

Exhibit No.:  
Issue: Fuel Adjustment  
Witness: Bethany Q. King  
Type of Exhibit: Direct Testimony  
Sponsoring Party: Empire District Electric  
File No. ER-2018-  
Date Testimony Prepared: September 2017

**Before the Public Service Commission  
Of the State of Missouri**

**Direct Testimony**

**Of**

**Bethany Q. King**

**September 2017**



**Empire District**<sup>™</sup>  
A Liberty Utilities Company

DIRECT TESTIMONY  
OF  
BETHANY Q. KING  
THE EMPIRE DISTRICT ELECTRIC COMPANY  
BEFORE THE  
PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI  
FILE NO. ER-2018-

1 **INTRODUCTION AND QUALIFICATIONS**

2 **Q. PLEASE STATE YOUR NAME, TITLE AND BUSINESS ADDRESS.**

3 A. My name is Bethany Q. King. My title is the Manager of Strategic Planning for The  
4 Empire District Electric Company (“Empire” or “Company”), and my business  
5 address is 602 S. Joplin Avenue, Joplin, Missouri.

6 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL  
7 BACKGROUND FOR THE COMMISSION.**

8 A. I hold a Bachelor of Science degree in computational mathematics with majors in  
9 mathematics and computer science from Missouri Southern State University.  
10 Additionally I hold an Associates of Science degree in Computer Programming from  
11 Missouri Southern State University. I was employed by St John’s Regional Medical  
12 Center from 1998 to 2006 and served in various roles in the Information Technology  
13 Department including Network Engineer. In 2006, I began my employment with  
14 Empire as an Internal Auditor specializing in Information Technology and performed  
15 various audits related to SOX compliance, customer bill recalculations, inventory  
16 audits, and information technology process audits. I joined the Supply Management  
17 Department in 2009 as an Energy Trader and was promoted to Planning Analyst in

1 January 2014. My responsibilities were assisting with the Southwest Power Pool  
2 (SPP) Integrated Marketplace implementation project, natural gas hedge activity  
3 reporting, representing Empire as a voting member of the SPP Change Working  
4 Group and the Economic Studies Working Group, and various special studies related  
5 to the SPP marketplace and annual fuel and purchase power budgets. In June 2016, I  
6 accepted the position of Planning and Energy Efficiency Analyst in the Planning and  
7 Regulatory Department where I was responsible for the development of five year  
8 demand, energy, sales, and revenue budgets for electric, gas and water segments as  
9 well as monthly variance reporting and quarterly weather normalization studies. I  
10 was promoted to Manager of Strategic Planning in October 2016. My responsibilities  
11 include oversight of the development of annual demand, energy, sales, and revenue  
12 budgets, integrated resource planning and energy efficiency related program  
13 administration and analysis.

14 **Q. HAVE YOU EVER TESTIFIED BEFORE THIS OR ANY OTHER STATE**  
15 **UTILITY COMMISSION?**

16 A. Yes. I have testified on behalf of Empire before the Missouri Public Service  
17 Commission (“Commission”), the Kansas Corporation Commission, the Oklahoma  
18 Corporation Commission, and the Arkansas Public Service Commission. The case  
19 references are attached to this testimony as Exhibit BQK-1.

20 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

21 A. My testimony will support the Fuel & Purchased Power Adjustment Clause  
22 (“FAC”) rate schedules that have been filed by Empire to reflect the actual energy  
23 costs that Empire has incurred during the six-month period March 2017 through

1 August 2017. This six-month period is an Accumulation Period specified in  
2 Empire's FAC tariff that was approved by the Commission in its Report and Order  
3 issued in File No. ER-2016-0023.

4 **EXECUTIVE SUMMARY**

5 **Q. PLEASE PROVIDE AN OVERVIEW OF YOUR TESTIMONY IN**  
6 **SUPPORT OF THE FAC RATE SCHEDULES FILED BY EMPIRE.**

7 A. The Commission's rule governing fuel and purchased power cost recovery  
8 mechanisms for electric utilities – specifically 4 CSR 240-20.090(4) – requires  
9 Empire to make periodic FAC filings that are designed to enable Commission  
10 review of the actual fuel costs, purchased power costs, cost of consumables  
11 associated with the power plants' air quality control system ("AQCS"), net cost of  
12 emission allowances, revenue from the sale of renewable energy credits ("REC")  
13 and off-system sales margins (collectively referred to as total energy costs) the  
14 Company has incurred during an Accumulation Period. In addition, these periodic  
15 filings are designed to adjust the FAC rates up or down, to reflect the actual energy  
16 costs incurred during the Accumulation Period. Empire's FAC tariff calls for two  
17 annual filings: a filing covering the six-month Accumulation Period running from  
18 September through February and a second filing covering the Accumulation Period  
19 running from March through August. Any increases or decreases in rates approved  
20 by the Commission, or that take effect by operation of law, are then collected from  
21 or refunded to customers over two six-month Recovery Periods: June through  
22 November and December through May.

