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Witness: Martin Hyman  
Sponsoring Party: Missouri Department of Economic  
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Case Nos.: WR-2015-0301  
and SR-2015-0302

**MISSOURI PUBLIC SERVICE COMMISSION**

**MISSOURI-AMERICAN WATER COMPANY**

**CASE NOS. WR-2015-0301  
AND  
SR-2015-0302**

**SURREBUTTAL TESTIMONY**

**OF**

**MARTIN R. HYMAN**

**ON**

**BEHALF OF**

**MISSOURI DEPARTMENT OF ECONOMIC DEVELOPMENT**

**DIVISION OF ENERGY**

Jefferson City, Missouri  
March 4, 2016

MoDOE Exhibit No. 6  
Date 3-21-16 Reporter TR  
File No. WR-2015-0301

BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI

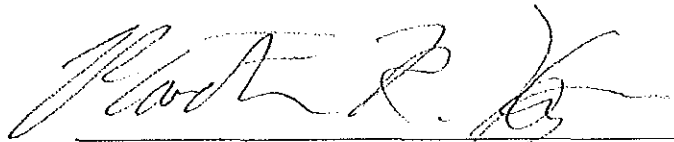
In the Matter of Missouri-American Water Company's )  
Request for Authority to Implement a General Rate ) WR-2015-0301  
Increase for Water and Sewer Service Provided in ) and SR-2015-0302  
Missouri Service Areas )

AFFIDAVIT OF MARTIN HYMAN

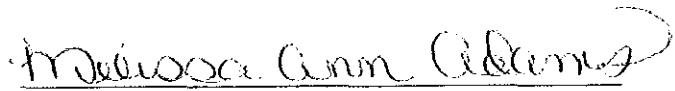
STATE OF MISSOURI )  
 ) ss  
COUNTY OF COLE )

Martin R. Hyman, of lawful age, being duly sworn on his oath, deposes and states:

1. My name is Martin R. Hyman. I work in the City of Jefferson, Missouri, and I am employed by the Missouri Department of Economic Development as a Planner II, Division of Energy.
2. Attached hereto and made a part hereof for all purposes is my Surrebuttal Testimony on behalf of the Missouri Department of Economic Development – Division of Energy.
3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct to the best of my knowledge.

  
\_\_\_\_\_  
Martin R. Hyman

Subscribed and sworn to before me this 4<sup>th</sup> day of March, 2016.

  
\_\_\_\_\_  
Notary Public

My commission expires:

MELISSA ANN ADAMS  
Notary Public - Notary Seal  
State of Missouri  
Commissioned for Cole County  
My Commission Expires: March 09, 2019  
Commission Number: 15633820

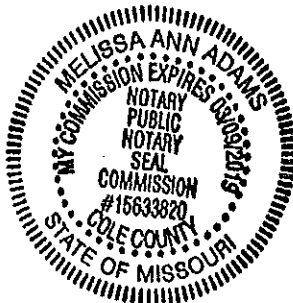


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1 **I. INTRODUCTION**

2 **Q. Please state your name and business address.**

3 A. My name is Martin R. Hyman. My business address is 301 West High Street, Suite 720,  
4 PO Box 1766, Jefferson City, Missouri 65102.

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

6 A. I am employed by the Missouri Department of Economic Development – Division of  
7 Energy (“DE”) as a Planner II.

8 **Q. Have you previously filed testimony before the Missouri Public Service Commission**  
9 **(“Commission”) in this case?**

10 A. Yes. I filed Direct Revenue Requirement, Direct Rate Design, and Rebuttal Testimony  
11 (Rate Design) in this case (WR-2015-0301 and SR-2015-0302).

12 **II. PURPOSE AND SUMMARY OF TESTIMONY**

13 **Q. What is the purpose of your Surrebuttal Testimony in this proceeding?**

14 A. The purpose of my Surrebuttal Testimony is to address comments on DE’s demand-side  
15 efficiency proposal by the Commission Staff (“Staff”), the Missouri-American Water  
16 Company (“MAWC” or “Company”), and the Office of the Public Counsel (“OPC”); I  
17 also address comments on my rate design testimony by the Company, as well as aspects  
18 of Staff witness Mr. James A. Busch’s Rate Design Rebuttal Testimony. In particular, I  
19 provide an analysis of Staff’s revised rate design for its proposed second water district,  
20 along with a discussion of Mr. Busch’s statements on inclining block rates and straight-  
21 fixed variable (“SFV”) rate design.

1 **Q. What are your conclusions?**

2 A. DE is not opposed to the further consideration, through a collaborative setting, of the  
3 issues raised by Staff regarding the proposed demand-side efficiency program; such a  
4 collaborative was part of the original proposal. Both the Company and OPC are opposed  
5 to DE's demand-side efficiency proposal, although the reasons for such opposition differ.  
6 In response to MAWC's argument regarding the need for a revenue-stability mechanism  
7 ("RSM") to promote efficiency, DE would support the consideration of a tracking  
8 mechanism, for potential future recovery, of quantifiable sales reductions associated with  
9 DE's proposed demand-side program initiative. The Company's other argument,  
10 regarding the need to communicate the benefits of demand-side efficiency, is not  
11 supported by its actions, which already work towards this goal. OPC's counterarguments  
12 fail to include relevant quantitative, legal, and policy considerations.

13 Based on my analysis of Staff's revised rate design proposal, DE still generally supports  
14 Staff's proposed rate design if the Commission approves Staff's proposed revenue  
15 requirement and district consolidation. However, DE disagrees with Staff's positions on  
16 inclining block rates and SFV rate design; the former position lacks supporting  
17 arguments, while the latter is contradicted by considerations found within Staff's  
18 testimony. The Company's arguments against DE's positions on customer charges,  
19 uncollectible accounts, and inclining block rates are incomplete at best.

20 **Q. What information did you rely upon when preparing this testimony?**

21 A. I reviewed the Revenue Requirement Rebuttal Testimonies of Staff witness Mr. James A.  
22 Merciel, Jr., Company witness Mr. Philip C. Wood, and OPC witness Dr. Geoff Marke. I  
23 also reviewed the Rate Design Rebuttal Testimonies of Company witness Mr. Paul R.

1 Herbert and Staff witness Mr. Busch. Additionally, I relied upon: Mr. Herbert's Direct  
2 Testimony; the Corrected Direct Testimony of Company witness Mr. Frank L. Kartmann;  
3 Staff's "Report on Class Cost of Service and Rate Design" ("Staff's CCOS Report"); the  
4 workpapers for Mr. Busch's Rate Design Rebuttal Testimony; the American Water  
5 Works Association's manual entitled, "Principles of Water Rates, Fees, and Charges;" the  
6 Revised Stipulation and Agreement and List of Issues filed in ER-2014-0351;  
7 §386.250(3), RSMo.; portions of Missouri Gas Energy's energy efficiency-related tariff  
8 sheets; a portion of the Institute for Electric Innovation's November 2015 Issue Brief; a  
9 portion of Stewart et al. (2013); and my own previously filed testimony and workpapers.

10 **III. DEMAND-SIDE EFFICIENCY PROPOSAL**

11 **Q. Please restate your proposal for demand-side efficiency programs and measures.**

12 A. As described in my Direct Revenue Requirement Testimony, DE proposes that the  
13 Commission authorize expenditures of up to 0.5 percent of the Company's average  
14 annual total revenue to encourage demand-side water and wastewater savings, in  
15 consultation with a collaborative. Such a program would accomplish the goals of saving  
16 both water and energy.<sup>1</sup>

17 **A. RESPONSE TO STAFF**

18 **Q. Is Staff supportive of the concept of a demand-side efficiency program for MAWC?**

19 A. Yes. In his Rebuttal Testimony, Staff witness Mr. Merciel indicates that, "Staff supports,  
20 at the least, development of a demand-side conservation program through the work of a

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<sup>1</sup> Missouri Public Service Commission Case Nos. WR-2015-0301 and SR-2015-0302, *In the Matter of Missouri-American Water Company's Request for Authority to Implement a General Rate Increase for Water and Sewer Service Provided in Missouri Service Areas*, Direct Testimony (Revenue Requirement) of Martin R. Hyman on Behalf of the Missouri Department of Economic Development – Division of Energy, December 23, 2015, page 12, lines 15-20.

