

Exhibit No.:
Issue(s): *Fuel Adjustment Clause*
Witness: *Brooke Mastrogiannis*
Sponsoring Party: *MoPSC Staff*
Type of Exhibit: *Direct Testimony*
Case No.: *ER-2024-0261*
Date Testimony Prepared: *July 2, 2025*

MISSOURI PUBLIC SERVICE COMMISSION

INDUSTRY ANALYSIS DIVISION

ENERGY RESOURCES DEPARTMENT

DIRECT TESTIMONY

OF

BROOKE MASTROGIANNIS

**THE EMPIRE DISTRICT ELECTRIC COMPANY,
d/b/a Liberty**

CASE NO. ER-2024-0261

Jefferson City, Missouri
July 2025

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BROOKE MASTROGIANNIS	
THE EMPIRE DISTRICT ELECTRIC COMPANY,	
d/b/a Liberty	
CASE NO. ER-2024-0261	
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1 A. Staff recommends that Empire continue its FAC with modifications, and that the
2 Commission order the recommendations listed below regarding Empire's FAC:

- 3 1. Continue to include the information provided in Schedule BM-d2,¹ either
4 within the tariff or as an attachment to the tariff or any agreed upon document
5 resolving this case, to clarify the list of sub-accounts included and excluded
6 within the FAC;
- 7 2. Continue to include a Base Factor in the FAC tariff sheets calculated from the
8 Base Energy Cost² that the Commission includes in the revenue requirement
9 upon which it sets Empire's general rates in this case;
- 10 3. Continue to include transmission costs that are included in Empire's FAC tariff
11 sheets and are those that Empire incurs for Purchased Power and Off-System
12 Sales. This is a continuation of the currently used methodology consistent with
13 the FAC and what the Commission termed as "true purchased power" in its
14 *Report and Order* in Case No. ER-2014-0258.

15 Also, Staff recommends the Commission order Empire to continue providing
16 the following information between rate cases, to aid Staff in performing FAC tariff,
17 prudence, and true-up reviews due to the accelerated Staff review process necessary with FAC
18 adjustment filings:³

- 19 1. Monthly Southwest Power Pool ("SPP") market settlements and revenue
20 neutrality uplift charges;
- 21 2. Monthly filings that will aid the Staff in performing FAC tariff, prudence, and
22 true-up reviews;
- 23 3. Additional FAC monthly reporting, including a detailed listing of all costs and
24 revenues incurred due to the Missouri Joint Municipal Electric Utility
25 Commission ("MJMEUC") contracts;

¹ Staff created Schedule BM-d2 from Empire witness Leigha Palumbo's Schedule LP-7, with modifications.

² Base Energy Cost is defined in Empire's 1st Revised Tariff Sheet No. 17i as "Base energy cost is ordered by the Commission in the last rate case consistent with the costs and revenues included in the calculation of the Fuel and Purchased Power Adjustment ("FPA")."

³ The Company must file its FAC adjustment 60 days prior to the effective date of its proposed tariff sheet. Staff has 30 days to review the filing and make a recommendation to the Commission. The Commission then has 30 days to approve or deny Staff's recommendation.

4. Notification to Staff within 30 days of entering a new long-term contract for purchased power, transportation, coal, natural gas or other fuel (natural gas spot transactions are specifically excluded);
5. Notification to Staff within 30 days of changes to a purchased power contract or entering a new long-term contract for purchased power;
6. Monthly natural gas fuel reports that include all transactions (spot and longer term), including terms, volumes, price, and analysis of number of bids;
7. Every Empire hedging policy in effect at the time the tariff changes ordered by the Commission in this rate case go into effect;
8. Notification to Staff within 30 days of any material change in Empire's fuel hedging policy and Staff access to new policies;
9. Provide Missouri Fuel Adjustment Interest calculation workpapers in electronic format with all formulas intact when Empire files for a change in its cost adjustment factor;
10. Notification to Staff within 30 days of any revisions to Empire's internal policies for participating in the SPP and Staff access to the new policies;
11. Access to all natural gas, nuclear fuel, coal, and transportation contracts and policies upon Staff's request, at Empire's corporate office in Joplin, Missouri;
12. Notification to Staff within 30 days of the effective date of every natural gas contract Empire enters into and giving Staff opportunity to review the contract at Empire's corporate office in Joplin, Missouri;
13. Provide additional FAC monthly reporting to include, by month, the SPP hourly Day-Ahead Locational Marginal Price ("LMP") and the SPP hourly average Real-Time LMP for the Settlement locations related to Empire's generating units and load; and
14. Provide additional FAC monthly reporting to include the monthly Auction Revenue Rights/Transmission Congestion Rights ("ARR/TCR") revenues, sales, purchases and congestion by path between Empire's generating units and load, and other paths that make up Empire's TCR portfolio.

These recommendations are consistent with past Empire rate cases,⁴ except for sub-bullets 3, 13, and 14. Sub-bullet 3 was only effective after the last two general rate cases because of the effective date of the MJMEUC contract, and sub-bullets 13 and 14 are newly suggested in this general rate case to be consistent with recent Report and Orders from Evergy⁵ and Ameren rate cases.⁶

HISTORY

Q. Please describe the history of Empire's FAC.

A. The Commission first authorized a FAC for Empire in its *Report and Order* in Empire's 2008 rate case, Case No. ER-2008-0093, approving FAC tariff sheets with an effective date of September 1, 2008. In subsequent general rate cases, Case Nos. ER-2010-0130, ER-2011-0004, ER-2012-0345, ER-2014-0351, ER-2016-0023, ER-2019-0374, and ER-2021-0312, the Commission authorized continuation of Empire's FAC, with modifications.

