

**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI**

In the Matter of Missouri-American Water                    )  
Missouri American's Request for Authority to                )  
Implement a General Rate Increase for                        )       File No. WR-2015-0301  
Water and Sewer Service Provided in                         )  
Missouri Service Areas    )

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**MIEC SUPPLEMENT TO THE REPLY BRIEF OF THE  
MISSOURI INDUSTRIAL ENERGY CONSUMERS, CITY OF JOPLIN,  
CITY OF ST. JOSEPH, CITY OF WARRENSBURG, AND CITY OF BRUNSWICK**

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COMES NOW, the Missouri Industrial Energy Consumers and for its Supplement addressing solely the issue of Allocation of Purchased Fuel/Power Associated With Pumping, states as follows:

**Introduction**

MIEC witness Collins proposed an adjustment for how the cost of purchased power is allocated among the Company’s rate classes in the St. Louis Metro District. The basis for his adjustment is that the allocation factor used by Missouri-American allocated power costs solely based upon volumes of water used. The problem with that approach is that power costs are also a function of when the power is purchased and the load factor of the user. Industrial customers have high load factors, meaning that they use roughly the same amount of water every day of the year. Other customers, such as commercial and residential customers, use more water, and thus force Missouri-American to buy more power to operate pumps for pumping water, in the summer when those customers water their lawns and landscapes. The cost of the power in the summer is higher on a kWh basis than it is the rest of the year. Moreover, by causing a spike in water usage, and thus energy usage, in the summer, those non-industrial customers cause Missouri-American to pay higher demand charges during these peak periods so that the electric supplier can have capacity available to meet that spiked demand. In addition, during the summer

periods the cost of energy is also higher.<sup>1</sup> Collins' adjustment merely seeks to allocate that additional electricity cost from those not causing that cost to the cost causers, something that all parties and this Commission should strive to do.

Staff takes no position on this issue. OPC and Missouri American oppose Collins' adjustment.

**The Cost of Purchased Fuel/Power Associated with Pumping Should Be Allocated According to Factor 3**

Paul Herbert's Schedule B-SLM, pages 2 and 3, sets forth how he allocated "Power and Pumping Expenses" for the St. Louis Metro District.<sup>2</sup> That Schedule, copy attached, shows 12 categories of expense, starting with "Super & Eng Oper P" on page SLM-2 and ending with "Pump Equip Maint P" on page SLM-3. He allocated the power and pumping expense using Factor 3 for 10 of the 12 categories. He used Factor 1 for only two categories: "Fuel of Power Prod" and "Purch Fuel/Power for Pump." The latter category happens to represent almost 75 percent of the costs of Power and Pumping Expense for the St. Louis Metro District.

Factor 1 merely takes the average daily consumption of water by customer classification. That calculation is shown on Herbert's Schedule C-SLM, page 10, also attached.<sup>3</sup> Rate J, the manufacturing class to which MIEC members belong, represents 9.53% of that usage and the Rate A class to which residential and commercial customers belong represents 86.61% of that usage.

Factor 3, shown on Herbert's Schedule C-SLM, page 12, also attached, on the other hand takes into account: (1) the average daily consumption of water by customer classification; (2) the

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<sup>1</sup> For example, Ameren Missouri's Large General Service Tariff includes a summer first block energy charge of 10.34 cents per kWh, while the winter first block energy charge is 6.51 cents per kWh. The second and third energy block charges are also higher in summer as compared to the winter.

<sup>2</sup> Herbert Direct, MAWC Ex. 7.

<sup>3</sup> *Id.*

“Maximum Day Extra Capacity” cost to factor in the effect of peak demand of the various customers; and (3) and the cost attributed to Fire Protection. As this Commission is well aware, it costs more per unit to serve customers, like residential customers, who have low load factors. Under Factor 3, the average daily consumption component was given a 45.89% weighting and the maximum day extra capacity was given a 50.47% weighting (Fire Protection was assigned the remaining 3.64%). Significantly, the Rate A customer class caused 94.63% of that maximum day extra capacity cost, while the Rate J class caused only 3.2% of that cost. In other words, the Rate A customers are responsible for 94.63% of water usage during the peak period, when the cost to service customers is higher. Alternatively, Rate J customers at time of peak usage are only responsible for 3.20% of peak water usage. As the Commission can plainly see, it is unfair to assign 9.53% of this cost to manufacturing customers in Rate J (which one does by using Factor 1) when they are causing only 3.2% of those costs (as demonstrated by Factor 3). Collins’ adjustment merely reflects that cost causation fact and correctly allocates the major category of costs for Power and Pumping Expenses according to Factor 3.

