

May 24, 2017

INDIANA UTILITY

REGULATORY COMMISSION

STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

JOINT PETITION OF OHIO VALLEY GAS )  
CORPORATION AND OHIO VALLEY GAS, )  
INC. FOR (1) AUTHORITY TO INCREASE )  
THEIR RATES AND CHARGE FOR GAS )  
UTILITY SERVICE; (2) APPROVAL OF NEW ) CAUSE NO. 44891  
SCHEDULES OF RATES AND CHARGES; )  
AND (3) APPROVAL OF CHANGES TO )  
THEIR GENERAL RULES AND )  
REGULATIONS APPLICABLE TO GAS )  
UTILITY SERVICE )

**SUBMISSION OF PETITIONERS' REBUTTAL EVIDENCE**

The petitioners Ohio Valley Gas Corporation and Ohio Valley Gas, Inc. (collectively "OVG") hereby submit their rebuttal evidence consisting of the attached rebuttal testimony and accompanying exhibits of witnesses Kerry A. Heid, S. Mark Kerney and Adrien M. McKenzie.

Respectfully submitted,

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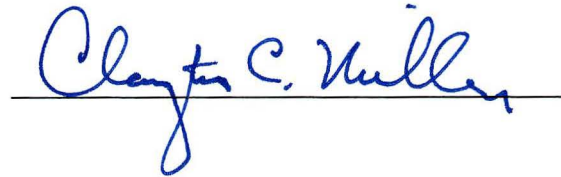
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*Attorney for Ohio Valley Gas Corporation  
and Ohio Valley Gas, Inc.*

**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that the Petitioners' Rebuttal Evidence has been served upon the following counsel of record by electronic mail, this 24th day of May, 2017.

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A handwritten signature in blue ink, reading "Clayton C. Miller", is written over a horizontal line.

BEFORE THE

INDIANA UTILITY REGULATORY COMMISSION

JOINT PETITION OF OHIO VALLEY GAS )  
CORPORATION AND OHIO VALLEY GAS, INC. )  
FOR (1) AUTHORITY TO INCREASE THEIR )  
RATES AND CHARGES FOR GAS UTILITY )  
SERVICE; (2) APPROVAL OF NEW SCHEDULES )  
OF RATES AND CHARGES; AND (3) APPROVAL )  
OF CHANGES TO THEIR GENERAL RULES AND )  
REGULATIONS APPLICABLE TO GAS UTILITY )  
SERVICE )

PETITIONERS' EXHIBIT KAH-R

REBUTTAL TESTIMONY  
OF

KERRY A. HEID, P.E.  
HEID RATE AND REGULATORY SERVICES

ON BEHALF OF

OHIO VALLEY GAS CORPORATION  
OHIO VALLEY GAS, INC.

MAY 2017

1                   **PREPARED REBUTTAL TESTIMONY OF KERRY A. HEID, P.E.**

2  
3                   **OHIO VALLEY GAS CORPORATION**  
4                   **OHIO VALLEY GAS, INC.**

5  
6  
7                   **I. INTRODUCTION AND OVERVIEW**

8  
9       **1. Please state your name and business address.**

10    A. My name is Kerry A. Heid. My business address is 3212 Brookfield Drive, Newburgh,  
11       IN 47630.

12  
13    **2. Are you the same Kerry A. Heid who previously sponsored direct testimony and**  
14       **exhibits in this proceeding on behalf of Ohio Valley Gas Corporation and Ohio Valley**  
15       **Gas, Inc. (collectively “Ohio Valley Gas,” “OVG,” or “Petitioners”)?**

16    A. Yes.

17  
18    **3. What is the purpose of your rebuttal testimony in this proceeding?**

19    A. The purpose of my rebuttal testimony is to respond to issues raised by the prefiled  
20       direct testimony of Mr. Brien R. Krieger, representing the Indiana Office of Utility  
21       Consumer Counselor (“OUCC”), on OVG’s cost of service study that I prepared.

22  
23    **4. How is your testimony organized?**

24    A. My testimony is organized into the following sections:

25            I. Introduction and Overview

26            II. Cost of Service Study -- Overview



1           **III. CLASSIFICATION AND ALLOCATION OF MAINS-OVERVIEW**

2  
3   **6. To what cost classifications did you assign transmission and distribution mains?**

4   A. I assigned transmission and distribution mains to all three classifications, i.e.,  
5       customer-related, peak day demand-related, and annual demand-related.

6  
7   **7. How did you determine the percentage split between customer-related, peak day**  
8       **demand-related, and annual demand-related?**

9   A. I performed a zero-intercept mains study<sup>2</sup> to determine the percentage of transmission  
10       and distribution mains to be classified and allocated as a customer cost. My zero-  
11       intercept mains study determined that 26% of the cost of transmission and distribution  
12       mains is related to the number of customers. The remainder of transmission and  
13       distribution mains costs not determined to be customer-related costs were classified  
14       50%/50% between peak day demand and annual demand.

15  
16   **8. What is the rationale for classifying a portion of transmission and distribution mains as**  
17       **a customer cost?**

18   A. The rationale for classifying a portion of transmission and distribution mains as a  
19       customer cost is that there is a minimum size main necessary to extend the  
20       transmission and distribution system to the customer and connect customers to the  
21       system, thus affording the customer an opportunity to take service. This system of  
22       minimum size mains is thus considered to be related to the respective number of

---

<sup>2</sup> Also frequently referred to as a “zero-inch mains study.”

1 customers, so is classified as a “customer cost” and allocated to rate classes based  
2 on number of customers. The zero-intercept mains study is a generally-accepted  
3 methodology to quantify what percentage of transmission and distribution mains  
4 should be classified as customer-related. The zero-intercept system methodology is  
5 supported in the NARUC Gas Rate Design Manual and the NARUC Gas Distribution  
6 Rate Design Manual and has commonly been approved by this Commission.

7  
8 **9. Please briefly discuss and define transmission mains vis-a-vis distribution mains.**

9 A. Transmission mains are recorded in NARUC Uniform System of Accounts (“USOA”)<sup>3</sup>  
10 Account 367, whereas distribution mains are recorded in NARUC USOA Account 376.  
11 Transmission mains are used to transmit or deliver natural gas from the delivery point  
12 of purchased gas to the distribution areas, to and from on-system storage, and/or  
13 between distribution areas. Once gas is delivered to a distribution area via  
14 transmission mains, distribution mains distribute natural gas within a distribution area.

15  
16 **IV. DISCUSSION OF MR. KRIEGER’S RECOMMENDATION**

17  
18 **10. Please summarize the testimony of Mr. Krieger as it pertains to your zero-intercept**  
19 **mains study.**

20 A. Mr. Krieger accepts the results of my zero-intercept study. On page 3, lines 6-8, Mr.  
21 Krieger’s direct testimony includes the following question and answer:

22 **Q. Do you agree with the results of Petitioner’s zero-intercept mains study?**

---

<sup>3</sup> Jurisdictional Indiana utilities are required to maintain their books and records in accordance with the NARUC Uniform System of Accounts.

1           A.     Yes. Petitioner’s zero-intercept main study indicates 26% of the cost of  
2                 transmission and distribution mains could be related to the number of  
3                 customers.

4                             (Emphasis added)  
5

6           However, while Mr. Krieger agrees that the results of the zero-intercept mains study  
7           should be applied to distribution mains, he subsequently states he does not agree that  
8           the zero-intercept mains study should be applied to transmission mains.  
9

10 **11. Please describe Mr. Krieger’s reasoning for disagreeing with using the number of**  
11 **customers to allocate transmission mains costs.**

12 A.    On page 3, lines 19-20, Mr. Krieger states:

13                     “Typically, large volume customers can be located on transmission size pipe or  
14                     distribution size pipe. Residential customers are only located on distribution pipes.”  
15

16           Mr. Krieger’s direct testimony then goes on to describe that because small-volume  
17           customers (residential and small commercial customers) comprise the largest number  
18           of customers but a much lesser percentage of usage and demand, that “Mr. Heid’s  
19           26% assignment of transmission mains costs to the number of customers unjustly  
20           penalizes the small volume commodity consumer.”

