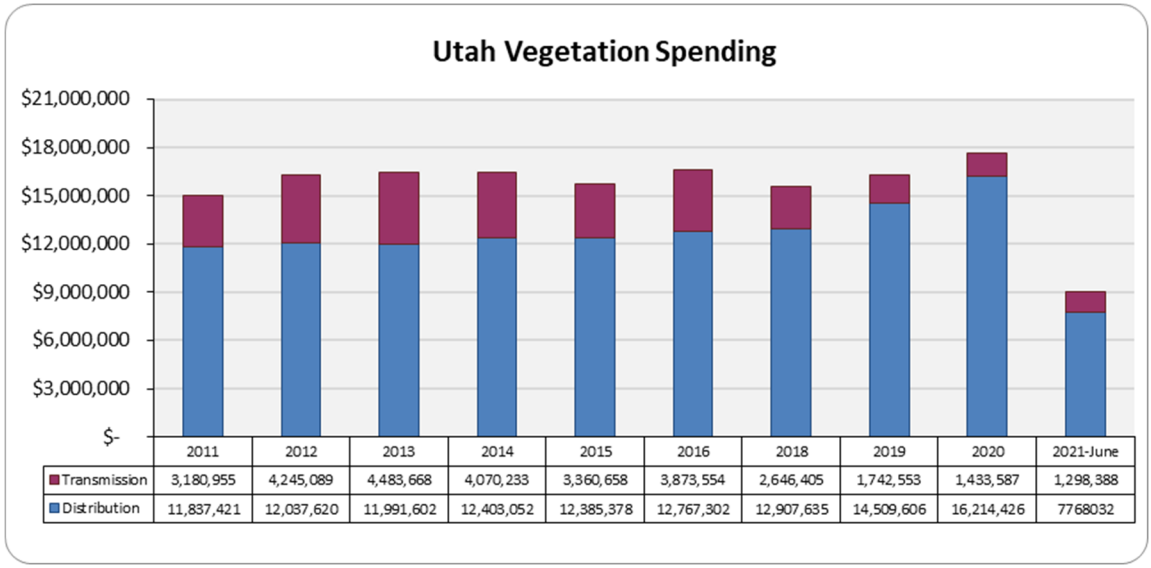
Tree Program Reporting

	CY2021	CY2022	CY2023
Distribution	$13,752,053	$13,752,053	$13,752,053
Transmission	$1,416,916	$1,416,916	$1,416,916
Total Tree Budget	$15,168,969	$15,168,969	$15,168,969

Calendar Year 2021	Distribution			Transmission		
	Actuals	Budget	Variance	Actuals	Budget	Variance
Jan	$ 641,716	$ 1,146,004	-$ 504,288	$ 641,716	$ 1,146,004	-$ 504,288
Feb	$ 1,589,823	$ 1,146,004	$ 443,819	$ 1,589,823	$ 1,146,004	$ 443,819
Mar	$ 2,032,877	$ 1,146,004	$ 886,873	$ 2,032,877	$ 1,146,004	$ 886,873
Apr	$ 1,254,139	$ 1,146,004	$ 108,135	$ 1,254,139	$ 1,146,004	$ 108,135
May	$ 1,049,478	$ 1,146,004	-$ 96,526	$ 1,049,478	$ 1,146,004	-$ 96,526
Jun	$ 1,199,999	$ 1,146,004	$ 53,995	$ 1,199,999	$ 1,146,004	$ 53,995
Jul						
Aug						
Sep						
Oct						
Nov						
Dec						
Total	$ 7,768,032	$ 6,876,024	$ 892,008	$ 7,768,032	$ 6,876,024	$ 892,008

