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Witness: Bethany Q. King
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File No. ER-2017-
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**Before the Public Service Commission
Of the State of Missouri**

Direct Testimony

Of

Bethany Q. King

March 2017



Empire District
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-2017-

1 **INTRODUCTION AND QUALIFICATIONS**

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

3 A. My name is Bethany Q. King and my business address is 602 S. Joplin Avenue,
4 Joplin, Missouri.

5 **Q. BY WHOM ARE YOU EMPLOYED AND WHAT IS YOUR JOB TITLE?**

6 A. I am presently employed by The Empire District Electric Co. (“Empire” or “the
7 Company”) as the Manager of Strategic Planning.

8 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL
9 BACKGROUND FOR THE COMMISSION.**

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

1 audits, and information technology process audits. I joined the Supply Management
2 Department in 2009 as an Energy Trader and was promoted to Planning Analyst in
3 January 2014. My responsibilities were assisting with the Southwest Power Pool
4 (SPP) Integrated Marketplace implementation project, natural gas hedge activity
5 reporting, representing Empire as a voting member of the SPP Change Working
6 Group and the Economic Studies Working Group, and various special studies related
7 to the SPP marketplace and annual fuel and purchase power budgets. In June 2016, I
8 accepted the position of Planning and Energy Efficiency Analyst in the Planning and
9 Regulatory Department where I was responsible for the development of five year
10 demand, energy, sales, and revenue budgets for electric, gas and water segments as
11 well as monthly variance reporting and quarterly weather normalization studies. I
12 was promoted to Manager of Strategic Planning in October 2016. My responsible
13 include oversight of the development of annual demand, energy, sales, and revenue
14 budgets, integrated resource planning and energy efficiency related program
15 administration and analysis.

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

18 A. Yes. I have testified on behalf of Empire before the Kansas Corporation
19 Commission and the Corporation Commission of Oklahoma. The case references are
20 attached to this testimony as Schedule BQK-1.

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

22 A. My testimony will support the Fuel & Purchased Power Adjustment Clause
23 (“FAC”) rate schedules that have been filed by Empire to reflect the actual energy

1 costs that Empire has incurred during the six-month period September 2016
2 through February 2017. This six-month period is an Accumulation Period specified
3 in Empire's FAC tariff that was approved by the Missouri Public Service
4 Commission ("Commission") in its Report and Order issued in File No. ER-2016-
5 0023.

6 **EXECUTIVE SUMMARY**

7 **Q. ARE THERE ANY CHANGES DURING THE ACCUMULATION PERIOD**
8 **(SEPTEMBER 2016 – FEBRUARY 2017) THAT SHOULD BE NOTED?**

9 A. Yes. New electric rates became effective on September 14, 2016 from File No. ER-
10 2016-0023. At this point, the base factor changed from \$26.84 per megawatt-hour
11 to \$24.15 per megawatt-hour. The weighted average base factor during the period
12 was \$24.34 per megawatt-hour. Also effective September 14, 2016, in accordance
13 with File No. ER-2016-0023, Transmission Congestion Rights ("TCRs") are no
14 longer eligible to flow through Empire's approved FAC.

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

17 A. The Commission's rule governing fuel and purchased power cost recovery
18 mechanisms for electric utilities – specifically 4 CSR 240-20.090(4) – requires
19 Empire to make periodic FAC filings that are designed to enable Commission
20 review of the actual fuel costs, purchased power costs, cost of consumables
21 associated with the power plants' air quality control system ("AQCS"), net cost of
22 emission allowances, revenue from the sale of renewable energy credits ("REC")
23 and off-system sales margins (collectively referred to as total energy costs) the

1 Company has incurred during an Accumulation Period. In addition, these periodic
2 filings are designed to adjust the FAC rates up or down, to reflect the actual energy
3 costs incurred during the Accumulation Period. Empire's FAC tariff calls for two
4 annual filings: a filing covering the six-month Accumulation Period running from
5 September through February and a second filing covering the Accumulation Period
6 running from March through August. Any increases or decreases in rates approved
7 by the Commission, or that take effect by operation of law, are then collected from
8 or refunded to customers over two six-month Recovery Periods: June through
9 November and December through May.