21           As will be subsequently demonstrated, Mr. Krieger’s recommendation to not assign  
22           transmission costs based on number of customers actually penalizes large volume  
23           customers and unreasonably and inappropriately benefits small volume customers.  
24

25 **12. Do you agree with Mr. Krieger’s testimony excerpt above that “Typically, large volume**  
26 **customers can be located on transmission size pipe or distribution size pipe”?**



1 A. No. Large volume customers (depending upon the size definition) typically have  
2 service lines connected directly to OVG's transmission (Account 367) mains. They  
3 are generally too large to take service directly from the smaller distribution (Account  
4 376) mains. On the other hand, if the "large volume" customers are sufficiently small  
5 to take service directly from distribution mains, they are still served by transmission  
6 mains that deliver the gas to the distribution system.

7

8 **13. Do you agree with Mr. Krieger's testimony excerpt above that "Residential customers**  
9 **are only located on distribution pipes"?**

10 A. No. Although most residential customers' service lines may be connected directly to  
11 OVG's distribution mains, Mr. Krieger fails to recognize that the residential customers  
12 still must use OVG's transmission mains to deliver the gas to the distribution system.  
13 Moreover, Mr. Krieger fails to recognize that some residential and small volume  
14 commercial customers are served directly from transmission mains.

15

16 **14. Please summarize Mr. Krieger's bases for his recommendation against including a**  
17 **portion of transmission mains as a customer cost.**

18 A. First, Mr. Krieger includes only two arguments for his recommendations, and both  
19 arguments are shown to be completely in error. Mr. Krieger has offered no other  
20 basis for his recommendation.

21 Mr. Krieger's examples, in fact, provide support rather than disprove that all customers  
22 use OVG's transmission system. Very large volume customers may connect directly  
23 to OVG's transmission mains, while smaller customers utilize OVG's transmission

1 mains indirectly (or even directly) by delivering gas to the distribution system. In any  
2 case, all customers utilize OVG's transmission mains.

3  
4 **15. Has the Commission previously been presented with and rejected a similar OUCC**  
5 **argument?**

6 A. Yes. In NIPSCO Cause No. 38380, the Commission's Order dated October 26, 1988  
7 addressed OUCC witness Tjun Wong's reference to Indiana Gas Cause No. 38080  
8 pertaining to Indiana Gas' "inter-city" mains.<sup>4</sup> The NIPSCO Order, page 50, stated:

9 In the Indiana Gas case, Mr. Wong substantially reduced the utility's theoretical  
10 investment in its "minimum" system of mains by excluding all the utility's inter-  
11 city mains. See Final Order, Cause No. 38080 (Sept 18, 1987), p. 60. By doing  
12 so, he greatly reduced the amount of mains costs allocated on the basis of the  
13 number of customers in each class, to the detriment of industrial customers. As  
14 was pointed out in Indiana Gas, however, many of the utility's customers are  
15 served from those inter-city mains and, thus, they make up a part of the utility's  
16 minimum system. Id. We rejected Mr. Wong's approach in that case, and we  
17 reject it here. We find it unrealistic to exclude intercity main in determining the  
18 customer component of Petitioner's main costs.  
19

20 **16. Mr. Krieger's direct testimony presented numerical results that he asserted resulted**  
21 **from his recommendation concerning the classification and allocation of transmission**  
22 **mains. Please respond.**

23 A. I offer several comments. First, Mr. Krieger's recommendations concerning the  
24 classification and allocation of transmission mains have been shown to be without  
25 merit. Therefore, his numerical results are moot and should be disregarded.  
26 Second, and even more convicting, Mr. Krieger had a working Excel model of my cost  
27 of service study model that OVG provided to the OUCC subject to appropriate

1 confidential and non-disclosure agreements. However, Mr. Krieger did not re-run the  
2 working cost of service study model using his recommended transmission mains  
3 allocation to determine his numerical results. Instead, Mr. Krieger elected to perform  
4 a “back of the envelope” calculation that did not consider the many interactions of the  
5 cost of service study calculations, such as flow-through effects of allocations, income  
6 taxes, revenue taxes, subsidy changes, etc. Even assuming for arguments sake that  
7 Mr. Krieger’s recommendation concerning transmission mains had merit, his  
8 numerical results were not correct.

9 Moreover, Mr. Krieger’s comparisons between the rate class revenue produced by my  
10 cost of service study compared to Mr. Krieger’s results is an “apples-to-oranges”  
11 comparison and thus does not produce meaningful results. The comparison in Mr.  
12 Krieger’s exhibit Attachment BRK-2 compares rate class revenue impacts at OVG’s  
13 proposed revenue requirement (based on a 17.8% overall increase) to corresponding  
14 rate class revenue impacts at the OUCC’s proposed revenue requirements (based on  
15 a 7.8% overall increase). Thus the results besides not being calculated correctly as  
16 previously discussed, present rate class comparisons that are not meaningful.

17  
18 **17. What is the most appropriate approach for measuring the impact of Mr. Krieger’s**  
19 **proposal on rate classes?**

20 A. The most appropriate approach for making a valid comparison is to re-run my cost of  
21 service study model but reflecting Mr. Krieger’s proposed change in mains allocation,

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<sup>4</sup> Indiana Gas Company referred to its transmission mains as “inter-city” mains.

1 while holding all other variables constant.

2

3 **18. Have you re-run your cost of service study model making Mr. Krieger's recommended**  
4 **change to the transmission allocation while holding all other variables constant?**

5 A. Yes.

6

7 **19. Please summarize the results of your comparative analysis for Rate 1 (residential and**  
8 **small commercial) customers.**

9 A. Based on an overall system rate increase of 17.8% as proposed by OVG, the Rate 1  
10 (residential and small commercial) customers' rate increase would drop from 18.3%  
11 down to 17.8%.

12

13 **20. Are these results reasonable for Rate 1?**

14 A. No. Based on the OUCC's proposal, Rate 1 customers are presently receiving a  
15 \$434,212 subsidy from other rate classes. This equates to Rate 1 customers paying  
16 97.5% of their cost of service. Therefore, reasonable ratemaking would suggest that  
17 the Rate 1 percentage rate increase should be above the overall system average.  
18 OVG's proposal produces this result, proposing an 18.3% increase to Rate 1, slightly  
19 above the overall system average percentage increase consistent with Rate 1's  
20 below-cost status. However, under Mr. Krieger's proposal the Rate 1 customers  
21 receive exactly the overall system average increase of 17.8%, which is not a desirable  
22 or reasonable ratemaking result given their current below-cost status.

23

1 **21. Please summarize the results of your comparative analysis for Rate 5 (large volume**  
2 **transportation) customers.**

3 A. Based on an overall system rate increase of 17.8% as proposed by OVG, the Rate 5  
4 (large volume transportation) customers (the largest non-contract customers) would  
5 see their increase go up from 13.2% under OVG's proposal to 18.7% under Mr.  
6 Krieger's proposal, a very significant increase for OVG's very largest non-contract  
7 customers.

8  
9 **22. Are these results reasonable for Rate 5?**

10 A. No. Based on the OUCC's proposal, Rate 5 customers are presently paying a  
11 \$346,850 subsidy to other rate classes. Under present rate levels, this equates to  
12 Rate 5 customers paying 165.0% of their cost of service. Reasonable ratemaking  
13 would suggest that the Rate 5 percentage rate increase should be significantly lower  
14 than the overall system average percentage increase of 17.8%. OVG's proposal  
15 produces this result, proposing a 13.2% increase to Rate 5, significantly below the  
16 overall system average percentage increase consistent with Rate 5's above-cost  
17 status. However, under Mr. Krieger's proposal, Rate 5 customers would pay an  
18 average increase of 18.7%, which is higher than the overall system average of 17.8%,  
19 an unreasonable and undesirable ratemaking result, as previously discussed.  
20 Moreover, the Rate 5 percentage rate increase is higher than the Rate 1 percentage  
21 rate increase, although Rate 1 customers are paying 97.5% of their cost of service  
22 while Rate 5 customers are paying 165.0% of their cost of service. Such a result is

1 not fair and equitable and should be rejected by the Commission.