1 collaborative, if other parties show enough interest to work on the development of such a  
2 program.”<sup>2</sup>

3 **Q. Does Staff support a Commission order requiring the Company to implement a**  
4 **demand-side efficiency program in the manner which you recommended in your**  
5 **Direct Testimony (Revenue Requirement)?**

6 **A.** Not entirely. Mr. Merciel states:

7 Staff is not opposed to consideration of such a spending program. However, there  
8 are unaddressed questions that pertain to reasonableness and determination of the  
9 level of 0.5% of total revenue, and less than 20% of the program fund to be  
10 available for administration, outreach, and evaluation costs, as stated by Mr.  
11 Hyman in his testimony.<sup>3</sup>

12 **Q. How would you respond?**

13 **A.** As acknowledged by Mr. Merciel,<sup>4</sup> my Direct Testimony (Revenue Requirement)  
14 discussed the formation of a collaborative to determine several details related to the  
15 demand-side efficiency proposal.<sup>5</sup> The demand-side efficiency proposal in my Direct  
16 Revenue Requirement Testimony also included general parameters for the cost of the  
17 program portfolio and related administrative costs. However, under DE’s proposal, the  
18 reasonableness and determination of specific programs to include in the portfolio, along

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<sup>2</sup> Missouri Public Service Commission Case Nos. WR-2015-0301 and SR-2015-0302, *In the Matter of Missouri-American Water Company’s Request for Authority to Implement a General Rate Increase for Water and Sewer Service Provided in Missouri Service Areas*, Rebuttal Testimony of James A Merciel, Jr. on Behalf of Missouri Public Service Commission Staff, February 11, 2016, page 9, lines 13-15.

<sup>3</sup> *Ibid*, lines 1-4.

<sup>4</sup> *Ibid*, lines 12-13.

<sup>5</sup> Hyman Direct (Revenue Requirement), pages 9-10 and 11, lines 15-19, 1-15, and 12-17.

1 with associated administration, outreach, and evaluation costs, would be addressed by the  
2 collaborative.

3 **Q. Do you believe that a target of 0.5 percent of the total Company revenue**  
4 **requirement is a reasonable amount for demand-side efficiency initiatives?**

5 A. Yes. I provide several examples of demand-side efficiency initiatives and their funding  
6 levels in my Direct Revenue Requirement Testimony; the proposed 0.5 percent target is  
7 comparable to the funding described in the examples.<sup>6</sup> Additionally, Missouri Gas  
8 Energy's efficiency program targets a 0.5 percent level of expenditures.<sup>7</sup>

9 **B. RESPONSE TO COMPANY**

10 **Q. Does the Company support DE's demand-side efficiency proposal?**

11 A. No.<sup>8</sup>

12 **Q. Does MAWC witness Mr. Wood claim in his testimony that the Company engages**  
13 **in, "... demand-side strategies, such as customer efficiency and public education**  
14 **programs?"**<sup>9</sup>

15 A. Yes. However, he provides no description of these "demand-side strategies," so it is  
16 unclear if these strategies are additional to those mentioned by Company witness Mr.  
17 Frank L. Kartmann in his Direct Testimony<sup>10</sup> or the Company's response to Data Request  
18 DED-DE 1-215.

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<sup>6</sup> *Ibid*, page 9, lines 1-14.

<sup>7</sup> See, e.g., Missouri Public Service Commission, JG-2015-0294, Missouri Gas Energy, Schedule of Rates and Charges and General Terms and Conditions for Gas Service, Promotional Practices (Schedule PP), Effective May 1, 2015, Sheet No. 99.

<sup>8</sup> Missouri Public Service Commission Case Nos. WR-2015-0301 and SR-2015-0302, *In the Matter of Missouri-American Water Company's Request for Authority to Implement a General Rate Increase for Water and Sewer Service Provided in Missouri Service Areas*, Rebuttal Testimony of Philip C. Wood on Behalf of Missouri-American Water Company, February 11, 2016, page 4, lines 14-15.

<sup>9</sup> *Ibid*, page 4, lines 1-3.

<sup>10</sup> Missouri Public Service Commission Case Nos. WR-2015-0301 and SR-2015-0302, *In the Matter of Missouri-*



1 **Q. Have you previously addressed these “strategies?”**

2 A. Yes. As I noted in my Direct Testimony (Revenue Requirement), the Company has not  
3 quantified any of the water or energy savings resulting from its educational programs.<sup>11</sup>

4 **Q. If the Company already has “demand-side strategies” in place, what are Mr.  
5 Wood’s objections to your demand-side efficiency proposal?**

6 A. Mr. Wood raises two objections: 1) that MAWC’s current rate structure promotes water  
7 consumption, not efficiency,<sup>12</sup> and 2) that DE’s proposal for “... setting aside an arbitrary  
8 amount (0.5%) of average would be premature at this point.”<sup>13</sup>

9 **Q. Did you propose a “set-aside” in your Direct Revenue Requirement Testimony?**

10 A. No. I proposed that, “The Commission should authorize an amount of up to 0.5 percent  
11 (0.5%) of MAWC’s average annual total revenue – as determined in this rate case – to  
12 fund demand-side efficiency programs.”<sup>14</sup> I described how the Company’s spending  
13 should target a 0.5 percent funding level on an annual average basis,<sup>15</sup> and suggested that  
14 the Company’s demand-side efficiency initiatives under DE’s proposal could be funded  
15 through a regulatory asset account.<sup>16</sup>

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*American Water Company’s Request for Authority to Implement a General Rate Increase for Water and Sewer Service Provided in Missouri Service Areas*, Corrected Direct Testimony of Frank L. Kartmann on Behalf of Missouri-American Water Company, August 6, 2015, pages 34-35, lines 2-22 and 1-10.

<sup>11</sup> Hyman Direct (Revenue Requirement), page 6, lines 3-5, referencing Company response to Data Request DED-DE 1-206.

<sup>12</sup> Wood Rebuttal, pages 4-5, lines 20-24 and 1-4.

<sup>13</sup> *Ibid*, page 5, lines 4-6.

<sup>14</sup> Hyman Direct (Revenue Requirement), page 8, lines 3-5.

<sup>15</sup> *Ibid*, page 8, lines 17-20.

<sup>16</sup> *Ibid*, page 12, lines 1-5.

1 **Q. What is Mr. Wood's solution to his first concern?**

2 A. Mr. Wood believes that the Company's proposed RSM would address the Company's  
3 disincentive to encourage efficiency.<sup>17</sup> He supports his assertion by citing a report from  
4 the U.S. Department of Energy.<sup>18</sup>

5 **Q. What is your response to Mr. Wood's RSM solution?**

6 A. It may be reasonable to address the revenue impact of lost sales if and when the impact of  
7 demand-side efficiency programs becomes significant. DE does not oppose tracking, for  
8 potential future recovery, quantifiable sales reductions associated with DE's proposed  
9 demand-side efficiency initiative. The funding from the quantification of these sales  
10 reductions would come from the portion of funding which I indicated should be allowed  
11 for administration, outreach, and evaluation purposes.<sup>19</sup> However, DE takes no position  
12 on tracking, for potential future recovery, revenues lost due to other factors (e.g.,  
13 weather).

14 **Q. How does Mr. Wood address his second concern?**

15 A. He claims that both demand- and supply-side investments, "... need to be planned,  
16 staffed, assessed (reasonable, measurable and cost effective), and communicated to  
17 customers and other stakeholders to gain acceptance and momentum before implemented.  
18 ...Ultimately, the incremental value of the investment should exceed the incremental  
19 cost."<sup>20</sup>

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<sup>17</sup> Wood Rebuttal, page 5 lines 10-19.

<sup>18</sup> *Ibid*, pages 6-7, lines 14-20 and 1-22.

<sup>19</sup> Hyman Direct (Revenue Requirement), page 8, lines 13-16.

<sup>20</sup> Wood Rebuttal, pages 5-6, lines 21-24 and 1-6.

