

December 2, 2024

Ms. Linda C. Bridwell, P.E.  
Executive Director  
Public Service Commission  
211 Sower Boulevard  
Frankfort, Kentucky 40602

Re: *In the Matter of: Electronic Application of Atmos Energy Corporation for an Adjustment of Rates; Approval of Tariff Revisions; and Other General Relief-*  
**Case No. 2024-00276**

Dear Ms. Bridwell:

Please find attached Atmos Energy Corporation's Responses to Commission Staff's Second Requests for Information in the above-styled case.

This is to certify that the foregoing electronic filing was transmitted to the Commission on December 2, 2024 that there are currently no parties that the Commission has excused from participation by electronic means in this proceeding; and pursuant to the Commission's July 22, 2021 Order in Case No. 2020-00085, no paper copies of this filing will be made.

If you have any questions, please let me know.

Very truly yours,



L. Allyson Honaker

Enclosure

BEFORE THE PUBLIC SERVICE COMMISSION

COMMONWEALTH OF KENTUCKY

ELECTRONIC APPLICATION OF ATMOS	)	
ENERGY CORPORATION FOR AN	)	
ADJUSTMENT OF RATES; APPROVAL OF	)	Case No. 2024-00276
TARIFF REVISIONS; AND OTHER	)	
GENERAL RELIEF	)	

CERTIFICATE AND AFFIDAVIT

The Affiant, Joe T. Christian, being duly sworn, deposes and states that the attached responses to Commission Staff's second request for information are true and correct to the best of his knowledge and belief.

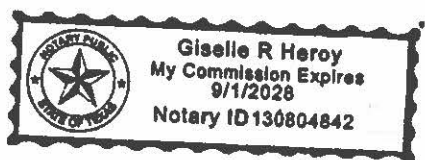
  
 \_\_\_\_\_  
 Joe T. Christian

STATE OF TEXAS  
COUNTY OF DALLAS

SUBSCRIBED AND SWORN to before me by Joe T. Christian on this the 2<sup>nd</sup> day of December, 2024.

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

My Commission Expires: September 1, 2028



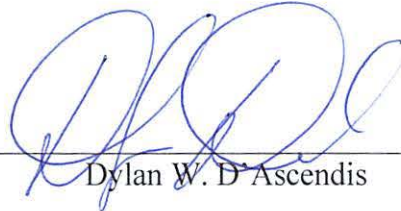
BEFORE THE PUBLIC SERVICE COMMISSION

COMMONWEALTH OF KENTUCKY

ELECTRONIC APPLICATION OF ATMOS	)	
ENERGY CORPORATION FOR AN	)	
ADJUSTMENT OF RATES; APPROVAL OF	)	Case No. 2024-00276
TARIFF REVISIONS; AND OTHER	)	
GENERAL RELIEF	)	

CERTIFICATE AND AFFIDAVIT

The Affiant, Dylan W. D'Ascendis, being duly sworn, deposes and states that the attached responses to Commission Staff's second request for information are true and correct to the best of his knowledge and belief





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Dylan W. D'Ascendis

STATE OF NEW JERSEY  
COUNTY OF BURLINGTON

SUBSCRIBED AND SWORN to before me by Dylan W. D'Ascendis on this the 19 day of November, 2024.

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

My Commission Expires: 1/25/26

HEATHER WARNER  
 Notary Public - State of New Jersey  
 My Commission Expires Jan 25, 2026



**BEFORE THE PUBLIC SERVICE COMMISSION**

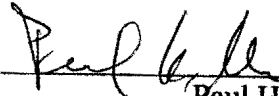
**COMMONWEALTH OF KENTUCKY**

**ELECTRONIC APPLICATION OF ATMOS )**  
**ENERGY CORPORATION FOR AN )**  
**ADJUSTMENT OF RATES; APPROVAL OF )**  
**TARIFF REVISIONS; AND OTHER )**  
**GENERAL RELIEF )**

**Case No. 2024-00276**

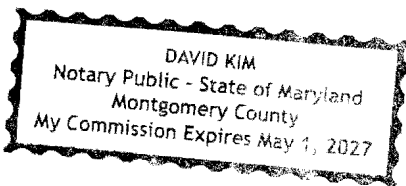
**CERTIFICATE AND AFFIDAVIT**

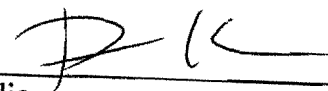
The Affiant, Paul H. Raab, being duly sworn, deposes and states that the attached responses to Commission Staff's second request for information are true and correct to the best of his knowledge and belief.

  
\_\_\_\_\_  
Paul H. Raab

STATE OF MARYLAND  
COUNTY OF MONTGOMERY

SUBSCRIBED AND SWORN to before me by Paul H. Raab on this the 19 day of November, 2024.



  
\_\_\_\_\_  
Notary Public  
My Commission Expires: May 1, 2027


BEFORE THE PUBLIC SERVICE COMMISSION

COMMONWEALTH OF KENTUCKY

ELECTRONIC APPLICATION OF ATMOS )  
ENERGY CORPORATION FOR AN )  
ADJUSTMENT OF RATES; APPROVAL OF ) Case No. 2024-00276  
TARIFF REVISIONS; AND OTHER )  
GENERAL RELIEF )


CERTIFICATE AND AFFIDAVIT

The Affiant, Brannon C. Taylor, being duly sworn, deposes and states that the attached responses to Commission Staff's second request for information are true and correct to the best of his knowledge and belief.

  
\_\_\_\_\_  
Brannon C. Taylor

STATE OF TENNESSEE  
COUNTY OF WILLIAMSON

SUBSCRIBED AND SWORN to before me by Brannon C. Taylor on this the 19th day of November, 2024.

