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May 27, 2016

Aaron Greenwell
Acting Executive Director
Public Service Commission
211 Sower Blvd.
Frankfort, KY 40601

Re: Atmos Energy Corporation
Case No. 2015-00343

Dear Mr. Greenwell:

Atmos Energy submits for filing it rebuttal testimony. I certify that the electronic documents are true and correct copies of the original documents.

If you have any questions about this filing, please contact me.

Submitted By:

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MARTIN, M. A.

BEFORE THE PUBLIC SERVICE COMMISSION

COMMONWEALTH OF KENTUCKY

APPLICATION OF ATMOS ENERGY	)	
	)	
CORPORATION FOR AN ADJUSTMENT	)	**Case No. 2015-00343**
	)	
OF RATES AND TARIFF MODIFICATIONS	)	

<u>REBUTTAL TESTIMONY OF MARK A. MARTIN</u>

I. <u>INTRODUCTION</u>

Q. PLEASE STATE YOUR NAME, POSITION AND BUSINESS ADDRESS.

A. My name is Mark A. Martin. I am Vice President – Rates and Regulatory Affairs for the Kentucky/Mid-States Division of Atmos Energy Corporation ("Atmos Energy" or the "Company"). My business address is 3275 Highland Pointe Drive, Owensboro, Kentucky, 42303.

Q. ARE YOU THE SAME MARK A. MARTIN THAT SUBMITTED DIRECT TESTIMONY IN THIS PROCEEDING?

A. Yes.

Q. HAVE YOU REVIEWED THE TESTIMONY OF THE INTERVENING PARTIES?

A. Yes.

II. PURPOSE AND SUMMARY OF REBUTTAL TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. My rebuttal testimony has three primary purposes. First, I will discuss the Attorney General's proposed adjustments related to rate case expense. Second, I will discuss an alternative to alleviate the Attorney General's concerns that they have incurred the costs of multiple experts for this filing and the resources required of the Commission and Staff addressing this filing. Finally, I will rebut Mr. Kollen's testimony regarding the Company's proposed increase to its R&D rider.

III. RATE CASE EXPENSE

Q. HAVE YOU REVEIWED THE TESTIMONY OF MR. KOLLEN?

A. Yes.

Q. HAS MR. KOLLEN PROPOSED AN ADJUSTMENT RELATED TO RATE CASE EXPENSE IN THIS CASE?

A. Yes.

Q. PLEASE DESCRIBE MR. KOLLEN'S PROPOSED ADJUSTMENT RELATED TO RATE CASE EXPENSE IN THIS CASE.

A. Mr. Kollen proposes that the Company's request to recover rate case expense be denied, thereby reducing rate base by $351,682 and reducing operating expenses by $234,455.

Q. WHAT IS THE RATIONALE FOR MR. KOLLEN'S OPPOSITION TO THE COMPANY'S RECOVERY OF RATE CASE EXPENSE?

A. Mr. Kollen does not believe that the Company should have filed this rate case, and therefore, should not recover the expenses related to this case.

Q. DO YOU AGREE WITH MR. KOLLEN'S PROPOSED ADJUSTMENT RELATED TO RATE CASE EXPENSE IN THIS CASE?

A. No.

Q. WHY DO YOU DISAGREE WITH MR. KOLLEN'S ADJUSTMENT TO REMOVE RATE CASE EXPENSE?

A. Any utility is allowed to file an application for a rate adjustment at its discretion. Kentucky law allows a utility to recover its prudent costs of service and establish fair, just and reasonable rates. The standard for reasonableness is not based on the expense the Attorney General spends on expert witnesses. Mr. Kollen bases his objection on a standard that is unrelated to the determination of the reasonableness of Atmos Energy's rate request. The decision to intervene and the amount of money allocated for expert witnesses are purely in the discretion of the Office of the Attorney General.

Additionally, Mr. Kollen's adjustment is based on his professed belief that the Company's filing is unwarranted simply because Mr. Kollen disagrees with the Company's proposed changes to ROE and capital structure. The Company's witnesses on these issues are experienced, well-qualified and have fully explained and supported their positions. Mr. Kollen's experience and qualification as an expert on these specific issues, on the other hand, appears limited.

The five most recent regulatory proceedings involving natural gas in which Mr. Kollen has testified were all in Georgia and occurred in 2008(2), 2009(1) and 2010(1). The only recent natural gas regulatory hearing Mr. Kollen participated in was in 2016 and he served as a panel witness in a proceeding to approve a merger of companies before the George Public Service Commission.[1]

Q. PLEASE DESCRIBE THE FUNDAMENTAL FLAW IN MR. KOLLEN'S CRITICISM OF THE COMPANY'S REQUESTED INCREASE?

A. Mr. Kollen criticizes the Company for filing for an increase in ROE and an increase in the equity component of the Company's capital structure that are different than those approved in Case No. 2013-00148, in part due to the fact that it is "less than two years after the Commission decided these two issues".[2] This criticism is curious given the fact that the Attorney General's other expert, Mr. Baudino, recommends an even greater change in ROE (80 basis points versus 70 basis points) as well as an increase to the equity component of capital structure that is much closer to the Company's proposal than it is to the order in Case No. 2013-00148.

Q. WERE THERE OTHER FACTORS INVOLVED IN THE COMPANY'S DECISION TO FILE THIS CASE?

A. Yes. The Company's new depreciation study, and the filing and approval of those rates, was an important consideration in this rate case filing. The Company's PLR ruling from the Internal Revenue Service and the desire of the Company to

[1] *See* Case No. 2015-00343, *AG's Responses to Atmos Energy Corporation's First Data Request*, Item 1, 5/13/16.
[2] Kollen Direct at 33.

incorporate that ruling in its rate case for purposes of clarity was another factor influencing this filing. The Company has also proposed a new methodology to compute its weather normalization adjustment (WNA) which ultimately needs to be consistently used in the setting of rates. Finally, the Company has or will spend approximately $62,500,000 in non-PRP capital investment since the end of its last test year (November 2014) through the end of this test year (February 2017). These factors, in addition to the Cost of Service items, led the Company to exercise its right under applicable Kentucky law to request, collect and receive fair, just and reasonable rates for the services rendered. The Company will also point out that it is left with few options for recovering non-PRP investment, resetting billing determinants and approving other items, such as the changes to the R&D rider, updated WNA factors and the proposed cash-out language except through a rate case.

Q. MR. KOLLEN HAS EXPRESSED A CONCERN THAT THE ATTORNEY GENERAL HAS INCURRED THE COSTS OF MULTIPLE EXPERTS FOR THIS FILING AND THAT THE COMMISSION AND STAFF HAVE BEEN FORCED TO EXPEND THEIR LIMITED RESOURCES ADDRESSING THIS FILING. IS THERE AN ALTERNATIVE APPROACH THAT WOULD MITIGATE THESE EXPENSES?

A. Yes. The Company believes that an annual rate stabilization mechanism would make the rate review process more simplistic and formulaic as well as eliminating the need to expend the OAG's resources on multiple experts.

Q. PLEASE EXPLAIN.

A. As mentioned in my direct testimony, the Company has briefly discussed rate stabilization and believes that such a mechanism would be successful in Kentucky. Such a mechanism could create a simple, formulaic filing plan that would be agreed upon prior to the initial annual filing. This process would help alleviate the resource limitations alleged by the OAG. The Company would be open to an annual review of rates similar to programs in Louisiana, Mississippi, Tennessee and Texas in which the Company is a participant. The Company was also successful in seeking commission approval in Georgia for a rate stabilization mechanism prior to the sale of assets in that state. According to the American Gas Association (AGA), rate stabilization mechanisms appear to be most prevalent in the southeast and the Company has six such mechanisms in effect.

Q. HAVE ANNUAL RATE STABILIZATION MECHANISMS BEEN SUCCESSFUL IN THE JURISDICTIONS THAT THE COMPANY SERVES?

A. Yes. The process has become largely formulaic with prescribed information being filed and reviewed on an annual basis. The result is an annual change in rates which can result from an increase or decrease in revenue requirement.

Q. DOES A SIMILAR MECHANISM ALREADY EXIST IN KENTUCKY?

A. Yes. The Company's PRP as well as the PRPs of other Kentucky LDCs have a simple formulaic approach that is akin to rate stabilization.

Q. DO YOU BELIEVE A RATE STABILIZATION MECHANISM WOULD BE APPROPRIATE FOR THE COMPANY'S KENTUCKY OPERATIONS?

A. Yes. A process similar to those utilized in some of the other jurisdictions where the Company operates would provide for a regularly scheduled rate review that will cost less and adjust the rates each year in a more expedited manner to actually achieve the results contemplated by the Commission's rate orders.

IV. R&D RIDER

Q. HAS MR. KOLLEN PROPOSED AN ADJUSTMENT RELATED TO THE COMPANY'S R&D RIDER IN THIS CASE?

A. Yes.

Q. PLEASE DESCRIBE MR. KOLLEN'S PROPOSED ADJUSTMENT RELATED TO THE COMPANY'S R&D RIDER IN THIS CASE.

A. Mr. Kollen proposes that the Commission reject the Company's proposed increase in the R&D Rider unit charge.

Q. DOES THE COMPANY AGREE WITH MR. KOLLEN'S PROPOSED ADJUSTMENT RELATED TO THE COMPANY'S R&D RIDER IN THIS CASE?

A. No.

Q. WHAT WAS THE PRIMARY REASON FOR MR. KOLLEN TO OPPOSE THE INCREASE IN THE R&D RIDER UNIT CHARGE?

A. Mr. Kollen testified that the Company identified no quantifiable benefits resulting from the R&D Rider unit charge.

Q. DO YOU BELIEVE THAT BENEFITS EXIST?

A. Yes. While the Company does not specifically track the benefits/savings that Mr. Kollen requested, it is somewhat intuitive that customer benefits and savings exist from R&D efforts. The Company believes that its customers have benefited from R&D initiatives.

Q. **PLEASE EXPLAIN.**

A. The Company believes that R&D initiatives develop technologies that result in benefits that accrue almost entirely to gas consumers. These benefits include increased safety, enhanced deliverability, contained costs for distribution O&M, enhanced environmental quality, and greater system integrity through development of distribution operations technologies; as well as, lower energy use and energy bills and enhanced venting safety through the development of improved appliances and equipment that are lower cost or operate more efficiently. Maintaining R&D programs is absolutely critical for the continued safe transportation and efficient and affordable use of natural gas as a current and future environmentally benign, domestically produced energy source for the Commonwealth of Kentucky and for the United States. The Company's participation in this program will provide direct benefits to its customers and contribute to the needed funding of these critical R&D initiatives.

Q. **PLEASE DISCUSS THE COMPANY'S PARTICIPATION WITH GTI.**

A. The Company provides financial support for gas operations and end-use efficiency R&D which are directed through two industry-led consortia: Operations Technology Development ("OTD") and Utilization Technology Development ("UTD").

Q. PLEASE DISCUSS OTD AND UTD IN MORE DETAIL.

A. UTD and OTD are 501(c)(6) (i.e., not-for-profit) industry-led consortia established in 2004 and 2003, respectively, to provide the nation's natural gas LDCs a way to voluntarily fund Gas Consumer Benefits R&D. Twenty-three gas LDCs are members of OTD; and sixteen gas LDCs are members of UTD. Significant funding for UTD and OTD comes from gas LDCs that have received regulatory approval for cost recovery of R&D funding. Additionally, according to GTI, in 2015, each $1.00 in new UTD funding was leveraged with $3.68 of direct funding from government and industry partners. GTI secured $7.74 million from federal and state government partners and $6.84 million in funding from manufacturing partners and other gas industry resources (outside of UTD). Manufacturing partners provided significant, additional in-kind co-funding. UTD funds R&D that is anticipated to benefit end users of natural gas by increasing the efficiency, reducing emissions, and lowering the cost of gas-using equipment, and ensuring the safe use of natural gas in customers' homes and businesses. OTD funds R&D that benefit gas consumers, LDCs, and the general public by developing technologies and products that increase the safety, improve the reliability, and reduce the costs of gas transmission and distribution systems. According to GTI, OTD co-funding for 2014 and 2015 was $530,000 per year from the Department of Transportation Pipeline and Hazardous Materials Safety Administration, the California Energy Commission, and prospective manufacturers. The Company's Kentucky customers currently contribute to both the UTD and the OTD programs.

Q. IS THE COMPANY AWARE OF ANY SPECIFIC PROGRAMS FUNDED BY GTI FOR EITHER UTD OR OTD WHICH WILL OR HAVE CREATED BENEFITS FOR NATURAL GAS CUSTOMERS?

A. Yes. The Company is aware of a safety study in UTD that is looking at preventing freeze up of attic-based condensing furnaces where the vent line for the condensed water vapor would freeze up in the unheated attic space. UTD is also developing reliable methane detectors for home use. OTD has developed and commercialized both the optical and portable methane detectors, for use in more quickly and accurately locating gas leaks, downhole fire extinguishing techniques for reducing incidents during gas line repairs and guidelines and best practices for preventing crossbores of natural gas and sewer lines. The aforementioned initiatives are just a small sample of the benefits derived from GTI programming.

Q. WHAT OTHER STATES ARE ALREADY PARTICIPATING IN UTD AND OTD FUNDING PROGRAMS?

A. There are 30 states currently authorizing research funding for R&D initiatives for one or more of the LDCs in their state. The states are Alabama, Arizona, California, Colorado, Delaware, Florida, Idaho, Illinois, Kentucky, Louisiana, Maryland, Mississippi, Minnesota, Nevada, New York, New Hampshire, New Jersey, New Mexico, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, Tennessee, Texas, Utah, Virginia, Washington, and Wyoming.

Q. ARE YOU AWARE OF ANY OTHER KENTUCKY LDCS THAT HAVE R&D RIDERS?

A. Yes. The Company is aware that Columbia Gas (Columbia) and Delta Natural Gas have R&D Riders.

Q. ARE ANY OF THE OTHER KENTUCKY LDCS R&D RIDERS AT A LEVEL SIMILAR TO THE COMPANY'S REQUEST?

A. Yes. According to Sheet No. 51c of Columbia's tariff, their R&D Rider collects $300,000 annually. The Company is seeking to increase its R&D Rider unit charge to collect approximately $278,000 annually. As stated in my direct testimony that while one could argue that the $278,000 which could have been billed and collected annually since 2004 is somewhat stale, the Company would prefer to initially increase the R&D unit charge to $0.0174 per Mcf from the present $0.0035 per Mcf and to seek any additional increases in future proceedings. This level is consistent with the original Federal Energy Regulatory Commission ("FERC") R&D surcharge which was discontinued in 2004, to be replaced by voluntary R&D funding from gas distribution companies.

V. CONCLUSION

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes.

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF	)	
RATE APPLICATION OF	)	Case No. 2015-00343
ATMOS ENERGY CORPORATION	)	

CERTIFICATE AND AFFIDAVIT

The Affiant, Mark A. Martin, being duly sworn, deposes and states that the prepared testimony attached hereto and made a part hereof, constitutes the prepared rebuttal testimony of this affiant in Case No. 2015-00343, in the Matter of the Rate Application of Atmos Energy Corporation, and that if asked the questions propounded therein, this affiant would make the answers set forth in the attached prepared rebuttal testimony.

Mark A. Martin

Mark A. Martin

STATE OF KENTUCKY

COUNTY OF DAVIESS

SUBSCRIBED AND SWORN to before me by Mark A. Martin on this the 17TH day of May, 2016.

Pearl Ann Simon

Notary Public - State of Kentucky at Large

My Commission Expires: Sept. 26, 2017

Notary ID: 496385

PEARL ANN SIMON
NOTARY PUBLIC
KENTUCKY, STATE AT LARGE
MY COMMISSION EXPIRES 09-26-17
NOTARY ID 496385

WALLER, G. K.

BEFORE THE PUBLIC SERVICE COMMISSION

COMMONWEALTH OF KENTUCKY

APPLICATION OF ATMOS ENERGY	)	
	)	
CORPORATION FOR AN ADJUSTMENT	)	**Case No. 2015-00343**
	)	
OF RATES AND TARIFF MODIFICATIONS	)	

<u>REBUTTAL TESTIMONY OF GREGORY K. WALLER</u>

I. <u>INTRODUCTION</u>

Q. PLEASE STATE YOUR NAME, JOB TITLE AND BUSINESS ADDRESS.

A. My name is Gregory K. Waller. I am Manager, Rates and Regulatory Affairs with Atmos Energy Corporation ("Atmos Energy" or "Company"). My business address is 5420 LBJ Freeway, Ste. 1600, Dallas, Texas 75240.

Q. ARE YOU THE SAME GREGORY WALLER THAT FILED PREFILED TESTIMONY IN THIS PROCEEDING?

A. Yes.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to rebut the adjustments for non-PRP capital expenditures, liabilities associated with certain deferred tax asset items, and cash working capital of Attorney General's Office of Rate Intervention (OAG) witness Mr. Lane Kollen. I will also rebut the adjustments for the short-term debt rate and recommended capital structure of OAG witness Mr. Richard Baudino, which were quantified by Mr. Kollen in his testimony.

II. NON-PRP INVESTMENT

Q. DO YOU AGREE WITH MR. KOLLEN'S NON-PRP CAPITAL SPENDING ADJUSTMENT AS SUMMARIZED ON PAGES 5-6 OF HIS TESTIMONY?

A. No.

Q. WHAT IS THE RATIONALE FOR MR. KOLLEN'S ADJUSTMENT?

A. Mr. Kollen makes an adjustment for non-PRP capital expenditures by removing the ten percent increase projected by the Company for FY2017. Mr. Kollen's sole arguments for the adjustment are that this increase outpaces projected inflation and that the Company's O&M expenditures do not increase in a corresponding amount with projected capital spending.[1]

Q. WHY DO YOU DISAGREE WITH THIS ADJUSTMENT?

A. It is not consistent with the Company's planned capital investment. The ten percent increase is solely projected for the months of the forward looking test year that are in FY 2017 and is based on growth in capital spending from the Company's FY 2016 budget. The Company's FY 2016 non-PRP capital investment budget can be found in attachment 26 to the response to Staff's First Request, Item 59.[2] The amount is $33.96 million which represents an 83% and 28% increase over non-PRP actual investment from FY 2015 and FY 2014 respectively. These projected increases in direct investment reflect actual and expected capex growth consistent with the operational needs of the Company's Kentucky distribution property. The Company's response to Staff's Second

[1] *See* Kollen Direct at 6.

[2] Staff_1-59_Att26 - KY Plant Data-Fall 2015 case.xlsx, "Capital Spending" tab, cells D14 - O14.

Request Item 52 also indicates that year-over-year capital spending increases have occurred in the past several years for Kentucky as a whole. Failure to base rates on an increased level of capital spending when that is, in fact, the Company's investment plan, puts pressure on the Company to increase its frequency of full-blown rate cases absent a comprehensive annual rate mechanism such as the type discussed by Company witness Mr. Mark Martin is his rebuttal testimony.

Q. WHAT OTHER CRITICISMS DO YOU HAVE OF MR. KOLLEN'S ADJUSTMENT?

A. I disagree with Mr. Kollen's assertion that O&M expense remaining flat is not commensurate with an increase in capital spending. It is quite possible for the two to move independently and I do not understand Mr. Kollen's implication that their growth rates should be consistent with one another. O&M expense contains several items that affect its level beyond capital spending and the Company works diligently to manage its O&M expenses to the benefit of the ratepayer. The O&M expense level remaining flat is a product of the Company successfully controlling its expenses and striving to become more efficient in its operations. Capital investment, on the other hand, is driven by the needs of the system and absolute necessity that it remains safe and reliable.

III. <u>LIABILITIES ASSOCIATED WITH CERTAIN ADIT ASSETS</u>

Q. PLEASE DESCRIBE MR. KOLLEN'S PROPOSED ADJUSTMENTS RELATING TO ACCUMULATED DEFERRED INCOME TAXES ("ADIT").

A. Mr. Kollen proposes three adjustments related to ADIT. Two of those adjustments relate to certain deferred tax assets ("DTAs") which he divides into two categories. The third adjustment is related to the DTA for the Company's net operating loss carryover ("NOLC"). The first category is related to certain DTAs recorded at Divisions 002 and 091. Mr. Kollen testified that these DTAs should be excluded from rate base because none of the costs which give rise to the identified DTAs are included in operating expense nor are any associated liabilities subtracted from rate base in determining the revenue requirement. The Company agreed that it would not oppose removing these DTAs from rate base with one exception to be addressed later in my testimony. Company witness Pace McDonald rebuts Mr. Kollen's arguments relating to the deferred tax assets in what Mr. Kollen refers to as the second category as well as his arguments relating to the NOLC. I will rebut Mr. Kollen's arguments relating to the liabilities associated with category 2 deferred tax assets in this section.

Q. PLEASE DESCRIBE MR. KOLLEN'S PROPOSAL FOR HIS SECOND CATEGORY OF DEFERRED TAX ASSETS.

A. Mr. Kollen recommends that the Commission either deduct the associated liabilities from rate base or remove the DTAs from rate base. In his calculation of the revenue requirement impact of his recommendations, he chooses the former option by calculating the impact of removing the liabilities from rate base.

Q. DO YOU AGREE WITH HIS ADJUSTMENT?

A. No.

Q. WOULD YOU CONSIDER HIS TREATMENT TO BE "CORRECT RATEMAKING" AS HE CONTENDS?[3]

A. No. The Company has rates approved in the 8 states it serves and makes no such adjustment in any of its jurisdictions. Mr. Kollen testified against the Company in multiple dockets[4] in the Company's former Georgia jurisdiction and did not propose this adjustment. I am unaware of this treatment being applied to any gas utility in Kentucky and furthermore, it is inconsistent with the rates approved by this Commission in Case No. 2013-00148.

Q. WHAT IS THE PROPER RATEMAKING FOR LIABILITIES SUCH AS THE ONES IN QUESTION HERE?

A. They are not deducted from rate base. Timing differences between the time an expense is booked and cash paid are netted against timing differences between the time revenues are billed and cash received. The net result of these timing differences comprise a utility's cash working capital requirement which is properly included in rate base.

