



**Liberty Utilities®**

**ELECTRIC SYSTEM RELIABILITY  
ANNUAL REPORT**

**2019**

**LIBERTY UTILITIES (CALPECO ELECTRIC) LLC  
(U 933 E)**

**-- CONFIDENTIAL VERSION --**

**Prepared for  
California Public Utilities Commission**

**February 1<sup>ST</sup>, 2020**

## EXECUTIVE SUMMARY

The Electric System Reliability Annual Report for 2019 has been prepared in response to CPUC Decision 16-01-008, which was approved January 20, 2016. Decision 16-01-008 established reliability recording, calculation, and reporting requirements for Liberty Utilities (CalPeco Electric) LLC.

CalPeco Electric does not provide transmission services. CalPeco Electric does not have an Open Access Transmission Tariff (OATT). Therefore data is presented for the distribution services only. All statistics and calculations include forced distribution outages. Forced outages are those that are not prearranged. For the purposes of this report, sustained outages are outages that lasted more than five minutes in duration, while momentary outages are outages that lasted five minutes or less in duration.

The reliability indicators that are tracked are as follows:

1. SAIDI (System Average Interruption Duration Index) - minutes of sustained outages per customer per year.
2. SAIFI (System Average Interruption Frequency Index) - number of sustained outages per customer per year.
3. MAIFI (Momentary Average Interruption Frequency Index) - number of momentary outages per customer per year.
4. CAIDI (Customer Average Interruption Duration Index) – is the average time required to restore service to a utility customer.

CalPeco Electric presents nine years (2011 through 2019) of data, which represents the period in which Liberty Utilities purchased CalPeco Electric from NV Energy.

Beginning in 2013, the measurement of each reliability performance indicator excludes IEEE Major Event Days (MED) instead of CPUC Major Events. An IEEE Major Event Day is defined in IEEE-1366, Section 4.5 as a day in which the daily system SAIDI exceeds a threshold value. These threshold major event days are referred to as “TMED”. Thus, any day in which the total system SAIDI exceeds TMED is excluded from CalPeco Electric’s reliability results. The applicable TMED value is calculated at the end of each year using CalPeco Electric’s daily SAIDI values for the prior five years. CalPeco Electric’s TMED value for 2019 was 171.00 minutes of daily system SAIDI. Other reliability indices in this report are not calculated using methodologies or formulas exactly as described in the IEEE guide for electric power Distribution Reliability indices (IEEE-1366).

## Table of Contents

1) System Indices for the Last 9 Years (Years CalPeco Electric in business)..	1
2) Division (or District) Reliability Indices for the past 9 years.....	10
3) System and Division indices based on IEEE 1366 for the past 9 years including planned outages and including and excluding TMED .....	10
4) Service territory map including divisions of districts .....	20
5) Top two worst performing circuits (WPC) excluding TMED .....	21
6) Top 10 major unplanned power outage events within a reporting year.....	25
7) Summary list of 2019 TMED per IEEE 1366.....	26
8) Historical 10 largest unplanned outage events for the past 8 years* .....	27
9) Number of customer inquiries on reliability data and the number of days per response .....	31
10) List of PSPS's in 2019 .....	31

**1) System Indices for the Last 9 Years (Years CalPeco Electric in business)**

a. Separate tables with SAIDI, SAIFI, MAIFI and CAIDI (Major Event Day (MED)) included and excluded.

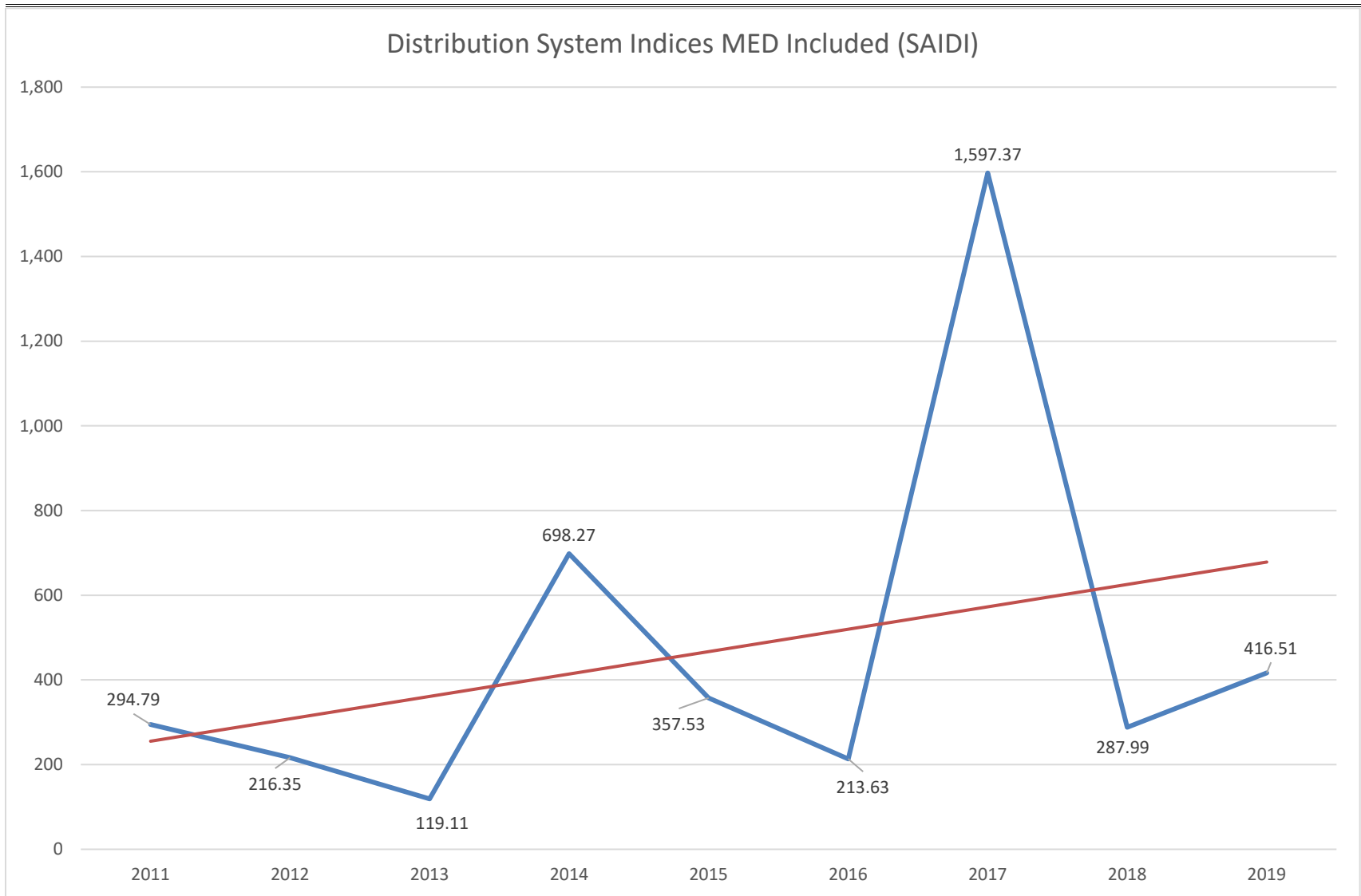
I. Distribution System Indices (Major Event included and excluded)

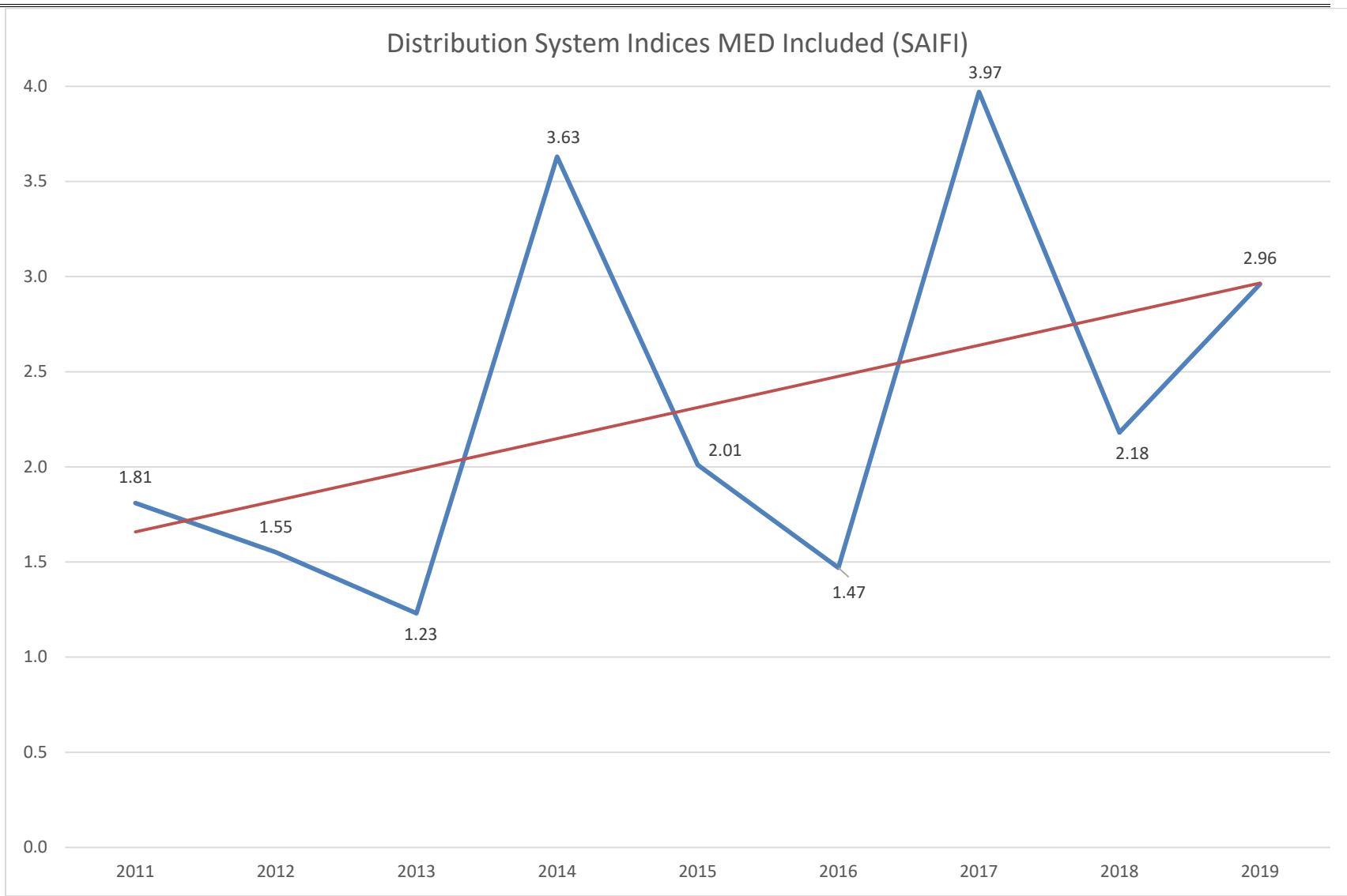
Liberty Utilities (CalPeco Electric), LLC								
<u>Distribution</u> Historical System Reliability Data 9 Years (Years in Business)								
	Major Event Included				Major Event Excluded			
Year	SAIDI	SAIFI	CAIDI	MAIFI	SAIDI	SAIFI	CAIDI	MAIFI
2019	416.51	2.96	140.73	0.31	416.51	2.96	140.73	0.31
2018	287.99	2.18	131.82	0.52	287.99	2.18	131.82	0.52
2017	1597.37	3.97	402.06	1.37	772.83	2.86	270.23	1.37
2016	213.63	1.47	144.98	1.08	213.63	1.47	144.98	1.08
2015	357.53	2.01	177.68	1.15	357.53	2.01	177.68	1.15
2014	698.27	3.63	192.44	2.15	352.37	2.40	146.58	2.15
2013	119.11	1.23	96.75	2.08	119.11	1.23	96.79	2.08
2012	216.35	1.55	139.31	2.75	216.35	1.55	139.31	2.75
2011	294.79	1.81	162.60	1.88	192.22	1.25	154.27	1.88

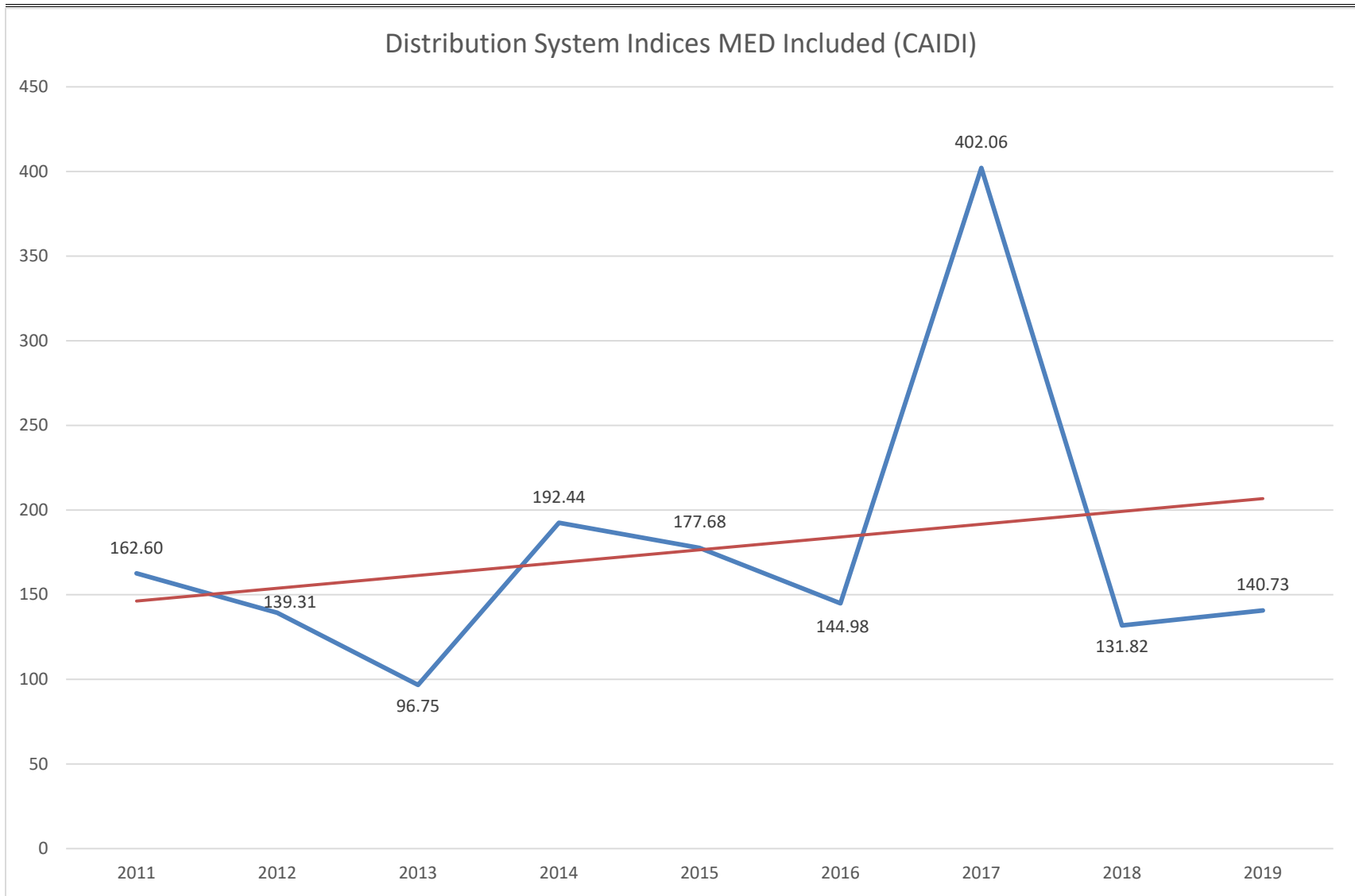
II. Transmission System Indices (MED Included and Excluded)

Liberty Utilities (CalPeco Electric), LLC does not own Transmission.

