

October 29, 2018

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 Secretary

RE: **Docket No. 18-035-17** – Rocky Mountain Power’s Service Quality Review Report
Docket No. 08-035-55 – Service Quality Standards – June 2013 Service Quality Review Report
Docket No. 13-035-01 – Rocky Mountain Power’s Service Quality Review Report
Docket No. 15-035-72 – 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 (“Company”) submits the Service Quality Review Report for the period January through June 30, 2018.

The Company recognizes that environmental impacts, such as wildland fires, can result in reduced reliability. Over the past several years, the Company has been heavily engaged in fire mitigation planning in California and has recently evaluated the fire risks across its entire service territory and identified areas for which risks may be higher, which could lead to de-energized electrical equipment to minimize the consequences of wildland fire. The Company requests the Commission schedule a technical conference for the Company and stakeholders to discuss emergency response planning for fire risks, up to and including the impacts of pro-active de-energization.

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

By E-mail (preferred): datarequest@pacificorp.com
utahdockets@pacificorp.com
Jana.saba@pacificorp.com

By regular mail: Data Request Response Center
PacifiCorp
825 NE Multnomah, Suite 2000
Portland, OR 97232


Public Service Commission of Utah

October 29, 2018

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

Sincerely,

A handwritten signature in blue ink that reads "Joelle Steward". The signature is written in a cursive style with a large initial "J".

Joelle Steward
Vice President, Regulation

Enclosures



UTAH

SERVICE QUALITY

REVIEW

January 1 – June 30, 2018
Report

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EXECUTIVE SUMMARY

Rocky Mountain Power has a number of Performance Standards and Customer Guarantee service quality measures and reports currently in place. These standards and measures are reflective of Rocky Mountain Power's performance (both customer service and network performance) in providing customers with high levels of service. The Company developed these standards and measures using industry standards for collecting and reporting performance data where they exist. In other cases, largely where the industry has no established standards, Rocky Mountain Power has developed metrics, reporting and targets. These existing standards and measures can be used over time, both historically and prospectively, to measure the quality of service delivered to our customers. In 2012 the Company and stakeholders collaboratively developed reliability reporting rules that were intended to replace the Service Standards Program. This report reflects those changes and captures the state rules. In 2016 the Company worked with the Division of Public Utilities to establish a method to recognize fundamental changes in the performance of the network allowing for updates to performance baselines. These changes are also incorporated into this document.

1 Service Standards Program Summary¹

1.1 Rocky Mountain Power Customer Guarantees

<u>Customer Guarantee 1:</u> 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.
<u>Customer Guarantee 2:</u> Appointments	The Company will keep mutually agreed upon appointments, which will be scheduled within a two-hour time window.
<u>Customer Guarantee 3:</u> 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.
<u>Customer Guarantee 4:</u> 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.
<u>Customer Guarantee 5:</u> 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.
<u>Customer Guarantee 6:</u> 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.
<u>Customer Guarantee 7:</u> 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 with Rule 25 and relevant exemptions.

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

¹ 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.

1.2 Rocky Mountain Power Performance Standards²

<u>*Network Performance Standard 1:</u> 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.
<u>*Network Performance Standard 2:</u> 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.
<u>Network Performance Standard 3:</u> 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 ³ .
<u>*Network Performance Standard 4:</u> 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.
<u>Customer Service Performance Standard 5:</u> 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.
<u>Customer Service Performance Standard 6:</u> 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.

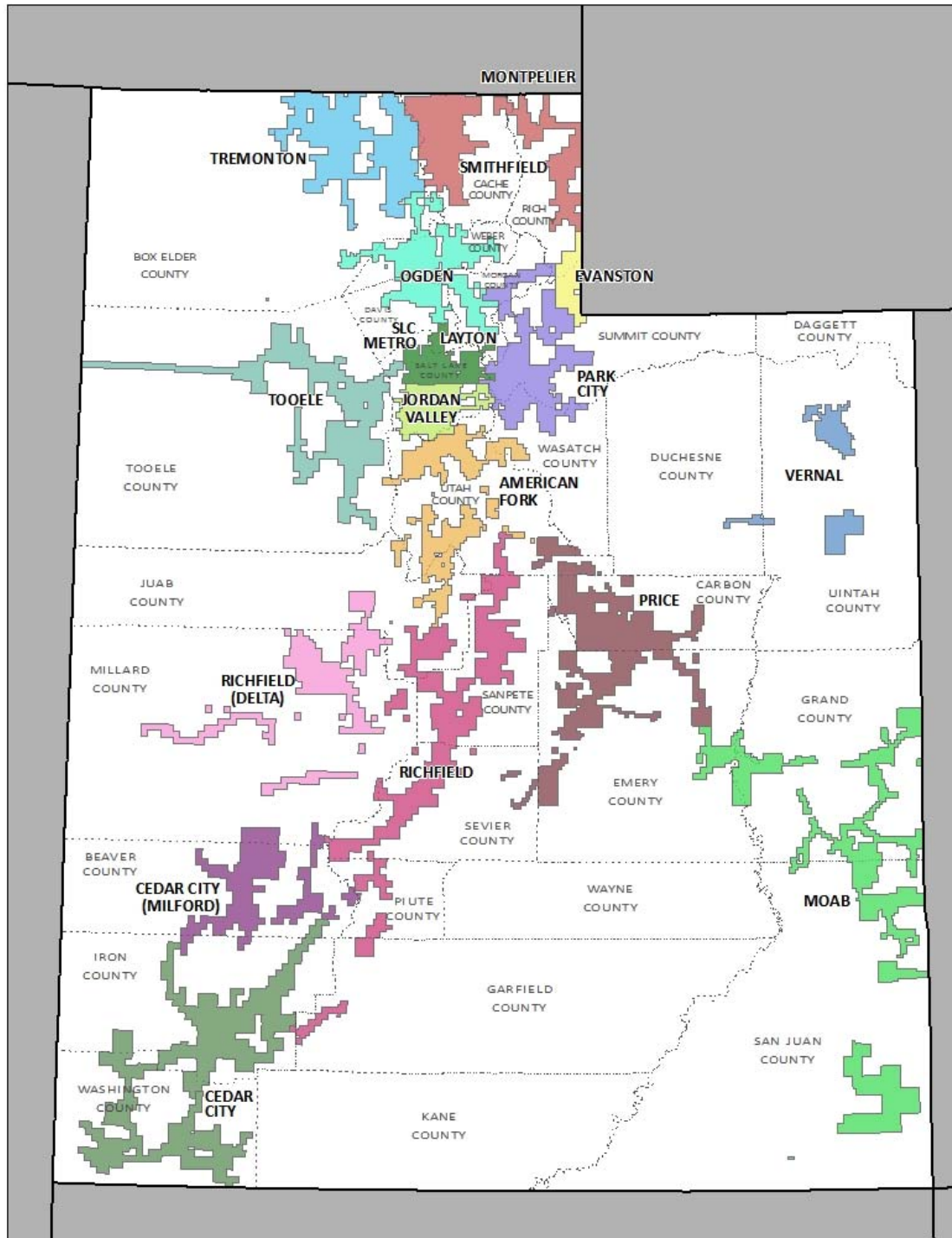
*Note: Performance Standards 1, 2 & 4 are for underlying performance days and exclude Major Events.

² On December 20, 2016, the Public Service Commission of Utah approved a modified electric service reliability performance baseline notification levels to 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).

³ On June 1, 2017, 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.

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.



2 RELIABILITY PERFORMANCE

For the reporting period, the Company's performance is on target for delivering system average interruption duration index (SAIDI) performance and system average interruption frequency index (SAIFI), within the performance baseline range (SAIDI between 137-187 minutes and SAIFI between 1.0 and 1.6 events).

Results for the underlying performance can be seen in subsections 2.1 and 2.2 below, where the Company's current underlying reliability results are shown with the Company's control zones, which are colored green in the graphic. History reflecting these metrics is displayed in Sections 2.3 and 2.4. Baselines are discussed in Section 2.5. Cause code information, which is reported consistently with past Service Quality Review Reports, is shown in Section 2.6. Finally, Section 2.7 contains reporting information complies with features outlined in Utah Title 746.313.

During the reporting period, there were no major events⁴ while four significant event days⁵ were recorded.

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 reporting period four significant event days were recorded, which account for 11.6 SAIDI minutes, or about 20% of the reporting period's underlying 57 SAIDI minutes. These significant events were triggered by weather-impacted and loss of supply outages.

Significant Event Days					
Dates	Cause: General Description	SAIDI	SAIFI	% Underlying SAIDI	% Underlying SAIFI
February 19, 2018	Snow Storm and Pole Fires in Salt Lake City	2.8	0.017	5%	3%
March 22, 2018	Loss of Substation in Ogden	2.8	0.020	5%	4%
April 9, 2018	Loss of Transmission in Jordan Valley	3.1	0.058	5%	11%
April 16, 2018	Wind Storm in Salt Lake City and Jordan Valley	2.9	0.023	5%	4%
TOTAL		11.6	0.118	20%	22%

⁴ Major event threshold shown below:

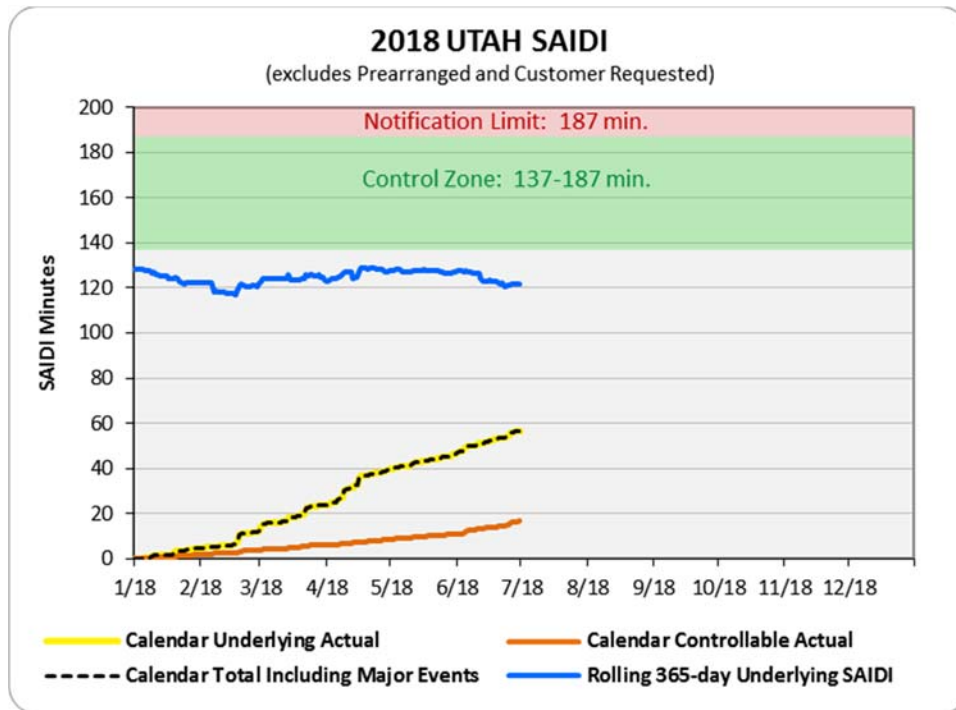
Effective Date	Customer Count	ME Threshold SAIDI	ME Customer Minutes Lost
1/1-12/31/2018	917,739	5.41	4,969,384

⁵ 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).