IV. CASH WORKING CAPITAL

Q. DO YOU AGREE WITH MR. KOLLEN'S ADJUSTMENT ON CASH WORKING CAPITAL AS SUMMARIZED ON PAGES 28-32 OF HIS TESTIMONY?

A. No.

Q. WHAT IS THE RATIONALE OF MR. KOLLEN'S ADJUSTMENT?

[3] Kollen Direct at page 12, line 13.
[4] Docket Nos. 20298-U, 27163, and 30442.

A. Mr. Kollen analyzes cash working capital studies filed by the Company in four of our eight states, with several of these studies dating back to 2012, and arrives at the conclusion that the Company's cash working capital should be set to $0.[5]

Q. WHY DO YOU DISAGREE WITH MR. KOLLEN'S CASH WORKING CAPITAL RECOMMENDATION?

A. Mr. Kollen's recommendation derives from analysis from studies in only half of the Company's states, all of which require lead/lag studies by rule, precedent or order whereas Kentucky does not. In the absence of a lead/lag study, the 1/8th O&M expense methodology has been used consistently for cash working capital by Atmos Energy and other gas utilities in Kentucky. This methodology, while not an issue raised by any party in the Company's fully litigated 2013 rate case, was allowed in the Company's final cash working capital amount for that case.[6] In assembling this case and as mentioned in my direct testimony, the Company followed the methodology in Case No. 2013-00148 and maintained the 1/8th O&M methodology. I cannot and would not recommend that the Company use its resources (and require the Commission Staff and the AG to use theirs) to conduct and evaluate a lead/lag study where one is not required. The Commission practice on this issue allows for the streamlining of a complex and lengthy component of ratemaking and should be upheld.

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[5] Kollen Direct at 31.

[6] The Company also took guidance in its 1/8 O&M methodology for cash working capital from issued Commission Orders in Case No. 99-176, Case No. 2000-386 and Case No. 2000-439 regarding cash working capital amounts for Delta Natural Gas, Louisville Gas and Electric, and Kentucky Utilities, respectively.

Q. DO YOU AGREE WITH MR. KOLLEN'S CHARACTERIZATION OF THE LEAD/LAG STUDIES PERFORMED IN TENNESSEE?

A. No. Mr. Kollen states that, in the studies performed by the Company in Tennessee, that two items were "erroneously included."[7] He further states that Atmos had negative cash working capital requirements "in *every* instance"[8] where it filed lead/lag studies. Both of these statements are inaccurate for the studies filed and approved by the Tennessee Regulatory Authority ("TRA"). The methodology filed by the Company and approved by the TRA results in a positive cash working capital requirement. Because they are approved in Tennessee, the amounts included are, by definition, not erroneously included. While Mr. Kollen is entitled to his opinion, an opinion that differs from his is not an error as he claims. Because the Company was not required to file a lead/lag study in this case, I cannot predict how the Kentucky Commission would rule on lead/lag study methodology. If the Commission was to abandon its precedent and require a lead/lag study in the next case, and then subsequently adopt the methodology approved in Tennessee, there is no doubt that the result would be a positive cash working capital requirement.

Q. HAS MR. KOLLEN TESTIFIED BEFORE THIS COMMISSION ON THE SUBJECT OF CASH WORKING CAPITAL? IF SO, WHAT WAS THE RESULT?

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[7] *See, e.g.*, Kollen Direct at 30 lines 3, 7, 12 and 16. I also note the Mr. Kollen made similar accusations regarding the Virginia study (Kollen Direct at 31 line 6) however no order has yet been issued in that Docket.
[8] Kollen Direct at 31.

A. Yes. Mr. Kollen testified on behalf of the Kentucky Industrial Utility Customers, Inc. in Case No. 2000-386 and recommended that the cash working capital be set to zero.[9] The Commission found, in its Order, that "absent a lead/lag study or other analysis demonstrating that LG&E does not have a cash working capital requirement, the Commission finds that it is appropriate to utilize the 1/8th formula approach . . ."[10] As far as I am aware, the Commission has not required a gas utility to file a lead/lag study in lieu of using the formulaic method.

V. SHORT-TERM DEBT RATE

Q. WHY DO YOU DISAGREE WITH MR. BAUDINO'S ADJUSTMENT TO REMOVE COMMITMENT FEES IN THE COMPANY'S REQUESTED COST OF SHORT-TERM DEBT?

A. Mr. Baudino's recommendation is to exclude commitment fees and banking fees from the interest rate computation by characterizing those costs as O&M expense.[11] Commitment fees are an integral part of the cost of debt. Credit facilities would not be available to the Company if those fees were not paid. The fees represent costs of borrowing and are not unlike the points one pays when financing a home purchase with a mortgage; these are, in reality, up-front interest payments and are recognized as such for accounting purposes. These

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[9] *See* Attachment 1 to Request 1-04 to AG's Responses to Data Requests of Atmos Energy pages 25-26 (Kollen Direct Testimony). I also note that Mr. Kollen testified in Case No. 2000-439 referenced above. The Commission's findings were consistent with Case No. 2000-00386 as he points out in his response to Staff's request 1-03 part a.

[10] *See* Attachment 2 to Request 1-04 to AG's Responses to Data Requests of Atmos Energy pages 12 (Case No. 2000-00386 Order).

[11] Baudino Direct at 29.

commitment fees are properly accounted for as interest costs in Account 4310, not as an O&M expense as characterized by Mr. Baudino. Therefore, the banking fees and commitment fees are an integral component of the actual short-term interest rate and are properly included in the short-term interest rate calculation.

Q. DOES THE METHODOLOGY USED IN THIS AND EVERY OTHER CASE FILED BY THE COMPANY IN KENTUCKY REQUIRE THE COMMISSION TO RECALCULATE THE PERCENTAGE COST OF SHORT TERM DEBT COMMENSURATE WITH RATE BASE OR CAPITAL STRUCTURE CHANGES AS MR. BAUDINO IMPLIES?[12]

A. No. The Company's cost of both short-term and long-term debt are calculated based on the capitalization of the Atmos Energy Corporation as a whole for the reasons I explain in my pre-filed testimony.[13] Those rates are applied universally to the capital structures, levels of debt and rate bases approved for ratemaking in each jurisdiction the Company serves. A change in the relative capital structure or rate base for a particular jurisdiction (such as Kentucky), does not change the cost of debt or prudent level of credit facilities required for Atmos Energy as a whole.

VI. CAPITAL STRUCTURE

Q. DO YOU AGREE WITH MR. BAUDINO'S ADJUSTMENTS TO CAPITAL STRUCTURE AS SUMMARIZED ON PAGE 29 OF HIS TESTIMONY?

A. No.

Q. WHAT IS MR. BAUDINO'S RECOMMENDED CAPITAL STRUCTURE?

[12] *See* Baudino Direct at 29.

[13] *See* Waller Direct at 35-37.

A. Mr. Baudino recommends that the Company's requested common equity ratio of 55.32% should be adjusted downward to 52.99% to reflect the end of the base period.[14]

Q. WHAT IS YOUR PRIMARY CRITICISM OF MR. BAUDINO'S METHODOLOGY?

A. While he recommends the common equity percentage be that which was filed by the Company for the Base Period, the manner in which he calculates overall capital structure is without merit. Rather than accept the overall capital structure filed by the Company for the Base Period, he, without explanation, holds the Company's total projected forward looking test year capitalization constant and reduces the nominal amount of equity while increasing the nominal amount of short-term debt to force the equity percentage to match that of the Base Period.

Q. IS THE COMPANY'S METHODOLOGY FOR FORECASTING CAPITAL STRUCTURE CONSISTENT WITH THE METHODOLOGY THAT WAS ORDERED BY THE COMMISSION IN CASE NO. 2013-00148?

A. Yes. Although the Company originally recommended a capital structure without short-term debt in Case No. 2013-00148, it presented capital structures both with and without short-term debt in its filing for the forecasted test year in that case. The Commission ordered that rates be set utilizing the forecasted test year capital structure that included short-term debt and accepted the Company's forecast as it was included in the initial filing. In the current case, I forecasted capital structure

[14] Baudino Direct at 3-4.

including short-term debt using the same methodology that was accepted by the Commission in Case No. 2013-00148.

Q. DO YOU HAVE ANY OTHER COMMENTS REGARDING THE APPROPRIATE CAPITAL STRUCTURE FOR THIS CASE?

A. Yes. Should the Commission desire to consider a capital structure that is completely objective, verifiable and repeatable in future rate proceedings, I would recommend consideration of the Company's 13-month average actual capital structure as of August 31, 2015. The original filing made by the Company included a Base Period consisting of six months of actual results and 6 months of forecasted data as required by Commission rules. The six months of actual data used by the Company were the six months ending August 31, 2015. The 13-month average capital structure that existed as of that time can be found in Attachment 10 to the response to Staff request 1-59[15] and consists of 53.67% equity, 42.07% LTD and 4.26% STD and was used as the starting point for projecting the capital structure for the Base Period and forward looking test year. The data underlying that capital structure can be easily and objectively verified on the Company's books and records and could be easily repeated in future rate proceedings as a way to streamline one aspect of each case. My consideration notwithstanding, I believe that a forecasted test year capital structure that is calculated consistent with Commission precedent continues to be the most appropriate capital structure to use for rate-making in a forward looking jurisdiction such as Kentucky.

[15] Staff's First Request, Item 59, Attachment 10. Staff_1-59_Att10 - EMINT 16 - 1 0 KSUMM KY CAP STR SUMMARY FINAL.xlsx (cells FE269 to FE278).

VII. CONCLUSION

Q. ARE THERE ANY ADJUSTMENTS MADE BY MR. KOLLEN WITH WHICH YOU AGREE?

A. Yes. As Mr. Kollen points out in his testimony, the Company previously agreed to the adjustment associated with updating the request for the impact of bonus depreciation, which was described and quantified in the response to Staff request 2-21 and which reduces revenue requirement by $94,082 to the new starting point of $3,213,606 quantified in the revenue requirement model attached to that response. Additionally, the Company will not oppose Mr. Kollen's adjustments related to extending the amortization period for the PLR regulatory asset. Finally, Mr. Kollen correctly describes the Company's position to not oppose the adjustment which he labels "Remove Account 190 ADIT Not Associated With Cost of Service" with one important exception.

Q. WHAT IS THE ONE IMPORTANT EXCEPTION TO THE COMPANY'S POSITION TO NOT OPPOSE THE ADIT ADJUSTMENT CITED IN THE PREVIOUS RESPONSE?

A. The Company's responses to AG Requests 2-13 and 2-14 stated, in the sections related to MIP/VPP Accrual, that "the Company would not oppose removal of the ADIT item consistent with the underlying expense treatment, provided it is appropriately removed from all divisions allocable to Kentucky." Mr. Kollen removed the debit balances in Divisions 002 and 091 while erroneously and conveniently failing to remove the $410,946 credit balance in Division 012 and the $7,976 credit balance in Division 009.[16] I have properly included these adjustments in my summary and quantification of the Company's rebuttal positions below.

Q. HAVE YOU SUMMARIZED THE COMPANY'S REBUTTAL POSITION AND CALCULATED THE REVENUE REQUIREMENT THAT RESULTS?

A. Yes. The table below, which is adopted from the table that appears in Mr. Kollen's testimony on page 4, summarizes the Company's position on each of the AG's adjustments. I calculated the resulting revenue requirement using the revenue requirement model attached to the response to Staff Request 2-21 and referenced above as the starting point. By simultaneously incorporating all of the adjustments, the proper revenue requirement can be calculated.

Atmos As-Filed Requested Increase	$ 3,307,688
Less: Reduction Related to Company Revision to Reflect Bonus Depreciation	(94,082)
Atmos Revised Requested Increase	$ 3,213,606
Company Position on AG Rate Base Recommendations	
Remove Forecast 10% Escalation on Capital Additions for Kentucky Non-PRP	Reject
Remove Account 190 ADIT Not Associated With Cost of Service	Accept
Include Temporary Differences Associated With 190 ADIT Included in Cost of Service	Reject
Remove NOL ADIT in Acct 190	Reject
Reflect Zero Balance for Cash Working Capital	Reject
Remove Rate Case Expense Regulatory Asset	Reject
Extend Amortization Period for PLR Regulatory Asset to 3 Years	Accept
Company Position on AG Operating Income Recommendations	
Remove Amortization Expense for Rate Case Expense Regulatory Asset	Reject
Extend Amortization Period for PLR Regulatory Asset to 3 Years	Accept
Adjust Depreciation Expense to Remove Forecast 10% Escalation on Capital Additions	Reject
Include AEC Commitment and Banking Fees in Operating Income	Reject
Company Position on AG Rate of Return Recommendations	
Reflect Adjusted Capital Structure	Reject
Reduce Short Term Debt Rate by Removing AEC Commitment and Banking Fees	Reject
Reflect Return on Equity of 9.0%	Reject
Company Position on Change In Composite Allocation Factor	Reject
Change From Revised Requested Increase	$ (201,404)
Resulting Revenue Requirement (Increase to Base Rates)	$ 3,012,202

[16] *See* Staff_2-21_Att3 - Update to Staff_1-59_Att2 - ADIT for KY Fall 2015.xlsx on tab "Division 012" cell CT12 and tab "Division 009" cell CT12.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF	)	
RATE APPLICATION OF	)	Case No. 2015-00343
ATMOS ENERGY CORPORATION	)	

CERTIFICATE AND AFFIDAVIT

The Affiant, Gregory K. Waller, being duly sworn, deposes and states that the prepared testimony attached hereto and made a part hereof, constitutes the prepared rebuttal testimony of this affiant in Case No. 2015-00343, in the Matter of the Rate Application of Atmos Energy Corporation, and that if asked the questions propounded therein, this affiant would make the answers set forth in the attached prepared rebuttal testimony.

GWaller

Gregory K. Waller

STATE OF Texas

COUNTY OF Dallas

SUBSCRIBED AND SWORN to before me by Gregory K. Waller on this the 24th day of May, 2016.

NOTARY PUBLIC STATE OF TEXAS
PAMELA L. PERRY
My Commission Expires
October 29, 2016

Pamela L. Perry

Notary Public

My Commission Expires: 10-29-16

MCDONALD, P.

BEFORE THE PUBLIC SERVICE COMMISSION

COMMONWEALTH OF KENTUCKY

APPLICATION OF ATMOS ENERGY	)	
	)	
CORPORATION FOR AN ADJUSTMENT	)	**Case No. 2015-00343**
	)	
OF RATES AND TARIFF MODIFICATIONS	)	

REBUTTAL TESTIMONY OF PACE MCDONALD

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, POSITION AND BUSINESS ADDRESS.

A. My name is Pace McDonald. I am Vice President of Taxes for Atmos Energy Corporation and Subsidiaries ("Atmos Energy" or the "Company"). My business address is 5430 LBJ Freeway, Suite 700, Dallas, Texas 75240.

Q. ARE YOU THE SAME PACE MCDONALD THAT FILED PREFILED TESTIMONY IN THIS PROCEEDING?

A. Yes.

Q. HAVE YOU REVIEWED THE INTERVENOR TESTIMONY FILED IN THIS CASE?

A. Yes, I have.

II. PURPOSE AND SUMMARY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I rebut the arguments raised in the direct testimony of Kentucky Office of the Attorney General ("AG") witness Lane Kollen regarding his proposed adjustments to rate base for accumulated deferred income taxes ("ADIT").

Q. PLEASE SUMMARIZE YOUR IMPRESSIONS OF MR. KOLLEN'S TESTIMONY.

A. Mr. Kollen has proposed three adjustments related to ADIT. Two of those adjustments relate to certain deferred tax assets ("DTAs") which he divides into two categories. The third adjustment is related to the DTA for the Company's net operating loss carryover ("NOLC").

The first category is related to certain DTAs recorded at Divisions 002 and 091. Mr. Kollen testified that these DTAs should be excluded from rate base because none of the costs which give rise to the identified DTAs are included in operating expense NOR are any associated liabilities subtracted from rate base in determining the revenue requirement.[1] The Company agreed that it would not oppose removing these DTAs from rate base with one exception as discussed in the rebuttal testimony of Company witness Waller.

The second category is related to certain DTAs also recorded at Divisions 002 and 091. Mr. Kollen has suggested that a different standard applies to these DTAs than those in the first category. Unlike the DTAs in the first category, Mr. Kollen has testified that to determine whether the second category of DTAs should be included in rate base the singular test is whether any associated

[1] Kollen Direct at 11, Lines 6-7.

liabilities are deducted from rate base in determining the revenue requirement.[2] He dismisses the fact that the costs associated with these DTAs are included in operating costs.[3] This is in contrast to the standard for the first category of DTAs and Mr. Kollen offers no explanation for this inconsistency. Mr. Kollen has recommended that the Commission either deduct the associated liabilities from rate base or remove the DTAs from rate base.

With respect to the NOLC DTA, Mr. Kollen:

(1) opines that the Company's facts in this filing are more closely aligned with a PLR issued to another taxpayer operating in another jurisdiction. (PLR 201418024);

(2) alleges that the Company's Request for PLR and the resulting PLR issued by the IRS are fundamentally flawed and cannot be relied upon; and

(3) proposes to disallow the NOLC DTA from rate base.

His proposals and allegations regarding the NOLC are based entirely on his incorrect conclusion that the Company has not reflected a reduction to income tax expense for the NOLC.

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. It will be my testimony that inclusion of the second category of DTAs and the NOLC ADIT are appropriate adjustments to rate base accepted by numerous commissions and based first and foremost on sound ratemaking principles. Failure to include these items in rate base would result in a return requested from rate

[2] *Id.* at 12, Lines 14-16.
[3] *Id.* at 13, Lines 11-13.

payers that would not be reflective of the economic realities embodied in the Company's tax filings and associated cash flow.

It will also be my testimony that Mr. Kollen has established an arbitrary standard with respect to the second category of DTAs. His standard inconsistent with the standard he applied to the first category of DTAs. The DTAs in the second category are related to costs included in operating expense and are therefore properly included in rate base. Furthermore Company witness Mr. Waller will testify as to why Mr. Kollen's proposal to deduct the liabilities from rate base would be inappropriate.

With respect to the NOLC ADIT, my testimony will demonstrate that his conclusion regarding the tax expense included in the filing is incorrect and the Company has in fact reduced tax expense for the NOLC. This factual error on his part is the basis for his assertions and proposed adjustments. Therefore, all of Mr. Kollen's proposals should be rejected. It will also be my testimony the AG had ample opportunity to comment on the Company's Request for PLR at the time the request was filed. To now allege the request was factually incorrect, is ill timed, inappropriate and likely driven more so by the AGs disagreement with the outcome of ruling. Furthermore, his proposals would be inconsistent with sound ratemaking, this Commission's ruling in Case No. 2013-00148 and the Internal Revenue Service ("IRS") private letter ruling ("PLR") received by the Company.

Q. ARE YOU SPONSORING ANY EXHIBITS?

A. Yes, I am sponsoring Exhibit PM-1 (AG Response to Staff Set 1, Item 2).

III. RATEMAKING TREATMENT OF ACCUMULATED DEFERRED INCOME TAXES

Q. PLEASE DESCRIBE WHAT ACCUMULATED DEFERRED INCOME TAXES ARE.

A. Deferred taxes represent the balance of tax that is due or receivable in the future when items of income and expense are recognized for tax purposes in a period different than they are recognized for financial reporting purposes. Accumulated deferred taxes simply represent the accumulated tax for all items deferred to future periods. More importantly, for a regulated utility, deferred taxes represent a source of cost-free financing provided by the government.

Q. PLEASE DESCRIBE WHAT GIVES RISE TO ACCUMULATED DEFERRED INCOME TAXES.

A. Deferred taxes arise from the interaction of the Internal Revenue Code ("IRC"), the Company's accounting practices under United States ("US") generally accepted accounting principles ("GAAP"), and the Company's operations. Deferred taxes are created because of differences between the IRC and the Company's accounting under US GAAP. In addition to Federal Energy Regulatory Commission ("FERC") rules, the Company's records are maintained according to US GAAP accounting principles which provide guiding principles and requirements as to when and how the Company records its financial results. Likewise, the IRC and related regulations provide the rules and requirements the Company follows when completing its tax filings. There are a myriad of differences between US GAAP and the IRC.

Examples include, but are not limited to, differences in the recognition of income or expense, time period or methods by which assets are depreciated and the capitalization of costs. Many of these differences are temporary in nature, meaning the total amount of income or expense recognized for an item is the same under US GAAP and the IRC, but the time period over which it is recognized is different. For example, an item purchased by the Company for $100 may be capitalized and depreciated over a 30 year period under US GAAP. The IRC may permit that same item to be depreciated over a 15 year period. There is no difference in the depreciation deductions over time in that US GAAP and the IRC permit the Company a $100 depreciation deduction. However, that deduction is realized over different time periods. It is this difference in timing between the US GAAP and the IRC that give rise to deferred taxes. Due to the difference in timing required by the IRC, the Company has deferred recognition of tax liabilities or benefits to a future period.

Q. HOW DO DEFERRED TAXES IMPACT A REGULATED UTILITY?

A. A utility earns its allowed rate of return based on its cost of service. A component of the cost of service is the tax liability the utility will owe on its earnings. From its earnings, the utility has cash funds available to pay its tax obligations to the government. However, the federal government, by way of the differences I described, raises or lowers the utility's current tax liability relative to the cash funds available from customers. This difference between what is available from customers versus the actual current liability results in the utility retaining or remitting additional funds in the current period.

A common example is the difference associated with depreciation. Bonus and accelerated tax depreciation rules grant the utility tax depreciation in excess of its book deprecation. These favorable depreciation deductions lower the utility's current tax liability and provide funds to the utility in the current period. However, its future tax liability will be increased and those funds will be remitted to the government in the future. The net effect is that the government has provided an interest-free loan to the utility by virtue of a lower current tax bill due to the accelerated and bonus depreciation provisions. That interest-free loan will be repaid by higher tax bills in the future.

Q. WHAT CREATES AN ADIT ASSET OR DTA?

A. An ADIT asset (also referred to as a DTA in Mr. Kollen's testimony) is created when the tax liability differences I described result in a temporary increase to income or the deferment of a deduction.