2

3 **23. Does this conclude your prepared rebuttal testimony?**

4 A. Yes.

**BEFORE THE  
INDIANA UTILITY REGULATORY COMMISSION**

<b>JOINT PETITION OF OHIO VALLEY</b>	)	
<b>GAS CORPORATION AND OHIO</b>	)	
<b>VALLEY GAS, INC. FOR (1)</b>	)	<b>CAUSE NO. 44891</b>
<b>AUTHORITY TO INCREASE THEIR</b>	)	
<b>RATES AND CHARGES FOR GAS</b>	)	
<b>UTILITY SERVICE; (2) APPROVAL OF</b>	)	
<b>NEW SCHEDULES OF RATES AND</b>	)	
<b>CHARGES; AND (3) APPROVAL OF</b>	)	
<b>CHANGES TO THEIR GENERAL</b>	)	
<b>RULES AND REGULATIONS</b>	)	
<b>APPLICABLE TO GAS UTILITY</b>	)	
<b>SERVICE</b>	)	
	)	

**REBUTTAL TESTIMONY**

of

**ADRIEN M. MCKENZIE, CFA**

**Petitioner's Exhibit AMM-R**

**REBUTTAL TESTIMONY OF ADRIEN M. MCKENZIE**

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<b><u>Exhibit:</u></b>	<b><u>Description</u></b>
Exhibit AMM-12	Proxy Group Allowed ROEs
Exhibit AMM-13	Proxy Group Expected Earnings
Exhibit AMM-14	Revised Lorton DCF Analysis



**I. INTRODUCTION**

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24

**Q1. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

A1. Adrien M. McKenzie, 3907 Red River, Austin, Texas, 78751.

**Q2. HAVE YOU PREVIOUSLY PROVIDED TESTIMONY IN THIS PROCEEDING?**

A2. Yes, my Direct Testimony was filed in this proceeding on December 21, 2016.

**Q3. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?**

A3. My purpose is to respond to the testimony of Mr. Bradley E. Lorton, submitted on behalf of the Indiana Office of Utility Consumer Counselor (“OUCC”). Mr. Lorton addresses the cost of equity (“ROE”) that Ohio Valley Gas Corporation and its subsidiary, Ohio Valley Gas, Inc. (together “OVG” or “the Company”) is requesting on its original cost rate base. In addition, my testimony responds to several other issues discussed in Mr. Lorton’s testimony including capital structure and OVG’s small size relative to the gas companies in the proxy group. I also emphasize the importance of testing ROE results from traditional approaches, such as the discounted cash flow (“DCF”) model against the results of alternative methodologies.

**A. Summary of Conclusions**

**Q4. PLEASE SUMMARIZE THE PRINCIPAL CONCLUSIONS OF YOUR REBUTTAL TO MR. LORTON’S TESTIMONY.**

A4. His ROE recommendation is extreme and out of the mainstream. At 9.0%, it is below any reasonable level. Mr. Lorton goes even further and says that his analyses “could justify a lower rate of return, as an 8.7% ROE is the higher end of the range of results in my DCF and CAPM analyses.”<sup>1</sup> Although Mr. Lorton does not propose a change to OVG’s capital structure, he suggests that the Company’s risks are lower than other gas

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<sup>1</sup> Public’s Exhibit No. 4 at 6-7.

1 utilities because a “lack of debt financing ... pre-empts any financial risk to the  
 2 company.”<sup>2</sup> Finally, Mr. Lorton does not make any adjustment to his recommended  
 3 ROE to account for the Company’s very small size. Taken as a whole, his  
 4 recommendations are not balanced and not supportive of the Company’s operations in  
 5 Indiana.

6 The significant shortfall between Mr. Lorton’s recommendations and the ROE  
 7 benchmarks discussed in my rebuttal testimony is illustrated in the figure below.

**FIGURE R-1**  
**COMPARISON OF ROE RECOMMENDATION TO BENCHMARKS**



■ Range  
— Average  
— Lorton Recommended

(a) Allowed ROE for Lorton proxy group companies.  
 (b) Expected earned returns for proxy group cos. from Value Line. Excludes lowest and highest values.  
 (c) Authorized ROEs reported for gas utilities by Regulatory Research Associates. 2017 data for Q1.

<sup>2</sup> *Id.* at 6.

1     **Q5. ARE THERE TECHNICAL FLAWS IN THE ROE ANALYSIS PROVIDED BY**  
2     **MR. LORTON?**

3     A5. Yes. There are key deficiencies in his quantitative applications that lead to a  
4     significant downward bias in his conclusions. My rebuttal testimony demonstrates  
5     that:

- 6         • His DCF study contains numerous flaws centered on a faulty growth  
7         rate approach. His growth analysis is misguided because it relies too  
8         heavily on historical data and on dividend and book value data.  
9         Furthermore, he makes no attempt to remove illogical DCF results  
10        stemming from unrealistically low growth rates.
- 11        • His Capital Asset Pricing Model (“CAPM”) results are so low that they  
12        should be rejected on their face. His CAPM results are even more  
13        suspect because his approach is based on historical data and is not  
14        forward-looking, as is required by the ROE estimation process.
- 15        • Beyond his flawed CAPM results, Mr. Lorton has failed to include any  
16        checks of reasonableness on his DCF results, with approaches such as  
17        Empirical CAPM (“ECAPM”), Utility Risk Premium, Expected  
18        Earnings, or Non-Utility DCF, as I did in my direct testimony. In  
19        addition, he failed to recognize the implications of the Company’s  
20        small size in evaluating his ROE recommendation.

21        Finally, while Mr. Lorton accepts the Company’s actual capital structure, he  
22        incorrectly implies that OVG’s lack of debt financing implies lower overall investment  
23        risks relative to his proxy group of natural gas utilities.

24     **Q6. IS MR. LORTON’S RECOMMENDATION DIRECTLY RELATED TO THE**  
25     **RESULTS OF HIS ANALYSES?**

26     A6. No. There is only a tenuous relationship between the results of Mr. Lorton’s analyses  
27     and his ultimate recommendation. Mr. Lorton’s 9.0% ROE is above the results  
28     produced by DCF application and exceeds his CAPM results by 113 basis points. The  
29     fact that Mr. Lorton was compelled to ignore his own modeling results undercuts his

1 conclusion that a recommendation based on these outcomes “would be reasonable and  
2 appropriate.”<sup>3</sup>

3 **B. Comparison of OUCC ROE Recommendation to Accepted Benchmarks**

4 **Q7. HOW DOES OUCC’S ROE RECOMMENDATION COMPARE TO**  
5 **ACCEPTED BENCHMARKS?**

6 A7. Allowed ROEs provide one gauge of reasonableness for the outcome of a cost of  
7 equity analysis.<sup>4</sup> In considering utilities with comparable risks, investors will always  
8 seek to provide capital to the opportunity with the highest expected return. If a utility  
9 is unable to offer a return similar to that available from other investment opportunities  
10 posing equivalent risks, investors will become unwilling to supply the utility with  
11 capital on reasonable terms. While the ROEs approved in other jurisdictions do not  
12 constrain the Indiana Utility Regulatory Commission’s (“Commission”) decision-  
13 making in this proceeding, it is important to understand that there would be a  
14 disincentive for investors to provide equity capital to OVG if the Commission were to  
15 apply an unreasonably low ROE, compared to entities of comparable risk.

16 If adopted, Mr. Lorton’s recommendation would be at the very bottom of the  
17 range of ROEs allowed to other gas utilities across the country. Mr. Lorton’s 9.0%  
18 recommendation would match the lowest return granted in at least the last five years,<sup>5</sup>

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<sup>3</sup> *Id.* at 1.

<sup>4</sup> Mr. Lorton also referenced authorized ROEs for other gas utilities as a benchmarks in his testimony. Public’s Exhibit No. 4 at 2-4.

<sup>5</sup> In 2015 and 2016 there were six cases decided by the New York Public Service Commission, all with ROEs of 9.0%. In all of these cases, the New York PSC merely approved comprehensive settlements reached by all the parties and the authorized ROE was a component of the overall agreement. Orange and Rockland Utilities concluded that the provisions of the stipulation relating to ROE “were very difficult to accept and were only acceptable in light of all the other provisions of the agreement.” (New York Public Service Commission, *Order Adopting Terms of Joint Proposal and Establishing Electric Rate Plan*, Case 14-G-0494, October 16, 2015, page 12).