  
\_\_\_\_\_  
Notary Public  
My Commission Expires: 01-24-2028




BEFORE THE PUBLIC SERVICE COMMISSION

COMMONWEALTH OF KENTUCKY

<b>ELECTRONIC APPLICATION OF ATMOS</b>	)	
<b>ENERGY CORPORATION FOR AN</b>	)	
<b>ADJUSTMENT OF RATES; APPROVAL OF</b>	)	<b>Case No. 2024-00276</b>
<b>TARIFF REVISIONS; AND OTHER</b>	)	
<b>GENERAL RELIEF</b>	)	

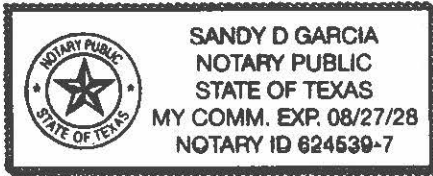
CERTIFICATE AND AFFIDAVIT

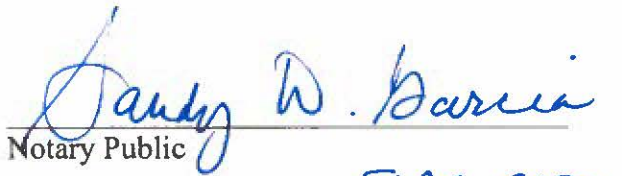
The Affiant, Thomas L. Troup, being duly sworn, deposes and states that the attached responses to Commission Staff's second request for information are true and correct to the best of his knowledge and belief.

  
 \_\_\_\_\_  
 Thomas L. Troup

STATE OF TEXAS  
COUNTY OF DALLAS

SUBSCRIBED AND SWORN to before me by Thomas L. Troup on this the 20<sup>th</sup> day of November, 2024.



  
 \_\_\_\_\_  
 Notary Public  
 My Commission Expires: 8-27-2028



**BEFORE THE PUBLIC SERVICE COMMISSION**

**COMMONWEALTH OF KENTUCKY**

**ELECTRONIC APPLICATION OF ATMOS )**  
**ENERGY CORPORATION FOR AN )**  
**ADJUSTMENT OF RATES; APPROVAL OF ) Case No. 2024-00276**  
**TARIFF REVISIONS; AND OTHER )**  
**GENERAL RELIEF )**


**CERTIFICATE AND AFFIDAVIT**

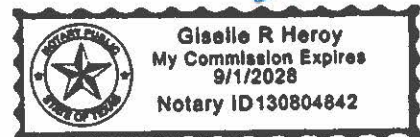
The Affiant, Gregory K. Waller, being duly sworn, deposes and states that the attached responses to Commission Staff's second request for information are true and correct to the best of his knowledge and belief.

  
\_\_\_\_\_  
Gregory K. Waller

STATE OF TEXAS  
COUNTY OF DALLAS

SUBSCRIBED AND SWORN to before me by Gregory K. Waller on this the 2<sup>nd</sup> day of December, 2024.

  
\_\_\_\_\_  
Notary Public  
My Commission Expires: September 1, 2028



**Case No. 2024-00276**  
**Atmos Energy Corporation, Kentucky Division**  
**Staff DR Set No. 2**  
**Question No. 2-01**  
**Page 1 of 1**

**REQUEST:**

Refer to Atmos's response to Commission Staff's First Request for Information (Staff's First Request), Item 8(b). Provide the costs incurred by Atmos for each funded project by Operations Technology Development (OTD) and Utilization Technology Development (UTD), respectively.

**RESPONSE:**

See Attachment 1 and Attachment 2. The listed funding by project is reflected for Atmos Energy as a whole.

**ATTACHMENTS:**

Staff\_2-01\_Att1 - OTD Funded Projects 2023\_With Funding.xlsx

Staff\_2-01\_Att2 - UTD Funded Projects 2023\_With Funding.xlsx

Respondent: Brannon Taylor



**Case No. 2024-00276**  
**Atmos Energy Corporation, Kentucky Division**  
**Staff DR Set No. 2**  
**Question No. 2-02**  
**Page 1 of 1**

**REQUEST:**

Refer to the Direct Testimony of Paul H. Raab (Raab Direct Testimony), page 10, line 23; and page 11, line 1. Identify and explain what natural gas demand characteristics Atmos is referring to when discussing customer classes.

**RESPONSE:**

There is no text on line 23 of page 10 of the Direct Testimony of Paul H. Raab. However, assuming that the question is referring to the natural gas demand characteristics referenced on lines 6-8 of page 10 of the Direct Testimony of Paul H. Raab, these demand characteristics are discussed in the question and answer appearing on page 10, lines 9-22 of the Direct Testimony of Paul H. Raab and include:

1. "The customer's request for service...that necessarily results in an immediate investment in a regulator, a service line and metering facilities and establishes a commitment on the part of the company to provide, among other things, answers to questions and a monthly billing."
2. "The amount of natural gas taken from the utility system, usually expressed volumetrically (Mcf) or in terms of the energy content of the natural gas itself (therms or Dth) and referred to as the customer's energy use or usage..." and
3. "[T]he customer's potential rate of energy use, usually expressed in design day usage, and referred to as the customer's demand."

Respondent: Paul Raab

**Case No. 2024-00276**  
**Atmos Energy Corporation, Kentucky Division**  
**Staff DR Set No. 2**  
**Question No. 2-03**  
**Page 1 of 1**

**REQUEST:**

Refer to the Raab Direct Testimony, page 12, line 22. Explain how Atmos forecasted 74 percent of its total firm sales volume during the winter months of November through March. Include in the response any necessary calculations to support the 74 percent figure. State what years the testimony regarding November to March sales is referencing.

**RESPONSE:**

The statement that Atmos Energy can be expected to distribute about 74 percent of its total firm sales volumes during the five winter months of November through March (the winter heating season) is not based on a forecast. Rather, the statement reflects a simple calculation of the ratio of monthly test year adjusted firm Mcf sales to Residential, Commercial, Industrial, and Public Authority customers in the November 2023 – March 2024 historical period (12,737,581 Mcf) to cycle bill monthly firm Mcf sales to these same customers during the Base period of July 2023 – June 2024 (17,080,794 Mcf). Data supporting these calculations can be found in the tab “factors” in the spreadsheet “factors.xlsx” previously filed in this proceeding.

