I&E Statement No. 2-SR
Witness: Christopher M. Henkel

PENNSYLVANIA PUBLIC UTILITY COMMISSION

v.

PEOPLES NATURAL GAS COMPANY LLC

Docket No. R-2018-3006818

Surrebuttal Testimony

of

Christopher M. Henkel

Bureau of Investigation & Enforcement

Concerning:

Rate of Return

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INTRODUCTION OF WITNESS

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Christopher M. Henkel. My business address is Pennsylvania Public Utility Commission, Commonwealth Keystone Building, 400 North Street, Harrisburg, PA 17120.

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

A. I am employed by the Pennsylvania Public Utility Commission (Commission) in the Bureau of Investigation & Enforcement (I&E) as a Fixed Utility Financial Analyst.

Q. ARE YOU THE SAME CHRISTOPHER HENKEL WHO IS RESPONSIBLE FOR THE DIRECT TESTIMONY CONTAINED IN I&E STATEMENT NO. 2 AND THE SCHEDULES IN I&E EXHIBIT NO. 2?

A. Yes.

Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?

A. The purpose of my surrebuttal testimony is to address statements made by Peoples Natural Gas Company LLC (Peoples or Company) witness Paul R. Moul in his rebuttal testimony (Peoples Statement No. 9-R) regarding rate of return topics including the cost of common equity and the overall fair rate of return, which will be applied to the Company's rate base. In addition, I will address the management effectiveness claim discussed by Mr. Moul and Company witness Morgan O'Brien (Peoples Statement No. 1-R).

SUMMARY OF MR. MOUL'S REBUTTAL TESTIMONY

Q. SUMMARIZE MR. MOUL'S RESPONSE IN REBUTTAL TESTIMONY TO YOUR RECOMMENDATIONS MADE IN DIRECT TESTIMONY.

A. In his rebuttal, Mr. Moul disputes: (1) the proxy group I assembled for my analysis; (2) my recommended cost of debt for the Company; (3) the Company's heightened risk position resulting from the Tax Cuts and Jobs Act (TCJA); (4) the weight given to my Discounted Cash Flow (DCF) analysis; (5) specific elements of my DCF and Capital Asset Pricing Model (CAPM) analyses; and (6) my rejection of his Risk Premium (RP) and Comparable Earnings (CE) methods. Within my DCF analysis, he disputes my growth rate, my rejection of his leverage adjustment, and asserts my results are too close to the Company's cost of debt. In my CAPM analysis, Mr. Moul disputes my risk-free rate of return, my rejection of his leverage-adjusted betas, and my rejection of his size risk adjustment. He claims that the I&E recommended cost of equity is not commensurate with the returns investors expect to earn on natural gas utilities. Finally, he disputes my rejection of his adjustment for the Company's claimed superior management performance.

PROXY GROUP

Q. WHAT IS THE BASIS OF MR. MOUL'S DISPUTE WITH THE PROXY GROUP USED IN YOUR ANALYSIS?

A. Mr. Moul disputes my first criterion that was used to assemble my proxy group. The criterion states that 50% or more of a company's revenues must be generated from the regulated natural gas utility industry to qualify as a member of the group.[1] He claims the percentage of regulated revenues cannot be used to select members of a proxy group because the margins on the minority non-regulated segments of businesses are too dissimilar to the utility industry. Further, he asserts that the percentage of utility assets of all companies in his Gas Group is more than 50%.

Q. WHAT IS YOUR RESPONSE TO MR. MOUL'S DISPUTE WITH YOUR PROXY GROUP?

A. Mr. Moul's argument is flawed. Because utility business segments require large outlays of capital to expand and maintain plant and infrastructure, it is possible that the non-regulated utility business segment(s) of a firm could generate more than 50% of its revenue while more than 50% of the firm's assets on its balance sheet are utility related. In other words, a firm operating mainly as something other than a regulated utility would qualify as a member of Mr. Moul's Gas

[1] I&E Statement No. 2, p. 7, lines 5-6.

Group. Moreover, the non-regulated utility sectors which generate more than 50% of the firm's revenue could potentially still reflect margins that, as Mr. Moul claims, are dissimilar to the utility business.[2] Additionally, if Mr. Moul's method is used, depreciation can distort the proxy group selection process. For example, if more than 50% of a firm's revenue is generated from regulated utility operations and its utility assets are largely depreciated, utility assets to total assets on its balance sheet could in theory be less than 50%. In this instance, a company operating primarily as a regulated utility would not qualify as a member of Mr. Moul's Gas Group. Revenues are the primary indicator of how a firm operates. Last, Mr. Moul did not identify percentage of assets as a criterion for his Gas Group in direct testimony.[3]

Q. HAVE YOU CHANGED YOUR PROXY GROUP AS A RESULT OF MR. MOUL'S REBUTTAL TESTIMONY?

A. No.

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[2] Peoples Statement No. 9-R, p.12, lines 9-12.
[3] Peoples Statement No. 9, pp. 4-5.

COST OF DEBT

Q. IN WHAT WAY DOES MR. MOUL DISPUTE YOUR RECOMMENDED COST OF DEBT FOR THE COMPANY?

A. Mr. Moul agrees with my analysis that interest rates have stabilized and settled at lower rates than those indicated by his forecast.[4] However, he disagrees with my proposal to adjust the Company's cost of debt accordingly and suggests that subsequent data in the future could substantiate the reasonableness of his original projection. He suggests the best course of action is to adopt the original interest cost for the future issue of long-term debt for Peoples.[5]