The primary features of Empire's present FAC (1st Revised tariff sheet numbers 17i through 17p) include:

1. Two 6-month accumulation periods ("AP")⁷: March through August and September through February;
2. Two 6-month recovery periods ("RP")⁸: December through May and June through November;
3. Empire must file Fuel Adjustment Rate ("FAR")⁹ filings semi-annually, not later than April 1 and October 1 of each year;

⁴ Case No's ER-2021-0312, ER-2019-0374, and ER-2016-0023.

⁵ Case No. ER-2024-0189, *Unanimous Stipulation and Agreement*, pg. 9, approved on December 4, 2024.

⁶ Case No. ER-2024-0319, *Order Approving Stipulations and Agreements*, pg. 29, issued on April 23, 2025.

⁷ An AP is the calendar months during which the actual costs and revenues are accumulated for the purposes of the Fuel Adjustment Rate.

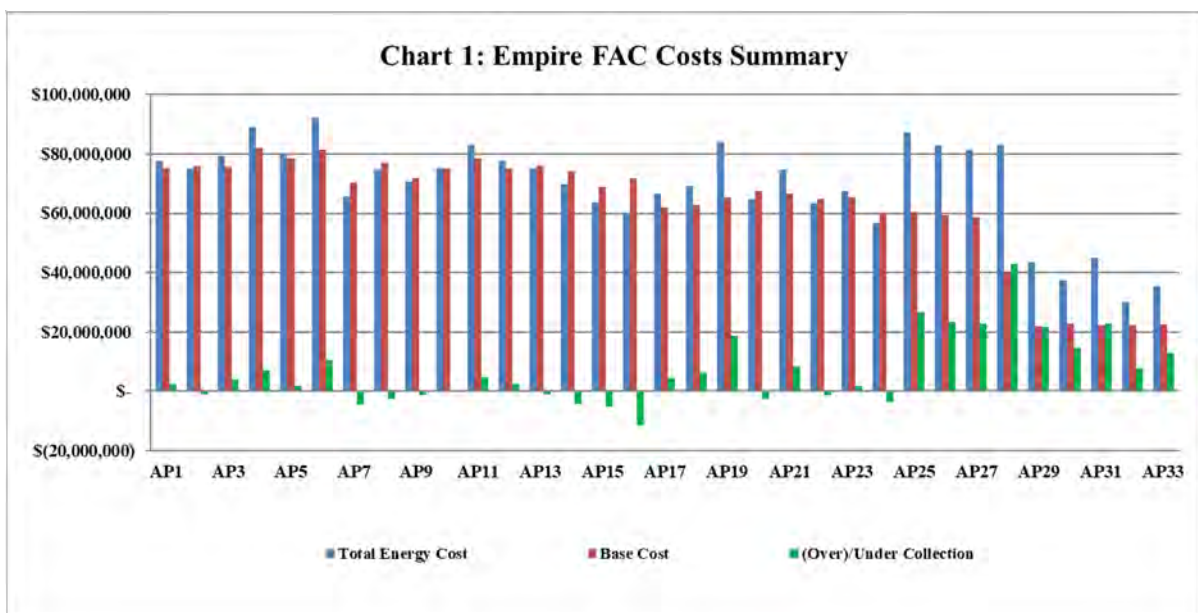
⁸ A RP is the billing calendar months during which the FAR is applied to retail customer usage on a per kWh basis, as adjusted for service voltage.

⁹ The FAR for each accumulation period is the amount that is returned to or collected from customers as part of a decrease or an increase of the FAC Fuel and Purchased Power Adjustment per kWh rate.

4. One Base Factor for all calendar months of the year;
5. A 95/5 sharing mechanism between ratepayers and Empire;¹⁰
6. FAR rates for individual service classifications adjusted for the two Empire service voltage levels, rounded to the nearest \$0.00001, and charged on each kWh billed; and
7. True-up of any over- or under-recovery of revenues following each recovery period with a true-up amount included in the determination of FAR for a subsequent recovery period.

Q. Please explain the historical operation of Empire's FAC.

A. Empire has filed for and received approval of changes to its FARs for 33 completed APs (AP1 through AP33). Chart 1 below shows a summary of Empire's Total Energy Costs ("TEC"), Base Costs, and the over- or under-collection of fuel and purchased-power costs, minus off-system sales revenues through its permanent rates, since the Commission authorized Empire's FAC:



¹⁰ 95% of the difference between the total energy cost and net base energy costs for each respective AP will be used to calculate the FAR.

1 Empire's actual TEC exceeded the then-effective Base Factor multiplied by
2 monthly usage billed to Empire's customers in 22 out of 33 completed accumulation periods.

3 Actual TEC includes:

- 4 1) Empire's total booked costs as allocated to its Missouri retail jurisdiction for
5 fuel consumed in its generating units, including the costs associated with its fuel
6 hedging program;
- 7 2) Purchased power energy charges, including applicable transmission fees;
- 8 3) SPP variable costs; and
- 9 4) Air quality control system consumables, such as anhydrous ammonia,
10 limestone, and powder activated carbon, and emission allowance costs.

11 Actual Total Energy Cost does not include the purchased power demand costs, since
12 these are considered to be fixed costs. Actual FAC costs are off-set by actual revenue from
13 Off-System Sales, actual Net Emission Costs, and actual Renewable Energy Credit Revenues.

14 At the conclusions of its general electric rate cases, during AP3, AP6, AP10, AP14,
15 AP17, AP25, and AP28 – Case Nos. ER-2010-0130, ER-2011-0004, ER-2012-0345,
16 ER-2014-0351, ER-2016-0023, ER-2019-0374, and ER-2021-0312, respectively – the Base
17 Factor in Empire's FAC was re-calculated.