Respondent: Paul Raab

**Case No. 2024-00276**  
**Atmos Energy Corporation, Kentucky Division**  
**Staff DR Set No. 2**  
**Question No. 2-04**  
**Page 1 of 1**

**REQUEST:**

Refer to the Raab Direct Testimony, Exhibit PHR-5. Provide the Exhibit in Excel Spreadsheet format with all formulas, rows, and columns fully accessible and unprotected.

**RESPONSE:**

See Attachment 1.

**ATTACHMENT:**

Staff\_2-04\_Att1 - PHR-5.xlsx

Respondent: Paul Raab

**Case No. 2024-00276**  
**Atmos Energy Corporation, Kentucky Division**  
**Staff DR Set No. 2**  
**Question No. 2-05**  
**Page 1 of 2**

**REQUEST:**

Refer to the Direct Testimony of Thomas L. Troup (Troup Direct Testimony), page 11, lines 10–16. Provide and explain each equation used to adjust each customer class for variances from normal weather based on the current heating degree day (HDD) composite and normal basis.

**RESPONSE:**

For weather normalization calculations in the revenue billing unit forecast, see the relied upon Excel file "KY Revenue Billing Unit Forecast TYE 6.30.2024.xlsx" provided with the response to Staff 1-54.

In the above relied upon Excel file, the weather normalization—using the residential class as an example—on the worksheet "WNA" is calculated as follows for each month:

1. Actual and normal HDDs on Line Nos. 1–3 are pulled from the worksheet "HDDs".
2. Number of customers and actual volumes on Line Nos. 18 and 20 are pulled from the worksheet "Bill Frequency".
3. The actual class base load on Line No. 11 equals the per-customer base load (Line No. 16) multiplied by the number of customers (Line No. 18).
4. Actual heat load on Line No. 12 equals the actual volume (Line No. 20) less the calculated class base load (Line No. 11).
5. The heat load per customer on Line No. 13 equals the heat load (Line No. 12) divided by the number of customers (Line No. 18).
6. The X coefficient (the heat load per customer per lagged actual HDD) on Line No. 14 equals the 12-month sum of the heat load per customer (Line No. 13) divided by the 12-month sum of the lagged actual HDDs (Line No. 1).
7. The product on Line No. 15 equals the X coefficient (Line No. 14) multiplied by the lagged normal HDDs (Line No. 2).
8. The base load on Line No. 16 equals the average per-customer load for July and August calculated as the sum of the July and August actual volumes (Line No. 20) divided by the sum of the July and August number of customers (Line No. 18).
9. Weather normalized usage per customer on Line 17 equals the base load usage per customer (Line No. 16) plus the product (Line No. 15).
10. The weather normalized class volume on Line No. 19 equals the normalized usage per customer (Line No. 17) multiplied by the number of customers (Line No. 18).
11. Weather normalized volume including unbilled on Line No. 21 equals the number of customers (Line No. 18) multiplied by the quantity of the X coefficient (Line No. 14) multiplied by calendar normal HDDs (Line No. 3) plus base load per customer (Line No. 16).

**Case No. 2024-00276**  
**Atmos Energy Corporation, Kentucky Division**  
**Staff DR Set No. 2**  
**Question No. 2-05**  
**Page 2 of 2**

12. Normalized calendar volume on Line 22 equals the normalized volume including unbilled (Line No. 21) divided by the 12-month sum of normalized volume including unbilled (Line No. 21) multiplied by the 12-month sum of weather normalized volume (Line 19).
13. The weather adjustment volume on Line 24 equals weather normalized volume (Line No. 19) less actual volume (Line No. 20).

Weather normalization for the firm commercial and firm public authority classes is calculated in a parallel manner to weather normalization for the residential class

For weather normalization on an annual basis for 10-year trend lines, see the calculations in Attachment 1.

In Attachment 1, the steps to weather normalize volumes for residential, commercial, and public authority customers are as follows for each customer class and fiscal year of data:

1. Calculate the actual HDDs percentage of normal HDDs by dividing actual HDDs by Normal HDDs.
2. Calculate the annual heating load by multiplying the class monthly base load by 12 and subtracting the result from the total annual volume, where the class monthly base load is the average monthly load per customer for July and August multiplied by the average annual number of customers.
3. Calculate the weather normal heating load by dividing the annual heating load by the actual HDDs percentage of normal HDDs from step 1, above.
4. Calculate the weather normal volume by multiplying the monthly base load by 12 and adding the result to the weather normal heating load.

Once normal volumes are calculated, for each fiscal year the normal volume per customer can be calculated as can be base load factors (which is the monthly base load per customer) to look at 10-year trends.

**ATTACHMENT:**

Staff\_2-05\_Att1 - RES-COM-PA Trend Lines 6.2024.xlsx

Respondent: Thomas Troup

**Case No. 2024-00276**  
**Atmos Energy Corporation, Kentucky**  
**Division Staff DR Set No. 2**  
**Question No. 2-06**  
**Page 1 of 1**

**REQUEST:**

Refer to the Troup Direct Testimony, page 11, lines 17-19. In Excel format with all formulas, rows, columns, and cells fully accessible, observable, and unprotected, provide the historical data and trends for the customer count, net annual growth, and weather normalized adjusted volumes per customer for the residential, commercial, and public authority classes.

**RESPONSE:**

See the relied upon Excel file "KY Revenue Billing Unit Forecast TYE 6.30.2024.xlsx" provided with the response to Staff 1-54. For 10-year trend lines used to forecast residential, commercial, and public authority customer growth, see Attachment 1 provided with the response to Staff 2-05.

Respondent: Thomas Troup

**Case No. 2024-00276**  
**Atmos Energy Corporation, Kentucky Division**  
**Staff DR Set No. 2**  
**Question No. 2-07**  
**Page 1 of 1**

**REQUEST:**

Refer to the Troup Direct Testimony, page 12, lines 1–8.

- a. Explain and provide the equations, assumptions and analysis used to forecast residential, commercial, and public authority classes. Provide detailed information regarding both the number of customers and the volume of gas forecast for each customer class.
- b. Explain how the net annual growth was determined for the residential, commercial, and public authority classes.

