Exhibit No.:	
Issue:	Class Cost of Study, Revenue Allocation, Rate Design,
Witness:	Kavita Maini
Type of Exhibit:	Surrebuttal Testimony
Sponsoring Parties:	MECG
Case No.:	ER-2016-0023
Date Testimony Prepared:	May 16, 2016

BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI

In the Matter of The Empire District Electric Company of Joplin, Missouri for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers in the Missouri Service Area of the Company	**))))))))**	**File No. ER-2016-0023** Tariff No. YE-2016-0104

Surrebuttal Testimony and Schedules of

Kavita Maini

On behalf of

MIDWEST ENERGY CONSUMERS GROUP

May 16, 2016

Protecting Your Bottom Line

KM ENERGY CONSULTING, LLC

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of The Empire District Electric Company for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers In the Company's Missouri Service Area	))))	Case No. ER-2016-0023

STATE OF WISCONSIN	)	
	)	SS
COUNTY OF WAUKESHA	)	

AFFIDAVIT OF KAVITA MAINI

Kavita Maini, being first duly sworn, on her oath states:

1. My name is Kavita Maini. I am a consultant with KM Energy Consulting, LLC. having its principal place of business at 961 North Lost Woods Road, Oconomowoc, WI 53066. I have been retained by the Midwest Energy Consumers' Group ("MECG") in this proceeding on their behalf.

2. Attached hereto and made a part hereof for all purposes are my surrebuttal testimony and schedules which were prepared in written form for introduction into evidence in Missouri Public Service Commission Case No. ER-2016-0023

3. I hereby swear and affirm that the testimony and schedules are true and correct and that they show the matters and things that they purport to show.

____
Kavita Maini

Subscribed and sworn to before me this ___ day of April 2016

____
Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI

In the Matter of The Empire District Electric Company of Joplin, Missouri for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers in the Missouri Service Area of the Company	)	**File No. ER-2016-0023** Tariff No. YE-2016-0104

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COMMISSION OF THE STATE OF MISSOURI**

In the Matter of The Empire District Electric Company of Joplin, Missouri for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers in the Missouri Service Area of The Company	))))))))	**File No. ER-2016-0023** Tariff No. YE-2016-0104

Surrebuttal Testimony of Kavita Maini

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND OCCUPATION.

A. My name is Kavita Maini. I am the principal and sole owner of KM Energy Consulting, LLC.

Q. PLEASE STATE YOUR BUSINESS ADDRESS.

A. My office is located at 961 North Lost Woods Road, Oconomowoc, WI 53066.

Q. ARE YOU THE SAME KAVITA MAINI WHO HAS PREVIOUSLY FILED DIRECT AND REBUTTAL TESTIMONY IN THIS CASE?

A. Yes, I filed direct and rebuttal testimony on behalf of the Midwest Energy Consumers Group ("MECG"). In those pieces of testimony I addressed class cost of service, revenue allocation, rate design and the recovery of the SC-P interruptible credits.

Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?

A. The purpose of my surrebuttal testimony is to:

a) Update the EEI average industrial rate comparison and address OPC witness Dr. Marke's rebuttal testimony regarding industrial rates;

b) Address Staff's rebuttal testimony as it relates to class cost of service and provide recommendations;

c) Address Staff and OPC's rebuttal testimony pertaining to revenue neutral adjustments and provide recommendations; and

d) Address Staff and OPC's rebuttal testimony provided in response to MECG's recommendations regarding the LP rate design.

II. EEI AVERAGE RATE COMPARISONS

Q. WHAT PRIMARY CONCERNS DID OPC WITNESS MARKE HAVE REGARDING YOUR EEI AVERAGE RATE COMPARISONS IN HIS REBUTTAL TESTIMONY?

A. Dr. Marke claims that I provided misleading information from the "average rate" comparisons published by the EEI report.[1] Relying on another section entitled "typical electric bills", Dr. Marke concludes that:

> [A]lmost all of the "typical" Empire ratepayers have rates below the national average. It should be noted this table suggests Empire's high load industrial ratepayers are very competitive with rates **16.5% lower** than what is seen nationally.[2]

[1] See, Marke Rebuttal, pages 35-37.
[2] *Id.* at page 36 (emphasis in original).

Based upon this faulty conclusion, Dr. Marke "caution[s] the Commission from drawing any strong conclusions from the EEI report."[3]

Q. DO YOU AGREE WITH HIS ASSESSMENT?

A. No. Dr. Marke's assessment is misguided and unfounded for the following reasons:

1. First, to the best of my knowledge, the EEI report is the preeminent survey used to compare rates of utilities within a state as well as against regional and national averages. The EEI report is frequently referenced by other utilities in comparing their average rates to state, regional and national averages. In addition, this Commission relied upon the EEI report in its Report and Order in Case No. ER-2014-0258.
2. Second, the KW and KWh blocks utilized by Dr. Marke are not representative of a "typical" Empire industrial customer. For instance, Dr. Marke references customers with 50,000 kW of demand. Recognizing that Empire does not have any customers with 50,000 kW of demand, such a comparison is truly hypothetical. Dr. Marke's use of this particular KW demand block to claim that Empire's rates are 16.5% below the national average is misleading and inappropriate.
3. Third, as explained by MECG witness Chriss in more detail, using the "typical electric bills" section for comparing to national averages results in erroneous conclusions. Unlike the EEI average rates information that I relied on, EEI's typical electric bills data is not weighted by energy sales. Given this, the data is not comparable to the national average.[4] Rather, the typical bill calculation consists of an

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[3] *Id.* at page 37.
[4] See MECG Witness Steve Chris surrebuttal testimony at pages 5-6.

unweighted arithmetic average of the typical bill calculated for every utility in the report. The average annual rate information I utilized is weighted by kWh sales and therefore, comparable across regions and on a national basis.