A common example is the difference associated with retirement or compensation plans. IRS rules generally limit the deduction of retirement or compensation until the time at which the benefit is paid. For book purposes, these plans accrue expense as the participant's benefits accumulate. The result is expenses are realized on the books for the accrual of the benefits but no deduction is taken on the tax return until the participant is paid. These delayed deductions increase the utility's current tax liability and reduce the funds to the utility in the current period. However, its future tax liability will be decreased and those funds will be returned to the utility in the future. The net effect is that the utility has advanced to the government a tax payment by virtue of a higher current tax bill due to the denial of a deduction until a later date. The tax advance will be recouped by lower tax bills in the future.

Q. HOW IS THE LOAN AND ADVANCE YOU DESCRIBE REFLECTED ON A UTILITY'S BOOKS AND RECORDS?

A. Essentially, the interest-free loan to the utility is netted with any advances to the government and reflected as the net ADIT recorded on the Company's books and records. In the case of a utility, the net of the loan and advance almost always results in a net ADIT liability and that is the case with this filing. The net ADIT liability is quite simply the amount of interest-free capital that the government loaned to the Company after taking into account the Company's advances to the government.

Q. HOW IS A NET ADIT LIABILITY TREATED FOR RATEMAKING PURPOSES?

A. Given that a net ADIT liability represents an interest free loan or cost-free capital, rate base should be reduced for the amount of the net ADIT liability. This allows customers to receive the benefit of the interest-free loan and not pay a rate of return on rate base financed at no cost.

Q. IS THE REDUCTION OF RATE BASE FOR NET ADIT LIABILITIES A STANDARD REGULATORY RATEMAKING PRACTICE?

A. Yes. This is the widely accepted treatment of ADIT liabilities.

IV. THE COMPANY HAS PROPERLY INCLUDED ADIT ASSETS AS AN INCREASE TO RATE BASE

Q. IN THIS FILING, DID THE COMPANY NET THE ADIT ASSETS WITH ADIT LIABILITIES IN CALULATING RATE BASE?

A. Yes.

Q. DID MR. KOLLEN PROPOSE ADJUSTMENTS?

A. Yes.

Q. PLEASE DESCRIBE THOSE ADJUSTMENTS.

A. Mr. Kollen identified several ADIT assets (or DTAs as referred to by him) at Divisions 002 and 091. He divided those ADIT assets into two categories. Category 1 ADIT assets are listed in the table on Page 14 of his testimony. Category 2 ADIT assets are listed in table on Page 15 of his testimony.

For Category 1 ADIT assets Mr. Kollen has proposed to eliminate those ADIT assets from the calculation of rate base. His basis for that proposal is that none of the costs which give rise to the identified ADIT assets are included in operating expense NOR any associated liabilities deducted from rate base in determining the revenue requirement.[4]

For Category 2 ADIT assets Mr. Kollen has proposed to include the underlying liabilities associated with the ADIT assets as a reduction to rate base. He testifies that in order for the Category 2 ADIT assets to be included in rate base the singular requirement is that the associated liabilities are deducted from rate base in determining the revenue requirement.[5] He makes a claim that the

[4] *Id.* at 11, Lines 6-7.
[5] *Id.* at 12, Lines 14-16.

Company has not matched benefits and costs. As an alternative, he suggests that the ADIT assets be removed from rate base if the liabilities are not deducted from rate base.

Q. HAS THE COMPANY AGREED TO REMOVE THE CATEGORY 1 ADIT ASSETS FROM RATE BASE?

A. Yes. The Company agreed that it would not oppose removing these DTAs from rate base with one exception as discussed in the rebuttal testimony of Company witness Waller.

Q. WHY?

A. The ADIT assets identified as Category 1 relate to items that are either not in cost of service or are "below the line" items that are excluded from cost of service. For example, the Company has not included in cost of service the expenses associated with the variable pay plan or the management incentive plan. Likewise, no liabilities associated with these items have been removed from rate base. The Company has also not included below the line expenses for charitable contributions.

Q. IS IT APPROPRIATE TO REMOVE THE CATEGORY 2 ADIT ASSETS FROM RATE BASE?

A. No.

Q. WHY NOT?

A. The ADIT assets identified as Category 2 relate to items that are included in cost of service. Mr. Kollen acknowledges this in his testimony.[6] The items are related

[6] *Id.* at 13, Lines 11-12.

to benefit plans and compensation items. Despite being accrued on the books and included in cost of service, these items are not deductible by the Company for tax purposes until the benefit is paid to participants. The Company has an expense in cost of service but has been denied a deduction on its tax return. The denial of these deductions results in an increase to the Company tax liability until that time in which it is permitted a deduction. It is sound and proper ratemaking to match these ADIT assets with cost of service expense and the denial of its deduction on the Company's tax return. In order to reflect the proper amount of cost free capital or interest free loan the utility has received from the government, these ADIT assets must remain in rate base until the company pays participants and receives a reduction on its tax return.

Q. IS MR. KOLLEN CONSISTENT IN HIS RECOMMENDATION REGARDING CATEGORY 1 AND CATEGORY 2 ADIT ASSETS?

A. No.

Q. PLEASE EXPLAIN.

A. In his argument for excluding Category 1 ADIT assets, Mr. Kollen states that none of the items associated with the ADIT assets are included in operating expense NOR any associated liabilities included in rate base in determining the revenue requirement.[7] It is the failure to do one or the other that seems to trigger the removal of the ADIT asset.

For the Category 2 ADIT assets, Mr. Kollen states the ADIT assets are permissible based on a singular requirement that the associated liabilities are

[7] *Id.* at 11, Lines 6-7.

deducted from rate base in determining the revenue requirement.[8] He dismisses inclusion of the expenses in cost of service as a relevant fact for Category 2 ADIT assets.[9]

Q. DOES HE OFFER A REASON FOR THIS INCONSIST AND ARBITRARY APPROACH?

A. No.

Q. DO THE LIABILITIES ASSOCIATED WITH THE CATEGORY 2 ADIT ASSETS HAVE TO BE REFLECTED AS A REDUCTION IN RATE BASE FOR THE ADIT ASSETS TO REMAIN IN RATE BASE?

A. No.

Q. WHY?

A. Inclusion of the ADIT assets in rate base results in the proper reflection of cost free capital or interest free loan that the Company has received as a result of the items included in cost of service and their effect on the Company's tax returns. This is the purpose of including ADIT in rate base and that goal should be accomplished regardless of whether the underlying liabilities are included in rate base.

Q. WOULD IT BE PROPER TO INCLUDE THE ASSOCIATED LIABILITIES IN RATE BASE AS RECOMMENDED BY MR. KOLLEN?

A. Company witness Mr. Waller addresses this in his rebuttal testimony.

[8] *Id.* at 12, lines 14-16.
[9] *Id.* at 13, lines 11-13.

V. NET OPERATING LOSS CARRYFORWARDS

Q. WHAT IS A NET OPERATING LOSS ("NOL")?

A. The Company computes it's taxable income in accordance with the IRC. Depending on the income and deductions reported on the Company's tax return, either a positive or negative taxable income is reported on the tax return. A positive taxable income will result in the imposition of tax at the applicable tax rate. A negative taxable income creates an income tax net operating loss ("NOL").

Q. WHAT IS AN INCOME TAX NET OPERATING LOSS CARRYFORWARD?

A. Under §172 of the IRC, a tax NOL may first be carried back to offset taxable income (generally to the two preceding years). Any loss remaining after the carryback is available to carry forward for up to 20 years and reduce taxable income in a future period.

Q. WHAT ARE THE CONSEQUENCES OF CARRYING AN NOL FORWARD?

A. An NOL carryforward is simply deductions that were claimed on a prior tax return but not used to offset the tax liability in the period claimed. An NOL carryforward therefore has the effect of moving those unused deductions forward to a subsequent year to offset the tax liability of the future period.

Q. HAVE ATMOS ENERGY CORPORATION'S REGULATED UTILITY OPERATIONS RESULTED IN TAXABLE LOSSES?

A. Yes. For the past seven fiscal years, the taxable income computations for the utility operations have reflected large taxable losses.

Q. HAVE THESE LOSSES RESULTED IN AN NOL CARRYFORWARD FOR THE COMPANY?

A. Yes. As of the filing of this case, the Company had a federal and state NOL carryforwards of $407,851,903 and $18,731,296, respectively, from its utility operations.

Q. PLEASE EXPLAIN THE PRIMARY CAUSE OF THE TAX LOSSES AND NOL CARRYFORWARD.

A. The Company has realized significant deductions associated with bonus depreciation, accelerated depreciation and the deduction of capital expenditures as repairs for tax purposes.

Q. DID THESE DEDUCTIONS HAVE AN IMPACT ON THE COMPANY'S ADIT LIABILITY BALANCE?

A. Yes. These accelerated deductions resulted in a deferral of the Company's tax liability. Therefore, an ADIT liability was recorded on the Company's books and records to reflect this future obligation to the government.

Q. PLEASE EXPLAIN WHAT ADIT LIABILITIES ARE AND HOW THEY IMPACT RATE BASE.

A. As I have described, ADIT liabilities are realized because the Company's tax filings reflect tax deductions in excess of its book deductions, for example accelerated tax depreciation. These excess tax deductions offset the Company's current tax liability which allows the Company to retain cash that would have otherwise been paid to the government. This cash tax savings allowed by the government represents the interest free loan from the government to the Company. Essentially an ADIT liability represents an obligation to pay this interest free loan back to the government in the future and is therefore appropriately reflected as a reduction to rate base as cost free capital.

Q. WHAT THEN IS THE SIGNIFICANCE OF THE NOL CARRYFORWARD GENERATED BY THESE DEDUCTIONS?

A. To the extent that these deductions gave rise to an NOL carryforward, the deductions are not generating current tax savings. Therefore, in terms of the loan analogy, the government has not yet extended a loan because the underlying deductions have not yet reduced the Company's tax liability.

Q. HOW IS AN NOLC REFLECTED IN THE COMPANY'S BOOKS AND RECORDS?

A. An NOLC is recorded as an ADIT asset. This asset represents a future cash flow from the government which will be realized when the Company has sufficient taxable income and a tax liability to reduce. Until that time, the tax deductions which have given rise to the NOL have not produced any tax saving for the Company

Q. HAS THE COMPANY PROPOSED TO INCREASE RATE BASE FOR THESE AS NOLC ADIT ASSETS?

A. Yes. The Company has proposed to increase rate base for the proportionate share of these items allocable to Kentucky consistent with Case No. 2013-00148 and the Company's cost allocation manual.

Q. HOW DOES THE RECORDING OF THE NOLC ADIT ASSET INTERACT WITH THE ADIT LIABILITY RECORDED FOR ACCELERATED DEUCTIONS?

A. This asset effectively reduces the ADIT liability recorded for accelerated deductions to the amount that has been loaned to the Company in the form of current tax savings.

Q. WHAT IS THE SIGNIFICANCE OF THE NOLC FOR RATEMAKING?

A. The Company's ADIT liability balance represents the tax benefit of its favorable tax deductions regardless of whether or not they actually produced cash. An NOLC represents unused tax deductions beyond what is necessary to reduce current year taxable income to zero and taxes that the Company has on deposit with the government. There is no current cost-free capital associated with the NOLC, and thus, from a ratemaking perspective, it is inappropriate to have a reduction of rate base for the unused deferred taxes. Thus, the offset against rate base of accumulated deferred taxes must be limited to the amount of current benefit. The Company's proposed ratemaking treatment of including the NOLC ADIT asset in rate base achieves this by accurately reflecting the cash tax savings obtained by the Company when these savings are realized.

Q. IS THERE ANY JUSTIFICATION FOR IGNORING THE IMPACT OF THE NOLC ADIT ASSET?

A. No, there is not. If the effect of the Company's NOLC is ignored, then every dollar of accelerated depreciation and other favorable tax deductions claimed by the Company on its tax returns would reduce its rate base - even though, to the extent the deductions simply produced a NOLC, they would not yet have deferred any tax and, therefore, would not have produced any incremental cash for the Company. If, instead, the Company had claimed fewer such deductions - only enough to eliminate its taxable income but not enough to produce a NOLC - then it would be in the same cash position (that is, the Company still would have paid $0 tax) but the amount by which its rate base is reduced would be diminished. Rate treatment that ignores the impact of the Company's NOLC would disadvantage the Company more so if it claimed favorable tax deductions than if it did not claim them.

Q. WHAT IS MR. KOLLEN'S PROPOSAL FOR THE COMPANY'S NOLC ADIT ASSET?

A. Mr. Kollen proposes to disallow the NOLC ADIT asset from rate base.

Q. WHAT IS THE BASIS FOR MR. KOLLEN'S PROPOSAL?

A. His proposals and allegations regarding the NOLC are based entirely on his incorrect conclusion that the Company has not reflected a reduction to income tax expense for the recording of the NOLC ADIT asset.

VI. NOLC INCLUSION IN COST OF SERVICE TAX EXPENSE

Q. PLEASE DESCRIBE HOW THE COST OF SERVICE TAX EXPENSE IS CALCULATED IN THIS FILING?

A. The Company accrues tax at a statutory rate of 38.9% on the projected earnings in the filing.

Q. HOW IS THE 38.9% COST OF SERVICE STATUTORY TAX RATE CALCULATED?

A. The tax rate of 38.9% is a composite federal and state statutory rate that includes 35% for federal taxes and 3.9% for Kentucky state taxes. The state tax rate of 3.9% is derived from the Kentucky state rate of 6% less the benefit the Company will realize from the deduction of the state income taxes on its federal return. The formula for calculating the effective state rate is the state rate times (1 minus the federal rate). (6% times (1-35%)) = 3.9%

Q. WHEN TAX IS ACCRUED USING A STATUTORY RATE WHAT IS THE EFFECT?

A. The use of a statutory tax rate results in the accrual of all federal and state taxes that will be due on those earning in the current period **OR** the future. Use of this rate accrues both current and deferred taxes, including an ADIT asset for NOLC.

Q. PLEASE DESCRIBE HOW ADIT IS RECORDED?

A. An ADIT liability for items such as accelerated depreciation is recorded by debiting tax expense and crediting ADIT. An ADIT asset for items such as the NOLC is recorded by debiting ADIT and crediting income tax expense.

Q. WOULD THE STATUTORY TAX RATE YOU DESCRIBED RESULT IN THE RECORDING OF ALL ADIT LIABILITIES AND ASSETS?

A. Yes. The utilization of a statutory tax rate results in the recording of all current and deferred taxes, both ADIT liabilities and assets. The accrual of these items is simply embedded in the overall rate.

Q. WOULD THE STATUTORY TAX RATE YOU DESCRIBED RESULT IN THE RECORDING OF NOLC ADIT ASSET?

A. Yes.

Q. PLEASE PROVIDE AN EXAMPLE THAT DEMONSTRATES THIS?

A. For simplicity, assume the following:

Net earnings before taxes	$100
Statutory tax rate	35%
Bonus/accelerated depreciation in excess of book depreciation	($120)

In this example, the Company will have book earnings of $100, a taxable loss on its current tax return of ($20) and an NOL carryforward of $20 to offset taxable income in future periods. The Company will record the following to accrue taxes:

Tax expense debit for bonus/accelerated depreciation ($120 x 35%)	$42
Tax expense credit for NOLC ($20 x 35%)	($7)
ADIT asset for NOLC ($20 x 35%)	$7
ADIT liability for bonus/accelerated depreciation ($120 x 35%)	($42)

The above entry results in a net tax expense on its books and records of $35 ($42-$7), which is equal to its statutory rate of 35% times its earnings before tax. Embedded in this expense is a $42 expense for establishing an ADIT liability for bonus/accelerated depreciation and $7 benefit for establishing an ADIT asset for an NOLC. The Company's balance sheet would reflect a net ADIT liability of $35.

In this same example, were the Company to make a filing before this Commission, the tax expense included in cost of service would be $35. That amount would be calculated in the filing workpapers as simply $100 of net earnings before taxes times the statutory tax rate. Rate base in the filing would reflect a $35 reduction for the net ADIT liability. This liability represents the $35 loan extended to the Company from the government in the form of tax deferral.

A statutory rate applied to net earnings, by its very nature, results in the accrual of all current and deferred taxes, including ADIT assets related to NOLC. Tax expense calculated using a statutory rate will always reflect the impact of an NOLC.

VII. <u>ERRORS AND MISINTERPRETATIONS BY AG WITNESS KOLLEN</u>

Q. WITH RESPECT TO THE REDUCTION OF TAX EXPENSE FOR THE NOLC, WHAT DOES MR. KOLLEN ALLEGE?

A. He alleges that the Company has not reduced income tax expense for the recording of the NOLC ADIT.

Q. HOW DOES MR. KOLLEN DRAW THIS INCORRECT CONCLUSION?

A. He draws his conclusion incorrectly from several faulty interpretations of either the Commission's approach to income taxes in filings or the Company's discovery responses.

Q. PLEASE EXPLAIN HOW MR. KOLLEN HAS MISINTERPRETED THE COMMISSION'S APPROACH TO INCOME TAXES IN FILINGS MADE BEFORE IT?

A. In his testimony, Mr. Kollen acknowledges that the Commission uses a formula methodology to calculate income tax expense whereby the statutory income tax is applied to earnings. He further acknowledges that within income tax expense the

Commission does not distinguish between current and deferred income tax expense.[10] Those two items are true and not in dispute.

However, Mr. Kollen errs when he opines that the lack of detail on current and deferred tax expense in the filing schedules means that deferred taxes and notably a reduction for the NOLC is not embedded in the income tax expense included in the filing. He opines that the Commission does not and has not reduced income tax expense for the NOLC.[11]

Q. IS THAT TRUE?

A. No. As I have explained in my testimony and demonstrated by example, when using a statutory tax rate times earnings, the resulting tax expense includes all current and deferred taxes, including the reduction for an NOLC. This is true regardless of whether or not it is specifically disclosed on a schedule. The reduction in tax expense for the NOLC is embedded in the overall tax expense number.

Q. DID MR. KOLLEN MISINTERPRET THE COMPANY'S RESPONSES TO DISCOVERY REQUESTS?

A. Yes. Mr. Kollen alleges that in responses to discovery request AG DR 2-1 the Company confirmed that it had not reduced income tax expense for the benefit of the NOLC either in this case or in 2013-00148.[12]

Q. IS THAT TRUE?

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[10] *Id.* at 18, line 20; at 19 lines 1-4.
[11] *Id.* at 19 lines 4-6.
[12] *Id.* at 20 lines 11-15.

A. No. It appears Mr. Kollen has misread the AG's questions or misinterpreted the Company's responses.

In AG DR Set 2-1(c), the discovery request read in part:

> Refer to Schedule E in Case No. 2013-00148. Please confirm that the Company did NOT credit (reduce) income tax expense in either the base year or the test period to reflect an NOL in either period.

In addition, AG DR Set 2-1(f), the discovery request read in part:

> Refer to Schedule E in this proceeding. Please confirm that the Company did NOT credit (reduce) income tax expense in either the base year or the test period to reflect an NOL in either period.

In both responses to the AG's request the Company replied, "The Company cannot confirm this."[13] The AG asked the Company to confirm it did NOT reduce income tax expense for the NOLC and the Company refused to confirm. Both filings use a statutory tax rate times earnings to derive tax expense and such an approach results in tax expense which includes all current and deferred taxes, including the reduction for an NOLC.

Q. BASED ON THESE MISINTERPRETATIONS AND FACTUAL ERRORS, HAS MR. KOLLEN MADE PROPOSALS REGARDING THE NOLC?

A. Yes. Mr. Kollen:

(1) opines that the Company's facts in this filing are more closely aligned with a PLR issued to another taxpayer operating in another jurisdiction. (PLR 201418024)

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[13] Case No. 2015-00343, *Atmos Energy Corporation's Responses to Attorney General's Second Request for Information*, Item 1, 4/1/16.

(2) alleges that the Company's Request for PLR and the resulting PLR issued by the IRS are fundamentally flawed and cannot be relied upon; and

(3) proposes to disallow the NOLC DTA from rate base;

Q. DO YOU AGREE WITH MR. KOLLEN THAT THE FACTS IN THIS CASE ARE MORE CLOSELY ALIGNED WITH PLR 201418024?

A. No

Q. PLEASE EXPLAIN PLR 201418024.

A. PLR 201418024 was issued to a taxpayer operating in a jurisdiction other than Kentucky. The regulatory authority in that jurisdiction excluded the NOLC ADIT asset from rate base. The IRS ruled that this exclusion was not a normalization violation *if* the tax expense in the filing has not been reduced by the benefit of the NOLC.

Q. BY WAY OF EXAMPLE, CAN YOU DEMONSTRATE WHAT TAX EXPENSE WOULD BE LIKE IF IT WERE CALCULATED IN A MANNER CONSISTENT WITH PLR 201418024?

A. Assume the same facts as the earlier example in my testimony:

Net earnings before taxes	$100
Statutory tax rate	35%
Bonus/accelerated depreciation in excess of book depreciation	($120)

As before, the Company will have book earnings of $100, a taxable loss on its current tax return of ($20) and an NOL carryforward of $20 to offset taxable income in future periods. The Company will record the following to accrue taxes:

Tax expense debit for bonus/accelerated depreciation	$42
Tax expense credit for NOLC *(zero because it is excluded)*	-
ADIT asset for NOLC *(zero because it is excluded)*	-
ADIT liability for bonus/accelerated depreciation	($42)

The above entry results in a tax expense of $42. This equates to a tax rate of 42% of earnings. This does not equal its statutory rate of 35% times its earnings before tax because the benefit of the NOL has been excluded from tax expense.

In this same example, were the taxpayer subject to this PLR to make a filing before the jurisdiction subject to the PLR, the tax expense included in cost of service would be $42 and not its statutory rate times earnings.

Q. IF THE BENEFIT OF THE NOLC IS EXCLUDED FROM TAX EXPENSE IN A MANNER CONSISTENT WITH PLR 201418024, WILL THE TAX EXPENSE EQUAL THE STATUTORY RATE TIMES EARNINGS?