MIEC Witness Collins sought to allocate “Purchased Fuel/Power for Pumping costs” under Factor 3 because:

The Company has not properly differentiated between the costs it incurs for these [expenses] based on its average daily usage on the one hand, and its peaking requirements on the other. These costs vary in part based on the Company’s peak demands, and they should be allocated on a corresponding basis.

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Factor 3 allocates cost based on customers’ maximum day demands as well as average flow or volume. Factor 1 allocates costs only on volume. Also, Ameren Missouri’s commercial rates are broken out for seasonal variation in energy charges. The energy rates during the summer period, a period where water demand is highest, reflect significantly higher demand and energy charges than rates in the winter period. Variation in rates reflects higher demands during the summer during average annual flow conditions. As such, the Company’s cost of

purchased power is impacted by customers' peak monthly demands, seasonal demand, and energy purchased for base volume.<sup>4</sup>

In support of his position, Collins cited the American Water Works Association's Manual M-1, Principles of Water Rates, Fees and Charges, Sixth Edition, page 65:

that to the extent to which power costs are allocated to extra capacity depends on the variation in electric demands incurred in pumping and the energy/demand electric rate structure that applies to pumping.

So Collins, as well as the authoritative source that he cites, expressly mentions the structure of both demand and energy rates. Therefore, the variation in energy rates, where higher energy charges exist in summer, cannot simply be ignored.

As indicated, Staff has taken no position on this issue.

Missouri-American, through Herbert's Rebuttal testimony, acknowledges that an adjustment should be made ("I would support a refinement to my cost allocation"), but incorrectly claims that the adjustment should be smaller than proposed by Collins.<sup>5</sup> To reach his incorrect conclusion, Herbert fails to acknowledge one of Collins' concerns, which was that the Commission should also consider the higher cost of energy in the summer when residential and commercial customers use more water and industrial customers do not:

Mr. Collins suggests that since power bills include a demand charge that varies with the Company's peak demands, Factor 3 would be a more appropriate factor for allocating power costs.<sup>6</sup>

Herbert proceeds to then propose a minor adjustment of 4.5% by figuring ONLY the difference in demand charges without also considering the difference in energy charges. All extra costs incurred by Missouri-American to serve those customers consuming more water in the summer

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<sup>4</sup> Collins Direct, MIEC Ex. 5, p. 9, l. 16 – p. 11, l. 7 (emphasis added).

<sup>5</sup> Herbert Rebuttal, MAWC Ex. 9, p. 7, l. 4 – p. 8, l. 15; Missouri American Br. 35-36.

<sup>6</sup> Herbert Rebuttal, p. 7, ll. 4 – 8.

during peak loads and when energy costs are higher should be included in the cost of service calculation. Collins' calculation does that; Herbert's original and refined calculations do not.

Although OPC does not cite OPC witness Smith's testimony, Missouri-American does.<sup>7</sup> Smith opined that "Mr. Collins has failed to establish that Factor 3 has a cost causative relationship to Power Costs for Pumping."<sup>8</sup> But Collins did establish the relationship, relying on Missouri-American's own schedules, referenced above and attached hereto. To deny that customers using more water in the summer, when capacity charges and energy charges are higher, is to deny the facts. And as Schedule C-SLM, page 12, shows, those customers in Rate A, are responsible for 94.63% of maximum day extra capacity, and those customers in Rate J, are responsible for 3.2% of maximum day extra capacity. Contrary to Smith's assertion that the MIEC is "cherry-picking" with its adjustment, it was Missouri-American that cherry picked. Missouri-American should have used Factor 3 for all 12 components of "Power and Pumping Expenses" instead of cherry-picking 2, one of which is significant, for Factor 1 allocation.