10 Since the implementation of Empire's FAC, the variable cost of fuel and purchased
11 power used by the Company's Missouri customers has varied from the base fuel
12 and energy cost established in rates. For the Accumulation Period September 2016
13 through February 2017, Empire's actual total energy costs eligible for the FAC have
14 been higher than the base energy costs included in the Company's Missouri rates by
15 approximately \$3,716,245. In accordance with the FAC tariff, Empire has absorbed
16 5% of the overall increase in Missouri variable energy costs during that six-month
17 period. Therefore, in accordance with the Commission's FAC rule and Empire's
18 approved FAC tariff, the Company has filed FAC rate schedules that are designed
19 to recover 95 percent of the energy cost differences of approximately \$3,530,433
20 from its Missouri jurisdictional customers.

21 In addition, Empire also seeks to collect approximately \$5,816, which is further
22 described in the true-up testimony that is provided in a separate filing, of under-
23 recovered energy costs from the prior recovery period ending November 30, 2016.

1 This brings the total net recovery sought by the Company to approximately
2 \$3,521,108 including interest. This total represents the Fuel and Purchased Power
3 Adjustment (“FPA”).

4 As reflected in the rate schedules filed by the Company, Empire has developed two
5 Fuel Adjustment Rates (“FAR”) designed to recover the FPA, each of which is
6 based on forecasted retail Missouri sales over the next Recovery Period: a FAR of
7 \$0.00165 per kilowatt-hour (kWh) for primary service, and a FAR of \$0.00168 per
8 kWh for secondary service have been developed for this filing. These FARs will
9 enable Empire to recover over a Recovery Period ending November 2017 the
10 difference between base energy costs built into its rates and the total energy costs
11 actually incurred during the Accumulation Period and the true-up of fuel and energy
12 costs during the Recovery Period ended November 30, 2016.

13 **Q. DOES THE EMPIRE FAC TARIFF INCLUDE PROVISIONS THAT ARE**
14 **DESIGNED TO LIMIT EMPIRE’S FAC RECOVERYS TO THE ACTUAL**
15 **COST OF ENERGY?**

16 **A.** Yes. The Empire FAC and the Commission’s rule governing FACs include two
17 safeguards limiting FAC recovery to actual, prudently-incurred energy costs. The
18 first safeguard is a true-up process that ensures the FAC collections during the
19 Recovery Period do not exceed actual energy costs incurred during the
20 Accumulation Period. The second safeguard involves a requirement that Empire’s
21 energy costs be subjected to periodic Prudence Reviews, which will ensure only
22 prudently-incurred energy costs are passed through to customers using the FAC.
23 Empire’s operation of the FAC has been audited by the Commission’s staff through

1 August 31, 2016. Staff filed its report in File No. EO-2017-0065; no disallowances
2 were recommended. The Office of Public Counsel has requested an Evidentiary
3 Hearing in the matter.

4 **THE PROPOSED FAC RATE ADJUSTMENT**

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

7 A. The Commission's rules – specifically 4 CSR 240-20.090(4) – and Empire's FAC
8 tariff require the Company to make periodic FAC filings that enable the
9 Commission to review Empire's actual fuel, purchased power, AQCS costs, off-
10 system sales, REC revenue, and net costs of emissions allowances so that Empire's
11 FAC rates can be adjusted to reflect the actual energy costs the Company incurs to
12 provide electric service to its Missouri customers. Empire's Missouri FAC tariff
13 calls for two FAC adjustment filings per year: a filing covering the six-month
14 Accumulation Period running from September through February and a second filing
15 covering the Accumulation Period running from March through August. Empire
16 is seeking an increase in its FAC rates to reflect 95% of the difference between the
17 base energy costs built into its base Missouri rates and Empire's actual Missouri
18 energy costs for the Accumulation Period, plus a true-up of the costs recovered
19 during the Recovery Period ending November 30, 2016. This recovery via FAC
20 rates will be reflected on the Missouri customers' bills over the six-month Recovery
21 Period running from June 2017 through November 2017.