Average # Tree Crews on Property (YTD) **73**

7.2.1 Vegetation Historical Spending



8 Standard Guarantees/Program Summary

8.1 Service Standards Program Summary[7]

8.1.1 Rocky Mountain Power Customer Guarantees

Customer Guarantee 1: Restoring Supply After an Outage	The Company will restore supply after an outage within 24 hours of notification with certain exceptions as described in Rule 25.
Customer Guarantee 2: Appointments	The Company will keep mutually agreed upon appointments, which will be scheduled within a two-hour time window.
Customer Guarantee 3: Switching on Power	The Company will switch on power within 24 hours of the customer or applicant's request, provided no construction is required, all government inspections are met and communicated to the Company and required payments are made. Disconnection for nonpayment, subterfuge or theft/diversion of service is excluded.
Customer Guarantee 4: Estimates For New Supply	The Company will provide an estimate for new supply to the applicant or customer within 15 working days after the initial meeting and all necessary information is provided to the Company and any required payments are made.
Customer Guarantee 5: Respond To Billing Inquiries	The Company will respond to most billing inquiries at the time of the initial contact. For those that require further investigation, the Company will investigate and respond to the Customer within 10 working days.
Customer Guarantee 6: Resolving Meter Problems	The Company will investigate and respond to reported problems with a meter or conduct a meter test and report results to the customer within 10 working days.
Customer Guarantee 7: Notification of Planned Interruptions	The Company will provide the customer with at least two days' notice prior to turning off power for planned interruptions consistent will Rule 25 and relevant exemptions.

Note: See Rule 25 for a complete description of terms and conditions for the Customer Guarantee Program.

[7] In 2012, rules were codified in Utah Administrative Code R746-313. The Company, Commission and other stakeholders worked to develop mechanisms that comply with these rules and supersedes the Company's Service Standards Program.

8.1.2 Rocky Mountain Power Performance Standards[8]

*Network Performance Standard 1: Improve System Average Interruption Duration Index (SAIDI)	In 2016 Utah Commission adopted a modified 365-day rolling (rather than calendar year) performance baseline control zone of between 137-187 minutes.
*Network Performance Standard 2: Improve System Average Interruption Frequency Index (SAIFI)	In 2016 Utah Commission adopted a modified 365-day rolling (rather than calendar year) performance baseline control zone of between 1.0-1.6 events.
Network Performance Standard 3: Improve Under Performing System Segments	The Company will identify underperforming circuit segments and outline improvement actions and their costs, and using the Open Reliability Reporting (ORR) process, evidence the outcome of the ORR process for the circuit segments chosen[9].
*Network Performance Standard 4: Supply Restoration	The Company will restore power outages due to loss of supply or damage to the distribution system within three hours to 80% of customers on average.
Customer Service Performance Standard 5: Telephone Service Level	The Company will answer 80% of telephone calls within 30 seconds. The Company will monitor customer satisfaction with the Company's Customer Service Associates and quality of response received by customers through the Company's eQuality monitoring system.
Customer Service Performance Standard 6: Commission Complaint Response/Resolution	The Company will a) respond to at least 95% of non-disconnect Commission complaints within three working days; b) respond to at least 95% of disconnect Commission complaints within four working hours; and c) resolve 95% of informal Commission complaints within 30 days, except in Utah where the Company will resolve 100% of informal Commission complaints within 30 days.