2.1 System Average Interruption Duration Index (SAIDI)

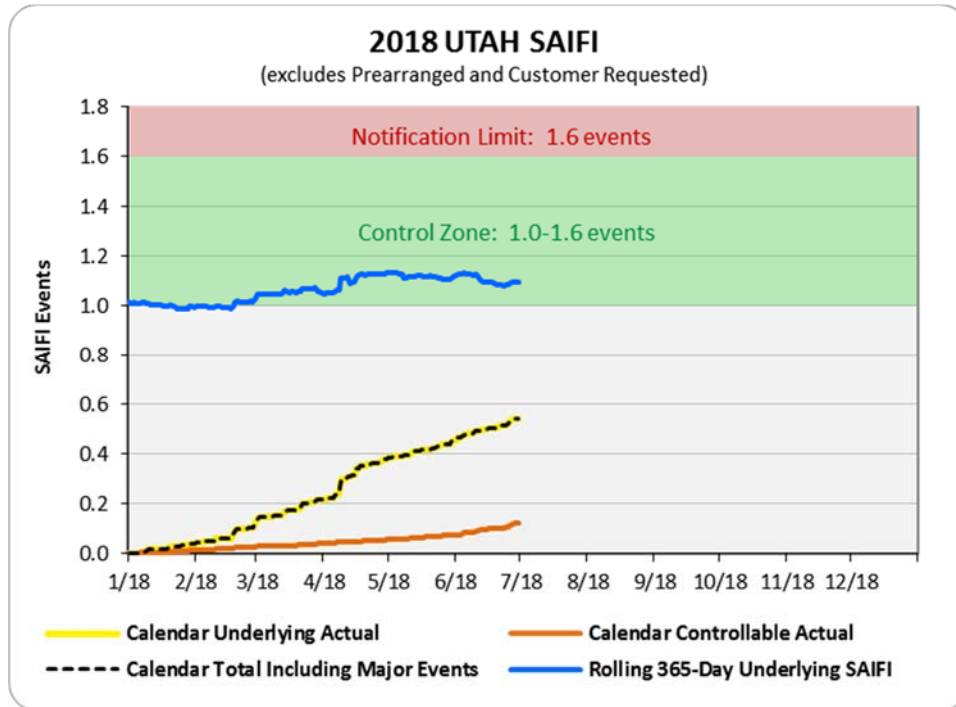
Over time the Company has made system changes to minimize how many customers are affected for any given outage. This approach has resulted in improvements to both outage duration and outage frequency, and has yielded improved performance as delivered to customers, as generally shown in the graphic below and in Section 2.2.

SAIDI	Reporting Period
Total	57
Underlying	57
Controllable Distribution	17



2.2 System Average Interruption Frequency Index (SAIFI)

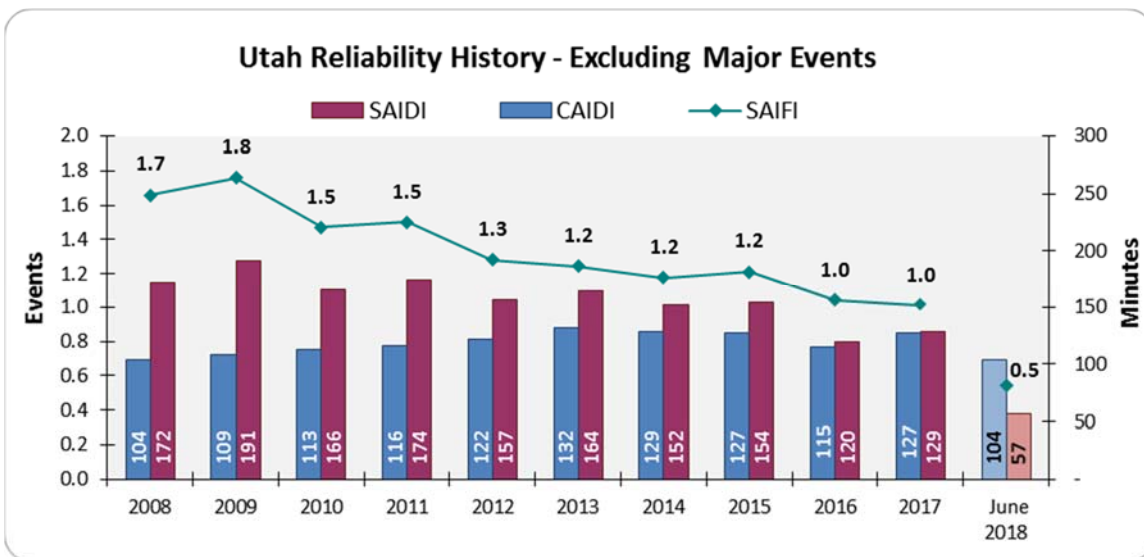
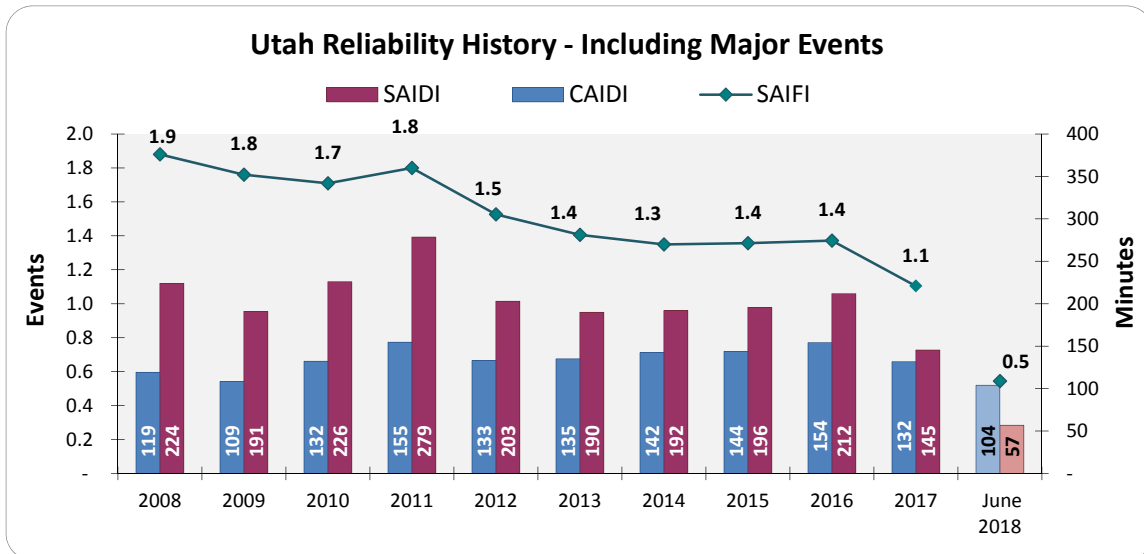
SAIFI	Reporting Period
Total	0.544
Underlying	0.544
Controllable Distribution	0.124



2.3 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 2.4 and 2.6, where 365-day rolling performance trends are depicted. These indices (shown in the history charts below and in Sections 2.4 and 2.6) 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. In recognition of the improved performance the Commission directed the Company to work with the Division to develop processes to establish modified performance baselines, which are detailed further in Section 2.6.

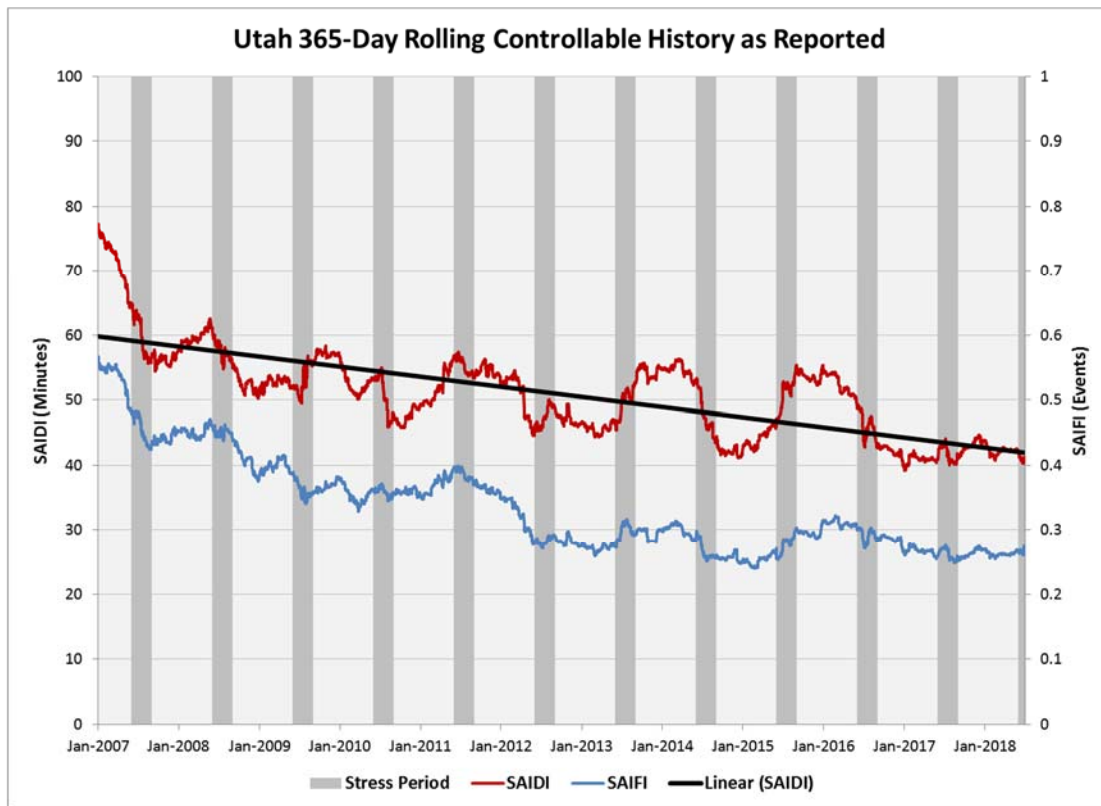
It is particularly noteworthy that these two metrics show durable improvement for both underlying and major event performance within the state, meaning that the system is more resilient on a day-to-day basis as well as when extreme weather or other system impacting events occur.



2.4 Controllable, Non-Controllable and Underlying Performance Review

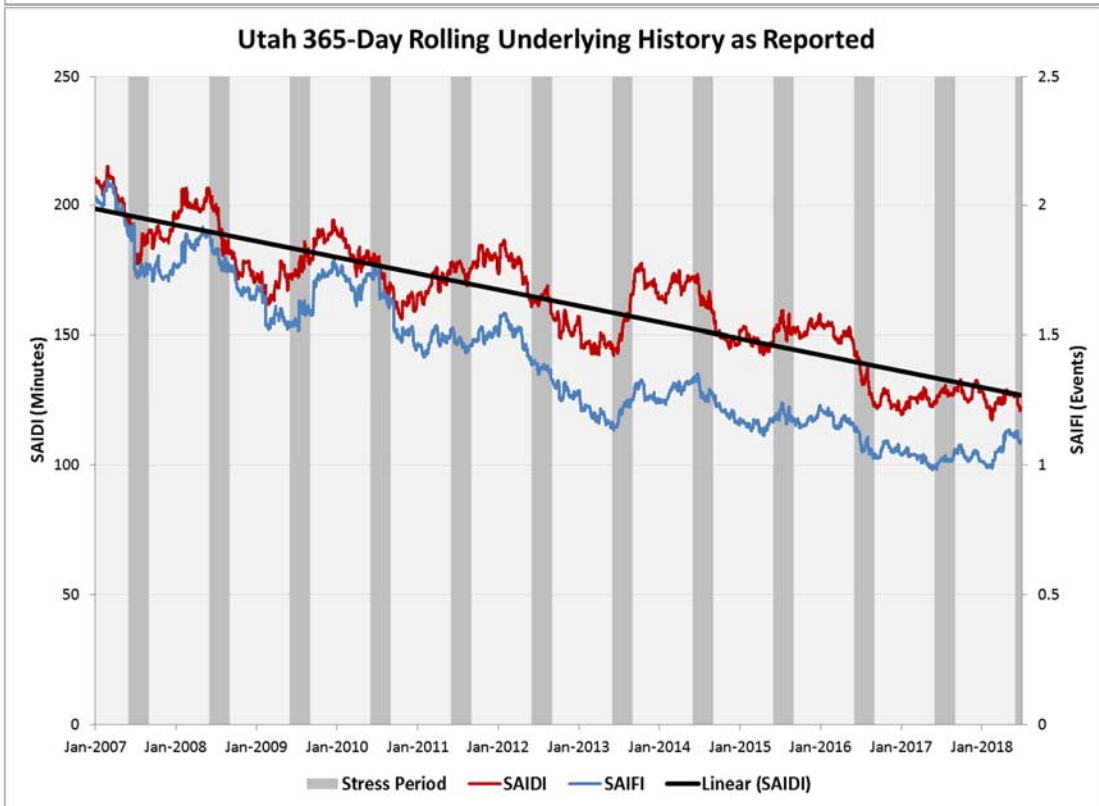
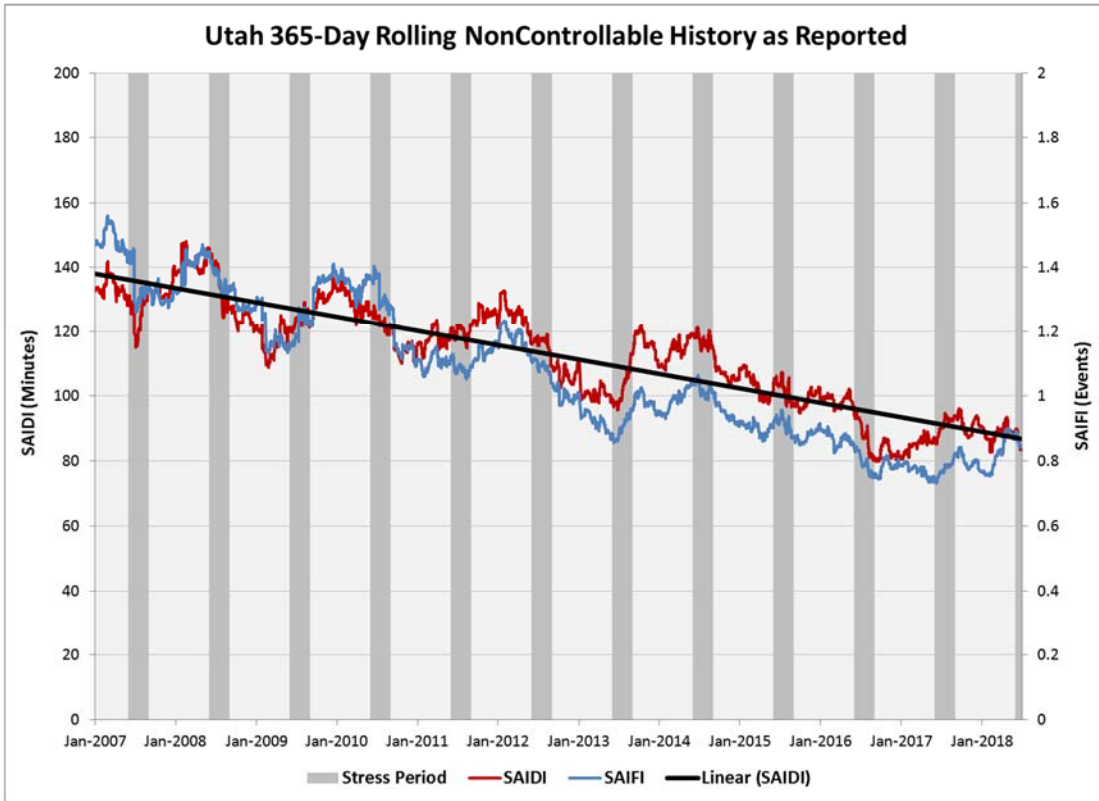
In 2008 the Company introduced a further categorization of outage causes, which it subsequently used to develop improvement programs as developed by engineering resources. This categorization was titled Controllable Distribution outages and recognized that certain types of outages can be cost-effectively avoided. So, for example, animal-caused interruptions, as well as equipment failure interruptions have a less random nature than lightning caused interruptions; other causes have also been determined and are specified in Section 2.5. 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 outages⁶. 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.