A. No.

Q. IF TAX EXPENSE AS DEFINED BY PLR 201418024 DOES NOT EQUAL THE STATUTORY RATE TIMES EARNINGS CAN THIS PLR BE ANALAGOUS TO RATE MAKING BEFORE THIS COMMISSION?

A. No.

Q. IS THIS PLR REVELEVANT, PRECENDENTIAL OR APPLICABLE TO THE COMPANY, THIS COMMISSION OR THIS FILING?

A. No.

Q. PLEASE EXPLAIN.

A. First, a PLR is precedential only to the taxpayer to which it is issued and if it is a ruling regarding normalization it is only precedential for that jurisdiction. Second, as I have explained in my testimony and demonstrated by example, the Company in this filing did reduce tax expense for the NOLC. The facts in this filing do not match those of the PLR. Finally, as discussed in my direct testimony, the Company has received its own PLR which is precedential for the Company and applicable to this jurisdiction.

Q. DO YOU AGREE WITH MR. KOLLEN THAT THE COMPANY'S REQUEST FOR PLR AND THE RESULTING PLR ISSUED BY THE IRS ARE FUNDAMENTALLY FLAWED AND CANNOT BE RELIED UPON?

A. No.

Q. PLEASE EXPLAIN.

A. As I have explained in my testimony and demonstrated by example, the Company in this filing and in Case No. 2013-00148 did reduce tax expense by the benefit of the NOLC. As discussed in my direct testimony, the Company provided a copy of the PLR Request to this Commission prior to filing. By letter dated December 15, 2014, this Commission affirmed that it had reviewed the request and believed the facts as stated and rulings requested were adequate and complete.

Mr. Kollen bases his recommendations regarding the Company's PLR Request and the ruling on his allegation that the facts as represented by the Company and verified by this Commission were inaccurate. He incorrectly believes that the Company and this Commission have not reflected the NOLC in tax expense in this filing or in Case No. 2013-00148. Given his mistake, his suggestion that the PLR cannot be relied upon is incorrect.

Q. HAS THE AG RAISED AN ISSUE IN THIS PROCEEDING REGARDING THE FACTUAL ACCURACY OF THE COMPANY'S PLR REQUEST AS APPROVED BY THE COMMISSION

A. Yes.

Q. IS THIS THE APPROPRIATE TIME AND MANNER TO RAISE THIS ISSUE?

A. No.

Q. HAS AG WITNESS KOLLEN ALLEGED THAT THE AG HAD NO OPPORURTUNITY TO COMMENT ON THE PLR REQUEST?

A. Yes, in response to Staff's First Discovery Set to the Attorney General, Item 2, witness Kollen states there is no opportunity for non-taxpayer comments in a PLR request and the AG was denied the opportunity to comment.[14]

Q. DO YOU AGREE WITH THESE STATEMENTS AND BELIEVE THE AG UTILIZED THE PROCEDURES AVAILABLE TO IT TO MAKE TIMELY COMMENTS?

A. No.

Q. PLEASE EXPLAIN.

A. The IRS has defined procedures for regulatory authorities and consumer advocate to provides comments or communicate with the IRS regarding the ruling requests. I would reference Exhibit PM-1 which the AG provided as ATTACHMENT 1 –

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[14] Case No. 2015-00343, *Attorney General's Responses to Commission's First Request*, Item 2, 5/13/2016.

AGs_Exhibit_A.pdf in response to Staff's First Discovery Set to the Attorney General, Item 2.[15] The AG was clearly notified of the Company's filing of the PLR Request by letter on November 7, 2014 and again on December 12, 2014. Both letters informed the AG that comments could be provided in accordance with Rev. Proc. 2014-1, Appendix E, Section .01. The November 7, 2014 letter specifically stated:

> If the taxpayer or the regulatory **authority informs a consumer advocate of the request for a letter ruling and the advocate wishes to communicate with the Service regarding the request, any such communication should be sent to:** Internal Revenue Service, Associate Chief Counsel (Procedure and Administration), Attn: CC:PA:LPD:DRU, P.O. Box 7604, Ben Franklin Station, Washington, DC 20044 (or, if a private delivery service is used: Internal Revenue Service, Associate Chief Counsel (Procedure and Administration), Attn: CC:PA:LPD:DRU, Room 5336, 1111 Constitution Ave., NW, Washington, DC 2D224). These communications will be treated as third party contacts for purposes of§ 6110 (emphasis added).

Q. DID THE AG PROVIDE COMMENTS TO THE IRS REGARDING THE RULING REQUEST?

A. Not to my knowledge.

Q. DO YOU AGREE WITH MR. KOLLEN THAT THE NOLC ADIT ASSET SHOULD BE REMOVED FROM RATE BASE?

A. No.

Q. PLEASE EXPLAIN.

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[15] *Id.*

A. Mr. Kollen's proposal is based entirely on his inaccurate conclusions and allegations that the Company excluded the NOLC from tax expense included in this filing. As I have explained in my testimony and demonstrated by example, the Company in this filing and in Case No. 2013-00148 did reduce tax expense by the benefit of the NOLC.

Inclusion of the NOLC ADIT is an appropriate adjustment to rate base accepted by numerous commissions and based first and foremost on sound ratemaking principles. Failure to include it in rate base would result in a return requested from customers that would not be reflective of the economic realities embodied in the Company's tax filings and associated cash flow. Furthermore, inclusion of the NOLC in rate base would be consistent with this Commission's ruling in Case No. 2013-00148 and the PLR received by the Company from the IRS.

VIII. <u>CONCLUSION</u>

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF	)	
RATE APPLICATION OF	)	Case No. 2015-00343
ATMOS ENERGY CORPORATION	)	

CERTIFICATE AND AFFIDAVIT

The Affiant, Pace McDonald, being duly sworn, deposes and states that the prepared testimony attached hereto and made a part hereof, constitutes the prepared rebuttal testimony of this affiant in Case No. 2015-00343, in the Matter of the Rate Application of Atmos Energy Corporation, and that if asked the questions propounded therein, this affiant would make the answers set forth in the attached prepared rebuttal testimony.

Pace McDonald

STATE OF Texas

COUNTY OF Dallas

SUBSCRIBED AND SWORN to before me by Pace McDonald on this the 24th day of May, 2016.

NOTARY PUBLIC STATE OF TEXAS
PAMELA L. PERRY
My Commission Expires
October 29, 2016

Pamela L. Perry
Notary Public

My Commission Expires: 10-29-16

SCHNEIDER, J. L.

BEFORE THE PUBLIC SERVICE COMMISSION

COMMONWEALTH OF KENTUCKY

APPLICATION OF ATMOS ENERGY	)	
	)	
CORPORATION FOR AN ADJUSTMENT	)	**Case No. 2015-00343**
	)	
OF RATES AND TARIFF MODIFICATIONS	)	

<u>REBUTTAL TESTIMONY OF JASON L. SCHNEIDER</u>

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Jason L. Schneider. My business address is 5430 LBJ Freeway, Suite 600, Dallas, Texas 75240.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am the Director of Accounting Services for Atmos Energy Corporation (hereinafter "Atmos Energy" or the "Company").

Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY AND EXHIBITS IN THIS DOCKET?

A. Yes.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. The purpose of my testimony is to rebut the testimony of AG witness Mr. Lane Kollen regarding his recommendation to modify the Division 002 Shared Services Unit (SSU) and Division 091 Kentucky/Mid-States (DGO) composite factors, which affect rate base and operating expense allocations to the Kentucky rate division.

Q. HOW DID THE COMPANY DETERMINE THE COMPOSITE FACTORS USED IN THIS CASE?

A. The Company describes how the composite factors are determined in the Cost Allocation Manual (CAM) that was filed as exhibit JLS-1 attached to my pre-filed testimony.

Q. PLEASE DESCRIBE THE HISTORY OF THE CAM.

A. Although the Company had been utilizing the allocation methodology described in the CAM for many years prior, the CAM was formally documented in response to 807 K.A.R. 5:080, and was first filed with the Commission in April of 2001. Atmos Energy is required to update the CAM each year. The Company has used the CAM to document its allocation processes in the regular course of business since it was first filed with the Commission.

Q. WHAT ARE THE FUNCTIONS OF SHARED SERVICES (SSU) AND THE KENTUCKY MID-STATES DIVISION GENERAL OFFICE (DGO)?

A. The Company's Shared Services Unit (SSU) consists of functions that serve multiple rate divisions. These services include departments such as legal, billing, call center, accounting, information technology, human resources, gas supply, and rates administration among others. SSU is comprised of SSU – General Office (Division 002) and SSU – Customer Support . SSU – General Office includes all other functions not encompassed by SSU – Customer Support. SSU – Customer Support includes billing, customer call center functions and customer support related services. The Kentucky Mid-States General Office (DGO) is an administrative office that is located outside of SSU which serve as the base of operations and central office for the operating division that encompasses the Company's operations in Kentucky, Tennessee and Virginia.

Q. HOW ARE SSU AND DGO EXPENSES ALLOCATED TO KENTUCKY?

A. SSU – General Office department expenses are allocated by department to the applicable operating divisions using the Composite Factor. The DGO's charges are allocated to the rate divisions using the composite rate for each rate division.

Costs are allocated to operating divisions based on a composite factor applied to the SSU departments.

The Composite Factor is the simple average of three percentages:

(1) The average percentage of gross direct property plant and equipment in each operating division unit as a percentage of the total direct property plant and equipment in all of the operating divisions.

(2) The average number of customers in each operating division as a percentage of the total number of customers in all of the operating divisions.

(3) The total direct O&M expense in each operating division as a percentage of the total direct O&M expense in all operating divisions.

SSU – Customer Service department expenses are allocated by cost center to the applicable operating division based on the average number of customers in each operating division as a percentage of the total number of customers in all of the operating divisions. The DGO charges are allocated to rate divisions based on the number of customers in the rate division.

DGO department expenses, which are incurred directly in the DGO, are allocated to the rate divisions utilizing the composite rate for each rate division.

The calculations for factors used in this filing for both SSU and DGO were provided in the Company's response to Staff Set 1, Item 59.[1]

Q. HAS THE COMPANY APPLIED ITS ALLOCATION METHODOLOGY CONSISTENTLY, OBJECTIVELY, AND IN ACCORDANCE WITH ITS COST ALLOCATION MANUAL SINCE THE INITIAL INCEPTION OF THE COST ALLOCATION MANUAL, INCLUDING IN CASE NO. 2013-00148 THAT WAS HEARD BEFORE THE KENTUCKY PUBLIC SERICE COMMISSION?

A. Yes. Although the percentages change each year with the input of the latest available fiscal year information, the methodology underlying calculation of the composite factors is the same, as it has been even before developing the CAM in April 2001.

Q. DO YOU AGREE WITH MR. KOLLEN THAT THE COMPOSITE FACTORS USED FOR DIVISION 002 AND DIVISION 091 ARE NOT REASONABLE?

A. No. Atmos Energy's allocation methodology is reasonable and reflective of cost causation. It is applied in all of the jurisdictions in which Atmos Energy operates in a manner that is uniform and consistent and ensures full and fair allocation of Division 002 and Division 091 costs. The cost allocations that results from the composite factors yield fairly and justly apportioned costs in compliance with KRS 278.010 (20).

Q. WHAT ARE MR. KOLLEN'S RECOMMENDATIONS FOR COMPOSITE FACTORS?

A. He agrees that the gross direct property plant and equipment is reasonable. He claims that the number of customers is not reasonable because there is a separate customer

[1] Case No. 2015-00343, *Atmos Energy's Responses to Staff's First Request for Information*, Item 59, 12/7/2015.

allocation factor that is used for customer costs, particularly the costs from Division 012 Call Center customer support.[2] He also claims that total direct O&M is not reasonable because it is not a comprehensive measure of all expenses that are managed by Division 002.[3]

Q. DO YOU AGREE WITH HIS RECOMMENDATION THAT THE NUMBER OF CUSTOMERS IS NOT REASONABLE?

A. No. It is important to the Company to develop a reasonable correlation between cost causation and allocation of common corporate costs. Servicing our customer loads requires significant management effort. As alluded to above, division 002 includes all other functions not encompassed by division 012. These costs include, among others, senior management costs. The need for and the level of services provided by the Utility is principally driven by the number of customers serviced by a particular operating division. Inclusion of this factor in the composite factor ensures that common corporate costs are being assigned in reasonable relation to the divisions that generate those costs by providing the necessary functions required to service customers.

Q. DO YOU AGREE WITH HIS RECOMMENDATION THAT TOTAL DIRECT O&M IS NOT REASONABLE?

A. No. Using direct O&M is a better gauge to use as it reflects the level of service provided. In the Company's extensive experience in providing local gas distribution utility serve in multiple jurisdictions, the relative percentage of O&M direct expense appropriately reflects cost causation attributable to a particular division. That is, in

[2] Kollen Direct at 40.

[3] *Id.*

allocating common costs for Atmos Energy, the level of O&M direct expense directly attributable to a particular division is one of the principle drivers of the level of services provided by rate division 002 and rate division 091. It has a high, and therefore reasonable, correlation with a division's use of common SSU and GDO services and should be utilized as a component of the 3 factor composite factor.

Q. WHY IS USING TOTAL OPERATING EXPENSES INAPPROPRIATE?

A. Using total operating expenses as a component of the composite factor produces circular results. As an example, suppose another division of the Company had total operating expense decreases but the level of service provided to them remains the same. That would mean that the costs to the other division's operations would be reduced via the allocation process in the following year, which would again be incorporated into the allocation process making that division's operations less profitable. At no time during these hypothetical years would the costs have been representative of the actual level of service.

Q. WHY IS DIRECT O&M A BETTER INDICATOR OF COST CAUSATION THAN TOTAL OPERATING EXPENSES?

A. Direct O&M represents a collection of expenditure types such as labor, benefits, utilities, telecom and IT expenses that are directly related to the services provided to the operating divisions. In other words, it is the people, as well as their related benefits and employee driven costs that provide the services to the operating divisions and whose costs must be allocated. Depreciation expense is directly related to and therefore redundant to gross plant, which Mr. Kollen agrees is already one of the reasonable factors that should be included in a composite factor. Depending on the rate structure of any particular jurisdiction relative to another, Other Taxes can easily distort the composite allocation. Texas, for example, requires regulated utilities to record revenue related taxes (such as franchise fees) as revenue and offsetting Other Tax expense. Including them in the composite factor calculation distorts the allocation away from jurisdictions that do not record such items on the income statement. In the cases of depreciation expense and Other Tax expense, to the extent they are higher or lower for a particular jurisdiction, they are not drivers of service costs. In both cases, they are managed by shared resources (primarily people) whose costs are accounted for as O&M and are properly allocated using the Company's existing allocation methodology.

Q. HAS MR. KOLLEN EVER TESTIFIED IN RELATION TO THE COMPANY'S CAM AND ITS COMPOSITE ALLOCATION FACTORS?

A. Yes, before the Georgia Public Service Commission in Docket No. 20298-U, Mr. Kollen testified that the Mid-States Operating division (Div 091) should use the composite factor to allocate costs to the states it serves.[4] Again before the Georgia Public Service Commission in Docket No. 30442, Mr. Kollen's testimony concluded that the division costs were allocated in accordance with the Atmos Energy CAM and the Georgia Commission precedent.[5] In neither proceeding did Mr. Kollen recommend a change to the Company's allocation methodology.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

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[4] Direct Testimony of Victoria L. Taylor and Lane Kollen, Docket No. 20298-U, at 18.

[5] Direct Testimony and Exhibits of Alicia McBride and Lane Kollen, Docket No. 30442, at 13.

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF	)	
RATE APPLICATION OF	)	Case No. 2015-00343
ATMOS ENERGY CORPORATION	)	

CERTIFICATE AND AFFIDAVIT

The Affiant, Jason L. Schneider, being duly sworn, deposes and states that the prepared testimony attached hereto and made a part hereof, constitutes the prepared rebuttal testimony of this affiant in Case No. 2015-00343, in the Matter of the Rate Application of Atmos Energy Corporation, and that if asked the questions propounded therein, this affiant would make the answers set forth in the attached prepared rebuttal testimony.

Jason L. Schneider

Jason L. Schneider

STATE OF Texas

COUNTY OF Dallas

SUBSCRIBED AND SWORN to before me by Jason L. Schneider on this the 17 day of May, 2016.

NOTARY PUBLIC STATE OF TEXAS KATHERINE E. PARKS My Commission Expires July 16, 2018

Katherine E. Parks

Notary Public

My Commission Expires: 7/16/18

VANDER WEIDE, J. H.

BEFORE THE PUBLIC SERVICE COMMISSION

COMMONWEALTH OF KENTUCKY

APPLICATION OF ATMOS ENERGY	)	
	)	
CORPORATION FOR AN ADJUSTMENT	)	**Case No. 2015-00343**
	)	
OF RATES AND TARIFF MODIFICATIONS	)	

JAMES H. VANDER WEIDE, PH.D.

RATE OF RETURN

ATMOS ENERGY CORPORATION
RATE OF RETURN

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I. WITNESS IDENTIFICATION AND PURPOSE OF REBUTTAL TESTIMONY

Q. WHAT IS YOUR NAME AND BUSINESS ADDRESS?

A. My name is James H. Vander Weide. My business address is 3606 Stoneybrook Drive, Durham, North Carolina.

Q. ARE YOU THE SAME JAMES H. VANDER WEIDE WHO PREVIOUSLY SUBMITTED DIRECT TESTIMONY IN THIS PROCEEDING?

A. Yes, I am.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. I have been asked by Atmos Energy Corporation ("Atmos Energy" or "the Company") to review the testimony of Richard A. Baudino and to respond to his recommended rate of return on equity for Atmos Energy. Mr. Baudino's testimony is presented on behalf of the Office of the Attorney General.

Q. WHAT IS MR. BAUDINO'S RECOMMENDED RATE OF RETURN ON EQUITY FOR ATMOS ENERGY?

A. Mr. Baudino recommends a rate of return on equity equal to 9.0 percent for Atmos Energy.

Q. HOW DOES MR. BAUDINO ARRIVE AT HIS RECOMMENDED 9.0 PERCENT RATE OF RETURN ON EQUITY?

A. Mr. Baudino arrives at his recommended 9.0 percent rate of return on equity by applying the Discounted Cash Flow ("DCF") model to two groups of proxy companies, a natural gas distribution company group and a water utility group. Although he also applies the Capital Asset Pricing Model ("CAPM") to his proxy company groups, he does not rely on his CAPM results to arrive at his recommended cost of equity (Baudino at 12).

Q. WHAT AREAS OF MR. BAUDINO'S TESTIMONY WILL YOU ADDRESS IN YOUR REBUTTAL TESTIMONY?

A. I will address Mr. Baudino's: (1) DCF analysis; (2) CAPM analysis; and (3) comments on my direct testimony.

Q. IS THERE ANYTHING IN MR. BAUDINO'S TESTIMONY THAT CAUSES YOU TO CHANGE YOUR RECOMMENDED COST OF EQUITY FOR ATMOS?

A. No.

II. <u>MR. BAUDINO'S DISCOUNTED CASH FLOW ANALYSIS</u>

Q. WHAT DCF MODEL DOES MR. BAUDINO USE TO ESTIMATE ATMOS ENERGY'S COST OF EQUITY?

A. Mr. Baudino uses an annual DCF model of the form, $k = [D_0\ (1+.5g)/P_0] + g$, where k is the cost of equity, D_0 is the most recent annualized dividend per share, P_0 is the current stock price, and g is the expected future annual growth rate in dividends and earnings per share.

Q. WHAT ARE THE BASIC ASSUMPTIONS OF MR. BAUDINO'S ANNUAL DCF MODEL?

A. Mr. Baudino's annual DCF model is based on the assumptions that: (1) a company's stock price is equal to the present value of the future dividends investors expect to receive from their investment in the company; (2) dividends are paid annually at the end of each year; (3) dividends, earnings, and book values are expected to grow at the same constant rate forever; and (4) the first annual dividend is received one year from the date of the analysis.

Q. DO YOU AGREE WITH MR. BAUDINO'S USE OF AN ANNUAL DCF MODEL TO ESTIMATE ATMOS ENERGY'S COST OF EQUITY?

A. No. The annual DCF model is based on the assumption that companies pay dividends only at the end of each year. Because Mr. Baudino's proxy companies pay dividends quarterly, Mr. Baudino should have used the quarterly DCF model to estimate Atmos Energy's cost of equity.

Q. WHY IS IT INCORRECT TO USE AN ANNUAL DCF MODEL TO ESTIMATE THE COST OF EQUITY FOR COMPANIES THAT PAY DIVIDENDS QUARTERLY?

A. It is incorrect to apply an annual DCF model to companies that pay dividends quarterly because: (1) the DCF model is based on the assumption that a company's stock price is equal to the present value of the expected future dividends associated with investing in the company's stock; and (2) the annual DCF model is not a correct equation for the present value of expected future dividends when dividends are paid quarterly. [See Vander Weide Direct, Appendix 2]

Q. RECOGNIZING YOUR DISAGREEMENT WITH MR. BAUDINO'S USE OF AN ANNUAL DCF MODEL, DID MR. BAUDINO APPLY THE ANNUAL DCF MODEL CORRECTLY?

A. No. Mr. Baudino's annual DCF model is based on the assumption that dividends will grow at the same constant rate forever. Under the assumption that dividends will grow at the same constant rate forever, the cost of equity is given by the equation, $k = [D_0 (1 + g) / P_0] + g$, where D_0 is the current annualized dividend, P_0 is the stock price, and g is the expected constant annual growth rate. [See Vander Weide Direct Appendix 2] Thus, the correct first period dividend in the annual DCF model is the current annualized dividend multiplied by the factor, (1 + growth rate). Instead, Mr. Baudino uses the current annualized dividend multiplied by the factor (1 + 0.5 times growth rate) as the first period dividend in his DCF model. This incorrect procedure, apart from other errors in his methods, causes him to underestimate Atmos Energy's cost of equity.