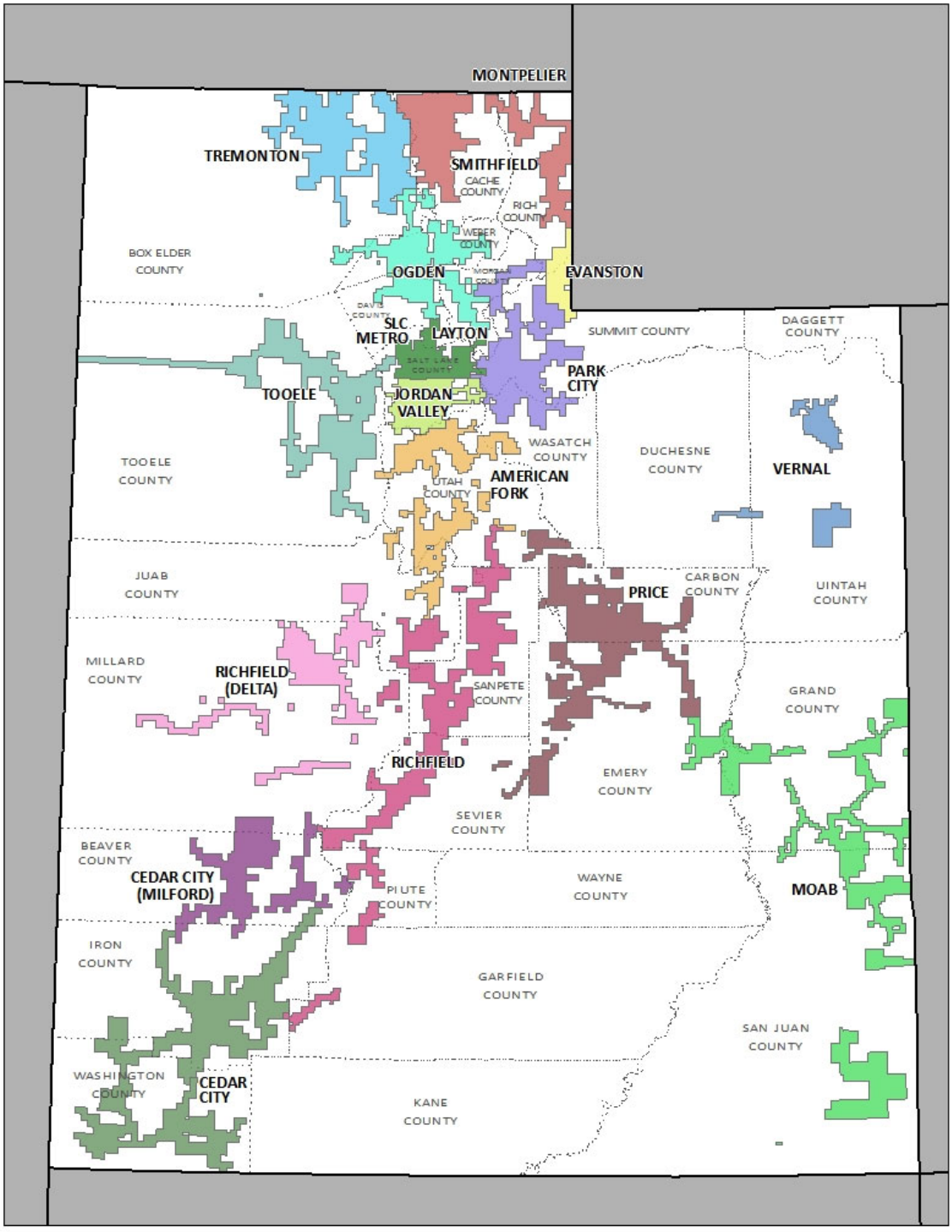
*Note: Performance Standards 1, 2 & 4 are for underlying performance days and exclude Major Events.

[8] On December 20, 2016, the Public Service Commission of Utah approved modified electric service reliability performance baseline notification levels of 187 SAIDI minutes and 1.6 SAIFI events, with proposed baseline control zones of 137-187 SAIDI and 1.0-1.6 SAIFI (Docket NOS. 13-035-01 and 15-035-72).

[9] On June 1, 2107, in Dockets 15-035-72 and 08-035-55, the Commission approved modified reliability improvement methods with the Company's Open Reliability Reporting (ORR) process, in which the Commission concluded that the process reasonably satisfies the requirements of Utah Administrative Code R746-313-7(3)(e) relating to reporting on electric service reliability for areas whose reliability performance warrants additional improvement efforts. This change is reflected in Section 2.8.