⁶ 3. The Company shall provide, as an appendix to its Service Quality Review reports, information regarding non-controllable outages, including, when applicable, descriptions of efforts made by the Company to improve service quality and reliability for causes the Company has identified as not controllable.

4. The Company shall provide a supplemental filing, within 90 days, consisting of a process for measuring performance and improvements for the non-controllable events.



2.5 Cause Analysis Tables (Pre-Title 746-313 Modification)

Certain types of outages typically result in a large amount of customer minutes lost, but are infrequent, such as Loss of Supply outages. Others tend to be more frequent, but result in few customer minutes lost.

The cause analysis tables below detail SAIDI⁷ and SAIFI by direct cause, with separate tables for the company's Controllable metrics and its Underlying metrics. (Both tables exclude major events.) Following the detail tables are pie charts showing the percentages attributed to each cause category with respect to three measures: total incidents, total customer minutes lost and total sustained customer interruptions, again with separate pie charts for Controllable and Underlying.

Note that the Underlying cause analysis table includes prearranged outages (*Customer Requested, Customer Notice Given, and Planned Notice Exempt* line items) with subtotals for their inclusion, while the grand totals in the table exclude these prearranged outages so that grand totals align with reported SAIDI and SAIFI metrics for the period. The following pie and historical cause detail reflect the cause category performance; these charts exclude prearranged outages, to align with the underlying reportable results. Following the charts, a table of definitions provides descriptive examples for each direct cause category. Further cause analysis is explored in Section 2.7.

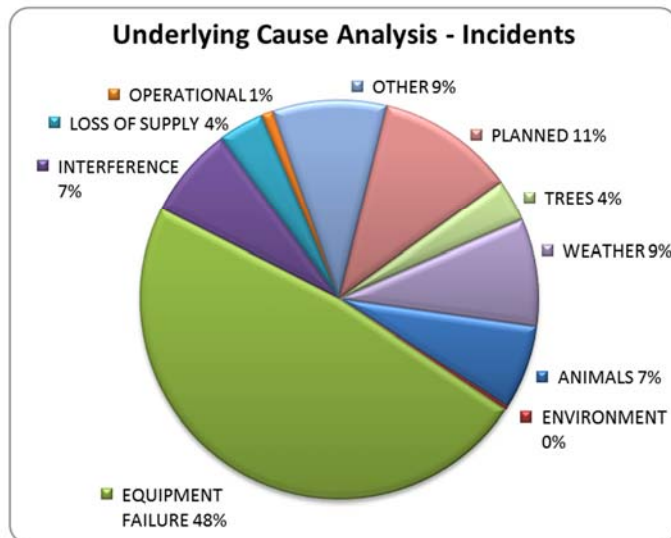
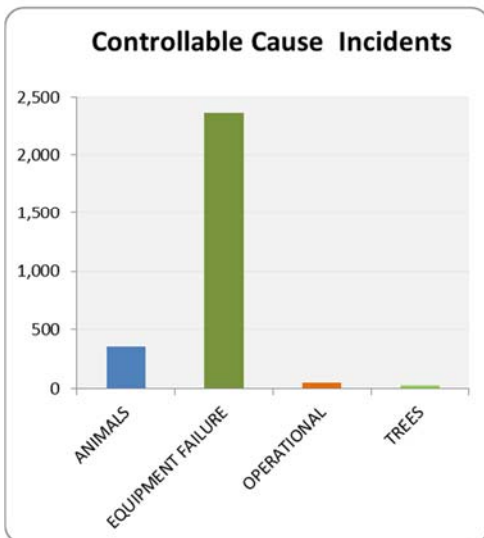
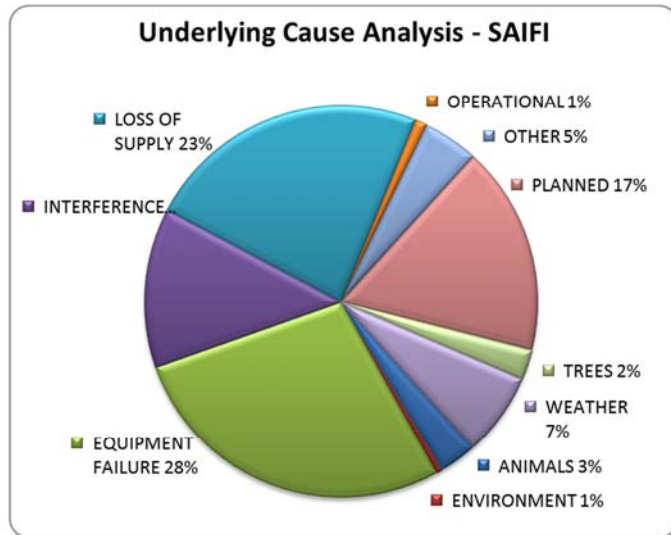
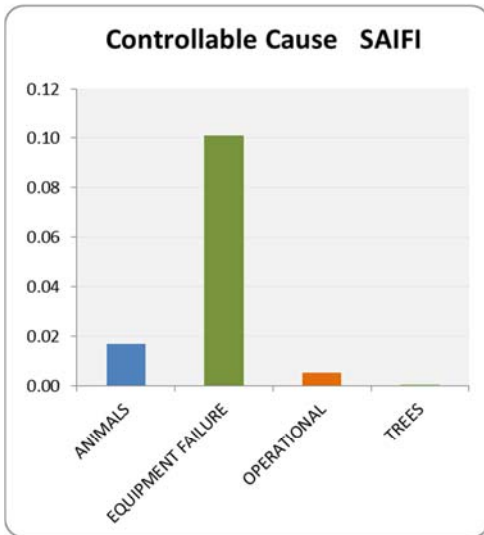
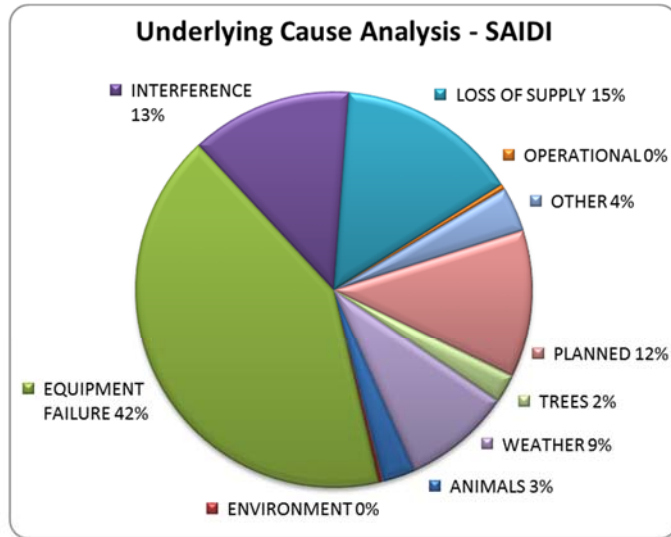
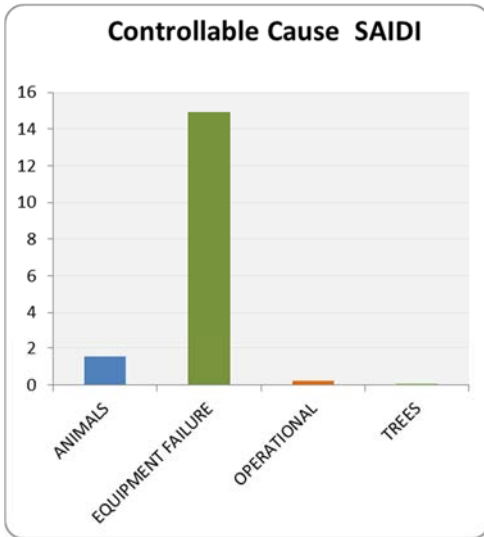
Utah Cause Analysis - Controllable 01/01/2018 - 06/30/2018					
Direct Cause	Customer Minutes Lost for Incident	Customers in Incident Sustained	Sustained Incident Count	SAIDI	SAIFI
ANIMALS	251,946	2,729	192	0.27	0.003
BIRD MORTALITY (NON-PROTECTED SPECIES)	634,431	8,330	79	0.69	0.009
BIRD MORTALITY (PROTECTED SPECIES) (BMTS)	270,558	2,997	32	0.29	0.003
BIRD NEST (BMTS)	18,776	109	23	0.02	0.000
BIRD SUSPECTED, NO MORTALITY	223,762	1,188	35	0.24	0.001
ANIMALS	1,399,474	15,353	361	1.52	0.017
B/O EQUIPMENT	1,817,721	21,046	305	1.98	0.023
DETERIORATION OR ROTTING	11,591,473	67,157	2,013	12.63	0.073
OVERLOAD	262,050	4,582	29	0.29	0.005
RELAYS, BREAKERS, SWITCHES	-	-	4	-	-
STRUCTURES, INSULATORS, CONDUCTOR	5,321	13	15	0.01	0.000
EQUIPMENT FAILURE	13,676,565	92,798	2,366	14.90	0.101
FAULTY INSTALL	68,283	312	13	0.07	0.000
IMPROPER PROTECTIVE COORDINATION	11,436	163	4	0.01	0.000
INCORRECT RECORDS	12,030	636	11	0.01	0.001
INTERNAL CONTRACTOR	84,020	1,898	6	0.09	0.002
PACIFICORP EMPLOYEE - FIELD	41,167	1,865	17	0.04	0.002
SWITCHING ERROR	-	-	-	-	-
OPERATIONAL	216,936	4,874	51	0.24	0.005
TREE - TRIMMABLE	46,832	332	25	0.05	0.000
TREES	46,832	332	25	0.05	0.000
Utah Including Prearranged	15,339,806	113,357	2,803	16.71	0.124

