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May 1, 2017

via e-filing EXPRESS

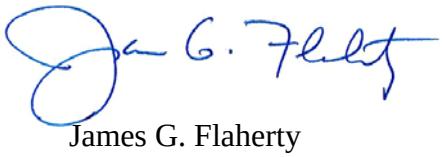
Ms. Amy L. Green, Secretary
Kansas Corporation Commission
1500 S. W. Arrowhead Road
Topeka, Kansas 66604-4027

Re: Docket No. 17-EPDE-393-CPL

Dear Ms. Green:

Enclosed for filing is the 2016 Kansas Reliability Performance Report dated May 1, 2017 ("Report"), of The Empire District Electric Company ("Empire"). The Report is being filed pursuant to (1) Section II.A.vi. (paragraphs 50-56) and Appendix A of the Settlement Agreement approved by the Kansas Corporation Commission ("Commission") in its Order dated December 22, 2016, in Docket No. 16-EPDE-410-ACQ; and (2) discussions between Empire and the Commission Staff in which the Commission Staff requested that Empire file this Report for the 2016 calendar year even though the Report covered the performance of Empire prior to the approval of the merger transaction. The Commission Staff requested the pre-merger information contained in the Report so it could be used and compared to post-merger information, which would first be reflected in the 2017 Report due May 1, 2018.

Sincerely,



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Enclosure
cc: Thomas J. Connors
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The Empire District Electric Company
2016 Reliability Performance Report
16-EPDE-410-ACQ
17-EPDE-393-CPL

Sam McGarrah
Director, System Performance
P.O. Box 127
Joplin, MO 64802
417-625-6526
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The Empire District Electric Company (Empire) performs routine reliability activities for all customers. Transmission and distribution assets are inspected on a scheduled basis. Defects identified during inspections are scheduled for remediation. Vegetation clearing is also performed on a routine, scheduled basis.

Empire also identifies distribution circuits each year for reliability improvements. Each identified circuit is assessed by performing a “walk-through” of the circuit identifying visible defects and collecting engineering data to evaluate additional sectionalization and protective device coordination. Empire has made reliability improvements to 8 of the 21 Kansas circuits since the inception of the program in 2010.

Empire has also implemented Operation Toughen Up as a 10-year plan for system enhancements to improve electric service reliability. Empire has completed 5 years of the program to date with Kansas customers benefitting by additional transmission line construction, substation protection upgrades, and distribution rebuilds totaling over $8.5M.

Empire has yet to complete a couple of major upgrades associated with Operation Toughen Up that should improve the reliability of service to the customers in the Baxter Springs and Galena areas. One of the projects is to construct a new distribution substation that will not be on a radial transmission line to serve the Baxter Springs area. The old substation serving these customers will be retired. Another project is to install an automatic sectionalizing system in the transmission system that serves the Galena substation. These two projects should substantially improve the reliability because of the outages experienced due to transmission issues.

2016 Reliability Indices for Kansas Facilities

Kansas Indices Including Major Events

	SAIDI	SAIFI	CAIDI
January	8.26	0.150	54.89
February	18.14	0.342	53.11
March	66.66	0.400	170.80
April	33.61	0.632	53.20
May	20.82	0.288	72.29
June	9.33	0.152	61.27
July	18.22	0.150	121.60
August	20.00	0.340	58.84
September	4.30	0.044	96.88
October	4.09	0.036	114.09
November	6.08	0.052	116.02
December	15.09	0.259	58.22

Kansas Indices Excluding Major Events

	SAIDI	SAIFI	CAIDI
January	8.26	0.150	54.89
February	18.14	0.342	53.11
March	9.55	0.116	82.36
April	33.61	0.632	53.20
May	20.82	0.288	72.29
June	9.33	0.152	61.27
July	18.22	0.150	121.60
August	20.00	0.340	58.84
September	4.30	0.044	96.88
October	4.09	0.036	114.09
November	6.08	0.052	116.02
December	15.09	0.259	58.22