4. Fourth, EEI's average annual rate information that I provided, and Dr. Marke criticized, is corroborated by real life experience as noted by the surrebuttal testimony of MECG witnesses Richard Nelson (Praxair) and Steve Chriss (Walmart). Both Praxair and Walmart have multiple facilities across the country and find that the EEI data that I presented provides an accurate depiction of the relative competitiveness of Empire's industrial rate as compared to state, regional and national averages.

Thus, EEI's average annual rate information is reliable and valid and the Commission's continued reliance on the rate comparisons is appropriate.

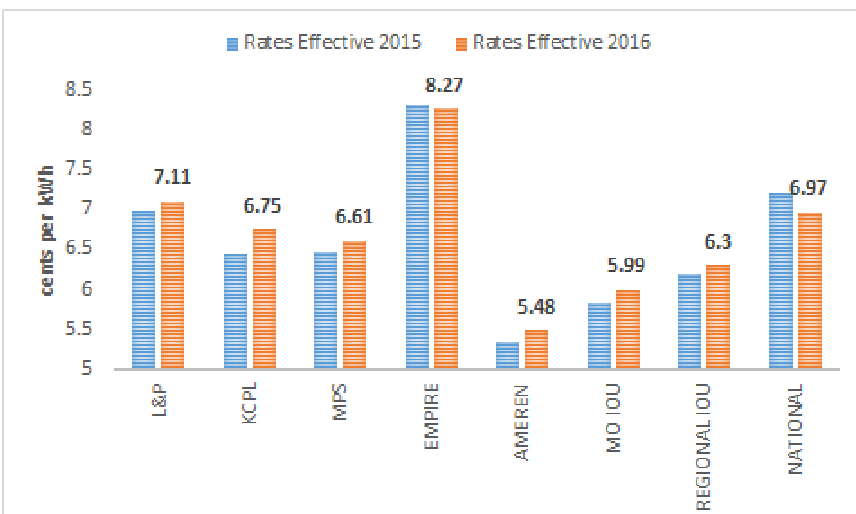
Q. DO YOU HAVE ANY ADDITIONAL COMMENTS ABOUT DR. MARKE'S OBSERVATIONS AND CONCLUSIONS REGARDING THIS MATTER?

A. Yes, as mentioned, Dr. Marke utilizes his conclusions about typical monthly bill comparisons as rationale to oppose revenue neutral shifts on an inter-class basis. Furthermore, he also used this misleading information to oppose my recommended reduction in the LP tailblock charge. I will address this issue later in my testimony under the LP Rate Design section.

Q. IN YOUR DIRECT TESTIMONY, YOU INDICATED THAT YOU WOULD PROVIDE UPDATED AVERAGE RATE INFORMATION ONCE THAT DATA IS AVAILABLE FROM EEI. PLEASE PROVIDE THE UPDATE.

A. From an average industrial rate standpoint, the gap between Empire's average industrial rate and the national average industrial rate has widened since the last update – from approximately 16% to 18.7%.[5] While Empire's average industrial rate decreased by 0.6%, the national average industrial rates declined much faster (-2.2%). Thus, Empire's industrial rate lost ground when compared against the national average industrial rate. Figure 1 shows a side by side comparison of Empire's average industrial rate for January 1, 2015 and January 1, 2016 as well as a comparison with: (1) Missouri's investor-owned utilities; (2) regional utilities and (3) the national average for the same years. As can be seen, a significant gap remains between Empire's industrial rates and the state, regional and national average industrial rates. Compared to the Missouri and regional average industrial rate, Empire's average industrial rate is 38% and 31% higher respectively.

Figure 1: Average Industrial Rate Comparison: 2015 vs. 2016

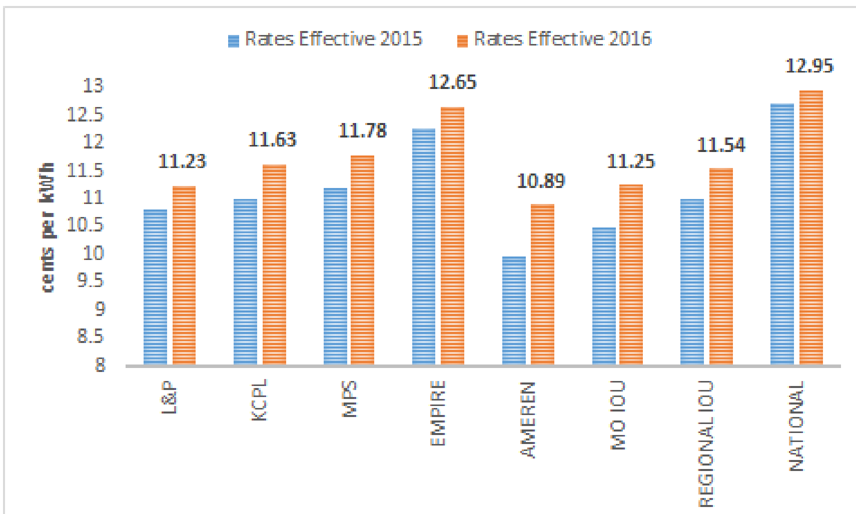


[5] EEI Typical Bills and Average Rates Report Winter 2016, reflecting rates in effect as of January 1, 2016.