23 Since the implementation of Empire's FAC, the variable cost of fuel and purchased

1 power used by the Company's Missouri customers has varied from the base fuel  
2 and energy cost established in rates. For the Accumulation Period March 2017  
3 through August 2017, Empire's actual total energy costs eligible for the FAC have  
4 been higher than the base energy costs included in the Company's Missouri rates by  
5 approximately \$5,110,442. In accordance with the FAC tariff, Empire has absorbed  
6 5% of the overall increase in Missouri variable energy costs during that six-month  
7 period. Therefore, in accordance with the Commission's FAC rule and Empire's  
8 approved FAC tariff, the Company has filed FAC rate schedules that are designed  
9 to recover 95 percent of the energy cost differences of approximately \$4,854,920  
10 from its Missouri jurisdictional customers.

11 In addition, Empire also seeks to return approximately \$1,045,682, which is further  
12 described in the true-up testimony that is provided in a separate filing, of over-  
13 recovered energy costs from the prior recovery period ending May 31, 2017. This  
14 brings the total net recovery sought by the Company to approximately \$3,837,264  
15 including interest. This total represents the Fuel and Purchased Power Adjustment  
16 ("FPA").

17 As reflected in the rate schedules filed by the Company, Empire has developed two  
18 Fuel Adjustment Rates ("FAR") designed to recover the FPA, each of which is  
19 based on forecasted retail Missouri sales over the next Recovery Period: a FAR of  
20 \$0.00181 per kilowatt-hour (kWh) for primary service, and a FAR of \$0.00184 per  
21 kWh for secondary service have been developed for this filing. These FARs will  
22 enable Empire to recover over a Recovery Period ending May 2018 the difference  
23 between base energy costs built into its rates and the total energy costs actually

1 incurred during the Accumulation Period and the true-up of fuel and energy costs  
2 during the Recovery Period ended May 31, 2017.

3 **Q. DOES THE EMPIRE FAC TARIFF INCLUDE PROVISIONS THAT ARE**  
4 **DESIGNED TO LIMIT EMPIRE'S FAC RECOVERYS TO THE ACTUAL**  
5 **COST OF ENERGY?**

6 A. Yes. The Empire FAC and the Commission's rule governing FACs include two  
7 safeguards limiting FAC recovery to actual, prudently-incurred energy costs. The  
8 first safeguard is a true-up process that ensures the FAC collections during the  
9 Recovery Period do not exceed actual energy costs incurred during the  
10 Accumulation Period. The second safeguard involves a requirement that Empire's  
11 energy costs be subjected to periodic Prudence Reviews, which will ensure only  
12 prudently-incurred energy costs are passed through to customers using the FAC.  
13 Empire's operation of the FAC has been audited by the Commission's staff through  
14 August 31, 2016. Staff filed its report in File No. EO-2017-0065; no disallowances  
15 were recommended. The Office of Public Counsel requested an Evidentiary  
16 Hearing in the matter. Post hearing briefs will be submitted October 5, 2017.

17 **THE PROPOSED FAC RATE ADJUSTMENT**

18 **Q. WHY HAS EMPIRE FILED FAC-RELATED RATE SCHEDULES AT THIS**  
19 **TIME?**

20 A. The Commission's rules – specifically 4 CSR 240-20.090(4) – and Empire's FAC  
21 tariff require the Company to make periodic FAC filings that enable the  
22 Commission to review Empire's actual fuel, purchased power, AQCS costs, off-  
23 system sales, REC revenue, and net costs of emissions allowances so that Empire's

1 FAC rates can be adjusted to reflect the actual energy costs the Company incurs to  
2 provide electric service to its Missouri customers. Empire's Missouri FAC tariff  
3 calls for two FAC adjustment filings per year: a filing covering the six-month  
4 Accumulation Period running from September through February and a second filing  
5 covering the Accumulation Period running from March through August. Empire  
6 is seeking an increase in its FAC rates to reflect 95% of the difference between the  
7 base energy costs built into its base Missouri rates and Empire's actual Missouri  
8 energy costs for the Accumulation Period, plus a true-up of the costs recovered  
9 during the Recovery Period ending May 31, 2017. This recovery via FAC rates will  
10 be reflected on the Missouri customers' bills over the six-month Recovery Period  
11 running from December 2017 through May 2018.

