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Block Usage*
Witness: *Kim Cox*
Sponsoring Party: *MoPSC Staff*
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Case No.: *ER-2021-0312*
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MISSOURI PUBLIC SERVICE COMMISSION

INDUSTRY ANALYSIS DIVISION

TARIFF/RATE DESIGN DEPARTMENT

REBUTTAL TESTIMONY

OF

KIM COX

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

CASE NO. ER-2021-0312

*Jefferson City, Missouri
December 2021*

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1 **REBUTTAL TESTIMONY**

2 **OF**

3 **KIM COX**

4 **THE EMPIRE ELECTRIC COMPANY,**
5 **d/b/a Liberty**

6 **CASE NO. ER-2021-0312**

7 Q. Please state your name and business address.

8 A. Kim Cox, 200 Madison Street, Jefferson City, Missouri 65101.

9 Q. By whom are you employed and in what capacity?

10 A. I am employed by the Missouri Public Service Commission (“Commission”) as
11 a Research/Data Analyst in the Tariff and Rate Design Department of the Industry Analysis
12 Division of the Commission Staff.

13 Q. Have you previously filed testimony in this case?

14 A. Yes. I provided testimony in the Staff’s Cost of Service Report filed on
15 October 29, 2021 in this case.

16 Q. What is the purpose of your rebuttal testimony?

17 A. The purpose of my rebuttal testimony is to respond to The Empire Electric
18 Company (“Empire”) workpapers of Mr. Tillman and Mr. Lyons regarding Empire’s manual
19 adjustment to billed kilowatt-hours (“kWh”), the method of applying the manual adjustment to
20 determine the weather normalization adjustment and how it was applied to rate blocks for
21 residential service (“RG”), commercial service (“CB”), small heating service (“SH”) and
22 general power service (“GP”) rate classes , and the appropriate level of customer growth.

RESPONSE TO EMPIRE REGARDING MANUAL ADJUSTMENT

Q. What is the current rate design on Empire's RG tariff?

A. RG customers are billed a customer charge that is the same amount year round, plus a flat per kWh rate for usage for the summer months, which consists of the four monthly billing periods beginning June 16, and a declining block rate for usage over 600 kWh for the remaining eight winter months of the year.

Q. What is the current rate design on Empire's CB and SH tariff?

A. Empire's CB and SH service classes have the same rate design as the RG rate class with one exception, the declining block rate for the winter month's usage is over 700 kWh instead of 600 kWh.

Q. What is the current rate design on Empire's GP tariff?

A. GP customers are billed a customer charge that is the same amount year round, a monthly demand charge, a facility charge, and an energy charge. The energy charge is a declining block rate that is billed at the first 150 hours of metered demand, the next 200 hours of metered demand, and all additional kWh.

Q. What is the manual adjustment to the test year billing determinants that Empire performed?

A. Staff understands that the Company's purpose of performing a manual adjustment to monthly-billed usage was to align the billing determinant report with a final revenue report run at a later date than the billing determinant report. In Mr. Lyon's workpapers,¹ he made an adjustment to the second block usage for RG, CB, and SH services rate classes and a third block usage adjustment for the GP service rate class. Essentially, Mr. Lyons is placing

¹ Lyons, WP (Input Revenues) - Billing Determinants, Manual Adjustments and sheet kWh Usage.

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the full amount of the manual adjustment in the last rate block for each class. Provided below shows the kWh usage adjustment and the revenue adjustment.