Q. HOW DOES EMPIRE'S AVERAGE RESIDENTIAL RATE COMPARE TO THE NATIONAL AVERAGE RESIDENTIAL RATE?

A. While Empire's industrial rate is significantly above the national average, Empire's residential rate remains below the national average. From an average residential rate standpoint, Empire's average rate is 2.3% lower than the national average. This compares to a 3.5% difference in my previous update.

Figure 2: Average Residential Rate Comparison: 2015 vs. 2016



Thus, from an overall average annual rate perspective:

- Empire's industrial rate competitiveness, as compared to the national average, has worsened since the last case. Specifically, in the last case, Empire's industrial rate was 16.7% above the national average. Despite the Commission's modest steps in the last case, Empire's industrial average is now 18.7% above the national average. Meanwhile, Empire average residential rate continues to be below the national average.

Q. IS IT CONCERNING THAT EMPIRE'S AVERAGE INDUSTRIAL RATE COMPETITIVENESS HAS WORSENED?

A. Yes, it is. As discussed in MECG witness Nelson's testimony, high industrial rates for energy intensive customers impact important business decisions regarding whether to constrict / expand production or relocate elsewhere. Such decisions not only affect the industrial plant but also have a snowball effect on the local economy and employment which will ultimately and adversely impact residential customers:

- Shuttering of facilities or lower production in industrial facilities leads to fewer tax revenues, higher unemployment and lower electrical usage; and
- Empire's overall rates get higher because the Company's fixed costs are spread over lower overall customer usage.

Q. WHAT RECOMMENDATIONS DO YOU HAVE FOR THE COMMISSION TO CONSIDER IN THIS REGARD?

A. I urge the Commission to continue the effort initiated in Empire's last rate case to eliminate the residential subsidy and align class revenue requirements with cost of service. Further, in order to guide this alignment, the Commission should rely on cost of service studies that are based upon production allocators that are conventionally recognized and accepted in the industry such as the Average and Excess ("A&E") Demand allocator that I have applied and that is used by other Missouri utilities such as Ameren and Empire.

III. CLASS COST OF STUDY ("CCOSS") ISSUES

Q. DID STAFF PROVIDE ADDITIONAL CCOSS RESULTS IN ITS REBUTTAL TESTIMONY?

A. Yes, Staff provided the following:

1. Updated Detailed BIP CCOSS results corrected for errors, modification of certain calculations and using Staff's revised revenue requirement; and
2. Results of Staff's Average and Excess Demand CCOSS method using four Non-Coincident Peaks as an alternative.

Q. WHY DID STAFF UPDATE ITS CLASS COST OF SERVICE RESULTS?

A. Staff updated the detailed BIP CCOSS results to account for an increase in its recommended revenue requirement from $20.9 million to $22.8 million. Furthermore, Staff corrected some errors it found in its detailed BIP approach.[6]

Q. PLEASE COMMENT ON STAFF'S DEVELOPMENT OF THE A&E (4NCP) ALLOCATOR.

A. Staff's A&E methodology is flawed. Specifically, Staff's method of calculating the A&E allocator does not give consideration to the importance of the peak months. When choosing the class non-coincident peaks, used for calculating the excess portion of the A&E allocator, Staff picked the four highest non-coincident demands for each class instead of the non-coincident class demand during the months of the system peaks. From a cost causation standpoint, the method should consist of choosing the class non-coincident peaks in only the system peak months because it is the load in these months

[6] See, Sarah Kliethermes Rebuttal Testimony.

that are the primary driver that causes the utility to expand its generation. In Empire's case, the peak months for the test year were January, June, July and August. It is the class non-coincident peaks in these months that should be used to calculate the excess demand portion.[7] Table 3 below shows the differences between Staff's faulty A&E allocators and MECG's A&E allocators. As can be seen, there are some differences between the two allocators. Specifically, Staff's faulty approach results in allocating less production fixed costs to the low load factor classes (i.e., residential (RES) and commercial (CB)) and more of these costs to the high load factor classes (i.e., general power (GP) and large power (LP)).

Table 3: Comparison of A&E Allocators: Staff v. MECG

AED4NCP	RES	CB	SH	TEB	GP	LP	Praxair	PFM	Lighting	TOTAL
STAFF	50.190%	8.338%	2.586%	9.176%	16.919%	10.826%	0.825%	0.028%	1.111%	100.000%
MECG	51.091%	8.620%	2.350%	8.838%	16.671%	10.475%	0.825%	0.026%	1.102%	100.000%

Q. ARE THERE ANY OTHER DIFFERENCES BETWEEN STAFF AND YOUR APPROACH USING THE A&E ALLOCATOR?

A. Yes, as explained in my rebuttal testimony, Staff classified purchased power costs noted as "demand only" as energy-related. As the label clearly indicates, these purchased power costs are associated with the need for demand. Since the purchased power is for demand, it should be classified as demand-related and be based on the A&E allocator and not an energy allocator. My CCOSS results reflect this change.