THE EMPIRE DISTRICT ELECTRIC COMPANY

CUSTOMER OUTAGE STATISTICS AND INDICES FOR KANSAS

1/1/2016 to 12/31/2016

INCLUDING MAJOR EVENT DAYS

CIRCUIT NUMBER	NUMBER OF OUTAGES	OUTAGE HOURS REPORTED	CUSTOMERS AFFECTED	CUSTOMER OUTAGE MINUTES	TOTAL CUST. ON AFFECTED CIRCUITS	SAIFI	CAIDI	SAIDI
2711	4	9.19	21	3,113	255	0.082	148.24	12.21
2781	1	0.55	1	33	1	1.000	33.00	33.00
2782	42	62.5	4,472	217,423	1,916	2.334	48.62	113.46
2783	30	60.05	2,283	195,161	557	4.101	85.48	350.61
2784	1	0.53	1	32	3	0.333	32.00	10.67
2821	6	7.66	495	29,779	459	1.078	60.16	64.88
2822	2	2.2	55	4,952	253	0.217	90.04	19.57
2823	28	42.9	986	106,071	527	1.870	107.58	201.12
2824	22	24.25	493	45,049	1,096	0.450	91.38	41.10
2911	40	45.47	6,978	480,821	990	5.668	74.18	420.44
2913	25	22.8	1,505	80,799	889	1.693	53.69	90.90
2914	30	29.24	1,976	83,246	572	3.454	42.13	145.51
3391	35	50.04	420	49,922	522	0.804	118.86	95.55
3392	1	2.75	1	165	11	0.091	165.00	15.00
4061	27	29.11	1,248	71,284	795	1.570	57.12	89.70
4062	25	24.78	3,285	237,755	477	6.887	72.38	498.44
4251	14	23.25	407	55,735	195	2.092	136.94	286.45
6601	37	61.2	3,678	473,243	826	4.455	128.67	573.28
6602	17	27.69	2,204	287,077	517	4.260	130.25	554.81

	NUMBER OF OUTAGES	OUTAGE HOURS REPORTED	CUSTOMERS AFFECTED	CUSTOMER OUTAGE MINUTES	TOTAL CUSTOMERS SERVED	SAIFI	CAIDI	SAIDI
Total:	387	526.16	30,509	2,875,159	10,857	2.810	79.38	223.04