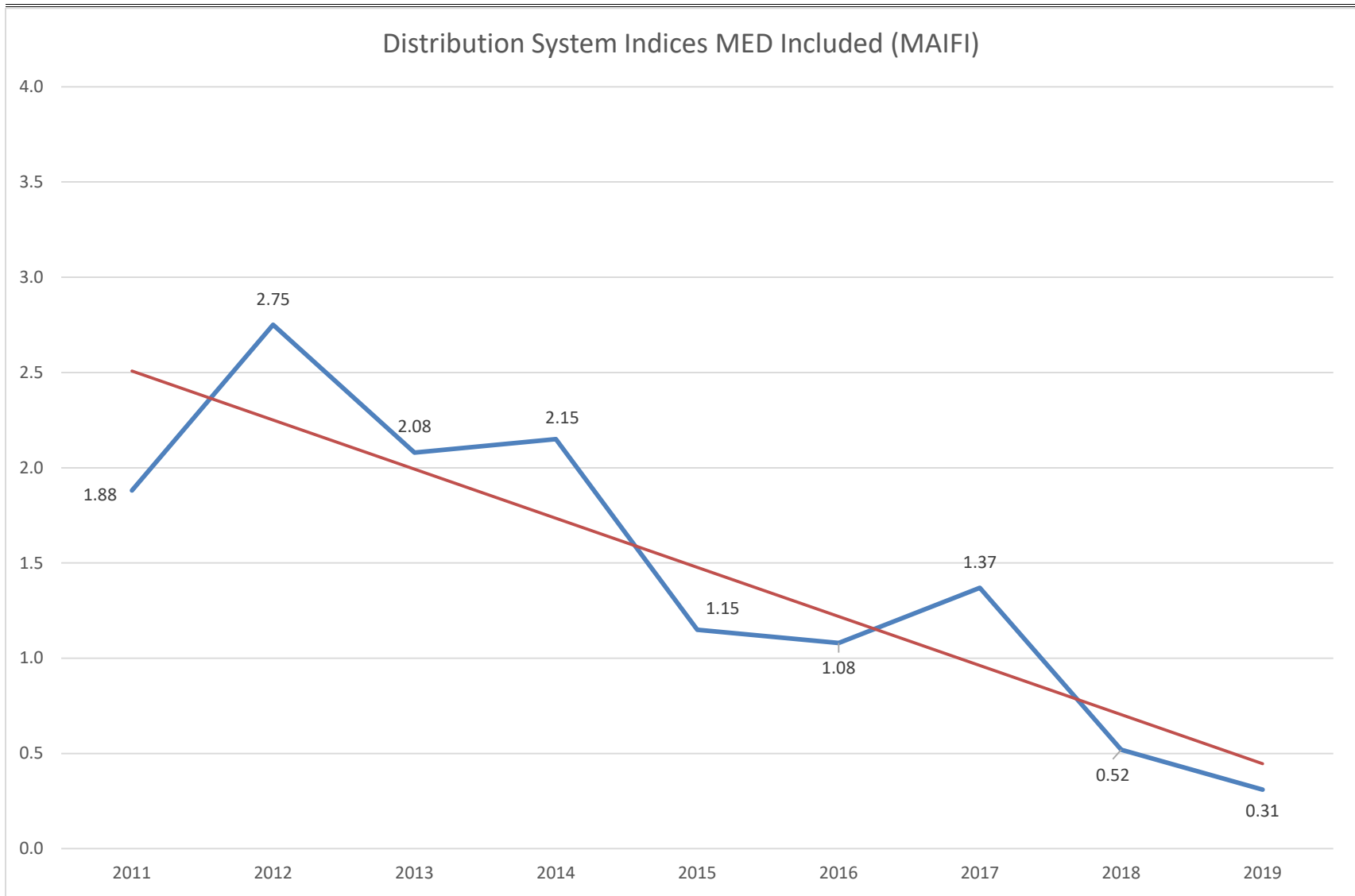
b. Separate charts showing a line graph of distribution system SAIDI, SAIFI, MAIFI, and CAIDI for the past 9 years (years in business) with linear trend line (TMED included and excluded).