18 Chart 1 also shows that the range of Empire's TEC varies from approximately
19 \$30 million for AP32 (March 2024 – August 2024), to approximately \$92 million for
20 AP6 (March 2011 – August 2011). Based on this varied range of Empire's TEC, Chart 1 shows
21 that Empire's TECs have continued to be large and volatile, which is why Staff recommends
22 that the Commission approve, with modifications, the continuation of Empire's FAC.

CONTINUATION OF FAC

Q. How is the Base Factor defined?

A. The Base Factor is defined on Empire's 1st Revised sheet 17i as the base energy cost divided by the net generation kWh determined by the Commission from the most recent rate case. This value is the sum of (1) allowable fuel costs, (2) plus cost of purchased power, emissions costs and revenues, (3) less revenues from off-system sales, and (4) divided by corresponding normalized retail kWh.

Q. Is setting the Base Factor in Empire's FAC tariff sheets important?

A. Yes. Setting the Base Factor in Empire's FAC tariff sheets is important to ensure a well-functioning FAC and a well-functioning FAC sharing mechanism. For the reasons below, Staff recommends the Commission require the Base Factor in Empire's FAC be based on the Base Energy Cost that the Commission includes in the revenue requirement on which it sets Empire's general rates in this case.

Q. Please provide examples illustrating why setting a reasonable base factor is so important.

A. Table 1 below shows the three scenarios in which the FAC Base Energy Cost used to set the FAC Base Factor is equal to, less than, or greater than the Base Energy Cost in the revenue requirement upon which the Commission sets general rates:

continued on next page

Table 1: Base Energy Cost Case Studies	
95%/5% Sharing Mechanism	
Outcome 1: Actual Net Energy Cost <u>Equals</u> the Base Energy Cost in Revenue Requirement	
Actual Total Energy Cost (ANEC)	\$ 4,000,000
Billed to Customer: (NBEC)	
in Permanent Rates	\$ 4,000,000
95% of difference between ANEC and NBEC through FAC	\$ -
Total Billed to Customers	\$ 4,000,000
Kept/(Paid) by Company	\$ -
Outcome 2: Actual Net Energy Cost <u>Greater Than</u> Base Energy Cost in Revenue Requirement	
Actual Total Energy Cost	\$ 4,200,000
Billed to Customer:	
in Permanent Rates	\$ 4,000,000
95% of difference between ANEC and NBEC through FAC	\$ 190,000
Total Billed to Customers	\$ 4,190,000
Kept/(Paid) by Company	\$ (10,000)
Outcome 3: Actual Energy Cost <u>Less Than</u> Base Energy Cost in Revenue Requirement	
Actual Energy Cost	\$ 3,800,000
Billed to Customer:	
in Permanent Rates	\$ 4,000,000
95% of difference between ANEC and NBEC through FAC	\$ (190,000)
Total Billed to Customers	\$ 3,810,000
Kept/(Paid) by Company	\$ 10,000

Outcome 1 illustrates that if the FAC Actual Net Energy Cost is equal to the Base Energy Cost (Base Factor) in the revenue requirement used for setting general rates, the utility does not over- or under-collect as a result of the level of total actual energy costs.

Outcome 2 illustrates that if the FAC Actual Net Energy Cost is greater than the Base Energy Cost (Base Factor) in the revenue requirement used for setting general rates, the utility will not collect all of the costs that were included as a normalized value

(under-recover) in the FAC design, and customers will pay less than the entire amount included as a normalized value.

Outcome 3 illustrates that if the FAC Actual Net Energy Cost is less than the Base Energy Cost (Base Factor) in the revenue requirement used for setting general rates, the utility will collect more than what was included as a normalized value, and customers will pay more than the FAC was designed for them to pay.

These three outcomes illustrate the importance of setting the Base Factor in the FAC, i.e., revising the Base Factor to match the Base Energy Cost in the revenue requirement used for setting general rates. If the Base Factor in the FAC is set as close to the actual net energy costs as reasonably possible, the customers will not see such a huge swing of over or under recovery in its subsequent Fuel Adjustment Rate filings.

Table 2 below contains a comparison of Empire's FERC account expenses and revenues, annual kWhs, cents per kWh, and Base Energy Cost approved in its last general rate case, Case No. ER-2021-0312, and Empire's proposed¹¹ Base Energy Cost in this case. Empire's proposed overall total Fuel and Purchased Power for the FAC base increased a total of 94.53% compared to the total fuel and purchased power for FAC base approved in Case No. ER-2021-0312. The current FAC Base Factor was based on a negotiated settlement. At the time the proposed new base factor was developed, Empire utilized a low natural gas price and associated market price forecast while modelling its FAC base factor proposal. Within the model, this results in lower market revenue from generation sold into the market. Additionally, Empire is requesting a higher level of transmission expense than is in the current FAC base factor.¹²

¹¹ This proposed FAC Base Factor calculation can be found in Todd W. Tarter's Direct Testimony, Schedule TWT-3.

¹² Empire witness Todd W. Tarter's Direct Testimony page 5.