**RESPONSE:**

- a. See the relied upon Excel file "KY Revenue Billing Unit Forecast TYE 6.30.2024.xlsx" provided with the response to Staff 1-54.

For residential, commercial, and public authority, the forecast monthly number of customers on the worksheet "Monthly Forecast" come from the worksheet "WNA" in the revenue billing unit forecast relied file. Actual monthly customer bill frequencies (worksheet "Bill Frequency") were obtained for the 12-month reference period of July 2023 – June 2024. On the worksheet "WNA", for each month for July 2024 and going forward, the forecast number of customers in a month is equal to the number of customers 12 months prior plus any projected annual customer growth. As stated in the referenced testimony, commercial customer growth is forecast at 50 customers per year while no net growth was forecast for residential and public authority. These customer growth forecasts are based on 10-year trend line analyses per part b., below.

The forecast monthly volumes on worksheet "Monthly Forecast" come from the worksheet "WNA", and are based on the 12-month reference period (July 2023 – June 2024) actual volumes (worksheet "Bill Frequency") as adjusted to reflect known and measurable changes (worksheet "Contract & Vol Adj"). On worksheet "WNA", the volumes for July 2024 and going forward are forecast by applying the monthly weather normalization calculations to calculate the normal usage per customer, and applying that normal usage per customer to the forecast number of customers.

- b. The customer growth for residential, commercial, and public authority as cited in Mr. Troup's Direct Testimony, page 12, lines 1–8 (and used in the customer growth forecast described above) are based on the net average annual customer growth over the past three years using the 10-year trend line analysis provided as Attachment 1 with the response to Staff 2-05.

Respondent: Thomas Troup



**Case No. 2024-00276**  
**Atmos Energy Corporation, Kentucky Division**  
**Staff DR Set No. 2**  
**Question No. 2-08**  
**Page 1 of 1**

**REQUEST:**

Refer to the Troup Direct Testimony, page 12, lines 11–15.

- a. In Excel format with all formulas, rows, columns, and cells fully accessible, observable, and unprotected, provide the data and trend lines which show that average usage customer usage was declining and then leveled off for the past ten years.
- b. Provide the equations used to forecast average customer usage for the residential, commercial, and public authority classes and identify any other factors referenced or utilized in making the forecasts other than the current ten-year trend.

**RESPONSE:**

- a. See Attachment 1 provided with the response to Staff 2-05.
- b. See the response to Staff 2-07. The forecast customer usage for residential, commercial, and public authority is based on (1) the July 2023 – June 2024 reference period actual bill frequencies and normalized usage, and (2) forecast monthly customers using annual customer growth based on the 10-year trend line analyses.

Respondent: Thomas Troup

**Case No. 2024-00276**  
**Atmos Energy Corporation, Kentucky Division**  
**Staff DR Set No. 2**  
**Question No. 2-09**  
**Page 1 of 1**

**REQUEST:**

Refer to the Direct Testimony of Dylan W. D'Ascendis (D'Ascendis Direct Testimony), Table 1, page 2, and Schedule DWD-1, page 1. Provide a breakdown of Atmos's long-term and short-term debt supporting each of the composite cost rates of 4.11 percent and 17.14 percent.

**RESPONSE:**

See FR\_16(8)(j)\_Att1 - Schedule J, Tab J-3 F, Lines 1 - 26 for the requested long-term debt supporting the 4.11%.

See FR\_16(8)(j)\_Att1 - Schedule J, Tab J-2 F, Lines 1 - 5 for the requested short-term debt supporting the 17.17%. Note that the effective interest rate includes \$4.4 million in commitment fees which are required to support the Company's commercial paper program. Interest for the 12 months ended June 2024 was:

1	Jun-23	—
2	Jul-23	750
3	Aug-23	308,851
4	Sep-23	1,364,167
5	Oct-23	412,044
6	Nov-23	—
7	Dec-23	—
8	Jan-24	—
9	Feb-24	—
10	Mar-24	—
11	Apr-24	—
12	May-24	—
13	Jun-24	—
14		<u>2,085,811.96</u>

Respondent: Joe Christian

**Case No. 2024-00276**  
**Atmos Energy Corporation, Kentucky Division**  
**Staff DR Set No. 2**  
**Question No. 2-10**  
**Page 1 of 1**

**REQUEST:**

Refer to the D'Ascendis Direct Testimony, page 4 lines 1–4, page 14, lines 9–28, page 15, line 1, and Schedule DWD-2, page 4. Refer also to NiSource's status as a combination gas and electric regulated utility. In terms of aligning business and financial risks, explain the rationale for including a proxy group made up of 53 non-regulated companies and not including a proxy group containing combination gas and electric utilities.

**RESPONSE:**

As discussed in Mr. D'Ascendis' Direct Testimony, the selection criteria for the nonregulated proxy group were based on a range of unadjusted Beta coefficients (a measure of systematic risk) and a range of standard errors of the regression (a measure of non-systematic or diversifiable risk), which gave rise to those Beta coefficients, and together measure total risk.

Business and financial risks may vary between companies and proxy groups, but if the collective average betas and standard errors of the regression of the group are similar, then the total, or aggregate, non-diversifiable market risks and diversifiable risks are similar, as noted in "Comparable Earnings: New Life for an Old Precept" provided in Attachment 1. Thus, because the non-price regulated companies are selected based on analyses of market data, they are comparable in total risk (even though individual risks may vary) to the Utility Proxy Group, which is comparable to the subject company as discussed below.

Mr. D'Ascendis' objective in selecting a Utility Proxy Group is to develop a proxy group that is highly representative of the risks and prospects faced by Atmos Energy. Therefore, Mr. D'Ascendis selected companies with at least 60% of operating income or assets attributable to regulated natural gas operations to ensure the proxy group companies had rate-regulated operations similar to the subject company. NiSource, Inc. passed that criteria. Alternatively, other combination gas and electric companies that did not pass the criteria noted above face a broader set of risks than companies that operate primarily in natural gas distribution and are therefore not appropriate to include in the Utility Proxy Group.