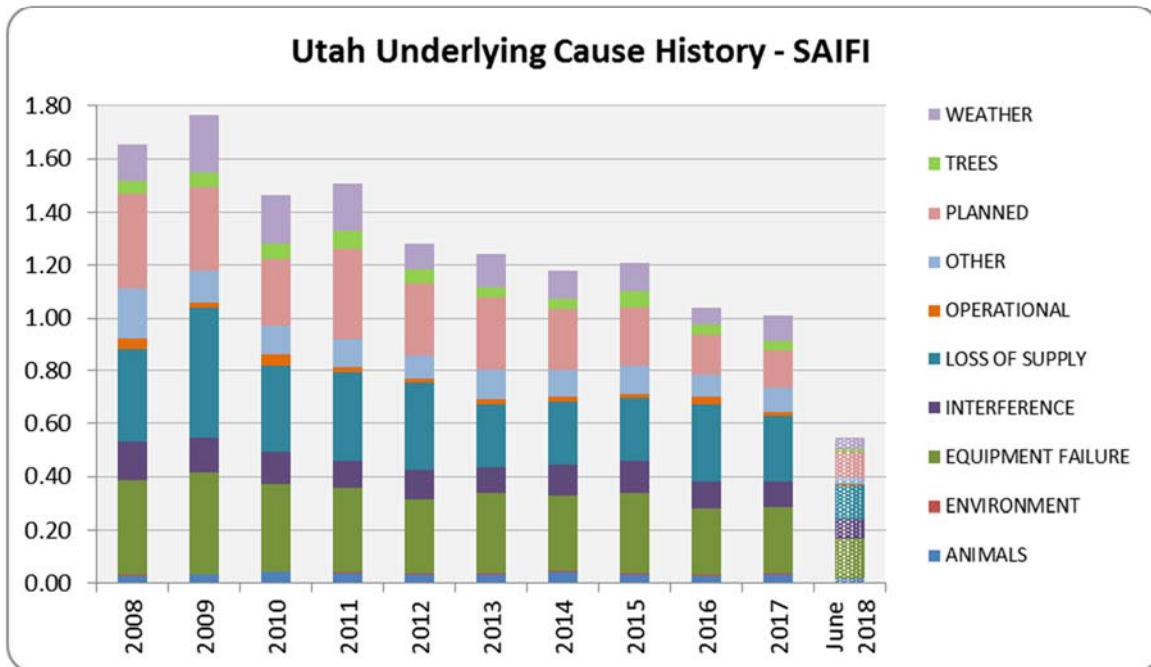
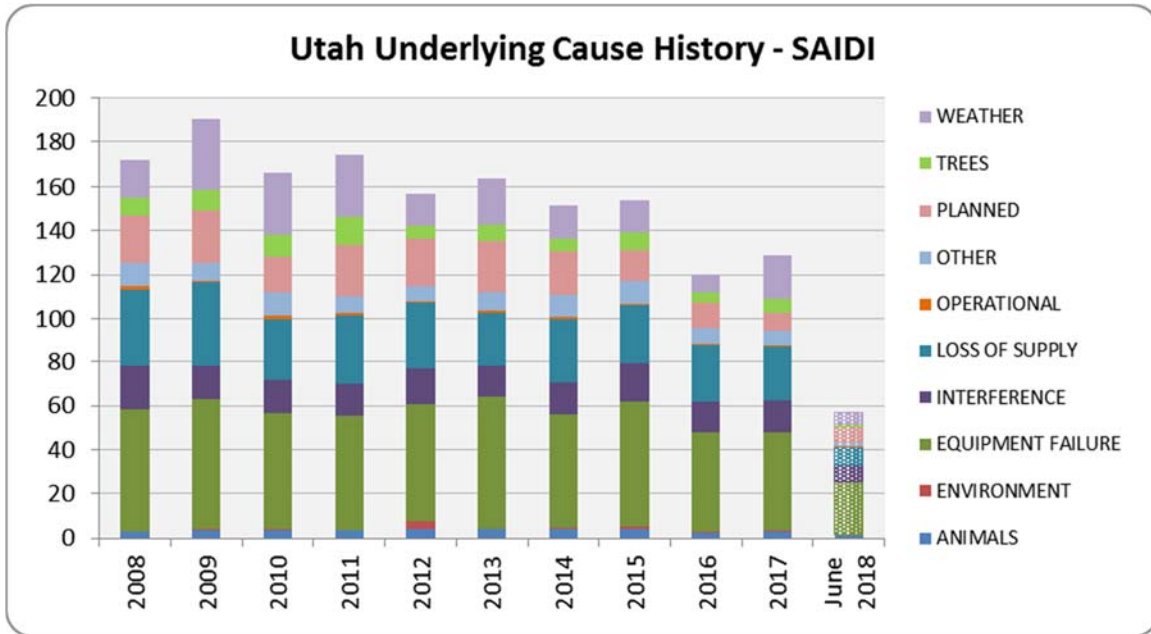
⁷ To convert SAIDI (Outage Duration) and SAIFI (Outage Frequency) to Customer Minutes Lost and Sustained Customer Interruptions, respectively, multiply the SAIDI or SAIFI value by 879,258 (2017 Utah frozen customer count).

Utah Cause Analysis - Underlying 1/1/2018 - 6/30/2018					
Direct Cause	Customer Minutes Lost for Incident	Customers in Incident Sustained	Sustained Incident Count	SAIDI	SAIFI
ANIMALS	251,946	2,729	192	0.27	0.003
BIRD MORTALITY (NON-PROTECTED SPECIES)	634,431	8,330	79	0.69	0.009
BIRD MORTALITY (PROTECTED SPECIES) (BMTS)	270,558	2,997	32	0.29	0.003
BIRD NEST (BMTS)	18,776	109	23	0.02	0.000
BIRD SUSPECTED, NO MORTALITY	223,762	1,188	35	0.24	0.001
ANIMALS	1,399,474	15,353	361	1.52	0.017
CONDENSATION / MOISTURE	25,546	129	4	0.03	0.000
FIRE/SMOKE (NOT DUE TO FAULTS)	139,349	2,382	12	0.15	0.003
ENVIRONMENT	164,895	2,511	16	0.18	0.003
B/O EQUIPMENT	1,817,721	21,046	305	1.98	0.023
DETERIORATION OR ROTTING	11,591,473	67,157	2,013	12.63	0.073
NEARBY FAULT	17,150	1,084	2	0.02	0.001
OVERLOAD	262,050	4,582	29	0.29	0.005
POLE FIRE	8,011,387	44,423	188	8.73	0.048
STRUCTURES, INSULATORS, CONDUCTOR	5,321	13	15	0.01	0.000
EQUIPMENT FAILURE	21,705,102	138,305	2,552	23.65	0.151
DIG-IN (NON-PACIFICORP PERSONNEL)	1,843,494	16,242	149	2.01	0.018
OTHER INTERFERING OBJECT	796,330	14,674	59	0.87	0.016
OTHER UTILITY/CONTRACTOR	55,644	492	40	0.06	0.001
VANDALISM OR THEFT	144,772	384	7	0.16	0.000
VEHICLE ACCIDENT	4,015,735	33,809	140	4.38	0.037
INTERFERENCE	6,855,974	65,601	395	7.47	0.071
LOSS OF FEED FROM SUPPLIER	36,539	1,104	5	0.04	0.001
LOSS OF SUBSTATION	2,174,849	23,625	27	2.37	0.026
LOSS OF TRANSMISSION LINE	5,517,338	92,364	160	6.01	0.101
SYSTEM PROTECTION	5,420	4	3	0.01	0.000
LOSS OF SUPPLY	7,734,147	117,097	195	8.43	0.128
FAULTY INSTALL	68,283	312	13	0.07	0.000
IMPROPER PROTECTIVE COORDINATION	11,436	163	4	0.01	0.000
INCORRECT RECORDS	12,030	636	11	0.01	0.001
INTERNAL CONTRACTOR	84,020	1,898	6	0.09	0.002
PACIFICORP EMPLOYEE - FIELD	41,167	1,865	17	0.04	0.002
UNSAFE SITUATION	175	1	1	0.00	0.000
OPERATIONAL	217,111	4,875	52	0.24	0.005
OTHER, KNOWN CAUSE	258,432	6,352	58	0.28	0.007
UNKNOWN	1,628,893	16,526	434	1.77	0.018
OTHER	1,887,325	22,878	492	2.06	0.025
CONSTRUCTION	62,215	1,762	42	0.07	0.002
CUSTOMER NOTICE GIVEN*	11,472,828	62,281	1,449	12.50	0.068
CUSTOMER REQUESTED*	1,487	14	3	0.00	0.000
EMERGENCY DAMAGE REPAIR	5,549,537	75,973	518	6.05	0.083
INTENTIONAL TO CLEAR TROUBLE	601,409	7,858	29	0.66	0.009
PLANNED NOTICE EXEMPT*	1,627,770	11,695	136	1.77	0.013
TRANSMISSION REQUESTED	71,374	199	5	0.08	0.000
PLANNED	19,386,620	159,782	2,182	21.12	0.174
TREE - NON-PREVENTABLE	1,152,373	12,065	158	1.26	0.013
TREE - TRIMMABLE	46,832	332	25	0.05	0.000
TREES	1,199,205	12,397	183	1.31	0.014
ICE	1,264	15	6	0.00	0.000
LIGHTNING	417,407	3,943	66	0.45	0.004
SNOW, SLEET AND BLIZZARD	706,546	7,408	73	0.77	0.008
WIND	3,466,778	23,147	316	3.78	0.025
WEATHER	4,591,995	34,513	461	5.00	0.038
Utah Including Prearranged*	65,141,846	573,312	6,889	70.98	0.625
Utah Excluding Prearranged	52,039,761	499,322	5,301	56.70	0.544

UTAH

January 1 – December 31, 2017



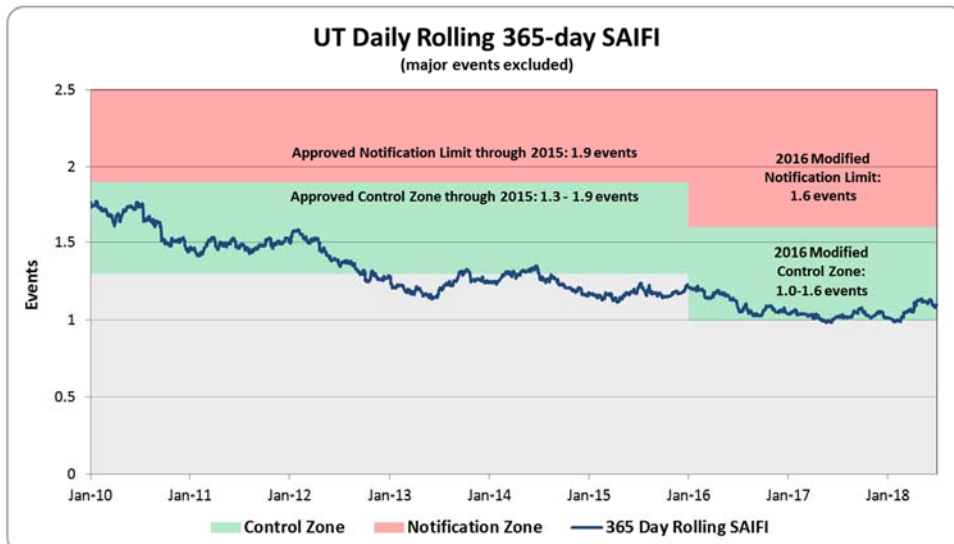
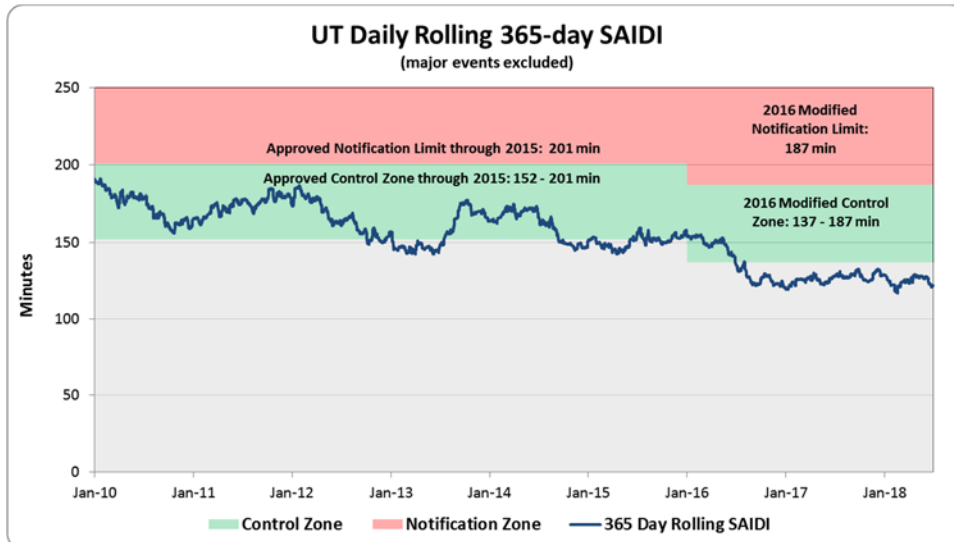