THE EMPIRE DISTRICT ELECTRIC COMPANY

CUSTOMER OUTAGE STATISTICS AND INDICES FOR KANSAS

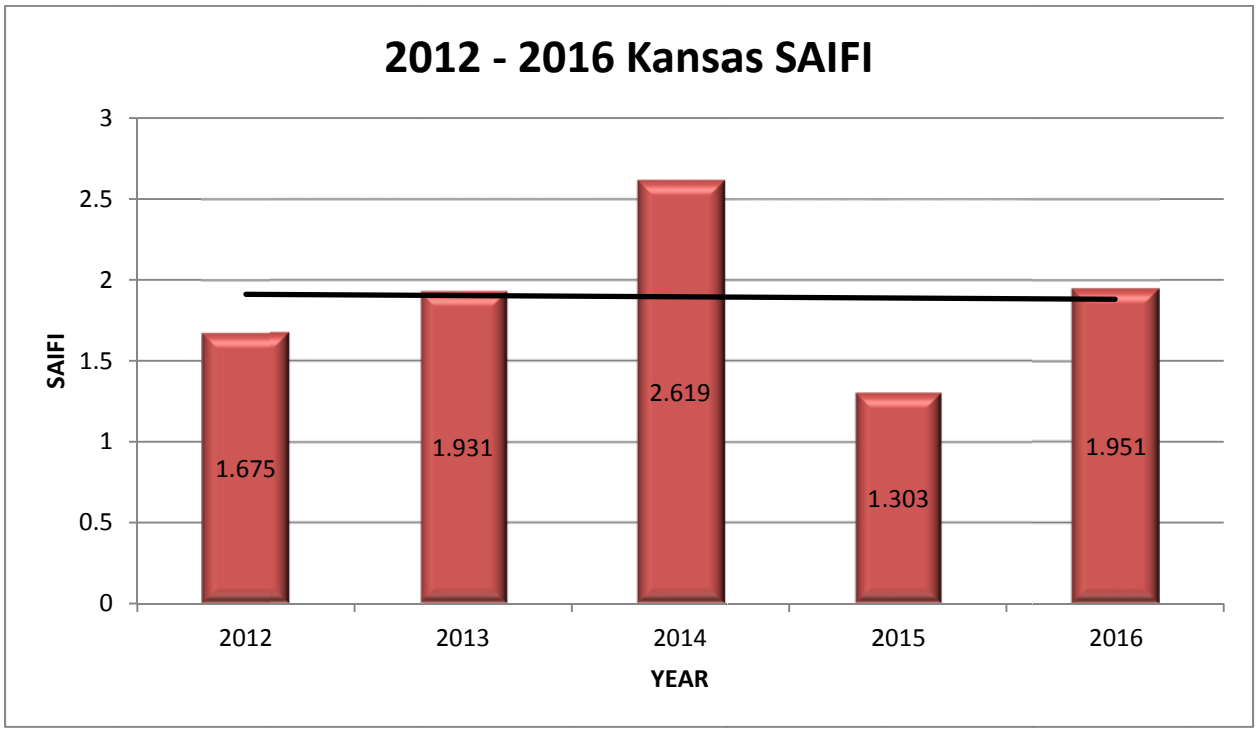
1/1/2016 to 12/31/2016

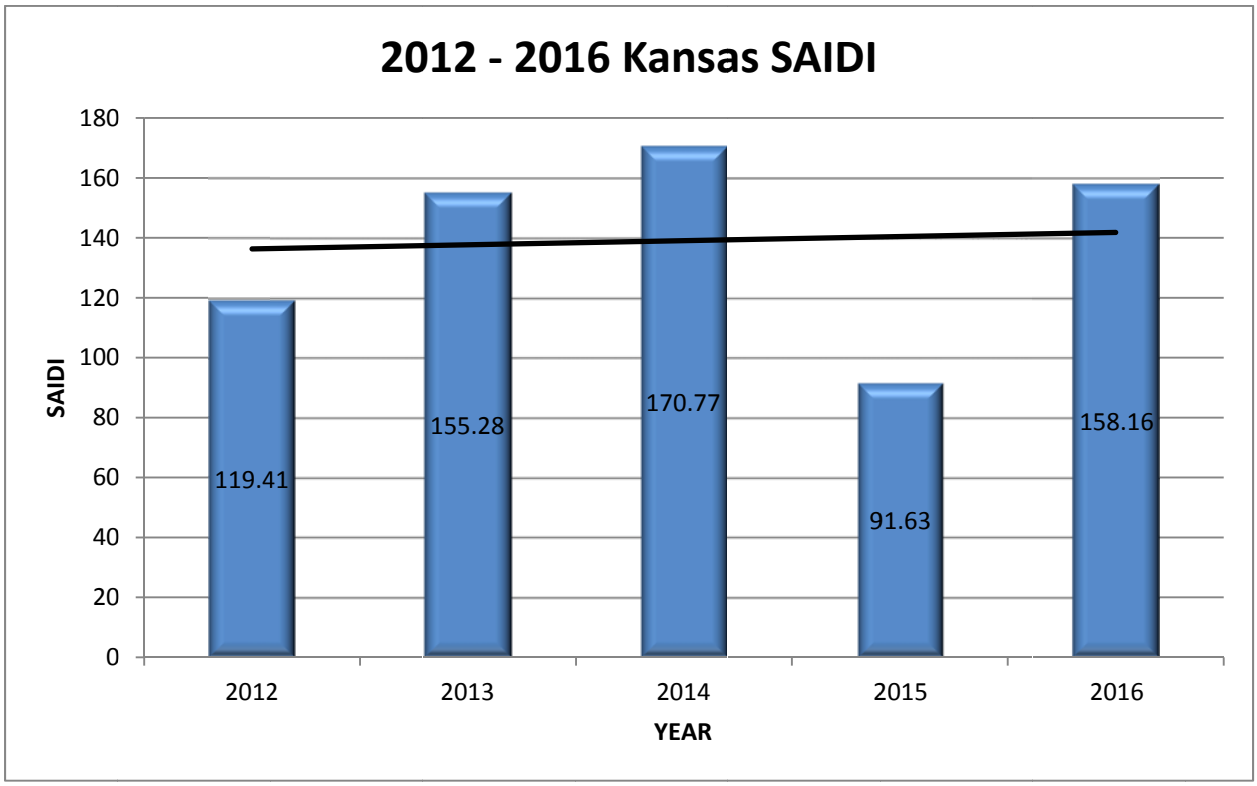
EXCLUDING MAJOR EVENT DAYS

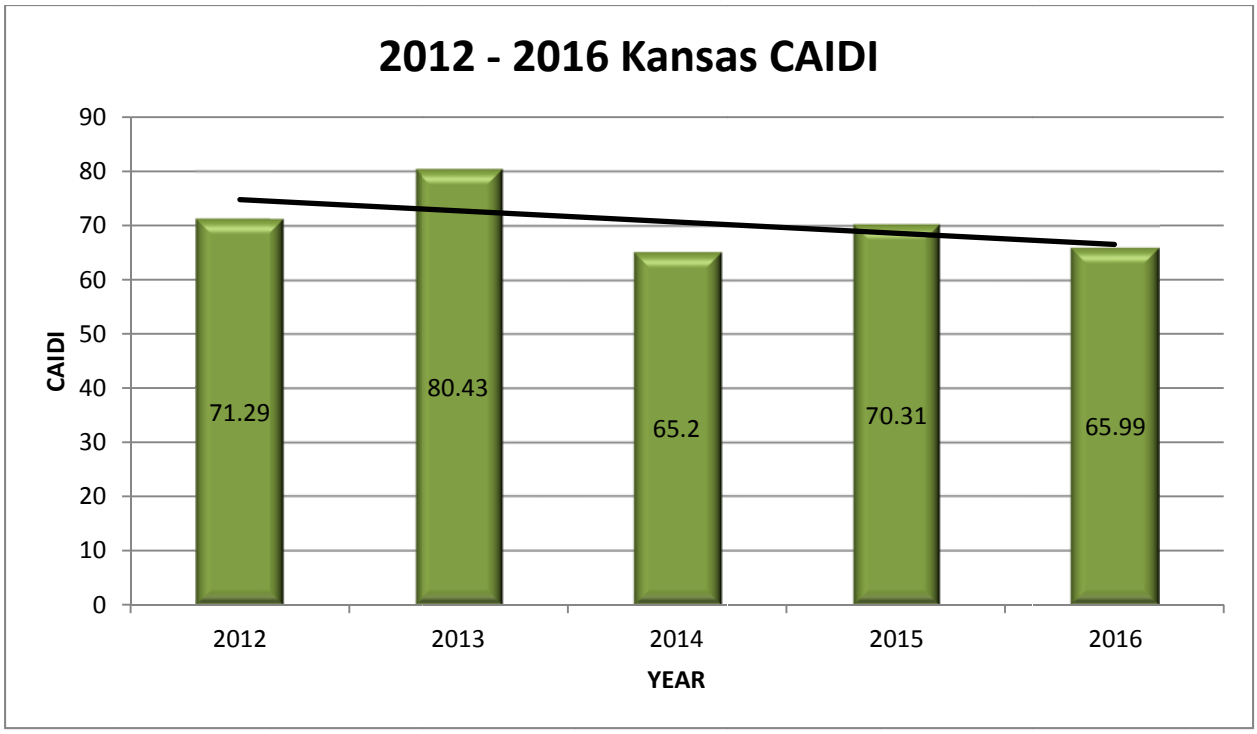
CIRCUIT NUMBER	NUMBER OF OUTAGES	OUTAGE HOURS REPORTED	CUSTOMERS AFFECTED	CUSTOMER OUTAGE MINUTES	TOTAL CUST. ON AFFECTED CIRCUITS	SAIFI	CAIDI	SAIDI
2711	4	9.19	21	3,113	255	0.082	148.24	12.21
2781	1	0.55	1	33	1	1.000	33.00	33.00
2782	42	62.5	4,472	217,423	1,916	2.334	48.62	113.46
2783	29	59.9	2,042	192,976	556	3.674	94.50	347.2
2784	1	0.53	1	32	3	0.333	32.00	10.67
2821	6	7.66	495	29,779	459	1.078	60.16	64.88
2822	2	2.2	55	4,952	253	0.217	90.04	19.57
2823	28	42.9	986	106,071	527	1.870	107.58	201.12
2824	22	24.25	493	45,049	1,096	0.450	91.38	41.10
2911	40	45.47	6,978	480,821	990	5.668	74.18	420.44
2913	25	22.8	1,505	80,799	889	1.693	53.69	90.90
2914	30	29.24	1,976	83,246	572	3.454	42.13	145.51
3391	34	49.32	419	49,879	523	0.802	119.04	95.43
3392	1	2.75	1	165	11	0.091	165.00	15.00
4061	27	29.11	1,248	71,284	795	1.570	57.12	89.70
4062	21	21.09	2,016	155,129	477	4.224	76.95	325.05
4251	14	23.25	407	55,735	195	2.092	136.94	286.45
6601	30	42.1	1,825	88,334	826	2.211	48.40	107.01
6602	13	15.77	1,081	52,449	517	2.090	48.52	101.38

