

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

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PUBLIC SERVICE  
COMMISSION

In the Matter of:

APPLICATION OF DELTA NATURAL )  
GAS CO., INC. FOR AN ADJUSTMENT )  
OF GAS RATES )

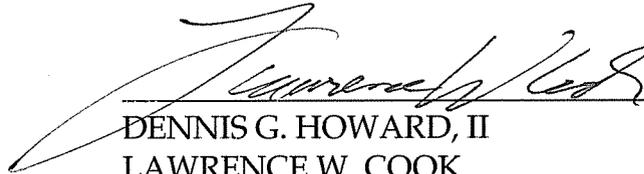
Case No. 2007-00089

ATTORNEY GENERAL'S RESPONSES TO  
DISCOVERY REQUESTS OF STAFF OF  
KENTUCKY PUBLIC SERVICE COMMISSION

Comes now the Attorney General of the Commonwealth of Kentucky, by  
and through his Office of Rate Intervention, and states as follows for his  
responses to the discovery requests of the staff of the Kentucky Public Service  
Commission.

Respectfully submitted,

GREGORY D. STUMBO  
ATTORNEY GENERAL



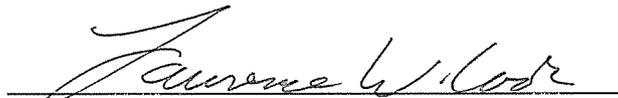
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*Certificate of Service and Filing*

Counsel certifies that the responses set forth herein are true and accurate to the best of his knowledge, information, and belief formed after a reasonable inquiry. Counsel further certifies that an original and ten photocopies of the foregoing were served and filed by hand delivery to Beth O'Donnell, Executive Director, Public Service Commission, 211 Sower Boulevard, Frankfort, Kentucky 40601; furthermore, it was served by mailing a true and correct copy of the same, first class postage prepaid, to:

Hon. Robert M. Watt, III  
Attorney At Law  
STOLL KEENON OGDEN, PLLC  
300 W. Vine St.  
Ste. 2100  
Lexington, KY 40507-1801

all on this 13<sup>th</sup> day of September, 2007.

  
Assistant Attorney General



**Attorney General's Response to the Public Service  
Commission's Requests for Information to the Attorney General  
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WITNESS RESPONSIBLE:

Michael J. Majoros

Question 1. Refer to the Direct Testimony of Michael J. Majoros, Jr. ("Majoros Testimony"), page 6. Provide specific citations and copies of the citations from generally accepted accounting principles and the Securities and Exchange Commission that require reporting of non-legal asset retirement obligations as a liability that is specific to ratepayers.

RESPONSE: SFAS No. 143 paragraph 73B and SFAS No. 71, paragraph 11.



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WITNESS RESPONSIBLE:

Michael J. Majoros

Question 2: Refer to the Majoros Testimony, page 10. Does Mr. Majoros believe it is reasonable to rely solely on his geometric mean turnover analysis when determining the appropriate depreciation rates for Delta? Explain the response.

RESPONSE: No. If the data is sufficient to obtain a reasonable result, it still requires expert judgment to make a recommendation.



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WITNESS RESPONSIBLE:  
Michael J. Majoros

- Question 3: Refer to the Majoros Testimony, page 17. While Mr. Majoros has determined that depreciation expense should be reduced by \$972,418, he has not recognized that proposed reduction as an adjustment to the accumulated depreciation balance included in his rate base calculations.
- (a) Explain in detail why the proposed adjustment to depreciation expense was not also reflected in the accumulated depreciation balance included in the rate base calculations.
  - (b) Was Mr. Majoros aware that in previous rate cases the Commission has included adjustments to depreciation expense when determining the balance for accumulated depreciation included in rate base calculations? Explain the response.
  - (c) What circumstances exist in this rate case that justifies a different approach in determining the accumulated depreciation balance?