Direct Cause Category	Category Definition & Example/Direct Cause
Animals	Any problem nest that requires removal, relocation, trimming, etc.; any birds, squirrels or other animals, whether or not remains found.
	<ul style="list-style-type: none"> • Animal (Animals) • Bird Mortality (Non-protected species) • Bird Mortality (Protected species)(BMTS) <ul style="list-style-type: none"> • 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).
	<ul style="list-style-type: none"> • Condensation/Moisture • Contamination • Fire/Smoke (not due to faults) • Flooding <ul style="list-style-type: none"> • 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).
	<ul style="list-style-type: none"> • B/O Equipment • Overload <ul style="list-style-type: none"> • 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.
	<ul style="list-style-type: none"> • Dig-in (Non-PacifiCorp Personnel) • Other Interfering Object • Vandalism or Theft <ul style="list-style-type: none"> • Other Utility/Contractor • Vehicle Accident
Loss of Supply	Failure of supply from Generator or Transmission system; failure of distribution substation equipment.
	<ul style="list-style-type: none"> • Failure on other line or station • Loss of Feed from Supplier • Loss of Generator <ul style="list-style-type: none"> • 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.
	<ul style="list-style-type: none"> • Contact by PacifiCorp • Faulty Install • Improper Protective Coordination • Incorrect Records • Internal Contractor <ul style="list-style-type: none"> • Internal Tree Contractor • Switching Error • Testing/Startup Error • Unsafe Situation
Other	Cause Unknown; use comments field if there are some possible reasons.
	<ul style="list-style-type: none"> • Invalid Code • Other, Known Cause <ul style="list-style-type: none"> • 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.
	<ul style="list-style-type: none"> • Construction • Customer Notice Given • Energy Emergency Interruption • Intentional to Clear Trouble <ul style="list-style-type: none"> • Emergency Damage Repair • Customer Requested • Planned Notice Exempt • Transmission Requested
Tree	Growing or falling trees
	<ul style="list-style-type: none"> • Tree-Non-preventable • Tree-Trimable <ul style="list-style-type: none"> • Tree-Tree felled by Logger
Weather	Wind (excluding windborne material); snow, sleet or blizzard, ice, freezing fog, frost, lightning.
	<ul style="list-style-type: none"> • Extreme Cold/Heat • Freezing Fog & Frost • Wind <ul style="list-style-type: none"> • Lightning • Rain • Snow, Sleet, Ice and Blizzard

2.6 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). 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 NOS. 13-035-01 and 15-035-72). The original and modified baselines are shown below.

	SAIDI (Minutes)			SAIFI (Events)		
	Average	Lower Value Control Zone	Upper Value Control Zone	Average	Lower Value Control Zone	Upper Value Control Zone
Prior Baseline	-	152	201	-	1.3	1.9
2016 Modified Baseline	162	137	187	1.36	1.0	1.6



UTAH

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2.7 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. Thus, in order to include both, the new required segmentation in addition to the pre-reporting rule segmentation was considered the ideal reporting approach. As this report evolves, certain of these redundancies may be eliminated.

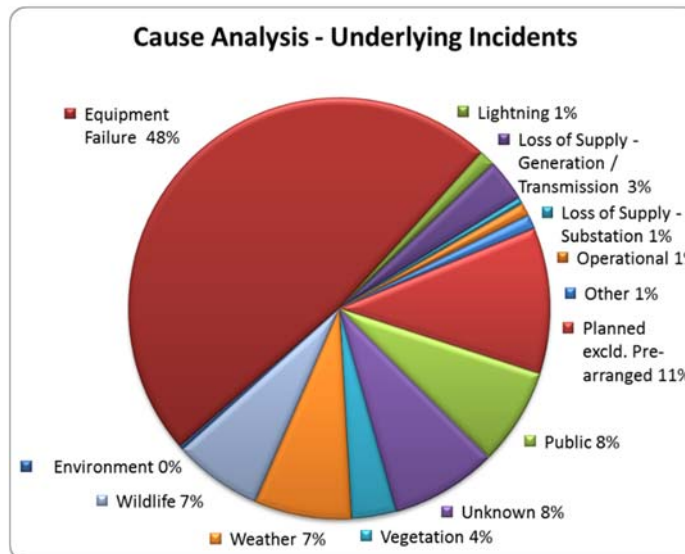
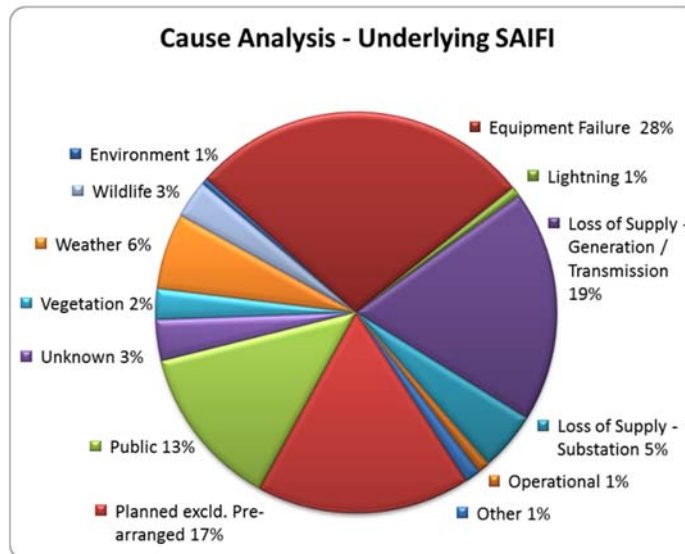
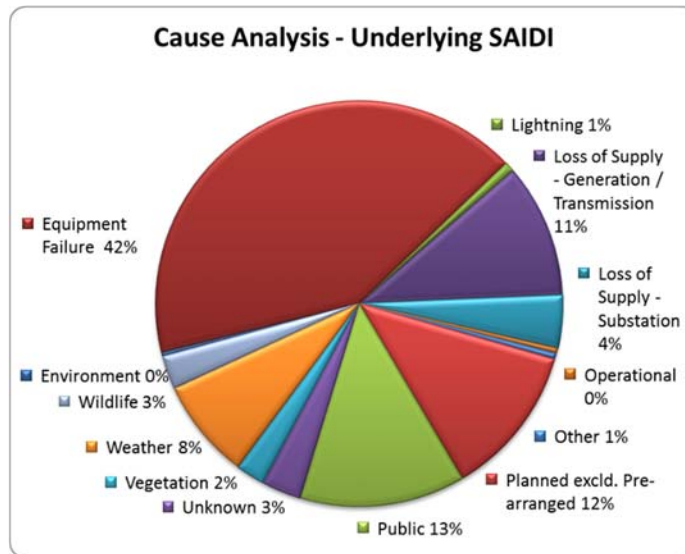
The final rule required five-year history at an operating area level for SAIDI, SAIFI and CAIDI. At a state level, these metrics in addition to MAIFle⁸ are required.

Major Events and Prearranged Excluded*	2013				2014				2015				2016				2017				June 2018			
STATE	SAIDI	SAIFI	CAIDI	MAIFle	SAIDI	SAIFI	CAIDI	MAIFle	SAIDI	SAIFI	CAIDI	MAIFle	SAIDI	SAIFI	CAIDI	MAIFle	SAIDI	SAIFI	CAIDI	MAIFle	SAIDI	SAIFI	CAIDI	MAIFle
Utah	164	1.2	132	0.81	152	1.2	129	1.21	154	1.2	127	1.48	120	1.0	115	1.76	129	1.0	127	1.11	57	0.5	104	1.40
OP AREA																								
AMERICAN FORK	126	1.3	99		113	1.0	109		134	1.1	128		92	1.0	93		77	0.8	102		37	0.3	107	
CEDAR CITY	225	1.8	127		170	1.1	151		238	1.6	146		174	1.5	116		183	1.7	109		63	0.6	106	
CEDAR CITY (MILFORD)	707	3.3	213		891	3.3	271		334	3.6	92		650	4.9	132		565	2.5	230		157	0.8	208	
JORDAN VALLEY	106	0.7	145		103	0.7	141		128	1.0	126		100	0.8	131		109	0.8	139		58	0.6	92	
LAYTON	105	1.0	109		108	0.8	127		122	1.1	109		90	0.9	103		115	0.8	149		43	0.4	119	
MOAB	284	1.9	147		412	2.3	181		426	3.5	122		278	3.0	93		190	2.4	80		35	0.5	68	
OGDEN	168	1.4	122		218	1.9	113		175	1.4	123		120	1.0	120		119	0.9	138		55	0.6	90	
PARK CITY	232	1.5	155		147	1.1	140		247	1.5	162		183	1.6	117		227	1.4	159		85	0.6	154	
PRICE	514	1.8	293		394	2.2	180		230	1.8	127		340	3.3	104		171	2.5	69		65	0.8	77	
RICHFIELD	469	3.4	138		181	1.7	104		303	2.2	137		132	1.3	101		187	2.0	95		59	0.5	118	
RICHFIELD (DELTA)	316	3.7	85		202	1.9	108		536	3.0	180		215	2.1	103		139	1.3	105		137	0.7	197	
SLC METRO	170	1.2	139		145	1.1	129		107	0.9	125		104	0.9	113		114	1.0	111		59	0.5	110	
SMITHFIELD	81	0.7	117		114	0.9	126		236	1.6	150		117	1.0	118		139	0.9	149		19	0.4	52	
TOOELE	137	1.3	103		239	2.1	115		129	1.3	103		161	1.1	151		140	1.4	100		121	0.9	141	
TREMONTON	335	3.3	102		216	2.0	111		462	4.2	110		399	3.1	129		200	2.0	99		92	0.6	164	
VERNAL	160	2.1	75		119	1.2	101		68	0.8	87		53	0.6	84		77	0.8	96		27	0.4	77	

*except MAIFle

Utah Cause Category	2013		2014		2015		2016		2017		June 2018	
	SAIDI	SAIFI	SAIDI	SAIFI	SAIDI	SAIFI	SAIDI	SAIFI	SAIDI	SAIFI	SAIDI	SAIFI
Environment	0	0.0	1	0.0	1	0.0	1	0.0	1	0.0	0	0.0
Equipment Failure	60	0.3	51	0.3	56	0.3	45	0.2	44	0.2	24	0.2
Lightning	9	0.1	7	0.1	6	0.1	3	0.0	3	0.0	0	0.0
Loss of Supply - Generation/Transmission	19	0.2	23	0.2	22	0.2	13	0.2	13	0.1	6	0.1
Loss of Supply - Substation	6	0.0	6	0.0	5	0.0	13	0.1	11	0.1	2	0.0
Operational	1	0.0	1	0.0	1	0.0	1	0.0	1	0.0	0	0.0
Other	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Planned (excl. Prearranged)	24	0.3	20	0.2	14	0.2	11	0.2	8	0.1	7	0.1
Public	14	0.1	15	0.1	18	0.1	14	0.1	15	0.1	7	0.1
Unknown	8	0.1	10	0.1	10	0.1	7	0.1	6	0.1	2	0.0
Vegetation	7	0.0	6	0.0	8	0.1	5	0.0	6	0.0	1	0.0
Weather	12	0.1	8	0.0	8	0.0	5	0.0	16	0.1	5	0.0
Wildlife	4	0.0	4	0.0	5	0.0	2	0.0	3	0.0	2	0.0
UTAH Underlying	164	1.2	152	1.2	154	1.2	120	1.0	129	1.0	57	0.5

⁸ MAIFle 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.



2.8 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 described in section 2.8.4. 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.

2.8.1 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.

2.8.2 Project approvals by district

The identification of projects is an ongoing process throughout the year. An approval team reviews projects weekly 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.