	NUMBER OF OUTAGES	OUTAGE HOURS REPORTED	CUSTOMERS AFFECTED	CUSTOMER OUTAGE MINUTES	TOTAL CUSTOMERS SERVED	SAIFI	CAIDI	SAIDI
Total:	370	490.58	26,022	1,717,269	10,857	2.397	65.99	158.17

2012-2016 Reliability Indices for Kansas Facilities






2012 - 2016 Kansas CAIDI
CAIDI
90
80
70
60
50
40
30
20
10
0
71.29
80.43
65.2
70.31
65.99
2012
2013
2014
2015
2016
YEAR

Major Event Report

March 8, 2016

An insulator in the radial transmission line serving #66 – Scammon substation failed. This interrupted service to all customers served by #66 – Scammon substation. The failure occurred during the night and delayed restoration efforts.

Interruption Cause:	Transmission Equipment Failure (Insulator)
Date of Interruption:	3/8/2016
Regional Location:	Area 212 – Scammon
Customer % without power:	12.7% (1,344 out of 10,594)
Outage Start:	3/8/2016 2:39 AM
Last Outage Restored:	3/8/2016 5:39 AM

March 26, 2016

A portable substation transformer was being utilized to allow maintenance on the station transformer. During this time the normal protective equipment was bypassed. As a result, the circuit exposure was significantly increased and the circuit sectionalization was reduced. The outage occurred during this reconfigured state resulting in a service interruption for all customers served by #66 - Scammon substation.

Interruption Cause:	Equipment Failure (Transformer)
Date of Interruption:	3/26/2016
Regional Location:	Area 212 –Scammon
Customer % without power:	12.7% (1,344 out of 10,594)
Outage Start:	3/26/2016 3:18 PM
Last Outage Restored:	3/26/2016 7:36 PM

Total Kansas System Outages

Outage Cause Description	Customer Minutes Interrupted	Customers Interrupted
ACTS OF MAN	40514	1068
BAD BREAKER IN METER PED	88	1
BIRDS	2532	54
CABLE TROUBLE	165	1
CONDUCTOR TROUBLE	3290	46
CONNECTOR TROUBLE	7284	66
CUTOUT FAILURE	91	1
FIRE CALL	75	1
INSULATOR FAILURE DEAD END	4961	51
LIGHTNING	187527	1640
LIGHTNING ARRESTOR	5238	51
OTHER ANIMALS	427	8
POLES HIT	34544	901
SPLICE FAILURE	1272	5
SQUIRRELS	264095	3748
STRUCTURE FAILURE	483653	326
SUBSTATION – BREAKER	67508	1344
SUBSTATION EQUIPMENT	265384	5063
TRANSFORMER FAILURE	354638	1433
TRANSMISSION – ACTS OF MAN	139879	2472
TRANSMISSION – EQUIPMENT FAILURE	204	1
TRANSMISSION – STRUCTURE FAILURE	195796	1226
TRANSMISSION – UNKNOWN	81576	2472
TREES IN LINE	7937	142
TREES IN PRIMARY	4554	28
TREES IN SERVICE LINES	6922	47
UNKNOWN	129711	1647
VEGETATION – FALL IN PRIMARY	127229	1967
VEGETATION - GROW IN SECONDARY	799	9
WIND	457266	4690

2016 Worst Performing Circuits

Worst Performing Circuits - System 2016 Measured by SAIFI									
Circuit Number	Substation	Location	Customer Outage Minutes	Customers Affected	Total Cust. On Affected Circuits	SAIFI	SAIDI	CAIDI	Previous Year Worst Performing Circuit?
2911	291	Baxter Springs - 12th Street	414,138	5583	985	5.668	420.44	74.18	No

Worst Performing Circuit Assessment

No multi-year worst performing circuits identified.

Contact Center Stats 2016

Year	Incoming Calls	Calls Answered at Contact Center and IVR	Percent of calls Answered	Percent Abandoned	Staffing Per Shift	
2016	678,481	655,945	97%	3%	**Shift**	**Reps**
					7:00a-3:30p	3
					7:00a-4:00p	2
					8:00a-4:30p	1
					8:00a-5:00p	7
					8:30a-5:30p	2
					9:00a-6:00p	2
					10:00a-7:00p	1
					8:30a-7:00p	6
					7:00p-7:00a (Nights)	4
					7:00a-7:00p (Weekends)	2
					7:00a-7:00p (Radio Room)	2