

**FILED<sup>2</sup>**

DEC 11 2017

Missouri Public  
Service Commission

Exhibit No.: 106  
Issue(s): Capital Structure  
Witness: Matthew J. Barnes  
Sponsoring Party: MoPSC Staff  
Type of Exhibit: Rebuttal Testimony  
Case No.: WR-2017-0259  
Date Testimony Prepared: October 27, 2017

**MISSOURI PUBLIC SERVICE COMMISSION**

**COMMISSION STAFF DIVISION**

**WATER AND SEWER DEPARTMENT**

Staff Exhibit No. 106  
Date 11-30-17 Reporter KF  
File No. WR-2017-0259

**REBUTTAL TESTIMONY**

**OF**

**MATTHEW J. BARNES**

**INDIAN HILLS UTILITY OPERATING COMPANY, INC.**

**CASE NO. WR-2017-0259**

Jefferson City, Missouri  
October 2017

Staff  
Ex 106

1 REBUTTAL TESTIMONY

2 OF

3 MATTHEW J. BARNES

4 INDIAN HILLS UTILITY OPERATING COMPANY, INC.

5 CASE NO. WR-2017-0259

6 Q. Please state your name and business address.

7 A. Matthew J. Barnes, PO Box 360, Jefferson City, MO 65102

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

9 A. I am a Utility Regulatory Auditor IV in the Water and Sewer Department,  
10 Commission Staff Division of the Missouri Public Service Commission ("Commission").

11 Q. Please describe your work and educational background.

12 A. Please see Schedule MJB-r1.

13 Q. What is the purpose of your testimony?

14 A. The purpose of my testimony is to provide information to the Commission  
15 related to the various proposals for capital structure and Rate of Return (ROR) for Indian Hills  
16 Utility Operating Company, Inc. ("Indian Hills").

17 Q. What capital structure and ROR did the Office of Public Counsel ("OPC")  
18 witness Michael Gorman propose?

19 A. Mr. Gorman proposes a hypothetical capital structure of 50% equity and  
20 50% debt. Mr. Gorman proposes a ROR of 8.05% that consists of a Return on Equity (ROE)  
21 of 9.34% and an embedded cost of debt of 6.75% for Indian Hills.

22 Q. What embedded cost of debt did Mr. Gorman use and Staff use?

Rebuttal Testimony of  
Matthew J. Barnes

1 A. Mr. Gorman and Staff used an embedded cost of debt of 6.75% and 14%,  
2 respectively.

3 Q. Why did Staff use 14%?

4 A. Staff agreed to the 14.00% as part of the partial disposition agreement filed  
5 earlier in the case.

6 Q. What is the difference between the ROR resulting from Staff's capital structure  
7 (65% debt/35% equity) and Mr. Gorman's capital structure (50% debt/50% equity), assuming  
8 the Commission adopts a cost of debt of 14%?

9 A. Rate of return would decrease by 0.70% or 70 basis points. Staff's filed ROR  
10 is 12.37% and using OPC's capital structure and a cost of debt of 14% yields an ROR of  
11 11.67%. Please see Schedules MJB-r2 and MJB-r3 that show the respective ROR  
12 calculations.

13 Q. What is the difference between the ROR resulting from Staff's capital structure  
14 (65% debt/35% equity) and Mr. Gorman's capital structure (50% debt/50% equity) assuming  
15 the Commission adopts Mr. Gorman's proposed cost of debt of 6.75%?

16 A. Rate of return would increase by 0.39% or 39 basis points. Using Staff's  
17 capital structure and OPC's cost of debt results in and ROR of 7.66% compared to OPC's  
18 recommendation which results in an ROR of 8.05%. Please see Schedule MJB-r4 and  
19 MJB-r5 that show the respective ROR calculations.

20 Q. What is the impact on rates based on the various scenarios?

21 A. First, Staff calculated the cost of service for the four scenarios.

- 22 • The first scenario is Staff's filed position with a 14% cost of  
23 debt and 65% debt/35% equity capital structure. The cost of  
24 service is \$649,031, which is an increase of 572% in overall  
25 revenues.