Q. HOW DOES MR. BAUDINO ESTIMATE THE EXPECTED FUTURE GROWTH COMPONENT OF HIS DCF MODEL?

A. Mr. Baudino estimates the expected growth component of his DCF model by calculating the mean and median values of five sources of forecasted growth for each proxy company, including the Value Line forecasted dividends per share ("DPS") growth, Value Line forecasted earnings per share ("EPS") growth, Value Line internal growth as measured by b times r, Zack's reported consensus analysts' EPS growth, and Thomson Reuters I/B/E/S consensus analysts' EPS growth forecasts.

Q. DO YOU AGREE WITH MR. BAUDINO'S USE OF VALUE LINE'S FORECASTED DIVIDEND PER SHARE GROWTH RATE TO ESTIMATE THE GROWTH COMPONENT OF THE DCF MODEL?

A. No. Dividend growth forecasts are, in general, less accurate indicators of long-run future growth than are earnings growth forecasts. When analysts forecast dividend growth, they first must estimate earnings growth and then forecast the percentage of earnings that will be paid out as dividends. Since the percentage of earnings that are paid out as dividends is uncertain, there is an additional element of error present in dividend growth forecasts than is present in earnings growth forecasts.

In addition, my studies indicate that analysts' EPS growth forecasts are more highly correlated with stock prices than analysts' DPS growth forecasts. This result is important because it supports the conclusion that investors use analysts' EPS growth forecasts as the estimate of future growth when making stock buy and sell decisions.

Q. WHAT IS THE B X R METHOD FOR ESTIMATING GROWTH IN THE DCF MODEL?

A. The b x r method estimates expected future growth by multiplying a company's retention ratio, "b," times its expected rate of return on equity, "r." Thus, "g = b x r," where "b" is the percentage of earnings that are retained in the business and "r" is the expected rate of return on equity.

Q. DO YOU AGREE WITH MR. BAUDINO'S B X R METHOD FOR ESTIMATING GROWTH IN THE DCF MODEL?

A. No. I have at least three criticisms of Mr. Baudino's use of the b x r method for estimating growth in the DCF model. First, the b x r method involves circular logic in that it requires an estimate of the expected rate of return in order to calculate the growth rate, and the growth rate is used to calculate the expected or required rate of return. Second, the b x r method fails to incorporate the additional growth companies can achieve by issuing new equity at prices above the company's book value. Adjusting for external growth is typically accomplished by adding a second term, "sv," to the b x r growth rate, which reflects stock sales at prices above book value. However, Mr. Baudino does not include the sv term in his b x r growth calculations. Third, Mr. Baudino's application of the b x r method fails to recognize that Value Line calculates each company's ROE by dividing net income by year-end equity, whereas most financial analysts calculate ROE by dividing net income by average equity for the year. When equity is increasing, as it is for Mr. Baudino's proxy companies, Value Line's method of calculating ROE underestimates the more conventionally-measured ROE, and thus is a downwardly-biased estimate of b x r growth.

Q. WHAT IS THE BEST METHOD FOR ESTIMATING THE GROWTH COMPONENT OF THE DCF MODEL?

A. As I discuss in my direct testimony, my studies indicate that the analysts' EPS growth forecasts are the best proxy for investors' growth expectations in the DCF model because stock prices are more highly correlated with analysts' EPS growth forecasts than with other growth estimators such as DPS growth and b x r growth.

Q. DOES MR. BAUDINO INCLUDE AN ALLOWANCE FOR THE FLOTATION COSTS THAT ATMOS ENERGY INCURS WHEN IT ISSUES NEW EQUITY?

A. No (see Baudino at 37 - 38).

Q. DO YOU AGREE WITH MR. BAUDINO'S FAILURE TO INCLUDE A FLOTATION COST ALLOWANCE IN HIS COST OF EQUITY STUDIES?

A. No. As I explain in my direct testimony, equity flotation costs are a legitimate cost of issuing new equity in the capital markets that should be reflected in a company's cost of equity (see Vander Weide Direct at 23 – 25 and Appendix 3).

Q. ARE EQUITY FLOTATION COSTS TYPICALLY INCLUDED IN THE OPERATING EXPENSES A COMPANY USES TO CALCULATE ITS REVENUE REQUIREMENT?

A. No. Equity flotation costs are typically treated as an offset to the proceeds of a new equity issuance in the equity account on the balance sheet rather than as an operating expense in the company's income statement.

Q. WHAT IS THE ECONOMIC BASIS OF YOUR RECOMMENDED FLOTATION COST ALLOWANCE?

A. My recommended flotation cost allowance is based on the fundamental economic and regulatory principles that: (1) a company should only invest in a new project if it can earn a return on its investment that is equal to or greater than its cost of capital; and (2) the time pattern of expense recovery should match the time pattern of benefits resulting from the expense. Because equity flotation costs are a legitimate expense of raising capital, a company has no incentive to invest in new capital projects if equity flotation costs are not included in the cost of capital estimate. In addition, because the proceeds of an equity issuance are invested in assets that provide benefits over a long time period, the costs of an equity issuance should be recovered over a long period of time.

Q. HAS THE COMPANY EXPERIENCED EQUITY FLOTATION COSTS ON COMMON STOCK OFFERINGS IN RECENT YEARS?

A. Yes. Atmos Energy incurred flotation costs associated with new equity issuances in 2014, 2006, and 2004. In these offerings, Atmos Energy experienced flotation costs in the range 5.4 percent to 10.5 percent. As I discuss in my direct testimony, Appendix 3, Atmos Energy's flotation costs are similar to the flotation costs companies typically incur in issuing new securities in the market place.

Q. HOW DO YOU DETERMINE THE AMOUNT OF FLOTATION COSTS INCURRED BY ATMOS ENERGY IN THESE EQUITY ISSUANCES?

A. I determine the amount of equity flotation costs Atmos Energy incurred from information contained in the prospectus documents filed by the Company with the Securities Exchange Commission ("SEC"). For example, in the Company's February 2014 equity offering of 9,200,000 shares, the Company's closing stock price on February 10, 2014, just prior to the filing of the prospectus, was $47.41 per share; and the public offering price for this issuance was $44.00. The Company incurred underwriting discounts, commissions, and expenses equal to $14,518,000 compared to net proceeds of $390,632,000. Thus, the Company's out-of-pocket flotation costs as a percent of net proceeds to the Company are 3.7 percent, and total flotation costs as a percent of the pre-issue price are 10.5 percent. The calculation of these flotation costs for the equity issuance in 2014 and for the three previous equity issuances are shown in Exhibit JVW-1 Rebuttal Schedule 1.

Q. IS A FLOTATION COST ADJUSTMENT ONLY APPROPRIATE IF A COMPANY ISSUES STOCK DURING THE TEST YEAR?

A. No. As described in Exhibit JVW-1, Appendix 1, a flotation cost adjustment is required whether or not a company issued new stock during the test year. Previously incurred flotation costs have not been recovered in previous rate cases; rather, they are a permanent cost associated with past issues of common stock. Just as an adjustment is made to the embedded cost of debt to reflect previously incurred debt issuance costs (regardless of whether additional bond issuances were made in the test year), so should an adjustment be made to the cost of equity regardless of whether additional stock was issued during the test year.

III. MR. BAUDINO'S CAPM ANALYSIS

Q. WHAT IS THE CAPM?

A. The CAPM is an equilibrium model of expected returns on risky securities in which the expected or required return on a given risky security is equal to the risk-free rate of interest plus the security's "beta" times the market risk premium:

Expected return = Risk-free rate + (Security beta x Market risk premium).

The risk-free rate in this equation is the expected rate of return on a risk-free government security, the security beta is a measure of the company's risk relative to the market as a whole, and the market risk premium is the premium investors require to invest in the market basket of all securities compared to the risk-free security.

Q. HOW DOES MR. BAUDINO USE THE CAPM TO ESTIMATE ATMOS ENERGY'S COST OF EQUITY?

A. The CAPM requires estimates of the risk-free rate, the company-specific risk factor, or beta, and either the required return on an investment in the market portfolio, or the risk premium on the market portfolio compared to an investment in risk-free government securities. For the risk-free rate, Mr. Baudino uses the recent average 2.64 percent yield to maturity on 20-year Treasury bonds and the recent 1.48 percent yield to maturity on five-year Treasury bonds. For the company-specific risk factor or beta, Mr. Baudino uses the current average Value Line beta for his natural gas utility group, 0.79. For the risk premium on the market portfolio, Mr. Baudino calculates a forward-looking risk premium in the range 8.5 percent to 9.49 percent by subtracting his 2.64 percent and 1.48 percent risk-free rate estimates from his 10.97 percent estimate of the expected return on the Value Line universe of companies. In addition, Mr. Baudino uses historical risk premiums in the range 5.01 percent to 7.01 percent, which reflect the historical geometric and arithmetic mean risk premiums on the market portfolio over the period 1926 to 2015 [Baudino at 24 - 25, Exhibit__(RAB-7), Exhibit___(RAB-8)].

Q. WHAT CAPM RESULTS DOES MR. BAUDINO OBTAIN?

A. Using his estimated risk premium for the Value Line universe of companies, Mr. Baudino obtains CAPM cost of equity estimates in the range 9.01 percent to 9.21 percent (Exhibit___(RAB-7); using his historical risk premiums, Mr. Baudino obtains CAPM cost of equity estimates in the range 6.44 percent to 8.03 percent (Exhibit___(RAB-8).

Q. DO YOU AGREE WITH MR. BAUDINO'S CAPM ANALYSIS OF ATMOS ENERGY'S COST OF EQUITY?

A. No. I disagree with Mr. Baudino's: (1) use of the current yields on five-year Treasury notes and twenty-year Treasury bonds; (2) use of both geometric mean and arithmetic mean historical returns on the S&P 500 to estimate the market risk premium; (3) failure to recognize that the CAPM underestimates the cost of equity for companies with betas less than 1.0; and (4) failure to recognize that the CAPM underestimates the cost of equity for companies with small market capitalizations.

Q. WHY DO YOU DISAGREE WITH MR. BAUDINO'S USE OF THE CURRENT YIELD ON FIVE-YEAR AND TWENTY-YEAR TREASURY BONDS TO ESTIMATE THE RISK-FREE RATE COMPONENT OF THE CAPM?

A. I disagree with Mr. Baudino's use of the current yield on Treasury bonds to estimate the risk-free rate component of the CAPM because current yields on Treasury bonds are artificially low as a result of the Federal Reserve's efforts to stimulate the economy. I recommend using the forecasted interest rate on long-term Treasury bonds rather than the current interest rate to estimate the risk-free rate component of the CAPM. Because current interest rates are determined more by Federal Reserve policy interventions than by market forces, I believe forecasted interest rates are better indicators of investor-required returns on Treasury securities in the market place. At the time of my direct testimony, the forecasted yield on 20-year Treasury bonds was approximately 4.2 percent, whereas Mr. Baudino's CAPM studies use a Treasury bond yield equal to 2.82 percent.

I further disagree with Mr. Baudino's use of the current yield on five-year Treasury notes because Atmos Energy's investments in ratebase are long lived, and five-year Treasury notes are not risk-free over the long life of the company's ratebase investments.

Q. DO YOU AGREE WITH BAUDINO'S USE OF BOTH GEOMETRIC MEAN AND ARITHMETIC MEAN RETURNS ON THE S&P 500 TO ESTIMATE THE RISK PREMIUM ON THE MARKET PORTFOLIO?

A. No. As I describe in my direct testimony, I recommend using the arithmetic mean return rather than the geometric mean return because the arithmetic mean return is the only return that will discount the investor's expected future wealth to the current price of the investment (see Vander Weide Direct Testimony, Schedule JVW-6).

Q. DID YOU CALCULATE A CAPM ESTIMATE OF THE AVERAGE-RISK NATURAL GAS UTILITY'S COST OF EQUITY USING A 4.2 PERCENT FORECASTED YIELD ON 20-YEAR TREASURY BONDS AND A 7.0 PERCENT MARKET RISK PREMIUM THAT REFLECTS THE DIFFERENCE BETWEEN THE ARITHMETIC MEAN RETURN AND THE INCOME RETURN ON 20-YEAR TREASURY BONDS?

A. Yes. Using these data, I found a base CAPM cost of equity equal to 10.1 percent (4.2 + 0.81 x 7.0 = 10.1).

Q. YOU NOTE THAT MR. BAUDINO FAILS TO ADJUST FOR THE TENDENCY OF THE CAPM TO UNDERESTIMATE THE COST OF EQUITY FOR COMPANIES WITH BETAS LESS THAN 1.0. DO YOU HAVE EVIDENCE THAT THE CAPM TENDS TO UNDERESTIMATE THE COST OF EQUITY FOR COMPANIES WITH BETAS LESS THAN 1.0?

A. Yes. The original evidence that the unadjusted CAPM tends to underestimate the cost of equity for companies whose equity beta is less than 1.0 and to overestimate the cost of equity for companies whose equity beta is greater than 1.0 was presented in a paper by Black, Jensen, and Scholes, "The Capital Asset Pricing Model: Some Empirical Tests." Numerous subsequent papers have validated the Black, Jensen, and Scholes findings, including those by Litzenberger and Ramaswamy, Banz, Fama and French, and Fama and MacBeth. (See Vander Weide Direct at 42 – 44.)

Q. DO YOU HAVE ADDITIONAL EVIDENCE THAT THE CAPM TENDS TO UNDERESTIMATE THE COST OF EQUITY FOR UTILITY COMPANIES WITH AVERAGE BETAS LESS THAN 1.0?

A. Yes. Over the period 1937 to 2015, investors in the S&P Utilities Stock Index have earned a risk premium over the yield on long-term Treasury bonds equal to 5.49 percent, while investors in the S&P 500 have earned a risk premium over the yield on long-term Treasury bonds equal to 6.06 percent. According to the CAPM, investors in utility stocks should expect to earn a risk premium over the yield on long-term Treasury securities equal to the average utility beta times the expected risk premium on the S&P 500. (See

Vander Weide Direct, Schedule 9.) Thus, the ratio of the risk premium on the utility portfolio to the risk premium on the S&P 500 should equal the utility beta. However, the average natural gas utility beta at the time of the studies presented in my direct testimony was approximately 0.81, whereas the historical ratio of the utility risk premium to the S&P 500 risk premium is 0.90 (5.49 ÷ 6.06 = 0.90). In short, the 0.81 measured beta for utilities underestimates the cost of equity for the utilities, providing further support for the conclusion that the CAPM underestimates the cost of equity for utilities at this time.

Q. YOU ALSO NOTE THAT MR. BAUDINO FAILS TO ACKNOWLEDGE THAT THE CAPM UNDERESTIMATES THE COST OF EQUITY FOR COMPANIES WITH SMALL MARKET CAPITALIZATIONS. DID YOU PROVIDE EVIDENCE IN YOUR DIRECT TESTIMONY ON THE REQUIRED RISK PREMIUM ON INVESTMENTS IN SMALL AND MID-CAP COMPANIES WHEN ESTIMATING THE COST OF EQUITY USING THE CAPM?

A. Yes. I provide evidence that the required risk premium on investments in small and mid-cap companies is in the range 1.07 percent to 3.74 percent when using the CAPM to estimate the cost of equity (see Vander Weide Direct, Table 1, at 40).

IV. REBUTTAL OF MR. BAUDINO'S COMMENTS ON MY DIRECT TESTIMONY

Q. WHAT ARE MR. BAUDINO'S CRITICISMS OF YOUR COST OF EQUITY ESTIMATES FOR ATMOS ENERGY?

A. Mr. Baudino disagrees with my: (1) use of a quarterly DCF model rather than an annual DCF model; (2) including an allowance for flotation costs; (3) use only of earnings growth forecasts in my application of the DCF model; and (4) use of forecasted interest rates in my application of the CAPM and risk premium methods.

Q. WHAT IS MR. BAUDINO'S CONCERN WITH YOUR USE OF A QUARTERLY DCF MODEL?

A. Mr. Baudino argues that a quarterly DCF model would over compensate investors because quarterly dividends are already reflected in a company's stock price. (Baudino at 37)

Q. DO YOU AGREE WITH MR. BAUDINO'S CONCLUSION THAT THE QUARTERLY DCF MODEL OVER-COMPENSATES INVESTORS FOR THE QUARTERLY PAYMENT OF DIVIDENDS BECAUSE QUARTERLY DIVIDENDS ARE ALREADY INCLUDED IN STOCK PRICES?

A. No. The DCF model is based on the assumption that a company's stock price is equal to the present value of the cash flows investors expect to receive from their ownership of the stock. Because the quarterly DCF model is the only DCF model that equates a company's stock price to the present value of the cash flows investors expect to receive from owning the stock, the quarterly model must be used to estimate the cost of equity for companies such as those in Mr. Baudino's and my comparable groups that pay quarterly dividends. Contrary to Mr. Baudino's assertion, it is precisely because investors recognize that his proxy companies pay dividends quarterly that the quarterly DCF model must be used to estimate the cost of equity.

Q. MR. BAUDINO CLAIMS THAT YOUR USE OF A QUARTERLY DCF MODEL INCREASED YOUR DCF ESTIMATE OF THE COST OF EQUITY BY 30 BASIS POINTS (BAUDINO AT 38). IS HE CORRECT?

A. No. The difference between the results from using the quarterly DCF model and a properly applied annual DCF model is just seven basis points in the studies reported in my direct testimony and only six basis points in the updated DCF study I present in this rebuttal testimony.

Q. WHY DOES MR. BAUDINO DISAGREE WITH YOUR ALLOWANCE FOR FLOTATION COSTS?

A. Mr. Baudino disagrees with my allowance for flotation costs because, in his opinion, flotation costs are already included in stock prices (Baudino at 37 - 38).

Q. ARE FLOTATION COSTS ALREADY REFLECTED IN STOCK PRICES?

A. No. Flotation costs are an expense that are deducted from the proceeds associated with a stock issuance.

Q. IF FLOTATION COSTS ARE AN EXPENSE, WHY DO YOU INCLUDE THEM IN YOUR CALCULATION OF A COMPANY'S COST OF EQUITY?

A. I include flotation costs in my calculation of a company's cost of equity because the company will not be able to earn a fair return on equity if flotation costs are not included in the estimate of the cost of equity.

Q. CAN YOU ILLUSTRATE WHY A COMPANY WILL NOT BE ABLE TO EARN A FAIR RETURN ON EQUITY IF FLOTATION COSTS ARE NOT INCLUDED IN THE ESTIMATE OF THE COST OF EQUITY?

A. Yes. Assume that a company issues $100 in equity, incurs $3 in flotation costs, and that the investors' required rate of return on equity is 10 percent. To satisfy the investors' return requirement, the company must earn a $10 return on the $100 investment in the company. However, because of the flotation cost, the company will have only $97 to invest in rate base. Thus, the company must earn a 10.31 percent return on its $97 investment in order to earn the investors' required $10 return (10.31% x $97 = $10).

Q. WHY DO YOU RELY ON EARNINGS GROWTH FORECASTS IN YOUR DCF ANALYSES?

A. I rely on earnings growth forecasts as the estimate of investors' expected growth in the DCF model because the DCF model requires the use of investors' growth expectations, and my studies indicate that earnings growth forecasts are the best proxy for investors' growth expectations in the DCF model. Furthermore, although earnings and dividends must grow at approximately the same rate in the long run, dividends sometimes grow at a different rate than earnings in the short term because a company is adjusting its dividend payout ratio to a different value. Because dividend growth during the transition to the new target dividend payout ratio will not reflect long-run expected dividend growth, analysts' earnings per share estimates are better estimates of long-run future growth than dividend growth forecasts. (See Vander Weide Direct at 20 – 24.)

Q. WHY DO YOU USE FORECASTED INTEREST RATES IN YOUR RISK PREMIUM STUDIES?

A. I use forecasted interest rates in my risk premium studies because the rates in this proceeding should be sufficient to provide Atmos Energy an opportunity to earn its required return on equity during the period in which rates will be in effect.

Q. WHAT IS MR. BAUDINO'S DISAGREEMENT WITH YOUR USE OF FORECASTED INTEREST RATES?

A. Mr. Baudino argues that forecasted interest rates could not possibly be higher than current interest rates because, if they were, investors would adjust current bond yields to avoid or minimize capital losses in the future. (Baudino at 39 - 40.)

Q. DO YOU AGREE WITH MR. BAUDINO'S ASSERTION THAT FORECASTED INTEREST RATES MUST BE EQUAL TO CURRENT INTEREST RATES?

A. No. If investors always expected forecasted interest rates to be equal to current interest rates, they would be unwilling to pay for economic forecasts from firms such as Consensus Economics, Blue Chip, and others. The fact that numerous firms spend considerable sums to obtain forecasts of interest rates is sufficient evidence that they do not believe that current interests rates are the best forecast of future interest rates.

Q. WHY DOES MR. BAUDINO DISAGREE WITH YOUR RISK PREMIUM ESTIMATES?

A. Mr. Baudino contends that: (1) long-term historical return studies may not reflect investors' current required risk premiums; and (2) investors' expectations for natural gas distribution companies may be different than their expectations for the S&P500. (Baudino at 40.)

Q. ARE HISTORICAL RISK PREMIUM STUDIES COMMONLY USED TO ESTIMATE THE INVESTOR'S CURRENT REQUIRED MARKET RISK PREMIUM?

A. Yes. Although the current required market risk premium is uncertain, long-term historical studies of the returns on stocks compared to bonds are a frequently-used method for estimating the required risk premium.

Q. DOES MR. BAUDINO HIMSELF USE HISTORICAL RISK PREMIUM DATA TO ESTIMATE THE REQUIRED MARKET RISK PREMIUM IN HIS CAPM ANALYSIS?

A. Yes. As I discuss above, as one of his two methods for estimating the required risk premium on the market portfolio, Mr. Baudino relies on historical geometric and arithmetic mean risk premium data from the Ibbotson® SBBI® Classic Yearbook.

Q. IN HIS DISCUSSION OF YOUR EX POST RISK PREMIUM APPROACH, MR. BAUDINO CLAIMS THAT YOU SHOULD HAVE ADJUSTED YOUR HISTORICAL RISK PREMIUM DATA FOR THE S&P500 TO REFLECT THE RISK OF UTILITY COMPANIES. DO YOU ADJUST YOUR HISTORICAL RISK PREMIUM DATA FOR THE S&P500 TO REFLECT THE RISK OF UTILITY COMPANIES?