1 **Q. What is your response to Mr. Wood's claim that more communication of the need**  
2 **for demand-side efficiency is required?**

3 A. I agree that outreach and education – such as those activities which Mr. Wood indicates  
4 the Company already conducts – are critical elements in promoting and gaining greater  
5 customer support for programs targeted at more efficient water use. DE believes that  
6 methods for achieving these goals, including the types of outreach and education  
7 activities which could be conducted in the future, should be addressed in the collaborative  
8 process.

9 **Q. Considering Mr. Wood's claim, is DE's demand-side efficiency proposal,**  
10 **“premature?”**

11 A. No. As I indicated, Mr. Wood's solution is already occurring to some extent under  
12 current Company practices; therefore, there is no reason to add an unnecessary delay to  
13 the implementation of demand-side efficiency initiatives by the Company.

14 **C. RESPONSE TO OFFICE OF THE PUBLIC COUNSEL**

15 **Q. Is OPC supportive of DE's demand-side efficiency proposal?**

16 A. No.

17 **Q. What is your general impression of Dr. Marke's testimony?**

18 A. Dr. Marke appears to lack understanding of DE's proposals and draws inaccurate and  
19 inapplicable conclusions from the sources cited in his testimony.

20 **Q. Has OPC correctly described your proposal in its testimony?**

21 A. No. Dr. Marke claims that DE's proposal would target funding of approximately \$1.55  
22 million for demand-side efficiency initiatives, and that no more than \$311k would be  
23 allocated towards administration, marketing, and evaluation. He also states that the total

1 amount, "... **would** be collected in future rate proceedings" (emphasis added) and that I  
2 suggested the formation of a collaborative, "... of any and all interested stakeholders  
3 ...."<sup>21</sup>

4 **Q. Why is Dr. Marke's characterization of your proposal incorrect?**

5 A. Dr. Marke's claims ignore key statements in my testimony. Dr. Marke's claim that the  
6 funding target, "... **would** be collected in future rate proceedings"<sup>22</sup> incorrectly implies  
7 that the Company's spending on demand-side efficiency would go without scrutiny. This  
8 implication is unfounded when contrasted with this part of my testimony:

9 Program costs would **potentially** be recoverable in the next rate case, **subject to**  
10 **auditing**. The **quantification of actual water and energy savings** from the  
11 programs and measures implemented by the Company **should be determined by**  
12 **a collaborative**, as explained below. (Emphases added.)<sup>23</sup>

13 Additionally, my testimony regarding the collaborative stated that, "... DE would  
14 encourage the Commission to allow a **broader set of participants**" than the parties to the  
15 present case.<sup>24</sup> Although Dr. Marke's assertion that DE would support the inclusion of all  
16 potential participants exaggerates DE's proposal, the inclusion of a broader group of  
17 stakeholders – including, but not limited to, the Missouri Department of Natural  
18 Resources ("DNR") and Bridging The Gap – would benefit the collaborative process. For  
19 example, Bridging The Gap could provide additional information on the implementation

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<sup>21</sup> Missouri Public Service Commission Case Nos. WR-2015-0301 and SR-2015-0302, *In the Matter of Missouri-American Water Company's Request for Authority to Implement a General Rate Increase for Water and Sewer Service Provided in Missouri Service Areas*, Rebuttal Testimony (Revenue Requirement) of Dr. Geoff Marke Submitted on Behalf of the Office of the Public Counsel, February 11, 2016, page 2, lines 9-17.

<sup>22</sup> *Ibid*, page 2, lines 12-13.

<sup>23</sup> Hyman Direct (Revenue Requirement), page 8, lines 9-12.

<sup>24</sup> *Ibid*, page 10, lines 13-15.

1 of its “WaterWorks!” program,<sup>25</sup> which the collaborative could use in its evaluation of  
2 potential Company demand-side efficiency measures and programs. The Commission  
3 could determine which parties would provide a benefit to the collaborative based on such  
4 parties’ applications to join the collaborative.

5 **Q. Dr. Marke states, “... there may be situations where water usage should be**  
6 **promoted based on underutilized infrastructure in specific water systems to spur**  
7 **economic growth for local communities” (emphases added).<sup>26</sup> How do you respond?**

8 A. DE’s proposal is not to promote the curtailment of water end-uses, but to promote the  
9 more efficient end use of water. Even if there are instances in which water use should be  
10 promoted, this use should be promoted in an efficient manner to avoid waste.

11 **Q. Has Dr. Marke provided any of his own quantitative analyses or legal citations to**  
12 **support the conclusions in his testimony?**

13 A. No. However, he mentions, “... empirical studies that verify savings from energy  
14 efficiency measures.”<sup>27</sup>

15 **Q. Does Dr. Marke cite any of the evaluation, measurement, and verification reports**  
16 **from the Missouri electric utilities which he mentions – i.e., the “...empirical studies**  
17 **that verify savings from energy efficiency measures?”<sup>28</sup>**

18 A. No. His statements about savings from demand-side efficiency – particularly water  
19 savings – many times rely on studies of non-Missouri jurisdictions, such as a study of  
20 natural gas furnaces in Canada.<sup>29</sup> Some of his citations are also to extremely old sources,

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<sup>25</sup> Bridging The Gap. 2013. “WaterWorks! Final Report.” Contract No. EECBG-ARRA-OEQ-6.

<sup>26</sup> Marke Rebuttal (Revenue Requirement), page 6, lines 8-10.

<sup>27</sup> *Ibid*, pages 9-10, lines 9-16 and 1-2.

<sup>28</sup> Marke Rebuttal (Revenue Requirement), page 9, lines 9-12.

<sup>29</sup> *Ibid*, page 4, footnote 6.

1 such as a 1983 study on water conservation.<sup>30</sup> The study which he cites on behavioral  
2 responses to shower monitoring devices<sup>31</sup> is from Australia, and only involves 44  
3 households in the trial group out of a total sample of 151 households; additionally, the  
4 study is focused on these monitoring devices<sup>32</sup> and does not directly relate to the low-  
5 flow showerheads cited in Dr. Marke's testimony.<sup>33</sup>

6 **Q. Does he also criticize your California-American Water Company example?**

7 A. Yes. These criticisms include the different rate designs used by California American, a  
8 California-wide drought, state government conservation mandates, and the relatively  
9 small amount of demand-side efficiency funding in comparison to electric energy  
10 efficiency funding.<sup>34</sup> I address the first three contentions later in this testimony. However,  
11 it should be noted that his attempted comparison of water and electric demand-side  
12 efficiency funding amounts is incorrect, since he is apparently comparing the demand-  
13 side efficiency funding of the California-American Water Company to the entirety of  
14 electric demand-side efficiency funding in California.<sup>35</sup>

15 To be clear, DE is not opposed to the use of non-Missouri examples to make an  
16 argument. However, it is unclear why Dr. Marke would criticize the use of an out-of-state

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<sup>30</sup> *Ibid*, page 9, footnote 21.

<sup>31</sup> *Ibid*, page 10, footnote 23.

<sup>32</sup> Stewart, Rodney A., Willis, Rachelle M., Panuwatwanich, Kriengsak, and Sahin, Oz. 2013. "Showering behavioural response to alarming visual display monitors: longitudinal mixed method study." *Behaviour & Information Technology* 32 (7): 699.

<sup>33</sup> Marke Rebuttal (Revenue Requirement), page 10, lines 14-15.

<sup>34</sup> *Ibid*, pages 7-8, lines 13-22 and 1-6.

<sup>35</sup> Dr. Marke's source on electric demand-side efficiency measures at page 7, footnote 13 states the following: "Figure 4 shows the ten states with the largest 2013 electric efficiency expenditures. These ten states account for 59 percent of U.S. electric efficiency expenditures in 2014. California leads the states with \$1.4 billion in expenditures ..." (Emphases added). Cooper, Adam, and Smith, T.D. 2015. "Electric Utility Customer-Funded Energy Efficiency Savings, Expenditures, and Budgets (2014). IEI Issue Brief – November 2015. Institute for Electric Innovation. Page 6.