Rebuttal Testimony of  
Matthew J. Barnes

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- The second scenario is Staff's 14% cost of debt and OPC's 50% debt/50% equity capital structure. The cost of service is \$652,957, which is an increase of 576% in overall revenues.
- The third scenario is OPC's cost of debt of 6.75% and Staff's 65% debt/35% equity capital structure. The cost of service is \$560,440, which is an increase of 481% in overall revenues.
- The final scenario is OPC's cost of debt of 6.75% and OPC's 50% debt/50% equity capital structure. The cost of service is \$584,803, which is an increase of 506% in overall revenues.

Based on those numbers, here is a table showing the impact on rates:

Scenario	Customer Charge	Commodity Charge	Average Bill (3,000 gallons)
14% cost of debt – 65% debt/35% equity	\$52.04	\$7.87	\$75.64
14% cost of debt – 50% debt/50% equity	\$53.33	\$7.59	\$76.10
6.75% cost of debt - 65% debt/35% equity	\$45.85	\$6.49	\$65.32
6.75% cost of debt - 50% debt/50% equity	\$48.56	\$6.53	\$68.16

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Q. Does this conclude your testimony?

A. Yes.

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

In The Matter of The Rate Increase Request Of             )  
Indian Hills Utility Operating Company, Inc.             )     Case No. WR-2017-0259

**AFFIDAVIT OF MATTHEW J. BARNES**

State of Missouri     )  
  ) ss  
County of Cole         )

**COMES NOW** Matthew J. Barnes, and on his oath declares that he is of sound mind and lawful age; that he contributed to the attached *Rebuttal Testimony*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

  
\_\_\_\_\_  
Matthew J. Barnes

**JURAT**

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 26th day of October, 2017.

  
\_\_\_\_\_  
NOTARY PUBLIC

<p align="center">DIANNA L. VAUGHT Notary Public - Notary Seal State of Missouri Commissioned for Cole County My Commission Expires: June 28, 2019 Commission Number: 15207377</p>
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MATTHEW J. BARNES

EDUCATION AND RATE CASE PARTICIPATION

Educational and Employment Background and Credentials

I am a Utility Regulatory Auditor IV in the Water and Sewer Department, Commission Staff Division for the Missouri Public Service Commission. I was promoted to Utility Regulatory Auditor IV in the Energy Resources Department, Commission Staff Division for the Missouri Public Service Commission in June 2008. I accepted the position of Utility Regulatory Auditor I/II/III in June 2003. I transferred to the position of Utility Regulatory Auditor IV in the Water and Sewer Department in June 2016.

In December 2002, I earned a Bachelor of Science Degree in Business Administration with an Emphasis in Accounting from Columbia College. In May 2005, I earned a Master's in Business Administration with an Emphasis in Accounting from William Woods University.

**RATE CASE PARTICIPATION**

<b>Date Filed</b>	<b>Issue</b>	<b>Case Number</b>	<b>Exhibit</b>	<b>Case Name</b>
09/08/2004	Merger with TXU Gas	GM20040607	Staff Recommendation	Atmos Energy Corporation
10/15/2004	Rate of Return	TC20021076	Supplemental Direct	BPS Telephone Company
06/28/2005	Finance Recommendation	EF20050387	Staff Recommendation	Kansas City Power and Light Company
06/28/2005	Finance Recommendation	EF20050388	Staff Recommendation	Kansas City Power and Light Company
08/31/2005	Finance Recommendation	EF20050498	Staff Recommendation	Kansas City Power and Light Company
11/15/2005	Spin-off of landline operations	IO20060086	Rebuttal	Sprint Nextel Corporation

MATTHEW J. BARNES

EDUCATION AND RATE CASE PARTICIPATION

03/08/2006	Spin-off of landline operations	TM20060272	Rebuttal	Alltel Missouri, Inc.
08/08/2006	Rate of Return	ER20060314	Direct	Kansas City Power & Light Company
09/08/2006	Rate of Return	ER20060314	Rebuttal	Kansas City Power & Light Company
09/13/2006	Rate of Return	GR20060387	Direct	Atmos Energy Corporation
10/06/2006	Rate of Return	ER20060314	Surrebuttal	Kansas City Power & Light Company
11/07/2006	Rate of Return	ER20060314	True-Up Direct	Kansas City Power & Light Company
11/13/2006	Rate of Return	GR20060387	Rebuttal	Atmos Energy Corporation
11/23/2006	Rate of Return	GR20060387	Surrebuttal	Atmos Energy Corporation
12/01/2006	Rate of Return	WR20060425	Direct	Algonquin Water Resources of Missouri LLC
12/28/2006	Rate of Return	WR20060425	Rebuttal	Algonquin Water Resources of Missouri LLC
01/12/2007	Rate of Return	WR20060425	Surrebuttal	Algonquin Water Resources of Missouri LLC
02/07/2007	Finance Recommendation	GF20070220	Staff Recommendation	Laclede Gas Company