RESPONSE: a., b. & c.: Mr. Majoros did adjust accumulated depreciation to reverse Mr. Seelye's adjustment for his proposed depreciation expense. See AG Adjustment No. 1, and page 5 of Mr. Majoros's testimony. Mr. Majoros did not reduce accumulated depreciation for the entire amount of his depreciation expense reduction because he concluded that what was in accumulated depreciation was already there and should not be removed just because future rates would be lower. In other words, ratepayers have already paid for that depreciation expense.



**Attorney General's Response to the Public Service  
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WITNESS RESPONSIBLE:

Michael J. Majoros

Question 4: Refer to the Majoros Testimony, pages 17 through 19. Mr. Majoros has included a customer growth adjustment based on discrepancies that he found in Delta's customer numbers. Is Mr. Majoros contending that the customer numbers that he found in the data responses, which were lower than the customer numbers provided in Delta's original testimony, indicate that Delta is gaining customers? Explain the response.

RESPONSE: No, Mr. Majoros does not believe Delta is gaining customers. His rationale for including the adjustment is explained in his testimony at pages 17-19.



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WITNESS RESPONSIBLE:

Michael J. Majoros

Question 5: Refer to the Majoros Testimony, page 20. Does Mr. Majoros believe it is reasonable to use a 3-year historic average to determine normalized pension expense? Explain the response.

RESPONSE: Yes, however Mr. Majoros is not opposed to an alternative historic average.



**Attorney General's Response to the Public Service  
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WITNESS RESPONSIBLE:  
Dr. J. Randall Woolridge

Question 6: Refer to the Direct Testimony of Dr. J. Randall Woolridge ("Woolridge Testimony"), pages 7 and 8. Explain why investors, as a result of the 2003 tax law change, would willingly give up that incremental increase in investment returns and give it to ratepayers vis a vis lower equity returns awarded to utilities.

RESPONSE: It is Dr. Woolridge's contention that the lowering of tax rates on dividend and capital gains income reduced investors' pre-tax return requirement relative to the pre-2003 years. If investors' require lower returns due to a reduction in taxes, there is no reason to compensate them with a return for taxes which they do not have to pay.



**Attorney General's Response to the Public Service  
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WITNESS RESPONSIBLE:  
Dr. J. Randall Woolridge

Question 7: Refer to the Woolridge Testimony, pages 8 and 9, and Exhibits JRW-2, JRW-6, and JRW-7.

- (a) Explain why it is appropriate to include Delta in the group of gas companies that serve as a proxy for Delta.
- (b) Was Atmos Energy inadvertently left off Exhibit JRW-2 or inadvertently included in Exhibits JRW-6 and JRW-7?
- (c) There are substantial size differences between Delta and several companies in the proxy group: AGL Resources has 2.2 million customers, Atmos Energy has 3.2 million customers, and WGL Holdings has over 1 million customers. Nicor, Inc does not appear to be in Dr. Blake's proxy group, but also has over 2 million customers. In terms of operating revenues, Atmos Energy has over \$5.5 billion; AGL Resources, New Jersey Resources, and WGL Holdings have over \$2 billion; and Laclede Group, Northwest Natural Gas and Piedmont Natural Gas have over \$1 billion. Delta's operating revenue is less than \$100 million. Explain why these companies are suitable proxies for Delta.

RESPONSE: (a) Delta's witness, Mr. Blake, selected the proxy group of companies which he felt were comparable to delta. I have elected to use his group.

(b) Atmos was included in both. The testimony at page 8 is incorrect.

(c) Delta's witness, Mr. Blake, selected the proxy group of companies which he felt were comparable to delta. I have elected to use his group. I have also conducted a risk analysis of Delta relative to the group and included a risk adjustment to my equity cost rate.



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WITNESS RESPONSIBLE:

Dr. J. Randall Woolridge

- Question 8: Refer to the Woolridge Testimony, pages 27 through 29, and Exhibit JRW-6, pages 3 through 5 of 5.
- (a) Explain why blending the mean and median values of 10-year, 5-year, and 1-year averages produces a meaningful estimate of growth rates.
  - (b) Explain how blending projected estimates of earnings, dividends, and book value growth rates into a single number provides a meaningful estimate of growth rates.