12 **Q. HOW HAVE EMPIRE'S AVERAGE ENERGY COSTS CHANGED OVER**  
13 **THE COST INCLUDED IN BASE RATES DURING THE**  
14 **ACCUMULATION PERIOD?**

15 A. Empire's average energy costs per kWh have increased above the level built into its  
16 base electric rates, which is why the FAC rate schedules filed by the Company seek  
17 an increase in the rates charged to the Missouri customers. More specifically,  
18 Empire's Missouri base rates included an average cost of energy per kWh of net  
19 system production of \$0.02415 during the Accumulation Period of March 2017  
20 through August 2017. Empire actually incurred average energy costs of \$0.02656  
21 per kWh during the Accumulation Period. This represents an overall increase in  
22 average energy costs of \$0.00240 per kWh during the Accumulation Period, or  
23 about 9.95 percent higher than the average cost built into base rates. Pursuant to

1 Empire's FAC tariff, Empire is requesting to recover from its Missouri customers  
2 the net of 95 percent of this cost increase less approximately \$1,045,682 of over  
3 recovered energy cost and \$28,026 of interest income from the Recovery Period  
4 ending May 31, 2017, or an average of \$0.00173 per kWh sold during the  
5 upcoming Recovery Period.

6 **Q. HOW DOES THE MONTHLY FAC CHANGE FOR A TYPICAL  
7 RESIDENTIAL CUSTOMER?**

8 A. For Missouri residential customers using 1,000 kWh per month, the electric bill  
9 will increase by approximately \$0.16 per month over the six-month period  
10 December 2017 through May 2018, when the current FAC charge of \$0.00184 is  
11 applied to their bill and the previous FAC recovery factor of \$0.00168 is eliminated  
12 from their bill.

13 **Q. DID THE AVERAGE ENERGY COST VARY FROM EXPECTATIONS?**

14 A. Yes, the actual total energy cost per megawatt-hour was slightly below the  
15 Company budget by approximately 0.74 percent.

16 **Q. DO YOU EXPECT THE AVERAGE ENERGY COSTS ELIGIBLE FOR  
17 THE FAC TO BE HIGHER OR LOWER THAN THE BASE DURING THE  
18 NEXT ACCUMULATION PERIOD FROM SEPTEMBER 2017 THROUGH  
19 FEBRUARY 2018?**

20 A. Based on the current budget, Empire expects the total energy costs eligible for the  
21 FAC to be about 4.8% higher than the base. The period in question, September  
22 2017 through February 2018, contains the winter months, so this period has the  
23 potential for a higher average cost per megawatt-hour than what would be expected



1 for an annual average cost per megawatt-hour. The current budget, which assumes  
2 normal weather, anticipates average energy costs eligible for the FAC to be higher  
3 than the current FAC base of \$24.15 per megawatt-hour during the next  
4 Accumulation Period.

5 **Q. DO YOU BELIEVE EMPIRE'S FUEL ADJUSTMENT CLAUSE IS**  
6 **REASONABLE AND APPROPRIATE?**

7 A. Yes. The design of the Commission's rule governing the FAC was the subject of  
8 much discussion and debate prior to being approved by the Commission. In  
9 addition, there was much discussion and debate concerning Empire's FAC tariff in  
10 Case No. ER-2008-0093. This was the case in which the Commission ultimately  
11 approved Empire's initial FAC tariff. Additional discussions have occurred in  
12 subsequent cases. Empire's FAC filing is being made in accordance with the  
13 Commission's rules governing the FAC and in accordance with the FAC tariff  
14 approved for Empire.