Q. WHAT IS YOUR RESPONSE TO MR. MOUL'S REBUTTAL TESTIMONY CONCERNING YOUR RECOMMENDED COST OF DEBT?

A. Mr. Moul's recommendation is speculative. As mentioned in my direct testimony, the Federal Reserve issued a press release on March 20, 2019 which stated that the Federal Open Market Committee decided to maintain the target range for the federal funds rate at 2¼- to 2½ percent in response to a slow-down in the economy in the fourth quarter of 2018.[6] Additionally, the interest rate on the 10-year U.S. treasury note has declined considerably since November of 2018.[7] This indicates that interest rates have fallen in the present market and are expected to stay low for

[4] Peoples Statement No. 9-R, p. 8, lines 1-2.
[5] Peoples Statement No. 9-R, p. 8, lines 5-8.
[6] I&E Statement No. 2, pp. 12-13.
[7] I&E Statement No. 2, p. 12, line 14.

an indefinite period. To adopt a higher cost of debt on a guess that interest rates will climb in the future while the market reflects an entirely different picture is speculative and harmful to ratepayers. The Commission should reject Mr. Moul's recommendation and instead adopt the I&E recommended 4.08% cost of debt for the Company in this proceeding.[8]

Q. HAS YOUR RECOMMENDED LONG-TERM DEBT COST RATE CHANGED AS A RESULT OF MR. MOUL'S REBUTTAL TESTIMONY?

A. No.

RISK ASSOCIATED WITH TCJA

Q. ON WHAT BASIS DOES MR. MOUL CLAIM THE COMPANY'S RISK PROFILE IS GREATER AS A RESULT OF THE TCJA?

A. Mr. Moul noted that Moody's Investors Service downgraded its outlook on the regulated utilities sector to 'negative,' on June 18, 2018 as a result of lower cash flows and higher debt levels resulting from the TCJA and increased capital spending.[9] Mr. Moul further asserts that the TCJA will: (1) lower the Company's pre-tax interest coverage;[10] (2) make investor returns more volatile because of lower federal tax rates;[11] and (3) require more investor-supplied capital for the

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[8] I&E Exhibit No. 2, Schedule 4.
[9] Peoples Statement No. 9-R, p. 3, lines 19-22.
[10] Peoples Statement No. 9-R, p. 4, lines 1-6.
[11] Peoples Statement No. 9-R, p. 4, lines 6-9.

Company to fund its construction program because the TCJA eliminates bonus depreciation and deferred taxes will be booked at a lower rate prospectively.[12] Finally, he suggests the I&E proposed return on equity is too low and, as such, an inappropriate regulatory response to the effects of the TCJA.[13]

Q. WHAT IS YOUR RESPONSE TO MR. MOUL'S REBUTTAL TESTIMONY CONCERNING CHANGES TO THE COMPANY'S RISK PROFILE ASSOCIATED WITH THE TCJA?

A. My response to Mr. Moul's analysis is: (1) that the entire utility sector received a 'negative' outlook from Moody's Investors Service; and (2) that Mr. Moul failed to differentiate the Company from my proxy group members in terms of risk associated with the TCJA. Earlier, I demonstrated why my proxy group more effectively represents the regulated natural gas industry than Mr. Moul's Gas Group. All regulated natural gas utility companies are equally affected by TCJA policy which has been in effect for well over a year. Analysts are well aware of its policies and effects on the regulated industry as a whole. Accordingly, these effects are 'baked' into their forecasts. As stated in my direct testimony, the Company compares favorably to the Gas Group in terms of interest coverage and internally generated funds.[14] In summary, the Company's cost of equity, as measured by my proxy group, more than adequately compensates investors for

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[12] Peoples Statement No. 9-R, p. 4, lines 10-13.
[13] Peoples Statement No. 9-R, p. 4, lines 19-23.
[14] I&E Statement No. 2, p 35, lines 7-14 and p. 36, lines 5-9.

risks associated with the TCJA. The Commission should reject any notion of rewarding the Company with a higher cost of equity as a result of risk associated with the TCJA. Such an adjustment is not in the public interest because it double counts the risk already factored in by analysts and, as such, is harmful to ratepayers whose rates are affected by the allowed return on equity (ROE) in this proceeding.

Q. HAVE YOU CHANGED YOUR RECOMMENDED ROE FOR THE COMPANY AS A RESULT OF MR. MOUL'S REBUTTAL TESTIMONY?

A. No.

<u>WEIGHT GIVEN TO DCF ANALYSIS</u>

Q. ON WHAT BASIS DOES MR. MOUL DISPUTE THE WEIGHT GIVEN TO I&E'S DCF ANALYSIS?

A. Mr. Moul claims that the use of more than one method provides a superior foundation in the determination of the cost of equity.[15] He points to assumptions that are made when using a DCF analysis and further states the Commission has acknowledged the usefulness of other methods, such as CAPM and RP, as a check on the reasonableness of the return indicated by using the DCF.[16]

[15] Peoples Statement No. 9-R, p. 13, lines 8-9.
[16] Peoples Statement No. 9-R, pp. 13-14.

Q. WHAT IS YOUR RESPONSE TO MR. MOUL'S REBUTTAL TESTIMONY CONCERNING THE WEIGHT GIVEN BY I&E TO ITS DCF ANALYSIS IN THIS PROCEEDING?

A. First, as stated in my direct testimony, I chose the DCF as my primary method in measuring the Company's cost of equity because it provides a comprehensive measure of a Company's ROE, it provides the most direct measure of a company's ROE, it recognizes the time value of money, and it is commonly used and widely accepted by Public Utility Commissions across the United States.[17] The use of other models that are less superior to the DCF does not, in my opinion, provide a superior result. For reasons stated in my direct testimony, I rejected using the RP and Comparative Earnings methods.[18]

Q. IN YOUR ANALYSIS, DID YOU RELY ON ANY OTHER METHODS THAN THE DCF TO CHECK THE REASONABLENESS OF YOUR DCF RESULTS?

A. Yes. I used the CAPM to check the reasonableness of my results. This methodology aligns with the Commission Order entered on December 28, 2012 at Docket No. R-2012-2290597, which is referenced by Mr. Moul in his rebuttal

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[17] I&E Statement No. 2, p. 17, lines 6-19.
[18] I&E Statement No. 2, pp. 19-20.

testimony. The Order states:

> … We conclude that methodologies other than the DCF can be used as a check upon the reasonableness of the DCF derived equity return calculation.