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[7] See my rebuttal testimony pages 20-22 for more detail. For derivation of Staff's AED4NCP allocator, see Staff_CCOS_Allocators_Empire_NCP_DR workpaper.

Q. DO YOU HAVE UPDATED CCOSS RESULTS?

A. Yes, I do. Schedule KM-1S shows the updated results. As mentioned, Staff's recommended rate increase moved from $20.9 million (4.5%) to $22.8 million (5.03%). I used Staff's CCOSS model with the revised revenue requirement and my A&E allocator.[8]

Q. PLEASE COMPARE THE RESULTS OF STAFF'S A&E CCOSS AND MECG'S A&E CCOSS.

A. Tables 4 and 5 show the A&E CCOSS results for Staff and MECG respectively. As can be observed from this table, while the results are the same directionally, there are differences in the magnitude due to the differences in the approaches as discussed above. For example, assuming Staff's revised revenue requirement of $22.8 million (5.02% increase), Staff's A&E CCOSS results show a 1.54% increase for the LP class and 0.51% decrease for Praxair (SC-P). This compares to MECG's CCOSS results which indicate a 0.39% increase for the LP class and a 1.2% decrease to the Praxair class respectively.

[8] I also corrected a small error in that I had inadvertently used Staff's "BIP Fuels in Storage" Allocator instead of the A&E allocator for fuels in inventory in my rebuttal testimony.

Table 4: Staff's A&E CCOSS Results

	STAFF AED4NCP				
CLASS	Class Deficiency at Staff's Recommended Increase	CCOSS % Inc.	Relative Rate of Return at Current Revenues	% Revenue Neutral Change	$ Revenue Neutral Change
Residential	$25,111,659	12.03%	0.68	7.0%	$14,624,180
CB	-$491,210	-1.14%	1.37	-6.2%	-$2,656,296
SH	$1,163,567	11.18%	0.71	6.2%	$640,406
TEB	$2,353,715	6.30%	0.94	1.3%	$476,306
GP	-$5,070,773	-5.67%	1.71	-10.7%	-$9,562,371
LPS	$824,909	1.54%	1.19	-3.5%	-$1,869,239
SC-Praxair	-$6,607	-0.15%	1.31	-5.2%	-$223,749
PFM	-$8,563	-7.48%	1.75	-12.5%	-$14,316
Lighting	-$1,027,975	-13.35%	2.13	-18.4%	-$1,414,938

Table 5: MECG's A&E CCOSS Results

	MECG AED4NCP				
CLASS	Class Deficiency at Staff's Recommended Increase	CCOSS % Inc.	Relative Rate of Return at Current Revenues	% Revenue Neutral Change	$ Revenue Neutral Change
Residential	$26,469,229	12.69%	0.65	7.7%	$15,981,750
CB	-$202,783	-0.47%	1.32	-5.5%	-$2,367,869
SH	$975,644	9.37%	0.78	4.3%	$452,482
TEB	$2,059,203	5.51%	0.98	0.5%	$181,794
GP	-$5,581,057	-6.25%	1.76	-11.3%	-$10,072,655
LPS	$207,385	0.39%	1.27	-4.6%	-$2,486,762
SC-Praxair	-$51,919	-1.20%	1.39	-6.2%	-$269,062
PFM	-$9,239	-8.07%	1.81	-13.1%	-$14,992
Lighting	-$1,017,734	-13.22%	2.12	-18.2%	-$1,404,697

Q. IN THE LAST RATE CASE (ER-2014-0351), STAFF ALSO PROVIDED THE CCOSS RESULTS ASSOCIATED WITH ITS BIP NON-DETAILED

PRODUCTION ALLOCATOR. DID STAFF PROVIDE CCOSS RESULTS USING THIS ALLOCATOR IN THIS CASE?

A. No. Interestingly, Staff did not provide these results in its testimony. Staff's non-detailed BIP allocator uses a similar methodology as an A&E method except that it further divides the excess portion into peak and intermediate. The average and excess portions are weighted by load factor as is also the case with the conventional average and excess method. Using Staff's CCOSS model, I replaced Staff's detailed BIP allocator with non-detailed BIP allocator that was provided in Staff's workpapers to calculate the results. I did not make any other changes. A summary of these results are provided in Schedule KM-2S. The results using Staff's non-detailed BIP allocator are more consistent with MECG's A&E than Staff's Detailed BIP results. For example, similar to my A&E results, the non-detailed BIP CCOSS results indicate that SC-P (Praxair) rates are above cost of service even after Staff's proposed rate increase. Furthermore, the LP class is above cost of service at present rates.

Q. STAFF RECOMMENDS THAT THE COMMISSION RELY ON ITS DETAILED BIP CCOSS RESULTS TO ALLOCATE THE COMPANY'S RATE INCREASE TO CLASSES INSTEAD OF THE AVERAGE AND EXCESS DEMAND METHOD RESULTS. DO YOU AGREE?