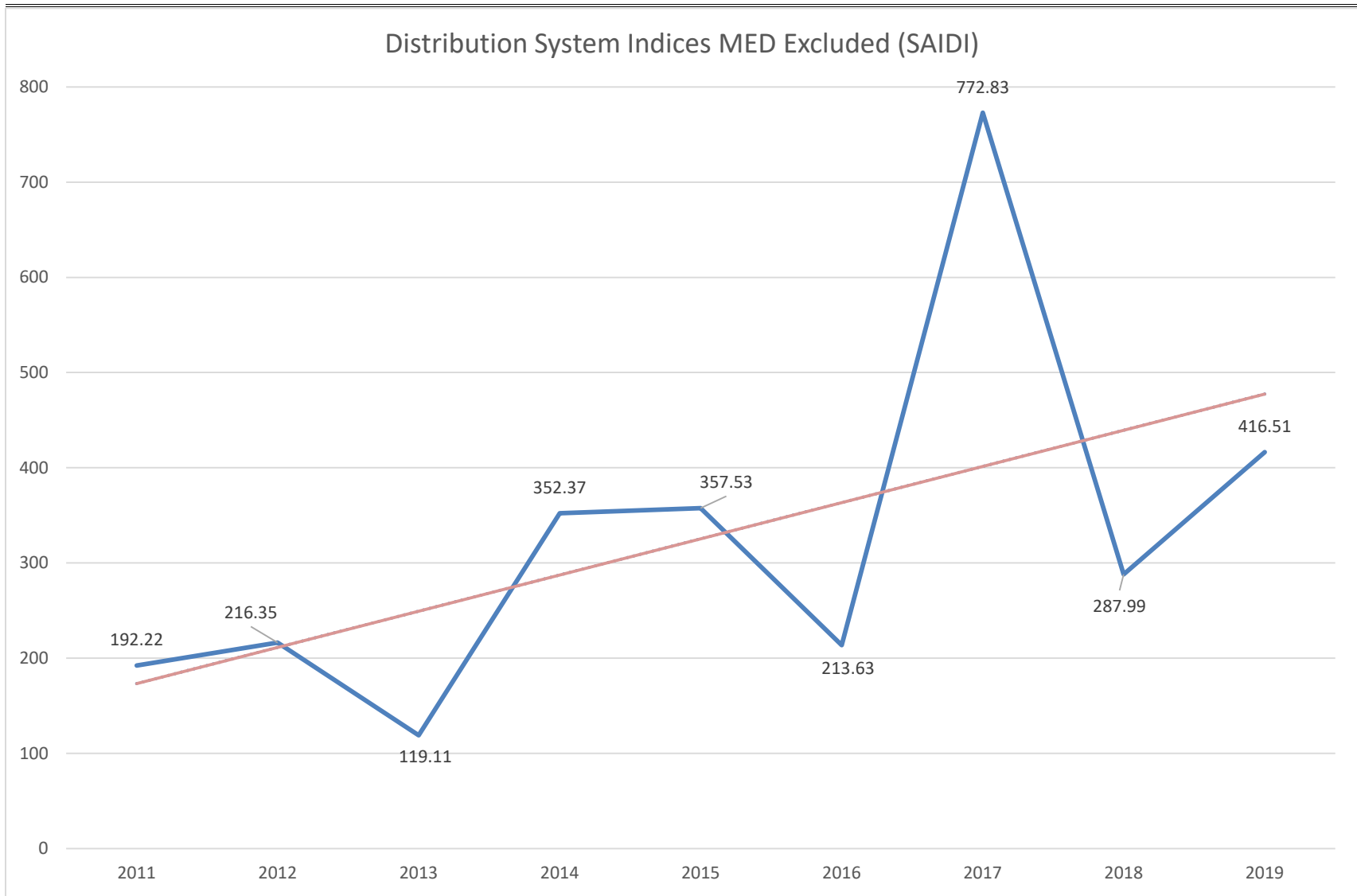


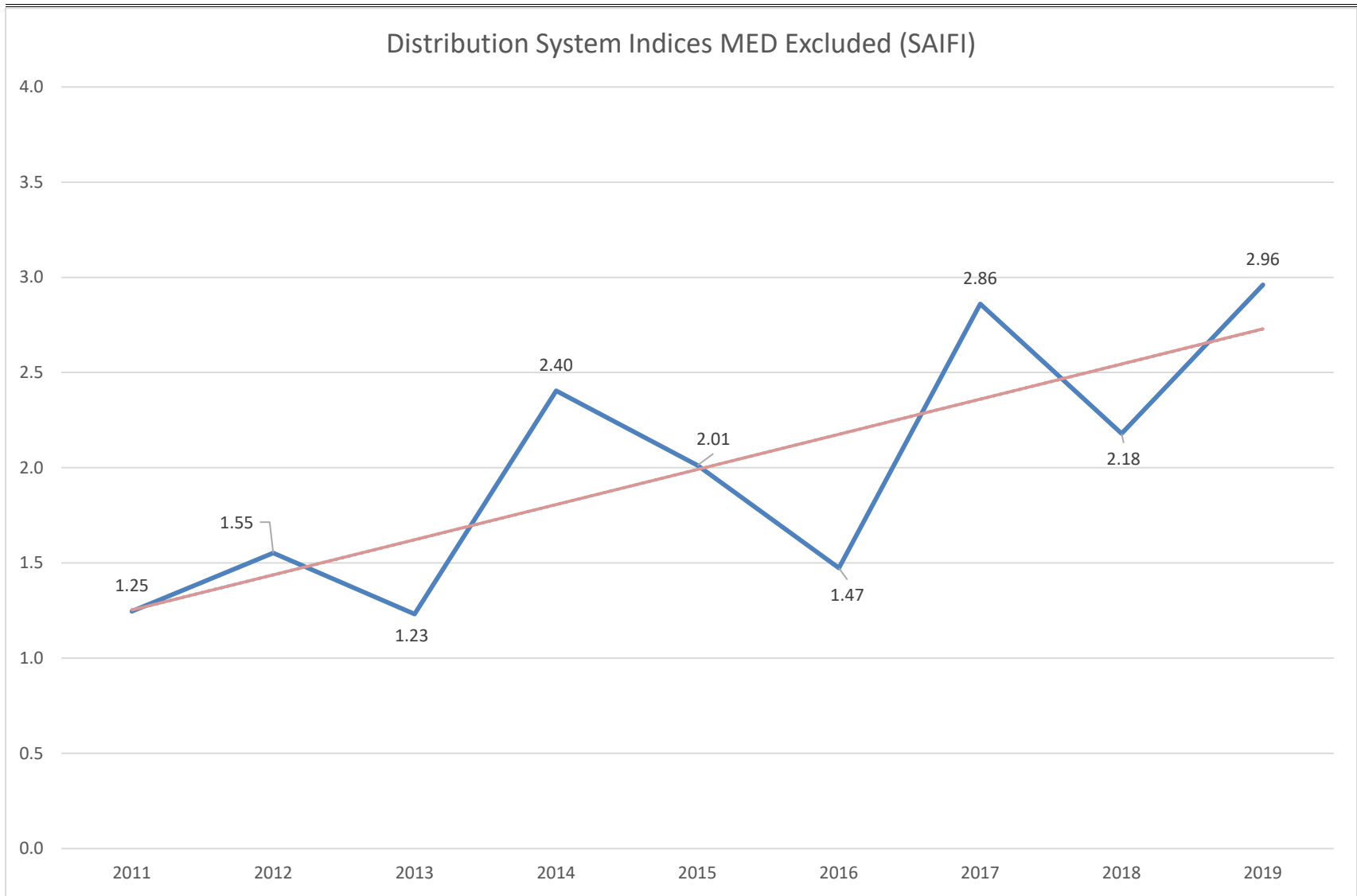


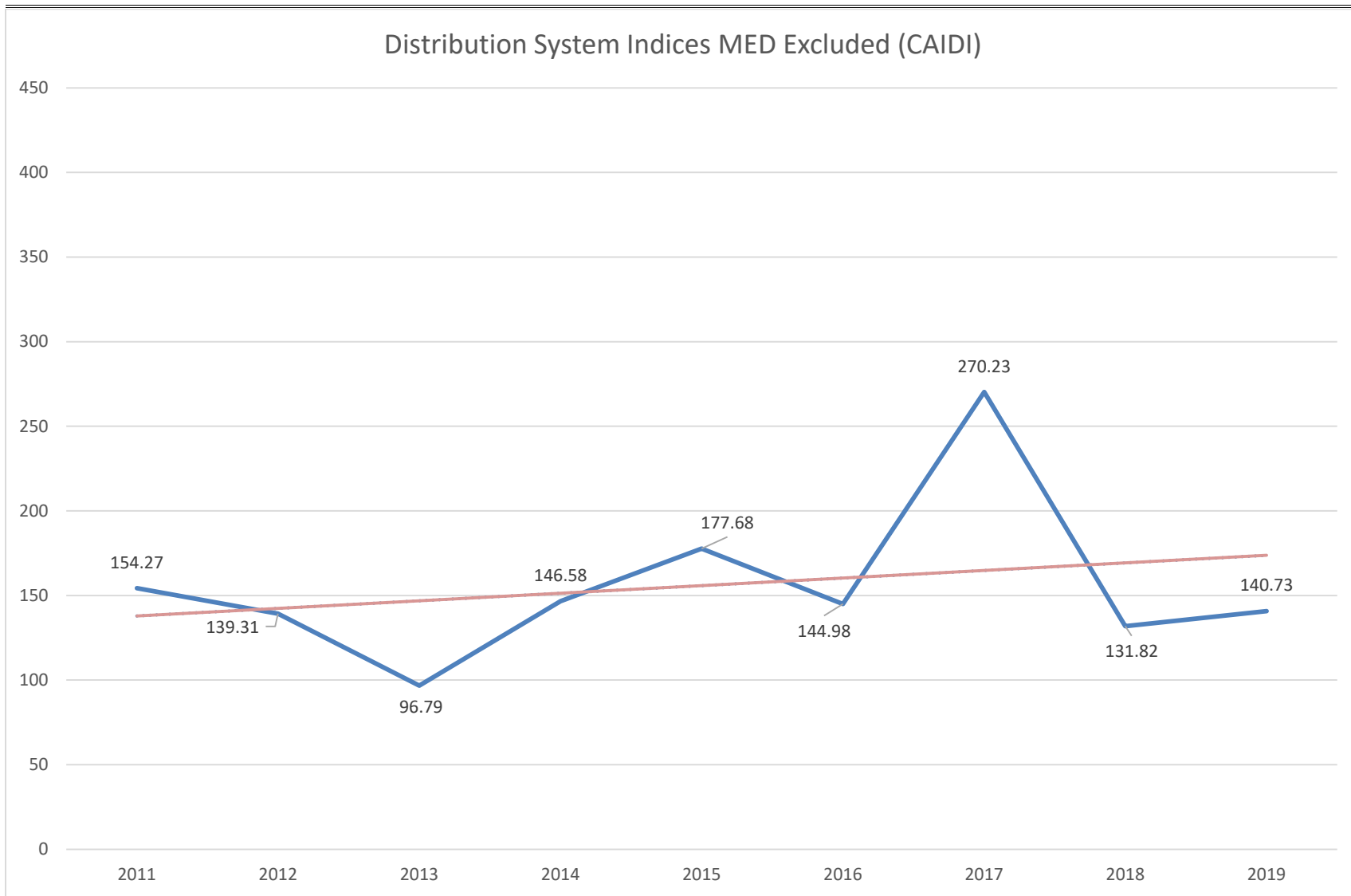


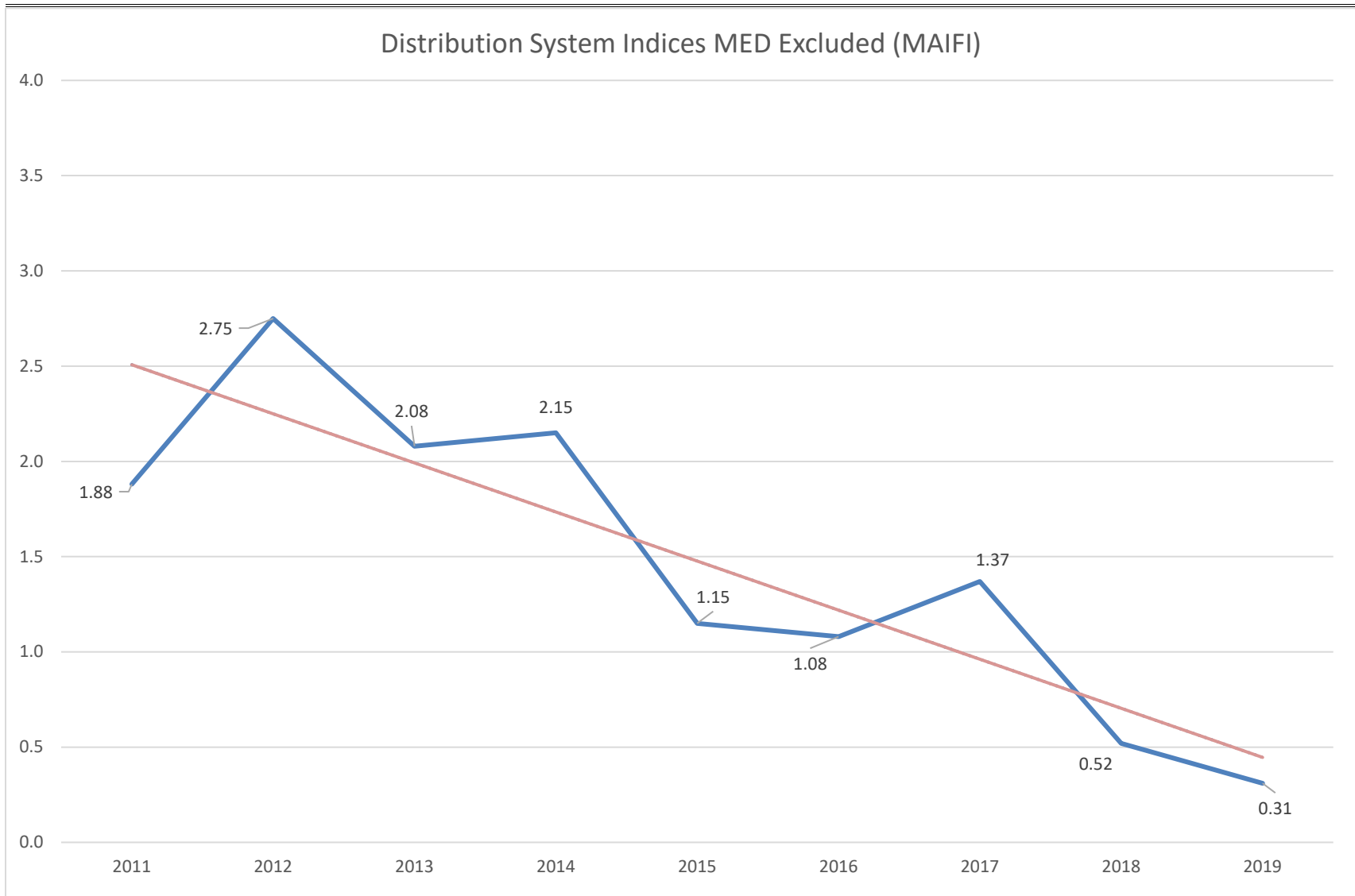












**2) Division (or District) Reliability Indices for the past 9 years**

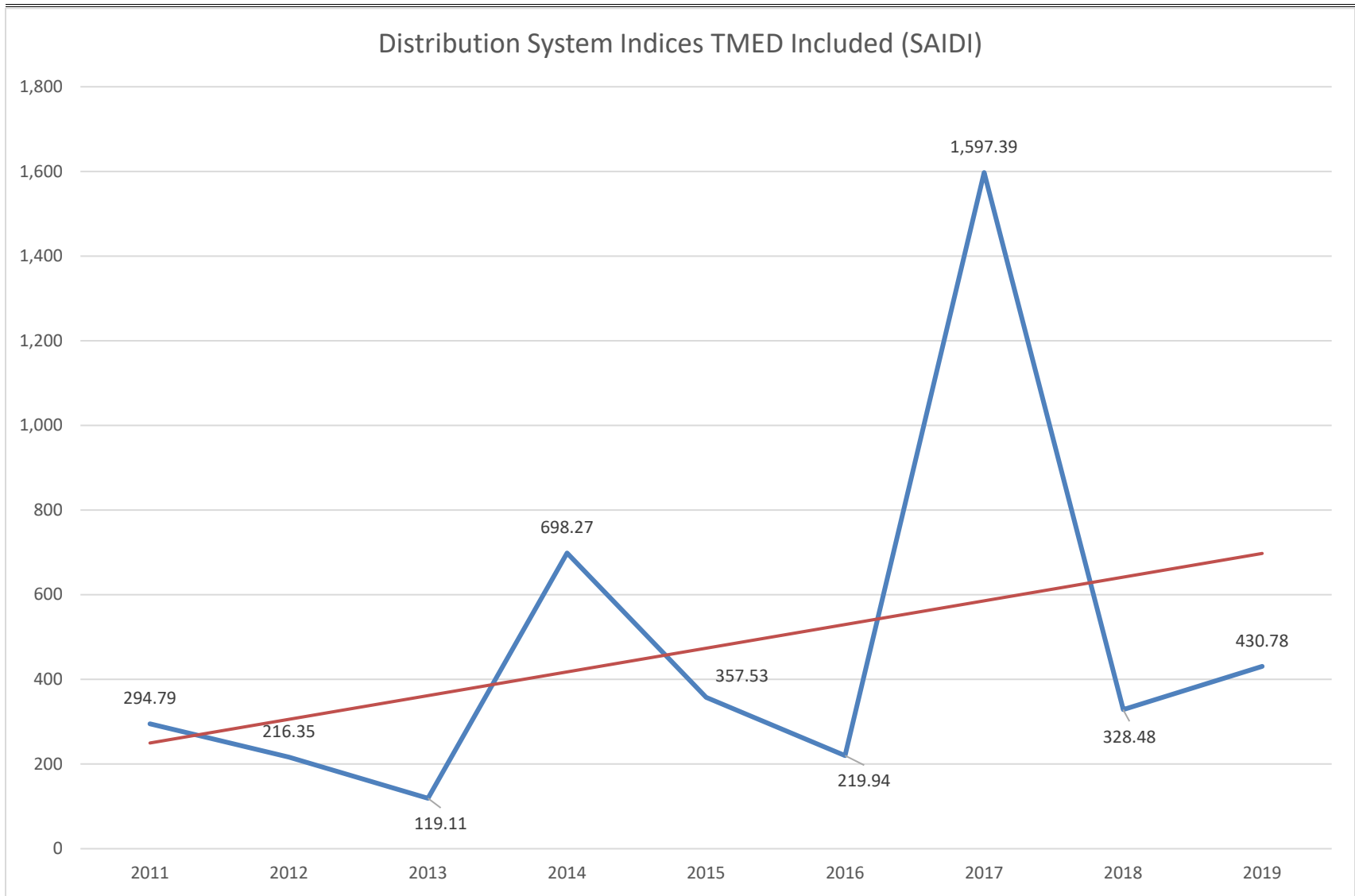
Liberty Utilities (CalPeco Electric), LLC has one division, Lake Tahoe. See section 1 for indices.

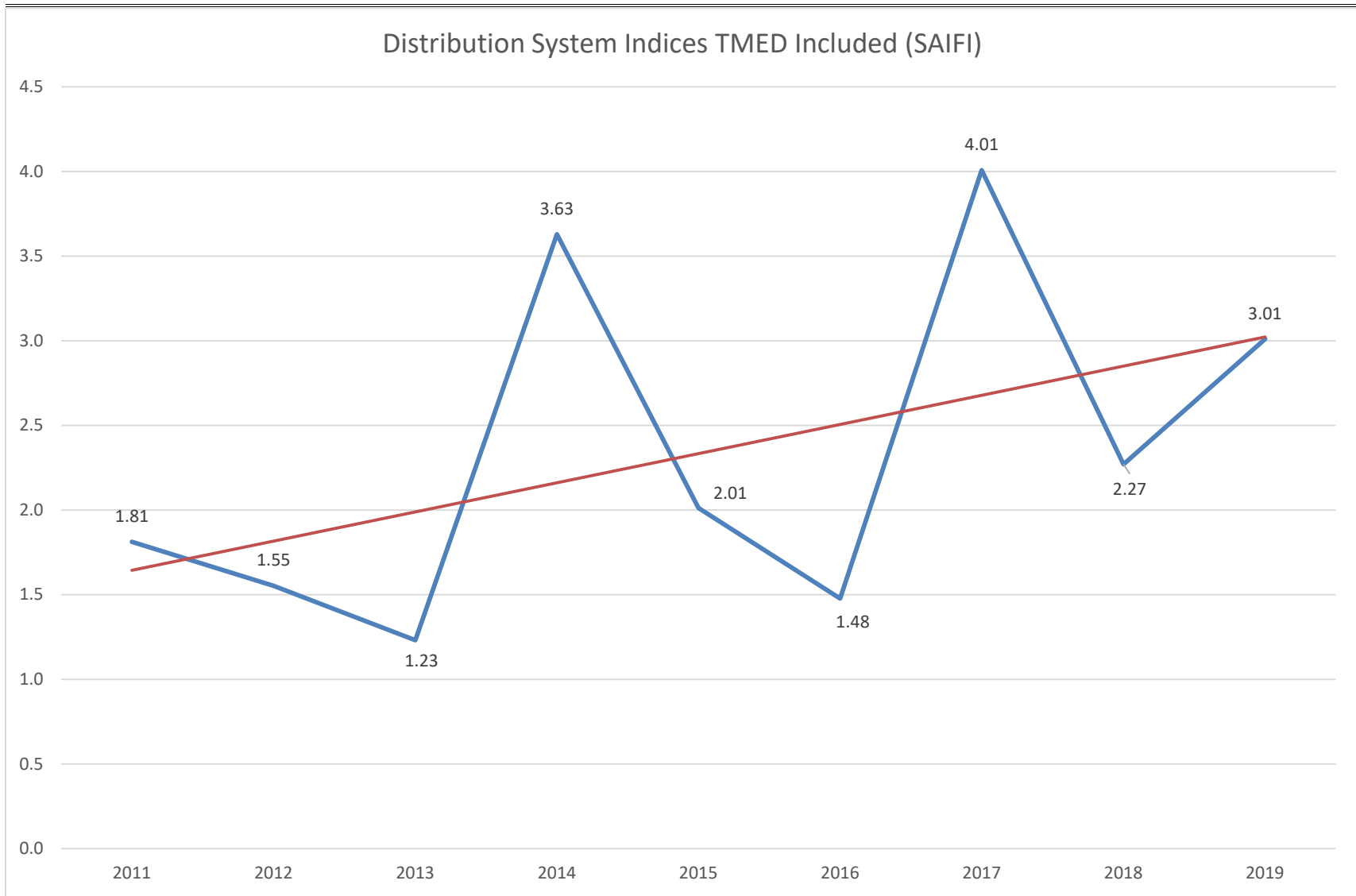
**3) System and Division indices based on IEEE 1366 for the past 9 years including planned outages and including and excluding TMED**

a. SAIDI, SAIFI, MAIFI, and CAIDI Data

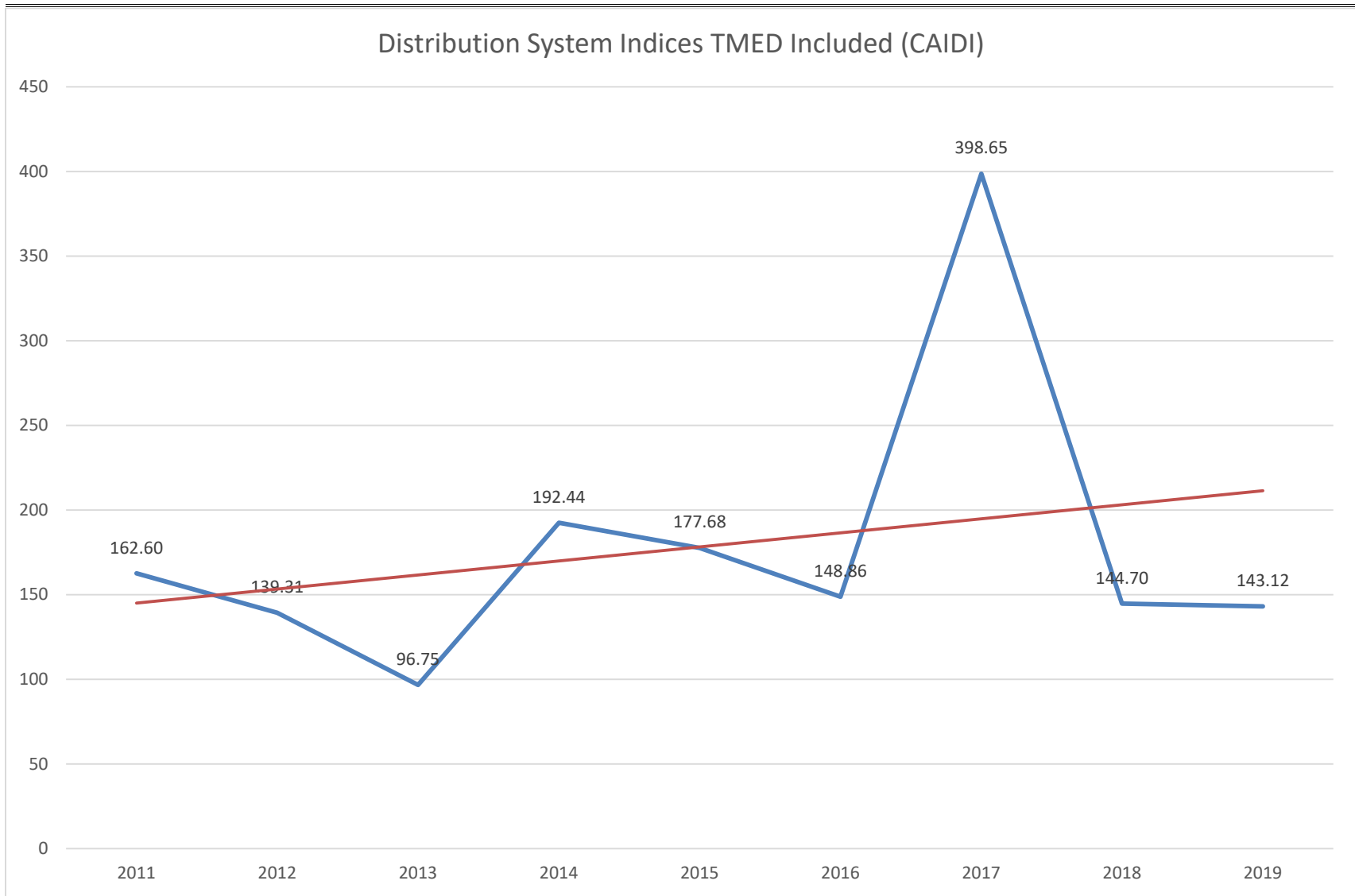
Liberty Utilities (CalPeco Electric), LLC Distribution Historical System Reliability Data 9 Years (Years in Business)								
Year	TMED Included				TMED Excluded			
	SAIDI	SAIFI	CAIDI	MAIFI	SAIDI	SAIFI	CAIDI	MAIFI
2019	430.78	3.01	143.12	0.31	430.78	3.01	143.12	0.31
2018	328.48	2.27	144.70	0.52	328.48	2.27	144.70	0.52
2017	1597.39	4.01	398.65	1.37	772.84	2.89	267.42	1.37
2016	219.94	1.48	148.86	1.08	219.94	1.48	148.86	1.08
2015	357.53	2.01	177.68	1.15	357.53	2.01	177.68	1.15
2014	698.27	3.63	192.44	2.15	352.37	2.40	146.58	2.15
2013	119.11	1.23	96.75	2.08	119.11	1.23	96.79	2.08
2012	216.35	1.55	139.31	2.75	216.35	1.55	139.31	2.75
2011	294.79	1.81	162.60	1.88	192.22	1.25	154.27	1.88

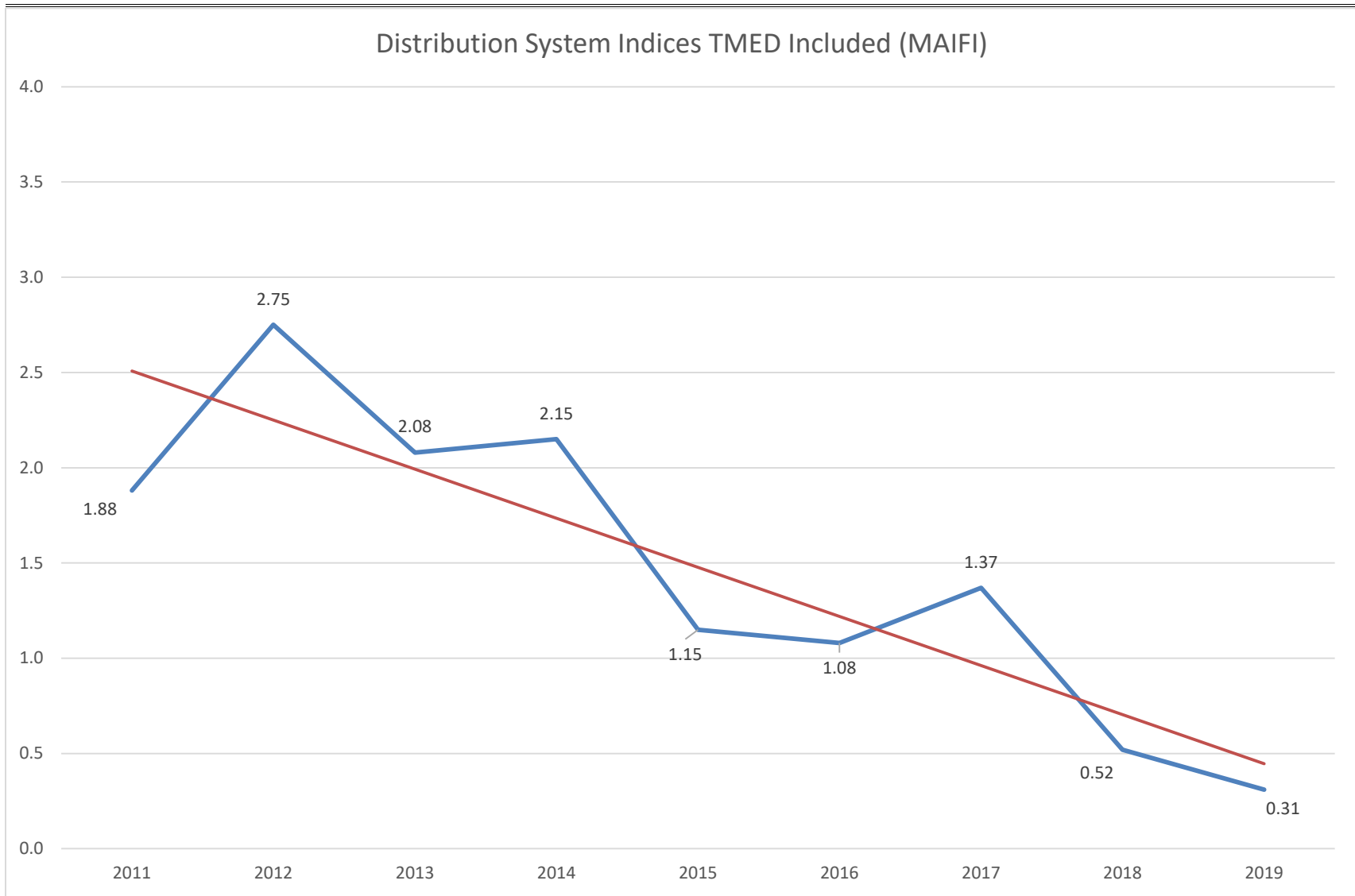
CalPeco Electric has been in business for 9 years and therefore does not have 10 years of data.