Q. HAS YOUR RECOMMENDED ROE OR RATE OF RETURN CHANGED AS A RESULT OF MR. MOUL'S REBUTTAL TESTIMONY WITH RESPECT TO THE WEIGHT GIVEN BY I&E TO ITS DCF RESULT?

A. No.

I&E COST OF EQUITY MODELS

I&E DCF MODEL

Q. SUMMARIZE MR. MOUL'S REBUTTAL TESTIMONY REGARDING YOUR DCF ANALYSIS.

A. Within my DCF analysis, Mr. Moul disputes my growth rate and my rejection of his leverage adjustment. He claims that the DCF results of two companies in my proxy group produce costs of equity that are too close to their respective costs of debt. Mr. Moul asserts that a premium of 6.50% over the cost of debt in this proceeding is necessary to compensate investors for the higher risk associated with common equity investments.

GROWTH RATE

Q. IN WHAT WAY DOES MR. MOUL DISPUTE THE GROWTH RATE USED IN I&E'S DCF ANALYSIS?

A. Mr. Moul claims that I rejected an 'actual growth rate' of 7.18% for my proxy group and instead used a rate of 6.00%.[19] He claims that my selection of inputs in my DCF model is erroneous because I eliminated the Value Line earnings forecast projection for Northwest Natural Gas from my analysis.[20]

Q. DID YOU ELIMINATE THE VALUE LINE EARNINGS FORECAST PROJECTION FOR NORTHWEST NATURAL GAS FROM YOUR DCF ANALYSIS?

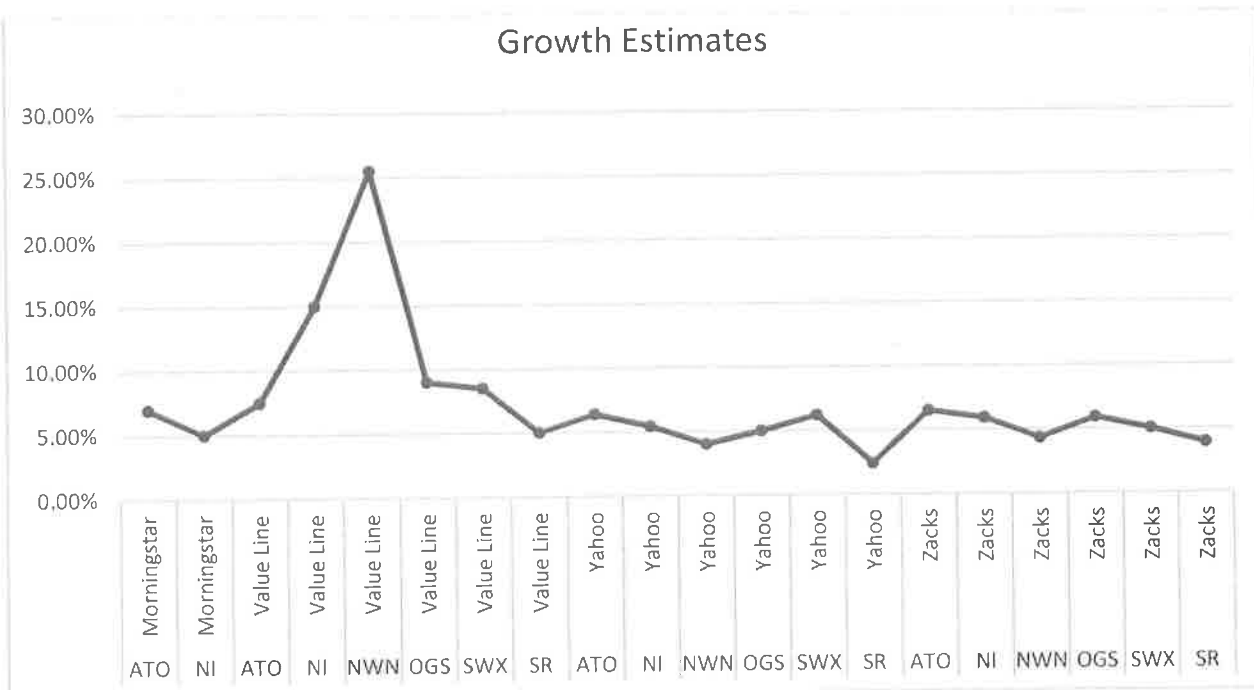
A. Yes.

Q. ON WHAT BASIS DID YOU MAKE THIS ELIMINATION?

A. I eliminated the Value Line forecasted earnings projection for Northwest Natural Gas from my analysis using a criterion that Mr. Moul recommends in his rebuttal testimony: "… when some of the Barometer Group results are unreasonable on their face, the reliability of the method being used, or the witness' application of that method, must be questioned."[21] Value Line's growth estimate for Northwest Natural Gas, which is 25.50%, exceeds the originally calculated average growth

[19] Peoples Statement No. 9-R, p. 14, lines 24-25.
[20] Peoples Statement No. 9-R, p. 16, lines 5-10.
[21] Peoples Statement 9-R, p. 15, lines 7-9.

rate (7.18%)[22] of my proxy group by more than 3.5 times. It is also greater than the average by more than three standard deviations and more than four times higher than the average of the remaining estimates. *Clearly*, this is an outlier, and, more importantly, it exerts undue influence on the Company's ROE. The following chart, which is also included in my direct testimony, reiterates the Value Line growth estimate as extreme:



After excluding the outlier from my analysis, the average growth rate for my entire proxy group dropped by 118 basis points to 6.00%, confirming how unreasonable its influence is. Further, my resultant 6.00% growth rate appears to be corroborated by OCA witness Mr. O'Donnell in his DCF analysis, because it falls

[22] I&E Exhibit No. 2, Schedule 9.

exactly in the middle of the range of his recommended average growth rate, which is 5.00% to 7.00%.[23] Including Value Line's estimate in my analysis would not only inflate the Company's ROE but would also unjustly increase the rates paid by Peoples' ratepayers.