RESPONSE: a. Dr. Woolridge's objective is to find the central tendency for the figures shown. Means and medians are measures of central tendency for an array of numbers. Due to the presence of outliers, Dr. Woolridge is using both the means and medians. Growth over five- and ten- year periods are commonly provided to investors by Value Line and other investor information sources as indicators of historic growth.

b. According to the DCF model, DPS, EPS, and BVPS should all have the same rate of growth. Over short-term periods of time, these growth rates may differ. Dr. Woolridge is attempting to gauge an overall long-term rate of growth for all three.



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WITNESS RESPONSIBLE:

Dr. J. Randall Woolridge

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Question 9: Refer to the Woolridge Testimony, pages 36 through 54, and Exhibit JRW-7, page 3 of 5.

- (a) Exhibit JRW-7 does not contain references for all of the entries. Provide the references for all the exhibit entries.
- (b) Explain why it is appropriate to use risk premium estimates based upon the geometric mean in the context of obtaining forward looking market risk premiums.
- (c) Under the exhibit heading "Puzzle Research," there is wide disparity between the various risk premium entries. Provide a copy of the Mehra and Prescott paper referenced on page 37 and a copy of each of the studies in this subsection.
- (d) Under the exhibit heading "Puzzle Research," the reported risk premium estimates appear to be very sensitive to the historical time period used to make the calculations. Explain why it is appropriate to use studies that rely on relatively recent or short historical time periods for purposes of forward looking estimates.
- (e) Provide a copy of each of the studies listed in the Surveys and Social Security subsections of the Exhibit JRW-7 and explain why it is appropriate to use each study in the context of the present rate case.
- (f) There is a substantial difference between the Ibbotson and Cheng and the Woolridge risk premium estimates using the Building Block approach. Provide an explanation of the source of these differences and a copy of the Ibbotson and Cheng study.
- (g) If the Ibbotson SBBi yearbook 2007 contains any discussion of estimating and using the ex ante approaches and/or a discussion comparing the ex ante and historical approach to calculating risk premiums (i.e. appropriate methodologies for the analyst), provide those discussions.

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- (h) Provide the historical data from the Ibbotson SBBI Yearbook 2007 which is used to derive the historical entries 6.50 percent and 5.00 percent.
- (i) Provide an explanation of whether any of the Exhibit JRW-7 entries have been adjusted for inflation in any way. If so, further explain which entries and how the adjustment was performed.
- (j) A few of the Exhibit JRW-7 entries are almost 6 years old. For those exhibit entries that were published prior to 2006, explain why they are still valid for use in current risk premium analysis.

RESPONSE: a. SHOVEN, JOHN B. 2001. "What Are Reasonable Long-Run Rates of Return to Expect on Equities?" *Estimating the Real Rate of Return on Stocks over the Long Term*, presented to the Social Security Advisory Board, August.

BRAD CORNELL, "Equity Risk Premium Forum," AIMR, 11/8/01, pp. 38-41.

JOHN CAMPBELL, 2001. "Valuation Ratios and the Long-Run Stock Market Outlook: An Update." Working paper #8221, National Bureau of Economic Research. Forthcoming in *Advances in Behavioral Finance, Vol. II*, edited by Nicholas Barberis and Richard Thaler, Russell Sage Foundation, 2003.

PETER DIAMOND. 2001. "What Stock Market Returns to Expect for the Future: An Update," in *Estimating the Real Rate of Return on Stocks over the Long Term*, presented to the Social Security Advisory Board, August.

SOCIAL SECURITY ADVISORY BOARD. *Estimating the Real Rate of Return on Stocks over the Long Term*, 2001.

ROBERT HARRIS AND FELICIA MARSTON. 2001. "The Market Risk Premium: Expectational Estimates Using Analysts' Forecasts," *Journal of Applied Finance* 11(1): 6-16.