	kWh Billed Usage - Manual Adjustments						
	WINTER			SUMMER			
Customer	Winter	Winter	Winter	Summer	Summer	Summer	
Class	kWh-1st Block	kWh-2nd Block	kWh-3rd Block	kWh-1st Block	kWh-2nd Block	kWh-3rd Block	
RG-Residential		1,439,772			(17,316,689)		
CB-Commercial		(8,786,732)			(65,646,238)		
SH-Small Heating		99,050			-		
GP-General Power			-			(24,857,440)	
	Rates						
Customer	Winter	Winter	Winter	Summer	Summer	Summer	
Class	kWh-1st Block	kWh-2nd Block	kWh-3rd Block	kWh-1st Block	kWh-2nd Block	kWh-3rd Block	Revenue
RG-Residential	\$ 0.12535	\$ 1.00930		\$ 0.12535	\$ 0.12535		\$ (717,485)
CB-Commercial	\$ 0.12712	\$ 0.11377		\$ 0.12712	\$ 0.12712		\$ (9,344,616)
SH-Small Heating	\$ 0.12441	\$ 0.09172		\$ 0.12441	\$ 0.12441		\$ 9,085
GP-General Power	\$ 0.07464	\$ 0.06078	\$ 0.06027	\$ 0.08694	\$ 0.06745	\$ 0.06056	\$ (1,505,367)

Q. Does Staff agree with how Empire applied the manual adjustment to test year sales?

A. No. Empire assumed all usage was only in the second block, which results in lower revenue impact for the RG, CB, and SH rate classes. Empire applied the manual adjustment only to the third block for the GP rate class, which is the lowest rate of all four rate blocks.

Q. Did Staff incorporate the Company's manual kWh adjustment?

A. Staff did incorporate the Company's manual kWh adjustment; however, Staff did not apply the adjustment only to the second rate block usage for RG, CB, and SH or only the third block usage for GP. Staff used the actual billing determinants provided by the Company to determine the actual percent of usage in each season and block. Staff applied each block percent to the total kWh in each month to determine the adjusted actual billing determinants. In essence, Staff's adjustment spreads the manual adjustment over all kWh billing determinants and not just determinants in the last rate block for each class.

1 **RESPONSE TO EMPIRE REGARDING WEATHER NORMALIZED ADJUSTMENT**
2 **AND BLOCK USAGE**

3 Q. How did Empire apply the manual adjustment when calculating the weather
4 normalization adjustment?

5 A. Empire excluded the manual adjustment when calculating the Company's
6 weather normalization adjustment. Empire used kWh sales per month without the manual
7 adjustment included to calculate its weather normalization adjustment. Empire calculated
8 kWh per customer by actual sales (without the manual adjustment) divided by the number of
9 customers. The weather factor² was multiplied by the actual kWh sales (without the manual
10 adjustment) to determine the weather normalized kWh per customer. The weather normalized
11 kWh per customer was multiplied by the customer counts in each month of the test year to
12 determine the weather normalization sales.

13 Q. Would the monthly weather normalized sales be different had Empire included
14 the manual adjustment?

15 A. Yes. The average actual use per customer and the weather normalized use per
16 customer would be different if the Company included the manual adjustment in its weather
17 normalization calculation. Thus, the overall weather normalized adjustment would differ.

18 Q. How did Empire apply the weather normalized adjustment to the rate blocks?

19 A. Empire again used the actual kWh sales per month and subtracted the weather
20 normalized sales to determine the weather normalization adjustment.³ However, Empire did
21 add the manual adjustment to kWh sales to determine the first and second percent block usage
22 in each month. Empire divided the actual first block sales by the total sales (including the

² Direct workpaper, Fox, Schedule_EF2.

³ Direct workpaper, Tillman, REV ADJ4-Weather Normalization and Covid, sheet RG.

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1 manual adjustment) to determine the percent of usage in the block. For the second block,
2 Empire added the manual adjustment to the second block usage and divided it by the total sales
3 (including the manual adjustment) to determine the percent of usage in second block.

4 Q. Does Staff have concerns with Empire’s method of determining the kWh sales
5 by rate block?

6 A. Yes. By only applying the manual adjustment to the usage in the second rate
7 block, it skews the amount of usage in each block and therefore, the weather normalization
8 adjustment is not accurately applied to each rate block.