Q. **DO YOU HAVE ANY CHANGES TO YOUR RECOMMENDED EXCLUSION OF THE VALUE LINE EARNINGS FORECAST PROJECTION FOR NORTHWEST NATURAL GAS FROM YOUR DCF ANALYSIS?**

A. No. Mr. Moul's assertion that the actual growth rate of my proxy group is 7.18% should be rejected by the Commission. His recommendation to include the Value Line outlier is completely unreasonable.

REJECTION OF MR. MOUL'S LEVERAGE ADJUSTMENT

Q. IN WHAT WAY DOES MR. MOUL DISPUTE YOUR REJECTION OF HIS LEVERAGE ADJUSTMENT?

A. Mr. Moul emphasizes his leverage adjustment is not designed to produce a particular market-to-book M/B ratio.[24] Additionally, he asserts that the methodology used by credit rating agencies to assess financial risk has no relevance to his leverage adjustment,[25] that the Commission's decision to decline

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[23] Peoples Statement 9-R, p. 15, lines 1-2.
[24] Peoples Statement No. 9-R, p. 18, lines 14-16.
[25] Peoples Statement No. 9-R, pp. 18-19.

the use of leverage adjustments in prior cases does not invalidate its use,[26] and that any basic finance textbook discusses the relationship between returns and the degree of financial leverage, often referencing the work of Modigliani and Miller and Hamada.[27]

Q. HAVE YOU STATED THAT MR. MOUL'S ADJUSTMENT IS A MARKET-TO-BOOK RATIO ADJUSTMENT?

A. No. As stated in my direct testimony, Mr. Moul does not propose to change the capital structure of the utility (a leverage adjustment), nor does he propose to apply the market-to-book ratio to the DCF model (a market-to-book adjustment).[28]

Q. WHAT IS YOUR RESPONSE TO MR. MOUL'S REBUTTAL TESTIMONY CONCERNING CREDIT RATING AGENCIES?

A. Mr. Moul has supported the I&E argument that his proposed leverage adjustment is not needed by stating that the credit rating agencies are only concerned with the timely payment of interest and principal by utilities.[29] Mr. Moul's stated need for the leverage adjustment is based on his assertion that the difference between the book value capital structure and his market value capital structure causes a financial risk difference.[30]

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[26] Peoples Statement No. 9-R, p. 19, lines 7-9.
[27] Peoples Statement No. 9-R, pp. 19-20.
[28] I&E Statement No. 2, p. 42, lines 3-5.
[29] Peoples Statement No. 9-R, p. 18, lines 21-23.
[30] Peoples Statement No. 9, pp. 33-34.

Financial risk does relate to the capital structure of a company, but it is created by the financing decisions (the use of debt or equity) and the amount of leverage or debt with which a company chooses to finance its assets. Financial risk and the book value capital structure of a company are represented in the income statement, which is part of what is evaluated by rating agencies. Mr. Moul agrees with me that credit rating agencies use a company's financial statements in their analysis to assess financial risk and determine creditworthiness.[31]

Q. WHAT IS YOUR RESPONSE TO MR. MOUL'S REBUTTAL TESTIMONY REGARDING YOUR REFERENCE TO PRIOR COMMISSION ORDERS?

A. Mr. Moul refers to the discussion in my direct testimony where I point to two recent cases (Aqua Pennsylvania and City of Lancaster – Bureau of Water) where the Commission has rejected a "leverage adjustment." He claims that the adjustment proposed in the City of Lancaster case was much different than what he proposes in this case.[32] Additionally, Mr. Moul explains that even though the Commission declined to make a "leverage adjustment" in the Aqua Pennsylvania case, it does not invalidate its use.[33] Further, Mr. Moul states, "Notably, the Commission did not repudiate the leverage adjustment in the Aqua case, but instead arrived at an 11.00% return on equity for Aqua by including a separate

[31] Peoples Statement No. 9-R, p. 18, lines 17-19.
[32] Peoples Statement No. 9-R, p. 19, lines 13-15.
[33] Peoples Statement No. 9-R, p. 19, lines 8-9.

return increment for management performance."[34] If the Commission were to rely on the Aqua Pennsylvania case, it would be important to note Mr. Moul is recommending a 142 to 160 basis point "leverage adjustment"[35] compared to a much smaller increment for recognition of claimed strong management performance. Finally, with respect to the Commission's decision to decline Mr. Moul's leverage adjustment in the UGI Electric case, Mr. Moul provided no response. In *Pennsylvania Public Utility Commission, et al v. UGI Utilities, Inc. – Electric Division*, at Docket No. R-2017-2640058, p. 93 the Commission states

> … we find the arguments of both I&E and the OCA persuasive that UGI's requested leverage adjustment is not reasonable and should be denied. As we noted in our *2012 PPL Order*, the fact that we have granted leverage adjustments in a few select cases in the past does not mean that such adjustments are warranted in all cases. Rather, the award of such an adjustment is not precedential but discretionary with the Commission.