[http://www.edisonfoundation.net/iei/Documents/IEI\\_2015USEnergyEfficiency\\_2014Exp\\_FINAL.pdf](http://www.edisonfoundation.net/iei/Documents/IEI_2015USEnergyEfficiency_2014Exp_FINAL.pdf).

1 example in one instance and cite to such examples in other instances, particularly when  
2 he mentions in-state examples of energy efficiency measure verification studies.

3 **Q. On what basis does Dr. Marke believe a demand-side efficiency initiative should**  
4 **proceed for MAWC?**

5 A. Dr. Marke states that:

6 The decision to move forward with a rate-payer funded [demand-side  
7 management] program should be grounded on actual empirical evidence in the  
8 form of a feasibility (or potential) study to investigate the prospective impact of  
9 the specific actions against forecasts of water scarcity and/or capital investment  
10 deferment.<sup>36</sup>

11 **Q. Could a potential study – such as that mentioned by Dr. Marke – be a first step for**  
12 **the collaborative which you proposed?**

13 A. Yes. However, Dr. Marke makes no such constructive recommendation, even though  
14 such a potential study could address one of his primary concerns:

15 Any claim that [demand-side management] is a more sustainable and capable  
16 approach to managing the imbalance between supply and demand must be seen in  
17 the context of identifying the point at which it becomes more efficient to shift  
18 from water resource reinforcement (supply) to a [demand-side management]  
19 strategy for a given utility.<sup>37</sup>

20 While Dr. Marke is right that some measures and programs will be more cost-effective  
21 than others, such cost-effectiveness considerations should be evaluated under the

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<sup>36</sup> *Ibid*, page 4, lines 19-22.

<sup>37</sup> *Ibid*, page 5, lines 1-4.

1           auspices of a collaborative. This could, at the collaborative's discretion, involve a  
2           potential or feasibility study.

3   **Q.    Did your proposal ever state that there should be *no* consideration of the costs and**  
4   **benefits associated with water and energy savings?**

5   A.    No. DE's proposal is that, "The quantification of actual water and energy savings from  
6   the programs and measures implemented by the Company should be determined by a  
7   collaborative ...,"<sup>38</sup> and that the Company should consult with this collaborative to  
8   determine which measures and programs should be implemented.<sup>39</sup>

9   **Q.    Does Dr. Marke agree with the concept of simultaneously saving water and energy?**

10  A.    It is not entirely clear that he agrees this is a viable concept. He states:  
11           ... OPC offers that there is no cost justification that a ratepayer-funded [demand-  
12           side management] program is the most efficient policy option in which to  
13           maximize the conservation of water and the embedded energy used in servicing  
14           that water. As it stands, OPC cannot state with any confidence that saving a gallon  
15           of water is comparable to saving an equivalent amount of kWh (electricity) or  
16           therm (natural gas).<sup>40</sup>

17           Dr. Marke offers no alternative for addressing these concerns, except his closing  
18           recommendation to essentially "kick the can" of water resource planning over to DNR:

19           ... to the extent that the Commission believes least-cost resource planning should  
20           be introduced as an element of regulatory oversight into MAWC's activities; OPC

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<sup>38</sup> Hyman Direct (Revenue Requirement), page 8, lines 10-11.  
<sup>39</sup> *Ibid*, page 10, lines 9-12.  
<sup>40</sup> Marke Rebuttal (Revenue Requirement), page 5, lines 16-21.



1 offers that key elements of that discussion are taking place under the direction of  
2 the Missouri Department of Natural Resources ....<sup>41</sup>

3 **Q. Dr. Marke mentions “water scarcity.” Was your proposal based on any current or**  
4 **forecasted shortage of water in the Company’s service territory?**

5 A. No. Although such considerations could be important, my focus was on the potential  
6 energy savings from demand-side water efficiency measures. I described the “embedded  
7 energy” in water and wastewater production in my Direct Revenue Requirement  
8 Testimony, with citations to relevant sources.<sup>42</sup>

9 **Q. Is Dr. Marke’s opposition to DE’s demand-side efficiency proposal partially based**  
10 **on a purported lack of explicit policy direction regarding water savings?**

11 A. Yes. Dr. Marke states that demand-side energy efficiency programs, “...should be  
12 grounded in empirical evidence and tied to explicit policy direction to be properly valued  
13 and justified.”<sup>43</sup> His testimony cites the lower “level of scrutiny” of water utilities  
14 compared to electric utilities, as well as the lack of resource planning requirements and  
15 demand-side management “enabling” legislation for water utilities.<sup>44</sup>

16 **Q. Are these considerations relevant?**

17 A. No. His assertion that water utilities are somehow subject to less oversight by the  
18 Commission is unsupported. Additionally, the Commission has a long history of  
19 approving customer-benefiting efficiency programs without legislation “enabling”  
20 demand-side efficiency programs. The Empire District Electric Company offers its

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<sup>41</sup> *Ibid*, page 12, lines 13-16.

<sup>42</sup> Hyman Direct (Revenue Requirement), pages 2-3, lines 14-21 and 1-5.

<sup>43</sup> Marke Rebuttal (Revenue Requirement), page 12, lines 5-7.

<sup>44</sup> *Ibid*, lines 7-9.

1 demand-side efficiency programs outside of the scope of MEEIA,<sup>45</sup> as did Union Electric  
2 Company d/b/a Ameren Missouri and Kansas City Power & Light Company prior to the  
3 enactment of the Missouri Energy Efficiency and Investment Act. Similarly, natural gas  
4 providers, which are not covered under MEEIA or any other such enabling legislation,  
5 have offered efficiency programs to customers for years. Missouri Gas Energy's  
6 efficiency programs and collaborative, which I cited in my Direct (Revenue  
7 Requirement) Testimony,<sup>46</sup> are an example of such offerings.

8 **Q. Dr. Marke also mentions the Missouri Comprehensive State Energy Plan ("CSEP")**  
9 **in his testimony.<sup>47</sup> Are his statements regarding the CSEP accurate?**

10 A. No. He claims that, "The plan makes no formal recommendation, nor does it opine on the  
11 appropriateness of utilizing ratepayer funding to promote end-use water efficiency."<sup>48</sup>  
12 This assertion ignores the first recommendation in the CSEP, "Modifying the Missouri  
13 Energy Efficiency Investment Act,"<sup>49</sup> which includes a recommendation to, "Allow  
14 investor-owned natural gas and **water utilities** to voluntarily participate in MEEIA"  
15 (emphasis added).<sup>50</sup>

16 **Q. Did the CSEP include other references to water efficiency?**

17 A. Dr. Marke qualified his question to mention the water-energy nexus, which was discussed  
18 as its own topic in a dedicated section of the CSEP. However, he fails to acknowledge

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<sup>45</sup> Missouri Public Service Commission Case No. ER-2014-0351, *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*, Revised Stipulation and Agreement and List of Issues, April 8, 2015, page 4.

<sup>46</sup> Hyman Direct (Revenue Requirement), page 12, lines 6-12.

<sup>47</sup> Marke Rebuttal (Revenue Requirement), pages 6-7, lines 11-22 and 1-6.

<sup>48</sup> *Ibid*, page 7, lines 3-4.

<sup>49</sup> Division of Energy. 2015. Missouri Comprehensive State Energy Plan. Pages 212-213.

<https://energy.mo.gov/energy/docs/MCSEP.pdf>.

<sup>50</sup> *Ibid*, page 213.

1 other discussions of the interaction between water use and energy use in the CSEP, such  
2 as this statement:

3 ... energy efficiency provides numerous benefits to consumers, utilities, and to  
4 society as a whole that go beyond the avoided costs of additional generation,  
5 transmission and distribution. Benefits include reductions in water usage, reduced  
6 air emissions, job creation, and public welfare.<sup>51</sup>

7 **Q. Did OPC participate in the process which led to the CSEP?**

8 A. Yes.<sup>52</sup>

9 **Q. Does Dr. Marke claim that rate design is also an important consideration in  
10 encouraging demand-side water efficiency?**

11 A. Yes.<sup>53</sup>

12 **Q. In his Rebuttal (Revenue Requirement) Testimony, does he acknowledge DE's  
13 recommendation to move to uniform residential volumetric rates for most MAWC  
14 districts in the present case, and to require the implementation of inclining  
15 residential block rates in a subsequent case?<sup>54</sup>**

16 A. No. Dr. Marke erroneously claims that DE did not make a recommendation with regards  
17 to inclining block rates.<sup>55</sup>

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<sup>51</sup> *Ibid*, page 80.