OPC's Initial Brief also challenges Collins' adjustment.<sup>9</sup> OPC, like Missouri-American, argues that Factor 1 should be used because the cost of purchased power varies with the amount of water consumed. As explained above, however, the cost of purchased power also varies with when the water is consumed. Factor 3 takes both of those facts into consideration. Indeed, Missouri-American acknowledges this fact by using Factor 3 to allocate 10 of the 12 categories of Power and Pumping Expense. Those expenses and rate base are correctly, and fairly and reasonably, allocated based on average flow (volume) and maximum day requirements (time of use).<sup>10</sup>

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<sup>7</sup> Missouri American Br. 35-36.

<sup>8</sup> Smith Rebuttal, OPC Ex. 16, p. 5, ll. 17-18.

<sup>9</sup> OPC Br. 26-27.

<sup>10</sup> Collins Direct, MIEC Ex. 5, p. 10, ll 12-14.

OPC argues that Collins' adjustment would allocate more costs of power to other classes of customers and away from his clients in the Rate J class.<sup>11</sup> That is not true for the Rate B class, Sales for Resale, as its share of cost would drop too. As for why fewer costs are allocated to classes Rate B and Rate J, that is the case only because their contribution to Maximum Daily Extra Capacity is lower than their contribution to average daily consumption. In the case of the Rate J class, its contribution to demand/capacity charges and higher energy charges is 3.2% versus its contribution to average daily consumption of 9.53%. Costs should be allocated to cost causers. *See* Joint Consumer Reply Brief. Collins' adjustment correctly does that.

### **Conclusion**

For the reasons set forth above, this Commission should modify the Missouri-American cost of service study to reflect Collins' recommended adjustment and reflect that adjustment in the rate for the St. Louis Metro District Rate J class the Commission sets in this case.

Respectfully submitted,

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<sup>11</sup> OPC Br. 27.

**CERTIFICATE OF SERVICE**

I do hereby certify that a true and correct copy of the foregoing document has been emailed this 22nd day of April, 2016, to all parties on the Commission's service list in this case.

/s/ Edward F. Downey



MISSOURI-AMERICAN WATER COMPANY  
ST. LOUIS METRO DISTRICT  
COST OF SERVICE FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2014, ALLOCATED TO CUSTOMER CLASSIFICATIONS

Account (1)	Factor Ref. (2)	Cost of Service (3)	Res/Com/Ind/OPA Rate A (4)	Sales for Resale Rate B (5)	Large Industrial Rate J (6)	Rate F (7)	Rate E (8)
<b>OPERATION AND MAINTENANCE EXPENSES</b>							
<b>SOURCE OF SUPPLY EXPENSES</b>							
Super & Eng Oper SS	2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Labor & Exp Oper SS	2	151,450	137,532	4,377	9,420	91	30
Purchased Water	1	390,672	338,361	14,377	37,231	508	195
<b>TOTAL SS EXPENSE - OPERATION</b>		<b>542,122</b>	<b>475,893</b>	<b>18,754</b>	<b>46,651</b>	<b>599</b>	<b>226</b>
Misc Exp Oper SS	2	0	0	0	0	0	0
Misc Exp Oper SS	2	448,332	407,130	12,957	27,886	269	90
Rents Oper SS	2	2,603	2,364	75	162	2	1
Lake, River & Oth Maint SS - Labor	2	18	16	1	1	0	0
Wells & Springs Maint SS - Labor	2	65	59	2	4	0	0
Infiltr Gall & Tunnels Maint SS - Labor	2	414	376	12	26	0	0
Supply Mains Maint SS - Labor	2	104	94	3	6	0	0
Misc Plant Maint SS - Labor	2	252,865	229,627	7,308	15,728	152	51
Misc Plant Maint SS	2	6,956	6,316	201	433	4	1
<b>TOTAL SS EXPENSE - MAINTENANCE</b>		<b>711,358</b>	<b>645,984</b>	<b>20,558</b>	<b>44,246</b>	<b>427</b>	<b>142</b>
<b>TOTAL SS EXPENSE</b>		<b>1,253,480</b>	<b>1,121,877</b>	<b>39,312</b>	<b>90,898</b>	<b>1,026</b>	<b>368</b>