Q. WHAT IS YOUR RESPONSE REGARDING THE LACK OF ACADEMIC LITERATURE SUPPORTING MR. MOUL'S LEVERAGE ADJUSTMENT?

A. Mr. Moul claims that leverage adjustments are routinely discussed in academic literature, often referencing the work of Modigliani and Miller and Hamada. He states, "I have merely extended these well-accepted principles to the rate-setting process by using a precise analytics process based upon data that is readily

[34] Peoples Statement No. 9-R, p. 19, lines 9-11.
[35] Peoples Exhibit PRM-1, Schedule 1, p. 2.

available to investors and regulators."[36] However, Mr. Moul does not actually demonstrate how he arrives at his ultimate recommendation for a leverage adjustment. As I also pointed out in my direct testimony, Mr. Moul states:

> I know of no means to mathematically solve for the 1.42% leverage adjustment by expressing it in the terms of any particular relationship of market price to book value. The 1.42% adjustment is merely a convenient way to compare the 11.19% return computed directly with the Modigliani & Miller formulas to the 9.77% return generated by the DCF model based on a market value capital structure.[37]

Q. HAS YOUR RECOMMENDATION CHANGED FROM YOUR DIRECT TESTIMONY REGARDING MR. MOUL'S LEVERAGE ADJUSTMENT?

A. No. For the reasons discussed above, I continue to recommend that Mr. Moul's leverage adjustment be rejected.

GAP BETWEEN COST OF DEBT AND COST OF EQUITY

Q. SUMMARIZE MR. MOUL'S REBUTTAL TESTIMONY REGARDING THE GAP BETWEEN COST OF DEBT AND EQUITY IN YOUR DCF ANALYSIS.

A. Mr. Moul states one of the fundamental tenets of finance is that the cost of equity must be higher than the cost of debt by a meaningful margin to compensate for the higher risk associated with a common equity investment. He asserts that the

[36] Peoples Statement No. 9-R, p. 20, lines 3-5.
[37] Peoples Statement No. 9, p. 37, lines 10-16.

spread between the cost of debt and cost of equity should be 6.50% in this market environment. Mr. Moul indicates that two companies in my DCF analysis, Northwest Natural Gas, and Spire, Inc., fail to meet his requisite spread of 6.50%.[38]

Q. WHAT IS YOUR RESPONSE TO MR. MOUL'S REBUTTAL TESTIMONY WITH RESPECT TO THE GAP BETWEEN COST OF DEBT AND EQUITY IN YOUR DCF ANALYSIS RESULTS?

A. First, Mr. Moul inappropriately applied the result of his RP analysis, which indicates a risk premium of 6.50%,[39] to my DCF results. Nowhere does Mr. Moul support this methodology with academic literature. Second, Mr. Moul's claim of a requisite 6.50% gap between a gas utility's cost of debt and equity is highly subjective and, quite simply, refuted by current market data. The equity risk premium in Mr. Moul's RP method is arbitrarily chosen within a range of data from the 2017 SBBI Yearbook, Stocks, Bonds, Bills, and Inflation. This is not 'current' market information.[40] Meanwhile, more current market data inputs from my proxy group (including each company's dividend yields and forecasted growth rates) indicate that the risk premium for the regulated natural gas utility market is *less* than 6.50%. In the table below, the only company in my proxy group with a cost of debt/cost of equity gap larger than 6.50% is Northwestern Natural Gas

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[38] Peoples Statement No. 9-R, p. 15, lines 11-19.
[39] Peoples Statement No. 9, p. 42, lines 7-17.
[40] Peoples Statement No. 9, p. 42, lines 7-17.

(Northwestern). The only reason Northwestern's gap is larger than 6.50% is because its ROE includes Value Line's unreasonable 25.50% growth rate input which, as I demonstrated above, is an extreme outlier.[41]

	Expected Return on Equity (3=1+2)	Cost of Debt	Equity / Debt Cost Gap
Atmos Energy Corp	9.25%	3.67%	5.58%
NiSource, Inc	11.11%	4.78%	6.33%
Northwest Natural Gas Co	14.42%	5.64%	8.78%
One Gas, Inc.	9.36%	4.11%	5.25%
Southwest Gas	9.54%	4.43%	5.11%
Spire, Inc.	7.23%	4.47%	2.77%

Further, the only companies in my proxy group that Mr. Moul considers unreasonable are Northwest and Spire, Inc. (the two proxy group members that have the lowest ROE), even though all of my proxy group companies do not meet his threshold of 6.50%. Last, Mr. Moul failed to prove any of my proxy group companies are struggling to attract capital at a cost of debt/cost of equity gap less than 6.50%. In summary, one can only conclude Mr. Moul's assertion regarding a requisite 6.50% gap between cost of debt and equity is unreasonable and should be rejected by the Commission. His suggestion about my DCF results pertaining to Northwest and Spire, Inc. serves only to manipulate my DCF ROE higher in order to benefit the Company.

[41] I&E Exhibit No. 2, Schedules 5, 8, and 9.

Q. HAVE YOU CHANGED YOUR RECOMMENDED ROE FOR THE COMPANY AS A RESULT OF MR. MOUL'S REBUTTAL WITH RESPECT TO YOUR DCF ANALYSIS?

A. No.

I&E CAPM MODEL

Q. SUMMARIZE MR. MOUL'S REBUTTAL TESTIMONY REGARDING YOUR CAPM ANALYSIS.

A. Mr. Moul disputes the value of the risk-free rate that I use in my analysis, my rejection of his leveraged beta values, and my rejection of his adjustment related to the Company's alleged size risk.

RISK-FREE RATE

Q. SUMMARIZE MR. MOUL'S REBUTTAL TESTIMONY REGARDING YOUR USE OF THE YIELD ON THE 10-YEAR U.S. TREASURY NOTE.

A. Mr. Moul claims that his use of the yield on a 30-year U.S. Treasury Bond is more appropriate than my use of the yield on a 10-year Treasury Note because a longer-term bond is less susceptible to Federal policy actions.[42]

[42] Peoples Statement No. 9-R, p. 21, lines 4-8.