1 and when the risk-mitigating factors associated with those cases are considered, his  
2 proposal would have to be regarded as extreme.<sup>6</sup>

3 Mr. Lorton's recommendation is significantly below recent average ROEs  
4 authorized by other state commissions. The average allowed ROE for gas utilities was  
5 9.60% in 2015, 9.50% in 2016, and 9.60% for the first quarter of 2017.<sup>7</sup> Authorized  
6 ROE data for the specific firms in the gas utility proxy groups is even more  
7 compelling.<sup>8</sup> As shown in Exhibit AMM-12, authorized ROEs for the firms in the  
8 proxy group employed by Mr. Lorton ranged from 9.10% to 10.80% and averaged  
9 9.78%. In other words, allowed ROEs for the utilities that Mr. Lorton considered to be  
10 substitutes for the Company indicate that his recommended ROE is too low to meet  
11 regulatory standards. As the Commission has previously recognized:

12 The only evidence we are now prepared to accept as conclusive of  
13 invalidity would be a cost of equity number that would have no  
14 credibility in the capital markets and that would be well below (or  
15 above) the cost rate which other state commissions are finding at the  
16 present time.<sup>9</sup>

17 An ROE of 9.0% is far out of line with returns allowed by other state commissions  
18 across the country and with returns allowed for the proxy group used by Mr. Lorton.  
19 Similarly, the Commission's recent decision approving an ROE of 10.0% for  
20 Community Natural Gas Co., Inc. disproves Mr. Lorton's contention that his

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<sup>6</sup> In the six New York cases referenced in the previous footnote where a 9.0% ROE was authorized, a host of risk-mitigating rate mechanisms (in addition to the basic gas cost recovery mechanism) were also granted to the companies. For example, the gas utilities in New York all have revenue decoupling mechanisms, virtually assuring them of full revenue requirement recovery. Furthermore, the companies are operating under multi-year rate plans with rates set for up to three years at a time. Over the rate plan period, the companies are subject to earnings sharing mechanisms that permit them to keep all earnings over the 9.0% floor up to a specified higher level, up to 9.50% in at least one case and up to 9.60% in another.

<sup>7</sup> Regulatory Research Associates, "Major Rate Case Decisions," *Regulatory Focus* (Jan. 14, 2016, Jan. 18, 2017, and Apr. 20, 2017).

<sup>8</sup> Mr. Lorton adopted the same proxy group that I used.

<sup>9</sup> *Indiana Michigan Power Co.*, Cause No. 38728 (Aug. 24, 1990).

1 recommendation is in any way justified.<sup>10</sup> Investors would undoubtedly consider  
2 these facts in assessing the reasonableness of the outcome in this case.

3 **Q8. IS OVG COMPARABLE TO THE AVERAGE FIRM IN THE NATURAL GAS**  
4 **UTILITY INDUSTRY?**

5 A8. No. The downward bias of Mr. Lorton's recommendation is made even more apparent  
6 by the fact that OVG's investment risks are demonstrably higher than those of other  
7 gas utilities, including those in his proxy groups. As detailed in my direct testimony,  
8 OVG's lack of published credit ratings, limited service territory, high dependence on  
9 industrial load, and lack of economies of scale confirm that investors would view the  
10 Company as having a greater level of risk, which implies a higher – not a lower –  
11 ROE.

12 **Q9. WHAT IS THE EXPECTED DIRECTION OF INTEREST RATES AND HOW**  
13 **DOES THIS IMPACT THE ROE ANALYSIS IN THIS PROCEEDING?**

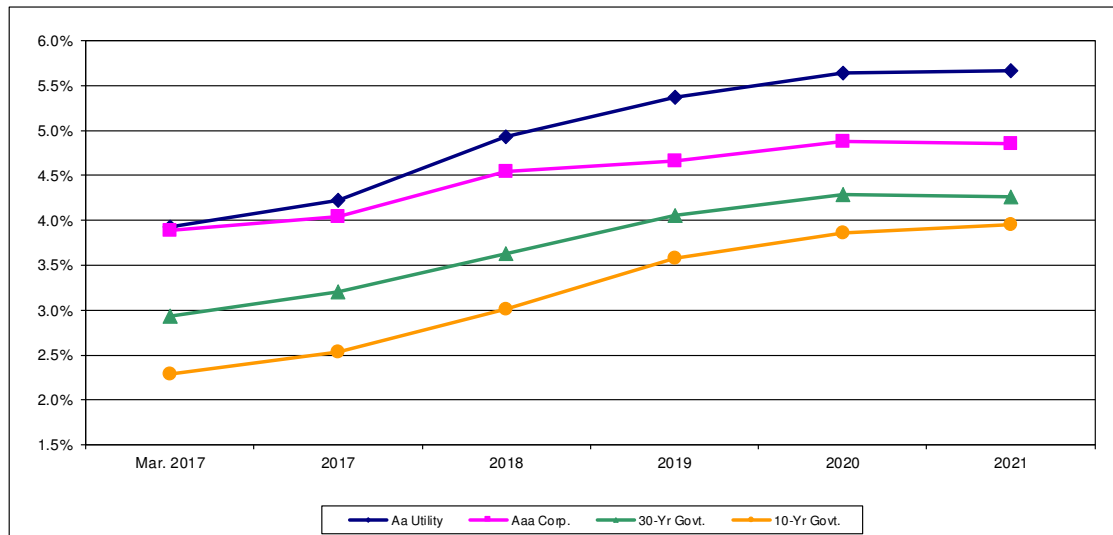
14 A9. Interest rates are expected to increase. Below is Figure R-2, an update of Figure 1  
15 (Interest Rate Trends) from my direct testimony:

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<sup>10</sup> *Community Natural Gas Co., Inc.*, Cause No. 44768 (Mar. 22, 2017).

1  
2

**FIGURE R2  
INTEREST RATE TRENDS**



Source:  
Value Line Investment Survey, Forecast for the U.S. Economy (Mar. 3, 2017)  
IHS Global Insight (Jan. 3, 2017; Nov. 30, 2016)  
Energy Information Administration, Annual Energy Outlook 2017 (Jan. 5, 2017)  
Wolters Kluwer, Blue Chip Financial Forecasts, Vol. 35, No. 12 (Dec. 1, 2016)

3 As the figure shows, investors continue to anticipate that interest rates will increase  
4 significantly from present levels. These projections are from forecasting services that  
5 are highly regarded and widely referenced, as I discuss in my direct testimony (at 12-  
6 13).

7 **Q10. WHAT DO THESE EXPECTATIONS IMPLY WITH RESPECT TO THE ROE**  
8 **FOR OVG MORE GENERALLY?**

9 A10. Largely because of unprecedented Federal Reserve policies, current capital costs are  
10 not representative of what is expected to prevail over the near-term future. Mr. Lorton  
11 observed that “yields remain well below historical normal,”<sup>11</sup> and noted that the  
12 Federal Reserve is “clearly on a long-term gradual course to higher interest rates.”<sup>12</sup>  
13 Mr. Lorton concluded that, “Considerations in the macro-economy, in Federal Reserve

<sup>11</sup> Public's Exhibit No. 4 at 19.

<sup>12</sup> *Id.* at 38.

1 policy, and in utility regulation suggest a gradual increase of important variables in the  
2 DCF and CAPM calculation.”<sup>13</sup>

3 As indicated in my direct testimony,<sup>14</sup> the Commission and other regulators  
4 have recognized the shortcomings of the DCF approach. In a more recent opinion, the  
5 Federal Energy Regulatory Commission (“FERC”) reiterated its position that current  
6 capital market conditions may undermine the reliability of the DCF model, and for this  
7 reason, cost of equity model results should be evaluated with even more critical  
8 judgment and focus:

9 As described above, evidence in the record regarding historically low  
10 interest rates and Treasury bond yields as well as the Federal Reserve’s  
11 large and persistent intervention in markets for debt securities are  
12 sufficient to find that current capital market conditions are  
13 anomalous.<sup>15</sup>

14 Similarly, while Complainants provide evidence that interest rates have  
15 been trending downwards, the current levels may be so low as to cause  
16 irregularities in the outputs of the DCF. Despite such yields remaining  
17 low for several years, we find that they are anomalous and could distort  
18 the results of the DCF model.<sup>16</sup>

19 Current capital market conditions make the process of setting a fair ROE even more  
20 demanding. In this environment, it is imperative that ROE model results be  
21 thoroughly tested against accepted benchmarks and compared to other checks of  
22 reasonableness.