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EDUCATION AND RATE CASE PARTICIPATION

05/04/2007	Rate of Return	GR20070208	Direct	Laclede Gas Company
07/24/2007	Rate of Return	ER20070291	Direct	Kansas City Power and Light Company
08/30/2007	Rate of Return	ER20070291	Rebuttal	Kansas City Power and Light Company
09/20/2007	Rate of Return	ER20070291	Surrebuttal	Kansas City Power and Light Company
11/02/2007	Rate of Return	ER20070291	True-up Direct	Kansas City Power and Light Company
02/01/2008	Finance Recommendation	EF20080214	Staff Recommendation	Kansas City Power and Light Company
02/22/2008	Rate of Return	ER20080093	Cost of Service Report	The Empire District Electric Company
04/04/2008	Rate of Return	ER20080093	Rebuttal Testimony	The Empire District Electric Company
04/25/2008	Rate of Return	ER20080093	Surrebuttal Testimony	The Empire District Electric Company
08/18/2008	Rate of Return	WR20080311	Cost of Service Report	Missouri-American Water Company
09/30/2008	Rate of Return	WR20080311	Rebuttal Testimony	Missouri-American Water Company
10/16/2008	Rate of Return	WR2008031	Surrebuttal Testimony	Missouri-American Water Company



MATTHEW J. BARNES

EDUCATION AND RATE CASE PARTICIPATION

02/26/2010	Fuel Adjustment Clause	ER20100130	Cost of Service Report	The Empire District Electric Company
04/02/2010	Fuel Adjustment Clause	ER20100130	Rebuttal Testimony	The Empire District Electric Company
04/23/2010	Fuel Adjustment Clause	ER20100130	Surrebuttal Testimony	The Empire District Electric Company
02/23/11	Fuel Adjustment Clause	ER20110004	Cost of Service Report	The Empire District Electric Company
04/22/11	Fuel Adjustment Clause	ER20110004	Rebuttal Testimony	The Empire District Electric Company
04/28/11	Fuel Adjustment Clause	ER20110004	Surrebuttal Testimony	The Empire District Electric Company
05/06/11	Fuel Adjustment Clause	ER20110004	True-up Direct Testimony	The Empire District Electric Company
10/21/11	Costs for the Phase-In Tariffs	ER20120024	Direct Testimony	KCP&L Greater Missouri Operations Company
11/17/11	Rate of Return	WR20110337	Cost of Service Report	Missouri-American Water Company
08/09/12	Fuel Adjustment Clause	ER20120175	Staff Report	KCP&L Greater Missouri Operations Company
09/12/12	Fuel Adjustment Clause	ER20120175	Rebuttal Testimony	KCP&L Greater Missouri Operations Company
10/10/12	Fuel Adjustment Clause	ER20120175	Surrebuttal Testimony	KCP&L Greater Missouri Operations Company
11/30/12	Fuel Adjustment Clause	ER20120345	Cost of Service Report	The Empire District Electric Company

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EDUCATION AND RATE CASE PARTICIPATION

12/13/14	Fuel Adjustment Clause	ER20120345	Class Cost of Service Report	The Empire District Electric Company
01/16/13	Fuel Adjustment Clause	ER20120345	Rebuttal Testimony	The Empire District Electric Company
02/14/13	Fuel Adjustment Clause	ER20120345	Surrebuttal Testimony	The Empire District Electric Company
12/05/14	Fuel Adjustment Clause	ER20140258	Cost of Service Report	Ameren Missouri
12/19/14	Fuel Adjustment Clause	ER20140258	Class Cost of Service Report	Ameren Missouri
01/16/15	Fuel Adjustment Clause	ER20140258	Rebuttal Testimony	Ameren Missouri
02/06/15	Fuel Adjustment Clause	ER20140258	Surrebuttal Testimony	Ameren Missouri
03/17/15	Fuel Adjustment Clause	ER20140258	True-up Direct Testimony	Ameren Missouri
07/15/16	Fuel Adjustment Clause	ER20160156	Staff Report Revenue Requirement Cost of Service	KCP&L Greater Missouri Operations Company
07/29/16	Fuel Adjustment Clause	ER20160156	Staff Report Rate Design	KCP&L Greater Missouri Operations Company
10/13/16	Rate of Return	SR20160202	Rebuttal Testimony	Raccoon Creek Utility Operating Company