9 Q. Does Staff have any additional concerns with the weather normalization
10 adjustment to blocks?

11 A. Yes. As explained earlier, Empire customers are billed a flat per kWh rate for
12 usage for the four summer monthly billing periods beginning June 16, and a declining block
13 rate for usage over 600 kWh for the remaining eight winter months of the year. Each month
14 Empire has first and second block usage that is billed at the summer and winter rates. Below is
15 Empire’s test year billing determinants with Staff’s manual adjustments applied.

16

	2019	2019	2019	2020	2020	2020	2020	2020	2020	2020	2020	2020
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept
Summer kWh												
1st 600	34,292,402	(67,424)	(53,025)	(11,981)	616	1,092	5,197	376	34,323,114	70,979,598	70,892,621	62,347,415
Over 600	31,738,899	(931,709)	(174,270)	(39,301)	5,222	4,944	1,613	(178)	31,750,677	95,492,944	100,287,846	84,648,540
Winter kWh												
1st 600	33,456,358	62,795,602	68,649,978	64,984,211	71,985,986	67,423,945	63,318,875	62,519,104	31,766,230	(12,280)	1,349	(939)
Over 600	23,784,875	60,347,167	87,623,579	103,184,024	94,690,481	75,661,463	45,614,999	35,881,601	18,501,277	(216,307)	(21,154)	(25,370)

17

18 Empire lumped the weather adjustment and only applied it to a summer or a winter month.
19 The adjustment was not applied to all determinants. As an example, for the month of October,
20 which is a winter month as defined by the tariff, Empire applied the adjustment only to the
21 winter defined kWh, even though a substantial amount of usage is defined as summer.

1 Q. How did Staff apply the weather normalization adjustment?

2 A. Staff applied the weather normalization adjustment to all rate usage components
3 and seasons.

4 **GROWTH ADJUSTMENT**

5 Q. Did Staff make a growth adjustment for the RG, CB, SH, GP and TEB (“Total
6 Electric Building”) tariff rate classes?

7 A. Yes. As stated in Staff’s direct filed Cost of Service (“COS”) report,⁴ Staff
8 adjusted the level of kWh sales, kW demand,⁵ and revenues through the update period of
9 May 2021.

10 Q. Did Empire make the same adjustment?

11 A. Empire’s growth adjustment went through September 2020. At this time, Staff
12 assumes Empire will update its growth adjustment through May 2021 to match Staff’s time
13 period. However, if Empire does not update its growth adjustment, Staff recommends the
14 Commission rely on Staff’s growth adjustment.

15 **CONCLUSION**

16 Q. What is Staff’s conclusion of these issues?

17 A. Staff recommends that the Commission accept Staff’s manual adjustment and
18 weather normalization adjustment to kWh and revenues. Staff applied the manual adjustment
19 to all usage rate components rather than to the second block only. Staff applied the adjusted
20 kWh (including manual adjustments) when calculating the weather normalization adjustment
21 and applied it to both seasons and all rate blocks for each rate class.

⁴ Staff Cost of Service Report, page 50.

⁵ Class kW demand was only adjusted for the GP and TEB classes that have demand charges.

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1 Staff recommends that the Commission accept Staff's growth adjustment that reflects
2 the impact in change of customer levels through the update period of May 2021.

3 Q. Does this conclude your rebuttal testimony?

4 A. Yes.

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)
Authority to File Tariffs Increasing Rates for)
Electric Service Provided to Customers in its)
Missouri Service Area)

Case No. ER-2021-0312

AFFIDAVIT OF KIM COX

STATE OF MISSOURI)
)
COUNTY OF COLE) ss.

COMES NOW KIM COX, and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *Rebuttal Testimony of Kim Cox*; and that the same is true and correct according to her best knowledge and belief.

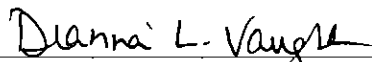
Further the Affiant sayeth not.


_____)
KIM COX

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 20th day of December, 2021.

DIANNA L. VAUGHT
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: July 18, 2023
Commission Number: 15207377


_____)
Notary Public