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<sup>13</sup> *Id.* at 7.

<sup>14</sup> Petitioner’s Exhibit AMM at 16.

<sup>15</sup> Opinion No. 551, 156 FERC ¶ 61,234 at P 124 (2016).

<sup>16</sup> *Id.*



1    **Q11. IS IT NECESSARY THAT INTEREST RATE FORECASTS, LIKE THOSE**  
2    **SHOWN ABOVE, BE PERFECTLY ACCURATE IN ORDER TO BE RELIED**  
3    **UPON?**

4    A11. Absolutely not. I dealt with this topic in my direct testimony (at 38) in discussing the  
5    validity of analysts' growth forecasts, and the same principle applies here. In  
6    estimating investors' required rate of return, what investors expect, not what actually  
7    happens, is what matters most. While the projections of various services may be  
8    proven optimistic or pessimistic in hindsight, this is irrelevant in assessing expected  
9    interest rates and how they might influence OVG's allowed ROE. Any difference in  
10   actual rates as compared to analysts' forecasts is beside the point. What is most  
11   important is that investors share analysts' views when the forecasts were made and  
12   incorporate those views into their decision making process, not the actual rates that  
13   ultimately transpire.

14   **Q12. WHAT OTHER BENCHMARKS INDICATE THAT OUCC'S**  
15   **RECOMMENDED ROE IS TOO LOW TO BE CONSIDERED**  
16   **REASONABLE?**

17   A12. Expected earned rates of return for other utilities provide yet another useful  
18   benchmark to gauge the reasonableness of OUCC's ROE recommendation. The  
19   expected earnings approach is predicated on the comparable earnings test, which  
20   developed as a direct result of the Supreme Court decisions in *Bluefield* and *Hope*, as I  
21   discuss in my direct testimony.<sup>17</sup> This test recognizes that investors compare the  
22   allowed ROE with returns available from other alternatives of comparable risk.

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<sup>17</sup> Petitioner's Exhibit AMM at 54-56. The *Bluefield* and *Hope* decisions refer to *Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm'n*, 262 U.S. 679 (1923) and *Fed. Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591 (1944).

1           Importantly, the expected earnings approach explicitly recognizes that  
2 regulators do not set the returns that investors earn in the capital markets. Regulators  
3 can only establish the allowed return on the value of a utility's investment, as reflected  
4 on its accounting records. As a result, the expected earnings approach provides a  
5 direct guide to ensure that the allowed ROE is similar to what other utilities of  
6 comparable risk will earn on invested capital. This opportunity cost test does not  
7 require theoretical models to indirectly infer investors' perceptions from stock prices  
8 or other market data. As long as the proxy companies are similar in risk, their  
9 expected earned returns on invested capital provide a direct benchmark for investors'  
10 opportunity costs that is independent of fluctuating stock prices, market-to-book  
11 ratios, debates over DCF growth rates, or the limitations inherent in any theoretical  
12 model of investor behavior.

13 **Q13. HAS THE EXPECTED EARNINGS APPROACH BEEN RECOGNIZED AS A**  
14 **VALID ROE BENCHMARK?**

15 A13. Yes. This method predominated before the DCF model became fashionable with  
16 academic experts, and it continues to be used around the country.<sup>18</sup> A textbook  
17 prepared for the Society of Utility and Regulatory Analysts labels the comparable  
18 earnings approach the "granddaddy of cost of equity methods" and points out that the  
19 amount of subjective judgment required to implement this method is "minimal,"  
20 particularly when compared to the DCF and CAPM methods.<sup>19</sup> The *Practitioner's*

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<sup>18</sup> For example, the Virginia State Corporation Commission ("VSCC") is required by statute (Virginia Code § 56-585.1.A.2.a) to consider the earned returns on book value of electric utilities in its region. Similarly, FERC concluded that, "The returns on book equity that investors expect to receive from a group of companies with risks comparable to those of a particular utility are relevant to determining that utility's market cost of equity." Opinion No. 531-B, 150 FERC ¶ 61,165 at P 128 (2015). Another example is the Idaho Public Utilities Commission, which also references return on book equity evidence. *See, e.g.*, Order No. 29505, Case No. IC-E-03-13 at 38 (Idaho Public Utilities Commission, May 25, 2004).

<sup>19</sup> David C. Parcell, "The Cost of Capital – A Practitioner's Guide," *Society of Utility and Regulatory Financial Analysts* (2010) at 115-16.

1            *Guide* notes that the comparable earnings test method is “easily understood” and  
2            firmly anchored in the regulatory tradition of the *Bluefield* and *Hope* cases,<sup>20</sup> as well  
3            as sound regulatory economics. Similarly, *New Regulatory Finance* concluded that,  
4            “because the investment base for ratemaking purposes is expressed in book value  
5            terms, a rate of return on book value, as is the case with Comparable Earnings, is  
6            highly meaningful.”<sup>21</sup>

7            **Q14. WHAT ROE IS IMPLIED BY THE EXPECTED EARNINGS APPROACH FOR**  
8            **THE PROXY GROUP OF GAS UTILITIES REFERENCED BY OUCC?**

9            A14. The year-end returns on common equity projected by Value Line Investment Survey  
10           (“Value Line”) over its forecast horizon for the firms in the gas utility proxy group  
11           referenced by OUCC are shown on Exhibit AMM-13. As shown there, once adjusted  
12           to mid-year, reference to expected earnings implied an annual average cost of equity  
13           for the utilities referenced by Mr. Lorton of 11.1%, or 11.4% after excluding the  
14           lowest and highest values. This book return estimate is an “apples to apples”  
15           comparison to the 9.0% ROE recommendation of OUCC.

16           **Q15. PLEASE EXPLAIN THE RATIONALE FOR THE ADJUSTMENT TO**  
17           **CONVERT YEAR-END RETURNS TO AVERAGE RETURNS WHEN**  
18           **APPLYING THIS METHOD.**

19           A15. The adjustment factor incorporated in my evaluation of expected returns is required  
20           because Value Line’s reported returns are based on end-of-year book values. Since  
21           earnings is a flow over the year while book value is determined at a given point in  
22           time, the measurement of earnings and book value are distinct concepts. It is this  
23           fundamental difference between a flow (earnings) and point estimate (book value) that  
24           makes it necessary to adjust to mid-year in calculating the ROE. Given that book

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<sup>20</sup> *Id.*

<sup>21</sup> Roger A. Morin, “New Regulatory Finance,” *Public Utilities Reports, Inc.* (2006) at 395.

1 value will increase or decrease over the year, using year-end book value (as Value Line  
2 does) understates or overstates the average investment that corresponds to the flow of  
3 earnings. To address this concern, earnings must be matched with a corresponding  
4 representative measure of book value, or the resulting ROE will be distorted.

5 The need for this adjustment has been recognized in the financial literature.<sup>22</sup>  
6 Similarly, FERC has also cited the necessity to adjust year-end data from Value Line  
7 to reflect average values when computing earned rates of return.<sup>23</sup> In its June 2014  
8 decision establishing new policies regarding ROE and confirmed in a recent  
9 September 2016 opinion, FERC relied directly on the expected earnings approach,  
10 which incorporates the exact same adjustment formula used in my direct testimony in  
11 this proceeding.<sup>24</sup> Similarly, the Virginia State Corporation Commission has  
12 determined that it is appropriate to rely on average book equity, rather than year-end  
13 equity, when evaluating earned rates of return.<sup>25</sup>

14 **Q16. WHAT OTHER EVIDENCE INDICATES THAT MR. LORTON'S**  
15 **RECOMMENDED ROE FAILS TO MEET REGULATORY STANDARDS?**

16 A16. As discussed in my direct testimony, required rates of return for firms in the  
17 competitive sector of the economy are also relevant in determining the appropriate  
18 return to be allowed for rate-setting purposes.<sup>26</sup> The idea that investors evaluate  
19 utilities against the returns available from other investment alternatives – including the  
20 low-risk companies in my Non-Utility Group – is a fundamental cornerstone of  
21 modern financial theory. Aside from this theoretical underpinning, any casual  
22 observer of stock market commentary and the investment media quickly comes to the

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<sup>22</sup> *Id.* at 305-06.