SIEGEL, JEREMY J. 1999. "The Shrinking Equity Premium," *Journal of Portfolio Management* 26(1): 10-17.

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ARNOTT, ROBERT D., AND PETER L. BERNSTEIN. 2002. "What Risk Premium Is 'Normal'?" *Financial Analysts Journal* 58(2): 64-85.

IBBOTSON ASSOCIATES, 2007 SBBI Year Book.

EUGENE F. FAMA AND KENNETH R. FRENCH, "The Equity Premium," *The Journal of Finance*, (April 2002).

RICHARD DERRIG AND ELISHA ORR, "Equity Risk Premium: Expectations Great and Small," Working Paper (version 3.0), Automobile Insurers Bureau of Massachusetts, August 28, 2003.

DUKE UNIVERSITY AND CFO MAGAZINE CFO SURVEY, [www.cfosurvey.org](http://www.cfosurvey.org), March 2007.

ROGER IBBOTSON AND PENG CHEN, "Long Run Returns: Participating in the Real Economy," *Financial Analysts Journal*, January 2003.

ANTTI ILMANEN, "Expected Returns on Stocks and Bonds," *Journal of Portfolio Management*, (Winter 2003), p. 11.

JAMES CLAUD AND JACOB THOMAS, "Equity Risk Premia as Low as Three Percent? Empirical Evidence from Analysts' Earnings Forecasts for Domestic and International Stock Market," *Journal of Finance*. (October 2001).

CORNELL, BRADFORD. 1999. *The Equity Risk Premium: The Long-Run Future of the Stock Market*. New York: John Wiley & Sons.

ELROY DIMSON, PAUL MARSH, AND MIKE STAUNTON, "New Evidence puts Risk Premium in Context," *Corporate Finance* (March 2003)

CONSTANTINIDES, GEORGE M. 2002. "Rational Asset Prices," *Journal of Finance* 57(4): 1567-91.

IVO WELCH, 2001/2005 "The Equity Risk Premium Consensus Forecast Revisited," (September 2001). Cowles Foundation Discussion Paper No. 1325.

FEDERAL RESERVE BANK OF PHILADELPHIA, *Survey of Professional Forecasters*, February 13, 2007.

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MARC H. GOEDHART, TIMOTHY M. KOLLER, AND ZANE D. WILLIAMS,  
"The Real Cost of Equity," *McKinsey on Finance* (Autumn 2002), p.14.

b. There are many issues with using historical return data to estimate a forward-looking equity risk premium. These issues are explained in Dr. Woolridge's testimony from pages 60-67. One of these issues is the geometric versus arithmetic mean.

c. The studies are provided on the CD.

d. See the table below. The risk premium studies, especially those involving puzzle research, cover very long time periods.

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**Equity Risk Premium Studies**

Study Authors	Date	Time Period Of Study	Methodology
<b>Historic</b>			
Ibbotson	2007	1926-2006	Historical Stock Returns - Bond Returns
<b>Puzzle Research</b>			
Claus Thomas	2001	1985-1998	Abnormal Earnings Model
Arnott and Bernstein	2002	1810-2001	Fundamentals - Div Yld + Growth Historical Returns & Fund.- P/D & P/E
Constantinides	2002	1872-2000	
Dimson, Marsh, and Staunton	2002	1900-2001	Historical Returns & Fund. DCF Fund. DCF with EPS and DPS Growth
Fama French	2002	1951-2000	Fund. DCF with Analysts' EPS Growth
Harris & Marston	2001	1982-1998	Growth
Siegel	2002	1802-2001	Historical Earnings Yield
<b>Surveys</b>			
Survey of Financial Forecasters	2007	10 Year Projection	62 Financial Forecasters
Duke - CFO Magazine Survey	2007	10 Year Projection	Approximately 500 CFOs
Welch - Academics	2005	30 Year Forecast	Random Academics
<b>Social Security</b>			
Office of Chief Actuary		1900-1995	
John Campbell	2001	1860-2000	Historical (D/P & Earnings Growth)
		75 Year Forecast	
Peter Diamond	2001	75 Year Forecast	Fund. (D/P, GDP Growth)
John Shoven	2001	75 Year Forecast	Fund. (D/P, P/E, GDP Growth)
<b>Building Block</b>			
Ibbotson and Chen	2003	1926-2000	Historical (D/P & Earnings Growth)
Woolridge	2007	2007	Current (D/P & Earnings Growth)
<b>Other Studies</b>			
McKinsey	2002	1962-2002	Fund. (P/E, D/P, & Earnings Growth)