UTAH

January 1 – December 31, 2017

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	42	\$0.63	15	445,243	630,092	\$1.13	\$0.92	2	25
Cedar City	10	\$1.28	2	570,766	1,477,602	\$0.61	\$0.19	1	7
Cedar City (Milford)	4	\$0.68	1	31,251	72,469	\$2.46	\$2.03	1	2
Jordan Valley	78	\$1.35	14	666,115	1,092,591	\$1.14	\$1.08	4	60
Layton	21	\$0.76	7	529,880	1,000,438	\$0.68	\$0.54	2	12
Moab	61	\$0.76	13	892,191	2,107,668	\$0.70	\$0.46	3	45
Ogden	10	\$1.68	2	138,106	259,107	\$0.42	\$0.17	3	5
Park City	44	\$0.92	12	1,461,697	2,396,829	\$0.86	\$0.57	3	29
Price	27	\$0.59	15	1,176,851	3,021,634	\$0.50	\$0.26	3	9
Richfield	14	\$0.37	3	31,829	42,639	\$2.92	\$2.86	1	10
Richfield (Delta)	10	\$2.11	0	-	-	\$0.00	\$0.00	0	10
SLC Metro	8	\$4.71	0	-	-	\$0.00	\$0.00	1	7
Smithfield	16	\$0.71	2	32,314	43,217	\$5.53	\$5.38	1	13
Tooele	14	\$0.50	4	649,360	810,620	\$0.25	\$0.14	2	8
Tremonton	12	\$0.62	4	362,706	1,152,978	\$0.66	\$0.20	0	8
Vernal	14	\$0.95	9	222,016	519,501	\$0.72	\$0.49	1	4
Total	385	\$0.87	103	7,210,325	14,627,385	\$0.75	\$0.47	28	254

*Metrics cover RWP's approved between 7/1/2015 and 06/30/2018

2.8.3 Reduce CPI for Worst Performing Circuits by 20%

Prior to the Open Reliability Reporting process, the Company reviewed circuits for performance. One of the measures that it used was called circuit performance indicator (CPI), which was a blended weighting of key reliability metrics covering a three-year period. The higher the number, the poorer the blended performance the circuit is delivering. As part of the Company's Performance Standards Program, it annually selected a set of Worst Performing Circuits for improvements, which were to be completed within two years of selection. Within five years of selection, the average performance of the five-selection circuits must have improved by at least 20% (as measured by comparing current performance against baseline performance).

2.8.4 Circuit Performance Score Updates for Prior-Year Selections

Annually, the company tracked the performance of circuits designated in the Worst Performing Circuits program, until the Program Year has successfully met the target score.

WORST PERFORMING CIRCUITS	STATUS	BASELINE ⁹	Performance 6/30/18
Program Year 17: (CY2016)			
Red Mountain 33	IN PROGRESS	1283	1311
Fountain Green 12	COMPLETE	266	168
Middleton 24	COMPLETE	253	251
Willowridge 11	COMPLETE	177	91
Summit Park 11	COMPLETE	116	89
TARGET SCORE = 335		419	382
Program Year 16: (CY2015)			
Nibley 21	COMPLETE	179	289
Brighton 12	COMPLETE	270	123
Rattlesnake 22	COMPLETE	456	509
Decker Lake 12	COMPLETE	167	67
Toquerville 31	COMPLETE	475	238
TARGET SCORE = 248	Target Met	309	245
Program Year 15: (CY2014)			
Skull Valley 11	COMPLETE	468	174
Fort Douglas 13	COMPLETE	417	100
Parowan Valley 25	COMPLETE	408	268
Brighton 21	COMPLETE	364	221
Bush 12	COMPLETE	281	148
TARGET SCORE = 248	Target Met	310	182

⁹ RMP transitioned fully to applying CPI99 rather than CPI05 based on prior review with Stakeholders where the limitations of CPI05 were explored. Due to inclusion of major event and transmission outages, reporting period comparisons yielded a limited ability to identify the benefits of improvements made for each of the circuits. The application of CPI99 proved to demonstrate more consistently how performance comparisons could be made.

WORST PERFORMING CIRCUITS	STATUS	BASELINE	Performance 12/31/2017
Program Year 14: (CY2013)			
Snyderville 16	COMPLETE	72	116
Eden 11	COMPLETE	116	114
Bush 11	COMPLETE	228	97
Pioneer 12	COMPLETE	177	88
Grantsville 12	COMPLETE	250	94
TARGET SCORE = 108	Target Met	135	102
Program Year 13: (CY2012)			
Fielding 11	COMPLETE	207	164
East Bench 12	COMPLETE	112	19
Clinton 11	COMPLETE	133	43
Redwood 16	COMPLETE	145	65
Orangeville 11	COMPLETE	114	69
TARGET SCORE = 114	Target Met	142	72
Program Year 12: (CY2011)			
Lincoln 15	COMPLETE	173	29
Huntington City 12	COMPLETE	285	71
Magna 15	COMPLETE	140	37
Gunnison 12	COMPLETE	110	114
Capitol 11	COMPLETE	129	35
TARGET SCORE = 134	Target Met	167	57
Program Year 11: (CY2010)			
Decker Lake 12	COMPLETE	102	67
North Bench 13	COMPLETE	95	45
Newgate 14	COMPLETE	164	33
Newton 12	COMPLETE	105	41
St Johns 11	COMPLETE	547	157
TARGET SCORE = 162	Target Met	203	68
Program Year 10: (CY2009)			
Fruit Heights 12	COMPLETE	113	91
Mathis 12	COMPLETE	132	126
Parrish 11	COMPLETE	137	38
Valley Center 11	COMPLETE	169	33
Hammer 15	COMPLETE	95	20
TARGET SCORE = 104	Target Met	129	61

Note: Goals were met for Program Years 1 through 13 and filed in prior reporting periods; however, data for Program Years 10-13 are retained in this report in order to show circuit selections over a longer period of history for discussion purposes.

2.9 Restore Service to 80% of Customers within 3 Hours

RESTORATIONS WITHIN 3 HOURS					
Reporting Period Cumulative = 90%					
January	February	March	April	May	June
91%	88%	86%	94%	92%	84%

2.10 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	104 minutes
Total Performance	104 minutes

2.11 Telephone Service and Response to Commission Complaints

COMMITMENT	GOAL	PERFORMANCE
PS5-Answer calls within 30 seconds	80%	82%
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 ¹⁰ complaints within 30 days	100%	100%

¹⁰ 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).

2.12 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.

During the first half of the year, there were three dates identified as a wide-scale outage days; call statistics are shown in the table below. On January 19th a tree downed an 115 kV line in Coos Bay, Oregon causing an outage to approximately 25,700 customers with outage durations ranging from 25 to 29 minutes. On April 9th customers in Jordan Valley, Utah experienced an outage when a fault occurred at a transmission substation causing an outage to approximately 51,500 customers with outage durations ranging from 38 minutes to 1 hours 18 minutes. On June 19th a transmission substation in Grants Pass, Oregon experienced an outage which affected approximately 54,000 customers with outage durations ranging from 8 minutes to 2 hours 43 minutes.

Date	Interval start/finish (Mountain Time)		Network Total Calls*	Calls received but not delivered**	# of Calls Abandoned from Agent Queue	Max Delay Time Seconds***	ASA Seconds
1/19/2018	16:15	16:29	432	0	286	591	129
	16:30	16:44	3013	498	0	339	6
	16:45	16:59	1754	313	0	78	4
	17:00	17:14	529	0	1	112	5
4/9/2018	12:15	12:29	3420	818	178	366	118
	12:30	12:44	4608	1152	7	152	21
	12:45	12:59	2275	238	12	115	26
	13:00	13:14	868	3	10	119	48
	13:15	13:29	683	0	3	78	19
6/19/2018	10:00	10:14	5562	859	69	118	49
	10:15	10:29	6980	1052	32	112	52
	10:30	10:44	3464	452	26	216	34
	10:45	10:59	511	0	4	127	26

Twenty First Century, an external Interactive Voice Response system, was utilized.

* All customers attempting to reach PacifiCorp Network.

** When Twenty First Century is manually invoked, the AT&T Network returns a courtesy message to non-outage callers. This includes repeated attempts.

*** Longest time any customer waited.

2.13 Utah State Customer Guarantee Summary Status

customer *guarantees*

January to June 2018

Utah

Description	2018				2017			
	Events	Failures	% Success	Paid	Events	Failures	% Success	Paid
CG1 Restoring Supply	511,017	0	100%	\$0	424,021	1	100.00%	\$50
CG2 Appointments	4,475	5	99.89%	\$250	5,227	4	99.92%	\$200
CG3 Switching on Power	2,578	4	99.84%	\$200	2,806	1	99.96%	\$50
CG4 Estimates	643	2	99.69%	\$100	690	4	99.42%	\$200
CG5 Respond to Billing Inquiries	1,357	2	99.85%	\$100	818	5	99.39%	\$250
CG6 Respond to Meter Problems	891	4	99.55%	\$200	404	0	100%	\$0
CG7 Notification of Planned Interruptions	62,281	18	99.97%	\$900	44,974	19	99.96%	\$950
	583,242	35	99.99%	\$1,750	478,940	34	99.99%	\$1,700

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.

3 MAINTENANCE COMPLIANCE TO ANNUAL PLAN

3.1 T&D Preventive and Corrective Maintenance Programs

Preventive Maintenance

The primary focus of the preventive maintenance plan is to inspect facilities, identify abnormal conditions¹¹, 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.¹²
- 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.

Transmission and Distribution Lines

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

¹¹ 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.

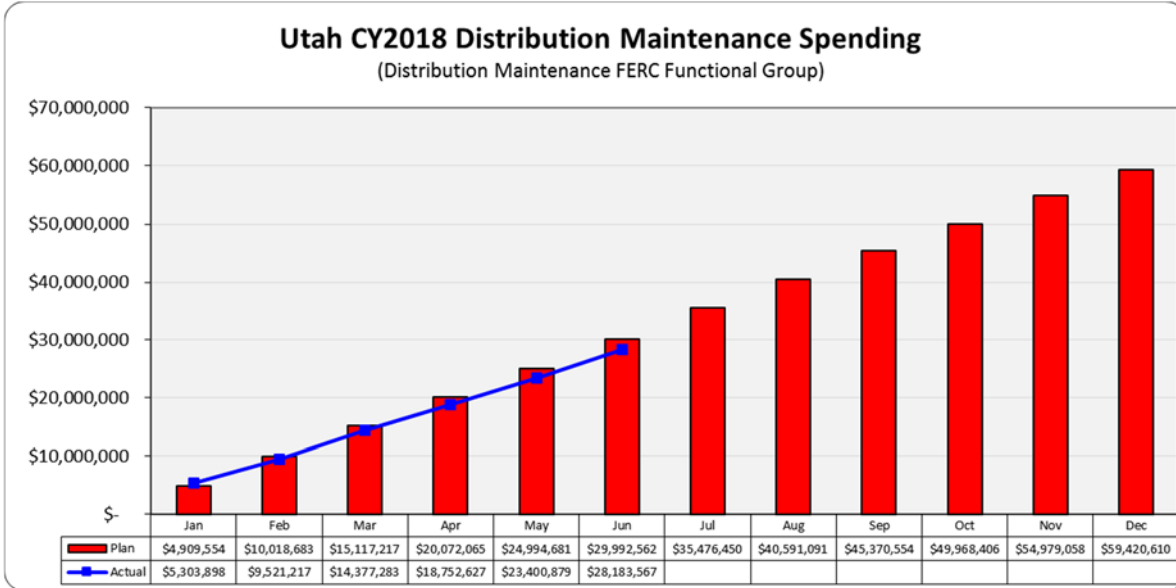
Priority D: Conditions that conform to the NESC and are not reportable to the associated State Commission. Priority G: Conditions that conform to the regulations requirement that was in place when construction took place but do not conform to more recent code adoptions. These conditions are "grandfathered"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

¹² 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.

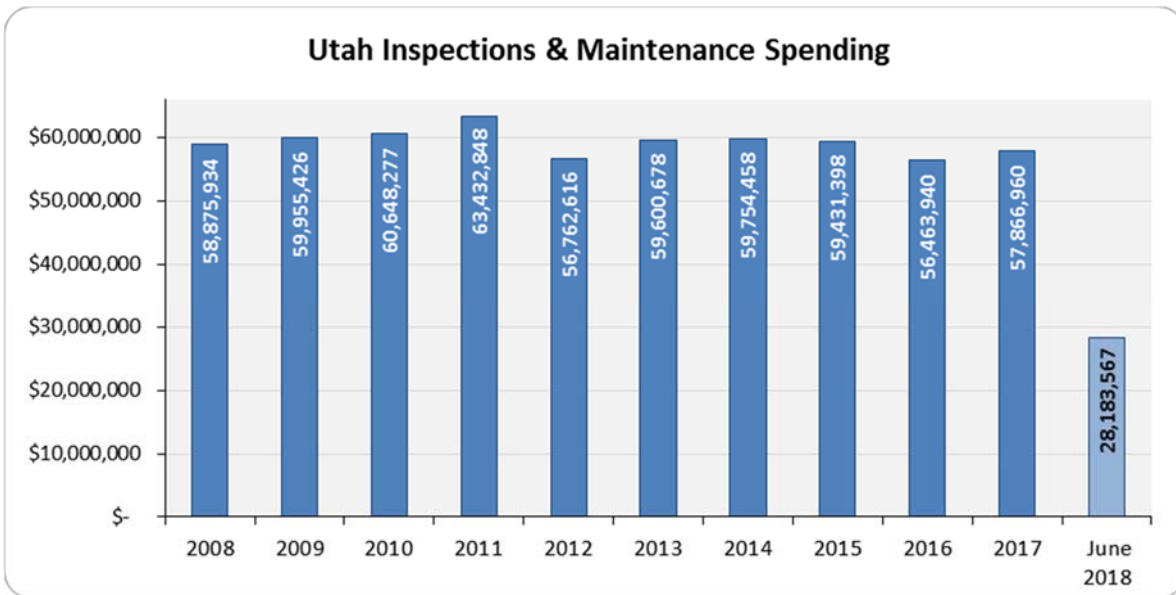
Substations and Major Equipment

- 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.