<sup>23</sup> *Bangor Hydro-Elec. Co.*, 122 FERC ¶ 61,265 (2008).

<sup>24</sup> Opinion No. 531, 147 FERC ¶ 61,234 at P 146 (2014) and Opinion No. 551, 156 FERC ¶ 61,234 at P 239 (2016).

<sup>25</sup> *See, e.g., Case No. PUE-2014-00026*, Final Order at n. 84 (2014).

<sup>26</sup> Petitioner's Exhibit AMM at 56-60.

1 realization that investors' choices are almost limitless. It follows that utilities must  
2 offer a return that can compete with other risk-comparable alternatives, or capital will  
3 simply go elsewhere.

4 In fact, returns in the competitive sector of the economy form the very  
5 underpinning for utility ROEs because regulation purports to serve as a substitute for  
6 the actions of competitive markets. The Supreme Court has recognized that the degree  
7 of risk, not the nature of the business, is relevant in evaluating an allowed ROE for a  
8 utility.<sup>27</sup> The cost of capital is based on the returns that investors could realize by  
9 putting their money in other alternatives, and the total capital invested in utility stocks  
10 is only the tip of the iceberg of total common stock investment.

11 **Q17. WHAT WERE THE RESULTS OF YOUR DCF ANALYSIS FOR THE NON-**  
12 **UTILITY GROUP?**

13 A17. As shown in Exhibit AMM-10 accompanying my direct testimony, the average DCF  
14 results for the Non-Utility Group implied a minimum cost of equity of 10.4%.

15 **Q18. WHAT OTHER COMPARISONS INDICATE THAT MR. LORTON'S**  
16 **RECOMMENDATION IS FAR TOO LOW?**

17 A18. The existing 10.10% ROE in effect for OVG was established as a result of a  
18 stipulation approved by the Commission in December 2012. At that time, the average  
19 yield on Baa-rated utility bonds was 4.56%, versus the current 4.62% benchmark for  
20 March 2017 reported by Moody's. In other words, the indicated yields on Baa utility  
21 bonds are directly comparable to those prevailing when the existing 10.1% ROE  
22 established in the stipulation was approved by the Commission. This directly  
23 contradicts Mr. Lorton's contention that the ROE for OVG should be dramatically  
24 decreased.

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<sup>27</sup> *Fed. Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591 (1944).

1    **Q19. BASED ON YOUR COMPARISON OF OUCC'S ROE RECOMMENDATION**  
2    **WITH ACCEPTED BENCHMARKS AND, IN LIGHT OF THE PROSPECT**  
3    **FOR HIGHER INTEREST RATES, WHAT DO YOU CONCLUDE?**

4    A19. Based on these comparisons, the 9.0% ROE recommendation of Mr. Lorton falls  
5    outside the norms established for other utilities, fail to meet regulatory standards, and  
6    would be viewed negatively by investors. One fundamental standard underlying the  
7    regulation of public utilities, as set forth by the Supreme Court's *Bluefield* and *Hope*  
8    decisions, requires that the Company must have the opportunity to earn an ROE  
9    comparable to contemporaneous returns available from alternative investments of  
10   similar risk if it is to maintain its financial flexibility and ability to attract capital.

11           If the utility is unable to offer a return similar to the returns available from  
12   other opportunities of comparable risk, investors will become unwilling to supply  
13   capital to the utility on reasonable terms. For existing investors, denying the utility an  
14   opportunity to earn what is available from other similar risk alternatives prevents them  
15   from earning their cost of capital. Both of these outcomes violate regulatory  
16   standards.

17   **Q20. WHAT OTHER PITFALLS ARE ASSOCIATED WITH AN ROE THAT FALLS**  
18   **FAR BELOW THOSE AUTHORIZED FOR OTHER UTILITIES?**

19   A20. Adopting an ROE for OVG that is well below the ROEs for utilities with even less  
20   investment risk could lead investors to view the Commission's regulatory framework  
21   as unsupportive, an outcome that would undermine investors' willingness to support  
22   future capital availability for investment in Indiana utilities. Security analysts study  
23   regulatory orders in order to advise investors where to invest their money. Moody's  
24   noted that, "[f]undamentally, the regulatory environment is the most important driver

1 of our outlook.”<sup>28</sup> Similarly, S&P concluded that “[t]he regulatory  
2 framework/regime’s influence is of critical importance when assessing regulated  
3 utilities’ credit risk because it defines the environment in which a utility operates and  
4 has a significant bearing on a utility’s financial performance.”<sup>29</sup>

5 Utilities and their investors must lock up large sums of capital and are exposed  
6 to many risks over the long time horizon when they invest in utility infrastructure. At  
7 the level proposed by Mr. Lorton, the ability of Indiana utilities to attract and retain  
8 capital would be severely compromised, leading investors to view the Commission’s  
9 regulatory framework as unstable.<sup>30</sup> This would have a long-term, chilling effect on  
10 investors’ willingness to support capital investment in utility infrastructure, not just for  
11 OVG, but for all utilities in the state. On the other hand, if Commission actions instill  
12 confidence that the regulatory environment is supportive, investors will provide the  
13 necessary capital, which ultimately benefits customers and the service area economy.

14 **Q21. DOES THE MARCH 10, 2015 REPORT FROM MOODY’S CITED BY MR.**  
15 **LORTON (AT 4-5) SUPPORT A DRAMATIC DROP IN OVG’S ALLOWED**  
16 **RETURN FROM THOSE CURRENTLY BEING AUTHORIZED FOR**  
17 **COMPARABLE UTILITIES?**

18 A21. No. The Moody’s report discusses only very generally the impacts of a “slow” decline  
19 in utilities’ authorized ROEs, and how regulators may lower authorized ROEs without  
20 harming utilities’ cash flow, such as by “targeting depreciation.” The Moody’s report  
21 does not identify a cost of equity for regulated utilities at all, much less discuss a cost

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<sup>28</sup> Moody’s Investors Service, “Regulation Will Keep Cash Flow Stable As Major Tax Break Ends,” *Industry Outlook* (Feb. 19, 2014).

<sup>29</sup> Standard & Poor’s Corporation, “Key Credit Factors For The Regulated Utilities Industry,” *RatingsDirect* (Nov. 19, 2013).

<sup>30</sup> Given the higher relative risks associated with OVG, the ROE recommendation of Mr. Lorton implies an even more punitive ROE for other utilities in Indiana. Alternatively, treating OVG differently from other similarly situated utilities would raise issues of fairness that would violate accepted regulatory principles.

1 of equity for OVG, which is not even mentioned in the report. In my view, the  
2 Moody's report offers no relevant information about a fair ROE in this proceeding,  
3 and it certainly does not support the value recommended by Mr. Lorton.

4 **Q22. DOES THE MOODY'S REPORT INDICATE THAT EQUITY INVESTORS**  
5 **WOULD NOT BE CONCERNED IF OVG'S ROE WAS LOWERED TO THE**  
6 **LEVEL RECOMMENDED BY OUCC?**

7 A22. No. I believe no one can make such an inference based on this report.<sup>31</sup> First, it is  
8 important to note that the primary mission of credit rating agencies like Moody's is to  
9 provide *debt holders* with an accurate benchmark of the relative risks of default  
10 associated with long-term bonds and other debt securities. As the report cited by Mr.  
11 Lorton clearly observes, Moody's evaluation is premised "from the perspective of a  
12 probability of a default and expected loss given default."

13 Bondholders, the constituency represented by Moody's, do not share in a  
14 utility's net income or profits. As a result, Moody's focus is on cash flows, which are  
15 viewed "as a more important rating driver."<sup>32</sup> On the other hand, *equity investors* are  
16 intensely focused on the ability of the utility to generate earnings, dividends and  
17 growth. This difference in the characteristics and priorities between debt and equity  
18 securities gives rise to the considerable distinction in the risks faced by debt holders  
19 and equity investors. While a moderate and gradual downturn in ROEs may not pose  
20 an immediate threat to the cash flow protection underlying the credit ratings on a  
21 utility's debt, it would have an immediate, negative impact on returns to common  
22 stockholders.

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<sup>31</sup> Moody's Investors Service, "Lower Authorized Equity Returns Will Not Hurt Near-Term Credit Profiles,"  
*Sector In-Depth* (March 2015).