8.1.3 Utah Distribution Service Area Map with Operating Areas/Districts

Below is a graphic showing the specific areas where the Company's distribution facilities are located.



8.2 Cause Code Analysis

The tables below outline categories used in outage data collection. Subsequent charts and table use these groupings to develop patterns for outage performance.

Direct Cause Category	Category Definition & Example/Direct Cause	
Animals	Any problem nest that requires removal, relocation, trimming, etc.; any birds, squirrels or other animals, whether or not remains found.	
	• Animal (Animals) • Bird Mortality (Non-protected species) • Bird Mortality (Protected species)(BMTS)	• Bird Nest • Bird or Nest • Bird Suspected, No Mortality
Environment	Contamination or Airborne Deposit (i.e. salt, trona ash, other chemical dust, sawdust, etc.); corrosive environment; flooding due to rivers, broken water main, etc.; fire/smoke related to forest, brush or building fires (not including fires due to faults or lightning).	
	• Condensation/Moisture • Contamination • Fire/Smoke (not due to faults) • Flooding	• Major Storm or Disaster • Nearby Fault • Pole Fire
Equipment Failure	Structural deterioration due to age (incl. pole rot); electrical load above limits; failure for no apparent reason; conditions resulting in a pole/cross arm fire due to reduced insulation qualities; equipment affected by fault on nearby equipment (e.g., broken conductor hits another line).	
	• B/O Equipment • Overload	• Deterioration or Rotting • Substation, Relays
Interference	Willful damage, interference or theft; such as gun shots, rock throwing, etc.; customer, contractor or other utility dig-in; contact by outside utility, contractor or other third-party individual; vehicle accident, including car, truck, tractor, aircraft, manned balloon; other interfering object such as straw, shoes, string, balloon.	
	• Dig-in (Non-PacifiCorp Personnel) • Other Interfering Object • Vandalism or Theft	• Other Utility/Contractor • Vehicle Accident
Loss of Supply	Failure of supply from Generator or Transmission system; failure of distribution substation equipment.	
	• Failure on other line or station • Loss of Feed from Supplier • Loss of Generator	• Loss of Substation • Loss of Transmission Line • System Protection
Operational	Accidental Contact by PacifiCorp or PacifiCorp's Contractors (including live-line work); switching error; testing or commissioning error; relay setting error, including wrong fuse size, equipment by-passed; incorrect circuit records or identification; faulty installation or construction; operational or safety restriction.	
	• Contact by PacifiCorp • Faulty Install • Improper Protective Coordination • Incorrect Records • Internal Contractor	• Internal Tree Contractor • Switching Error • Testing/Startup Error • Unsafe Situation
Other	Cause Unknown; use comments field if there are some possible reasons.	
	• Invalid Code	• Other, Known Cause • Unknown
Planned	Transmission requested, affects distribution sub and distribution circuits; Company outage taken to make repairs after storm damage, car hit pole, etc.; construction work, regardless if notice is given; rolling blackouts.	
	• Construction • Customer Notice Given • Energy Emergency Interruption • Intentional to Clear Trouble	• Emergency Damage Repair • Customer Requested • Planned Notice Exempt • Transmission Requested
Tree	Growing or falling trees	
	• Tree-Non-preventable • Tree-Trimmable	• Tree-Tree felled by Logger
Weather	Wind (excluding windborne material); snow, sleet or blizzard, ice, freezing fog, frost, lightning.	
	• Extreme Cold/Heat • Freezing Fog & Frost • Wind	• Lightning • Rain • Snow, Sleet, Ice and Blizzard

8.3 Reliability Definitions

Interruption Types

Below are the definitions for interruption events. For further details, refer to IEEE 1366-2003[10] Standard for Reliability Indices.

Sustained Outage

A sustained outage is defined as an outage of greater than 5 minutes in duration.