15 **Q. PLEASE DESCRIBE HOW EMPIRE IS PROPOSING TO COLLECT THE**  
16 **ENERGY COST INCREASES EXPERIENCED DURING THE**  
17 **SEPTEMBER 2017-FEBRUARY 2018 ACCUMULATION PERIOD?**

18 A. The FAC rate schedule filed by Empire will collect the energy cost increase actually  
19 incurred during the Accumulation Period by applying the positive Fuel Adjustment  
20 Rate or FAR of \$0.00181 for primary and \$0.00184 for secondary service to the  
21 actual Missouri retail kWh sales that take place during the December 1, 2017 to  
22 May 31, 2017 Recovery Period. The proposed FARs were calculated in accordance  
23 with Empire's authorized FAC tariff. I have attached to my testimony, as Schedule

1 BQK-2, an exemplar copy of one of Empire's approved FAC tariff sheets. In  
2 addition to the tariff sheet, I have included as page 2 of Schedule BQK-2 a monthly  
3 analysis of the energy costs and energy cost recovery that has taken place during the  
4 Accumulation Period. Schedule BQK-2 contains the basic information and FAC  
5 formula that Empire used to calculate the FARs that have been included in the  
6 proposed revised FAC rate schedule sheet 17e. The Empire FAC tariff and the  
7 formula included therein were approved by the Commission in File No. ER-2016-  
8 0023.

9 **Q. HOW WERE THE VARIOUS VALUES USED TO DETERMINE THE**  
10 **PROPOSED FARs SHOWN ON SCHEDULE BQK-2 DEVELOPED?**

11 A. The data upon which Empire based the values for each of the variables in the  
12 approved FAR formula are included on the schedule, and came from Empire's  
13 books and records. Schedule BQK-2 contains all of the basic information that is  
14 required to calculate the proposed change in the FAR. In addition, Empire has filed  
15 the detailed information required by 4 CSR 240-3.161(7) (A) with this testimony as  
16 a separate set of supporting workpapers. Additional information about the true-up  
17 amount was filed concurrently in a separate docket. Also, as required by 4 CSR  
18 240-3.161(7) (B), the Company has separately provided to all parties of record in  
19 File Nos. ER-2008-0093, ER-2010-0130, ER-2011-0004, ER-2012-0345, ER-  
20 2014-0351, and ER-2016-0023 with a set of these workpapers.

21 **Q. IS EMPIRE IN COMPLIANCE WITH THE PROVISIONS OF THE**  
22 **COMMISSION'S FAC RULE CONCERNING PERIODIC REPORTING**  
23 **AND SURVEILANCE?**

1 A. Yes. Empire has complied with all of the Commission's rules, 4 CSR 240-3.161(5)  
2 and (6), governing periodic reports and surveillance using the Commission's  
3 electronic filing system and provided all of the parties to File Nos. ER-2008-0093,  
4 ER-2010-0130, ER-2011-0004, ER-2012-0345, ER-2014-0351, and ER-2016-0023  
5 with copies of the periodic compliance reports and copies of surveillance reports at  
6 the same time they were filed with the Commission.

7 **Q. IF FAC SHEET 17e IS APPROVED BY THE COMMISSION, WHAT**  
8 **SAFEGUARDS EXIST TO ENSURE THE FAC REVENUE COLLECTED**  
9 **BY EMPIRE DOES NOT EXCEED THE ACTUAL TOTAL ENERGY COST**  
10 **INCURRED BY EMPIRE DURING THE ACCUMULATION PERIOD?**

11 A. As mentioned earlier, Empire's FAC and the Commission's rules provide two  
12 mechanisms designed to limit the FAC amounts collected from customers to  
13 Empire's actual, prudently-incurred energy costs. First, at the end of each Recovery  
14 Period the Company is required to true-up the amounts collected from customers  
15 through the FAR with the total energy costs that were actually incurred during the  
16 Accumulation Period to which the FAR applies. In addition, Empire's energy costs  
17 will be subjected to periodic Prudence Reviews to ensure that only prudently-  
18 incurred energy costs are collected from customers through the FAC. These two  
19 mechanisms serve as checks that ensure that Empire's Missouri customers pay only  
20 the prudently-incurred, actual cost of energy used to provide electric service in  
21 Missouri (less the 5% Empire absorbs or retains) – no more and no less.

22 **Q. WHAT ACTION IS EMPIRE REQUESTING FROM THE COMMISSION**  
23 **WITH RESPECT TO THE FAC RATE SCHEDULE THAT THE**

1           **COMPANY HAS FILED?**

2    A.    As provided by 4 CSR 240-20.090(4), Staff has thirty (30) days from the date the  
3           FAC rate schedule is filed to conduct a review and to make a recommendation to  
4           the Commission as to whether the rate schedule complies with the Commission's  
5           FAC rules, the requirements of Section 386.266, RSMo, and Empire's approved  
6           FAC. The Commission has sixty (60) days from the date of Empire's filing to  
7           either approve the rate schedule or to allow it to take effect by operation of law.  
8           Empire believes its FAC filing satisfies all of the requirements of applicable  
9           statutes, the Commission's rules, and Empire's approved FAC. Empire requests,  
10          following Staff's review, the Commission approve revised FAC sheet 17e to be  
11          effective as of December 1, 2017, which is the first day of the Recovery Period  
12          prescribed in Empire's FAC tariff.