A. No, I do not. As explained extensively in my rebuttal testimony, Staff's detailed BIP allocator has many flaws and should not be utilized. I continue to recommend that the Commission rely on MECG's A&E approach for revenue allocation purposes. Unlike

Staff's faulty detailed BIP approach, the A&E allocator is widely accepted and has also been utilized by Empire as well as other Missouri utilities such as Ameren.

IV. REVENUE REQUIREMENT ALLOCATION

Q. SHOULD CLASS REVENUE REQUIREMENTS BE PERFECTLY ALIGNED WITH YOUR CCOSS RESULTS IN THIS CASE?

A. The declining competitiveness of Empire's industrial rates suggests that the revenue requirements should be perfectly aligned with my CCOSS results. I recognize, however, that this would mean an increase of 12.69% for the residential class.[9] Therefore, similar to the last case, I am proposing a revenue allocation that recognizes principles of gradualism and moves all classes closer to cost of service. I would note that my proposed revenue allocation has modified somewhat from what I included in rebuttal testimony due to the change in Staff's revenue requirement and my updated CCOSS results.

Q. PLEASE DESCRIBE YOUR PROPOSED REVENUE NEUTRAL ADJUSTMENTS APPROACH.

A. Table 6 shows the recommended revenue neutral adjustments. My proposed revenue allocation approach is the same as what I included in my rebuttal testimony. This means that I continue to recommend an approximately 25% positive revenue neutral adjustment for the residential class, a 25% negative revenue neutral adjustment for the CB and LP

[9] See Table 6. This assumes Staff's overall 5.03% rate increase.

classes and a 29% negative revenue neutral adjustment for the GP class.[10] In addition, after a careful review of the updated results, I am also recommending a 25% positive revenue neutral adjustment for the SH class which will result in an above average increase for this class. I am making this additional recommendation because, as shown in Table 6, this class' RROR at current rates is significantly less than 1 (0.78) and shows a positive revenue neutral adjustment of over 4%.

Table 6: MECG's Revenue Neutral Adjustments

		STAFF RECOMMENDED INCRE		MECG A&E RESULTS		MECG RECOMMENDATION		MECG REBUTTAL
	Current Revenues	Class Deficiency	CCOSS % Inc.	Revenue Neutral Adj	Rev. Neutral %	Revenue Neutral Adj	Revenue Neutral % of Current Revenues	
Residential	$208,664,410	$26,469,229	12.69%	$15,981,750	7.7%	$4,000,000	1.92%	$4,000,000
CB	$43,077,693	-$202,783	-0.47%	-$2,367,869	-5.5%	($600,000)	-1.39%	-$600,000
SH	$10,409,097	$975,644	9.37%	$452,482	4.3%	$113,000	1.09%	
TEB	$37,353,930	$2,059,203	5.51%	$181,794	0.5%		0.00%	
GP	$89,367,201	-$5,581,057	-6.25%	-$10,072,655	-11.3%	($2,913,000)	-3.26%	-$2,825,000
LPS	$53,604,183	$207,385	0.39%	-$2,486,762	-4.6%	($600,000)	-1.12%	-$575,000
SC-Praxair	$4,320,391	-$51,919	-1.20%	-$269,062	-6.2%		0.00%	
PFM	$114,453	-$9,239	-8.07%	-$14,992	-13.1%		0.00%	
Lighting	$7,699,218	-$1,017,734	-13.22%	-$1,404,697	-18.2%		0.00%	
	$454,610,576	$22,848,729	5.03%					

Q. DO THE UPDATED RESULTS CHANGE YOUR RECOMMENDATIONS REGARDING WHICH CLASSES SHOULD NOT GET AN INCREASE?

A. No. Consistent with my reasoning in rebuttal testimony and the updated CCOSS results, I continue to recommend that Schedule SC-P ("Praxair"), PFM and Lighting classes get no rate increase. Specifically for Praxair, the updated CCOSS results indicate that this class' revenues are 1.2% over cost after Staff's recommended overall rate increase.

[10] As indicated in the following question and answer, because they are significantly above cost of service, there are also classes that should not receive any rate increase in this case.

Q. HOW SHOULD THE FINAL RATE INCREASE BE ALLOCATED TO CLASSES?

A. As indicated in my rebuttal testimony, after making the revenue neutral adjustments, the final rate increase should be allocated to all classes (except PFM, Lighting and Praxair) on an equal percentage basis in proportion to their revenues after adjusting revenue deficiency for MEEIA related impacts.

Q. WHY DO YOU BELIEVE THAT YOUR PROPOSED APPROACH RESULTS IN A FAIR REVENUE ALLOCATION?

A. I consider my proposed approach a fair revenue allocation because of the following:

- Prior to any rate increase, it is important to ascertain the relative degree of over or under recovery from each class, which should guide the revenue neutral adjustments needed to bring each class to costs to serve at present rates. In my CCOSS results, the residential and SH classes have rates that are below cost of service at present rates. Therefore, it is reasonable to make positive revenue neutral adjustments.
- On the other hand, the CB, LP and GP classes have rates that are above cost of service at present rates. Therefore, I recommend a negative revenue neutral adjustment for these classes.
- Further, I recommend no increase for PFM, Lighting and Praxair classes because these classes are paying rates that are above cost of service even with Staff's recommended increase.