Momentary Outage Event

A momentary outage is defined as an outage equal to or less than 5 minutes in duration. Rocky Mountain Power has historically captured this data using substation breaker fault counts, but where SCADA (Supervisory Control and Data Acquisition Systems) exist, uses this data to calculate consistent with IEEE 1366-2003.

Reliability Indices

SAIDI

SAIDI (system average interruption duration index) is an industry-defined term to define the average duration summed for all sustained outages a customer experiences in a given period. It is calculated by summing all customer minutes lost for sustained outages (those exceeding 5 minutes) and dividing by all customers served within the study area. When not explicitly stated otherwise, this value can be assumed to be for a one-year period.

Daily SAIDI

In order to evaluate trends during a year and to establish Major Event Thresholds, a daily SAIDI value is often used as a measure. This concept was introduced in IEEE Standard 1366-2003. This is the day's total customer minutes out of service divided by the static customer count for the year. It is the total average outage duration customers experienced for that given day. When these daily values are accumulated through the year, it yields the year's SAIDI results.

SAIFI

SAIFI (system average interruption frequency index) is an industry-defined term that attempts to identify the frequency of all sustained outages that the average customer experiences during a given time-frame. It is calculated by summing all customer interruptions for sustained outages (those exceeding 5 minutes in duration) and dividing by all customers served within the study area.

CAIDI

CAIDI (customer average interruption duration index) is an industry-defined term that is the result of dividing the duration of the average customer's sustained outages by the frequency of outages for that average customer. While the Company did not originally specify this metric under the umbrella of the Performance Standards Program within the context of the Service Standards Commitments, it has since been determined to be valuable for reporting purposes. It is derived by dividing PS1 (SAIDI) by PS2 (SAIFI).

[10] IEEE 1366-2003 was adopted by the IEEE on December 23, 2003. It was subsequently modified in IEEE 1366-2012, but all definitions used in this document are consistent between these two versions. The definitions and methodology detailed therein are now industry standards. Later, in Docket No. 04-035-T13 the Utah Public Utilities Commission adopted the standard methodology for determining major event threshold.

$MAIFI_E$

$MAIFI_E$ (momentary average interruption event frequency index) is an industry-defined term that attempts to identify the frequency of all momentary interruption events that the average customer experiences during a given time-frame. It is calculated by counting all momentary operations which occur within a 5 minute time period, as long as the sequence did not result in a device experiencing a sustained interruption. This series of actions typically occurs when the system is trying to re-establish energy flow after a faulted condition, and is associated with circuit breakers or other automatic reclosing devices.

Lockout

Lockout is the state of device when it attempts to re-establish energy flow after a faulted condition but is unable to do so; it systematically opens to de-energize the facilities downstream of the device then recloses until a lockout operation occurs. The device then requires manual intervention to re-energize downstream facilities. This is generally associated with substation circuit breakers and is one of the variables used in the Company's calculation of blended metrics.

CEMI

CEMI is an acronym for Customers Experiencing Multiple (Momentary Event and Sustained) Interruptions. This index depicts repetition of outages across the period being reported and can be an indicator of recent portions of the system that have experienced reliability challenges.

ORR

ORR is an acronym for Open Reliability Reporting, which shifts the company's reliability program from a circuit based metric (RPI) to a targeted approach reviewing performance in a local area, measured by customer minutes lost. Project funding is based on cost effectiveness as measured by the cost per avoided annual customer minute interrupted.