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Table 2: FAC BASE FACTOR CALCULATION

	Current FAC Base	Proposed FAC Base		
<u>FUEL</u>	<u>ER-2021-0312</u>	<u>Total Company</u>	<u>Difference</u>	<u>Percent Difference</u>
Fuel	\$ 81,329,145	\$ 63,821,219	\$ (17,507,926)	-21.53%
Staff Removed from FERC 501, 547 (Admin/Labor)	\$ (308,137)	\$ -	\$ 308,137	-100.00%
Nat Gas Transportation Variable (Nat Gas Commodity Costs)	\$ 288,248	\$ 571,163	\$ 282,915	98.15%
Natural Gas Losses at the Cost of Natural Gas	\$ 1,178,715	\$ 595,428	\$ (583,287)	-49.48%
Freeze Control Coal Adder	\$ -	\$ -	\$ -	0.00%
Other Fuel Related (Undistributed & Other and Unit Train)	\$ 2,191,400	\$ 2,374,073	\$ 182,673	8.34%
Staff Removed Labor from Other Fuel Related	\$ (527)	\$ -	\$ 527	-100.00%
Total Fuel and Related Costs	\$ 84,678,844	\$ 67,361,883	\$ (17,316,961)	-20.45%
<u>PURCHASED POWER ENERGY</u>				
Purchased Power Energy (e.g. Plum Point PPA and Wind PPAs)	\$ 34,497,047	\$ 38,276,577	\$ 3,779,530	10.96%
Plum Point O&M Cost-Variable	\$ 2,541,193	\$ 472,784	\$ (2,068,409)	-81.40%
Total Purchased Power	\$ 37,038,240	\$ 38,749,361	\$ 1,711,121	4.62%
Total F&PP (without purchase demand or Nat Gas Transport)	\$ 121,717,084	\$ 106,111,244	\$ (15,605,840)	-12.82%
<u>MARKET REVENUES</u>				
Resource Sales into the SPP IM (OSS Revenue)	\$ (212,637,092)	\$ (188,146,276)	\$ 24,490,816	-11.52%
	\$ (212,637,092)	\$ (188,146,276)	\$ 24,490,816	-11.52%
<u>NATIVE LOAD COST</u>				
SPP Charge - Liberty-Empire Load	\$ 143,030,070	\$ 170,397,718	\$ 27,367,648	19.13%
Ancillary/Other	\$ 1,818,658	\$ 2,768,302	\$ 949,644	52.22%
Net ARR/TCR	\$ (14,464,960)	\$ (23,533,318)	\$ (9,068,358)	62.69%
Total Native Load Cost	\$ 130,383,768	\$ 149,632,702	\$ 19,248,934	14.76%
<u>NET F&PP</u>				
Total Net F&PP (without purchase demand or Nat Gas Transport)	\$ 39,463,760	\$ 67,597,670	\$ 28,133,910	71.29%
<u>OTHER ENERGY RELATED AND ADJUSTMENTS</u>				
Net Emissions Allowances	\$ -	\$ -	\$ -	0%
AQCS Consumables (Ammonia, Limestone, PAC) - Variable	\$ 825,561	\$ 975,251	\$ 149,690	18.13%
Net Renewable Energy Credits (RECs)	\$ (281,951)	\$ (3,759,926)	\$ (3,477,975)	1233.54%
Fuel Admin/Labor	\$ -	\$ (318,334)	\$ (318,334)	-100.00%
RTO Transmission	\$ 4,162,206	\$ 21,005,101	\$ 16,842,895	404.66%
Net Metering Credits	\$ -	\$ 425,223	\$ 425,223	0.00%
Total Other Energy Related and Adjustments	\$ 4,705,816	\$ 18,327,316	\$ 13,621,500	289.46%
Total F&PP for FAC Base	\$ 44,169,576	\$ 85,924,986	\$ 41,755,410	94.53%
Total Kwh	5,077,206,660	5,178,270,813	101,064,153	1.99%
FAC Base Factor \$ per kWh	0.00870	0.01659	0.007894	90.74%
FAC Base Factor \$ per MWh	8.70	16.59	7.89	90.74%

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Q. Does Staff recommend the continuation of Empire's FAC?

1 A. Yes. Staff recommends continuation of Empire's FAC. Empire's fuel and
2 purchased-power costs, less off-system sales revenues, continue to be volatile. While Empire
3 can control some FAC related costs, there are some that are more difficult for Empire to control.
4 The proposed TEC is \$85,924,986, which represents approximately 12.86%¹³ of Empire's
5 proposed annual revenue requirement of \$668,375,888 for this case.

6 Q. What new value is Empire proposing for the Base Factor?

7 A. In the current rate case, Empire proposes to re-base the Base Factor from
8 \$0.00870 per kWh to \$0.01659 per kWh. Staff calculated the Base Factor rate based upon an
9 analysis of data compiled during the test year through the 12 months ending September 30,
10 2023, updated through September 30, 2024, which results in: (1) net base energy costs
11 (fuel and purchased power costs less off system sales revenue ("OSSR") including Staff's
12 accounting adjustments to test year; and (2) normalized net system inputs ("NSI"):

Base Energy Cost	\$94,664,096
NSI	<u>5,181,826,380</u>
Base Factor	\$0.01827 per kWh

16 Q. What is the Voltage Adjustment Factor ("VAF") and how does it relate
17 to the FAC?

18 A. VAFs adjust for the energy losses experienced in the delivery of electricity from
19 the generator to customers with transmission, secondary, and primary levels. These VAFs are
20 utilized in Staff's determination of a FAR for each voltage service classification. Staff witness
21 Alan J. Bax addresses the Voltage Adjustment Factors in his direct testimony.

¹³ This percentage is comprised of the proposed Base Energy Costs of \$85,924,986 from Empire witness Todd W. Tarter's Direct Testimony, divided by the total proposed annual revenue requirement of \$668,375,888 from Charlotte T. Emery's Direct Schedule CTE-1.