Q. WHAT IS OPC WITNESS MARKE'S POSITION REGARDING REVENUE NEUTRAL ADJUSTMENTS?

A. Dr. Marke is opposed to any revenue neutral adjustments. His rationale for opposing these adjustments is based on conclusions drawn from misapplication of the EEI data which I addressed earlier in my testimony. He also states that "Staff aptly points out all customer classes are producing a positive rate of return on current rates. Empire is in no danger of under recovery from any given class."

It is important to recognize that, even though a class is producing a positive rate of return, it does not mean that a class is actually covering its cost of service. Rate of return is also an actual cost to the customer classes. As such, a class that is not covering its entire share of the rate of return is not covering its cost of service.

Dr. Marke also appears to argue against any revenue allocation adjustments based upon some notion of rate shock.[11]

Q. DO YOU BELIEVE THAT YOUR REVENUE ALLOCATION RECOMMENDATION WILL RESULT IN RATE SHOCK FOR THE RESIDENTIAL CLASS?

A. No, the revenue neutral shift impact for an average residential customer, as a result of my revenue allocation recommendation, is an increase of only $2.63 per month.[12]

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[11] See, Marke Rebuttal, page 37-38 ("OPC is opposed to Staff's recommendation for a continued revenue neutral interclass shift to the residential class as this would represent over a double-digit rate increase for these customers in less than a year." "It is our [OPC] position there should be no revenue neutral shift and an equal percentage increase occur across classes.").

[12] This was calculated as follows: $4,000,000 / 126,598 residential customers / 12 months = $2.63 / month. (See Sarah Kliethermes Workpapers Empire Rate Design as of rebuttal.xlsx – Tab determinants for number of customers).

V. LP RATE DESIGN

Q. WHAT RECOMMENDATION DID YOU MAKE REGARDING THE LP RATE DESIGN?

A. In my direct testimony, I supported Empire's recommendation to apply any rate increase solely to the LP non-volumetric charges. My rationale for supporting this recommendation was attributable to: (a) the cost drivers in the case are almost entirely related to fixed costs; (b) the fact that fuel costs have been flat over the last several years; and (c) Empire's concerns about the significant recovery of fixed costs through volumetric charges. As I explained in my direct testimony, however, I also recommended a 10% reduction in the LP tailblock charge.[13]

Q. WHAT WAS OPC'S RESPONSE TO YOUR RECOMMENDATIONS?

A. While Dr. Marke did not comment on applying any rate increase to the non-volumetric charge, he seems critical of my recommendation to reduce the tailblock energy charge. Dr. Marke appears to base his criticism on his faulty observations regarding the EEI data he evaluated.[14]

Q. WHAT IS YOUR RESPONSE TO OPC'S CLAIMS?

A. As already explained earlier, Dr. Marke's observations are based on faulty rate comparisons. Further, he ignores the fact that my recommendations regarding reductions in the tailblock energy charge were not driven by EEI data. Instead, the need for

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[13] See, discussion on LP rate design in my direct testimony starting on page 18.

[14] See, page 36 of Geoff Marke rebuttal testimony, lines 13-15.

reductions in the LP tailblock energy charge is driven by the need to provide accurate pricing signals and to recognize the cost drivers that necessitated this case.

Q. WHAT WAS STAFF'S RESPONSE TO YOUR LP RATE DESIGN RECOMMENDATION?

A. Staff also opposes my recommendations regarding the tailblock energy charges. Notably, however, Staff fails to provide any substantive concerns with MECG's LP rate design recommendation. Instead, Staff witness Kliethermes recommends that the decision to make this change wait until Empire's completes its study regarding time-differentiate billing demand charges.[15] Given Staff's refusal to consider any LP rate design changes, Staff instead recommends that any LP rate increase be applied equally to all LP rate elements including the tailblock energy charge.

Q. WHAT IS YOUR RESPONSE TO STAFF'S RECOMMENDATIONS?

A. I believe that waiting to make a reduction in the tailblock energy charge until other enhancements occur creates further misalignments and sends inaccurate pricing signals. The decision to delay any consideration of time-differentiated billing demand was made because of concerns that Empire's billing system could not handle such changes without manual intervention. On the other hand, rate design changes to the tailblock energy charge do not raise similar concerns. Unlike a time-differentiated billing demand, Empire's billing system already handles a tailblock energy charge. My proposal simply changes the amount of this charge. As such, my proposal is easily handled by Empire's billing system and should not arbitrarily wait until a billing system change.

[15] See Sarah Kliethermes rebuttal testimony on pages 13-14.

Q. HAS STAFF AGREED TO CHANGES IN THE TAILBLOCK ENERGY CHARGE, WHICH ARE NOT PROPORTIONAL TO CHANGES IN OTHER BILLING COMPONENT CHARGES, IN OTHER CASES?

A. Yes. In recent KCPL cases, Staff agreed to rate design changes for the LP class with no changes to the tailblock energy charge and a different increase for the middle block charge.