13   **Q.    IS EMPIRE REQUESTING ANY OTHER CHANGES TO THE FAC**  
14   **TARIFF AT THIS TIME?**

15    A.    No other changes to the FAC tariff sheets are being requested at this time.

16   **Q.    DOES THIS CONCLUDE YOUR TESTIMONY AT THIS TIME?**

17    A.    Yes, it does.

## **Cases with Filed Written Testimony of Bethany Q. King**

### **Before the Oklahoma Corporation Commission**

Rate Cause: PUD 201600468

Rate Cause: PUD 201700256

### **Before the Kansas Corporation Commission**

Energy Cost Adjustment ACA Docket: 17-EPDE-226-ACA

### **Before the Missouri Corporation Commission**

Fuel Adjustment Clause Docket: ER-2017-0254; EO-2017-0255

### **Before the Arkansas Corporation Commission**

Energy Efficiency Cost Recovery Docket: 07-076-TF

THE EMPIRE DISTRICT ELECTRIC COMPANY

P.S.C. Mo. No. 5 Sec. 4 3rd Revised Sheet No. 17ac

Canceling P.S.C. Mo. No. 5 Sec. 4 2nd Revised Sheet No. 17ac

For ALL TERRITORY

FUEL & PURCHASE POWER ADJUSTMENT CLAUSE  
RIDER FAC  
For service on and after December 1, 2017


	Accumulation Period Ending		Aug 31, 2017
1	Total Energy Cost (TEC) = (FC + PP + E – OSSR - REC)		69,070,641
2	Net Base Energy Cost (B)	-	62,822,095
	2.1 Base Factor (BF)		0.02415
	2.2 Accumulation Period NSI (S <sub>AP</sub> )		2,440,458,808
3	(TEC-B)		6,248,545
4	Missouri Energy Ratio (J)	*	81.77%
5	(TEC - B) * J		5,110,442
6	Fuel Cost Recovery	*	95.00%
7	(TEC - B) * J * 0.95		4,854,920
8	True-Up Amount (T)	+	(1,045,682)
9	Prudence Adjustment Amount (P)	+	
10	Interest (I)	+	28,025.76
11	Fuel and Purchased Power Adjustment (FPA)	=	3,837,264
12	Forecasted Missouri NSI (S <sub>RP</sub> )	÷	2,218,459,384
13	Current Period Fuel Adjustment Rate (FAR)	=	0.00173
14	Current Period FAR <sub>PRIM</sub> = FAR x VAF <sub>PRIM</sub>		0.00181
15	Current Period FAR <sub>SEC</sub> = FAR x VAF <sub>SEC</sub>		0.00184
16	VAF <sub>PRIM</sub> = 1.0464		1.0464
17	VAF <sub>SEC</sub> = 1.0657		1.0657



AFFIDAVIT OF BETHANY Q. KING

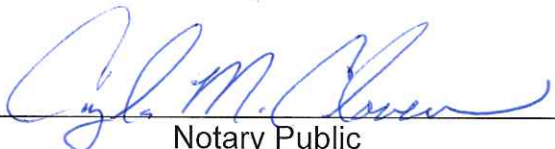
STATE OF MISSOURI )  
 ) ss  
 COUNTY OF JASPER )

On the 27th day of September, 2017, before me appeared Bethany Q. King, to me personally known, who, being by me first duly sworn, states that she is Manager of Strategic Planning of The Empire District Electric Company and acknowledges that she has read the above and foregoing document and believes that the statements therein are true and correct to the best of her information, knowledge and belief.

  
 \_\_\_\_\_  
 Bethany Q. King

Subscribed and sworn to before me this 27th day of September, 2017.

ANGELA M. CLOVEN  
 Notary Public - Notary Seal  
 State of Missouri  
 Commissioned for Jasper County  
 My Commission Expires: November 01, 2019  
 Commission Number: 15262659

  
 \_\_\_\_\_  
 Notary Public

My commission expires: 11/01/2019.