1 Q. What are the transmission costs and how do they factor into the determination
2 of the Base Factor and the FAC?

3 A. Transmission costs are related to the SPP and Non-SPP costs associated with
4 network transmission service, point-to-point transmission service, system control and dispatch,
5 and reactive supply and voltage control.

6 Q. What does Staff recommend for the transmission costs allowable in the
7 Base Factor of the FAC?

8 A. Staff's position is to retain the existing calculation for SPP¹⁴ transmission costs,
9 which is the percentage of total purchases over total market load. As provided in Staff witness
10 Shawn E. Lange's work papers,¹⁵ Staff calculated the pass-through percentage of SPP
11 transmission costs in the FAC as 21.39%. This calculation is based on the output from Staff's
12 fuel models that were used to develop the revenue requirements for this case.

13 Q. Is there anything new within Staff's base factor for this case? If so, why?

14 A. Yes. Staff included a four year average for net metering credits. The net metering
15 credits allow Empire to purchase less energy to serve native load, thereby reducing overall net
16 fuel and purchased power expenses.

17 Q. Please provide a conclusion of your direct testimony.

18 A. My direct testimony has provided the history of the Empire's FAC to support
19 Staff's recommendation for continuing its FAC with certain modifications, along with
20 continuing to provide Staff monthly reports and various information, to aid Staff in performing
21 FAC tariff, prudence, and true-up reviews. My direct testimony has also defined a base factor,

¹⁴ Staff proposes the pass-through percentage of non-SPP (Midcontinent Independent System Operator, Inc.) costs to continue to be 50%.

¹⁵ Work paper titled "ER-2024-0261 Staff Fuel Model For Direct 62025 fin.xlsx".

1 and compared Empire's proposed base factor to what the approved base factor was in the last
2 general rate case. Lastly, my direct testimony provides Staff's proposed base factor.¹⁶

3 Q. Does this conclude your direct testimony?

4 A. Yes it does.

¹⁶ Attached as Schedule BM-d3.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of the Request of The Empire)
District Electric Company d/b/a Liberty for) Case No. ER-2024-0261
Authority to File Tariffs Increasing Rates)
for Electric Service Provided to Customers)
in Its Missouri Service Area)

AFFIDAVIT OF BROOKE MASTROGIANNIS

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

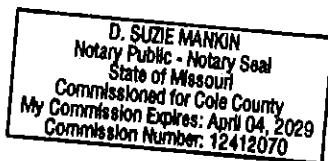
COMES NOW BROOKE MASTROGIANNIS and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *Direct Testimony of Brooke Mastrogiannis*; and that the same is true and correct according to her best knowledge and belief.

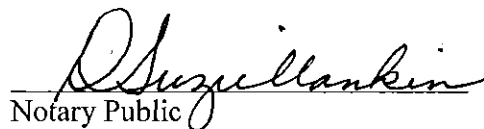
Further the Affiant sayeth not.


BROOKE MASTROGIANNIS

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 26th day of June 2025.




Notary Public

Brooke Mastrogiannis

Education and Employment Background

I am a Utility Regulatory Audit Supervisor in the Energy Resources Department of the Missouri Public Service Commission. I have been employed by the Missouri Public Service Commission since May 2014. I previously was a Utility Regulatory Auditor in the Auditing Unit of the Utility Services Department, and a Utility Management Analyst in the Consumer and Management Analysis Unit. I have been in my current position since May 2020.

I received a Bachelor of Science degree in Accounting from Lincoln University, in Jefferson City, MO in May of 2012. I then continued to further my education and received my Masters of Business Administration with an emphasis in Accounting in December 2013. In earning these degree's I completed numerous core Accounting and Business classes.

Prior to joining the Commission, I was employed by the State of Missouri - Department of Natural Resources from June 2013 to May 2014 as an Accounting Specialist. My duties entailed: reviewing and monitoring expense account forms to ensure employees followed correct procedures, prepared and set up project and job codes so they could be coded correctly on employee's time sheets, analyzed and prepared necessary cash draws, and also prepared financial information or reports to facilitate budget information and execution.

Brooke Mastrogiannis
Case Participation
Utility Regulatory Audit Supervisor

Company Name	Case Number	Testimony/Issues
The Empire District Electric Company	ER-2014-0351	January 2015 Cost of Service Report- Plant in Service, Depreciation Reserve, Prepayments, Materials and Supplies, Customer Deposits, Customer Deposit Interest, Customer Advances, Amortization of Electric Plant, Amortization of PeopleSoft Intangible Asset, Corporate Franchise Taxes, Depreciation Expense, Amortization Expense, Dues and Donations, EEI Dues, Advertising Expense, Outside Services, and Postage.
Seges Partners Mobile Home Park L.L.C.	SR-2015-0106	January 2015 Staff Report- Rate Base, Revenues, Purchased Sewer Costs, Payroll and Payroll Taxes, Management Fee, Postage, Telephone Expense, Maintenance Expense, Insurance, Outside Services, PSC Assessment, and Rate Case Expense
The Empire District Electric Company	ER-2014-0351	March 2015 Surrebuttal Testimony- Advertising Expense, Customer Advances, and EEI Dues.
Ozark International, Inc.	WR-2015-0192	September 2015 Staff Report- Payroll, Telephone and Cell Phone Expense, Auto Expense, Insurance Expense, Bank Service Charges, Customer Deposits, Customer Deposit Interest, PSC Assessment, Revenues, Miscellaneous Income, Contract Labor, General Maintenance Expense, Electric Expense, Returned Check Fees, Outside Services, Dues and Subscriptions, and Credit Card Fees
Hillcrest Utility Operating Company, Inc.	WR-2016-0064	March 2016 Staff Report- Customer Service and Business Operations Review
Cannon Home Association	SR-2016-0112	April 2016 Staff Report- Customer Service and Business Operations Review
Roy-L Utilities, Inc.	WR-2016-0109	May 2016 Staff Report- Customer Service and Business Operations Review
Raccoon Creek Utility Operating Company, Inc.	SR-2016-0202	August 2016 Staff Report- Customer Service and Business Operations Review