22 **Q. HOW HAVE EMPIRE'S AVERAGE ENERGY COSTS CHANGED OVER**
23 **THE COST INCLUDED IN BASE RATES DURING THE**

1 **ACCUMULATION PERIOD?**

2 A. Empire’s average energy costs per kWh have increased above the level built into its
3 base electric rates, which is why the FAC rate schedules filed by the Company seek
4 an increase in the rates charged to the Missouri customers. More specifically,
5 Empire’s Missouri base rates included an average cost of energy per kWh of net
6 system production of \$0.02434 during the Accumulation Period of September 2016
7 through February 2017. Empire actually incurred average energy costs of \$0.02612
8 per kWh during the Accumulation Period. This represents an overall increase in
9 average energy costs of \$0.00177 per kWh during the Accumulation Period, or
10 about 7.29 percent higher than the average cost built into base rates. Pursuant to
11 Empire’s FAC tariff, Empire is requesting to recover from its Missouri customers
12 the net of 95 percent of this cost increase plus approximately \$5,816 of under
13 recovered energy cost and \$15,140 of interest income from the Recovery Period
14 ending November 30, 2016, or an average of \$0.00158 per kWh sold during the
15 upcoming Recovery Period.

16 **Q. HOW DOES THE MONTHLY FAC CHANGE FOR A TYPICAL**
17 **RESIDENTIAL CUSTOMER?**

18 A. For Missouri residential customers using 1,000 kWh per month, the electric bill
19 will increase by approximately \$6.25 per month over the six-month period June
20 2017 through November 2017, when the current FAC charge of \$0.00168 is applied
21 to their bill and the previous FAC recovery factor of (\$0.00457) is eliminated from
22 their bill.

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

1 A. Yes, the actual total energy cost per megawatt-hour was slightly below the
2 Company budget by approximately 3.98 percent.

3 **Q. DO YOU EXPECT THE AVERAGE ENERGY COSTS ELIGIBLE FOR**
4 **THE FAC TO BE HIGHER OR LOWER THAN THE BASE DURING THE**
5 **NEXT ACCUMULATION PERIOD FROM SEPTEMBER 2016 THROUGH**
6 **FEBRUARY 2017?**

7 A. Based on the current budget, we expect the total energy costs eligible for the FAC
8 to be about 7.12% higher than the base. The period in question, March 2017
9 through August 2017, contains the summer months, so this period has the potential
10 for a higher average cost per megawatt-hour than what would be expected for an
11 annual average cost per megawatt-hour. The current budget, which assumes normal
12 weather, anticipates average energy costs eligible for the FAC to be higher than the
13 current FAC base of \$24.15 per megawatt-hour during the next Accumulation
14 Period.

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

17 A. Yes. The design of the Commission's rule governing the FAC was the subject of
18 much discussion and debate prior to being approved by the Commission. In
19 addition, there was much discussion and debate concerning Empire's FAC tariff in
20 Case No. ER-2008-0093. This was the case in which the Commission ultimately
21 approved Empire's initial FAC tariff. Additional discussions have occurred in
22 subsequent cases. Empire's FAC filing is being made in accordance with the
23 Commission's rules governing the FAC and in accordance with the FAC tariff

1 approved for Empire.

2 **Q. PLEASE DESCRIBE HOW EMPIRE IS PROPOSING TO COLLECT THE**
3 **ENERGY COST INCREASES EXPERIENCED DURING THE MARCH**
4 **2017-AUGUST 2017 ACCUMULATION PERIOD?**

5 A. The FAC rate schedule filed by Empire will collect the energy cost increase actually
6 incurred during the Accumulation Period by applying the positive Fuel Adjustment
7 Rate or FAR of \$0.00165 for primary and \$0.00168 for secondary service to the
8 actual Missouri retail kWh sales that take place during the June 1, 2017 to
9 November 30, 2017 Recovery Period. The proposed FARs were calculated in
10 accordance with Empire's authorized FAC tariff. I have attached to my testimony,
11 as Schedule BQK-2, an exemplar copy of one of Empire's approved FAC tariff
12 sheets. In addition to the tariff sheet, I have included as page 2 of Schedule BQK-2
13 a monthly analysis of the energy costs and energy cost recovery that has taken place
14 during the Accumulation Period. Schedule BQK-2 contains the basic information
15 and FAC formula that Empire used to calculate the FARs that have been included
16 in the proposed revised FAC rate schedule sheet 17e. The Empire FAC tariff and
17 the formula included therein were approved by the Commission in File No. ER-
18 2016-0023.