<sup>52</sup> *Ibid*, pages 278 and 279.

<sup>53</sup> Marke Rebuttal (Revenue Requirement), pages 11-12, lines 7-21 and 1-2.

<sup>54</sup> Missouri Public Service Commission Case Nos. WR-2015-0301 and SR-2015-0302, *In the Matter of Missouri-American Water Company's Request for Authority to Implement a General Rate Increase for Water and Sewer Service Provided in Missouri Service Areas*, Direct Testimony (Rate Design) of Martin R. Hyman on Behalf of the Missouri Department of Economic Development – Division of Energy, January 20, 2016, page 2, lines 7-10.

<sup>55</sup> Marke Rebuttal (Revenue Requirement), page 8, lines 1-6.

1 **Q. Did OPC conduct a bill frequency analysis to quantify the potential impact of**  
2 **moving to inclining block rates in this case?**

3 A. No.

4 **Q. You noted Dr. Marke's recommendation regarding the use of DNR's water resource**  
5 **planning process. Do you agree that DNR provides a more appropriate venue to**  
6 **discuss issues related to "least-cost resource planning" for MAWC?<sup>56</sup>**

7 A. I agree that environmental compliance planning should occur in consultation with DNR.  
8 However, while such planning should be considered in the Commission's decisions  
9 regarding allowable costs, the Commission has an independent obligation to ensure safe  
10 and adequate water service. Dr. Marke provides no justification as to why DNR is the  
11 more appropriate planning body, despite the Commission's jurisdiction over all investor-  
12 owned water utilities.<sup>57</sup>

13 **Q. What is your conclusion with respect to Dr. Marke's comments on your demand-**  
14 **side efficiency proposal?**

15 A. Dr. Marke's testimony inadequately addresses DE's demand-side efficiency proposal.  
16 His conclusions are not backed by his own original analyses; instead, his remarks  
17 mischaracterize the proposal and make numerous unjustified assertions on the facts  
18 surrounding the proposal.

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<sup>56</sup> *Ibid*, page 12, lines 13-17.

<sup>57</sup> §386.250(3), RSMo.

1 **IV. RATE DESIGN**

2 **A. RESPONSE TO COMPANY**

3 **1. CUSTOMER CHARGES AND UNCOLLECTIBLE ACCOUNTS**

4 **Q. How does the Company characterize your arguments regarding customer charges?**

5 A. Company witness Mr. Herbert alleges that I, "... support[] no increase to customer  
6 charges ...."<sup>58</sup> He further claims that I gave, "... no supporting evidence. Only [the]  
7 opinion that uncollectible accounts should not be included in customer charges."<sup>59</sup>

8 **Q. Is his characterization of your position on customer charges accurate?**

9 A. No. While I do not support the Company's proposed customer charge increases – and I  
10 support low customer charges on the principle of encouraging efficient consumption –  
11 this is not to say that I would oppose any customer charge increases ever. However, in  
12 this case, DE opposes an increase in the Company's customer charges not just based on  
13 cost causative concerns but also, as shown in my Direct Testimony, because the  
14 Company's proposal to significantly increase customer charges – coupled with its  
15 consolidation proposal – would create significant bill impacts that would be detrimental  
16 to customers.<sup>60</sup>

17 My Direct Testimony (Rate Design) also explains in detail why, "...the ideal water rate  
18 design to encourage conservation and efficiency would involve low customer charges and

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<sup>58</sup> Missouri Public Service Commission Case Nos. WR-2015-0301 and SR-2015-0302, *In the Matter of Missouri-American Water Company's Request for Authority to Implement a General Rate Increase for Water and Sewer Service Provided in Missouri Service Areas*, Rebuttal Testimony of Paul R. Herbert on Behalf of Missouri-American Water Company, February 19, 2016, page 8, line 20.

<sup>59</sup> *Ibid.*, page 9, lines 1-2.

<sup>60</sup> Hyman Direct (Rate Design), page 31, lines 7-16.

1           inclining variable rate blocks, with the customer and volumetric charges based on cost-  
2           of-service allocation, equity, gradualism and efficiency principles.”<sup>61</sup>

3       **Q.    When you discussed “cost of service,” what specific types of costs did you reference?**

4       A.    My reference to cost-of-service-based customer charges in a state such as Missouri was  
5           to customer charges which only recover dedicated customer-related costs.<sup>62</sup>

6       **Q.    What was the basis of your discussion?**

7       A.    My discussion was based on the American Water Works Association’s “Principles of  
8           Water Rates, Fees, and Charges” manual,<sup>63</sup> or what Mr. Herbert refers to as the “AWWA  
9           Manual M1.”<sup>64</sup> Using this manual as a reference, I clearly stated why customer charges  
10          should only recover dedicated customer-related costs – such as meter reading, billing, and  
11          meter and service line-related costs. I also explained why fixed charges – from a  
12          customer perspective – should not be confused with fixed accounting-related costs in  
13          cost-of-service rate setting, such as that used for MAWC.<sup>65</sup>

14      **Q.    Are there other considerations besides cost of service when setting customer**  
15      **charges?**

16      A.    Yes. As noted above, the Commission should consider principles of equity, efficiency,  
17          and gradualism. Disparities in customer charges between current or proposed districts  
18          could lead to inequities absent a cost-of-service-based justification. If customer charges  
19          are set too high, efficient consumption is not encouraged as well as it could be with lower

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<sup>61</sup> *Ibid*, page 3, lines 10-13.

<sup>62</sup> *Ibid*, page 4, lines 7-9.

<sup>63</sup> Zieburtz, Bill and Giardina, Rick. 2012. “Principles of Water Rates, Fees, and Charges.” American Water Works Association. AWWA Manual M1. Sixth ed. Denver: American Water Works Association.

<sup>64</sup> Herbert Rebuttal, page 8, line 2.

<sup>65</sup> Hyman Direct (Rate Design), pages 4-6, lines 1-20, 1-20, and 1-5.

1 customer charges. Additionally, a sudden increase in customer charges could lead to “rate  
2 shock.”

3 **Q. Given your detailed discussion of customer charges, is Mr. Herbert’s other  
4 statement – that it is only your, “...opinion that uncollectible accounts should not be  
5 included in customer charges”<sup>66</sup> – fair?**

6 A. No. As I explained above, customer charges should only recover dedicated customer-  
7 related costs. In cost-of-service rate design, these costs are recovered through customer  
8 charges based on the number of customers served by a utility or another  
9 “nonconsumptive” measure.<sup>67</sup> I noted in my Direct Rate Design Testimony that each  
10 customer within a customer class is not equally responsible for uncollectible expenses;  
11 given that such expenses generally vary with the level of revenues, uncollectible accounts  
12 should be recovered through variable charges.<sup>68</sup>

13 **Q. How does Mr. Herbert attempt to show that uncollectible accounts should be  
14 collected through customer charges?**

15 A. Mr. Herbert asserts that, “Uncollectible accounts do not vary with usage, they vary with  
16 the number of customers.”<sup>69</sup> In support of this statement, he provides a table showing  
17 write-offs by class,<sup>70</sup> leading to his conclusion that, “... the residential class is primarily  
18 responsible for uncollectible accounts and are properly allocated to customer costs based  
19 on the number of customers.”<sup>71</sup>

<sup>66</sup> Herbert Rebuttal, page 9, lines 1-2.

<sup>67</sup> AWWA Manual, pages 137-138.

<sup>68</sup> Hyman Direct (Rate Design), page 13, lines 7-13.

<sup>69</sup> Herbert Rebuttal, page 9, lines 6-7.

<sup>70</sup> *Ibid*, lines 11-16.

<sup>71</sup> *Ibid*, lines 18-20.