A. Yes. As I discuss in my direct testimony, I adjust the historical risk premium data on the S&P500 by calculating a historical risk premium on both the S&P500 and the S&P Utilities and using the average of these two estimates.

V. UPDATED COST OF EQUITY STUDIES

Q. HOW DO YOU ESTIMATE ATMOS ENERGY'S COST OF EQUITY IN YOUR DIRECT TESTIMONY?

A. In my direct testimony, I estimate Atmos Energy's cost of equity by applying standard cost of equity methods such as the DCF, the ex ante risk premium method, the ex post risk premium method, and the CAPM to market data for proxy groups of publicly-traded natural gas and water utilities. A complete description of these methods and my application of these methods is found in my direct testimony.

Q. IN YOUR UPDATED ANALYSES, DO YOU APPLY YOUR METHODS IN THE SAME MANNER AS IN YOUR DIRECT TESTIMONY?

A. Yes. My updated analyses are implemented in the same manner as that presented in my direct testimony.

Q. DO YOUR UPDATED ANALYSES CAUSE YOU TO CHANGE YOUR RECOMMENDED COST OF EQUITY FOR ATMOS ENERGY?

A. No. My updated studies indicate that the cost of equity for my proxy groups of publicly-traded natural gas distribution and water utilities is in the range 9.6 percent to 11.1 percent (see Table 1 below). Exhibits showing the detailed results of my updated studies accompany my testimony, Rebuttal Schedules 2 through 10. My updated cost of equity results are similar to the results presented in my direct testimony.

TABLE 1
COST OF EQUITY MODEL RESULTS

METHOD	MODEL RESULT
DCF—LDC	9.9%
DCF—Water	9.6%
Ex Ante Risk Premium	11.1%
Ex Post Risk Premium	10.6%
CAPM-Historical	10.4%
CAPM-DCF Based	10.6%

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes, it does.

LIST OF REBUTTAL SCHEDULES

Rebuttal Schedule 1	Atmos Energy Flotation Costs
Rebuttal Schedule 2	Summary of Discounted Cash Flow Analysis for Natural Gas Distribution Utilities
Rebuttal Schedule 3	Summary of Discounted Cash Flow Analysis for Water Utilities
Rebuttal Schedule 4	Comparison of the DCF Expected Return on an Investment in Natural Gas Utilities to the Interest Rate on Moody's A-Rated Utility Bonds
Rebuttal Schedule 5	Comparative Returns on S&P 500 Stock Index and Moody's A-Rated Bonds 1937—2016
Rebuttal Schedule 6	Comparative Returns on S&P Utility Stock Index and Moody's A-Rated Bonds 1937—2016
Rebuttal Schedule 7	Using the Arithmetic Mean to Estimate the Cost of Equity Capital
Rebuttal Schedule 8	Calculation of Capital Asset Pricing Model Cost of Equity Using the Ibbotson® SBBI® 6.9 Percent Risk Premium
Rebuttal Schedule 9	Calculation of Capital Asset Pricing Model Cost of Equity Using DCF Estimate of the Expected Rate of Return on the Market Portfolio
Rebuttal Schedule 10	Comparison of Risk Premia on S&P500 and S&P Utilities 1937 – 2016

ATMOS ENERGY
EXHIBIT___(JVW-1)
REBUTTAL SCHEDULE 1
ATMOS ENERGY FLOTATION COSTS

February 11, 2014 Public Offering	Price Per Share	No. Of Shares	Total
Closing Price at Date Just Prior to Issuance (2/10/14)	$ 47.41		
Public Offering Price	$ 44.00	9,200,000	$ 404,800,000
Underwriting discounts, commissions	$ 1.54	9,200,000	$ 14,168,000
Proceeds before expenses	$ 42.46	9,200,000	$ 390,632,000
Expenses			$ 350,000
Total Commissions, expenses			$ 14,518,000
Net proceeds	$ 42.42	9,200,000	$ 390,282,000
Total Expenses as percent of proceeds			3.7%
Flotation costs as % of pre-issue price			10.5%
December 7, 2006 Public Offering	Price per Share	No. of shares	Total
Closing Price at Date Just Prior to Issuance (12/96/06)	$ 32.72		
Public Offering Price	$ 31.50	5,500,000	$ 173,250,000
Underwriting discounts, commissions	$ 1.10	5,500,000	$ 6,050,000
Proceeds before other expenses	$ 30.40	5,500,000	$ 167,200,000
Expenses			$ 166,800
Total Commissions, expenses			$ 6,216,800
Net proceeds	$ 30.37	5,500,000	$ 167,033,200
Total Expenses as percent of proceeds			3.7%
Flotation costs as % of pre-issue price			7.2%
October 21, 2004 Public Offering	Price per Share	No. of shares	Total
Closing Price at Date Just Prior to Issuance (10/20/04)	$ 25.07		
Public Offering Price	$ 24.75	14,000,000	$ 346,500,000
Underwriting discounts, commissions	$ 0.99	14,000,000	$ 13,860,000
Proceeds before other expenses	$ 23.76	14,000,000	$ 332,640,000
Expenses			$ 440,000
Total Commissions, expenses			$ 14,300,000
Net proceeds	$ 23.73	14,000,000	$ 332,200,000
Total Expenses as percent of proceeds			4.3%
Flotation costs as % of pre-issue price			5.4%
July 13, 2004 Public Offering	Price per Share	No. of shares	Total
Closing Price at Date Just Prior to Issuance (07/12/04)	$ 25.14		
Public Offering Price	$ 24.75	8,650,000	$ 214,087,500
Underwriting discounts, commissions	$ 0.99	8,650,000	$ 8,563,500
Proceeds before other expenses	$ 23.76	8,650,000	$ 205,524,000
Expenses			$ 205,100
Total Commissions, expenses			$ 8,768,600
Net proceeds	$ 23.74	8,650,000	$ 205,318,900
Total Expenses as percent of proceeds			4.3%
Flotation costs as % of pre-issue price			5.6%

ATMOS ENERGY
EXHIBIT__(JVW-1)
REBUTTAL SCHEDULE 2
SUMMARY OF DISCOUNTED CASH FLOW ANALYSIS
FOR NATURAL GAS DISTRIBUTION UTILITIES

	COMPANY	MOST RECENT QUARTERLY DIVIDEND (D_0)	STOCK PRICE (P_0)	I/B/E/S FORECAST OF FUTURE EARNINGS GROWTH	MARKET CAP $ (MIL)	DCF MODEL RESULT
1	Atmos Energy	0.420	68.710	6.40%	7,448	9.1%
2	Laclede Group	0.490	63.992	4.70%	2,909	8.1%
3	New Jersey Resources	0.240	34.666	6.50%	3,040	9.7%
4	Northwest Nat. Gas	0.468	51.335	4.00%	1,432	8.1%
5	South Jersey Inds.	0.264	25.468	6.00%	1,975	10.7%
6	UGI Corp.	0.230	35.706	8.00%	6,866	11.0%
7	WGL Holdings Inc.	0.463	66.710	8.00%	3,559	11.3%
8	Market-weighted Average					9.9%

Notes:

d_0	=	Most recent quarterly dividend.
d_1, d_2, d_3, d_4	=	Next four quarterly dividends, calculated by multiplying the last four quarterly dividends per *Value Line* and Yahoo Finance, by the factor $(1 + g)$.
P_0	=	Average of the monthly high and low stock prices during the three months ending March 2016 per Thomson Reuters.
FC	=	Flotation costs expressed as a percent of gross proceeds.
g	=	Average of I/B/E/S and Value Line forecasts of future earnings growth March 2016.
k	=	Cost of equity using the quarterly version of the DCF model shown by the formula below:

ATMOS ENERGY
EXHIBIT__(JVW-1)
REBUTTAL SCHEDULE 3
SUMMARY OF DISCOUNTED CASH FLOW ANALYSIS
FOR WATER UTILITIES

	COMPANY	MOST RECENT QUARTERLY DIVIDEND (D_0)	STOCK PRICE (P_0)	VALUE LINE EPS GROWTH	I/B/E/S FORECAST OF FUTURE EARNINGS GROWTH	AVERAGE FORECAST OF FUTURE EARNINGS GROWTH	MARKET CAP $ (MIL)	DCF MODEL RESULT
1	Amer. States Water	0.224	42.504	6.00%	3.85%	4.93%	1,414	7.3%
2	Amer. Water Works	0.340	65.102	8.00%	7.60%	7.80%	12,455	10.3%
3	Aqua America	0.178	30.945	7.00%	5.85%	6.43%	5,694	9.0%
4	California Water	0.173	24.788	6.00%	5.00%	5.50%	1,253	8.6%
5	Conn. Water Services	0.268	41.894	4.50%	5.00%	4.75%	491	7.6%
6	Consolidated Water	0.075	11.288	15.50%	7.00%	11.25%	177	14.5%
8	SJW Corp.	0.203	33.757	1.50%	14.00%	7.75%	741	10.5%
9	York Water Co. (The)	0.156	27.178	6.00%	4.90%	5.45%	391	8.0%
10	Average							9.5%
11	Market-weighted Average							9.6%
12	Average Line 10, 11							9.6%

Notes:

d_0	=	Most recent quarterly dividend.
d_1,d_2,d_3,d_4	=	Next four quarterly dividends, calculated by multiplying the last four quarterly dividends per *Value Line* and Yahoo Finance by the factor (1 + g).
P_0	=	Average of the monthly high and low stock prices during the three months ending March 2016 from Thomson Reuters.
FC	=	Flotation costs expressed as a percent of gross proceeds.
g	=	I/B/E/S forecast of future earnings growth March 2016.
k	=	Cost of equity using the quarterly version of the DCF model shown by the formula below:

$$k = \frac{d_1(1+k)^{.75} + d_2(1+k)^{.50} + d_3(1+k)^{.25} + d_4}{P_0(1-FC)} + g$$

ATMOS ENERGY
EXHIBIT__(JVW-1)
REBUTTAL SCHEDULE 4
COMPARISON OF DCF EXPECTED RETURN ON AN EQUITY INVESTMENT IN NATURAL GAS DISTRIBUTION UTILITIES TO THE INTEREST RATE ON A-RATED UTILITY BONDS

In this analysis, I compute an natural gas utility equity risk premium by comparing the DCF estimated cost of equity for a natural gas utility proxy group to the interest rate on A-rated utility bonds. For each month in my June 1998 through March 2016 study period:

DCF	=	Average DCF-estimated cost of equity on a portfolio of proxy companies;
Bond Yield	=	Yield to maturity on an investment in A-rated utility bonds; and
Risk Premium	=	DCF – Bond yield.

A more detailed description of my ex ante risk premium method is contained in Appendix 4.

LINE	DATE	DCF	BOND YIELD	RISK PREMIUM
1	Jun-98	0.1154	0.0703	0.0451
2	Jul-98	0.1186	0.0703	0.0483
3	Aug-98	0.1234	0.0700	0.0534
4	Sep-98	0.1273	0.0693	0.0580
5	Oct-98	0.1260	0.0696	0.0564
6	Nov-98	0.1211	0.0703	0.0508
7	Dec-98	0.1185	0.0691	0.0494
8	Jan-99	0.1195	0.0697	0.0498
9	Feb-99	0.1243	0.0709	0.0534
10	Mar-99	0.1257	0.0726	0.0531
11	Apr-99	0.1260	0.0722	0.0538
12	May-99	0.1221	0.0747	0.0474
13	Jun-99	0.1208	0.0774	0.0434
14	Jul-99	0.1222	0.0771	0.0451
15	Aug-99	0.1220	0.0791	0.0429
16	Sep-99	0.1226	0.0793	0.0433
17	Oct-99	0.1233	0.0806	0.0427
18	Nov-99	0.1240	0.0794	0.0446
19	Dec-99	0.1280	0.0814	0.0466
20	Jan-00	0.1301	0.0835	0.0466
21	Feb-00	0.1344	0.0825	0.0519
22	Mar-00	0.1344	0.0828	0.0516
23	Apr-00	0.1316	0.0829	0.0487
24	May-00	0.1292	0.0870	0.0422
25	Jun-00	0.1295	0.0836	0.0459
26	Jul-00	0.1317	0.0825	0.0492
27	Aug-00	0.1290	0.0813	0.0477
28	Sep-00	0.1257	0.0823	0.0434
29	Oct-00	0.1260	0.0814	0.0446
30	Nov-00	0.1251	0.0811	0.0440
31	Dec-00	0.1239	0.0784	0.0455
32	Jan-01	0.1261	0.0780	0.0481
33	Feb-01	0.1261	0.0774	0.0487
34	Mar-01	0.1275	0.0768	0.0507
35	Apr-01	0.1227	0.0794	0.0433

LINE	DATE	DCF	BOND YIELD	RISK PREMIUM
36	May-01	0.1302	0.0799	0.0503
37	Jun-01	0.1304	0.0785	0.0519
38	Jul-01	0.1338	0.0778	0.0560
39	Aug-01	0.1327	0.0759	0.0568
40	Sep-01	0.1268	0.0775	0.0493
41	Oct-01	0.1268	0.0763	0.0505
42	Nov-01	0.1268	0.0757	0.0511
43	Dec-01	0.1254	0.0783	0.0471
44	Jan-02	0.1236	0.0766	0.0470
45	Feb-02	0.1241	0.0754	0.0487
46	Mar-02	0.1189	0.0776	0.0413
47	Apr-02	0.1159	0.0757	0.0402
48	May-02	0.1162	0.0752	0.0410
49	Jun-02	0.1170	0.0741	0.0429
50	Jul-02	0.1242	0.0731	0.0511
51	Aug-02	0.1234	0.0717	0.0517
52	Sep-02	0.1260	0.0708	0.0552
53	Oct-02	0.1250	0.0723	0.0527
54	Nov-02	0.1221	0.0714	0.0507
55	Dec-02	0.1216	0.0707	0.0509
56	Jan-03	0.1219	0.0706	0.0513
57	Feb-03	0.1232	0.0693	0.0539
58	Mar-03	0.1195	0.0679	0.0516
59	Apr-03	0.1162	0.0664	0.0498
60	May-03	0.1126	0.0636	0.0490
61	Jun-03	0.1114	0.0621	0.0493
62	Jul-03	0.1127	0.0657	0.0470
63	Aug-03	0.1139	0.0678	0.0461
64	Sep-03	0.1127	0.0656	0.0471
65	Oct-03	0.1123	0.0643	0.0480
66	Nov-03	0.1089	0.0637	0.0452
67	Dec-03	0.1071	0.0627	0.0444
68	Jan-04	0.1059	0.0615	0.0444
69	Feb-04	0.1039	0.0615	0.0424
70	Mar-04	0.1037	0.0597	0.0440
71	Apr-04	0.1041	0.0635	0.0406
72	May-04	0.1045	0.0662	0.0383
73	Jun-04	0.1036	0.0646	0.0390
74	Jul-04	0.1011	0.0627	0.0384
75	Aug-04	0.1008	0.0614	0.0394
76	Sep-04	0.0976	0.0598	0.0378
77	Oct-04	0.0974	0.0594	0.0380
78	Nov-04	0.0962	0.0597	0.0365
79	Dec-04	0.0970	0.0592	0.0378
80	Jan-05	0.0990	0.0578	0.0412
81	Feb-05	0.0979	0.0561	0.0418
82	Mar-05	0.0979	0.0583	0.0396
83	Apr-05	0.0988	0.0564	0.0424
84	May-05	0.0981	0.0553	0.0427
85	Jun-05	0.0976	0.0540	0.0436
86	Jul-05	0.0966	0.0551	0.0415
87	Aug-05	0.0969	0.0550	0.0419
88	Sep-05	0.0980	0.0552	0.0428

LINE	DATE	DCF	BOND YIELD	RISK PREMIUM
89	Oct-05	0.0990	0.0579	0.0411
90	Nov-05	0.1049	0.0588	0.0461
91	Dec-05	0.1045	0.0580	0.0465
92	Jan-06	0.0982	0.0575	0.0407
93	Feb-06	0.1124	0.0582	0.0542
94	Mar-06	0.1127	0.0598	0.0529
95	Apr-06	0.1100	0.0629	0.0471
96	May-06	0.1056	0.0642	0.0414
97	Jun-06	0.1049	0.0640	0.0409
98	Jul-06	0.1087	0.0637	0.0450
99	Aug-06	0.1041	0.0620	0.0421
100	Sep-06	0.1053	0.0600	0.0453
101	Oct-06	0.1030	0.0598	0.0432
102	Nov-06	0.1033	0.0580	0.0453
103	Dec-06	0.1035	0.0581	0.0454
104	Jan-07	0.1013	0.0596	0.0417
105	Feb-07	0.1018	0.0590	0.0428
106	Mar-07	0.1018	0.0585	0.0433
107	Apr-07	0.1007	0.0597	0.0410
108	May-07	0.0967	0.0599	0.0368
109	Jun-07	0.0970	0.0630	0.0340
110	Jul-07	0.1006	0.0625	0.0381
111	Aug-07	0.1021	0.0624	0.0397
112	Sep-07	0.1014	0.0618	0.0396
113	Oct-07	0.1080	0.0611	0.0469
114	Nov-07	0.1083	0.0597	0.0486
115	Dec-07	0.1084	0.0616	0.0468
116	Jan-08	0.1113	0.0602	0.0511
117	Feb-08	0.1139	0.0621	0.0518
118	Mar-08	0.1147	0.0621	0.0526
119	Apr-08	0.1167	0.0629	0.0538
120	May-08	0.1069	0.0627	0.0442
121	Jun-08	0.1062	0.0638	0.0424
122	Jul-08	0.1086	0.0640	0.0446
123	Aug-08	0.1123	0.0637	0.0486
124	Sep-08	0.1130	0.0649	0.0481
125	Oct-08	0.1213	0.0756	0.0457
126	Nov-08	0.1221	0.0760	0.0461
127	Dec-08	0.1162	0.0654	0.0508
128	Jan-09	0.1131	0.0639	0.0492
129	Feb-09	0.1155	0.0630	0.0524
130	Mar-09	0.1198	0.0642	0.0556
131	Apr-09	0.1146	0.0648	0.0498
132	May-09	0.1225	0.0649	0.0576
133	Jun-09	0.1208	0.0620	0.0588
134	Jul-09	0.1145	0.0597	0.0548
135	Aug-09	0.1109	0.0571	0.0538
136	Sep-09	0.1109	0.0553	0.0556
137	Oct-09	0.1146	0.0555	0.0592
138	Nov-09	0.1148	0.0564	0.0584
139	Dec-09	0.1123	0.0579	0.0544
140	Jan-10	0.1198	0.0577	0.0621
141	Feb-10	0.1167	0.0587	0.0580

LINE	DATE	DCF	BOND YIELD	RISK PREMIUM
142	Mar-10	0.1074	0.0584	0.0490
143	Apr-10	0.0934	0.0582	0.0352
144	May-10	0.0970	0.0552	0.0418
145	Jun-10	0.0953	0.0546	0.0407
146	Jul-10	0.1050	0.0526	0.0524
147	Aug-10	0.1038	0.0501	0.0537
148	Sep-10	0.1034	0.0501	0.0533
149	Oct-10	0.1050	0.0510	0.0540
150	Nov-10	0.1041	0.0536	0.0505
151	Dec-10	0.1029	0.0557	0.0472
152	Jan-11	0.1019	0.0557	0.0462
153	Feb-11	0.1004	0.0568	0.0436
154	Mar-11	0.1014	0.0556	0.0458
155	Apr-11	0.1031	0.0555	0.0476
156	May-11	0.1018	0.0532	0.0486
157	Jun-11	0.1020	0.0526	0.0494
158	Jul-11	0.1035	0.0527	0.0508
159	Aug-11	0.1179	0.0469	0.0710
160	Sep-11	0.1155	0.0448	0.0707
161	Oct-11	0.1150	0.0452	0.0698
162	Nov-11	0.1120	0.0425	0.0695
163	Dec-11	0.1092	0.0435	0.0657
164	Jan-12	0.1078	0.0434	0.0644
165	Feb-12	0.1081	0.0436	0.0645
166	Mar-12	0.1081	0.0448	0.0633
167	Apr-12	0.1131	0.0440	0.0691
168	May-12	0.1201	0.0420	0.0781
169	Jun-12	0.1011	0.0408	0.0603
170	Jul-12	0.0977	0.0393	0.0584
171	Aug-12	0.1023	0.0400	0.0623
172	Sep-12	0.1038	0.0402	0.0636
173	Oct-12	0.1011	0.0391	0.0620
174	Nov-12	0.1032	0.0384	0.0648
175	Dec-12	0.1023	0.0400	0.0623
176	Jan-13	0.1013	0.0415	0.0598
177	Feb-13	0.0982	0.0418	0.0564
178	Mar-13	0.1018	0.0420	0.0598
179	Apr-13	0.1001	0.0400	0.0601
180	May-13	0.1000	0.0417	0.0583
181	Jun-13	0.1000	0.0453	0.0547
182	Jul-13	0.0983	0.0468	0.0515
183	Aug-13	0.0982	0.0473	0.0509
184	Sep-13	0.0991	0.0480	0.0511
185	Oct-13	0.0998	0.0470	0.0528
186	Nov-13	0.0964	0.0477	0.0487
187	Dec-13	0.0966	0.0481	0.0485
188	Jan-14	0.0948	0.0463	0.0485
189	Feb-14	0.1019	0.0453	0.0566
190	Mar-14	0.1027	0.0451	0.0576
191	Apr-14	0.1081	0.0441	0.0640
192	May-14	0.1069	0.0426	0.0643
193	Jun-14	0.1059	0.0429	0.0630
194	Jul-14	0.1075	0.0423	0.0652

LINE	DATE	DCF	BOND YIELD	RISK PREMIUM
195	Aug-14	0.1069	0.0413	0.0656
196	Sep-14	0.1058	0.0424	0.0634
197	Oct-14	0.1131	0.0406	0.0725
198	Nov-14	0.1113	0.0409	0.0704
199	Dec-14	0.1105	0.0395	0.0710
200	Jan-15	0.1043	0.0358	0.0685
201	Feb-15	0.1043	0.0367	0.0676
202	Mar-15	0.1062	0.0374	0.0688
203	Apr-15	0.1072	0.0375	0.0697
204	May-15	0.1067	0.0417	0.0650
205	Jun-15	0.1020	0.0439	0.0581
206	Jul-15	0.0974	0.0440	0.0534
207	Aug-15	0.0949	0.0425	0.0524
208	Sep-15	0.0975	0.0439	0.0536
209	Oct-15	0.0961	0.0429	0.0532
210	Nov-15	0.1007	0.0440	0.0567
211	Dec-15	0.1027	0.0435	0.0592
212	Jan-16	0.1017	0.0427	0.0590
213	Feb-16	0.1002	0.0411	0.0591
214	Mar-16	0.0973	0.0416	0.0557

Notes: A-rated utility bond yield information from the Mergent Bond Record. DCF results are calculated using a quarterly DCF model as follows:

D_0	=	Latest quarterly dividend per *Value Line* and Yahoo Finance.
P_0	=	Average of the monthly high and low stock prices for each month from Thomson Reuters.
FC	=	Flotation costs expressed as a percent of gross proceeds.
g	=	I/B/E/S forecast of future earnings growth for each month.
k	=	Cost of equity using the quarterly version of the DCF model shown by the formula below:

$$k = \left[\frac{d_0(1+g)^{\frac{1}{4}}}{P_0(1-FC)} + (1+g)^{\frac{1}{4}}\right]^4 - 1$$

My estimate of the ex ante risk premium on an investment in my proxy natural gas utility group as compared to an investment in A-rated utility bonds is given by the equation:

$$RP_{PROXY} \quad = \quad \underset{(14.28)}{8.67} - \underset{(-6.10)}{.599} \times I_A.$$[1]

Using the forecast 6.2 percent yield to maturity on A-rated utility bonds, the regression equation produces an ex ante risk premium based on the proxy group equal to 4.7 percent (8.67 – .599 x 6.2 = 4.95). Adding an estimated risk premium of 4.95 percent to the 6.2 percent forecasted yield to maturity on A-rated utility bonds produces a cost of equity estimate of 11.1 percent for the electric company proxy group using the ex ante risk premium method.

