

*Exhibit No.:*  
*Issue:* *Rate of Return*  
*Witness:* *Matthew J. Barnes*  
*Sponsoring Party:* *MoPSC Staff*  
*Type of Exhibit:* *Rebuttal Testimony*  
*Case No.:* *WR-2006-0425*  
*Date Testimony Prepared:* *December 28, 2006*

**MISSOURI PUBLIC SERVICE COMMISSION**  
**UTILITY SERVICES DIVISION**

**REBUTTAL TESTIMONY**

**OF**

**MATTHEW J. BARNES**

**ALGONQUIN WATER RESOURCES OF MISSOURI, LLC**

**CASE NOS. WR-2006-0425 & SR-2006-0426**  
**(Consolidated)**

*Jefferson City, Missouri*  
*December 2006*

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

In the Matter of the Tariff Filing Algonquin Water )  
Resources of Missouri, LLC to Implement a )  
General Rate Increase for Water and Sewer Service )  
Provided to Customers in Its Missouri Service )  
Areas. )

Case No. WR-2006-0425

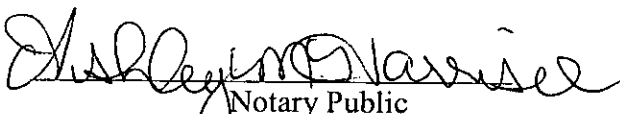
**AFFIDAVIT OF MATTHEW J. BARNES**

STATE OF MISSOURI       )  
                                  )  
COUNTY OF COLE       )       ss.

Matthew J. Barnes, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Rebuttal Testimony in question and answer form, consisting of 6 pages to be presented in the above case; that the answers in the foregoing Rebuttal Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of his knowledge and belief.

  
Matthew J. Barnes

Subscribed and sworn to before me this 27<sup>th</sup> day of December 2006

  
Notary Public



ASHLEY M. HARRISON  
Notary Public - State of Missouri  
Commission Expires August 31, 2010  
Cole County  
Commission #06898978

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**(Consolidated)**

Q. Please state your name.

A. My name is Matthew J. Barnes.

Q. Are you the same Matthew J. Barnes that filed Direct Testimony in this proceeding for the Staff of the Missouri Public Service Commission (Staff)?

A. Yes I am. I filed Direct Testimony on December 1, 2006, on the cost of capital and capital structure recommendation that the Staff is using in this case.

Q. In your Direct Testimony, did you recommend a fair and reasonable rate of return on the Missouri jurisdictional water and sewer utility rate base for Algonquin Water Resources of Missouri, LLC (AlgonquinMO)?

A. Yes, I did.

Q. What is the purpose of your Rebuttal Testimony?

A. The purpose of my Rebuttal Testimony is to respond to the Direct Testimony of Larry W. Loos. Mr. Loos sponsored rate-of-return testimony on behalf of AlgonquinMO. I will address the issue of the cost of common equity and capital structure to be applied to AlgonquinMO for ratemaking purposes in this proceeding.

**EXECUTIVE SUMMARY**

Q. Please provide an executive summary of your Rebuttal Testimony.

A. Mr. Loos recommends that the Commission adopt the capital structure of AlgonquinMO's parent (Algonquin Power Income Fund), which Staff believes is inappropriate, because the parent company is a Canadian company with its shares traded on the Toronto Stock Exchange. Also, Staff is not familiar with the Canadian capital markets. Additionally, this Company is not organized as a typical U.S. publicly traded water utility corporation. Unlike typical publicly traded U.S. water utility corporations, Algonquin Power Income Fund (Algonquin Power) is organized to distribute a majority of its free cash flow to its shareholders. Based on these reasons, Staff does not believe it is prudent to use AlgonquinMO's parent capital structure in this case.

Mr. Loos recommends a cost of debt of 6.54 percent for AlgonquinMO. Staff believes it is inappropriate to apply this debt cost to AlgonquinMO's capital structure because, as stated above, Algonquin Power is not organized as a typical publicly traded U.S. water utility corporation.

Mr. Loos develops a wide growth range for AlgonquinMO of 5.50 percent to 9.50 percent. Staff believes that Mr. Loos chose his own dates from *Value Line* to arrive at this large growth rate range of 400 basis points. I will explain later in my testimony that Mr. Loos failed to rely on the forecasts of analysts from *Value Line*, but instead he chose to use his own dates to determine his growth ranges, without any explanation.

Mr. Loos' dividend yield includes a forecasted annual yield and a historical book value dividend yield. It is not appropriate to use a historical book value dividend yield, because this is not the dividend yield investors expect to receive in the future. The Discounted Cash Flow (DCF) model is a forward-looking model that utilizes the dividends

1 expected over the next year and a current stock price to determine the dividend yield, which is  
2 then added to a growth rate. The sum of the dividend yield and the growth rate is the required  
3 rate of return that investors expect to receive in the future.