**POWER AND PUMPING EXPENSES**

Super & Eng Oper P	3	0	0	0	0	0	0
Fuel for Power Prod	1	10,243	8,871	377	976	13	5
Labor & Exp Oper Pwr Prod - Labor	3	664	581	19	40	6	19
Purch Fuel/Power for Pump	1	8,468,645	7,334,693	311,646	807,062	11,009	4,234
Labor & Exp Oper Pump - Labor	3	1,745,507	1,527,318	48,700	104,556	15,186	49,747
Misc Exp Oper P	3	2,158	1,888	60	129	19	62
Rents Oper P	3	1,683	1,473	47	101	15	48
<b>TOTAL PUMPING EXPENSE - OPERATION</b>		<b>10,228,899</b>	<b>8,874,825</b>	<b>360,848</b>	<b>912,864</b>	<b>26,248</b>	<b>54,115</b>

MISSOURI-AMERICAN WATER COMPANY  
ST. LOUIS METRO DISTRICT  
COST OF SERVICE FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2014, ALLOCATED TO CUSTOMER CLASSIFICATIONS

Account	Factor Ref.	Cost of Service	Res/Com/Ind/OPA Rate A	Sales for Resale Rate B	Large Industrial Rate J	Fire Protection	
						Rate F	Rate E
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Super & Eng Maint P	3	29,506	25,818	823	1,767	257	841
Struct & Improve Maint P - Labor	3	694,311	607,522	19,371	41,589	6,041	19,788
Struct & Improve Maint P	3	71,690	62,729	2,000	4,294	624	2,043
Pump Equip Maint P - Labor	3	42,920	37,555	1,197	2,571	373	1,223
Pump Equip Maint P	3	11,857	10,375	331	710	103	338
<b>TOTAL PUMPING EXPENSES - MAINTENANCE</b>		<b>850,284</b>	<b>743,998</b>	<b>23,723</b>	<b>50,932</b>	<b>7,397</b>	<b>24,233</b>
<b>TOTAL PUMPING EXPENSES</b>		<b>11,079,183</b>	<b>9,618,823</b>	<b>384,571</b>	<b>963,796</b>	<b>33,645</b>	<b>78,348</b>
<b>WATER TREATMENT</b>							
Super & Eng Oper WT	2	69,401	63,023	2,006	4,317	42	14
Chemicals	1	7,419,482	6,426,013	273,037	707,077	9,645	3,710
Labor & Exp Oper WT - Labor	2	1,286,730	1,168,479	37,186	80,035	772	257
Labor & Exp Oper WT	2	199,129	180,829	5,755	12,386	119	40
Misc Exp Oper WT	1	102,227	88,539	3,762	9,742	133	51
Misc Exp Oper WT	2	29,508	26,796	853	1,835	18	6
Rents Oper WT	2	10,157	9,224	294	632	6	2
<b>TOTAL WT EXPENSE - OPERATION</b>		<b>9,116,634</b>	<b>7,962,903</b>	<b>322,892</b>	<b>816,023</b>	<b>10,735</b>	<b>4,080</b>
Super & Eng Maint WT	2	1,613,443	1,465,167	46,628	100,356	968	323
WT Equip Maint WT - Labor	2	2,987	2,713	86	186	2	1
WT Equip Maint WT	2	542,382	492,537	15,675	33,736	325	108
<b>TOTAL WT EXPENSE - MAINTENANCE</b>		<b>2,158,812</b>	<b>1,960,417</b>	<b>62,390</b>	<b>134,278</b>	<b>1,295</b>	<b>432</b>
<b>TOTAL WT EXPENSE</b>		<b>11,275,446</b>	<b>9,923,320</b>	<b>385,282</b>	<b>950,301</b>	<b>12,030</b>	<b>4,512</b>
<b>TRANSMISSION AND DISTRIBUTION EXPENSES</b>							
Super & Eng Oper TD	10	532,432	491,488	2,023	7,561	17,091	14,269
Storage Facility Exp - Labor	5	48,575	39,302	1,380	2,798	1,151	3,944
TD Lines Exp - Labor	6	1,448,255	1,319,360	9,269	27,517	21,000	71,109
TD Lines Exp	6	43,719	39,828	280	831	634	2,147
Meter Expense - Labor	8	665,032	648,340	0	7,914	8,778	0