Q. DO YOU AGREE WITH MR. MOUL THAT USING THE YIELD OF A 30-YEAR U.S. TREASURY BOND IS MORE APPROPRIATE DUE TO A LONGER-TERM BOND BEING LESS SUSCEPTIBLE TO FEDERAL POLICY ACTIONS?

A. No. I chose the 10-year Treasury Note as it balances the short-comings of the short-term T-Bill and the 30-year Treasury Bond. Although long-term Treasury Bonds have less risk of being influenced by federal policies, they have substantial maturity risk and bear the risk of unexpected inflation. Therefore, my choice of a 10-year Treasury Note is more appropriate.

Q. SUMMARIZE MR. MOUL'S REBUTTAL TESTIMONY REGARDING YOUR RISK-FREE RATE USED IN THE CAPM FORMULA.

A. Mr. Moul opines that I have incorrectly given weight to the yield on the 10-year Treasury Note for the second, third, and fourth quarters of 2019 as I do for the entire five-year period encompassing 2020 to 2024. Then, Mr. Moul incorrectly recalculates the risk-free rate by averaging the 10-year treasury yield by year to determine a risk-free rate of 3.48%.[43]

[43] Peoples Statement No. 9-R, pp. 21-22.

Q. DO YOU AGREE WITH MR. MOUL'S ANALYSIS OF YOUR RISK-FREE RATE?

A. No. Mr. Moul's new calculation proposes to give equal weight to each separate year from 2019 to 2024. The flaw with this approach is that the further out into the future one forecasts, the less reliable and more speculative the estimates become; therefore, to give the less reliable estimates equal weight would not be prudent. It is more appropriate to weight the quarters and years as I have done in my direct testimony.[44] My calculation likely provides a much more accurate estimation of the risk-free rate during the FPFTY, as the further out one forecasts, the less reliable the information becomes.

LEVERAGE ADJUSTED BETAS

Q. WHAT ARE YOUR OBSERVATIONS WITH RESPECT TO MR. MOUL'S LEVERAGE ADJUSTED BETAS?

A. As stated in my direct testimony, the beta values published by Value Line are already adjusted to account for the fact that, over time, they shift forward the Security Market Line value of 1.00.[45] Enhancements such as a leverage adjusted beta are unwarranted in a CAPM analysis for the same reasons that enhancements are unwarranted for DCF results. Until this type of adjustment is demonstrated in

[44] I&E Exhibit No. 2, Schedule 11.
[45] I&E Statement No. 2, p. 48, lines 14,15.

academic literature to be valid, such leverage-adjusted betas in a CAPM should be rejected.

SIZE ADJUSTMENT

Q. SUMMARIZE YOUR DIRECT TESTIMONY REGARDING A SIZE ADJUSTMENT.

A. In direct testimony, I stated that Mr. Moul's 102-basis point CAPM size adjustment is unnecessary because none of the technical literature cited in his direct testimony supporting investment adjustments related to the size of a company is specific to the utility industry. In addition, I presented an article by Dr. Annie Wong that demonstrated there is no need to make an adjustment for the size of a company in utility rate regulation.[46]

Q. SUMMARIZE MR. MOUL'S RESPONSE IN REBUTTAL TESTIMONY REGARDING A SIZE ADJUSTMENT.

A. Mr. Moul states that enormous changes have occurred in the industry since the article "Utility Stocks and the Size Effect: An Empirical Analysis" by Dr. Annie Wong was published. He also references the Fama/French study, "The Cross-Section of Expected Stock Returns," to illustrate that his size adjustment is a separate factor from beta that helps explain systematic risk and returns.[47]

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[46] I&E Statement No. 2, pp. 49-50.
[47] Peoples Statement No. 9-R, p. 23, lines 13-15.

Q. DOES THE TIME WHICH HAS ELAPSED SINCE AN ARTICLE WAS WRITTEN NECESSARILY INVALIDATE ITS RESULTS?

A. No. Although Mr. Moul states that enormous changes have occurred in the industry since the 1960s, he presents no evidence that these "changes" have caused a size adjustment to be needed. To the contrary, Dr. Wong's study demonstrated that one does *not* need to be made in the regulated utility industry. As stated in my direct testimony, absent any credible article to refute Dr. Wong's findings, Mr. Moul's size adjustment to his CAPM results should be rejected.

Q. DOES THE FAMA/FRENCH STUDY REFUTE DR. WONG'S ARTICLE?

A. No. As stated in my direct testimony, Dr. Wong's article presents evidence that although a size effect may exist for industrial stocks, it does not exist for utility stocks. As the Fama/French study is not specific to utility stocks, it does not demonstrate that a size effect exists in the utility industry. In addition, the size effect that exists for industrial stocks varies to such an extent that it is difficult to predict. The difficulty in predicting the effect of size is demonstrated in the variance from year to year of the measurement of difference between the annual returns on the large and small-capitalization stocks of the NYSE/AMEX/NASDAQ in the Ibbotson *Stocks, Bonds, Bills & Inflation: 2015*

Yearbook. As stated on page 100 of the SBBI Yearbook,

> While the largest stocks actually declined in 2001, the smallest stocks rose more than 30%. A more extreme case occurred in the depression-recovery year of 1933, when the difference between the first and 10th decile returns was far more substantial. The divergence in the performance of small- and large- cap stocks is evident. In 30 of the 89 years since 1926, the difference between the total returns of the largest stocks (decile 1) and the smallest stocks (decile 10) has been greater than 25 percentage points.

Page 109 states,

> In four of the last 10 years, large-capitalization stocks (deciles 1-2 of NYSE/AMEX/NASDAQ) have outperformed small-capitalization stocks (deciles 9-10). This has led some market observers to speculate that there is no size premium. But statistical evidence suggests that periods of underperformance should be expected.

Page 112 states,

> Because investors cannot predict when small-cap returns will be higher than large-cap returns, it has been argued that they do not expect higher rates of return for small stocks.