Indian Hills Utility Operating Company, Inc.  
Case No.  
WR-2017-0269  
Test Year Ending March 31, 2017  
Capital Structure Schedule - Water

Line Number	A Description	B Dollar Amount	C Percentage of Total Capital Structure	D Embedded Cost of Capital	E Weighted Cost of Capital
1	Common Stock	\$643,298	35.00%	9.34%	3.269%
2	Other Security-Non Tax Deductible	\$0	0.00%	0.00%	0.000%
3	Preferred Stock	\$0	0.00%	0.00%	0.000%
4	Long Term Debt	\$1,194,699	65.00%	14.00%	9.100%
6	Short Term Debt	\$0	0.00%	0.00%	0.000%
6	Other Security-Tax Deductible	\$0	0.00%	0.00%	0.000%
7	<b>TOTAL CAPITALIZATION</b>	<b>\$1,837,997</b>	<b>100.00%</b>		<b>12.369%</b>

To PreTax Return Rate Schedule

Note: column C: is 6 positions with 4 that are displayed (if not totaled correctly, due to rounding)

Indian Hills Utility Operating Company, Inc.  
Case No.  
WR-2017-0259  
Test Year Ending March 31, 2017  
Capital Structure Schedule - Water

A	B	C	D	E	
Line Number	Description	Dollar Amount	Percentage of Total Capital Structure	Embedded Cost of Capital	Weighted Cost of Capital
1	Common Stock	\$918,998	50.00%	9.34%	4.670%
2	Other Security-Non Tax Deductible	\$0	0.00%	0.00%	0.000%
3	Preferred Stock	\$0	0.00%	0.00%	0.000%
4	Long Term Debt	\$918,998	50.00%	14.00%	7.000%
5	Short Term Debt	\$0	0.00%	0.00%	0.000%
6	Other Security-Tax Deductible	\$0	0.00%	0.00%	0.000%
7	<b>TOTAL CAPITALIZATION</b>	<b>\$1,837,996</b>	<b>100.00%</b>		<b>11.670%</b>

To PreTax Return Rate Schedule

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Indian Hills Utility Operating Company, Inc.  
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1	Common Stock	\$643,298	35.00%	9.34%	3.269%
2	Other Security-Non Tax Deductible	\$0	0.00%	0.00%	0.000%
3	Preferred Stock	\$0	0.00%	0.00%	0.000%
4	Long Term Debt	\$1,194,699	65.00%	6.75%	4.388%
5	Short Term Debt	\$0	0.00%	0.00%	0.000%
6	Other Security-Tax Deductible	\$0	0.00%	0.00%	0.000%
7	<b>TOTAL CAPITALIZATION</b>	<b>\$1,837,997</b>	<b>100.00%</b>		<b>7.667%</b>

To PreTax Return Rate Schedule

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Indian Hills Utility Operating Company, Inc.  
Case No.  
WR-2017-0259  
Test Year Ending March 31, 2017  
Capital Structure Schedule - Water

Line Number	A Description	B Dollar Amount	C Percentage of Total Capital Structure	D Embedded Cost of Capital	E Weighted Cost of Capital
1	Common Stock	\$918,998	50.00%	9.34%	4.670%
2	Other Security-Non Tax Deductible	\$0	0.00%	0.00%	0.000%
3	Preferred Stock	\$0	0.00%	0.00%	0.000%
4	Long Term Debt	\$918,998	50.00%	6.75%	3.375%
5	Short Term Debt	\$0	0.00%	0.00%	0.000%
6	Other Security-Tax Deductible	\$0	0.00%	0.00%	0.000%
7	<b>TOTAL CAPITALIZATION</b>	<b>\$1,837,996</b>	<b>100.00%</b>		<b>6.045%</b>

To PreTax Return Rate Schedule

Note: column C: is 6 positions with 4 that are displayed (if not totaled correctly, due to rounding)