3.2 Maintenance Spending^{13,14}



3.2.1 Maintenance Historical Spending

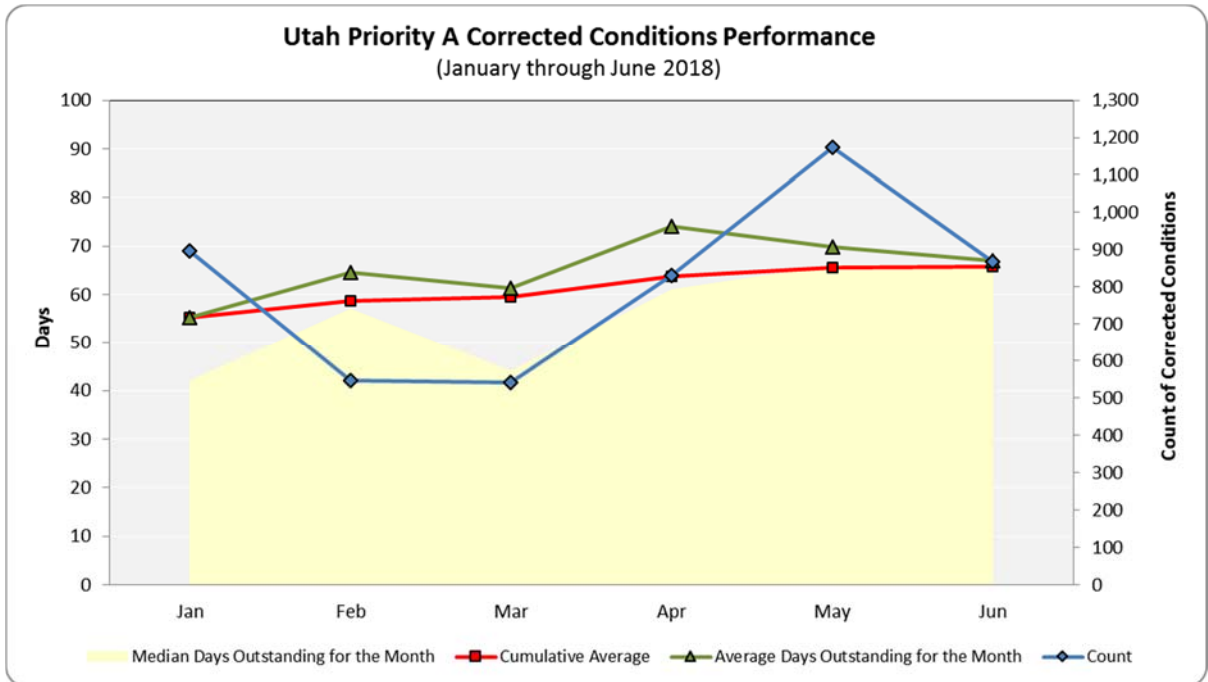


¹³ Maintenance spending reflected does not include Vegetation Management and Fault Locating costs, which when reporting under FERC accounting methodology, FERC has traditionally considered maintenance.

¹⁴ The Utah distribution maintenance total plan of \$63.8m is overstated by \$6.4m due to a misplaced system allocated entry in the plan. The Utah distribution maintenance plan should be \$57.4m. The overall PacifiCorp plan is correct as actual expenses for the misplaced plan item will be incurred in the correct department for which no plan exists.

3.3 Distribution Priority “A” Conditions Correction History

The Company reports history of A priority corrections. This reporting element dates back to Docket-04-035-070, which expired on December 31, 2011. In this commitment the Company was required to correct distribution A priority conditions on average within 120 days. After the commitment expired, stakeholders requested the Company continue to report the information, believing it to be a useful indicator of work delivered by the Company. As can be seen in the chart below, the company has consistently delivered the average age of priority A conditions well below the 120 day target.



3.3.1 Oldest Outstanding Priority A Conditions in Utah

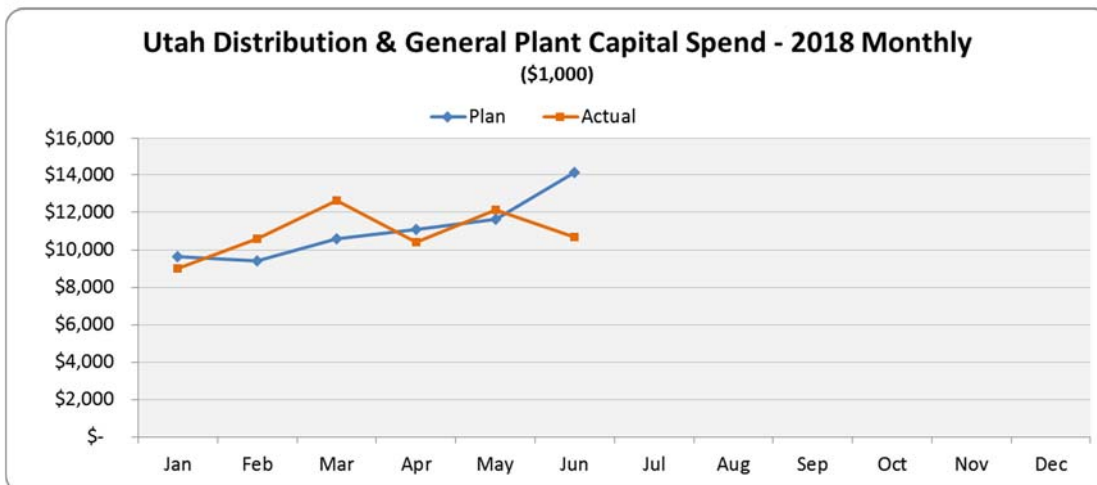
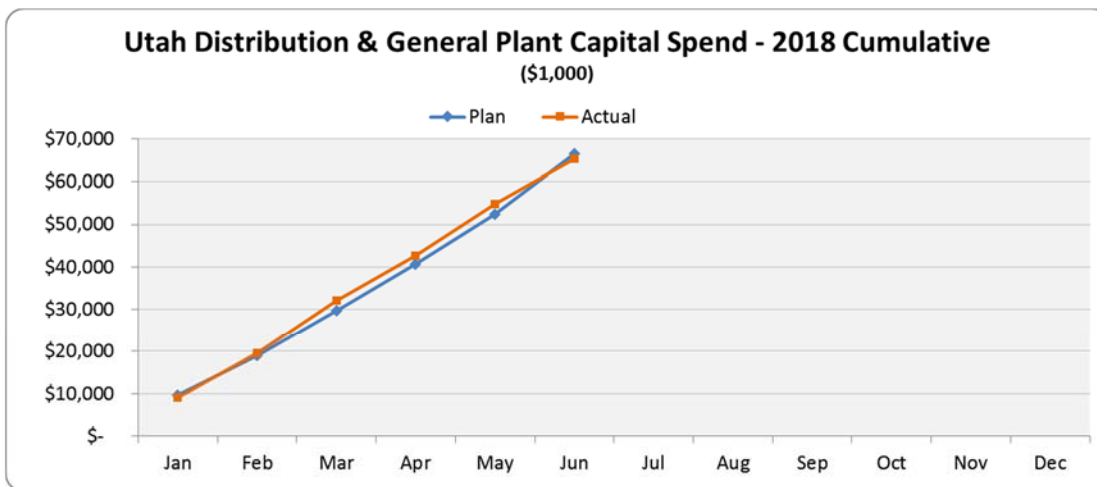
District	Plant Locality	Structure #	Condition	Inspection Remarks	Inspection Date	Anticipated Completion Date	Explanation
Metro	82090	386	BOGRD	BROKEN OR MISSING GROUND DISTRIBUTION AND TRANSMISSION< 230KV_ <8"	8/24/2017	10/15/2018	Correcting these transmission conditions requires a very large outage with complicated switching to isolate the structure. Work done to support completion of the correction is scheduled for October, after the summer load has subsided to enable taking an outage for the line segment.
Metro	82090	386	BOXARM	ARM IS SPLIT/CRACKED/ ROTTEN/TWISTED/BURNED	8/24/2017	10/15/2018	
Ogden	8205202	82	BOGRD	BROKEN OR MISSING GROUND DIST & TRANS 16793753	8/21/2017	10/31/2018	These transmission conditions are in very difficult terrain with poor access and difficult construction conditions, requiring a helicopter to set the pole. The work is scheduled for October, after the summer load has subsided and an outage window is allowed on the line segment.
Ogden	8205202	255	BOXARM	CROSS BRACE BROKEN/MISSING/LOOSE_ MISSING X BRACE	9/7/2017	10/31/2018	
Ogden	8205202	266	BOPOLE	DECAY REJECT REPLACE_ FIRE DAMAGE AT POLE TOP	9/7/2017	10/31/2018	

4 CAPITAL INVESTMENT

4.1 Capital Spending - Distribution and General Plant

January –June 2018

Investment	Actuals (\$M)	Plan (\$M)	Significant Variance Explanations
1. Mandated	\$6.3	\$5.8	Mandated NERC reliability over plan, (+\$1.1M); mandated net metering under plan, (-\$1.2M).
2. New Connect	\$27.9	\$20.8	Residential, commercial and industrial new revenue connection over plan, (+\$7.0M).
3. System Reinforcement	\$4.5	\$4.5	
4. Replacement	\$19.5	\$27.5	Replacements for customer meters over plan, (+\$1.4M); replacements for vehicles, storm & casualty, microwave/fiber and underground cable under plan, (-\$7.8M).
5. Upgrade & Modernize	\$7.2	\$7.9	
Total	\$65.4	\$66.5	

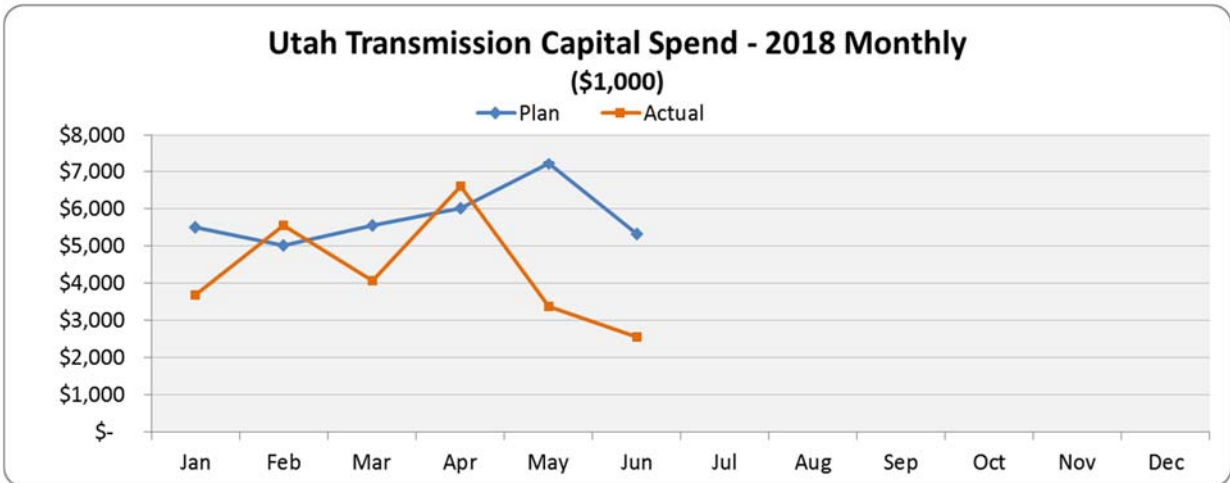
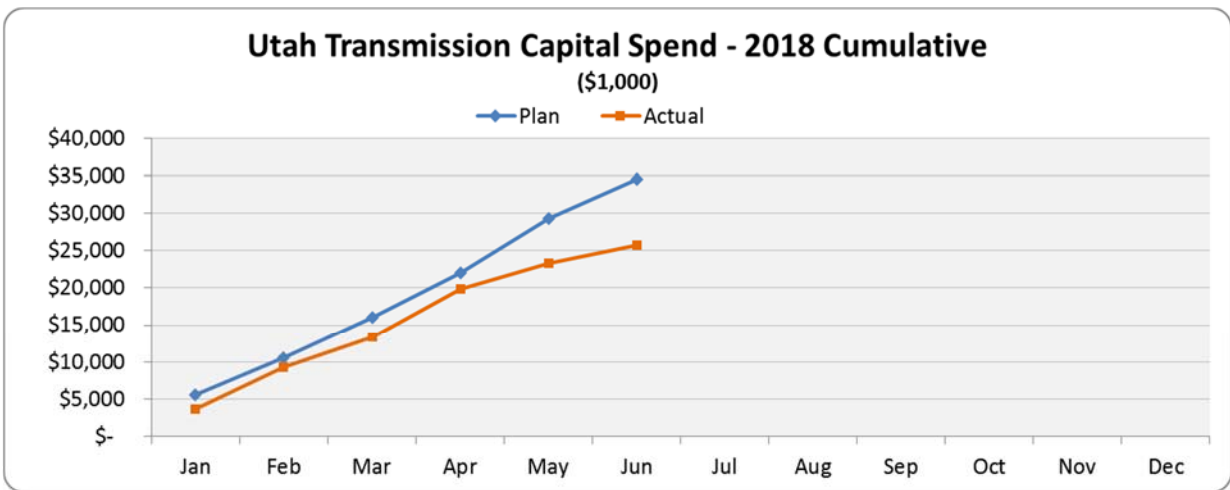


* Actual costs shown are expenditure values, not plant placed in service (PPIS) values. Actual expenditures are not directly tied to PPIS values.