e. The surveys are provided on the CD. These represent all of the studies and surveys known to Dr. Woolridge which have been published over the past decade.

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- f. Dr. Woolridge's approach uses current market data, while Ibbotson uses historical data.
- g. The Ibbotson 2007 summary is provided on the CD.
- h. The Ibbotson 2007 summary is provided on the CD.
- i. None of the Exhibit JRW-7 entries have been adjusted for inflation in any way.
- j. As shown in response to part (d), most of these studies used data spanning multiple decades to arrive at their equity risk premium results. Therefore, the publication date is not an indication of the equity risk premium at a particular point in time.



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WITNESS RESPONSIBLE:

Dr. J. Randall Woolridge

Question 10:           Refer to the Woolridge Testimony, page 40. Provide a copy of the  
Derrig and Orr paper.

RESPONSE:            The requested article is provide on the CD.



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WITNESS RESPONSIBLE:  
Dr. J. Randall Woolridge

Question 11: Refer to the Woolridge Testimony, pages 41 through 46.

- a. Were geometric averages used in any of the calculations?
- b. Provide a copy of both the Ibbotson and Cheng and the Ilmanen papers referenced on page 41.
- c. Does the Goedhart, Koller and Williams paper referenced on page 45 and Exhibit JRW-7, page 3 of 5, use the geometric average of any variables used in calculating the risk premium found in the exhibit? Provide a copy of the paper.

RESPONSE:

- a. Yes, for GDP growth.
- b. They are provided on the CD.
- c. No. The article is provided on the CD.



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WITNESS RESPONSIBLE:  
Dr. J. Randall Woolridge

Question 12: Refer to the Woolridge Testimony, pages 49 through 51. Explain why the rationale for the reasonableness of Dr. Woolridge's recommendation is not circular and self-fulfilling when the many of the studies that are used in reaching his Capital Asset Pricing Model estimates are also used as benchmarks for reasonableness.

RESPONSE: The recommendation is not circular and self-fulfilling. Dr. Woolridge uses the results from nearly twenty studies in reaching his CAP-M estimates, only three of which are cited between pages 49 and 51.



**Attorney General's Response to the Public Service  
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WITNESS RESPONSIBLE:  
Charles W. King

Question 13: Refer to the Direct Testimony of Charles W. King ("King Testimony"), pages 7 through 10.

- (a) Did Mr. King review Delta's response to the Commission Staff's Second Data Request dated June 7, 2007, Item 22, concerning any cost and benefit analysis of Delta's proposed conservation and efficiency program?
  - (i) If Mr. King did review the response, explain why Mr. King states on page 7 that Delta did not provide a cost and benefit analysis.
  - (ii) If Mr. King did not review the response, explain why the data response was not included in Mr. King's review and analysis.
  
- (b) Has Mr. King reviewed the entire text of KRS 278.285 in conjunction with the preparation of his direct testimony? Explain the response.
  
- (c) Was Mr. King aware that KRS 278.285(1)(c) and 278.285(2) allow for the recovery of lost revenues resulting from the implementation of demand side management ("DSM") programs?
  
- (d) Was Mr. King aware that the Commission has approved DSM cost recovery mechanisms for investor-owned electric and natural gas utilities that include a lost revenue recovery component? Explain the response.

RESPONSE: a. Yes. Mr. King did review this data response. His statement on page 7 is that he did not find a cost-benefit analysis in the filing.

b. Yes.

c. Yes.

d. Yes.