Q. DID STAFF'S HESITANCY TO CONSIDER YOUR LP RATE DESIGN PROPOSAL SURPRISE YOU?

A. Yes. In the last case, Staff opposed a similar change. At that time, Staff analyzed the proximity of the tailblock energy charge to the SPP local marginal pricing ("LMP") for the Empire node. In this case, I utilized the same methodology advanced by Staff in that case. Specifically, I showed that the average annual LMP for the Empire node has decreased significantly over the last year. Given this change, I believe that a decrease in the LP tailblock energy charge is warranted. Noticeably, while I used its methodology, Staff did not comment on the validity of my rationale for the tailblock energy charge reduction.[16] It should also be noted that from a seasonal perspective, Staff's own analysis shows that average LP energy charges for the summer and winter are 2.877 ₵/kWh and 2.567 ₵/kWh.[17] In my direct testimony, I recommended that the tailblock energy charges be reduced to 3.315 ₵/kWh and 3.197 ₵/kWh for summer and winter respectively. Given this, my recommended tailblock energy charges are 13% and 20%

[16] See my direct testimony pages 24-25.
[17] See, Staff Rate Design Report and page 28.

higher than Staff's calculated seasonal charges for the LP class. Thus, the recommended tailblock energy charge reduction makes sense and are supported by Staff's own analysis.

Q. ASIDE FROM DISTORTING THE PRICING SIGNAL, WHAT IS THE IMPLICATION OF HAVING HIGHER TAILBLOCK CHARGES THAN THE VARIABLE ENERGY COSTS?

A. The implication is that a significant level of fixed costs is being recovered through a variable charge (the tailblock energy charge). This results in disproportionate cost recovery from customers served under the LP rate schedule. Specifically, fixed costs are being over-recovered from high load factor LP customers and under-recovered from low load factor customers. This results in intra-class subsidies within the LP rate schedule.

Q. ASIDE FROM YOUR EARLIER OBSERVATIONS, DO YOU HAVE ADDITIONAL DATA THAT SUPPORTS YOUR ARGUMENT THAT FIXED COSTS ARE BEING RECOVERED THROUGH ENERGY CHARGES?[18]

A. Yes, data from past rate cases indicates that the FAC base fuel cost has been declining:

2008 Rate Case (ER-2008-0093): $0.02850 / kWh[19]
2010 Rate Case (ER-2010-0130): $0.02970 / kWh
2011 Rate Case (ER-2011-0004): $0.02823 / kWh
2012 Rate Case (ER-2012-0345): $0.02831 / kWh
2014 Rate Case (ER-2014-0351): $0.02684 / kWh
Current Rate Case: FAC proposed to increase to $0.02688 / kWh (currently being contested by Staff; Staff proposed base FAC at 0.02584/kWh)[20]

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[18] At pages 2-3 of his rebuttal testimony, MEUA witness Johnstone criticizes the use of a marginal cost analysis for purposes of setting retail rates. In my direct testimony, I noted that, while "I don't completely agree with this [marginal cost] methodology," this approach was relied upon by Staff in the last case for considering the reasonableness of a tailblock energy charge reduction. (See, Maini Direct, pages 23-24). Given the shared concerns with a marginal cost approach, the following analysis is based upon an embedded cost approach.

[19] In the 2008 and 2010 rate cases, the FAC was seasonally differentiated. The $/kWh rates above are the average for the year.

[20] See page 41 of Staff Rate Design Report.

Therefore, when comparing Empire's proposed base FAC, the FAC base amount of fuel has decreased by 5.7% over the past 8 years. Over that same period of time, however, the LP summer tailblock energy rate has increased by 28.32% (compared to Empire's proposed $0.03683 / kWh) and the LP winter tailblock energy rate has increased by 28.23% (compared to Empire's proposed $0.03552 / kWh). This means that an ever increasing amount of <u>fixed</u> costs are being recovered through the <u>variable</u> tailblock energy charge. This should be corrected.

Q. PLEASE SUMMARIZE YOUR CONCLUSIONS.

A. Neither OPC nor Staff has provided persuasive arguments against my recommendation to reduce the existing tailblock charge by 10%. Therefore, I continue to support this recommendation.