Q. WHAT IS YOUR RECOMMENDATION REGARDING MR. MOUL'S SIZE ADJUSTMENT?

A. I continue to recommend that his use of the 1.02% size adjustment be disallowed in calculating the CAPM.

Q. MR. MOUL HAS RECALCULATED YOUR CAPM RESULTS. DO YOU AGREE WITH HIS RECALCULATION?

A. No. Mr. Moul's recalculation is incorrect for a couple of reasons. He used an inaccurate risk-free rate and an unnecessary size adjustment, as stated in both my direct testimony and above. Because of these factors, a recalculation of my CAPM results is imprudent; any recalculation provided by Mr. Moul of my CAPM results is unreliable and unnecessary.

Q. HAVE YOU CHANGED YOUR RECOMMENDED ROE AS A RESULT OF MR. MOUL'S TESTIMONY REGARDING YOUR CAPM ANALYSIS?

A. No.

<u>RISK PREMIUM</u>

Q. SUMMARIZE MR. MOUL'S REBUTTAL TESTIMONY REGARDING THE RP METHOD.

A. Mr. Moul opines that his RP method should be given serious consideration because it is straight-forward, understandable, and has intuitive appeal because it is based on a company's own borrowing rate.[48] He also claims it provides a direct and complete reflection of a utility's risk and return because it considers additional factors not reflected in the beta measure of systematic risk.[49] Mr. Moul also states

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[48] Peoples Statement No. 9-R, p. 27, lines 18-20.
[49] Peoples Statement No. 9-R, p. 27, lines 24-26.

that I make an unfounded assertion that the RP method does not carry over from the investment decision-making process to the utility rate-setting process.[50]

Q. DO YOU AGREE WITH MR. MOUL THAT THE RP METHOD PROVIDES A DIRECT AND COMPLETE REFLECTION OF A UTILITY'S RISK AND RETURN?

A. No. The RP method produces an indirect measure when compared to the DCF method.

Q. PLEASE COMMENT ON THE INDIRECT MEASURE OF THE RP METHOD VERSUS THE MORE DIRECT MEASURE OF THE DCF METHOD.

A. Mr. Moul claims my assertion that the Risk Premium method does not measure the current cost of equity as directly as the DCF is without foundation. In my direct testimony, I have clearly illustrated how the two measures are different.[51] The main difference is that the RP method determines the rate of return on common equity indirectly by observing the cost of debt and adding to it an equity risk premium. The DCF measures cost of equity more directly because it uses the growth rates and dividends of individual utility companies in the proxy group as

[50] Peoples Statement No. 9-R, p. 28, lines 6-18.
[51] I&E Statement No. 2, pp. 14-20..

inputs, whereas the RP method measures cost of equity indirectly using debt information.

COMPARABLE EARNINGS

Q. SUMMARIZE MR. MOUL'S REBUTTAL TESTIMONY REGARDING THE CE METHOD.

A. Mr. Moul claims that using the CE method satisfies the comparability standard established in the *Hope* case.[52] Additionally, he cites a study conducted by John Olson, which established that ROEs from non-regulated companies provide better assessment of investor requirements than those available for regulated utilities.[53]

Q. DO YOU AGREE THAT THE COMPANIES USED BY MR. MOUL IN HIS CE METHOD ARE COMPARABLE TO PEOPLES?

A. No. As stated on I&E Statement No. 2, page 31, the companies in Mr. Moul's analysis are not utilities and therefore, are too disparate to be used in a CE analysis. For example, the criteria Mr. Moul uses to choose the companies in his CE group results in the selection of companies such as The Cheesecake Factory Inc., Capitol Federal Financial, Inc., Hershey Company, and Forrester Research, Inc. All these companies operate in industries very different from a utility company and operate under varying degrees of regulation. Also, most, if not all,

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[52] Peoples Statement No. 9-R, p. 29, lines 8-9.
[53] Peoples Statement No. 9-R, p. 29, lines 12-14.

of the companies Mr. Moul uses in his analysis are not monopolies as utilities largely are. This means that they have significantly more competition and would require a higher return for the added risk. Further, the CE method should be excluded because it is entirely subjective as to which companies are comparable and it is debatable whether historic accounting returns are representative of the future.

ADDITIONAL COMMENTS FROM MR. MOUL

Q. HAS MR. MOUL MADE ANY ADDITIONAL COMMENTS CONCERNING THE COMPANY'S ALLOWED ROE IN THIS PROCEEDING THAT YOU WOULD LIKE TO ADDRESS?

A. Yes. Mr. Moul asserts that the cost of equity in a rate case should be higher than the return allowed on a Company's Distribution Service Improvement Charge (DSIC).[54] He makes this assertion on the basis that: (1) investments carrying the DSIC return should not be penalized with a lower return when they are included in the rate base when setting base rates; and (2) DSIC investments receive a 'true-up' such that the achieved returns on DSIC investments equal the intended return in those proceedings and that there is no true-up of the achieved return with the opportunity provided in a rate case decision. Mr. Moul suggests there is additional

[54] Peoples Statement 9-R, p. 9, lines 7-16.

risk associated with achieving a particular return in base rates because there is no true up.

Q. WHAT IS YOUR RESPONSE TO MR. MOUL'S REBUTTAL TESTIMONY CONCERNING THE RELATIONSHIP BETWEEN A COMPANY'S ALLOWED ROE AND ITS DSIC RETURN?

A. Mr. Moul's comparison between the I&E recommended ROE in this proceeding and the Company's DSIC rate is misguided. The DSIC return for utilities is calculated differently than the rate of return in a base rate case and does not represent the full scope of risk for a given utility company. 66 Pa. C.S. § 1358(b)(3) states the following:

> The distribution system improvement charge shall be reset at zero if, in any quarter, data filed with the commission in the utility's most recent annual or quarterly earnings report show that the utility will earn a rate of return that would exceed the allowable rate of return used to calculate its fixed costs under the distribution system improvement charge.