4 Mr. Loos recommends that a 12.00 percent return on equity (ROE) be applied to a  
5 common equity ratio of 65.18 percent. Mr. Loos did not perform a check of reasonableness of  
6 the result he obtained by using the DCF model. He failed to perform any analysis using either  
7 the Capital Asset Pricing Model (CAPM) or the risk premium model to check the  
8 reasonableness of his recommended ROE of 12.00 percent for AlgonquinMO.

9 I believe that I have recommended a reasonable capital structure and a reasonable rate-  
10 of-return for AlgonquinMO in the range of 7.03 percent to 7.51 percent and an ROE in the  
11 range of 8.06 percent to 9.06 percent to be applied to AlgonquinMO's rate base.

12 **RESPONSE TO LARRY W. LOOS' DIRECT TESTIMONY**

13 Q. Please explain why Mr. Loos' capital structure is inappropriate to use in this  
14 case.

15 A. Mr. Loos' capital structure is inappropriate to use in this case because he relies  
16 on Algonquin Power's consolidated capital structure for ratemaking purposes (Loos, Direct,  
17 Page 30, Lines 22-25). Algonquin Power is the parent of AlgonquinMO. Staff believes it is  
18 appropriate to use the consolidated capital structure in some cases, but in this case it is  
19 inappropriate, because Algonquin Power is incorporated in Canada and trades on the Toronto  
20 Stock Exchange. Also, Staff is not familiar with Canadian markets. Additionally, this  
21 Company is not organized as a typical publicly traded U.S. water utility corporation. Unlike  
22 publicly traded U.S. water utility corporations, Algonquin Power is organized to distribute a  
23 majority of its free cash flow to its shareholders. Based on these reasons, Staff does not

1 believe it is prudent to use AlgonquinMO's parent capital structure in this case. Staff chose to  
2 apply a hypothetical capital structure based on a comparable group of U.S. water utility  
3 companies to AlgonquinMO's rate base. The use of a hypothetical capital structure for  
4 AlgonquinMO based on a group of U.S. publicly traded water utility corporations should  
5 provide assurance to the Commission that AlgonquinMO's rates are just and reasonable and  
6 its rate-of-return is based on the cost of capital in U.S. capital markets.

7 Q. Do you believe that Mr. Loos chose his own dates from *Value Line* to arrive at  
8 a growth range of 5.50 percent to 9.50 percent?

9 A. Yes, I do. In Mr. Loos' Schedule 4, he determines historic and forecasted  
10 growth rates using different time periods from *Value Line*. Mr. Loos uses three different time  
11 periods to determine his historical growth rate. The two beginning periods are 1990-1996  
12 (7 years), and 1997-2000 (4 years). The ending period for the two beginning periods is 2001-  
13 2005. Mr. Loos uses three different time periods to determine his forecasted growth rate. The  
14 beginning period is 2001-2005 (5 years) and the ending periods are 2006 and 2009-2011,  
15 respectively. He is inconsistent with his selection of time periods to use to determine his  
16 growth rate. Mr. Loos does not explain in his testimony why he did not simply rely on *Value*  
17 *Line's* analyst 5-year and 10-year historical and forecasted growth rates as most investors do.  
18 Mr. Loos' selection of his own time periods without any explanation as to why he believes a  
19 majority of investors would or would not use these periods illustrates the flaws in his cost of  
20 capital analysis. At the very least, Mr. Loos should have simply relied on the historical 5-year  
21 and 10-year growth rates of *Value Line's* financial analysts. He also should have simply  
22 relied on the projected growth rates of *Value Line's* financial analysts--even though these can  
23 be too high in some circumstances. Mr. Loos is obviously attempting to arrive at a higher

1 growth rate, and therefore, a higher ROE. It is also unclear in Mr. Loos' testimony how he  
2 chose his growth rates in his Recap and his final DCF wide growth rate range of 5.50 percent  
3 to 9.50 percent shown on Schedule LWL-4. Please see Schedule 1 attached to this testimony  
4 for Mr. Loos' growth rates.

5 Q. In using the DCF model, is it appropriate to use a historical book value  
6 dividend yield?

7 A. No, it is not appropriate to use a historical book value dividend yield in the  
8 DCF model because the historical book value dividend yield is not what investors expect to  
9 receive in the future. As I mentioned previously, the DCF model is a forward-looking model  
10 that includes dividends expected over the next year and a current stock price as the two  
11 components of the dividend yield, which is added to a growth rate. Mr. Loos' use of a  
12 historical book value dividend yield is not supported by any financial literature that I am  
13 aware of.