1 **Q. Does Mr. Herbert's table support his arguments?**

2 A. No. Showing that the residential class has the highest level of write-offs is not a  
3 demonstration of how cost allocation should occur, particularly since his table does not  
4 reference the number of customers per class, the volumetric sales per class, the revenues  
5 per class, or attempt to normalize the write-offs shown by any of these other metrics. Mr.  
6 Herbert also does not indicate if his data reference "write-offs" or "net write-offs." Mr.  
7 Herbert's incomplete analysis does not support his arguments.

8 **Q. Does Mr. Herbert provide any evidence to support his assertion that, "Allocating**  
9 **uncollectible accounts to volumetric rates as Mr. Martin [sic] suggests would be**  
10 **inequitable since large users would pay a disproportionate share of the cost?"<sup>72</sup>**

11 A. No.

12 **2. INCLINING BLOCK RATES**

13 **Q. What was Mr. Herbert's response to DE's inclining block rate proposal?**

14 A. Mr. Herbert claims that I proposed moving towards such a rate in the next case, then  
15 expresses his disagreement based on the price inelasticity of water and the ability of  
16 uniform volumetric rates to accomplish similar goals.<sup>73</sup>

17 **Q. Did you propose a movement towards inclining block rates in the next rate case?**

18 A. Not precisely. My Direct Rate Design Testimony indicates that, "... MAWC should be  
19 required to implement residential inclining block rates in a subsequent case" (emphasis  
20 added).<sup>74</sup>

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<sup>72</sup> *Ibid*, lines 20-22.

<sup>73</sup> *Ibid*, page 10, lines 1-5.

<sup>74</sup> Hyman Direct (Rate Design), page 6, lines 18-19.



1 **Q. What is Mr. Herbert's support for his assertion regarding the price inelasticity of**  
2 **water?**

3 A. Mr. Herbert provides no support for this statement.

4 **Q. Do you agree with Mr. Herbert that, "The single block rates that the Company and**  
5 **Staff have proposed in this case provide sufficient incentive for customers to**  
6 **conserve and limit discretionary usage?"**<sup>75</sup>

7 A. I agree that properly designed uniform volumetric rates can provide an incentive to  
8 encourage efficient water consumption, particularly as an initial transition away from the  
9 declining block rates in some of the Company's residential districts. A transition to  
10 uniform volumetric rates in the current case also avoids rate shock. However, I do not  
11 think that the Commission should ignore the possibility of properly designing inclining  
12 block rates, which could encourage even more efficient water use.

13 My Direct Rate Design Testimony cites the AWWA manual with regards to the benefits  
14 of uniform and inclining block rate designs,<sup>76</sup> and also indicates that there are American  
15 Water Company subsidiaries which use inclining block rate structures.<sup>77</sup>

16 **Q. Would the Company's rate design provide the incentives described by Mr. Herbert?**

17 A. No. Increasing customer charges in the manner proposed by the Company – along with  
18 the Company's volumetric rate design proposals – does not send appropriate price signals  
19 for purposes of encouraging efficient water consumption. I quantitatively show the results  
20 of the Company's proposed rate design in my Direct Rate Design Testimony.<sup>78</sup>

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<sup>75</sup> Herbert Rebuttal, page 10, lines 3-5.

<sup>76</sup> Hyman Direct (Rate Design), page 6, lines 7-12.

<sup>77</sup> *Ibid*, page 7, lines 1-5.

<sup>78</sup> *Ibid*, pages 23-32, lines 16-21, 1-18, 1-10, 1, 1, 1-2, 1-2, 1-23, 1-22, and 1-8.

1 **Q. What would you conclude with respect to Mr. Herbert's response to you in his**  
2 **Rebuttal Testimony?**

3 A. Mr. Herbert makes several inaccurate assertions regarding the positions of DE, and his  
4 only attempt at a counterargument – a table showing write-offs by class – is an  
5 incomplete analysis at best.

6 **B. RESPONSE TO STAFF**

7 **1. REVISED RATE DESIGN FOR PROPOSED SECOND WATER DISTRICT**

8 **Q. Has Staff revised the rate design which it proposed in its CCOS Report?**

9 A. Yes. In his Rebuttal Testimony (Rate Design), Staff witness Mr. Busch briefly describes  
10 these revisions as resulting from, "... an error in calculating total usage in the industrial  
11 class" in Staff's proposed second consolidated water district.<sup>79</sup> Mr. Busch also alludes to,  
12 "... other minor updates."<sup>80</sup>

13 **Q. What is the outcome of Staff's revision for the residential class in its proposed**  
14 **second district?**

15 A. Based on Staff's revisions, the residential class in its proposed second district would  
16 receive an overall rate increase as opposed to the previously proposed decrease.<sup>81</sup>

17 **Q. Does Mr. Busch explain the specific changes to the rate components for each class in**  
18 **this district – e.g., the customer and volumetric charges – in his testimony?**

19 A. No. The only schedule provided by Mr. Busch is a summary comparison of the costs of  
20 service to the revenues for the consolidated district, by class, under present and proposed

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<sup>79</sup> Missouri Public Service Commission Case Nos. WR-2015-0301 and SR-2015-0302, *In the Matter of Missouri-American Water Company's Request for Authority to Implement a General Rate Increase for Water and Sewer Service Provided in Missouri Service Areas*, Missouri Public Service Commission – Commission Staff Division, Rate Design Rebuttal Testimony of James A. Busch, February 19, 2016, page 26, lines 16-17.

<sup>80</sup> *Ibid*, line 22.

<sup>81</sup> *Ibid*, pages 26-27, lines 22-24 and 1.

1 rates.<sup>82</sup> The specific changes to the rates in this district are outlined in Mr. Busch's  
2 accompanying workpapers.<sup>83</sup>

3 **Q. Have you analyzed the potential residential bill impacts from Staff's modified**  
4 **proposal at the 5/8" and 3/4" meter sizes?**

5 A. Yes. My analysis is consistent with the methods described in both my Direct Rate  
6 Design<sup>84</sup> and Rebuttal Rate Design Testimonies.<sup>85</sup>

7 **Q. What residential customer and volumetric charges does Staff now propose for its**  
8 **second water district?**

9 A. Staff proposes the charges shown in Tables 1 and 2 below.

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<sup>82</sup> *Ibid*, Schedule 1 – District 2.

<sup>83</sup> *Ibid*, Workpapers, February 23, 2016, "Water District #2, St. Joseph, Platte County, Brunswick – Test Year Ending 12-31-2014 – Residential - Test Year Operating Revenues at Present Rates vs Proposed Rates."

<sup>84</sup> Hyman Direct (Rate Design), pages 24-25, lines 1-18 and 1-5.

<sup>85</sup> Missouri Public Service Commission Case Nos. WR-2015-0301 and SR-2015-0302, *In the Matter of Missouri-American Water Company's Request for Authority to Implement a General Rate Increase for Water and Sewer Service Provided in Missouri Service Areas*, Rebuttal Testimony (Rate Design) of Martin R. Hyman on Behalf of the Missouri Department of Economic Development – Division of Energy, February 19, 2016, pages 12-13, lines 5-12 and 1-6.