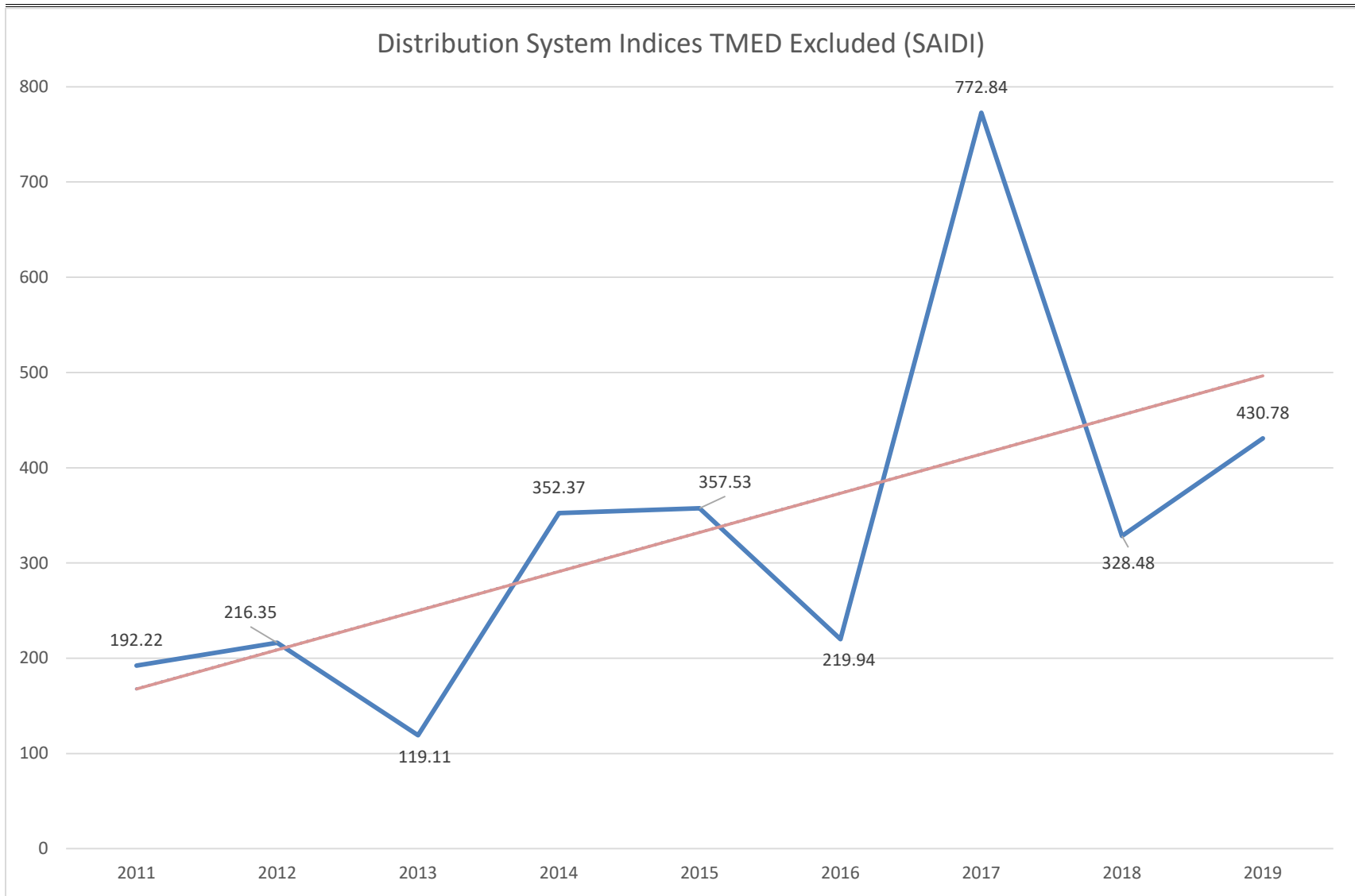


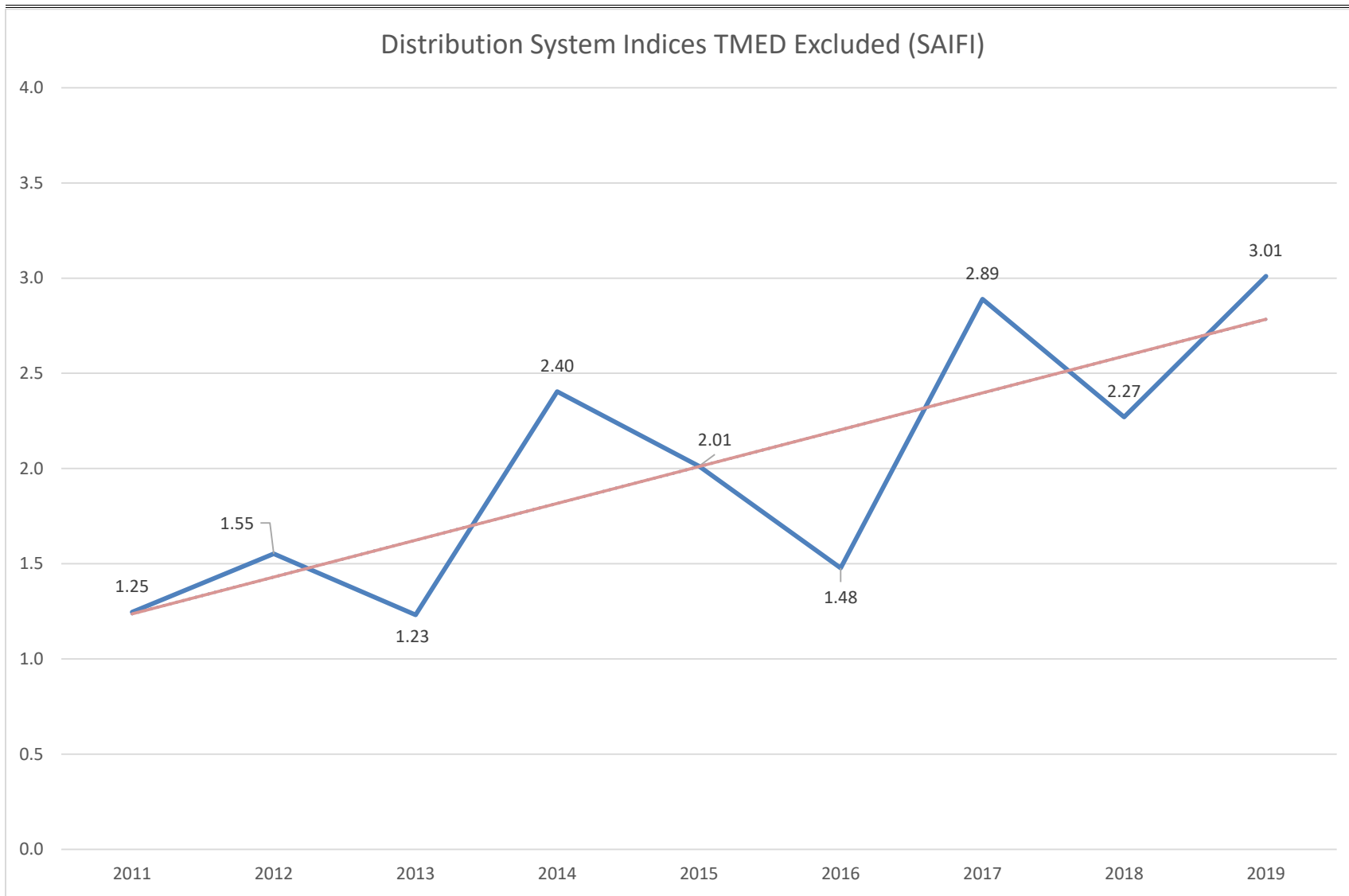


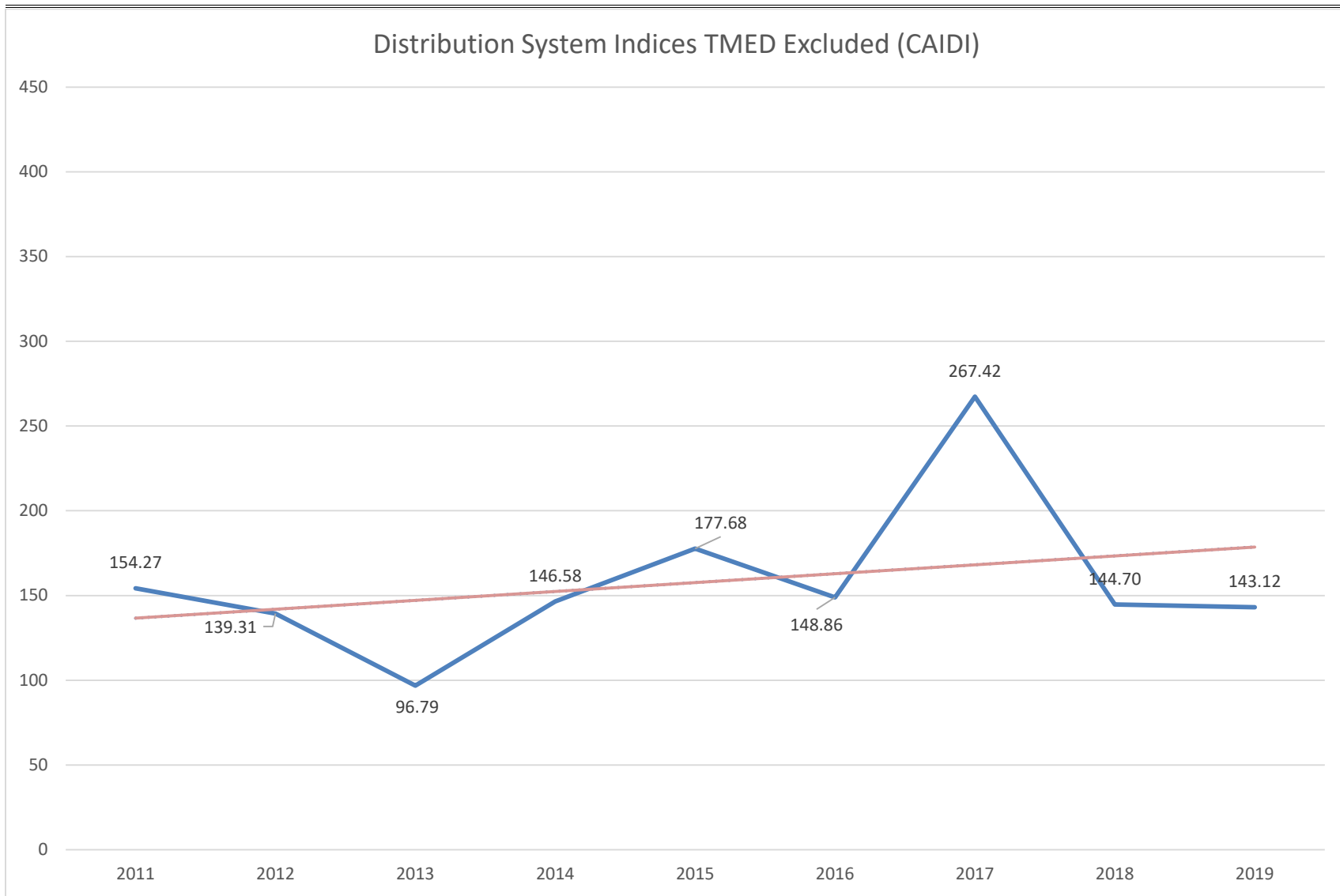


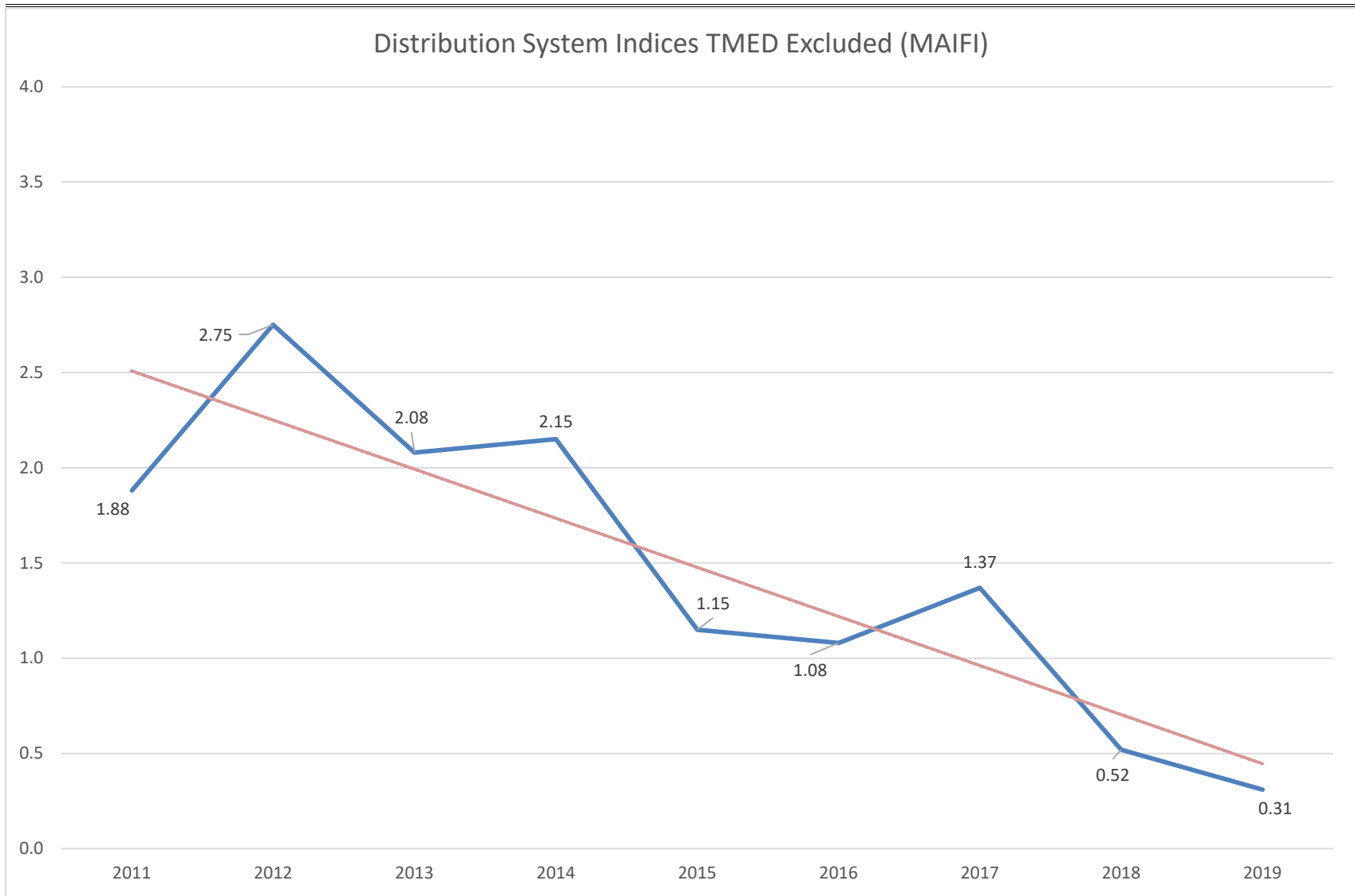








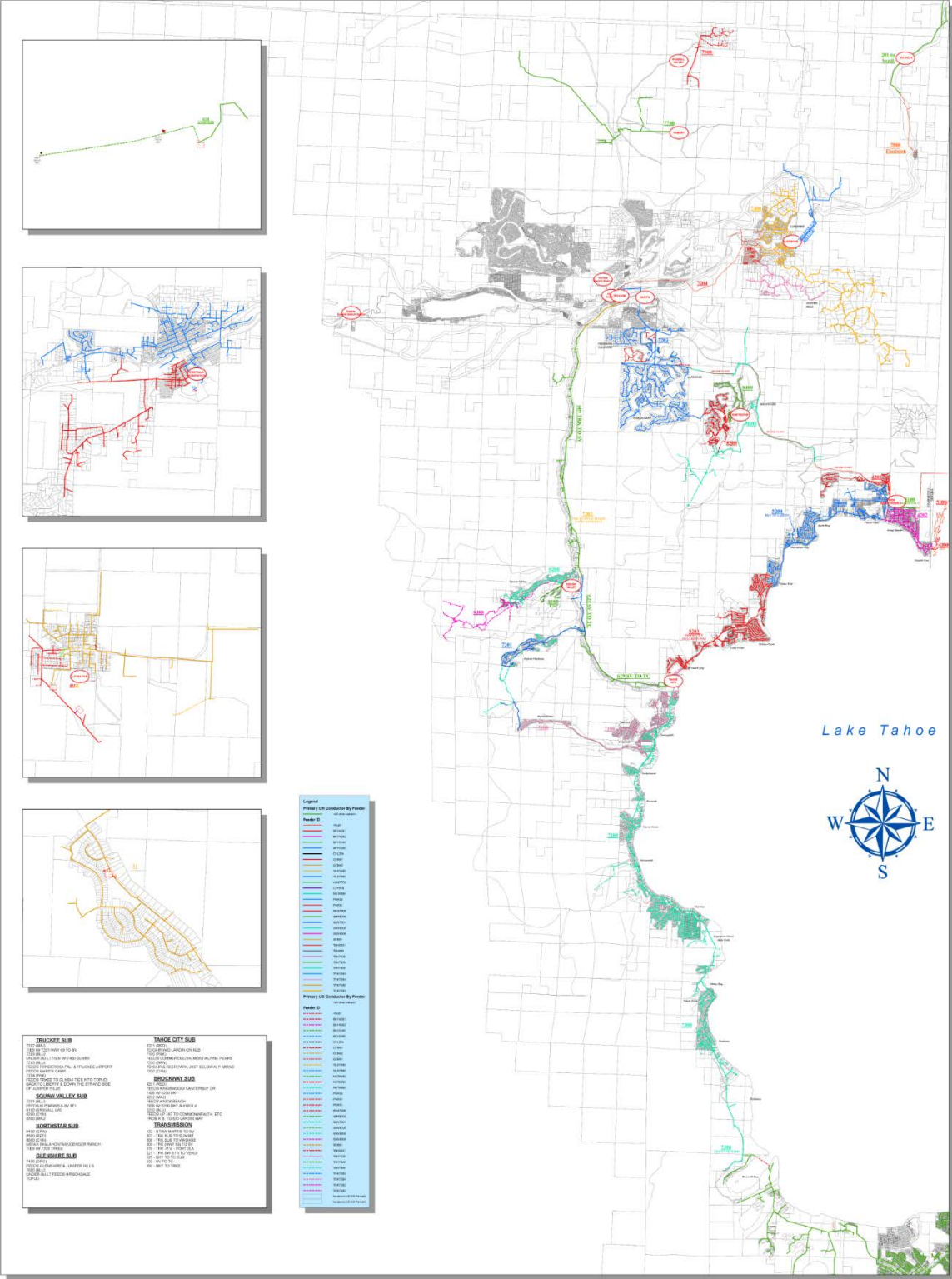




b. The number, date, and location of planned outages

Circuit	Number of Planned Outages By Year								
	2019	2018	2017	2016	2015	2014	2013	2012	2011
31		1			1				
32	1		2	1					
41				1					
201		7					1		
204	2			1					
619								1	
650					1			1	
1261	1	1							
1296		1	2		5	1			
2200	1				1	1			
2300	1	1			1	2		1	
3100	8	5	1					1	1
3101	3					2	2		
3200	3	5			1			1	
3300	8	10	2		3			2	
3400	2	4	3		5		2	4	
3500	15		6		1				
3501	3	3			2	2	4	1	1
4201	1	1		1					
4202	5	3	4				2	5	1
5100							1	1	
5200	5	4	1		4	1	1	3	
5201	8	1	5	5	4	1		1	
7100	1	2	1			1	1	4	
7200	1	1			1	1	1	2	
7201	1		4	1	2	1			
7202	3	1	1		2	3	1		
7203	3	2			2	2	4		
7300	20	14	5	6	4	16	4	5	2
7400	4	8	2	1	1				1
7600	1	1			1				1
7700						1			
7800						2			
7900	1								
8200	1	2	7	3	2	4			1
8300	1	1	2		6			2	
8400		7							
8500				1			1	2	
8600					4			2	