14 Q. Did Mr. Loos use any other models to check the reasonableness of his DCF  
15 result?

16 A. No, he did not. It is common practice to test the reasonableness of an  
17 estimated ROE using other models. Mr. Loos should have used at least one other model, such  
18 as the CAPM, to check the reasonableness of his DCF result. The CAPM is widely used and  
19 recognized in regulatory finance. It is unclear in Mr. Loos' testimony why he did not perform  
20 a check of reasonableness for his DCF result to determine if his recommendation is just and  
21 reasonable.

22 **SUMMARY AND CONCLUSIONS**

23 Q. Please summarize your conclusions.



1           A.     The Commission should reject Mr. Loos' use of a consolidated capital  
2 structure. He does not use AlgonquinMO's own capital structure, but instead he relies on the  
3 capital structure of its parent, which is a Canadian company and is not organized as a typical  
4 publicly traded water utility corporation.

5           The Commission should not give any weight to Mr. Loos' high growth rates as it  
6 appears he chose different time periods to arrive at a wide growth rate range of 400 basis  
7 points. He does not explain why he did not simply rely on *Value Line's* analyst 5-year,  
8 10-year, and projected growth rates, as most investors do. Mr. Loos' use of a historical book  
9 value dividend yield to include in his DCF model is inappropriate because this is not what  
10 investors expect to receive in the future, and it is not supported by any financial literature that  
11 I am aware of. Mr. Loos failed to check the reasonableness of his DCF result with other cost  
12 of capital models recognized in utility finance, such as the CAPM.

13           Staff believes that a ROE in the range of 8.06 percent to 9.06 percent and an overall  
14 rate of return in the range of 7.03 percent to 7.51 percent is just and reasonable for  
15 AlgonquinMO.

16           Q.     Does this conclude your Rebuttal Testimony?

17           A.     Yes, it does.

**Algonquin Water Resources of Missouri**  
**Pro Forma Test Year Ended September 30, 2006**  
**Compound Growth Rates**  
**Summary**

UPDATED  
Schedule (LWL-4)  
Sheet 1 of 1

Line No.	Description	[A] Period Beginning Period Ending	[C] Historic		[F] Forecast	
			[D] 2001 - 2005		2001 - 2005	
			1990 - 1996 2001 - 2005	1997 - 2000 2001 - 2005	2001 - 2005 2006	2001 - 2005 2009 - 2011
1	Cash Flow per Share					
2	American States Water		3.50%	3.19%	7.66%	5.94%
3	Aqua America		8.69%	9.87%	8.71%	9.00%
4	California Water		2.33%	-0.43%	4.85%	4.50%
5	Southwest Water		7.26%	5.88%	1.29%	6.24%
6	Median		5.38%	4.53%	6.26%	6.09%
7	Earnings Per Share					
8	American States Water		0.87%	0.39%	11.06%	7.20%
9	Aqua America		8.61%	8.73%	8.08%	10.57%
10	California Water		0.07%	-4.12%	9.23%	5.16%
11	Southwest Water		11.34%	5.38%	0.55%	9.79%
12	Median		4.74%	2.89%	8.66%	8.50%
13	Dividends Per Share					
14	American States Water		1.27%	0.96%	1.05%	1.22%
15	Aqua America		5.32%	6.47%	8.13%	9.57%
16	California Water		1.62%	0.93%	0.71%	1.15%
17	Southwest Water		2.25%	10.14%	11.48%	9.33%
18	Median		1.94%	3.71%	4.59%	5.28%
19	Price Per Share					
20	American States Water		7.45%	7.44%		5.75%
21	Aqua America		16.63%	15.39%		8.61%
22	California Water		6.02%	2.62%		2.60%
23	Southwest Water		14.71%	15.76%		5.89%
24	Median		11.08%	11.42%		5.82%
25	Book Value Per Share					
26	American States Water		4.31%	4.48%	5.70%	4.81%
27	Aqua America		8.51%	10.45%	9.03%	8.13%
28	California Water		2.71%	2.04%	4.99%	5.11%
29	Southwest Water		7.86%	13.30%	9.28%	6.35%
30	Median		6.08%	7.46%	7.37%	5.73%

**Recap**

Cash Flow per Share 4.50% - 6.00%  
Earnings per Share 2.75% - 8.50%  
Dividends per Share 3.50% - 5.25%  
Price per Share 5.75% - 11.00%  
Book Value per Share 6.00% - 7.00%

DCF Growth Rate 5.50% to 9.50%

**Reference:**

Valueline Investment Survey, July 28, 2006