**cont'd Case Participation
Brooke Mastrogiannis**

Company Name	Case Number	Testimony/Issues
Raccoon Creek Utility Operating Company, Inc.	SR-2016-0202	October 2016 Rebuttal Testimony- Collection of Bad Debt
Kansas City Power and Light Company	EO-2016-0124	January 2017 Management Audit Report- Employee Expense Account Process and Internal Audit Activities
Terre Du Lac Utilities Corporation	WR-2017-0110	April 2017 Staff Report- Customer Service and Business Operations Review
Indian Hills Utility Operating Company, Inc.	WR-2017-0259	July 2017 Staff Report- Customer Service and Business Operations Review
Spire Missouri, Inc.	GR-2017-0215	December 2017 Rebuttal Testimony- Performance Metrics Incentive Proposal
Ameren Missouri	EO-2018-0155	April 2018 Staff Report- First MEEIA Cycle 2 Prudence Review
Liberty Utilities, LLC	WR-2018-0170	April 2018 Staff Report- Normalized and Annualized Revenues, Miscellaneous Revenues, Bad Debt Expense, Outside Services/Contract Maintenance, DNR Fees, Meter Reading Expense, Transportation Expense, and Property Taxes
KCPL Greater Missouri Operations	ER-2018-0146	June 2018 Direct Testimony- Fuel Adjustment Clause Rebuttal Testimony- Fuel Adjustment Clause and Renewable Energy Rider Surrebuttal Testimony- Fuel Adjustment Clause
The Empire District Electric Company	EO-2018-0244	September 2018 Staff Report- Fuel Adjustment Clause Prudence Review
KCPL	EO-2018-0363	November 2018 Staff Report- First MEEIA Cycle 2 Prudence Review
KCPL Greater Missouri Operations	EO-2018-0364	November 2018 Staff Report- First MEEIA Cycle 2 Prudence Review
KCPL	EO-2019-0068	February 2019 Staff Report- Fuel Adjustment Clause Prudence Review
KCPL Greater Missouri Operations	EO-2019-0067	February 2019 Staff Report- Fuel Adjustment Clause Prudence Review

**cont'd Case Participation
Brooke Mastrogiannis**

Company Name	Case Number	Testimony/Issues
Ameren Missouri	EO-2019-0257	August 2019 Staff Report- Fuel Adjustment Clause Prudence Review
Ameren Missouri	EO-2019-0376	October 2019 Staff Report- Second MEEIA Cycle 2 Prudence Review
The Empire District Electric Company	EO-2020-0059	February 2020 Staff Report- Fuel Adjustment Clause Prudence Review
The Empire District Electric Company	ER-2019-0374	January 2020 Direct Testimony- Fuel Adjustment Clause Rebuttal Testimony- Fuel Adjustment Clause Surrebuttal Testimony- Fuel Adjustment Clause
Evergy Missouri Metro	EO-2020-0227	June 2020 Staff Report- Second MEEIA Cycle 2 Prudence Review
Evergy Missouri West	EO-2020-0228	June 2020 Staff Report- Second MEEIA Cycle 2 Prudence Review
Evergy Missouri West	EO-2020-0262	August 2020 Staff Report- Fuel Adjustment Clause Prudence Review
Evergy Missouri Metro	EO-2020-0263	August 2020 Staff Report- Fuel Adjustment Clause Prudence Review
Ameren Missouri	EO-2021-0060	February 2021 Staff Report- Fuel Adjustment Clause Prudence Review
Ameren Missouri	EO-2021-0157	May 2021 Staff Report- First MEEIA Cycle 3 Prudence Review
The Empire District Electric Company	EO-2021-0281	August 2021 Staff Report- Fuel Adjustment Clause Prudence Review
Ameren Missouri	ER-2021-0240	September 2021 Direct Testimony- Fuel Adjustment Clause Rebuttal Testimony- Fuel Adjustment Clause Surrebuttal Testimony- Fuel Adjustment Clause
The Empire District Electric Company	ER-2021-0312	October 2021 Direct Testimony- Fuel Adjustment Clause Rebuttal Testimony- Fuel Adjustment Clause Surrebuttal Testimony- Fuel Adjustment Clause

**cont'd Case Participation
Brooke Mastrogiannis**

Company Name	Case Number	Testimony/Issues
Evergy Missouri West	EO-2021-0416	October 2021 Staff Report- First MEEIA Cycle 3 Prudence Review
Evergy Missouri Metro	EO-2021-0417	October 2021 Staff Report- First MEEIA Cycle 3 Prudence Review
Evergy Missouri Metro	EO-2022-0064	February 2022 Staff Report- Fuel Adjustment Clause Prudence Review
Evergy Missouri West	EO-2022-0065	February 2022 Staff Report- Fuel Adjustment Clause Prudence Review
Ameren Missouri	EO-2022-0236	August 2022 Staff Report- Fuel Adjustment Clause Prudence Review
The Empire District Electric Company	EO-2023-0087	February 2023 Staff Report- Fuel Adjustment Clause Prudence Review
Evergy Missouri West	ER-2023-0210	Rebuttal Testimony- Fuel Adjustment Clause; Fuel Adjustment Rate Filing
Ameren Missouri	EO-2023-0180	April 2023 Staff Report- Second MEEIA Cycle 3 Prudence Review
Evergy Missouri Metro	EO-2023-0276	August 2023 Staff Report- Fuel Adjustment Clause Prudence Review Direct Testimony- November 2023 Rebuttal Testimony- December 2023 Surrebuttal Testimony- January 2024
Evergy Missouri West	EO-2023-0277	August 2023 Staff Report- Fuel Adjustment Clause Prudence Review Direct Testimony- November 2023 Rebuttal Testimony- December 2023 Surrebuttal Testimony- January 2024
Evergy Missouri Metro	EO-2023-0407	October 2023 Staff Report- Second MEEIA Cycle 3 Prudence Review Direct Testimony- February 2024
Evergy Missouri West	EO-2023-0408	October 2023 Staff Report- Second MEEIA Cycle 3 Prudence Review Direct Testimony- February 2024