Ex Ante Risk Premium Cost of Equity		
1	intercept coefficient/(1-serial correlation coefficient =	0.0866
2	Bond coefficient	(0.599)
3	Bond yield =	0.062
4	Bond coefficient x Bond yield =	(0.0371)
5	Ex Ante Risk Premium	0.0495
6	Bond yield =	0.062
7	Ex Ante Risk Premium Cost of Equity =	11.1%

1 The t-statistics are shown in parentheses.

ATMOS ENERGY
EXHIBIT__(JVW-1)
REBUTTAL SCHEDULE 5
COMPARATIVE RETURNS ON S&P 500 STOCK INDEX
AND MOODY'S A-RATED BONDS 1937 – 2016

LINE	YEAR	S&P 500 STOCK PRICE	STOCK DIVIDEND YIELD	STOCK RETURN	A-RATED BOND PRICE	BOND RETURN	RISK PREMIUM
1	2016	1,918.60	0.0222		$95.48		
2	2015	2,028.18	0.0208	-3.32%	$107.65	-7.59%	4.26%
3	2014	1,822.36	0.0210	13.39%	$89.89	24.20%	-10.81%
4	2013	1,481.11	0.0220	25.24%	$97.45	-3.65%	28.89%
5	2012	1,300.58	0.0214	16.02%	$94.36	7.52%	8.50%
6	2011	1,282.62	0.0185	3.25%	$77.36	27.14%	-23.89%
7	2010	1,123.58	0.0203	16.18%	$75.02	8.44%	7.74%
8	2009	865.58	0.0310	32.91%	$68.43	15.48%	17.43%
9	2008	1,378.76	0.0206	-35.16%	$72.25	0.24%	-35.40%
10	2007	1,424.16	0.0181	-1.38%	$72.91	4.59%	-5.97%
11	2006	1,278.72	0.0183	13.20%	$75.25	2.20%	11.01%
12	2005	1,181.41	0.0177	10.01%	$74.91	5.80%	4.21%
13	2004	1,132.52	0.0162	5.94%	$70.87	11.34%	-5.40%
14	2003	895.84	0.0180	28.22%	$62.26	20.27%	7.95%
15	2002	1,140.21	0.0138	-20.05%	$57.44	15.35%	-35.40%
16	2001	1,335.63	0.0116	-13.47%	$56.40	8.93%	-22.40%
17	2000	1,425.59	0.0118	-5.13%	$52.60	14.82%	-19.95%
18	1999	1,248.77	0.0130	15.46%	$63.03	-10.20%	25.66%
19	1998	963.35	0.0162	31.25%	$62.43	7.38%	23.87%
20	1997	766.22	0.0195	27.68%	$56.62	17.32%	10.36%
21	1996	614.42	0.0231	27.02%	$60.91	-0.48%	27.49%
22	1995	465.25	0.0287	34.93%	$50.22	29.26%	5.68%
23	1994	472.99	0.0269	1.05%	$60.01	-9.65%	10.71%
24	1993	435.23	0.0288	11.56%	$53.13	20.48%	-8.93%
25	1992	416.08	0.0290	7.50%	$49.56	15.27%	-7.77%
26	1991	325.49	0.0382	31.65%	$44.84	19.44%	12.21%
27	1990	339.97	0.0341	-0.85%	$45.60	7.11%	-7.96%
28	1989	285.41	0.0364	22.76%	$43.06	15.18%	7.58%
29	1988	250.48	0.0366	17.61%	$40.10	17.36%	0.25%
30	1987	264.51	0.0317	-2.13%	$48.92	-9.84%	7.71%
31	1986	208.19	0.0390	30.95%	$39.98	32.36%	-1.41%
32	1985	171.61	0.0451	25.83%	$32.57	35.05%	-9.22%
33	1984	166.39	0.0427	7.41%	$31.49	16.12%	-8.72%
34	1983	144.27	0.0479	20.12%	$29.41	20.65%	-0.53%
35	1982	117.28	0.0595	28.96%	$24.48	36.48%	-7.51%
36	1981	132.97	0.0480	-7.00%	$29.37	-3.01%	-3.99%
37	1980	110.87	0.0541	25.34%	$34.69	-3.81%	29.16%
38	1979	99.71	0.0533	16.52%	$43.91	-11.89%	28.41%
39	1978	90.25	0.0532	15.80%	$49.09	-2.40%	18.20%
40	1977	103.80	0.0399	-9.06%	$50.95	4.20%	-13.27%
41	1976	96.86	0.0380	10.96%	$43.91	25.13%	-14.17%
42	1975	72.56	0.0507	38.56%	$41.76	14.75%	23.81%

LINE	YEAR	S&P 500 STOCK PRICE	STOCK DIVIDEND YIELD	STOCK RETURN	A-RATED BOND PRICE	BOND RETURN	RISK PREMIUM
43	1974	96.11	0.0364	-20.86%	$52.54	-12.91%	-7.96%
44	1973	118.40	0.0269	-16.14%	$58.51	-3.37%	-12.77%
45	1972	103.30	0.0296	17.58%	$56.47	10.69%	6.89%
46	1971	93.49	0.0332	13.81%	$53.93	12.13%	1.69%
47	1970	90.31	0.0356	7.08%	$50.46	14.81%	-7.73%
48	1969	102.00	0.0306	-8.40%	$62.43	-12.76%	4.36%
49	1968	95.04	0.0313	10.45%	$66.97	-0.81%	11.26%
50	1967	84.45	0.0351	16.05%	$78.69	-9.81%	25.86%
51	1966	93.32	0.0302	-6.48%	$86.57	-4.48%	-2.00%
52	1965	86.12	0.0299	11.35%	$91.40	-0.91%	12.26%
53	1964	76.45	0.0305	15.70%	$92.01	3.68%	12.02%
54	1963	65.06	0.0331	20.82%	$93.56	2.61%	18.20%
55	1962	69.07	0.0297	-2.84%	$89.60	8.89%	-11.73%
56	1961	59.72	0.0328	18.94%	$89.74	4.29%	14.64%
57	1960	58.03	0.0327	6.18%	$84.36	11.13%	-4.95%
58	1959	55.62	0.0324	7.57%	$91.55	-3.49%	11.06%
59	1958	41.12	0.0448	39.74%	$101.22	-5.60%	45.35%
60	1957	45.43	0.0431	-5.18%	$100.70	4.49%	-9.67%
61	1956	44.15	0.0424	7.14%	$113.00	-7.35%	14.49%
62	1955	35.60	0.0438	28.40%	$116.77	0.20%	28.20%
63	1954	25.46	0.0569	45.52%	$112.79	7.07%	38.45%
64	1953	26.18	0.0545	2.70%	$114.24	2.24%	0.46%
65	1952	24.19	0.0582	14.05%	$113.41	4.26%	9.79%
66	1951	21.21	0.0634	20.39%	$123.44	-4.89%	25.28%
67	1950	16.88	0.0665	32.30%	$125.08	1.89%	30.41%
68	1949	15.36	0.0620	16.10%	$119.82	7.72%	8.37%
69	1948	14.83	0.0571	9.28%	$118.50	4.49%	4.79%
70	1947	15.21	0.0449	1.99%	$126.02	-2.79%	4.79%
71	1946	18.02	0.0356	-12.03%	$126.74	2.59%	-14.63%
72	1945	13.49	0.0460	38.18%	$119.82	9.11%	29.07%
73	1944	11.85	0.0495	18.79%	$119.82	3.34%	15.45%
74	1943	10.09	0.0554	22.98%	$118.50	4.49%	18.49%
75	1942	8.93	0.0788	20.87%	$117.63	4.14%	16.73%
76	1941	10.55	0.0638	-8.98%	$116.34	4.55%	-13.52%
77	1940	12.30	0.0458	-9.65%	$112.39	7.08%	-16.73%
78	1939	12.50	0.0349	1.89%	$105.75	10.05%	-8.16%
79	1938	11.31	0.0784	18.36%	$99.83	9.94%	8.42%
80	1937	17.59	0.0434	-31.36%	$103.18	0.63%	-31.99%
81	Average			11.1%		6.6%	4.5%

Note: See Appendix 5 for an explanation of how stock and bond returns are derived and the source of the data presented.

ATMOS ENERGY
EXHIBIT__(JVW-1)
REBUTTAL SCHEDULE 6
COMPARATIVE RETURNS ON S&P UTILITY STOCK INDEX
AND MOODY'S A-RATED BONDS 1937 – 2016

LINE	YEAR	S&P UTILITY STOCK PRICE	STOCK DIVIDEND YIELD	STOCK RETURN	A-RATED BOND PRICE	BOND RETURN	RISK PREMIUM
1	2016				$95.48		
2	2015			-3.90%	$107.65	-7.59%	3.69%
3	2014			28.91%	$89.89	24.20%	4.71%
4	2013			13.01%	$97.45	-3.65%	16.66%
5	2012			2.09%	$94.36	7.52%	-5.43%
6	2011			19.99%	$77.36	27.14%	-7.15%
7	2010			7.04%	$75.02	8.44%	-1.40%
8	2009			10.71%	$68.43	15.48%	-4.77%
9	2008			-25.90%	$72.25	0.24%	-26.14%
10	2007			16.56%	$72.91	4.59%	11.96%
11	2006			20.76%	$75.25	2.20%	18.56%
12	2005			16.05%	$74.91	5.80%	10.25%
13	2004			22.84%	$70.87	11.34%	11.50%
14	2003			23.48%	$62.26	20.27%	3.21%
15	2002			-14.73%	$57.44	15.35%	-30.08%
16	2001	307.70	0.0287	-17.90%	$56.40	8.93%	-26.83%
17	2000	239.17	0.0413	32.78%	$52.60	14.82%	17.96%
18	1999	253.52	0.0394	-1.72%	$63.03	-10.20%	8.48%
19	1998	228.61	0.0457	15.47%	$62.43	7.38%	8.09%
20	1997	201.14	0.0492	18.58%	$56.62	17.32%	1.26%
21	1996	202.57	0.0454	3.83%	$60.91	-0.48%	4.31%
22	1995	153.87	0.0584	37.49%	$50.22	29.26%	8.23%
23	1994	168.70	0.0496	-3.83%	$60.01	-9.65%	5.82%
24	1993	159.79	0.0537	10.95%	$53.13	20.48%	-9.54%
25	1992	149.70	0.0572	12.46%	$49.56	15.27%	-2.81%
26	1991	138.38	0.0607	14.25%	$44.84	19.44%	-5.19%
27	1990	146.04	0.0558	0.33%	$45.60	7.11%	-6.78%
28	1989	114.37	0.0699	34.68%	$43.06	15.18%	19.51%
29	1988	106.13	0.0704	14.80%	$40.10	17.36%	-2.55%
30	1987	120.09	0.0588	-5.74%	$48.92	-9.84%	4.10%
31	1986	92.06	0.0742	37.87%	$39.98	32.36%	5.51%
32	1985	75.83	0.0860	30.00%	$32.57	35.05%	-5.04%
33	1984	68.50	0.0925	19.95%	$31.49	16.12%	3.83%
34	1983	61.89	0.0948	20.16%	$29.41	20.65%	-0.49%
35	1982	51.81	0.1074	30.20%	$24.48	36.48%	-6.28%
36	1981	52.01	0.0978	9.40%	$29.37	-3.01%	12.41%
37	1980	50.26	0.0953	13.01%	$34.69	-3.81%	16.83%
38	1979	50.33	0.0893	8.79%	$43.91	-11.89%	20.68%
39	1978	52.40	0.0791	3.96%	$49.09	-2.40%	6.36%
40	1977	54.01	0.0714	4.16%	$50.95	4.20%	-0.04%
41	1976	46.99	0.0776	22.70%	$43.91	25.13%	-2.43%

LINE	YEAR	S&P UTILITY STOCK PRICE	STOCK DIVIDEND YIELD	STOCK RETURN	A-RATED BOND PRICE	BOND RETURN	RISK PREMIUM
42	1975	38.19	0.0920	32.24%	$41.76	14.75%	17.49%
43	1974	48.60	0.0713	-14.29%	$52.54	-12.91%	-1.38%
44	1973	60.01	0.0556	-13.45%	$58.51	-3.37%	-10.08%
45	1972	60.19	0.0542	5.12%	$56.47	10.69%	-5.57%
46	1971	63.43	0.0504	-0.07%	$53.93	12.13%	-12.19%
47	1970	55.72	0.0561	19.45%	$50.46	14.81%	4.64%
48	1969	68.65	0.0445	-14.38%	$62.43	-12.76%	-1.62%
49	1968	68.02	0.0435	5.28%	$66.97	-0.81%	6.08%
50	1967	70.63	0.0392	0.22%	$78.69	-9.81%	10.03%
51	1966	74.50	0.0347	-1.72%	$86.57	-4.48%	2.76%
52	1965	75.87	0.0315	1.34%	$91.40	-0.91%	2.25%
53	1964	67.26	0.0331	16.11%	$92.01	3.68%	12.43%
54	1963	63.35	0.0330	9.47%	$93.56	2.61%	6.86%
55	1962	62.69	0.0320	4.25%	$89.60	8.89%	-4.64%
56	1961	52.73	0.0358	22.47%	$89.74	4.29%	18.18%
57	1960	44.50	0.0403	22.52%	$84.36	11.13%	11.39%
58	1959	43.96	0.0377	5.00%	$91.55	-3.49%	8.49%
59	1958	33.30	0.0487	36.88%	$101.22	-5.60%	42.48%
60	1957	32.32	0.0487	7.90%	$100.70	4.49%	3.41%
61	1956	31.55	0.0472	7.16%	$113.00	-7.35%	14.51%
62	1955	29.89	0.0461	10.16%	$116.77	0.20%	9.97%
63	1954	25.51	0.0520	22.37%	$112.79	7.07%	15.30%
64	1953	24.41	0.0511	9.62%	$114.24	2.24%	7.38%
65	1952	22.22	0.0550	15.36%	$113.41	4.26%	11.10%
66	1951	20.01	0.0606	17.10%	$123.44	-4.89%	21.99%
67	1950	20.20	0.0554	4.60%	$125.08	1.89%	2.71%
68	1949	16.54	0.0570	27.83%	$119.82	7.72%	20.10%
69	1948	16.53	0.0535	5.41%	$118.50	4.49%	0.92%
70	1947	19.21	0.0354	-10.41%	$126.02	-2.79%	-7.62%
71	1946	21.34	0.0298	-7.00%	$126.74	2.59%	-9.59%
72	1945	13.91	0.0448	57.89%	$119.82	9.11%	48.79%
73	1944	12.10	0.0569	20.65%	$119.82	3.34%	17.31%
74	1943	9.22	0.0621	37.45%	$118.50	4.49%	32.96%
75	1942	8.54	0.0940	17.36%	$117.63	4.14%	13.22%
76	1941	13.25	0.0717	-28.38%	$116.34	4.55%	-32.92%
77	1940	16.97	0.0540	-16.52%	$112.39	7.08%	-23.60%
78	1939	16.05	0.0553	11.26%	$105.75	10.05%	1.21%
79	1938	14.30	0.0730	19.54%	$99.83	9.94%	9.59%
80	1937	24.34	0.0432	-36.93%	$103.18	0.63%	-37.55%
81	Average			10.5%		6.6%	3.9%

See Appendix 5 for an explanation of how stock and bond returns are derived and the source of the data presented. Standard & Poor's discontinued its S&P Utilities Index in December 2001 and replaced its utilities stock index with separate indices for electric and natural gas utilities. In this study, the stock returns beginning in 2002 are based on the total returns for the EEI Index of U.S. shareholder-owned electric utilities, as reported by EEI on its website. http://www.eei.org/whatwedo/DataAnalysis/IndusFinanAnalysis/Pages/QtrlyFinancialUpdates.aspx

ATMOS ENERGY
EXHIBIT__(JVW-1)
REBUTTAL SCHEDULE 7
USING THE ARITHMETIC MEAN TO ESTIMATE
THE COST OF EQUITY CAPITAL

Consider an investment that in a given year generates a return of 30 percent with probability equal to .5 and a return of -10 percent with a probability equal to .5. For each one dollar invested, the possible outcomes of this investment at the end of year one are:

ENDING WEALTH	PROBABILITY
$1.30	0.50
$0.90	0.50

At the end of year two, the possible outcomes are:

ENDING WEALTH			PROBABILITY	VALUE X PROBABILITY
(1.30) (1.30)	=	$1.69	0.25	0.4225
(1.30) (.9)	=	$1.17	0.50	0.5850
(.9) (.9)	=	$0.81	0.25	0.2025
Expected Wealth	=			$1.21

The expected value of this investment at the end of year two is $1.21. In a competitive capital market, the cost of equity is equal to the expected rate of return on an investment. In the above example, the cost of equity is that rate of return which will make the initial investment of one dollar grow to the expected value of $1.21 at the end of two years. Thus, the cost of equity is the solution to the equation:

$$1(1+k)^2 = 1.21 \text{ or}$$

$$k = (1.21/1)^{.5} - 1 = 10\%.$$

The arithmetic mean of this investment is:

$$(30\%)\ (.5) + (-10\%)\ (.5) = 10\%.$$

Thus, the arithmetic mean is equal to the cost of equity capital.

The geometric mean of this investment is:

$$[(1.3)\ (.9)]^{.5} - 1 = .082 = 8.2\%.$$

Thus, the geometric mean is not equal to the cost of equity capital.

The lesson is obvious: for an investment with an uncertain outcome, the arithmetic mean is the best measure of the cost of equity capital.

ATMOS ENERGY
EXHIBIT__(JVW-1)
REBUTTAL SCHEDULE 8
CALCULATION OF CAPITAL ASSET PRICING MODEL COST OF EQUITY
USING THE IBBOTSON® SBBI® 6.9 PERCENT RISK PREMIUM

LINE	COMPANY	VALUE LINE BETA	RISK-FREE RATE	MARKET RISK PREMIUM	BETA X RISK PREMIUM	CAPM RESULT	MARKET CAP $ (MIL)	SIZE PREMIUM	SIZE-ADJUSTED CAPM
1	Atmos Energy	0.80	4.2%	6.9%	5.52%	9.9%	7,448	1.00%	10.9%
2	Laclede Group	0.70	4.2%	6.9%	4.83%	9.2%	2,909	1.00%	10.2%
3	New Jersey Resources	0.80	4.2%	6.9%	5.52%	9.9%	3,040	1.00%	10.9%
4	Northwest Nat. Gas	0.65	4.2%	6.9%	4.49%	8.8%	1,432	1.70%	10.5%
5	South Jersey Inds.	0.85	4.2%	6.9%	5.87%	10.2%	1,975	1.70%	11.9%
6	UGI Corp.	0.95	4.2%	6.9%	6.56%	10.9%	6,866	1.00%	11.9%
7	WGL Holdings Inc.	0.80	4.2%	6.9%	5.52%	9.9%	3,559	1.00%	10.9%
8	Average	0.79	4.2%	6.9%	5.47%	**9.8%**			**11.0%**
9	Average Unadjusted, Adjusted	**10.4%**							

ESTIMATES OF PREMIUMS FOR COMPANY SIZE				
Decile		Smallest Mkt. Cap. ($Millions)	Largest Mkt. Cap. ($Millions)	Premium
Large-Cap (No Adjustment)		>9,611.188		0
Mid-Cap (3-5)		2,090.57	9,611.187	1.00%
Low-Cap (6-8)		448.502	2,090.56	1.70%
Micro-Cap (9-10)		1.963	448.501	3.58%

Estimates of size premia from *2016 Valuation Handbook, Guide to Cost of Capital, Market Results Through 2015*, Duff & Phelps, John Wiley & Sons, Inc., Appendix 3. Ibbotson® SBBI® risk premium; Value Line beta for comparable companies from Value Line Investment Analyzer. Forecast bond yield from Value Line and EIA. Value Line forecasts a yield on 10-year Treasury notes equal to 3.5 percent. The spread between the average March 2016 yield on 10-year Treasury notes (1.89 percent) and 20-year Treasury bonds (2.28 percent) is 39 basis points. Adding 39 basis points to Value Line's 3.5 percent forecasted yield on 10-year Treasury notes produces a forecasted yield of 3.89 percent for 20-year Treasury bonds (see Value Line Investment Survey, Selection & Opinion, March 4, 2016). EIA forecasts a yield of 4.11 percent on 10-year Treasury notes. Adding the 39 basis point spread between 10-year Treasury notes and 20-year Treasury bonds to the EIA forecast of 4.11 percent for 10-year Treasury notes produces an EIA forecast for 20-year Treasury bonds equal to 4.5 percent. The average of the forecasts is 4.2 percent (3.89 percent using Value Line data and 4.5 percent using EIA data).