**Table 1. Current residential water customer charges compared to Staff's revised proposals, second proposed consolidated water district.<sup>86</sup>**

Meter Size	District	Current	Proposed	Change
5/8"	St. Joseph	\$10.65		3.76%
	Platte County	\$15.47	\$11.05	-28.57%
	Brunswick	\$22.06		-49.91%
3/4"	St. Joseph	\$13.63	\$12.00	-11.96%
1"	St. Joseph	\$19.32		-28.93%
	Platte County	\$28.06	\$13.73	-51.07%
	Brunswick	\$38.48		-64.32%
1-1/2"	St. Joseph	\$33.61	\$20.53	-38.92%
	Platte County	\$48.76		-57.90%
2"	St. Joseph	\$50.73	\$24.31	-52.08%
	Platte County	\$73.65		-66.99%
3"	St. Joseph	\$90.69	\$72.60	-19.95%

**Table 2. Current residential water volumetric charges compared to Staff's revised proposals, second proposed consolidated water district (price per hundred gallons).<sup>87</sup>**

District		Current	Proposed	Change
St. Joseph		\$0.49115		25.41%
Platte County	Block 1	\$0.77731		-20.76%
	Block 2	\$0.47700	\$0.61595	29.13%
Brunswick	Block 1	\$1.08500		-43.23%
	Block 2	\$0.75000		-17.87%

<sup>86</sup> Missouri Public Service Commission Case Nos. WR-2015-0301 and SR-2015-0302, *In the Matter of Missouri-American Water Company's Request for Authority to Implement a General Rate Increase for Water and Sewer Service Provided in Missouri Service Areas*, Detail of Test Year Operating Revenues at Present and Proposed Rates – By District For the Test Year Ended December 31, 2014, July 31, 2015, Schedule CAS-12-BRU, page 1, lines 2-14; Schedule CAS-12-PLW, page 1, lines 2-14; Schedule CAS-12-SJO, page 1, lines 2-14. Busch Rebuttal (Rate Design), Workpapers, February 23, 2016, "Water District #2, St. Joseph, Platte County, Brunswick – Test Year Ending 12-31-2014 – Residential - Test Year Operating Revenues at Present Rates vs Proposed Rates," "Minimum Charges" table, lines 1-6.

<sup>87</sup> Schedule CAS-12-BRU, page 1, lines 16-20; Schedule CAS-12-PLW, page 1, lines 16-20; Schedule CAS-12-SJO, page 1, lines 16-20. Busch Rebuttal (Rate Design), Workpapers, February 23, 2016, "Water District #2, St. Joseph, Platte County, Brunswick – Test Year Ending 12-31-2014 – Residential - Test Year Operating Revenues at Present Rates vs Proposed Rates," "Volumetric Charges" table, line 1.

1 As in my other rounds of testimony, meter sizes under which customers do not currently  
2 receive service are excluded from Table 1; similarly, rate blocks in which customers  
3 exhibit no current or anticipated usage under the Company's accounting schedules are  
4 excluded from Table 2.

5 **Q. What do you observe about Staff's revisions?**

6 A. Staff's proposal would lead to both volumetric and customer charge increases for  
7 residential customers in the current St. Joseph district at the 5/8" meter size. Additionally,  
8 within the three current districts comprising Staff's second proposed district, customer  
9 charges would only increase in St. Joseph, and only at the 5/8" meter size.

10 **Q. Does this difference in customer charges across meter sizes and current districts**  
11 **necessarily mean Staff's proposal is inequitable?**

12 A. It does not automatically mean that Staff's proposal is inequitable, since most residential  
13 customers in St. Joseph receive service through 5/8" meters<sup>88</sup> and Mr. Busch indicates  
14 that St. Joseph is the "larger district" within Staff's proposed hybrid district.<sup>89</sup> However,  
15 the only other current district receiving an increase to its residential customer charges  
16 under Staff's proposal is Tri-States, and this increase would occur for all meter sizes in  
17 that district.<sup>90</sup> Mr. Busch notes that Tri-States has about 3,000 customers<sup>91</sup> and that St.  
18 Joseph has about 30,000 customers;<sup>92</sup> absent a far higher cost of service for a district  
19 nearly 10 times larger than Tri-States, it is hard to imagine why customer charges for a

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<sup>88</sup> Missouri Public Service Commission Case Nos. WR-2015-0301 and SR-2015-0302, *In the Matter of Missouri-American Water Company's Request for Authority to Implement a General Rate Increase for Water and Sewer Service Provided in Missouri Service Areas*, Direct Testimony of Paul R. Herbert on Behalf of Missouri-American Water Company, July 31, 2015, Schedule C-SJO, page SJO-17, columns 1 and 3.

<sup>89</sup> Busch Rebuttal (Rate Design), pages 4-5, lines 22-23 and 1.

<sup>90</sup> Hyman Rebuttal (Rate Design), pages 8-9, Table 1.

<sup>91</sup> Busch Rebuttal (Rate Design), page 6, lines 5-7.

<sup>92</sup> *Ibid*, page 5, line 1.

1 single meter size in St. Joseph would now increase under Staff's revision. Therefore,  
2 some equity concerns remain.

3 **Q. Are there efficiency concerns with increasing the customer charge?**

4 A. Potentially. In a revenue-neutral scenario, increased revenue recovery through the  
5 customer charge would incent less efficient consumption, since the customer charge does  
6 not vary with consumption. However, on a percentage basis, Staff's proposed volumetric  
7 charge increase for current St. Joseph residential customers is higher than that proposed  
8 for the residential customer charge at the 5/8" meter size in that district. This relatively  
9 higher percentage increase in the volumetric rate is likely to avoid any concerns with  
10 dampening the price signal received by customers as a result of an increased customer  
11 charge.

12 **Q. What are the bill impacts of Staff's revised proposal for its proposed second**  
13 **district?**

14 A. The impacts of Staff's revised proposal within this district are shown in Tables 3a and 3b  
15 below for the 5/8" and 3/4" meter sizes. The bill impacts under current Company rates  
16 remain those shown in my Rebuttal Testimony (Rate Design).<sup>93</sup>

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<sup>93</sup> Hyman Rebuttal (Rate Design), pages 14 and 16, lines 1 and 2.

1 **Table 3a. Residential bill impacts under Staff's revised proposals, second proposed consolidated water district.**

Meter Size	Area	Winter Bill			Summer Bill		
		Average Use	100% Greater Use	50% Less Use	Average Use	100% Greater Use	50% Less Use
5/8"	St. Joseph	\$34.79	\$58.53	\$22.92	\$36.32	\$61.60	\$23.69
	Platte County	\$34.93	\$58.81	\$22.99	\$58.40	\$105.75	\$34.73
	Brunswick	\$26.03	\$41.01	\$18.54	\$26.20	\$41.36	\$18.63
3/4"	St. Joseph	\$35.74	\$59.48	\$23.87	\$37.27	\$62.55	\$24.64

2 **Table 3b. Comparison of current and proposed rate impacts on residential bills, second proposed consolidated water district.**

Meter Size	Area	Winter Bill			Summer Bill		
		Average Use	100% Greater Use	50% Less Use	Average Use	100% Greater Use	50% Less Use
5/8"	St. Joseph	17.61%	20.66%	13.95%	17.92%	20.88%	14.28%
	Platte County	-23.41%	-22.35%	-24.72%	-22.37%	-21.65%	-23.42%
	Brunswick	-46.27%	-45.20%	-47.41%	-46.25%	-45.18%	-47.39%
3/4"	St. Joseph	9.77%	15.52%	3.36%	10.33%	15.97%	3.92%

1 **Q. What do you observe from these results?**

2 A. Staff's revisions would lead to decreased residential customer bills in the current  
3 Brunswick and Platte County districts for the meter sizes and usages analyzed; the  
4 direction of this change is the same as that shown in my previous analysis, albeit to a  
5 lesser degree.<sup>94</sup> By contrast, Staff's revisions would now result in increased residential  
6 customer bills in the current St. Joseph district for the meter sizes and usages analyzed, as  
7 opposed to the decreases observed in my prior analysis.<sup>95</sup>

8 Additionally, there has been a change in the bill impacts which low use customers would  
9 experience in these three current districts. Staff's previous proposal would have resulted  
10 in less of a bill decrease for low use customers across both meter sizes in these three  
11 current districts.<sup>96</sup> The revisions result in greater bill decreases for low use residential  
12 customers in the current Brunswick and Platte County districts, as well as lower bill  
13 increases for such customers in the St. Joseph district across both meter sizes.

14 Finally, the range of bill impact changes at the 5/8" meter size for residential customers  
15 in these current districts has shifted upwards in both the winter and summer. Staff's  
16 revision has also resulted in a shift in the overall minima and/or maxima for the entire set  
17 of current districts, depending on the season and meter size examined.

18 **Q. What can you conclude from these results?**

19 A. The relatively higher residential bill impacts at the 5/8" level in the current St. Joseph  
20 district are a potential concern from an equity perspective, as confirmed by this analysis.  
21 However, Staff's proposal has increased the potential efficiency outcomes resulting from

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<sup>94</sup> *Ibid*, page 16, line 1.