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

21 A. The data upon which Empire based the values for each of the variables in the
22 approved FAR formula are included on the schedule, and came from Empire's
23 books and records. Schedule BQK-2 contains all of the basic information that is

1 required to calculate the proposed change in the FAR. In addition, I have filed the
2 detailed information required by 4 CSR 240-3.161(7) (A) with this testimony as a
3 separate set of supporting workpapers. Additional information about the true-up
4 amount was filed concurrently in a separate docket. In addition, as required by 4
5 CSR 240-3.161(7) (B), I have separately provided to all parties of record in File
6 Nos. ER-2008-0093, ER-2010-0130, ER-2011-0004, ER-2012-0345, ER-2014-
7 0351, and ER-2016-0023 with a set of these workpapers.

8 **Q. IS EMPIRE IN COMPLIANCE WITH THE PROVISIONS OF THE**
9 **COMMISSION'S FAC RULE CONCERNING PERIODIC REPORTING**
10 **AND SURVEILLANCE?**

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

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

21 A. As mentioned earlier, Empire's FAC and the Commission's rules provide two
22 mechanisms designed to limit the FAC amounts collected from customers to
23 Empire's actual, prudently-incurred energy costs. First, at the end of each Recovery

1 Period the Company is required to true-up the amounts collected from customers
2 through the FAR with the total energy costs that were actually incurred during the
3 Accumulation Period to which the FAR applies. In addition, Empire's energy costs
4 will be subjected to periodic Prudence Reviews to ensure that only prudently-
5 incurred energy costs are collected from customers through the FAC. These two
6 mechanisms serve as checks that ensure that Empire's Missouri customers pay only
7 the prudently-incurred, actual cost of energy used to provide electric service in
8 Missouri (less the 5% Empire absorbs or retains) – no more and no less.

9 **Q. WHAT ACTION IS EMPIRE REQUESTING FROM THE COMMISSION**
10 **WITH RESPECT TO THE FAC RATE SCHEDULE THAT THE**
11 **COMPANY HAS FILED?**

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

23 **Q. IS EMPIRE REQUESTING ANY OTHER CHANGES TO THE FAC**

1 **TARIFF AT THIS TIME?**

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

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

4 A. Yes, it does.

Cases with Filed Written Testimony of Bethany Q. King

Before the Kansas Corporation Commission

- Energy Cost Adjustment ACA Docket

17-EPDE-226-ACA

Before the Oklahoma Corporation Commission

- Rate Cause

PUD 201600468

THE EMPIRE DISTRICT ELECTRIC COMPANY

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

Canceling P.S.C. Mo. No. 5 Sec. 4 1st Revised Sheet No. 17ac

For ALL TERRITORY

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

	Accumulation Period Ending		Feb 28, 2017
1	Total Energy Cost (TEC) = (FC + PP + E – OSSR - REC)		66,508,009
2	Net Base Energy Cost (B)	-	62,011,760
	2.1 Base Factor (BF)		0.02435
	2.2 Accumulation Period NSI (S _{AP})		2,546,465,000
3	(TEC-B)		4,496,249
4	Missouri Energy Ratio (J)	*	82.65%
5	(TEC - B) * J		3,716,245
6	Fuel Cost Recovery	*	95.00%
7	(TEC - B) * J * 0.95		3,530,433
8	True-Up Amount (T)	+	5,816
9	Prudence Adjustment Amount (P)	+	
10	Interest (I)	+	(15,140)
11	Fuel and Purchased Power Adjustment (FPA)	=	3,521,108
12	Forecasted Missouri NSI (S _{RP})	÷	2,233,927,053
13	Current Period Fuel Adjustment Rate (FAR) to be applied Beginning December 1, 2016	=	0.00158
14	Current Period FAR _{PRIM} = FAR x VAF _{PRIM}		0.00165
15	Current Period FAR _{SEC} = FAR x VAF _{SEC}		0.00168
16	VAF _{PRIM} = 1.0464		1.0464
17	VAF _{SEC} = 1.0657		1.0657