**ATTACHMENT:**

Staff\_2-10\_Att1 - Comparable Earnings - New Life for an Old Precept.pdf

Respondent: Dylan D'Ascendis

**Case No. 2024-00276**  
**Atmos Energy Corporation, Kentucky Division**  
**Staff DR Set No. 2**  
**Question No. 2-11**  
**Page 1 of 1**

**REQUEST:**

Refer to the D'Ascendis Direct Testimony, page 4, lines 10–13, and Table 2. The Commission has previously rejected the application of adjustments for company size, credit risk, flotation cost and non-regulated company proxy groups for ratemaking purposes.<sup>2</sup> Provide any facts that support approval of these adjustments.

**RESPONSE:**

See Section VII of Mr. D'Ascendis' Direct Testimony, which provides financial literature and empirical evidence in support of Mr. D'Ascendis' adjustments for size, credit risk and flotation costs. Regarding the use of non-regulated proxy group, in addition to Mr. D'Ascendis' response to Staff 2-10, see Attachment 1, which compares measures of total risk (*Value Line* Safety Ranking, the Coefficient of Variation of net profit, and the annualized volatility of stock prices) for Mr. D'Ascendis' Utility Proxy Group and Non-Price Regulated Proxy Group. As shown in Attachment 1, the various measures of total risk were similar between the Utility Proxy Group and the Non-Price Regulated Proxy Group, indicating similar levels of total risk.

**ATTACHMENT:**

Staff\_2-11\_Att1 - Measures.xlsx

Respondent: Dylan D'Ascendis

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<sup>2</sup> Case No. 2021-00214, Electronic Application of Atmos Energy Corporation for an Adjustment of Rates (Ky. PSC May 19, 2022), final Order at 48.

**Case No. 2024-00276**  
**Atmos Energy Corporation, Kentucky Division**  
**Staff DR Set No. 2**  
**Question No. 2-12**  
**Page 1 of 1**

**REQUEST:**

Refer to the D'Ascendis Direct Testimony, page 18, lines 20–22, and Schedule DWD-2, page 1.

- a. Explain whether the statement means that dividend growth rates play no part in influencing market prices.
- b. Provide an update to Schedule DWD-2, page 1, including dividend per share growth rates.

**RESPONSE:**

- a. The referenced statement is not a specific reference to the impact of dividend growth rates on market prices. It simply states that dividends per share growth cannot exceed the level of earnings per share growth into perpetuity. Refer to Mr. D'Ascendis' Direct Testimony at page 18, lines 21-22, which notes that earnings expectations have a more significant influence on market prices than dividend expectations, providing a better representation of investor expectations.
- b. Although Mr. D'Ascendis disagrees with the inclusion of dividend per share growth estimates in the DCF, as discussed in his Direct Testimony at page 18, the requested analysis is provided in Attachment 1.

**ATTACHMENT:**

Staff\_2-12\_Att1 - DWD-2 Requested Update.xlsx

Respondent: Dylan D'Ascendis

**Case No. 2024-00276**  
**Atmos Energy Corporation, Kentucky Division**  
**Staff DR Set No. 2**  
**Question No. 2-13**  
**Page 1 of 7**

**REQUEST:**

Refer to the D'Ascendis Direct Testimony page 18, lines 20–22, and Schedule DWD-4 page 1.

- a. Explain the time period and which stock index serves as the basis for the Value Line and Bloomberg adjusted beta values.
- b. Explain time period and basis for Yahoo Finance beta calculations and why they could not also be included in the analysis.
- c. Provide an update to Schedule DWD-4 including adjusted Yahoo Finance beta values.
- d. If Yahoo Finance beta values are unadjusted, provide the formula for adjusting the beta values.

**RESPONSE:**

- a. *Value Line* Beta coefficients are calculated using weekly returns over a five-year period, relative to the New York Stock Exchange. Bloomberg Beta coefficients are calculated using weekly returns over a two-year period relative to the S&P 500 Index.
- b. Yahoo Finance Beta coefficients are calculated using monthly returns relative to the S&P 500 Index. Yahoo Finance Beta coefficients are also unadjusted or “raw” betas, which are not forward-looking and are calculated on a monthly, instead of weekly, basis, which does not adequately reflect changes in market data. Mr. D'Ascendis will explain why the use of unadjusted betas and betas calculated using monthly returns are not appropriate for cost of capital purposes below:

**Unadjusted Betas**

Betas are measured using an Ordinary Least Squares (“OLS”) regression, in which the dependent variable is the return of the subject security, and the independent variable is the return on the market as measured by a given index (*Value Line*, for example, uses the New York Stock Exchange Index). Beta is represented by the slope term of the regression estimates. Intuitively, beta measures the change in the subject company's returns relative to the change in the market return.

The resulting beta is considered “raw”, or unadjusted. Unadjusted betas are historical in nature as they use historical market data. Blume studied the stability of beta over time and found that “[n]o economic variable including the beta coefficient is constant over time.”<sup>3</sup> Consistent with that finding, Blume observed a tendency of raw betas to change gradually over time. Blume further stated:

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<sup>3</sup> Marshal E. Blume, On the Assessment of Risk, The Journal of Finance, Vol. XXVI, No. 1, March 1971.

**Case No. 2024-00276**  
**Atmos Energy Corporation, Kentucky Division**  
**Staff DR Set No. 2**  
**Question No. 2-13**  
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...there is obviously some tendency for the estimated values of the risk parameter [beta] to change gradually over time. This tendency is most pronounced in the lowest risk portfolios, for which the estimated risk in the second period is invariably higher than that estimated in the first period. There is some tendency for the high risk portfolios to have lower estimated risk coefficients in the second period than in those estimated in the first. Therefore, the estimated values of the risk coefficients in one period are biased assessments of the future values, and furthermore the values of the risk coefficients as measured by the estimates of  $\beta_1$  tend to regress towards the means with this tendency stronger for the lower risk portfolios than the higher risk portfolios. (emphasis added)<sup>4</sup>

Blume proposed a correction for this tendency, also known as “regression bias”, which is inherent in the calculation of all betas. He stated:

In so far as the rate of regression towards the mean is stationary over time, one can in principle correct for this tendency in forming one's assessments.