<sup>95</sup> *Ibid*, pages 16 and 17, lines 1 and 2.

<sup>96</sup> *Ibid*.



1 its rates in these districts, despite the increased customer charge at the 5/8" level in the  
2 current St. Joseph district. This may, in part, be the result of the relatively larger  
3 volumetric charge increase which customers in this district would receive under Staff's  
4 revision.

5 **Q. Does the analysis of Staff's revision alter the recommendations from your Rebuttal**  
6 **Testimony (Rate Design) regarding Staff's proposed rate design?**

7 A. No. Without commenting on the merits of Staff's proposed district consolidation, DE still  
8 generally supports Staff's proposed rate design if the Commission approves Staff's  
9 proposed revenue requirement and district consolidation. Staff's revisions may result in  
10 better efficiency outcomes than its original rate design proposal. However, DE continues  
11 to recommend that the Commission request and consider a comparison of bill impacts  
12 between the various parties' district consolidation proposals under common revenue  
13 requirement and billing unit assumptions; revenue requirement is a key factor affecting  
14 the level at which rates are set and in determining the impacts of district consolidation.

15 **2. RATE STRUCTURE**

16 **Q. In his Rebuttal Testimony (Rate Design), how does Mr. Busch respond to the idea of**  
17 **inclining block rates?**

18 A. Mr. Busch agrees with the Company that such rates are not necessary.<sup>97</sup>

19 **Q. What reason does Mr. Busch give?**

20 A. He gives no reason in his testimony. To the extent that he agrees with Mr. Herbert's  
21 arguments, I addressed these contentions in my Rebuttal Testimony (Rate Design).<sup>98</sup>

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<sup>97</sup> Busch Rebuttal (Rate Design), page 24, lines 14-16.

<sup>98</sup> Hyman Rebuttal (Rate Design), pages 21-22, lines 10-20 and 1-8.

1 **Q. Mr. Busch also indicates his support for a working docket which would include**  
2 **inclining block rates and other rate design/class cost of service issues, should an**  
3 **inclining block rate be requested.<sup>99</sup> Would DE agree to such a docket?**

4 A. Yes, provided that MAWC agrees that such a docket can be completed in advance of the  
5 Company's next rate case.

6 **Q. In his testimony, Mr. Busch also discusses an alternative to the Company's RSM**  
7 **proposal. What is Mr. Busch's alternative?**

8 A. Mr. Busch discusses moving towards a rate design similar to a straight-fixed variable  
9 ("SFV") structure as an alternative to the Company's proposed RSM.<sup>100</sup>

10 **Q. What is a SFV rate design?**

11 A. Under a SFV rate design, the Company would collect most or all of its revenues through  
12 a higher customer charge than that proposed. Mr. Busch cites Mr. Herbert's Direct  
13 Testimony in stating that MAWC could potentially have a customer charge of  
14 approximately \$56.00 under such a rate design.<sup>101</sup> Mr. Herbert's testimony also indicates  
15 that the volumetric charge in such a situation would equal approximately \$0.039 per  
16 hundred gallons.<sup>102</sup>

17 **Q. Did Mr. Herbert also express an opinion regarding a SFV rate design in his Direct**  
18 **Testimony?**

19 A. Yes. Mr. Busch does not mention the subsequent question and answer in Mr. Herbert's  
20 testimony:

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<sup>99</sup> Busch Rebuttal (Rate Design), pages 24-25, lines 18-23 and 1-2.

<sup>100</sup> *Ibid*, page 23, lines 5-7.

<sup>101</sup> *Ibid*, lines 7-10, citing Herbert Direct, page 20, lines 14-19.

<sup>102</sup> Herbert Direct, page 20, lines 14-19.

1                   **Q. What is your opinion regarding such a rate structure?**

2                   A. This would be an alternative to an RSM by having a guarantee of recovering  
3                   the Company's fixed costs, **however low-use customers would be adversely**  
4                   **affected and there would be little incentive for customers to conserve.**  
5                   (Emphasis added.)<sup>103</sup>

6                   **Q. Why is it significant that Mr. Busch omitted this question and answer?**

7                   A. Earlier in his testimony, Mr. Busch countered one of the Company's arguments for the  
8                   RSM by stating that, "If the rate a customer pays for water increases in the future because  
9                   the customer used less today, **then the customer is not encouraged or rewarded for**  
10                  **conserving its usage**" (emphasis added).<sup>104</sup> However, movement towards a rate design  
11                  with a higher fixed customer charge (e.g., SFV rate design) would lead to a similar  
12                  outcome as described by Mr. Busch. Customers attempting to use water efficiently prior  
13                  to the implementation of a higher customer charge would not, once such a customer  
14                  charge was implemented, receive the future savings they had anticipated. Similarly,  
15                  customers could no longer anticipate as significant a level of savings from potential  
16                  future water efficiency measures in comparison to a lower customer charge. Customer  
17                  charges cannot be avoided through changes in consumption, absent a total disconnection  
18                  from the utility's system.

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<sup>103</sup> *Ibid*, lines 21-24.

<sup>104</sup> Busch Rebuttal (Rate Design), page 21, lines 4-6.

1 **Q. How does Mr. Busch address inconsistencies in Staff's position regarding the**  
2 **Company's RSM proposal, a SFV rate design, and Staff's customer charge**  
3 **proposals?**

4 A. Mr. Busch ends the section of his testimony on the Company's RSM proposal with the  
5 following question and answer:

6 **Q. Is Staff taking an inconsistent position by arguing against MAWC's**  
7 **proposed RSM, proposing an alternative mechanism similar to SFV, and**  
8 **supporting a lower customer charge?**

9 A. No. Staff proposed customer charge is a just and reasonable rate for  
10 MAWC's customers. Staff does not recommend the Commission approve  
11 MAWC's RSM proposal. However, Staff recognizes that an alternative may  
12 be considered and would support a higher customer charge rather than the  
13 RSM as proposed by MAWC. (Emphases added.)<sup>105</sup>

14 **Q. What do you conclude with respect to Staff's testimony regarding inclining block**  
15 **rates and a SFV rate design?**

16 A. Staff's position on inclining block rates is not supported by any unique arguments;  
17 however, DE is not opposed to the working docket alternative proposed by Staff which  
18 could consider such a rate design, so long as this docket could be concluded prior to the  
19 Company's next rate case.

20 DE disagrees with Staff's alternative proposal to the Company's RSM proposal, i.e.,  
21 movement towards a SFV rate design. Such a design does not encourage efficient water  
22 consumption and contradicts Staff's proposed customer charges in this case.

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<sup>105</sup> *Ibid*, page 23, lines 14-20.

1 **V. CONCLUSIONS**

2 **Q. Please summarize your conclusions and the positions of DE.**

3 A. I addressed comments on DE's demand-side efficiency proposal and DE's position on the  
4 Company's rate design. I also analyzed Staff's revised rate design for its second water  
5 district and responded to Staff's positions on inclining block rates and movement towards  
6 a SFV rate design.

7 DE is not opposed to the further consideration of the issues raised by Staff regarding the  
8 proposed demand-side efficiency requirement through a collaborative setting. DE also  
9 does not oppose the consideration of a mechanism to track, for potential future recovery,  
10 lost revenue associated with quantifiable declines in Company sales resulting from the  
11 implementation of Commission-mandated demand-side efficiency initiatives. Other  
12 arguments by the Company and OPC regarding DE's demand-side efficiency proposal  
13 are not supported by substantial evidence.

14 Based on my analysis of Staff's revised rate design proposal, DE still generally supports  
15 Staff's proposed rate design if the Commission approves Staff's proposed revenue  
16 requirement and district consolidation. However, based on policy considerations, DE  
17 disagrees with Staff's positions on inclining block rates and SFV rate design. The  
18 Company's arguments against DE's positions on customer charges, uncollectible  
19 accounts, and inclining block rates are not supported by substantial evidence.

20 **Q. Does this conclude your Surrebuttal Testimony in this case?**

21 A. Yes.