4) Service territory map including divisions of districts





**5) Top two worst performing circuits (WPC) excluding TMED**

- I. For each of these circuits each utility shall include the following information in its annual report: 1) Circuit Name; 2) District/Division; 3) Customer Count; 4) Substation name; 5) Circuit-miles; 6) Percentage underground, or “% UG”; 7) Percentage overhead or “% OH”; 8) Number of mainline/feeder/backbone outages resulting in the operation of either a circuit breaker (“CB”) or automatic re-closer (“AR”); and, 9) its preferred reliability metric.

Circuit	District	Customer Count	Substation Name	Circuit Miles	Facilities		Number of Mainline/Feeder/Backbone Outages Per Year	*Circuit SAIDI	Circuit SAIFI
					OH	UG			
1261*	Tahoe	749	Topaz	70.9	76.2%	23.8%	7	3040	7.12
201*	Tahoe	64	Washoe	8.7	99.8%	0.20%	4	2931	7.83

Note: Preferred Metric is the average of circuit SAIDI over a 3 year period.

\* A circuit that has been identified as deficient in the previous year’s report.

- II. Any circuit appearing on this list of “deficient” WPC circuits that also appeared on the previous year's list would be marked by an asterisk. For each asterisked circuit, each utility shall provide the following information:
  - I. An explanation of why it was ranked as a "deficient" circuit, i.e., the value of the metric used to indicate its performance;
  - II. A historical record of the metric;
  - III. An explanation of why it was on the deficiency list again;
  - IV. An explanation of what is being done to improve the circuit's future performance and the anticipated timeline for completing those activities (or an explanation why remediation is not being planned); and
  - V. A quantitative description of the utility's expectation for that circuit's future performance.

The Topaz 1261 circuit was noted as a deficient circuit in 2018 as well as 2019. The 3 year average circuit SAIDI score remains high due to significant outages in 2017 from wildfire and severe winter storms and an outage on March 22, 2019 which lasted approx. 58hrs. If the March 22<sup>nd</sup>, 2019 outage is excluded from the data, the Topaz 1261 circuit would not have been considered a deficient circuit in 2019.

There were 25 unplanned outages in 2019 for the 1261 circuit, 3 were due to a loss of source from a third party owned substation, 6 were due to equipment/hardware failure, 3 were weather related, 1 was due to trees, 1 was due to an operations error and the rest were unknown.

The historical metric for Topaz 1261:

- 2019 – 3,040.6
- 2018 – 2,393.8
- 2017 – 3,004.5
- 2016 – 1930.4

There are currently no plans in place that would remedy loss of source outages, which account for majority of the outages experienced by customers on this circuit. The circuit is a radial line, sourced by an NV Energy substation in Nevada. Approximately 10,000ft of this line will be will be rebuilt in 2020.

The circuit performance in 2019 was higher than historical records, excluding 2017. The 2017 performance is an outlier and does not accurately reflect the condition of this circuit. Liberty expects this circuit will no longer be a deficient

circuit no later than 2021 when the 2017 data is removed from the average and the planned rebuild is complete in 2020.

The Washoe 201 circuit was noted as a deficient circuit in 2017, 2018 as well as 2019. The 3 year average circuit SAIDI score remains high due to significant outages in 2017 from wildfire and severe winter storms.

There were only 5 unplanned outages in 2019 for the 201 circuit, 4 were due to a loss of source from a third party owned substation and the 5th time the substation was de-energized due to a brush.

The historical metric for Washoe 201:

- 2019 – 2931.6
- 2018 – 2,722.9
- 2017 – 2,698.9
- 2016 – 269.2

There are currently no plans in place that would remedy loss of source outages, which account for majority of the outages experienced by customers on this circuit. The circuit is a radial line in difficult terrain, sourced by an NV Energy substation in Nevada. The line has been rebuilt in 2014 and Liberty completed a voltage conversion in 2018 so that the entire circuit is now 24.9kV.

The circuit performance in 2019 was similar to historical records, excluding 2017. The 2017 performance is an outlier and does not accurately reflect the condition of this circuit. Liberty expects this circuit will no longer be a deficient circuit no later than 2020 when the 2017 data is removed from the average.

- III. Language to explain how the IOUs' include a cost effectiveness review as part of their respective internal review processes for circuit remediation projects.
  - I. Definitions of terms, acronyms, limitations, and assumptions;

Definitions

WPC- Worst Performing Circuits

Assumptions

Our analysis excludes planned outages and TMED outages.

- II. A clear explanation of the utility's process to determine the worst performing circuits:

The top 2 Worst Performing Circuits (WPC) are determined based upon the calculated average of circuit SAIDI over a 3 year period. This index is calculated on sustained outages by taking the total customer minutes of interruption and dividing by the number of customers on the circuit. Three years' worth of data is included and averaged in order to account for anomalies and tracking the impact of phased improvement projects.

- III. A clear explanation of the utility's process to determine cost-effective remediation projects. This shall include why the utility may decide to implement a project to address one worst performing circuit issue while deciding to not implement a project to address a different worst performing circuit.

The Regional Engineer presents proposals for reliability improvement projects along with a circuit analysis, cost-benefit analysis, and details on customer impact to the Business Manager, Engineering Manager, and Vice President of Operations. Collectively, the group determines which projects to approve or suggest alternatives and further analysis.

**6) Top 10 major unplanned power outage events within a reporting year**

- a. The cause of each outage event; and
- b. The location of each outage event.

Rank	Outage Date	Cause	Location	Customer Impact	SAIDI	SAIFI
1	10/1/2019	Third Party - Contractor Dig In	Lake Tahoe	10490	51.79	0.22223
2	2/22/2019	Equipment Failure	Lake Tahoe	8560	35.36	0.1814
3	10/3/2019	Third Party - Contractor Dig In	Lake Tahoe	7841	1.83	0.1661
4	2/26/2019	Hardware Failure	Lake Tahoe	4485	19.96	0.0950
5	1/18/2019	Tree	Lake Tahoe	4448	8.93	0.0942
6	3/6/2019	Hardware Failure	Lake Tahoe	4448	4.62	0.0942
7	11/11/2019	Animal	Lake Tahoe	4245	3.24	0.0899
8	9/21/2019	Third Party – Line Contact	Lake Tahoe	3712	2.05	0.0786
9	6/7/2019	Animal	Lake Tahoe	3529	2.09	0.0748
10	6/7/2019	Tree	Lake Tahoe	3507	6.76	0.0743

\*Based on customer impact

**7) Summary list of 2019 TMED per IEEE 1366**

- a. The number of customers without service at periodic intervals for each TMED;
- b. The cause of each Major Event (ME); and
- c. The location of each ME.

TMED as of 2018 = 171.00

CalPeco Electric did not experience an event in 2019 where the daily SAIDI was higher than the calculated TMED.

**8) Historical 10 largest unplanned outage events for the past 8 years\***

\*Based on Customers Affected

Rank	Description	Date	Customers Affected	Longest Interruption (hours)	Customers-hours affected	CPUC Major Event?
1	Third Party - Contractor Dig In	10/1/2019	10,490	3.88	40701.2	No
2	Equipment Failure	2/22/2019	8,560	4.42	37835.2	No
3	Third Party - Contractor Dig In	10/3/2019	7,841	0.18	1411.38	No
4	Hardware Failure	2/26/2019	4,485	3.5	15697.5	No
5	Tree	1/18/2019	4,448	1.76	7828.48	No
6	Hardware Failure	3/6/2019	4,448	0.82	3647.36	No
7	Animal	11/11/2019	4,245	0.6	2547	No
8	Third Party – Line Contact	9/21/2019	3,712	0.43	1596.16	No
9	Animal	6/7/2019	3,529	0.47	1658.63	No
10	Tree	6/7/2019	3,507	1.51	5295.57	No

LIBERTY UTILITIES (CALPECO) LLC 2019 ELECTRIC SYSTEM RELIABILITY REPORT

Rank	Description	Date	Customers Affected	Longest Interruption (hours)	Customers-hours affected	CPUC Major Event?
1	Third Party - Switching	5/17/2018	17,315	2.51	91301.9	No
2	Loss of Source – External System	12/12/2018	7,552	0.1	755.2	No
3	Trees	10/17/2018	7,398	6.32	14218.8	No
4	Loss of Source – External System	12/12/2018	7,089	0.1	708.9	No
5	Hardware Failure	10/3/2018	4,678	3.61	6958.1	No
6	Trees - Major Storm	6/9/2018	4,485	9.38	6420.1	No
7	Unknown	11/12/2018	4,154	1.76	7338.7	No
8	Unknown	1/4/2018	3,529	0.2	705.8	No
9	Loss of Source – External System	12/12/2018	3,434	0.1	343.4	No
10	Loss of Source – External System	8/4/2018	2,721	2.96	8072.3	No

Rank	Description	Date	Customers Affected	Longest Interruption (hours)	Customers-hours affected	CPUC Major Event?
1	Loss of Source – External System	1/10/17	22,000	26.12	5,745,66.7	No
2	Loss of Source – External System	8/28/2017	8,643	1.15	9,939.5	No
3	Major Storm	1/8/2017	4,497	9.75	43,845.8	No
4	Major Storm	2/8/2017	4,497	2.58	11,617.3	No
5	Trees	4/7/2017	4,497	1.91	8,619.3	No
6	Trees/Major Storm	2/22/2017	4,105	1.68	6,910.1	No
7	Major Storm	1/5/2017	3,517	8.72	30,656.5	No
8	Major Storm	2/21/2017	3,517	0.4	1,406.8	No
9	Underground Fault	5/30/2017	3,486	2.82	9,818.9	No
10	Carp/Pole	6/6/2017	3,486	1.97	6,855.8	No



LIBERTY UTILITIES (CALPECO) LLC 2019 ELECTRIC SYSTEM RELIABILITY REPORT

Rank	Description	Date	Customers Affected	Longest Interruption (hours)	Customers-hours affected	CPUC Major Event?
1	Loss of Source – External System	3/13/2016	6,882	0.75	5,046.80	No
2	Wind/Trees	10/16/2016	4,125	1.75	7,150.00	No
3	Underground Fault	10/4/2016	4,125	4.31	17,793.30	No
4	Downed Wire	3/22/2016	4,125	1.70	6,294.80	No
5	Car/Pole	3/13/2016	3,517	1.00	3,957.90	No
6	Failed Overhead Hardware/Material	1/1/2016	3,500	5.50	7,250.00	No
7	Trees	3/1/2016	3,258	0.50	1,683.30	No
8	Underground Fault	6/29/2016	2,859	8.42	3,975.10	No
9	Primary Contact – 3 <sup>rd</sup> Party	8/23/2016	2,772	5.15	2,693.25	No
10	Trees	6/15/2016	2,732	8.15	3,822.70	No

Rank	Description	Date	Customers Affected	Longest Interruption (hours)	Customers-hours affected	CPUC Major Event?
1	Storm	4/25/2015	4,120	6.50	12,380.00	No
2	Underground Fault	2/14/2015	3,587	0.50	2,511.00	No
3	Downed Wire	12/11/2015	3,587	10.00	17,251.00	No
4	Trees	2/6/2015	3,548	0.50	1,360.00	No
5	Bird/Animal	5/24/2015	3,000	6.50	12,340.00	No
6	Fire	2/20/2015	3,000	0.50	1,650.00	No
7	Weather/Lightning	7/4/2015	3,000	2.00	5,600.00	No
8	Weather/Lightning	7/7/2015	3,000	0.25	1,000.00	No
9	Operations	8/11/2015	3,000	0.25	750.00	No
10	Weather/Lightning	8/7/2015	3,000	1.75	5,400.00	No

LIBERTY UTILITIES (CALPECO) LLC 2019 ELECTRIC SYSTEM RELIABILITY REPORT

Rank	Description	Date	Customers Affected	Longest Interruption (hours)	Customers-hours affected	CPUC Major Event?
1	NV Energy Outage	9/27/2014	27,046	4.27	115,396.27	Yes
2	Flashing	7/20/2014	26,000	5.12	2,690.45	Yes
3	Tree-Green	12/11/2014	15,853	4.03	63,940.43	No
4	Relay Failure	9/23/2014	8,900	0.22	1,928.33	No
5	Trees	3/11/2014	3,587	1.83	6,521.17	No
6	Weather/Lightning	7/20/2014	3,587	0.75	2,690.25	No
7	Trees	8/30/2014	3,587	0.30	1,195.67	No
8	Trees	1/30/2014	3,548	4.25	2,109.00	No
9	Bird/Animal	8/31/2014	3,548	0.50	1,774.00	No
10	Trees	7/20/2014	3,500	5.00	17,266.67	No

Rank	Description	Date	Customers Affected	Longest Interruption (hours)	Customers-hours affected	CPUC Major Event?
1	Wire Down Transformer	7/4/2013	5,650	9.82	10,816.02	No
2	Tree Trimming	8/14/2013	4,800	2.35	4,334.50	No
3	Car/Pole	10/25/2013	3,548	0.40	1,419.20	No
4	Cable Failure	8/7/2013	3,475	8.50	4,412.50	No
5	Trees	3/14/2013	3,315	0.30	1,049.75	No
6	Hardware Failure	3/6/2013	3,000	8.13	14,740.00	No
7	Weather/Lightning	7/2/2013	3,000	2.10	6,300.00	No
8	Weather/Lightning	7/25/2013	2,042	3.46	911.83	No
9	Bird/Animal	10/5/2013	2,000	4.00	2,108.00	No
10	Unknown Cause	6/30/2013	2,000	0.76	1,533.33	No

LIBERTY UTILITIES (CALPECO) LLC 2019 ELECTRIC SYSTEM RELIABILITY REPORT

Rank	Description	Date	Customers Affected	Longest Interruption (hours)	Customers-hours affected	CPUC Major Event?
1		8/19/2012	8,677	1.08	9,400.08	No
2	Overhead Hardware/Material	11/29/2012	4,200	.067	3,488.33	No
3	Trees	4/1/2012	4,120	12.70	37,471.67	No
4	Hardware Failure	4/13/2012	4,120	2.95	12,154.00	No
5	Trees	5/24/2012	4,120	0.73	3,021.33	No
6	Bird/Animal	6/28/2012	3,587	0.47	1,673.93	No
7	Weather/Lightning	7/23/2012	3,548	1.16	909.50	No
8	Car/Pole	7/16/2012	3,315	8.83	2,724.17	No
9	Bird/Animal	5/11/2012	3,201	2.48	7,949.15	No
10	Bird/Animal	6/25/2012	1,967	5.60	11,015.20	No

**9) Number of customer inquiries on reliability data and the number of days per response**

CalPeco Electric did not receive any reliability inquiries in 2019.

Date Received	Date Responded	Description of Inquiry

**10) List of PSPS's in 2019**

CalPeco Electric did not have any PSPS events in 2019.