\* \* \*

For individual securities as well as portfolios of two or more securities, the assessments adjusted for the historical rate of regression are more accurate than the unadjusted or naïve assessments. Thus, an improvement in the accuracy of one's assessments of risk can be obtained by adjusting for the historical rate of regression even though the rate of regression over time is not strictly stationary.<sup>5</sup>

Based on Blume's results, the typical adjustment is calculated based upon an approximate of the following formula:

$$\beta_{adjusted} = 0.35 + .67x\beta_{raw} (unadjusted)$$

This adjustment transforms the historical unadjusted beta into an expectational value, consistent with the expectational nature of the cost of capital.

As noted by Morin:

Several authors have investigated the regression tendency of beta and generally reached similar conclusions [as Blume]. High-beta portfolios have tended to decline over time toward unity, while low-beta portfolios have tended to increase over time toward unity...He demonstrated that the Value Line adjustment procedure anticipated differences between past and future betas.<sup>6</sup>

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<sup>4</sup> Marshal E. Blume, On the Assessment of Risk, The Journal of Finance, Vol. XXVI, No. 1, March 1971.

<sup>5</sup> Marshal E. Blume, On the Assessment of Risk, The Journal of Finance, Vol. XXVI, No. 1, March 1971.

<sup>6</sup> Roger A. Morin, Modern Regulatory Finance, PUR Books, 2021 at 81. (“Morin”).



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Morin further notes:

A comprehensive study of beta measurement methodology by Kryzanowski and Jalilvand (1983) concludes that raw unadjusted beta (OLS beta) is one of the poorest beta predictors, and is outperformed by the Blume-style Bayesian beta approach. Gombola and Kahl (1990) examine the time-series properties of utility betas and find strong support for the application of adjustment procedures such as the Value Line and Bloomberg procedures.

\*\*\*

Because of this observed regressive tendency, a company's raw unadjusted beta is not the appropriate measure of market risk to use. Current stock prices reflect expected risk, that is, expected beta, rather than historical risk or historical beta. Historical betas, whether raw or adjusted, are only surrogates for expected beta. The best of the two surrogates is adjusted beta.<sup>7</sup>

Morin also provides economic and statistical justification for using adjusted betas to estimate the cost of equity for utilities. Relative to economic justification, he states:

Adjusted betas compensate for the tendency of regulated utilities to be extra interest-sensitive relative to industrials.<sup>(footnote omitted)</sup> In the same way that bondholders get compensated for inflation through an inflation premium in the interest rate, utility shareholders receive compensation for inflation through an inflation premium in the allowed rate of return. Thus, utility company returns are sensitive to fluctuations in interest rates. Conventional betas do not capture this extra sensitivity to interest rates. This is because the market index typically used in estimating betas is a stock-only index, such as the S&P 500. A focus on stocks alone distorts the betas of regulated companies. The true risk of regulated utilities relative to other companies is understated because when interest rates change, the stocks of regulated companies react in the same way as bonds do. A nominal interest rate on the face value of a bond offers the same pattern of future cash flows as a nominal return applied on a book value rate base. Empirical studies of utility returns confirm that betas are higher when calculated in a way that captures interest rate sensitivity. *The use of adjusted betas compensates for the interest sensitivity of regulated companies. (italics added for emphasis)*<sup>8</sup>

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<sup>7</sup> Morin, at 81-82.

<sup>8</sup> Morin, at 82.

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Relative to statistical justification, Morin states:

There is a statistical justification for the use of adjusted betas as well. High-estimated betas will tend to have positive error (overestimated) and low-estimated betas will tend to have negative error (underestimated). Therefore, it is necessary to squash the estimated betas in toward 1.00. One way to accomplish this is by measuring the extent to which estimated betas tend to regress toward the mean over time. As a result of this beta drift, several commercial beta producers adjust their forecasted betas toward 1.00 in an effort to improve their forecasts. This adjustment, which is commonly performed by investment services such as Value Line, and Bloomberg, uses the formula:

$$\beta_{adjusted} = 1.0 + a(\beta_{raw} - 1.0) \quad (4 - 3)$$

where “a” is an estimate of the extent to which estimated betas regress toward the mean based on past data. Value Line and Bloomberg betas are adjusted for their long-term tendency to regress toward 1.0 by giving approximately 66% weight to the measured beta and approximately 34% weight to the prior value of 1.0 for each stock, that is,  $a = 0.66$  in the above equation:

$$\begin{aligned} \beta_{adjusted} &= 1.0 + 0.66 (\beta_{raw} - 1.0) \\ &= 0.33 + 0.66 \beta_{raw} \quad (4-4)^9 \end{aligned}$$

Many commercial sources, including *Value Line* and Bloomberg, provide adjusted betas. Given the commercial use and acceptance of adjusted betas they are the proper measure of systematic risk in the CAPM.

### **Monthly Betas**

Betas calculated using weekly returns incorporate more observable market data than betas that use monthly returns. Weekly return betas are calculated using significantly more observations (260 weekly observations compared to 60 monthly observations for a five-year measurement period) which reduces the likelihood of measurement error. The lower number of observations of monthly returns may particularly be an issue for companies with relatively high dividend yields, such as the proxy companies, due to dividend-related price behavior. Because the value of a stock just prior to its dividend payment date is equal to the sum of the expected dividend, plus the going concern value of the business, following the ex-dividend date (the date on which a stockholder becomes entitled to the announced dividend) the value of the stock will adjust downward to reflect only the going concern value. That price behavior may skew the calculation of both the relative volatility of market returns and the correlation of market returns which determine betas.