4.2 Capital Spending – Transmission/Interconnections

January –December 2017

Investment	Actuals (\$M)	Plan (\$M)	Significant Variances
1. Mandated	5.3	7.5	Mandated right of way renewals under plan, (-\$1.2M).
2. New Connect	0.3	0.0	
3. Local Transmission System Reinforcements	2.0	2.9	Sub-transmission reinforcement under plan, (-\$1.3M).
**4. Main Grid Reinforcements / Interconnections	8.8	15.7	Syracuse 2nd Transformer (-\$2.9M), Naples New Substation TPL (-\$1.3M), and Purgatory Flat New 138kV (-\$1.0M) under plan.
**5. Energy Gateway Transmission	0.5	0.6	
6. Replacement	8.8	7.3	Replacements for substation switchgear/breakers/reclosers over plan, (+\$1.5M).
7. Upgrade & Modernize	0.0	0.5	
Total	25.8	34.6	



* 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.

4.3 New Connects

	2017	2018												
	YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YEAR
Residential														
UT South	1,114	96	78	130	121	109	111	-	-	-	-	-	-	645
UT North/Metro	6,177	509	426	663	424	573	694	-	-	-	-	-	-	3,289
UT Central	10,961	969	1,035	942	960	882	1,112	-	-	-	-	-	-	5,900
Total Residential	18,252	1,574	1,539	1,735	1,505	1,564	1,917	-	-	-	-	-	-	9,834
Commercial														
UT South	207	14	13	19	21	25	39	-	-	-	-	-	-	131
UT North/Metro	791	92	74	46	62	41	70	-	-	-	-	-	-	385
UT Central	839	63	93	69	71	74	91	-	-	-	-	-	-	461
Total Commercial	1,837	169	180	134	154	140	200	-	-	-	-	-	-	977
Industrial														
UT South	2	-	-	-	-	-	-	-	-	-	-	-	-	-
UT North/Metro	3	1	-	1	2	2	1	-	-	-	-	-	-	7
UT Central	5	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Industrial	10	1	-	1	2	2	1	-	-	-	-	-	-	7
Irrigation														
UT South	38	5	6	3	9	9	10	-	-	-	-	-	-	42
UT North/Metro	5	-	1	-	-	1	1	-	-	-	-	-	-	3
UT Central	9	-	3	2	2	4	5	-	-	-	-	-	-	16
Total Irrigation	52	5	10	5	11	14	16	-	-	-	-	-	-	61
TOTAL New Connects														
UT South	1,361	115	97	152	151	143	160	-	-	-	-	-	-	818
UT North/Metro	6,976	602	501	710	488	617	766	-	-	-	-	-	-	3,684
UT Central	11,814	1,032	1,131	1,013	1,033	960	1,208	-	-	-	-	-	-	6,377
TOTAL New Connects	20,151	1,749	1,729	1,875	1,672	1,720	2,134	-	-	-	-	-	-	10,879

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 a subject to change for operational purposes and may differ from historical reporting.

Smithfield and Laketown are excluded because the report was developed using an old coding system that included them under ID/ WY WEST and not Utah.

Temporary connections used to be included in our reports because there is no coding involved and, therefore, was no way to accurately remove them.

They did not double count new connections because when a permanent connection was established the temporary went away. 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 skewed the volumes considerably and made historic trend comparison useless. We have, therefore, done what we can, to eliminate temporary connections from our reporting since that time.

UTAH

January 1 – December 31, 2017

5 VEGETATION MANAGEMENT

5.1 Production

UTAH
Tree Program Reporting
January 1, 2018 through June 30, 2018
Distribution

	Total	Calendar Year Reporting				Cycle Reporting			
	3 Year Program/Total Line Miles	1/1/2018-6/30/2018 Miles Planned	1/1/2018-6/30/2018 Actual Miles	1/1/2018-6/30/2018 Ahead/Behind	1/1/2018-6/30/2018 % Ahead/Behind	1/1/2017-12/31/2019 Miles Planned	1/1/2017-12/31/2019 Actual Miles	01/01/2017-12/31/2019 Ahead/Behind	1/1/2017-12/31/2019 % Ahead/Behind
	column a	column b	column c	column d	column e	column f	column g	column h	column i
UTAH	10,747	1,681	2,415	734	144%	5,376	5,993	617	111%
AMERICAN FORK	830	155	310	155	200%	415	483	68	116%
CEDAR CITY	1,378	84	157	73	187%	689	816	127	118%
JORDAN VALLEY	774	93	128	35	138%	387	485	98	125%
LAYTON	299	130	247	117	190%	150	254	104	169%
MOAB	630	169	250	81	148%	315	433	118	137%
OGDEN	885	124	73	-51	59%	443	324	-119	73%
PARK CITY	551	88	92	4	105%	276	314	38	114%
PRICE	592	85	171	86	201%	296	437	141	148%
RICHFIELD	1,344	329	396	67	120%	672	550	-122	82%
SL METRO	1,235	151	213	62	141%	618	738	120	119%
SMITHFIELD	765	97	147	50	152%	383	423	40	110%
TOOELE	480	72	139	67	193%	240	231	-9	96%
TREMONTON	734	58	0	-58	0%	367	329	-38	90%
VERNAL	250	46	92	46	200%	125	176	51	141%

Distribution cycle \$/tree:	\$177.00
Distribution cycle \$/mile:	\$2,359
Distribution cycle removal %	10%

Transmission

Total Line Miles	Line Miles Scheduled	Line Miles Worked	Miles Ahead(behind) Schedule	% of miles on/behind Schedule
6,575	382	788	406	206%

Transmission \$/mile: \$633
Current distribution cycle began January 1, 2017 and extends until December 31, 2019.

Notes:

- Column a: Total overhead distribution pole miles by district
- Column b: Total overhead distribution pole miles planned for the period January 1, 2018 through June 30, 2018
- Column c: Actual overhead distribution pole miles worked during the period January 1, 2018 through June 30, 2018
- Column d: Miles ahead or behind for the period January 1, 2018 through June 30, 2018 (column c-column b)
- Column e: Percent of actual compared to planned for the period January 1, 2018 through June 30, 2018 ((column c÷b)×100)
- Column f: Total overhead distribution pole miles planned for the period January 1, 2017 through December 31, 2019
- Column g: Actual overhead distribution pole miles worked during the period January 1 2017 through December 31, 2019
- Column h: Miles ahead or behind for the period January 1, 2017 through December 31, 2019 (column g-column f)
- Column i: Percent of actual compared to planned for the period January 1, 2017 through December 31, 2019 ((column g÷f)×100). Max = 100%

5.2 Budget

UTAH

Tree Program Reporting

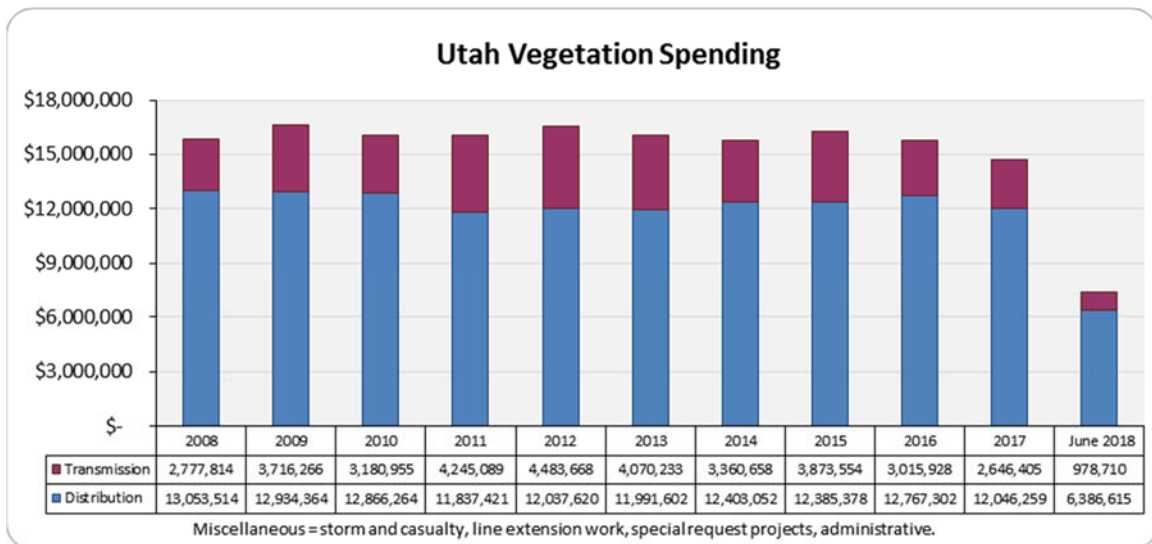
	CY2018	CY2019	CY2020
Distribution	\$10,550,000	\$10,550,000	\$10,550,000
Transmission	\$2,840,000	\$2,840,000	\$2,840,000
Total Tree Budget	\$13,390,000	\$13,390,000	\$13,390,000

Calendar Year 2018	Distribution			Transmission		
	Actuals	Budget	Variance	Actuals	Budget	Variance
Jan	\$1,339,206	\$779,167	\$560,039	\$139,133	\$236,667	-\$97,534
Feb	\$1,262,626	\$979,167	\$283,459	\$82,148	\$236,667	-\$154,519
Mar	\$869,930	\$879,167	-\$9,237	\$149,876	\$236,667	-\$86,791
Apr	\$1,002,872	\$879,167	\$123,705	\$163,541	\$236,667	-\$73,126
May	\$882,079	\$879,167	\$2,912	\$216,585	\$236,667	-\$20,082
Jun	\$1,029,902	\$979,167	\$50,735	\$227,427	\$236,667	-\$9,240
Jul	\$0	\$0	\$0	\$0	\$0	\$0
Aug	\$0	\$0	\$0	\$0	\$0	\$0
Sep	\$0	\$0	\$0	\$0	\$0	\$0
Oct	\$0	\$0	\$0	\$0	\$0	\$0
Nov	\$0	\$0	\$0	\$0	\$0	\$0
Dec	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$6,386,615	\$5,375,002	\$1,011,613	\$978,710	\$1,420,002	-\$441,292

Average # Tree Crews on Property (YTD)

51

5.2.1 Vegetation Historical Spending



6 Appendix

6.1 Reliability Definitions

Interruption Types

Below are the definitions for interruption events. For further details, refer to IEEE 1366-2003¹⁵ 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).

¹⁵ 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.

UTAH

January 1 – December 31, 2017

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:

$$\text{CPI} = \text{Index} * ((\text{SAIDI} * \text{WF} * \text{NF}) + (\text{SAIFI} * \text{WF} * \text{NF}) + (\text{MAIFI}_E * \text{WF} * \text{NF}) + (\text{Lockouts} * \text{WF} * \text{NF}))$$

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, $10.645 * ((3\text{-year SAIDI} * 0.30 * 0.029) + (3\text{-year SAIFI} * 0.30 * 2.439) + (3\text{-year MAIFI}_E * 0.20 * 0.70) + (3\text{-year breaker lockouts} * 0.20 * 2.00)) = \text{CPI Score}$

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
1/1-12/31/2017	897,258	5.74	5,152,204
1/1-12/31/2018	917,739	5.41	4,969,384

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. 18-035-17

I hereby certify that on October 29, 2018, a true and correct copy of the foregoing was served by electronic mail to the following:

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