<sup>32</sup> *Id.*



**II. RESPONSE TO MR. LORTON'S ROE ANALYSES**

**Q23. WHAT ROE DID MR. LORTON RECOMMEND FOR OVG?**

A23. Mr. Lorton recommended an ROE of 9.0% for the Company, which exceeds the results of both his DCF and CAPM applications. In applying the constant growth version of the DCF model, Mr. Lorton combined a 2.8% dividend yield and a growth rate of 5.9% to arrive at his final result of 8.7%. Meanwhile, Mr. Lorton's application of the CAPM approach resulted in an implied return on 7.87%.

**A. Discounted Cash Flow Analysis**

**Q24. WHAT ARE YOUR PRIMARY CRITICISMS OF MR. LORTON'S APPLICATION OF THE DCF MODEL?**

A24. There are three fundamental flaws in the DCF analysis conducted by Mr. Lorton. First, he relied on historical growth rates when it is clear that the DCF approach calls for measuring investors' forward-looking expectations. Second, he relied on growth rates in dividends and book value when it is clear that investors give considerably more weight to analysts' earnings projections in forming their expectations for future growth. Finally, he failed to evaluate the reasonableness of the individual cost of equity estimates produced by his application of the DCF model. As a result, he included data that result in illogical cost of equity estimates.

**Q25. DO YOU BELIEVE THAT HISTORICAL TRENDS IN EARNINGS, DIVIDENDS, OR BOOK VALUE PROVIDE A MEANINGFUL GUIDE TO INVESTORS' EXPECTATIONS?**

A25. No. As discussed at length in my direct testimony (at 35-38), it is investors' future expectations – and not actual, historical results – that determine the current price they are willing to pay for common stocks. If past trends are to be representative of investors' expectations for the future, then the historical conditions giving rise to these growth rates should be expected to continue. That is clearly not the case for utilities,

1           which have experienced declining dividend payouts, earnings pressure, and, in certain  
2 cases, significant write-offs.

3           While past conditions for utilities serve to depress historical growth rates, they  
4 are not representative of long-term expectations for the utility industry. Moreover, to  
5 the extent historical trends for utilities are meaningful, they are also captured in  
6 projected growth rates, such as those published by Value Line and Zacks Investment  
7 Research (“Zacks”), since securities analysts also routinely examine and assess the  
8 impact and continued relevance (if any) of historical trends.

9   **Q26. IS THE DOWNWARD BIAS INHERENT IN HISTORICAL GROWTH RATES**  
10 **FOR GAS UTILITIES EVIDENT IN MR. LORTON’S DCF ANALYSIS?**

11 A26. Yes, it is. For example, consider the historical growth measures displayed on  
12 Attachment BEL-5, page 4, of Mr. Lorton’s testimony. In addition to the negative  
13 growth rates removed by Mr. Lorton, twelve of the individual historical growth rates  
14 for the companies in the proxy group fall at or below 3.0%. Combining a growth rate  
15 of 3.0% with Mr. Lorton’s dividend yield of 2.8% (Attachment BEL-5, page 2) implies  
16 a DCF cost of equity of 5.8%, which is less than 120 basis points above the most  
17 recent six month average yield on triple-B utility bonds,<sup>33</sup> and falls below near-term  
18 forecasts.<sup>34</sup> As a result, these values provide no meaningful information regarding  
19 investors’ expectations and requirements. Clearly, any consideration of Mr. Lorton’s  
20 historical growth measures results in a built-in downward bias to his DCF conclusions.

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<sup>33</sup> The average triple-B utility bond yield reported by Moody’s for March 2017 was 4.62%.

<sup>34</sup> See Table 7 to Petitioner’s Exhibit AMM.

1     **Q27. BEYOND HIS MISGUIDED RELIANCE ON HISTORICAL MEASURES, MR.**  
2     **LORTON ALSO CONSIDERS GROWTH IN DIVIDENDS AND BOOK VALUE**  
3     **IN HIS DCF ANALYSIS. ARE THESE LIKELY TO BE INDICATIVE OF**  
4     **INVESTORS' EXPECTATIONS?**

5     A27. No. As I discussed in my direct testimony,<sup>35</sup> evidence supports the contention that  
6     investors rely primarily on earnings per share (“EPS”) growth projections in forming  
7     their expectations. The continued success of investment services such as IBES, Value  
8     Line, and Zacks, and the fact that projected growth rates from such sources are widely  
9     referenced, provides strong evidence that investors give considerable weight to  
10    analysts’ earnings projections in forming their expectations for future growth. Future  
11    trends in EPS, which provide the source for future dividends and ultimately support  
12    share prices, play a pivotal role in determining investors’ long-term growth  
13    expectations. The importance of earnings in evaluating investors’ expectations and  
14    requirements is well accepted in the investment community, and surveys of analytical  
15    techniques relied on by professional analysts indicate that growth in EPS is far more  
16    influential than trends in dividends per share (“DPS”). As explained in *New*  
17    *Regulatory Finance*:

18           Because of the dominance of institutional investors and their influence  
19           on individual investors, analysts’ forecasts of long-run growth rates  
20           provide a sound basis for estimating required returns. Financial  
21           analysts exert a strong influence on the expectations of many investors  
22           who do not possess the resources to make their own forecasts, that is,  
23           they are a cause of  $g$  [growth].<sup>36</sup>

24           The availability of projected EPS growth rates also is key to investors relying  
25           upon this measure as compared to future trends in DPS. Apart from Value Line,  
26           investment advisory services do not generally publish comprehensive DPS growth

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<sup>35</sup> Petitioner’s Exhibit AMM at 35-38.

<sup>36</sup> Roger A. Morin, “New Regulatory Finance,” *Public Utilities Reports, Inc.* (2006) at 298.

1 projections, and this scarcity of dividend growth rates relative to the abundance of  
2 EPS forecasts attests to their relative influence. The fact that analyst EPS growth  
3 estimates are routinely referenced in the financial media and in investment advisory  
4 publications implies that investors use them as a primary basis for their expectations.

5 As observed in *New Regulatory Finance*:

6           The sheer volume of earnings forecasts available from the investment  
7 community relative to the scarcity of dividend forecasts attests to their  
8 importance. The fact that these investment information providers focus  
9 on growth in earnings rather than growth in dividends indicates that the  
10 investment community regards earnings growth as a superior indicator  
11 of future long-term growth. Surveys of analytical techniques actually  
12 used by analysts reveal the dominance of earnings and *conclude that*  
13 *earnings are considered far more important than dividends.*<sup>37</sup>  
14 [Emphasis added]

15 While I did not rely solely on EPS projections in applying the DCF model,<sup>38</sup> my  
16 evaluation clearly supports greater reliance on EPS growth rate projections than other  
17 alternatives.

18 **Q28. HAVE OTHER REGULATORS RECOGNIZED THAT ANALYSTS' EPS**  
19 **GROWTH RATE ESTIMATES ARE A MORE MEANINGFUL GUIDE TO**  
20 **INVESTORS' EXPECTATIONS THAN GROWTH IN DIVIDENDS?**

21 A28. Yes. For example, the Kentucky Public Service Commission has indicated its  
22 preference for relying on analysts' projections in establishing investors' expectations:

23           KU's argument concerning the appropriateness of using investors'  
24 expectations in performing a DCF analysis is more persuasive than the  
25 AG's argument that analysts' projections should be rejected in favor of  
26 historical results. The Commission agrees that analysts' projections of  
27 growth will be relatively more compelling in forming investors'

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<sup>37</sup> *Id.* at 302-303.

<sup>38</sup> As discussed in my direct testimony, I also examined the "br+sv", sustainable growth rates for the companies in my proxy groups.