**Appendix A: 8 Years of Planned Outage Data -- CONFIDENTIAL VERSION --**

Outage ID	Created Date	Description	Out Date	Out Time	In Date	In Time
8500	1/26/2012 14:39	Meyers Sub: 3100 CB	1/27/2012	9:00	1/27/2012	16:00
8508	2/1/2012 14:49	3300 Meyers 14.5kV Line, 3300 Meyers 14.5kV Line	2/1/2012	12:30	2/1/2012	14:00
8513	2/2/2012 8:18	7300 TAHOE CITY 14.4Kv LINE	2/2/2012	8:30	2/2/2012	10:30
8515	2/2/2012 9:51	3400 Meyers 14.4kV Line	2/2/2012	9:30	2/2/2012	11:30
8534	2/9/2012 5:54	650 Truckee / Kings Beach, 8600 NORTHSTAR	2/9/2012	8:00	2/9/2012	14:00
8581	2/21/2012 9:24	Tahoe City Sub: 71-73 T2 switch	2/23/2012	8:00	2/24/2012	5:00
8825	4/19/2012 9:43	3200 Meyers 14.5kV Line, 3200 Meyers 14.5kV Line	4/19/2012	20:30	4/20/2012	0:00
8846	4/25/2012 7:38	Brockway Sub: cutouts @ pole #90563	4/27/2012	8:00	4/27/2012	16:00
8847	4/25/2012 7:42	Tahoe City Sub: 71/6A cutouts	5/1/2012	8:00	5/1/2012	18:00
8854	4/26/2012 8:26	8500 Northstar Ln	5/1/2012	9:00	5/1/2012	16:00
8868	4/30/2012 16:09	2300 Stateline 14.4kV Line	5/4/2012	0:00	5/18/2012	0:00
8855	4/26/2012 10:56	Brockway Sub: OS-28 & TS 17	5/9/2012	8:00	5/11/2012	18:00
8849	4/25/2012 8:07	Tahoe City Sub: 7334TI M.O.	5/16/2012	7:00	5/16/2012	17:00
8848	4/25/2012 8:00	Tahoe City Sub: cutouts @ pol #124626	5/16/2012	8:00	5/16/2012	17:00
8962	5/25/2012 10:20	Tahoe City Sub: 71-6 switch	5/30/2012	8:00	5/30/2012	17:00
8989	6/1/2012 9:47	8600 line	6/1/2012	9:30	6/1/2012	10:30
8964	5/25/2012 10:36	Brockway Sub: (4202) TS 17 & (5200) 52-5201 T1	6/5/2012	8:00	6/5/2012	17:00
9000	6/4/2012 16:06	3400 Meyers 14.4kV Line	6/8/2012	8:30	6/8/2012	15:00
8990	6/1/2012 10:22	7100 TAHOE CITY 14.4Kv LINE, 7300 TAHOE CITY 14.4Kv LINE , 71-73-T2	6/14/2012	8:00	6/14/2012	17:00
9029	6/12/2012 10:41	8300 SQUAW VALLEY 14.4Kv LINE	6/14/2012	10:00	6/14/2012	14:00
9071	6/15/2012 15:19	3501 Stateline 14.5kV Line, 3101 STATELINE	6/18/2012	0:30	6/18/2012	5:00
9153	7/6/2012 8:23	Tahoe City Sub: 72-5 air switch	7/14/2012	8:00	7/15/2012	16:00
9154	7/6/2012 8:26	Tahoe City Sub: 72-D2	7/14/2012	8:00	7/15/2012	16:00
9341	8/16/2012 14:07	4202 BROCKWAY	8/21/2012	7:00	8/22/2012	6:00
9587	9/20/2012 15:04	Tahoe City Sub: cutouts @ pole # 236636	10/1/2012	8:00	10/2/2012	0:00

LIBERTY UTILITIES (CALPECO) LLC 2019 ELECTRIC SYSTEM RELIABILITY REPORT

9661	10/1/2012 16:16	Northstar Sub: VFI 163	10/3/2012	8:00	10/3/2012	15:30
9668	10/2/2012 14:50	Portola Sub: 619C DISC	10/7/2012	2:00	10/7/2012	4:00
9711	10/12/2012 14:47	Brockway Sub: TS-17/TS-22/TS-16/TS-15	10/15/2012	8:00	10/22/2012	0:00
9805	11/5/2012 8:49	3400 Meyers 14.4kV Line	11/7/2012	8:00	11/7/2012	15:00
9832	11/14/2012 10:29	5200 BROCKWAY	11/16/2012	8:00	11/16/2012	17:00
9860	11/27/2012 13:14	3400 Meyers 14.4kV Line	11/28/2012	9:00	11/28/2012	16:30
9879	11/30/2012 9:01	3300 Meyers 14.5kV Line	12/3/2012	9:00	12/3/2012	16:00
9933	12/12/2012 12:49	Squaw Valley Sub: OSI 89, OS 56 & 8300 R1	12/13/2012	17:00	12/13/2012	19:00
9924	12/10/2012 12:53	51-17 SWITCH REPLACEMENT	12/17/2012	8:00	12/17/2012	16:00
10013	1/8/2013 11:10	3501 Stateline 14.5kV Line	1/9/2013	9:00	1/10/2013	0:00
9152	7/6/2012 8:19	Tahoe City Sub: 72-5 air switch	1/10/2013	8:00	1/10/2013	16:00
10056	1/16/2013 13:27	3501 Stateline 14.5kV Line	1/17/2013	9:00	1/17/2013	16:00
10030	1/11/2013 10:28	7100 TAHOE CITY 14.4Kv LINE	1/18/2013	0:00	1/19/2013	0:00
10091	1/28/2013 10:28	7203 line Truckee	1/31/2013	8:00	2/1/2013	0:00
10138	2/11/2013 10:37	7203 o/o truckee sub	2/14/2013	7:00	2/14/2013	11:00
10137	2/11/2013 10:10	truckee sub, truckee sub 7203	2/14/2013	7:00	2/14/2013	11:00
10259	3/25/2013 13:40	4202/5200 BKY CABLE BACK FOR HWY PROJECT	3/28/2013	4:00	4/8/2013	6:00
10376	4/30/2013 10:18	7203 ln	4/30/2013	11:00	4/30/2013	13:30
10409	5/3/2013 15:20	Tahoe City Sub: Cutouts @ pole # 242154	5/7/2013	8:00	5/7/2013	15:00
10459	5/14/2013 9:16	3400 Meyers 14.4kV Line	5/15/2013	8:00	5/18/2013	15:00
10472	5/16/2013 13:42	Northstar Sub: OSI 164 & 161	5/20/2013	8:30	5/21/2013	0:00
10474	5/16/2013 15:47	Tahoe City Sub: VFI 120	5/20/2013	19:00	5/21/2013	0:00
10130	2/6/2013 8:30	4200 INCLINE 14.4Kv LINE, 5100 BROCKWAY	5/21/2013	7:00	5/21/2013	16:00
10549	5/30/2013 8:39	3101 STATELINE, and 2300 Stateline 14.4kV Line	6/3/2013	0:01	6/3/2013	6:00
10708	7/17/2013 8:45	3101 STATELINE	7/17/2013	15:00	7/18/2013	0:00
10704	7/15/2013 8:33	3501 Stateline 14.5kV Line	7/19/2013	0:00	7/19/2013	0:00
10964	9/10/2013 13:07	7202 Truckee REPLACE POLES - UNDERBUILD OF 609	9/16/2013	7:00	9/20/2013	15:00
11019	9/24/2013 8:17	3400 Meyers 14.4kV Line	9/26/2013	8:30	9/26/2013	15:00
11038	9/30/2013 10:41	3501 Stateline 14.5kV Line	10/1/2013	22:00	10/2/2013	0:00
11072	10/11/2013 8:31	Tahoe City Sub: 7334TI M.O.	10/29/2013	7:00	11/1/2013	10:00

LIBERTY UTILITIES (CALPECO) LLC 2019 ELECTRIC SYSTEM RELIABILITY REPORT

11134	10/24/2013 15:10	Tahoe City Sub: `VFI 120`	10/30/2013	22:00	10/31/2013	0:00
10632	6/17/2013 15:40	Brockway Sub: Jumpers @ P#269433	11/12/2013	8:00	11/12/2013	16:30
11269	11/22/2013 10:36	201 LINE FLEISH - FARAD	11/25/2013	7:30	11/25/2013	15:30
11670	3/10/2014 10:49	7300 TAHOE CITY 14.4Kv LINE	3/24/2014	7:00	3/28/2014	0:00
11956	5/20/2014 15:30	3101 STATELINE	5/22/2014	8:30	5/22/2014	15:00
12051	6/17/2014 19:49	7100 TAHOE CITY 14.4Kv LINE, 7200 TAHOE CITY 14.4Kv LINE	6/19/2014	19:30	6/20/2014	7:00
12117	7/3/2014 13:03	7300 TAHOE CITY 14.4Kv LINE	7/9/2014	8:00	8/20/2014	17:00
12145	7/10/2014 9:58	7300 TAHOE CITY 14.4Kv LINE	7/15/2014	7:00	7/16/2014	0:00
12164	7/14/2014 8:40	7300 TAHOE CITY 14.4Kv LINE	7/17/2014	7:00	7/18/2014	0:00
12223	7/24/2014 11:56	7300 TAHOE CITY 14.4Kv LINE	7/29/2014	7:00	8/4/2014	0:00
12249	7/29/2014 15:22	7300 TAHOE CITY 14.4Kv LINE	8/5/2014	7:00	8/5/2014	16:00
12242	7/29/2014 10:09	7300 TAHOE CITY 14.4Kv LINE	8/6/2014	8:00	8/6/2014	18:00
12315	8/14/2014 6:07	7300 TAHOE CITY 14.4Kv LINE	8/18/2014	7:00	8/18/2014	17:00
12321	8/15/2014 13:47	7300 TAHOE CITY 14.4Kv LINE	8/20/2014	7:00	8/20/2014	17:00
12333	8/18/2014 11:20	3501 Stateline 14.5kv Line	8/21/2014	8:00	8/21/2014	17:30
12434	8/28/2014 11:52	7203 line Truckee	8/31/2014	7:00	9/27/2014	16:00
12543	9/5/2014 13:20	7202 Truckee	9/9/2014	6:00	9/23/2014	17:00
12559	9/8/2014 10:47	1296 MULLER 12.5kv LINE	9/10/2014	9:00	9/10/2014	15:00
12682	9/17/2014 16:05	`7700 HOBART`	9/18/2014	7:00	9/19/2014	12:00
12674	9/17/2014 9:37	3501 Stateline 14.5kv Line	9/19/2014	0:00	9/19/2014	0:00
12664	9/16/2014 7:43	7200 TAHOE CITY 14.4Kv LINE	9/22/2014	6:30	9/24/2014	16:30
12737	9/22/2014 9:37	2300 Stateline 14.4kv Line	9/26/2014	0:00	9/26/2014	0:00
12744	9/22/2014 11:49	Squaw Valley Sub: 7201 R1	10/3/2014	8:00	10/3/2014	12:00
12857	9/30/2014 18:53	Squaw Valley Sub: 8200 OCB	10/6/2014	8:00	10/9/2014	17:00
12850	9/30/2014 18:11	Squaw Valley Sub: OS 78	10/6/2014	8:00	11/1/2014	16:00
12847	9/30/2014 17:30	Tahoe City Sub: Cutouts @ pole # 137746	10/7/2014	8:00	10/8/2014	0:00
12774	9/24/2014 13:50	8200 SQUAW VALLEY 14.4Kv LINE	10/14/2014	6:00	10/16/2014	16:00
12927	10/8/2014 13:04	7203 Truckee	10/20/2014	6:00	10/21/2014	16:00
12986	10/14/2014 14:17	Tahoe City Sub: Coutouts @ pole#68594	10/20/2014	8:00	11/17/2014	0:00
13016	10/17/2014 7:18	Brockway Sub: switch @ pole # 161150	10/23/2014	22:00	10/24/2014	0:00

LIBERTY UTILITIES (CALPECO) LLC 2019 ELECTRIC SYSTEM RELIABILITY REPORT

13074	10/24/2014 6:02	Tahoe City Sub: 5201-14A cutouts @ P#140177	10/28/2014	8:00	10/29/2014	0:00
13091	10/27/2014 10:57	2200 Stateline 14.4kV Line	10/30/2014	5:30	10/30/2014	8:00
13075	10/24/2014 6:08	Tahoe City Sub: Cutouts @ P#92187	10/30/2014	8:00	10/31/2014	0:00
13121	10/29/2014 13:41	Farad Sub: 7800 R1	11/3/2014	8:00	12/1/2014	1:00
12858	9/30/2014 18:57	Squaw Valley Sub: 8200 OCB	11/6/2014	8:00	11/6/2014	17:00
13163	11/4/2014 9:56	3101 STATELINE	11/6/2014	8:30	11/7/2014	0:00
13164	11/4/2014 10:00	2300 Stateline 14.4kV Line	11/7/2014	0:00	11/7/2014	0:00
13152	11/3/2014 14:03	7300 TAHOE CITY 14.4Kv LINE	11/12/2014	7:00	11/12/2014	16:00
13174	11/5/2014 10:29	7300 TAHOE CITY 14.4Kv LINE	11/12/2014	8:00	11/12/2014	18:00
13219	11/12/2014 8:27	7202 Truckee, 7203 Truckee	11/14/2014	8:00	12/31/2014	13:00
13296	11/20/2014 10:10	7202 Truckee	12/3/2014	8:00	12/3/2014	17:00
13415	12/5/2014 10:02	Farad Sub: 7800 R1	12/14/2014	8:00	12/21/2014	3:00
13482	12/14/2014 9:23	Tahoe City Sub: 73-74 MO & 73-87	12/17/2014	8:00	12/19/2014	3:00
13535	12/22/2014 12:40	Tahoe City Sub: Cutouts @ pole # 134488	12/29/2014	9:00	12/30/2014	1:00
13267	11/19/2014 9:00	Brockway Sub: 52-3 cutouts	1/4/2015	8:00	1/5/2015	3:00
13772	1/23/2015 8:52	7202 Truckee	1/26/2015	6:00	1/30/2015	16:00
13704	1/14/2015 9:02	5201 TAHOE CITY 14.4Kv LINE	1/26/2015	8:00	1/26/2015	12:00
13705	1/14/2015 9:34	7600 o/o glenshire	1/26/2015	8:00	2/26/2015	16:00
13813	1/28/2015 13:38	7300 TAHOE CITY 14.4Kv LINE	1/29/2015	8:00	1/29/2015	16:00
14320	3/26/2015 10:51	Meyers 3300	3/30/2015	8:30	3/30/2015	13:30
14424	4/9/2015 8:42	3501 Stateline 14.5kV Line	4/11/2015	10:00	4/11/2015	14:30
14521	4/21/2015 17:21	1296 MULLER 12.5kV LINE	5/7/2015	8:00	5/7/2015	12:00
14420	4/8/2015 12:23	7203 Truckee	5/13/2015	7:00	5/14/2015	15:30
14780	5/20/2015 6:10	Tahoe City Sub: Cutouts @ P#151493	5/27/2015	8:00	5/28/2015	1:00
14929	6/8/2015 8:57	8300 o/o squaw valley	6/10/2015	8:00	6/10/2015	16:00
14938	6/9/2015 9:42	Meyers 3400	6/10/2015	23:00	6/11/2015	6:00
14996	6/16/2015 8:06	Meyers sub, Meyers sub 3400	6/17/2015	23:00	6/18/2015	6:00
14536	4/23/2015 6:39	7400 Glenshire	6/18/2015	8:00	6/18/2015	15:30
15029	6/18/2015 5:46	Brockway Sub: Cutouts @ P#235795	6/19/2015	8:00	6/20/2019	3:00
15141	6/29/2015 16:08	3400 Meyers 14.4kV Line	7/2/2015	9:00	8/14/2015	0:00
15181	7/6/2015 10:27	8300 o/o squaw valley	7/9/2015	8:00	7/9/2015	16:00

LIBERTY UTILITIES (CALPECO) LLC 2019 ELECTRIC SYSTEM RELIABILITY REPORT

15097	6/25/2015 12:22	Truckee Sub: 7202 RCL(E)	7/9/2015	8:00	7/24/2015	14:00
15208	7/8/2015 9:50	5201 TAHOE CITY 14.4kV LINE	7/16/2015	0:00	7/16/2015	1:00
15332	7/23/2015 15:33	8300 SQUAW VALLEY 14.4kV LINE	7/23/2015	16:00	7/23/2015	20:00
15402	7/31/2015 13:13	3200 Meyers 14.5kV Line	8/5/2015	17:00	8/6/2015	23:30
15059	6/22/2015 9:11	8600 NORTHSTAR	8/18/2015	7:00	10/18/2015	16:00
15541	8/14/2015 15:06	3501 Stateline 14.5kV Line	8/18/2015	22:00	8/20/2015	6:00
15597	8/19/2015 16:04	7201 SQUAW VALLEY 14.4kV LINE, 7100 TAHOE CITY 14.4kV LINE	8/21/2015	8:00	8/22/2015	16:00
15685	8/26/2015 14:08	Portola Sub: 32 R-1 @ PORTOLA SUB	8/31/2015	7:00	9/4/2015	17:00
15688	8/26/2015 15:34	1296 MULLER 12.5kV LINE	8/31/2015	8:00	9/11/2015	18:00
15710	8/31/2015 9:18	3300 Meyers 14.5kV Line	9/1/2015	9:00	9/30/2015	5:30
15711	8/31/2015 8:58	8300 o/o squaw valley	9/2/2015	7:00	9/30/2015	16:00
15779	9/3/2015 16:43	2200 Stateline 14.4kV Line, 2300 Stateline 14.4kV Line, 2301 ROUNDHILL 14.4 KV	9/4/2015	0:01	9/5/2015	5:00
15777	9/3/2015 14:46	7201 SQUAW VALLEY 14.4kV LINE	9/8/2015	23:00	9/18/2015	7:00
15708	8/31/2015 7:46	1296 MULLER 12.5kV LINE	9/9/2015	8:00	9/9/2015	17:00
15851	9/9/2015 14:22	1296 MULLER 12.5kV LINE	9/10/2015	8:00	9/30/2015	18:30
15741	9/1/2015 9:17	7203 Truckee	9/14/2015	7:00	9/14/2015	16:00
15791	9/4/2015 10:23	8600 NORTHSTAR	9/14/2015	7:00	9/14/2015	16:00
15773	9/3/2015 12:23	7300 TAHOE CITY 14.4kV LINE	9/16/2015	8:00	9/16/2015	16:00
15963	9/21/2015 10:18	3400 Meyers 14.4kV Line	9/23/2015	8:30	9/30/2015	13:30
15715	8/31/2015 9:51	3500 Meyers 14.5kV Line	9/28/2015	9:00	10/16/2015	5:30
16095	9/28/2015 14:35	1296 MULLER 12.5kV LINE	9/30/2015	8:30	10/30/2015	17:00
16158	10/5/2015 9:39	8600 NORTHSTAR	10/7/2015	8:00	10/18/2015	17:00
16178	10/7/2015 7:53	8600 NORTHSTAR	10/11/2015	8:00	10/16/2015	17:00
16234	10/11/2015 5:55	Squaw Valley Sub: OS 77	10/13/2015	8:00	10/15/2015	17:00
16061	9/24/2015 10:49	8300 fed 8200 o/o squaw valley	10/15/2015	8:00	10/15/2015	16:00
16365	10/22/2015 16:36	5201 TAHOE CITY 14.4kV LINE	10/25/2015	9:00	10/25/2015	15:00
16470	11/3/2015 14:05	5200 BROCKWAY	11/5/2015	7:00	12/5/2015	17:00
16487	11/5/2015 5:29	5200 BROCKWAY	11/9/2015	8:00	11/13/2015	17:00
16549	11/10/2015 12:49	5200 BROCKWAY	11/13/2015	7:00	11/13/2015	17:00