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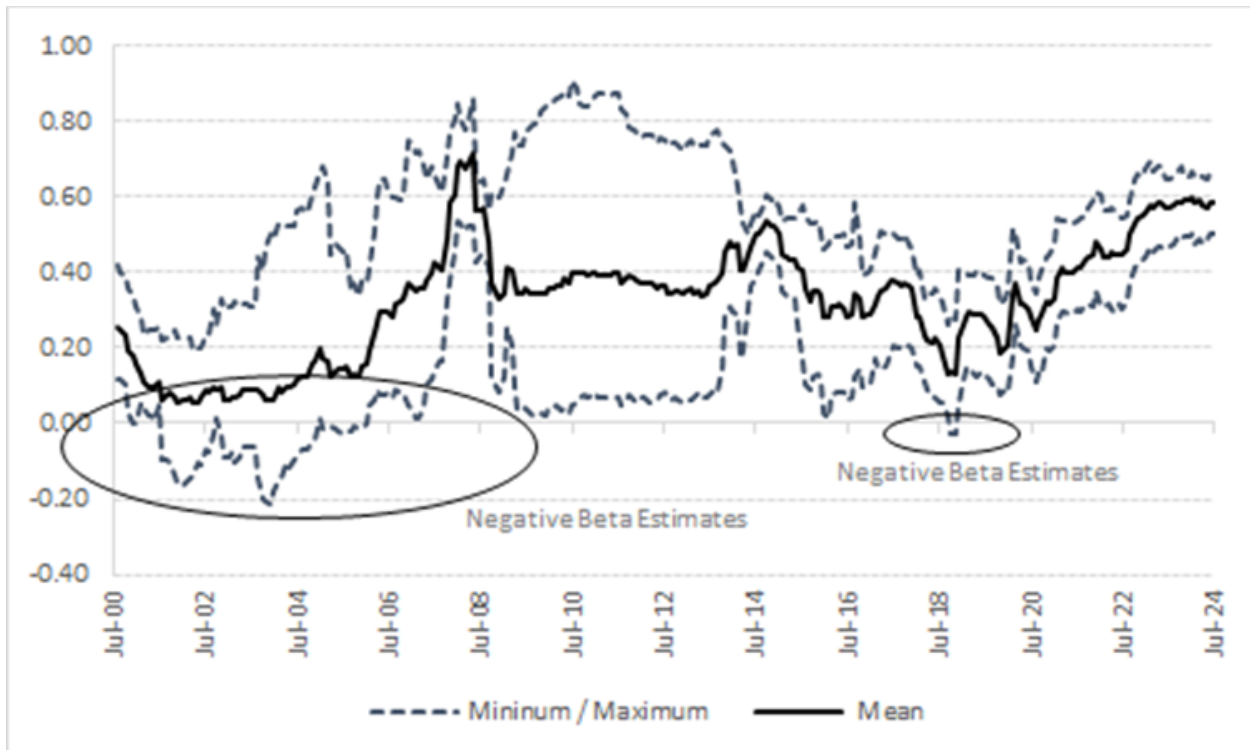
<sup>9</sup> Morin, at 82-83.

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As discussed previously, it is appropriate to use weekly data as opposed to monthly data because monthly data give less weight to market movements experienced in shorter time periods, thereby dampening volatility for the market index and the subject stock, although possibly not to the same degree for each.

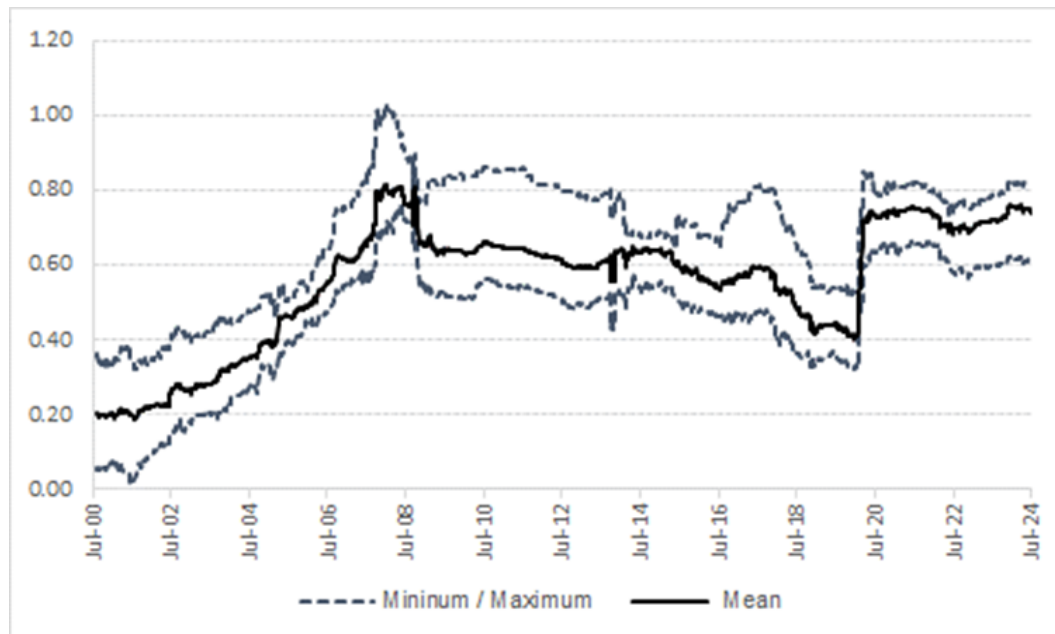
To assess the difference in results, Mr. D'Ascendis calculated betas for a proxy group consisting of six companies using both monthly and weekly return data from May 2000 through July 2024. The proxy group consists of ATO, NJR, NI, NWN, OGS, and SR. The results shown in Charts 1 and 2, below, confirm that monthly betas do not capture the full extent of the risk faced by equity investors.

**Chart 1: Calculated Monthly Betas for the Proxy Group<sup>10</sup>**



<sup>10</sup> Source S&P Global Market Intelligence. See Attachment 1.