In this manner, the DSIC rate of return establishes a benchmark above which a utility company is considered 'overearning.' As such, the DSIC rate does not serve as a measurement of a subject utility's cost of equity in a rate case proceeding. Moreover, the DSIC mechanism serves to lower a utility's risk because it reduces the lag time in the recovery of its capital outlays. To suggest a cost of equity above the DSIC rate for the Company in this proceeding is inappropriate and not in the public interest. Finally, the Commissioners inflate the

DSIC rate to encourage its usage by utility companies and to incentivize pipeline replacement between rate cases. If, anything, the DSIC rate should be higher.

MANAGEMENT PERFORMANCE ADJUSTMENT

Q. SUMMARIZE MR. MOUL'S AND MR. O'BRIEN'S REBUTTAL TESTIMONY REGARDING MANAGEMENT EFFECTIVENESS POINTS.

A. Mr. Moul is now recommending that 25 basis points be included in the cost of equity to recognize the Company's management performance.[55] Mr. O'Brien asserts the Commission should recognize utilities that go above and beyond the standards required by the Pennsylvania Public Utility Code.[56] Mr. O'Brien states counsel has advised him that according to Pennsylvania law, when considering the determination of just and reasonable rates, the Commission shall consider the efficiency, effectiveness, and adequacy of service.[57] Continuing on, Mr. O'Brien adds utilities should be incentivized by the Commission to provide service at the higher end of the range of acceptable service by allowing a cost of equity at the higher end of the cost of equity range where the company is providing higher quality service.[58] He states that my observation in direct testimony that the Company's performance on the 2017 Customer Service Performance Report for Pennsylvania declined in a few areas from 2015-2017 does not tell a complete

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[55] Peoples Statement 9-R, p. 31, lines 8-14.
[56] Peoples Statement No. 1-R, p. 2, lines 8-10.
[57] Peoples Statement No. 1-R, p. 3, lines 3-8.
[58] Peoples Statement No. 1-R, p. 3, lines 9-15.

story.[59] Mr. O'Brien follows with Exhibit MKO-R-1, which reveals almost all of the Company's customer satisfaction annual scores, as measured by Research America, have improved since 2016.[60] He states that the Company continues to be a leader in improving its customer experience through initiatives such as the ability to schedule a two-hour appointment window, the option to pay bills through Google Pay and Apple Wallet, and the proposal in this rate case to waive payment fees for credit card and walk-in payments.[61]

Q. WHAT IS YOUR RESPONSE TO MR. MOUL'S REBUTTAL TESTIMONY REGARDING AN ADDITIONAL 25 BASIS POINTS FOR MANAGEMENT PERFORMANCE?

A. As discussed in my direct testimony,[62] I maintain that neither Peoples, nor any utility company, should reap additional rewards for programs funded by ratepayers or for meeting their obligations under 66 Pa C.S.A. §1501.

I am aware that under 66 Pa C.S.A. §523 the Commission shall consider a utility's performance; however, it is not mandatory that the Commission grant additional points. Moreover, I continue to assert that for any company, true strong management performance is earning a higher return through its efficient use of resources and cost cutting measures. The greater the net income resulting from

[59] Peoples Statement No. 1-R, p. 3, lines 19-22.
[60] Peoples Statement No. 1-R, p. 4, lines 1-4.
[61] Peoples Statement No. 1-R, p. 4, lines 5-8.
[62] I&E Statement No. 2, p. 51, lines 13-18..

cost savings and true efficiency in management and operations is available to be passed on to shareholders.

Q. WHAT IS YOUR RESPONSE TO MR. O'BRIEN'S REBUTTAL TESTIMONY REGARDING YOUR RECOMMENDATION TO DISALLOW AN INCREASE OF 25 BASIS POINTS TO THE COMPANY'S ROE BASED ON MANAGEMENT PERFORMANCE?

A. Echoing my response to Mr. Moul, above average service and management performance equates to greater net income, and correspondingly higher earnings per share, which benefits shareholders. Those same above average activities that Mr. O'Brien references are paid for by ratepayers through base rates, so further increasing costs to ratepayers through management performance points is unnecessary and inappropriate. More importantly, I&E witness Matse raised concerns in I&E Statement No. 6 related to the Company's ability to meet its pipeline replacement goals outlined in its Long-Term Infrastructure Improvement Plan. Mr. Matse also pointed out in I&E Statement No. 6 that the Company exceeded the national average in damages per 1,000 tickets during the years 2015-2017. Finally, I see no quantifiable information from Mr. O'Brien showing comparisons that differentiate Peoples from other regulated gas utility companies in terms of providing exceptional service at the upper end of service standards. Nor has Mr. O'Brien demonstrated how the Company exceeds service standards required by Pennsylvania law at the upper end of the range of acceptability. As such, it is my opinion that Mr. O'Brien has not effectively demonstrated that the Company is performing at the high end of its group of peers. However, if the Commission feels differently, I recommend an award of no more than 5 basis points to the Company on its ROE for management effectiveness.

OVERALL RATE OF RETURN

Q. HAS YOUR OVERALL RATE OF RETURN RECOMMENDATION CHANGED FROM YOUR DIRECT TESTIMONY?

A. No. I continue to support each recommendation made in I&E Statement No. 2.

Q. WHAT IS YOUR OVERALL RATE OF RETURN RECOMMENDATION?

A. I recommend the following rate of return for Peoples:

Type of Capital	Ratio	Cost Rate	Weighted Cost
Long-Term Debt	45.12%	4.08%	1.84%
Short-Term Debt	1.22%	4.69%	0.06%
Common Equity	53.66%	8.97%	4.81%
Total	100.00%		6.71%[63]

Q. DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?

A. Yes.

[63] I&E Exhibit No. 2, Schedule 1.