LIBERTY UTILITIES (CALPECO) LLC 2019 ELECTRIC SYSTEM RELIABILITY REPORT

16607	11/17/2015 12:04	`8300 o/o squaw valley`	11/19/2015	7:00	11/19/2015	17:00
16585	11/16/2015 7:53	Meyers Sub: 3400 CB	11/19/2015	9:00	11/30/2015	0:00
16872	12/10/2015 14:28	7200 TAHOE CITY 14.4Kv LINE	12/10/2015	17:00	12/11/2015	1:00
16873	12/10/2015 14:17	7300 TAHOE CITY 14.4Kv LINE	12/14/2015	7:00	12/17/2015	17:00
16901	12/14/2015 8:30	3300 Meyers 14.5kV Line, 3500 Meyers 14.5kV Line	12/15/2015	9:00	1/29/2016	15:30
16920	12/15/2015 9:16	2300 Stateline 14.4kV Line	12/16/2015	9:00	1/29/2016	15:30
17004	12/22/2015 12:02	8200 SQUAW VALLEY 14.4Kv LINE	12/23/2015	8:00	12/23/2015	16:00
	1/4/2016	BKY 4202 Replacing XFMR	1/7/16	9:00	1/7/2016	16:00
	2/11/2016	Glenshire – Replace XFMR, Re-frame pole	2/16/2016	10:00	2/16/2016	16:00
	2/19/2016	Verdi Re-framing poles	2/24/2016	08:00	2/24/2016	16:00
	2/19/2016	Tahoma replacing secondary	2/24/2016	08:00	2/24/2016	16:00
	2/22/2016	Rubicon replacing secondary	2/26/2016	08:00	2/26/2016	16:00
	4/14/2016	Carnelian Bay replacing secondary	4/19/2016	09:00	4/19/2016	15:00
	4/15/2016	Lakeview replacing secondary	4/20/2016	09:00	4/20/2016	15:00
	5/4/2016	Cedar Flat replacing secondary	5/10/2016	08:00	5/10/2016	16:00
	5/4/2016	Cedar Flat replacing secondary	5/11/2016	08:00	5/11/2016	16:00
	5/4/2016	Cedar Flat replacing secondary	5/12/2016	08:00	5/12/2016	16:00
	6/17/2016	Cedar Flat replacing secondary	6/23/2016	08:00	6/23/2016	16:00
	7/11/2016	Truckee replacing XFMRs	7/14/2016	08:00	7/14/2016	16:00
	7/11/2016	Kings Beach underground upgrade	7/14/2016	08:00	7/14/2016	16:00
	7/14/2016	Rubicon replacing main conductor and re-framing	7/20/2016	08:00	7/20/2016	16:00
	8/18/2016	Portola replacing XFMR	8/24/2016	08:00	8/24/2016	14:00
	8/18/2016	Loyalton replacing secondary	8/25/2016	08:30	8/25/2016	16:30
	9/1/2016	Homewood underground repairs	9/8/2016	11:30	9/8/2016	16:00
	9/8/2016	Kings Beach 650 line reload	9/13/2016	08:00	9/13/2016	16:00
	9/8/2016	Rubicon replacing poles	9/13/2016	08:00	9/13/2016	16:00
	10/13/2016	Squaw Valley pole replacement	10/19/2016	08:00	10/19/2016	16:00
	10/13/2016	Squaw Valley replacing poles	10/19/2016	10:00	10/19/2016	15:00
	10/13/2016	Squaw Valley replacing poles	10/20/2016	08:00	10/20/2016	16:00
	12/12/2016	Tahoma repairing N36 box	12/20/2016	11:00	12/20/2016	16:00
	3/22/2017	CHANGING OUT XFMR	3/23/2017	8:30	3/23/2017	12:30

LIBERTY UTILITIES (CALPECO) LLC 2019 ELECTRIC SYSTEM RELIABILITY REPORT

	5/11/2017	REPLACE CAR POLE	5/18/2017	8:00	5/18/2017	9:00
	5/16/2017	RESTORE TO NORMAL AFTER CAR VS POLE	5/18/2017	9:00	5/18/2017	10:00
	5/22/2017	REPLACE XFMR ON P 114480	5/24/2017	9:00	5/24/2017	12:15
	6/25/2017	SET NEW POLE AND RELOCATE XFMR	6/27/2017	8:00	6/27/2017	17:00
	7/5/2017	REPLACE P 117493	7/11/2017	9:00	7/11/2017	14:00
	7/17/2017	RULE 20 - PULLING WIRE	7/19/2017	9:00	7/19/2017	11:00
	8/1/2017	SECONDARY CHANGEOUT	8/2/2017	9:00	8/2/2017	14:00
	8/1/2017	SECONDARY CHANGEOUT	8/3/2017	9:00	8/3/2017	16:00
	8/1/2017	SECONDARY CHANGEOUT	8/4/2017	9:00	8/4/2017	13:00
	8/8/2017	RULE 20 - TRANSFER U/G WIRE	8/10/2017	12:30	8/10/2017	15:30
	8/8/2017	RULE 20 - TRANSFER U/G WIRE	8/11/2017	9:00	8/11/2017	11:00
	8/8/2017	RULE 20 - TRANSFER U/G WIRE	8/14/2017	9:00	8/14/2017	11:09
	8/11/2017	RULE 20 - TRANSFER U/G WIRE	8/15/2017	9:00	8/15/2017	17:00
	8/25/2017	REPLACE OPEN SECONDARY WIRE	8/29/2017	8:00	8/29/2017	11:00
	8/29/2017	REPLACE POLE	8/31/2017	21:00	9/1/2017	5:00
	9/14/2017	REMOVE 3 TREES WITH CRANE	9/19/2017	8:30	9/19/2017	12:00
	9/27/2017	CRANE FOR NEW BUILD	9/28/2017	9:00	9/28/2017	15:00
	9/29/2017	TREE REMOVAL	10/3/2017	8:00	10/3/2017	16:30
	10/3/2017	REPAIR SECONDARY	10/4/2017	8:00	10/4/2017	17:00
	10/2/2017	CHANGE OUT PADMOUNT XFMR AND NEW WIRE REPLACEMENT	10/4/2017	20:00	10/5/2017	7:00
	10/3/2017	CHANGE OUT GRAY WIRE	10/5/2017	10:00	10/5/2017	17:00
	10/4/2017	CHANGE OUT PADMOUNT XFMR, REPLACE PAD	10/6/2017	9:00	10/6/2017	17:00
	10/5/2017	REPLACE PAD AND XFMR	10/9/2017	9:00	10/9/2017	16:00
	10/5/2017	CHANGE OUT LIVE FRONT XFMR	10/9/2017	8:00	10/9/2017	16:00
	10/5/2017	REPLACE VAULT, 3 NEW PADMOUNT XFMRs, REBUILD PRIMARY RISER, RUN 3 NEW RUNS OF 1/0 U/G	10/10/2017	8:00	10/10/2017	18:00
	10/5/2017	REPLACE TRANSFORMER AND PAD	10/11/2017	8:30	10/11/2017	16:00
	10/10/2017	REPLACE XFMR	10/13/2017	12:00	10/13/2017	8:00
	10/10/2017	REPLACE XFMR	10/13/2017	9:00	10/13/2017	16:00

LIBERTY UTILITIES (CALPECO) LLC 2019 ELECTRIC SYSTEM RELIABILITY REPORT

	10/16/2017	REPLACE POLE	10/18/2017	9:00	10/18/2017	14:45
	10/17/2017	RECONDUCTOR REPLACEMENT	10/20/2017	8:00	10/20/2017	17:00
	10/20/2017	REPLACE P 90826 - BROKEN IN STORM DMG	10/24/2017	9:00	10/24/2017	17:00
	10/24/2017	CHANGE OUT POLES DUE TO WINTER DMG - FLYING POLES IN	10/26/2017	9:00	10/26/2017	18:00
	10/24/2017	CHANGE OUT POLES DUE TO WINTER DMG - FLYING POLES IN	10/27/2017	9:00	10/27/2017	18:00
	10/26/2017	REPLACE SWITCH AND U/G CABLE	10/30/2017	8:00	10/30/2017	17:00
	10/26/2017	REMOVE HAZARD TREES	10/31/2017	8:00	10/31/2017	16:00
	10/26/2017	CHANGE OUT 2 XFMRs, NEW PADS	10/31/2017	9:00	10/31/2017	19:00
	11/20/2017	REPLACE SUBMERSIBLE XFMR	11/21/2017	8:30	11/21/2017	15:00
	11/20/2017	POLE CHANGE OUT	11/21/2017	9:00	11/21/2017	16:00
	11/20/2017	REPLACE SUBMERSIBLE XFMR	11/21/2017	8:30	11/21/2017	13:30
	11/20/2017	XFMR CHANGE OUT	11/22/2017	8:00	11/22/2017	14:00
	11/20/2017	CHANGE OUT POLE AND XFMR	11/27/2017	8:30	11/27/2017	16:00
	11/22/2017	REPLACE XFMR AND U/G WIRE	11/28/2017	23:00	11/29/2017	6:00
	11/22/2017	REPLACE 5 SPANS OF OPEN WIRE SECONDARY WITH 2/0 TX	11/28/2017	8:30	11/28/2017	16:00
	11/28/2017	REPLACE SWITCH	11/30/2017	8:30	11/30/2017	16:30
	11/29/2017	REPLACE XFMR	12/1/2017	8:00	12/1/2017	13:00
	12/11/2017	TREE REMOVAL WITH CRANE	12/14/2017	7:00	12/14/2017	17:00
	12/15/2017	REPLACE POLES	12/18/2017	8:00	12/18/2017	17:00
	1/2/2018	SWITCHING TO ENERGIZE NEW SUBDIVISION	1/4/2018	13:00	1/4/2018	14:00
	1/19/2018	REPLACING KAP CABLE	1/23/2018	8:00	1/23/2018	16:00
17918	1/23/2018	REPLACING XFMR TS 220	1/24/2018	9:00	1/24/2018	11:38
17950	1/23/2018	REMOVING OLD KAP CABLE, INSTALL NEW 2/0 TX	1/26/2018	8:30	1/26/2018	16:00
	1/29/2018	REMOVING OLD KAP CABLE, INSTALL NEW 2/0 TX	1/31/2018	8:30	1/31/2018	16:00
	1/31/2018	CHANGE OUT KAP CABLE, INSTALL 2/0 TX	2/2/2018	8:30	2/2/2018	16:00
18050	2/13/2018	CHANGE OUT KAP CABLE, INSTALL 2/0 TX	2/15/2018	8:00	2/15/2018	15:00
18051	2/14/2018	CHANGE OUT KAP CABLE, INSTALL 2/0 TX	2/16/2018	8:00	2/16/2018	15:00
	2/16/2018	REPLACING WIRE	2/21/2018	8:00	2/21/2018	16:00

LIBERTY UTILITIES (CALPECO) LLC 2019 ELECTRIC SYSTEM RELIABILITY REPORT

	2/20/2018	WRECK OUT 4 SPANS OF OPEN WIRE, INSTALL 2/0 TX	2/23/2018	8:30	2/23/2018	16:00
	3/5/2018	REPLACE WIRE	3/6/2018	8:00	3/6/2018	16:00
	3/6/2018	REPLACE OPEN WIRE SEC WITH NEW 2/0 TX	3/8/2018	8:30	3/8/2018	16:00
	3/6/2018	REPLACE OPEN WIRE SEC WITH NEW 2/0 TX	3/12/2018	8:00	3/12/2018	16:00
18462	3/21/2018	REPLACE ROTTEN POLE #146100	3/23/2018	9:00	3/23/2018	12:48
18559	3/23/2018	REPLACE POLE #72272	3/29/2018	8:30	3/29/2018	11:03
18572	4/4/2018	REPLACED XFMR	4/5/2018	9:00	4/5/2018	10:30
18596	4/4/2018	REPLACED XFMRs AND SECONDARY SERVICES	4/9/2018	8:00	4/9/2018	10:15
18614	4/12/2018	REPLACED POLE 66107	4/13/2018	7:45	4/13/2018	11:50
18735	4/19/2018	REPLACED SECONDARY	4/23/2018	10:00	4/23/2018	15:00
	4/20/2018	REPLACED OPEN WIRE SECONDARY	4/24/2018	8:00	4/24/2018	14:40
	4/20/2018	REMOVED SUB-XFMR, INSTALL NEW PRIMARY CABLE	4/24/2018	22:00	4/25/2018	6:00
	4/30/2018	REPLACE WIRE AND XFMR	5/2/2018	10:00	5/2/2018	18:30
	4/27/2018	REPLACE SECONDARY WIRE	5/4/2018	8:00	5/4/2018	14:00
18777	5/7/2018	RE-ROUTE POWER LINE	5/9/2018	7:00	5/9/2018	11:10
	5/7/2018	DE-ENERGIZING VFI-2300-11 B POS FOR NVE (5 MIN AT 0700, 5 MIN AT 0900)	5/9/2018	6:00	5/9/2018	9:00
18778	5/7/2018	REPLACING POLES	5/9/2018	9:00	5/9/2018	16:30
18823	5/11/2018	REPLACE POLE 109180	5/14/2018	8:00	5/14/2018	17:55
	5/11/2018	REPLACE P 96858, CHANGE OUT OPEN WIRE SECONDARY	5/16/2018	8:00	5/16/2018	17:00
	5/11/2018	REPLACE P 124803, CHANGE OUT OPEN WIRE SECONDARY	5/17/2018	8:00	5/17/2018	17:00
19498	5/28/2018	REPLACE O/H SECONDARY	5/29/2018	9:00	5/29/2018	14:30
19502	5/29/2018	REPLACE O/H SECONDARY AND XFMR	5/31/2018	8:00	5/31/2018	14:00
19503	5/29/2018	REPLACE 2 LIVE FRONT XFMRs AND CABLE	5/31/2018	9:00	5/31/2018	13:30
	6/4/2018	UPGRADE XFMR AND OPEN WIRE SECONDARY	6/7/2018	8:00	6/7/2018	16:00
19527	6/4/2018	REPLACE POLE	6/8/2018	8:00	6/8/2018	16:00
	6/12/2018	UPGRADE XFMRs	6/13/2018	10:40	6/13/2018	11:45
19611	6/6/2018	4 POLE REPLACEMENTS VIA HELICOPTER SET	6/14/2018	10:00	6/14/2018	17:55