ATMOS ENERGY
EXHIBIT__(JVW-1)
REBUTTAL SCHEDULE 9
CALCULATION OF CAPITAL ASSET PRICING MODEL COST OF EQUITY
USING DCF ESTIMATE OF THE EXPECTED RATE OF RETURN
ON THE MARKET PORTFOLIO

LINE NO.	FACTOR	VALUE	DESCRIPTION
1	Risk-free Rate	4.2%	Long-term Treasury bond yield forecast
2	Beta	0.79	Average beta natural gas companies
3	DCF S&P 500	12.1%	DCF Cost of Equity S&P 500 (see following)
4	Risk Premium	7.9%	
5	Beta * Risk Premium	6.2%	
6	Flotation cost	0.16%	
7	Cost of Equity	10.6%	

Value Line beta for comparable companies from Value Line Investment Analyzer. Forecast bond yield from Value Line and EIA. Value Line forecasts a yield on 10-year Treasury notes equal to 3.5 percent. The spread between the average March 2016 yield on 10-year Treasury notes (1.89 percent) and 20-year Treasury bonds (2.28 percent) is 39 basis points. Adding 39 basis points to Value Line's 3.5 percent forecasted yield on 10-year Treasury notes produces a forecasted yield of 3.89 percent for 20-year Treasury bonds (see Value Line Investment Survey, Selection & Opinion, March 4, 2016). EIA forecasts a yield of 4.11 percent on 10-year Treasury notes. Adding the 39 basis point spread between 10-year Treasury notes and 20-year Treasury bonds to the EIA forecast of 4.11 percent for 10-year Treasury notes produces an EIA forecast for 20-year Treasury bonds equal to 4.5 percent. The average of the forecasts is 4.2 percent (3.89 percent using Value Line data and 4.5 percent using EIA data).

ATMOS ENERGY
EXHIBIT__(JVW-1)
REBUTTAL SCHEDULE 9 (CONTINUED)
CALCULATION OF CAPITAL ASSET PRICING MODEL COST OF EQUITY
USING DCF ESTIMATE OF THE EXPECTED RATE OF RETURN
ON THE MARKET PORTFOLIO
SUMMARY OF DISCOUNTED CASH FLOW ANALYSIS FOR S&P 500 COMPANIES

	COMPANY	STOCK PRICE (P_0)	D_0	FORECAST OF FUTURE EARNINGS GROWTH	MODEL RESULT	MARKET CAP $ (MILS)
1	3M	152.72	4.44	8.09%	11.3%	99,220
2	ABBOTT LABORATORIES	39.34	1.04	9.48%	12.4%	59,357
3	ACCENTURE CLASS A	103.08	2.20	9.86%	12.2%	67,719
4	ADT	34.57	0.88	7.14%	9.9%	6,816
5	ADV.AUTO PARTS	149.21	0.24	12.48%	12.7%	11,581
6	AETNA	106.01	1.00	9.10%	10.1%	38,648
7	AGILENT TECHS.	37.96	0.46	11.12%	12.5%	12,878
8	AIR PRDS.& CHEMS.	130.83	3.44	9.77%	12.7%	30,398
9	ALLEGION	61.03	0.48	12.87%	13.8%	6,186
10	ALTRIA GROUP	60.36	2.26	8.40%	12.5%	122,038
11	AMERICAN EXPRESS	57.32	1.16	8.07%	10.3%	57,577
12	AMERICAN WATER WORKS	65.10	1.36	7.60%	9.9%	12,455
13	AMETEK	47.53	0.36	9.83%	10.7%	11,695
14	AMGEN	148.18	4.00	8.04%	11.0%	108,399
15	ANTHEM	132.14	2.60	9.70%	11.9%	36,681
16	AON CLASS A	93.01	1.20	9.03%	10.4%	27,548
17	APPLE	99.59	2.08	11.60%	13.9%	586,617
18	AT&T	36.59	1.92	5.10%	10.7%	240,635
19	AUTOMATIC DATA PROC.	83.33	2.12	10.40%	13.2%	40,640
20	AVERY DENNISON	63.92	1.48	10.09%	12.7%	6,235
21	BANK OF NEW YORK MELLON	36.21	0.68	11.70%	13.8%	40,221
22	BAXTER INTL.	38.06	0.46	11.20%	12.6%	21,853
23	BEST BUY	30.23	1.12	9.85%	14.0%	11,049
24	BLACKROCK	314.33	9.16	9.77%	13.0%	56,058
25	BORGWARNER	34.12	0.52	8.29%	9.9%	8,207
26	C R BARD	188.28	0.96	9.80%	10.4%	14,182
27	CENTERPOINT EN.	18.56	1.03	4.22%	10.1%	9,073
28	CH ROBINSON WWD.	67.62	1.72	7.97%	10.7%	10,788
29	CHURCH & DWIGHT CO.	86.48	1.42	8.58%	10.4%	11,799
30	CIGNA	137.66	0.04	10.54%	10.6%	35,312
31	CINTAS	85.44	1.05	12.54%	13.9%	9,637
32	CISCO SYSTEMS	25.57	1.04	8.24%	12.7%	141,855
33	CMS ENERGY	38.87	1.24	7.24%	10.7%	11,603
34	COACH	36.37	1.35	8.78%	12.9%	11,030
35	COSTCO WHOLESALE	151.59	1.60	8.72%	9.9%	67,541
36	DANAHER	88.39	0.64	11.20%	12.0%	64,371
37	DISCOVER FINANCIAL SVS.	47.65	1.12	7.32%	9.9%	20,511
38	DOMINION RESOURCES	70.26	2.80	6.00%	10.3%	44,486
39	DOVER	59.32	1.68	9.85%	13.0%	10,174
40	DOW CHEMICAL	47.06	1.84	7.82%	12.1%	57,662
41	DR PEPPER SNAPPLE GROUP	91.16	2.12	8.00%	10.5%	17,197
42	EATON	54.35	2.28	7.71%	12.3%	28,907
43	ECOLAB	106.44	1.40	12.44%	13.9%	31,921
44	EMC	25.43	0.46	9.88%	11.9%	51,654

	COMPANY	STOCK PRICE (P_0)	D_0	FORECAST OF FUTURE EARNINGS GROWTH	MODEL RESULT	MARKET CAP $ (MILS)
45	ESTEE LAUDER COS.'A'	88.73	1.20	11.33%	12.8%	20,849
46	FASTENAL	42.42	1.20	10.74%	13.9%	14,120
47	FLUOR	46.34	0.84	8.12%	10.1%	7,611
48	FMC	37.18	0.66	9.13%	11.1%	5,525
49	GARMIN	37.29	2.04	6.57%	12.5%	8,238
50	GENERAL DYNAMICS	131.56	3.04	9.57%	12.1%	41,129
51	GENERAL ELECTRIC	29.40	0.92	8.16%	11.6%	287,468
52	HANESBRANDS	28.44	0.44	11.93%	13.7%	11,350
53	HERSHEY	89.03	2.33	7.21%	10.0%	14,299
54	ILLINOIS TOOL WORKS	92.28	2.20	8.25%	10.9%	36,331
55	INGERSOLL-RAND	54.34	1.28	7.35%	9.9%	15,668
56	INTEL	30.75	1.04	10.00%	13.8%	151,073
57	INTERNATIONAL BUS.MCHS.	131.97	5.20	7.25%	11.5%	141,288
58	INVESCO	29.00	1.08	7.37%	11.4%	12,849
59	J M SMUCKER	125.61	2.68	10.10%	12.5%	15,548
60	JP MORGAN CHASE & CO.	58.10	1.76	7.50%	10.8%	215,628
61	JUNIPER NETWORKS	24.55	0.40	11.74%	13.6%	10,074
62	KANSAS CITY SOUTHERN	76.99	1.32	8.50%	10.4%	9,477
63	KEYCORP	11.22	0.30	10.01%	13.0%	9,300
64	KOHL'S	47.02	2.00	6.50%	11.1%	8,934
65	KROGER	38.69	0.42	10.00%	11.2%	37,127
66	L BRANDS	89.36	2.40	9.15%	12.1%	24,910
67	LAM RESEARCH	73.16	1.20	10.26%	12.1%	12,594
68	LOCKHEED MARTIN	213.34	6.60	8.23%	11.6%	66,822
69	LYONDELLBASELL INDS.CL.A	80.05	3.12	6.23%	10.4%	38,138
70	M&T BANK	108.08	2.80	10.00%	12.9%	17,674
71	MARSH & MCLENNAN	55.53	1.24	11.25%	13.8%	31,195
72	MCDONALDS	119.53	3.56	9.50%	12.8%	111,042
73	MCGRAW HILL FINANCIAL	89.30	1.44	11.73%	13.5%	25,473
74	MCKESSON	162.42	1.12	9.49%	10.2%	34,674
75	MEAD JOHNSON NUTRITION	74.00	1.65	7.62%	10.0%	15,300
76	METLIFE	42.24	1.50	8.50%	12.4%	48,341
77	MICROSOFT	52.33	1.44	9.23%	12.3%	432,322
78	MONDELEZ INTERNATIONAL CL.A	40.79	0.68	9.10%	10.9%	63,500
79	MONSANTO	90.70	2.16	8.91%	11.5%	40,918
80	NASDAQ	61.88	1.28	8.88%	11.1%	10,792
81	NETAPP	24.29	0.72	8.66%	11.9%	7,707
82	NEWELL RUBBERMAID	39.09	0.76	8.80%	10.9%	11,428
83	NEXTERA ENERGY	111.73	3.48	6.77%	10.1%	54,503
84	NIELSEN	48.24	1.12	10.53%	13.1%	19,122
85	NIKE 'B'	59.95	0.64	12.62%	13.8%	85,286
86	NORFOLK SOUTHERN	75.30	2.36	9.23%	12.7%	24,691
87	NORTHERN TRUST	62.17	1.44	9.77%	12.3%	14,904
88	PAYCHEX	50.37	1.68	9.60%	13.3%	19,529
89	PERRIGO	137.63	0.58	12.80%	13.3%	18,790
90	PFIZER	30.06	1.20	5.63%	9.9%	181,670
91	PG&E	55.54	1.82	6.60%	10.1%	29,077
92	PHILIP MORRIS INTL.	90.89	4.08	6.92%	11.8%	153,418
93	PPG INDUSTRIES	97.58	1.44	10.54%	12.2%	29,183
94	PRUDENTIAL FINL.	69.19	2.80	7.52%	11.9%	32,592
95	QUEST DIAGNOSTICS	66.95	1.60	10.02%	12.7%	9,862
96	RAYTHEON 'B'	122.97	2.93	8.63%	11.2%	36,654
97	REGIONS FINL.NEW	7.98	0.24	7.73%	11.0%	10,370
98	ROCKWELL COLLINS	86.54	1.32	8.99%	10.7%	11,990

	COMPANY	STOCK PRICE (P_0)	D_0	FORECAST OF FUTURE EARNINGS GROWTH	MODEL RESULT	MARKET CAP $ (MILS)
99	ROSS STORES	55.18	0.54	11.30%	12.4%	23,487
100	SCRIPPS NETWORKS INTACT. 'A'	59.16	1.00	10.77%	12.7%	6,205
101	SEAGATE TECH.	32.36	2.52	4.10%	12.4%	10,354
102	SEALED AIR	43.53	0.64	8.87%	10.5%	9,261
103	SEMPRA EN.	95.60	3.02	8.58%	12.1%	25,688
104	ST.JUDE MEDICAL	54.48	1.24	11.14%	13.7%	15,329
105	STANLEY BLACK & DECKER	97.12	2.20	10.07%	12.6%	15,246
106	STRYKER	98.47	1.52	9.56%	11.3%	38,551
107	SYMANTEC	19.27	0.60	7.24%	10.6%	12,216
108	SYSCO	42.90	1.24	8.51%	11.7%	26,034
109	T ROWE PRICE GROUP	69.01	2.16	7.47%	10.9%	18,128
110	TEXAS INSTRUMENTS	52.65	1.52	10.00%	13.2%	56,898
111	TEXTRON	34.76	0.08	12.45%	12.7%	9,409
112	THERMO FISHER SCIENTIFIC	131.98	0.60	9.57%	10.1%	54,783
113	TIFFANY & CO	66.69	1.60	8.03%	10.6%	8,990
114	TJX	72.24	1.04	10.24%	11.8%	51,165
115	TOTAL SYSTEM SERVICES	43.41	0.40	12.68%	13.7%	8,301
116	UNION PACIFIC	77.02	2.20	9.09%	12.2%	70,320
117	UNITED PARCEL SER.'B'	96.43	3.12	9.57%	13.2%	71,603
118	UNITED TECHNOLOGIES	92.81	2.56	8.99%	12.0%	82,702
119	V F	61.12	1.48	10.48%	13.2%	28,116
120	VIACOM 'B'	40.16	1.60	8.46%	12.8%	14,371
121	WALT DISNEY	95.50	1.42	11.87%	13.5%	162,504
122	WASTE MANAGEMENT	54.71	1.64	6.72%	10.0%	26,136
123	WEC ENERGY GROUP	55.68	1.98	6.80%	10.6%	18,687
124	WELLS FARGO & CO	48.79	1.50	9.45%	12.9%	251,497
125	WESTERN UNION	17.80	0.64	6.50%	10.4%	9,416
126	ZIMMER BIOMET HDG.	98.47	0.96	10.80%	11.9%	20,599
127	ZIONS BANCORP.	22.76	0.24	10.62%	11.8%	5,115
128	ZOETIS	42.72	0.38	12.73%	13.7%	19,747
129	Market-weighted Average				12.1%	

Notes: In applying the DCF model to the S&P 500, I include in the DCF analysis only those companies in the S&P 500 group which pay a dividend, have a positive growth rate, and have at least three analysts' long-term growth estimates. To be conservative, I also eliminate those 25% of companies with the highest and lowest DCF results.

D_0 = Current dividend per Thomson Reuters.
P_0 = Average of the monthly high and low stock prices during the three months ending March 2016 per Thomson Reuters.
g = I/B/E/S forecast of future earnings growth March 2016.
k = Cost of equity using the quarterly version of the DCF model shown below:

$$k = \left[\frac{d_0 (1+g)^{\frac{1}{4}}}{P_0} \right]^4 - 1$$

ATMOS ENERGY
EXHIBIT__(JVW-1)
REBUTTAL SCHEDULE 10
COMPARISON OF RISK PREMIA ON
S&P500 AND S&P UTILITIES 1937 – 2016

YEAR	S&P UTILITIES STOCK RETURN	SP500 STOCK RETURN	10-YR. TREASURY BOND YIELD	UTILITIES RISK PREMIUM	MARKET RISK PREMIUM
2015	-0.0390	-0.0332	0.0214	-0.0604	-0.0546
2014	0.2891	0.1339	0.0254	0.2637	0.1085
2013	0.1301	0.2524	0.0235	0.1066	0.2289
2012	0.0209	0.1602	0.0180	0.0029	0.1422
2011	0.1999	0.0325	0.0278	0.1721	0.0047
2010	0.0704	0.1618	0.0322	0.0382	0.1296
2009	0.1071	0.3291	0.0326	0.0745	0.2965
2008	-0.2590	-0.3516	0.0367	-0.2957	-0.3883
2007	0.1656	-0.0138	0.0463	0.1193	-0.0601
2006	0.2076	0.1320	0.0479	0.1597	0.0841
2005	0.1605	0.1001	0.0429	0.1176	0.0572
2004	0.2284	0.0594	0.0427	0.1857	0.0167
2003	0.2348	0.2822	0.0401	0.1947	0.2421
2002	-0.1473	-0.2005	0.0461	-0.1934	-0.2466
2001	-0.1790	-0.1347	0.0502	-0.2292	-0.1849
2000	0.3278	-0.0513	0.0603	0.2675	-0.1116
1999	-0.0172	0.1546	0.0564	-0.0736	0.0982
1998	0.1547	0.3125	0.0526	0.1021	0.2599
1997	0.1858	0.2768	0.0635	0.1223	0.2133
1996	0.0383	0.2702	0.0644	-0.0261	0.2058
1995	0.3749	0.3493	0.0658	0.3091	0.2835
1994	-0.0383	0.0105	0.0708	-0.1091	-0.0603
1993	0.1095	0.1156	0.0587	0.0508	0.0569
1992	0.1246	0.0750	0.0701	0.0545	0.0049
1991	0.1425	0.3165	0.0786	0.0639	0.2379
1990	0.0033	-0.0085	0.0855	-0.0822	-0.0940
1989	0.3468	0.2276	0.0850	0.2618	0.1426
1988	0.1480	0.1761	0.0884	0.0596	0.0877
1987	-0.0574	-0.0213	0.0838	-0.1412	-0.1051
1986	0.3787	0.3095	0.0768	0.3019	0.2327
1985	0.3000	0.2583	0.1062	0.1938	0.1521
1984	0.1995	0.0741	0.1244	0.0751	-0.0503
1983	0.2016	0.2012	0.1110	0.0906	0.0902
1982	0.3020	0.2896	0.1300	0.1720	0.1596
1981	0.0940	-0.0700	0.1391	-0.0451	-0.2091
1980	0.1301	0.2534	0.1146	0.0155	0.1388
1979	0.0879	0.1652	0.0944	-0.0065	0.0708
1978	0.0396	0.1580	0.0841	-0.0445	0.0739
1977	0.0416	-0.0906	0.0742	-0.0326	-0.1648
1976	0.2270	0.1096	0.0761	0.1509	0.0335
1975	0.3224	0.3856	0.0799	0.2425	0.3057

YEAR	S&P UTILITIES STOCK RETURN	SP500 STOCK RETURN	10-YR. TREASURY BOND YIELD	UTILITIES RISK PREMIUM	MARKET RISK PREMIUM
1974	-0.1429	-0.2086	0.0756	-0.2185	-0.2842
1973	-0.1345	-0.1614	0.0684	-0.2029	-0.2298
1972	0.0512	0.1758	0.0621	-0.0109	0.1137
1971	-0.0007	0.1381	0.0616	-0.0623	0.0765
1970	0.1945	0.0708	0.0735	0.1210	-0.0027
1969	-0.1438	-0.0840	0.0667	-0.2105	-0.1507
1968	0.0528	0.1045	0.0565	-0.0037	0.0480
1967	0.0022	0.1605	0.0507	-0.0485	0.1098
1966	-0.0172	-0.0648	0.0492	-0.0664	-0.1140
1965	0.0134	0.1135	0.0428	-0.0294	0.0707
1964	0.1611	0.1570	0.0419	0.1192	0.1151
1963	0.0947	0.2082	0.0400	0.0547	0.1682
1962	0.0425	-0.0284	0.0395	0.0030	-0.0679
1961	0.2247	0.1894	0.0388	0.1859	0.1506
1960	0.2252	0.0618	0.0412	0.1840	0.0206
1959	0.0500	0.0757	0.0433	0.0067	0.0324
1958	0.3688	0.3974	0.0332	0.3356	0.3642
1957	0.0790	-0.0518	0.0365	0.0425	-0.0883
1956	0.0716	0.0714	0.0318	0.0398	0.0396
1955	0.1016	0.2840	0.0282	0.0734	0.2558
1954	0.2237	0.4552	0.0240	0.1997	0.4312
1953	0.0962	0.0270	0.0281	0.0681	-0.0011
1952	0.1536	0.1405	0.0248	0.1288	0.1157
1951	0.1710	0.2039	0.0241	0.1469	0.1798
1950	0.0460	0.3230	0.0205	0.0255	0.3025
1949	0.2783	0.1610	0.0193	0.2590	0.1417
1948	0.0541	0.0928	0.0215	0.0326	0.0713
1947	-0.1041	0.0199	0.0185	-0.1226	0.0014
1946	-0.0700	-0.1203	0.0174	-0.0874	-0.1377
1945	0.5789	0.3818	0.0173	0.5616	0.3645
1944	0.2065	0.1879	0.0209	0.1856	0.1670
1943	0.3745	0.2298	0.0207	0.3538	0.2091
1942	0.1736	0.2087	0.0211	0.1525	0.1876
1941	-0.2838	-0.0898	0.0199	-0.3037	-0.1097
1940	-0.1652	-0.0965	0.0220	-0.1872	-0.1185
1939	0.1126	0.0189	0.0235	0.0891	-0.0046
1938	0.1954	0.1836	0.0255	0.1699	0.1581
1937	-0.3693	-0.3136	0.0269	-0.3962	-0.3405
Risk Premium 1937 to 2016				0.0534	0.0592
RP Utilities/RP SP500				0.90	

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF)
RATE APPLICATION OF) Case No. 2015-00343
ATMOS ENERGY CORPORATION)

CERTIFICATE AND AFFIDAVIT

The Affiant, James H. Vander Weide, being duly sworn, deposes and states that the prepared testimony attached hereto and made a part hereof, constitutes the prepared rebuttal testimony of this affiant in Case No. 2015-00343, in the Matter of the Rate Application of Atmos Energy Corporation, and that if asked the questions propounded therein, this affiant would make the answers set forth in the attached prepared rebuttal testimony.

James H. Vander Weide
James H. Vander Weide

STATE OF North Carolina
COUNTY OF Durham

SUBSCRIBED AND SWORN to before me by James H. Vander Weide on this the 24th day of May, 2016.

SANDRA W. BUMPASS NOTARY PUBLIC DURHAM COUNTY, NC

Sandra W. Bumpass
Notary Public

My Commission Expires: 05-30-2016