**cont'd Case Participation
Brooke Mastrogiannis**

Company Name	Case Number	Testimony/Issues
Evergy Missouri West	ER-2023-0444	Direct Testimony- October 2023- Fuel Adjustment Clause; Fuel Adjustment Rate Filing Rebuttal Testimony- November 2023- Fuel Adjustment Clause; Fuel Adjustment Rate Filing
The Empire District Electric Company	EO-2024-0151	April 2024 Staff Report- First MEEIA Cycle 1 Prudence Review
Ameren Missouri	EO-2024-0053	February 2024 Staff Report- Fuel Adjustment Clause Prudence Review
Evergy Missouri West	ER-2024-0189	Rebuttal Testimony- August 2024- Fuel Adjustment Clause Surrebuttal Testimony- September 2024- Fuel Adjustment Clause
The Empire District Electric Company	EO-2024-0241	August 2024 Staff Report- Fuel Adjustment Clause Prudence Review
Evergy Missouri Metro	EO-2025-0073	February 2025 Staff Report- Fuel Adjustment Clause Prudence Review
Evergy Missouri West	EO-2025-0074	February 2025 Staff Report- Fuel Adjustment Clause Prudence Review
Ameren Missouri	EO-2025-0169	April 2025 Staff Report- Third MEEIA Cycle 3 Prudence Review

List of Sub-Accounts Included and Excluded for FAC

<u>GL</u>	<u>Descriptions</u>	<u>GL</u>	<u>Descriptions</u>	<u>GL</u>	<u>Descriptions</u>
501	<u>Included:</u>	506	<u>Included:</u>	555	<u>Included:</u>
501042	Fuel -Coal	506127	Limestone Expense -latan	555430	Direct Purchases
501045	Fuel -Oil	506128	Powdered Activated Carbon	555431	Purchase Power Tolling Fees
501054	Fuel -Natural Gas	506129	Ammonia Expense	555432	Energy Imbalance
501183	Sales Of Ash	506201	Limestone Expense	555437	Interrupt Svc Compensation
501211	Ineffect (Gain)Loss Deri Steam	506202	Ammonia Expense	555800	DA Asset Energy
501212	Effective (Gn)Lss Deriv Steam	506203	Powdered Activated Carbon	555810	DA Non-Asset Energy
501216	NonFAS133Deriv(Gain)/LossSteam	506204	Lime Expense	555820	DA Virtual Energy
501300	Fuel -Tires			555840	DA Reg-Up
501401	Ops Mtls-Fuel Handling	548	<u>Included:</u>	555850	DA Reg-Down
501607	Fuel Adm E Trader Commission	548202	Ammonia Expense	555860	DA Spinning
				555870	DA Supplemental
501	<u>Excluded:</u>	447	<u>Included:</u>	555880	DA Other PP Expense
501011	Conv & Seminar-Fuel	447113	Gen Ark Off-Sys Sale-Resale	555900	RT Asset Energy
501400	Ops Labor-Fuel Handling	447124	Gen Ks Off-System Sale-Resale	555910	RT Non-Asset Energy
501601	Fuel Administration -Asbury	447133	Gen Mo Off-Sys Sale-Resale	555920	RT Virtual Energy
501604	Fuel Administration -Riverton	447143	Gen Ok Off-Sys Sales-Resale	555940	RT Reg-Up
501605	Fuel Administration Plum Point	447810	SPP IM Revenue -AR	555950	RT Reg-Down
		447820	SPP IM Revenue -KS	555960	RT Spinning
547	<u>Included:</u>	447830	SPP IM Revenue -MO	555970	RT Supplemental
547205	Natural Gas SLCC Tolling	447840	SPP IM Revenue -OK	555980	RT Other PP Expense
547206	Nat Gas-Tolling SLCC Ineffectiv	447849	SPP IM Revenue- Wind	555990	TCR Activity
547207	Nat Gas-Tolling SLCC Effective	447850	SPP IM Revenue	555995	ARR Activity
547208	Comb Turb Fuel Sales -Nat Gas	447860	Bilateral/Off Line Aux Revenue	555999	Purchased Power - Net Metering [*]
547210	Combust Turb Fuel Natural Gas	447851	MJMEUC Revenue		
547211	Ineffect (Gain)Loss Deriv Gas	447861	MJMEUC FAC Revenue Excluding Long-Term Capacity	565	<u>Included:</u>
				565413	Trans Of Electricity By Others
547212	Effective (Gain)Loss Deriv Gas			565414	SPP Fixed Chg -Native Load Exclude S1-A
547213	Fuel -No 2 Oil Fuel	447	<u>Excluded:</u>	565416	Non SPP Fixed Chg -Native Load
547301	NonFAS133 Deriv (Gain)/Loss	447430	Aec -Off-Sys-Missouri	565417	PP Non SPP Var -Native Load
547302	Wind Hedge (Gain)/Loss [*] [@] [see account 456250 \$]	447540	Oklahoma G R D A Off-System	565418	Gen Non SPP Var -Native Load
547607	Fuel Adm E Traders Commission	447610	Energy Imbalance -Arkansas	565419	Off Sys Sales Trans Costs
		447620	Energy Imbalance -Kansas		
547	<u>Excluded:</u>	447861	MJMEUC FAC Revenue Long-Term Capacity Only	565	<u>Excluded:</u>
547605	Fuel Adm State Line	447630	Energy Imbalance -Missouri	565414	SPP Schedule 1-A only [@]
547606	Fuel Adm Energy Center	447640	Energy Imbalance -Oklahoma	565415	SPP Var Chg Schedule 12 [@]
547210	Natural Gas Fixed Transportation and Fixed Storage Only				
		457	<u>Excluded:</u>	575	<u>Excluded:</u>
411	<u>Included:</u>	457137	Ot EI RvOffSys LTFSTF PTP Trns [@]	575700	IM Market Facilitation, Monitor [*] [@]
411800	Gains-Disposition Emmiss Allow	457138	Ot EI RvOffSys NnFrm PTP Trns [@]		
		457141	Sch 11 NITS [@]	456	<u>Included:</u>
509	<u>Included:</u>	457142	Sch 11 PTP [@]	456071	Misc Elec Rev-Green Credits-AR
509052	Emission Allowance Exp	457160	Sch 1 PTP [@]	456072	Misc Elec Rev-Green Credits-KS
				456073	Misc Elec Rev-Green Credits-MO
		457	<u>Excluded:</u>	456074	Misc Elec Rev-Green Credits-OK
		457131	Oth EI Rev-Sched Sys Ctrl&Disp	456075	REC Revenue
		457139	Ot EI RvOffSys NITS Rev	456210	REC Revenue - Wind [*]
		457140	Oth EI Rev-Off-Sys Losses	456215	REC Revenue- Wind Post-Stub Period
				456230	PTC Revenue - Wind [@] [!]
				456250	Misc Revenue - Wind [*] [@] [\$]