CPI99

CPI99 is an acronym for Circuit Performance Indicator, which uses key reliability metrics of the circuit to identify underperforming circuits. It excludes Major Event and Loss of Supply or Transmission outages. The variables and equation for calculating CPI are:

CPI = Index * ((SAIDI * WF * NF) + (SAIFI * WF * NF) + ($MAIFI_E$ * WF * NF) + (Lockouts * WF * NF))

Index: 10.645
SAIDI: Weighting Factor 0.30, Normalizing Factor 0.029
SAIFI: Weighting Factor 0.30, Normalizing Factor 2.439
$MAIFI_E$: Weighting Factor 0.20, Normalizing Factor 0.70
Lockouts: Weighting Factor 0.20, Normalizing Factor 2.00
Therefore, 10.645 * ((3-year SAIDI * 0.30 * 0.029) + (3-year SAIFI * 0.30 * 2.439) + (3-year $MAIFI_E$* 0.20 * 0.70) + (3-year breaker lockouts * 0.20 * 2.00)) = CPI Score

CPI05

CPI05 is an acronym for Circuit Performance Indicator, which uses key reliability metrics of the circuit to identify underperforming circuits. Unlike CPI99, it includes Major Event and Loss of Supply or Transmission outages. The calculation of CPI05 uses the same weighting and normalizing factors as CPI99.

Performance Types

Rocky Mountain Power recognizes several categories of performance; major events and underlying performance. Underlying performance days may be significant event days. Outages recorded during any day may be classified as "controllable" events.

Major Events

A Major Event (ME) is defined as a 24-hour period where SAIDI exceeds a statistically derived threshold value (Reliability Standard IEEE 1366-2012) based on the 2.5 beta methodology. The values used for the reporting period and the prospective period are shown below.

Effective Date	Customer Count	ME Threshold SAIDI	ME Customer Minutes Lost
1/1-12/31/2021	981,102	4.54	4,456,512

Significant Events

The Company has evaluated its year-to-year performance and as part of an industry weather normalization task force, sponsored by the IEEE Distribution Reliability Working Group, determined that when the Company recorded a day in excess of 1.75 beta (or 1.75 times the natural log standard deviation beyond the natural log daily average for the day's SAIDI) that generally these days' events are generally associated with weather events and serve as an indicator of a day which accrues substantial reliability metrics, adding to the cumulative reliability results for the period. As a result, the Company individually identifies these days so that year-on-year comparisons are informed by the quantity and their combined impact to the reporting period results.

Underlying Events

Within the industry, there has been a great need to develop methodologies to evaluate year-on-year performance. This has led to the development of methods for segregating outlier days, via the approaches described above. Those days which fall below the statistically derived threshold represent "underlying" performance, and are valid. If any changes have occurred in outage reporting processes, those impacts need to be considered when making comparisons. Underlying events include all sustained interruptions, whether of a controllable or non-controllable cause, exclusive of major events, prearranged (which can include short notice emergency prearranged outages), customer requested interruptions and forced outages mandated by public authority typically regarding safety in an emergency situation.

Controllable Distribution (CD) Events

In 2008, the Company identified the benefit of separating its tracking of outage causes into those that can be classified as "controllable" (and thereby reduced through preventive work) from those that are "non-controllable" (and thus cannot be mitigated through engineering programs); they will generally be referred to in subsequent text as controllable distribution (CD). For example, outages caused by deteriorated equipment or animal interference are classified as controllable distribution since the Company can take preventive measures with a high probability to avoid future recurrences, while vehicle interference or weather events are largely out of the Company's control and generally not avoidable through engineering programs. (It should be noted that Controllable Events is a subset of Underlying Events. The *Cause Code Analysis* section of this report contains two tables for Controllable Distribution and Non-controllable Distribution, which list the Company's performance by direct cause under each classification.) At the time that the Company established the determination of controllable and non-controllable distribution it undertook significant root cause analysis of each cause type and its proper categorization (either controllable or non-controllable). Thus, when outages are completed and evaluated, and if the outage cause designation is improperly identified as non-controllable, then it would result in correction to the outage's cause to preserve the association between controllable and non-controllable based on the outage cause code. The company distinguishes the performance delivered using this differentiation for comparing year to date performance against underlying and total performance metrics.

CERTIFICATE OF SERVICE

Docket No. 21-035-28

I hereby certify that on October 1, 2021, a true and correct copy of the foregoing was served by electronic mail to the following:

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