**MISSOURI-AMERICAN WATER COMPANY  
ST. LOUIS METRO DISTRICT**

**FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS**

**FACTOR 1. ALLOCATION OF COSTS WHICH VARY WITH THE AMOUNT OF WATER CONSUMED.**

Factors are based on the pro forma test year average daily consumption for each customer classification.

Customer Classification (1)	Average Daily Consumption, 100 Gallons (2)	Allocation Factor (3)
Rate A - Res/Com/Ind/OPA	1,022,086	0.8661
Rate B - Sales for Resale	43,484	0.0368
Rate J - Manufacturing	112,429	0.0953
Rate F - Private Fire	1,537	0.0013
Rate E - Public Fire	597	0.0005
<b>Total</b>	<b>1,180,133</b>	<b>1.0000</b>

**FACTOR 2. ALLOCATION OF COSTS ASSOCIATED WITH FACILITIES SERVING BASE AND MAXIMUM DAY EXTRA CAPACITY FUNCTIONS.**

Factors are based on the weighting of the factors for average daily consumption (Factor 1) and the factors derived from maximum day extra capacity demand for each customer classification, as follows:

Customer Classification (1)	Average Daily Consumption		Maximum Day Extra Capacity		Allocation Factor (6)=(3)+(5)
	Allocation Factor 1 (2)	Weighted Factor (3)=(2)x 0.4762	Allocation Factor (4)	Weighted Factor (5)=(4)x 0.5238	
Rate A - Res/Com/Ind/OPA	0.8661	0.4125	0.9463	0.4956	0.9081
Rate B - Sales for Resale	0.0368	0.0175	0.0217	0.0114	0.0289
Rate J - Manufacturing	0.0953	0.0454	0.0320	0.0168	0.0622
Rate F - Private Fire	0.0013	0.0006			0.0006
Rate E - Public Fire	0.0005	0.0002			0.0002
<b>Total</b>	<b>1.0000</b>	<b>0.4762</b>	<b>1.0000</b>	<b>0.5238</b>	<b>1.0000</b>

The derivation of the maximum day extra capacity factors in column 4 and the basis for the column 3 and 5 weightings are presented on the following page.

MISSOURI-AMERICAN WATER COMPANY  
ST. LOUIS METRO DISTRICT

FACTORS FOR ALLOCATING COST OF SERVICE TO CUSTOMER CLASSIFICATIONS, cont.

FACTOR 3. ALLOCATION OF COSTS ASSOCIATED WITH FACILITIES SERVING BASE, MAXIMUM DAY EXTRA CAPACITY AND FIRE PROTECTION FUNCTIONS.

Factors are based on the weighting of the average daily consumption, the maximum day extra capacity demand, and the fire protection demand for each customer classification.

Customer Classification	Average Daily Consumption		Maximum Day Extra Capacity		Fire Protection		Allocation Factor (8)=(3)+(5)+(7)
	Allocation Factor (2)	Weighted Factor (3)=(2) X 0.4589	Allocation Factor (4)	Weighted Factor (5)=(4) X 0.5047	Allocation Factor (6)	Weighted Factor (7)=(6) X 0.0364	
Rate A - Res/Com/Ind/OP/	0.8661	0.3975	0.9463	0.4775			0.8750
Rate B - Sales for Resale	0.0368	0.0169	0.0217	0.0110			0.0279
Rate J - Manufacturing	0.0953	0.0437	0.0320	0.0162			0.0599
Rate F - Private Fire	0.0013	0.0006			0.2224	0.0081	0.0087
Rate E - Public Fire	0.0005	0.0002			0.7776	0.0283	0.0285
Total	<u>1.0000</u>	<u>0.4589</u>	<u>1.0000</u>	<u>0.5047</u>	<u>1.0000</u>	<u>0.0364</u>	<u>1.0000</u>