**Chart 2: Calculated Weekly Betas for the Proxy Group<sup>11</sup>**



It also is clear from Charts 1 and 2 that a greater number of negative betas are observed when monthly returns are assumed. Taken at face value, a negative beta implies a cost of equity less than the risk-free rate of return. That prospect is highly unlikely, especially when other proxy companies did not have contemporaneously negative betas. Given the practical implications of negative betas, the use of weekly data provides more plausible results and ROE estimates.

- c. As noted in response to subpart (b) using Yahoo! Finance betas, specifically, the use of betas calculated using monthly returns, is inappropriate for cost of capital purposes. However, see Attachment 2 for the requested analysis.

Mr. D’Ascendis did not have access to Yahoo! Finance beta values as of July 31, 2024, so he used the beta calculation tool from Bloomberg Professional Services to calculate the unadjusted beta values consistent with Yahoo! Finance’s approach (i.e., monthly covariance of returns between the company and the S&P 500 for a five-year period). Mr. D’Ascendis used data as of July 31, 2024 to be consistent with his analysis presented with his Direct Testimony.

- d. As noted in response to part b. above, the formula for adjusting Beta coefficients is as follows:

$$\begin{aligned} \beta_{\text{adjusted}} &= 1.0 + 0.66 (\beta_{\text{raw}} - 1.0) \\ &= 0.33 + 0.66 \beta_{\text{raw}} \quad (4-4)^{12} \end{aligned}$$

<sup>11</sup> Source S&P Global Market Intelligence. See Attachment 1.

<sup>12</sup> Morin, at 82-83.

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ATTACHMENTS:

Staff\_2-13\_Att1 - Proxy Group Data.xlsx  
Staff\_2-13\_Att2 - DWD-4 Requested Update.xlsx

Respondent: Dylan D'Ascendis

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**Question No. 2-14**  
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**REQUEST:**

Refer to the D'Ascendis Direct Testimony, page 20, lines 8–10, and Schedule DWD-3, page 6. Explain why an equity risk premium based on a broader index such as the New York Stock Exchange Composite Index comprising approximately 1,700 companies would provide an additional alternative, if not better estimate than the narrower S&P 500 Index.

**RESPONSE:**

The S&P 500 index is comprised of 500 of the largest U.S. publicly traded companies, which account for approximately 80% of the overall U.S. equity market. The index is commonly used as a proxy for the entire U.S. equity market by investors, as the index components cover all sectors of the market. Additionally, the market return values calculated by Kroll are based on S&P 500 returns and Bloomberg Beta coefficients are calculated using the S&P 500 as the market index.

Respondent: Dylan D'Ascendis

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**Question No. 2-15**  
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**REQUEST:**

Refer to the D'Ascendis Direct Testimony, page 20, lines 13–23, page 21 lines 1–7, and Schedule DWD-3, pages 3-4. If the bond yield spread is being based on Moody's selected bond yields in Schedule DWD-3, page 3, explain why some allowance should not be made to account for four of the six proxy companies having lower Moody's bond ratings and two of which having significantly lower bond ratings than Atmos.

**RESPONSE:**

Mr. D'Ascendis made a downward adjustment of 0.04% to account for Atmos Energy's higher bond rating relative to the Utility Proxy Group, as shown on page 2 of Schedule DWD-1 and discussed on pages 54 through 56 of his Direct Testimony.

Respondent: Dylan D'Ascendis



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**Question No. 2-16**  
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**REQUEST:**

Refer to Schedule DWD-3, page 10. Presume that there are many factors that may influence a state regulatory commission's decision regarding the cost of equity which would not be influential in the market, and which may in part account for the widespread between equity risk premiums for any given A2 rated Moody's bond yield. Explain further why using state utility regulatory commission decisions provides a reasonable basis upon which to set current cost of equity decisions.

**RESPONSE:**

Mr. D'Ascendis does not agree with the initial presumption in the above request. For regulated utilities, the ROE equals the investor-required ROE which equals the allowed ROE, as reflected in the *Hope* and *Bluefield* Supreme Court decisions cited in Mr. D'Ascendis' Direct Testimony. This relationship holds because utility regulation by regulatory commissions acts as a substitute for competition and is well supported in the academic literature as noted above. Because this is the case, *any factor that would be considered by a regulatory commission in determining an ROE for a utility company would be influential in the market.* To limit authorized ROEs that were a result of negotiations between the parties (i.e., settlements), Mr. D'Ascendis only includes fully-litigated rate cases in his analysis.

Respondent: Dylan D'Ascendis

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**REQUEST:**

Refer to Atmos's response to Staff's First Request, Staff\_1-50\_Att1\_-\_Average\_Number\_of\_Customers.xlsx.

- a. Confirm whether the customer numbers in the Base Period CY 2024 column are actual or projected. If projected, provide a detailed explanation of the calculations and/or formulas used to determine these numbers.
- b. Identify whether the customer numbers provided here represent Kentucky customers exclusively or include the broader Kentucky/Mid-states Division.

**RESPONSE:**

- a. Base Period CY 2024 averages by class include monthly actuals through June and monthly forecasts for July through December.

For an explanation of the calculations for the six months of forecast customers used in the CY 2024 average, please see the response to Staff 2-07.

- b. The numbers represent Kentucky customers exclusively.

Respondent: Thomas Troup

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**Question No. 2-18**  
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**REQUEST:**

Refer to Atmos's response to Staff's First Request for Information, Staff\_1-25\_Att1\_-\_CWIP.xlsx. Atmos lists construction projects slated for completion in 2022, 2023, and early 2024. Explain why Atmos still classifies these projects as works in progress.

**RESPONSE:**

The project balances in column D of "Staff\_1-25\_Att1\_-\_CWIP.xlsx" represent the CWIP balance at the end of the month indicated in column A. The list of projects included in the attachment are the same projects included in the response to Staff 1-24 as indicated in the request and do not represent open CWIP as of the date of the response.

Respondent: Greg Waller

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**REQUEST:**

Provide a copy of the Power Point document presented at the October 31, 2024 Informal Technical Conference.

**RESPONSE:**

See Attachment 1.

**ATTACHMENT:**

Staff\_2-19\_Att1 - Informal Conference 10-31-24.pdf

Respondent: Greg Waller