LIBERTY UTILITIES (CALPECO) LLC 2019 ELECTRIC SYSTEM RELIABILITY REPORT

	6/14/2018	REPLACE DAMAGED POLE	6/17/2018	23:00	6/18/2018	5:00
	6/25/2018	REPLACE OPEN WIRE SECONDARY AND XFMR	6/27/2018	8:00	6/27/2018	16:00
19752	6/25/2018	REPLACE POLE AND XFMR	6/29/2018	8:00	6/29/2018	15:22
	7/6/2018	SPLICE AND ENERGIZE NEW CABLE	7/9/2018	8:00	7/9/2018	12:00
	7/9/2018	REPLACE SECONDARY WIRE AND XFMR	7/12/2018	8:00	7/12/2018	16:00
	7/12/2018	REPLACE LIVE FRONT XFMR AND RUN NEW PRI CABLE	7/17/2018	9:00	7/17/2018	15:00
	7/16/2018	INSTALL NEW XFMR	7/18/2018	8:00	7/18/2018	9:00
19896	7/19/2018	CREW REPLACING OPEN WIRE ON HAIDAS CIRCLE	7/25/2018	9:00	7/25/2018	14:56
19911	7/28/2018	FINISH PRI/SEC WIRE REPLACEMENT ON HAIDAS CIRCLE	7/30/2018	7:58	7/30/2018	13:59
19925	7/30/2018	REPLACE 2 PADMOUNT XFMRs, 1 RUN OF PRI CABLE	8/1/2018	9:00	8/1/2018	13:30
19989	8/5/2018	REPLACE OPEN WIRE SECONDARY	8/6/2018	9:00	8/6/2018	12:00
19992	8/6/2018	UPGRADE XFMR @ P 146191 (25KVA TO 50KVA)	8/7/2018	9:16	8/7/2018	9:45
19994	8/7/2018	REPLACE 2 XFMRs ON P 146202 AND 120204	8/8/2018	7:57	8/8/2018	13:44
20006	8/13/2018	REPLACING POLE, INSTALL NEW XFMR	8/15/2018	8:31	8/15/2018	12:20
20015	8/14/2018	REFRAME POLE AND ADD XFMR	8/16/2018	8:00	8/16/2018	12:00
20016	8/8/2018	UPGRADE WIRE AND PADMOUNT XFMR	8/16/2018	8:00	8/16/2018	16:00
20029	8/17/2018	REPLACING POLE	8/20/2018	8:55	8/20/2018	14:15
20038	8/17/2018	OPENED C/O @ P 77304. 3 AERIAL POLE SETS	8/23/2018	8:30	8/23/2018	17:00
20042	8/21/2018	REPLACE CROSSARM @ P 111359	8/24/2018	9:10	8/24/2018	11:21
20060	8/21/2018	ADD 2 NEW POLES AND XFMR	8/28/2018	8:42	8/28/2018	12:32
20215	9/8/2018	U/G REBUILD @ BASQUE DR, INSTALL NEW VFI	10/1/2018	7:00	10/1/2018	19:04
20220	9/8/2018	U/G REBUILD @ BASQUE DR, INSTALL NEW VFI	10/2/2018	7:00	10/2/2018	18:15
20234	9/8/2018	U/G REBUILD @ BASQUE DR, INSTALL NEW VFI	10/3/2018	7:57	10/3/2018	18:40
20263	9/8/2018	U/G REBUILD @ BASQUE DR, INSTALL NEW VFI	10/4/2018	7:30	10/4/2018	16:50
20273	9/8/2018	U/G REBUILD @ BASQUE DR, INSTALL NEW VFI	10/5/2018	8:02	10/5/2018	15:15
	10/3/2018	REPLACING MOLDS IN N36 SERVICE BOX	10/12/2018	10:00	10/12/2018	11:00
20283	10/3/2018	REPLACE POLE AND UPGRADE XFMR	10/12/2018	10:30	10/12/2018	12:12
20297	10/12/2018	UPGRADE XFMR	10/15/2018	9:07	10/15/2018	12:57

LIBERTY UTILITIES (CALPECO) LLC 2019 ELECTRIC SYSTEM RELIABILITY REPORT

20666	10/18/2018	UPGRADE XFMR	10/24/2018	8:25	10/24/2018	11:30
20667	10/18/2018	FLYING IN SETTING 3 POLES.	10/24/2018	9:01	10/24/2018	13:00
20672	10/18/2018	PHASING IN XFMR @ P 102877, CATCH OFF WIRE OPEN @ P 102878	10/24/2018	12:23	10/24/2018	13:30
20673	10/18/2018	REPLACE XFMR #2516, UPGRADE TO 50KVA	10/25/2018	8:26	10/25/2018	13:45
	10/18/2018	REMOVING POLES AND RE-CONFIGURING PRIMARY	10/30/2018	8:00	10/30/2018	14:00
	10/29/2018	REMOVING POLES AND RE-CONFIGURING PRIMARY	10/31/2018	8:00	10/31/2018	14:00
20719	11/5/2018	REPLACE 8300R1 RECLOSER	11/8/2018	7:30	11/8/2018	17:40
	11/7/2018	INSTALL NEW XFMR AT OLD COUNTRY RD	11/13/2018	9:00	11/13/2018	16:00
	11/7/2018	REPLACE POLE	11/14/2018	8:00	11/14/2018	16:00
	11/7/2018	PULL IN NEW WIRE FOR REBUILD PROJECT	11/14/2018	9:00	11/14/2018	16:00
	11/15/2018	REMOVE 2/0 SERVICE OUT OF TREE TO MIDSPAN	11/19/2018	9:00	11/19/2018	10:00
20851	11/16/2018	REPLACE XFMR 15502, PULL NEW CABLE	11/26/2018	8:27	11/26/2018	12:30
20889	11/29/2018	REPLACE XFMR 30999 AND U/G PRIMARY	11/30/2018	8:00	11/30/2018	10:45
20893	11/29/2018	REBUILD PROJECT, CONVERT TO 24.9KV	11/30/2018	12:00	11/30/2018	12:45
20910	11/30/2018	CORRECTING PHASING ERROR	12/3/2018	9:00	12/3/2018	10:45
20917	12/3/2018	RUNNING NEW WIRE FOR CONVERSION	12/6/2018	9:00	12/6/2018	15:15
20926	12/10/2018	RUNNING NEW WIRE FOR CONVERSION	12/12/2018	9:00	12/12/2018	16:10
20931	12/10/2018	REPLACED FAULTY COMPONENTS IN VAULT TS-28	12/12/2018	20:32	12/12/2018	21:45
	12/10/2018	REPLACE XFMRs FOR CONVERSION	12/18/2018	9:00	12/18/2018	13:40
	12/18/2018	ENERGIZE REPAIRED CABLE, RETURN TO NORMAL	12/20/2018	9:00	12/20/2018	9:45
	12/19/2018	REPLACE XFMRs FOR CONVERSION	12/20/2018	9:00	12/20/2018	12:00
	12/26/2018	REPLACE XFMRs FOR CONVERSION	12/28/2018	9:00	12/28/2018	12:50
21174	1/3/2019	INSTALL CROSSARM AND TRANSFER PRIMARY	1/4/2019	9:00	1/4/2019	12:00
21299	1/8/2019	REPAIR CRACKED C/O P 240912	1/9/2019	22:14	1/9/2019	23:42
23010	3/19/2019	RE-ENERGIZING SIERRA HOUSE ELEMENTARY SCHOOL	3/21/2019	9:00	3/21/2019	9:30
23022	3/20/2019	NVE PLANNED OUTAGE - PREP TO CONNECT GENERATOR	3/22/2019	8:05	3/22/2019	8:22
23158	4/8/2019	ADD XFMR, REPLACE OPEN WIRE SECONDARY	4/10/2019	8:00	4/10/2019	13:09

LIBERTY UTILITIES (CALPECO) LLC 2019 ELECTRIC SYSTEM RELIABILITY REPORT

23160	4/9/2019	POLE SET AND REPLACE SERVICE WIRE	4/11/2019	9:00	4/11/2019	14:15
23182	4/10/2019	REPLACING SERVICE WIRE	4/12/2019	9:00	4/12/2019	13:00
	4/10/2019	ADD XFMR, REPLACE OPEN WIRE SECONDARY	4/16/2019	9:00	4/16/2019	14:00
	4/15/2019	NEW XFMRs AND SECONDARY	4/18/2019	8:00	4/18/2019	16:00
	4/15/2019	NEW XFMRs AND SECONDARY	4/17/2019	9:00	4/17/2019	13:45
	4/16/2019	CHANGE OUT POLE NEAR I-80	4/18/2019	22:00	4/19/2019	4:00
	4/15/2019	RE-ROUTING SECONDARY	4/19/2019	9:00	4/19/2019	15:00
	4/19/2019	INSTALL NEW XFMR AND PRIMARY	4/24/2019	9:00	4/24/2019	15:00
23406	4/18/2019	TREE REMOVALS	4/25/2019	8:00	4/25/2019	17:00
	4/29/2019	XFMR UPGRADE	5/1/2019	9:00	5/1/2019	12:15
	4/29/2019	POLE REPLACEMENT, XFMR UPGRADE	5/2/2019	8:00	5/2/2019	13:11
23429	5/6/2019	UPGRADE XFMR	5/7/2019	9:00	5/7/2019	10:30
23430	5/6/2019	UPGRADE SECONDARY	5/8/2019	8:00	5/8/2019	12:30
23434	5/7/2019	CRANE WORKING OVER THE LINES	5/9/2019	7:00	5/9/2019	18:05
23435	5/6/2019	UPGRADE MULTIPLE XFMRs	5/9/2019	9:00	5/9/2019	13:30
23443	5/10/2019	UPGRADE XFMR, RPELACE 2/0 TRIPLEX	5/14/2019	9:00	5/14/2019	15:10
	5/13/2019	REPLACE XFMR	5/16/2019	8:00	5/16/2019	18:00
23456	5/17/2019	REPLACE P # 275579	5/20/2019	10:27	5/20/2019	15:30
23493	5/17/2019	REPLACE P #135305 AND XFMR #13822	5/22/2019	8:30	5/22/2019	16:15
23497	5/15/2019	REPLACE 50KVA XFMR #525437	5/22/2019	0:00	5/22/2019	4:30
	5/22/2019	REPLACE OLD 2/0 TRIPLEX	5/24/2019	9:00	5/24/2019	14:30
23503	5/17/2019	REPLACE P # 87800, 87867	5/24/2019	10:30	5/24/2019	16:01
23513	5/17/2019	REPLACE XFMR #18704 ON P # 63859	5/28/2019	8:30	5/28/2019	13:40
23515	5/28/2019	REPLACE OLD 2/0 TRIPLEX	5/29/2019	8:00	5/29/2019	14:00
23520	5/28/2019	Wrecking out old 2/0 triplex	5/31/2019	8:00	5/31/2019	12:27
	6/1/2019	HANGING 2 NEW XFMRs AND SECONDARY	6/5/2019	8:00	6/5/2019	15:20
	6/1/2019	REPLACING POLE	6/5/2019	23:00	6/6/2019	6:00
	6/1/2019	PULL 3 SPANS OF PRI, ADD 2 XFMRs	6/5/2019	8:00	6/5/2019	11:15
	6/10/2019	REPLACE OPEN WIRE SECONDARY, NEW XFMR	6/12/2019	8:00	6/12/2019	12:17
	6/10/2019	REPLACE XFMR	6/13/2019	8:00	6/13/2019	9:10
	6/10/2019	REPLACE XFMR	6/13/2019	12:00	6/13/2019	14:45

LIBERTY UTILITIES (CALPECO) LLC 2019 ELECTRIC SYSTEM RELIABILITY REPORT

	6/11/2019	POLE SET	6/13/2019	9:00	6/1/2019	12:00
	6/12/2019	CHANGE OUT XFMR	6/14/2019	9:15	6/14/2019	10:05
23629	6/10/2019	REPLACE POLE, CROSSARM, ADD XFMR	6/17/2019	8:00	6/17/2019	12:44
23636	6/14/2019	REPLACE CABLE AND XFMR	6/18/2019	8:00	6/18/2019	15:29
	6/14/2019	PREP OLD PAD, NEW XFMR	6/19/2019	22:00	6/20/2019	4:30
23641	6/17/2019	PULLING AND TERMINATING NEW CABLE	6/19/2019	23:12	6/20/2019	4:00
	6/18/2019	UPGRADE SECONDARY	6/20/2019	8:00	6/20/2019	12:30
23643	6/18/2019	REPLACE 8300 R1 RECLOSER	6/21/2019	8:00	6/21/2019	10:27
	6/21/2019	PULLING AND TERMINATING NEW CABLE	6/24/2019	0:00	6/24/2019	6:00
	6/24/2019	TREE REMOVAL WITH CRANE	6/26/2019	8:00	6/26/2019	16:00
	6/21/2019	REPLACE XFMR, UPGRADE CONDUCTOR	6/27/2019	8:30	6/27/2019	16:00
23688	6/28/2019	REPLACING XFMR # 109440	7/1/2019	12:24	7/1/2019	15:27
23717	7/1/2019	PLANNED OUTAGE 8:00AM TO 4:00PM UPGRADE XFMR, WRECKING OUT OPEN WIRE. COMPLETED @ 1:40PM	7/9/2019	8:00	7/9/2019	13:40
23723	7/3/2019	PRE-PLANNED OUTAGE TO REPLACE POLE	7/10/2019	8:46	7/10/2019	13:56
23730	7/9/2019	Repairs at P59437	7/10/2019	10:30	7/10/2019	15:15
23735	7/2/2019	Wrecking out open wire and hanging new transformer	7/11/2019	8:00	7/11/2019	14:05
23736	7/3/2019	Pole and transformer set	7/11/2019	8:30	7/11/2019	15:44
23749	7/3/2019	Planned outage to replace pole.	7/12/2019	8:20	7/12/2019	13:50
23766	7/11/2019	PLANNED OUTAGE TO REPLACE POLE AND TRANSFORMER	7/15/2019	8:13		14:52
23771	7/11/2019	Crew to take an outage to install new Verizon micro antenna	7/16/2019	8:42	7/16/2019	13:41
23796	7/16/2019	Dead ending primary and making up 2 risers	7/19/2019	8:00	7/19/2019	13:20
23803	7/19/2019	Crew replacing cut-outs at P #9470 Work completed by PAR crew. All customers back in service at 8:30 am	7/22/2019	7:30	7/22/2019	8:35
23815	7/22/2019	INSTALLED TRANSFORMERS /PLANNED OUTAGE 8:00AM TO 4:00PM	7/26/2019	8:00	7/26/2019	16:00



LIBERTY UTILITIES (CALPECO) LLC 2019 ELECTRIC SYSTEM RELIABILITY REPORT

24106	8/20/2019	MANUALLY OPENED TRANSFORMER 48515 AT P146360 HUPH ST FOR REPAIR / REPLACED BOTH HOTLINE CLAMPS AT HIGH SIDE OF TRANSFORMER	8/22/2019	21:52	8/22/2019	22:15
24165	8/28/2019	PLANNED OUTAGE 9:00AM TO 1:00PM REFRAMING 2 POLES.TSCARLETT 12:00pm OUTAGE COMPLETE ALL CUSTOMER BACK IN POWER.TSCARLETT	8/30/2019	9:00	8/30/2019	12:00
24183	9/3/2019	Pre-Planned Outage Work completed 3:20 pm. Installing new transformer	9/5/2019	9:44	9/5/2019	15:30
24224	9/9/2019	Transformer upgrade	9/11/2019	9:07	9/11/2019	11:30
24226	9/9/2019	Transformer change out/ pole replacement	9/12/2019	8:30	9/12/2019	15:45
24227	9/9/2019	COMPLETE AT 12:25PM.TOAK Transformer upgrade/ 2/0 triplex wreck out.	9/12/2019	9:00	9/12/2019	12:25
24281	9/13/2019	Transformer change outs and Re-Frames	9/17/2019	9:00	9/17/2019	14:28
24283	9/13/2019	Transformer change outs and Re-Frames	9/18/2019	9:00	9/18/2019	12:49
24525	9/30/2019	Pre-Planned outage to replace broken arrester, COLD CREEK TR Work completed as planned	10/2/2019	9:36	10/2/2019	10:28
24526	9/30/2019	Crew is replacing broken lightning arrester at P #146081 COLD CREEK TR Work completed as scheduled	10/2/2019	10:31	10/2/2019	11:25
24527	9/30/2019	Crew is replacing broken cut outs at P # 122979, IBACHE ST Work is complete - all customers back in service	10/2/2019	12:26	10/2/2019	13:07
24528	9/30/2019	Crew replacing broken cut-outs at P 146166, THUNDERBIRD DR All work is complete and all customers back in service	10/2/2019	12:49	10/2/2019	14:03
24529	9/30/2019	Crew replacing cracked cut-out, APACHE AVE All work complete - all customers back in service	10/2/2019	14:05	10/2/2019	14:48
24531	9/30/2019	Crew is changing cut-out, SHAKORI DR	10/2/2019	15:23	10/2/2019	16:09
24532	9/30/2019	Crew is changing cut-out - P # 120249, APACHE AVE All work is complete and customers back in service	10/2/2019	15:56	10/2/2019	16:52

LIBERTY UTILITIES (CALPECO) LLC 2019 ELECTRIC SYSTEM RELIABILITY REPORT

24559	10/4/2019	PRE-PLANNED OUTAGE TO INSTALL NEW TRANSFORMER AND ADD 4/0 WIRE, OGLALA CT	10/7/2019	9:26	10/7/2019	16:31
24573	10/9/2019	Transferring Primary and Secondary WORK COMPLETE FOR TODAY. CUSTOMERS BACK IN SERVICE AS OF 3:00 PM	10/11/2019	8:36	10/11/2019	15:26
24613	10/1/2019	Transformer change out	10/25/2019	8:30	10/25/2019	15:40
24621	10/25/2019	Transformer upgrade	10/28/2019	9:00	10/28/2019	13:00
24622	10/24/2019	PLANNED OUTAGE Transformer upgrade	10/28/2019	8:30	10/28/2019	16:00
24625	10/25/2019	Transformer upgrade	10/29/2019	9:00	10/29/2019	14:00
24626	10/24/2019	Transformer upgrade	10/29/2019	8:30	10/29/2019	7:15
24627	10/24/2019	Transformer upgrade	10/29/2019	8:00	10/29/2019	17:00
24628	10/24/2019	POLE CHANGE OUT	10/30/2019	8:30	10/30/2019	13:30
24629	10/28/2019	TRANSFORMER UPGRADE	10/30/2019	9:00	10/30/2019	12:15
24683	11/7/2019	Replacing 2 transformers, reframe and upgrade wire	11/13/2019	9:00	11/13/2019	17:09
24712	11/23/2019	Upgrade System	11/25/2019	8:00	11/25/2019	11:10
24713	11/22/2019	NV Energy switching. Opening "D" position to assist NV Energy	11/25/2019	11:54	11/25/2019	12:31
24898	12/13/2019	609 Transmission Line Repairs	12/18/2019	8:00	12/18/2019	15:49
24952	12/19/2019	Upgrading Transformer	12/30/2019	9:00	12/30/2019	12:40