Footnotes: [*] indicates new proposed account.

[#] indicates account previously excluded from FAC.

[@] indicates account Empire proposed to include and Staff proposes to keep excluded

[!] indicates account Empire proposed to include but states in DR 136 response that this account should be 409115 Prov-Fed Inc- PTC instead

[\$] indicates account Empire proposed to include but states in DR 136 response that they are going to exclude proposing this account, and will provide a new FAC subaccount listing in rebuttal testimony

Schedule BM-d3
Base Factor Calculation

	Staff Proposed Base Factor	EDE Proposed Base Factor	Staff-EDE Difference
<u>Description</u>	<u>Total Company</u>	<u>Total Company</u>	<u>Total Company</u>
<u>FUEL</u>			
Fuel	\$ 97,299,500	\$ 63,821,219	\$ 33,478,281
Removed from FERC 501, 547 (Admin/Labor)	\$ (355,020)	\$ (318,334)	\$ (36,686)
Gas Transportation - Variable	\$ 570,124	\$ 571,163	\$ (1,039)
Gas losses (LUF) at Cost of Gas	\$ 1,082,512	\$ 595,428	\$ 487,084
AQCS Consumables (Ammonia, Limestone, PAC) - Variable	\$ 711,316	\$ 975,251	\$ (263,935)
Freeze Control Coal Adder	\$ -	\$ 2,374,073	\$ (2,374,073)
Other Fuel Related (Undistributed & Other & Unit Train)	\$ 2,374,073	\$ -	\$ 2,374,073
TOTAL FUEL AND RELATED COSTS	\$ 101,682,506	\$ 68,018,800	\$ 33,663,706
<u>PURCHASED POWER ENERGY CHARGES</u>			
Purchased power energy (Plum Point PPA, Wind PPAs, and Market Purchases)	\$ 39,144,529	\$ 38,276,577	\$ 867,952
50 MW Plum Point O&M Cost- Variable	\$ 2,596,784	\$ 472,784	\$ 2,124,000
TOTAL PURCHASED POWER ENERGY	\$ 41,741,313	\$ 38,749,361	\$ 2,991,952
<u>SPP INTEGRATED MARKETPLACE</u>			
Native Load Cost	\$ 173,227,689	\$ 170,397,718	\$ 2,829,971
<u>OTHER ENERGY COSTS</u>			
Net Emission Allowances	\$ -	\$ -	\$ -
Transmission	\$ 6,818,953	\$ 21,005,101	\$ (14,186,148)
Net ARR/TCR	\$ (40,317,269)	\$ (23,533,318)	\$ (16,783,951)
Ancillary/Other	\$ 4,772,661	\$ 2,768,302	\$ 2,004,359
LESS: Net Renewable Energy Credits (REC)	\$ 7,557,793	\$ (3,759,926)	\$ 11,317,719
LESS: Off-System Sales Revenue	\$ (200,925,856)	\$ (188,146,276)	\$ (12,779,580)
Net Metering Credits	\$ 106,306	\$ 425,223	\$ (318,917)
TOTAL FUEL AND PURCHASED POWER FOR EMPIRE FAC BASE	\$ 94,664,096	\$ 85,924,985	\$ 8,739,111
total kWh's	\$ 5,181,826,380	\$ 5,178,270,813	\$ 3,555,567
Base Cost per kWh	\$ 0.01827	\$ 0.01659	\$ 0.00168
Base Cost per MWh	\$ 18.27	\$ 16.59	\$ 1.68