Q. DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?

A. Yes.

Schedule KM-1S

MECG UPDATED CCOSS SUMMARY RESULTS

Description	MO Adjusted Jurisdictional	Residential	CB	SH	TEB	GP	LPS	SC-Praxair	PFM	Lighting
TOTAL RATE BASE	$1,345,483,910	$713,962,338	$116,789,653	$32,784,926	$112,769,162	$207,814,744	$130,954,367	$8,921,707	$311,450	$21,175,563
TOTAL RETURN ON RATE	$100,696,016	$53,432,941	$8,740,538	$2,453,624	$8,439,644	$15,552,855	$9,800,625	$667,701	$23,309	$1,584,779
TOTAL EXPENSES	$391,329,536	$188,863,116	$35,369,400	$9,256,252	$32,136,257	$70,822,335	$45,813,829	$3,769,885	$84,549	$5,213,900
CLASS COST OF SERVICE	$492,025,552	$242,296,057	$44,109,938	$11,709,876	$40,575,901	$86,375,190	$55,614,454	$4,437,586	$107,858	$6,798,679
CURRENT RATE REVENUE	$454,610,577	$208,664,410	$43,077,693	$10,409,097	$37,353,930	$89,367,201	$53,604,183	$4,320,391	$114,453	$7,699,218
CURRENT OTHER REVENUE	$14,566,235	$7,162,418	$1,235,028	$325,135	$1,162,768	$2,589,046	$1,802,886	$169,114	$2,644	$117,195
TOTAL CURRENT REVENUE	$469,176,812	$215,826,828	$44,312,721	$10,734,232	$38,516,698	$91,956,247	$55,407,069	$4,489,505	$117,097	$7,816,413
CURRENT RATE OF RETURN	5.7858%	3.7766%	7.6576%	4.5081%	5.6580%	10.1696%	7.3256%	8.0659%	10.4505%	12.2902%
REVENUE ABOVE (BELOW) COS	-$22,848,740	-$26,469,229	$202,783	-$975,644	-$2,059,203	$5,581,057	-$207,385	$51,919	$9,239	$1,017,734
% CHANGE NEEDED TO BRING CLASS REVENUE TO COST-OF-SERVICE	5.0260%	12.6851%	-0.4707%	9.3730%	5.5127%	-6.2451%	0.3869%	-1.2017%	-8.0724%	-13.2187%
		5.0260%	5.0260%	5.0260%	5.0260%	5.0260%	5.0260%	5.0260%	5.0260%	5.0260%
% REVENUE NEUTRAL CHANGE NEEDED - BEFORE RATE INCREASE		7.66%	-5.50%	4.35%	0.49%	-11.27%	-4.64%	-6.23%	-13.10%	-18.24%
$ AMOUNT REVENUE NEUTRAL CHANGE NEEDED - BEFORE RATE INCREASE		$15,981,750	-$2,367,869	$452,482	$181,794	-$10,072,655	-$2,486,762	-$269,062	-$14,992	-$1,404,697
RELATIVE RATE OF RETURN @ CURRENT RATES		0.65	1.32	0.78	0.98	1.76	1.27	1.39	1.81	2.12

Schedule KM-2S

STAFF NON DETAILED BIP CCOSS SUMMARY RESULTS

Description	MO Adjusted Jurisdictional	Residential	CB	SH	TEB	GP	LPS	SC-Praxair	PFM	Lighting
TOTAL RATE BASE	$1,345,483,910	$720,486,422	$112,506,230	$33,441,333	$114,641,011	$209,887,972	$129,818,846	$8,992,268	$218,075	$15,491,746
TOTAL RETURN ON RATE BASE	$100,696,016	$53,921,204	$8,419,966	$2,502,749	$8,579,733	$15,708,016	$9,715,642	$672,981	$16,321	$1,159,402
TOTAL EXPENSES	$391,329,536	$191,511,134	$36,150,918	$9,072,434	$31,531,728	$69,024,736	$46,282,669	$3,768,661	$74,780	$3,912,464
CLASS COST OF SERVICE	$492,025,552	$245,432,338	$44,570,884	$11,575,183	$40,111,461	$84,732,752	$55,998,311	$4,441,642	$91,101	$5,071,866
CURRENT RATE REVENUE	$454,610,577	$208,664,410	$43,077,693	$10,409,097	$37,353,930	$89,367,201	$53,604,183	$4,320,391	$114,453	$7,699,218
CURRENT OTHER REVENUE	$14,566,235	$7,484,290	$1,263,232	$326,599	$1,152,423	$2,422,913	$1,731,087	$156,895	$1,944	$26,853
TOTAL CURRENT REVENUE	$469,176,812	$216,148,700	$44,340,925	$10,735,696	$38,506,353	$91,790,114	$55,335,270	$4,477,286	$116,397	$7,726,071
CURRENT RATE OF RETURN	5.7858%	3.4196%	7.2796%	4.9737%	6.0839%	10.8464%	6.9733%	7.8804%	19.0840%	24.6170%
REVENUE ABOVE (BELOW) COS	-$22,848,740	-$29,283,638	-$229,959	-$839,487	-$1,605,108	$7,057,362	-$663,041	$35,644	$25,296	$2,654,205
% CHANGE NEEDED TO BRING CLASS REVENUE TO COST-OF-SERVICE	5.0260%	14.0338%	0.5338%	8.0649%	4.2970%	-7.8970%	1.2369%	-0.8250%	-22.1020%	-34.4737%
		5.0260%	5.0260%	5.0260%	5.0260%	5.0260%	5.0260%	5.0260%	5.0260%	5.0260%
% REVENUE NEUTRAL CHANGE NEEDED - BEFORE RATE INCREASE		9.01%	-4.49%	3.04%	-0.73%	-12.92%	-3.79%	-5.85%	-27.13%	-39.50%
$ AMOUNT REVENUE NEUTRAL CHANGE NEEDED - BEFORE RATE INCREASE		$18,796,159	-$1,935,127	$316,326	-$272,302	-$11,548,960	-$2,031,107	-$252,787	-$31,049	-$3,041,168
RELATIVE RATE OF RETURN AT CURRENT RATES		0.59	1.26	0.86	1.05	1.87	1.21	1.36	3.30	4.25