1 forward-looking expectations than relying on historical performance,  
2 especially given the current state of the economy.<sup>39</sup>

3 Similarly, the Public Utility Regulatory Authority of Connecticut noted that:

4 The Authority used growth in earnings exclusively based on the record  
5 of this docket showing that financial literature supports security  
6 analysts' EPS growth rate projections as superior for use in a DCF  
7 analysis. Response to Interrogatory FI-106. The Authority takes note  
8 that long-term, there is not growth in DPS without growth in EPS.  
9 Market prices are more highly influenced by security analyst's earnings  
10 expectations than expectations in dividends. The Authority agrees with  
11 Ms. Ahern that "the use of earnings growth rates in a DCF analysis  
12 provides a better matching between investors' market price  
13 appreciation expectations and the growth rate component of the  
14 DCF."<sup>40</sup>

15 FERC has also expressed a clear preference for projected EPS growth rates in  
16 applying the DCF model to estimate the cost of equity for both electric and natural gas  
17 pipeline utilities, noting that, "The growth rate used in the DCF model should be the  
18 growth rate expected by the market."<sup>41</sup> As FERC concluded:

19 That growth rate may not necessarily prove to be the correct growth  
20 forecast, but the cost of common equity to a regulated enterprise  
21 depends upon what the market expects, not upon what ultimately  
22 happens. Accordingly, it is appropriate to look to the most recent  
23 record evidence of the growth rates actually expected by the investment  
24 community.<sup>42</sup>

25 FERC affirmed that "years of established Commission precedent" support the use of  
26 analysts' EPS growth projections in applying the DCF model.<sup>43</sup>

27 **Q29. MR. LORTON MAKES REFERENCE TO PAST DECISIONS WHERE THE**  
28 **COMMISSION HAS FAVORED PARTICULAR GROWTH MEASURES FOR**  
29 **CERTAIN TYPES OF UTILITIES.<sup>44</sup> SHOULD THOSE FINDINGS LOCK IN**

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<sup>39</sup> *Order*, Case No. 2009-00548 at 30-31 (Jul. 30, 2010).

<sup>40</sup> *Decision*, Docket No. 13-02-20 (Sep. 24, 2013).

<sup>41</sup> *Opinion* No. 531, 147 FERC ¶ 61,234 at P 88 (2014).

<sup>42</sup> *Id.*

<sup>43</sup> *Opinion* No. 531-B, 150 FERC ¶ 61,165 at P 71 (2015).

1           **THE MEASURES USED TO ESTIMATE GROWTH EXPECTATIONS NOW**  
2           **AND IN THE FUTURE?**

3    A29.   No. As the Commission noted in Cause No. 43680, for example, it expects analysts to  
4           exercise judgment based on the facts and circumstances of each case:

5                   In all cases ... the Commission expects the parties to exercise sound  
6                   judgment when deciding which inputs to include as part of their  
7                   analyses.<sup>45</sup>

8           The use of historical or projected dividends and book value may have been more  
9           appropriate in the past. A number of years ago, when the utility industries were more  
10          stable, historical dividend and earnings records were more useful. Also, standardized  
11          and objective sources of projections were not as widely available as is the case today.  
12          As the information environment has developed, including rules requiring security  
13          analysts' disclosures and compensation standards to avoid conflicts, projections have  
14          become more credible to investors.

15    **Q30. DID MR. LORTON LEAVE OUT READILY AVAILABLE, WIDELY**  
16    **RESPECTED SOURCES OF ANALYSTS' GROWTH RATES?**

17    A30.   Yes. Mr. Lorton relied solely on data from Value Line in his analysis. Other sources,  
18           such as IBES and Zacks Investment Research cited in my direct testimony, are readily  
19           available and are widely followed by investment professionals. These are well-  
20           recognized sources of expected growth rates and Mr. Lorton's DCF analysis suffers  
21           because he did not consider them.

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<sup>44</sup> Public's Exhibit No. 4 at 15.

<sup>45</sup> *Indiana- American Water Company*, Cause No. 40103 (May 30, 1996) at 40-41.

1    **Q31. DOES THE FACT THAT ANALYSTS' EPS PROJECTIONS MAY DEVIATE**  
2    **FROM ACTUAL RESULTS HAMPER THEIR USE IN APPLYING THE DCF**  
3    **MODEL, AS MR. LORTON CONTENDS?**<sup>46</sup>

4    A31. No. Investors, just like securities analysts and others in the investment community, do  
5    not know how the future will actually turn out. They can only make investment  
6    decisions based on their best estimate of what the future holds in the way of long-term  
7    growth for a particular stock, and securities prices are constantly adjusting to reflect  
8    their assessment of available information. While the projections of securities analysts  
9    may be proven optimistic or pessimistic in hindsight, this is irrelevant in assessing the  
10   expected growth that investors have incorporated into current stock prices, and any  
11   bias in analysts' forecasts – whether pessimistic or optimistic – is irrelevant if  
12   investors share analysts' views. As *New Regulatory Finance* concluded, "The  
13   accuracy of these forecasts in the sense of whether they turn out to be correct is not an  
14   issue here, as long as they reflect widely held expectations."<sup>47</sup>

15           Moreover, as discussed earlier, there is every indication that expectations for  
16   earnings growth are instrumental in investors' evaluation and the fact that analysts'  
17   projections deviate from actual results provides no basis to ignore this relationship.  
18   Comparisons between forecasts of future growth expectations and the historical trend  
19   in actual earnings are largely irrelevant in evaluating the use of analysts' projections in  
20   the DCF model.<sup>48</sup> But as noted above, the investment community can only make  
21   decisions based on their best estimate of what the future holds in the way of long-term  
22   growth for a particular stock, and the fact that projections deviate from actual results  
23   says nothing about whether investors rely on analysts' estimates. In using the DCF

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<sup>46</sup> Public's Exhibit No. 4 at 15-16.

<sup>47</sup> Roger A. Morin, "New Regulatory Finance," *Public Utilities Reports, Inc.* (2006) at 298.

<sup>48</sup> Although Mr. Lorton similarly states that, "I agree that projections should not be held up to hindsight review," (Public's Exhibit No. 4 at 15) that is exactly what he is proposing.

1 model to estimate investors' required returns, the purpose is not to prejudge the  
2 accuracy or rationality of investors' growth expectations. Instead, to accurately  
3 estimate the cost of equity we must base our analyses on the growth expectations  
4 investors actually use in determining the price they are willing to pay for common  
5 stocks – even if we do not agree with their assumptions. As Robert Harris and Felicia  
6 Marston noted in their article in *Journal of Applied Finance*:

7           ...Analysts' optimism, if any, is not necessarily a problem for the  
8 analysis in this paper. If investors share analysts' views, our  
9 procedures will still yield unbiased estimates of required returns and  
10 risk premia.<sup>49</sup>

11           Similarly, there is no logical foundation for criticisms such as those raised by  
12 Mr. Lorton that the purported upward bias of analysts' growth rates limits their  
13 usefulness in applying the DCF model. If investors' base their expectations on these  
14 growth rates, then they are useful in inferring investors' required returns – even if the  
15 analysts' forecasts prove to be wrong in hindsight.

16 **Q32. DO THE SELECTED ARTICLES CITED BY MR. LORTON IN SUPPORT OF**  
17 **HIS CONTENTION THAT ANALYSTS ARE OVERLY OPTIMISTIC PAINT A**  
18 **COMPLETE PICTURE OF THE FINANCIAL RESEARCH IN THIS AREA?**

19 A32. No. Peer-reviewed empirical studies do not uniformly support his contention that  
20 analysts' earnings projections are optimistically biased. For example, a study reported  
21 in "Analyst Forecasting Errors: Additional Evidence" found no optimistic bias in  
22 earnings projections for large firms (market capitalization of \$500-\$3,000 million),  
23 with data for the largest firms (market capitalization > \$3,000 million) demonstrating a  
24 *pessimistic* bias.<sup>50</sup> Similarly, a 2005 article that examined analyst growth forecasts

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<sup>49</sup> Robert S. Harris and Felicia C. Marston, "The Market Risk Premium: Expectational Estimates Using Analysts' Forecasts," *Journal of Applied Finance* 11 (2001) at 8

<sup>50</sup> Lawrence D. Brown, "Analyst Forecasting Errors: Additional Evidence," *Financial Analysts Journal* (November/December 1997).



1 over the period 1990 through 2001 illustrated that Wall Street's forecasting is not  
2 inherently optimistic, and other research on this topic also concludes that there is no  
3 clear support for the contention that analyst forecasts contain upside bias.<sup>51</sup> Moreover,  
4 the studies cited by Mr. Lorton do not focus on large, rate-regulated utilities in relative  
5 stable industries, where the magnitude of any potential bias is likely to be very small,  
6 if it exists at all.

7 **Q33. DO YOU HAVE OTHER CONCERNS WITH MR. LORTON'S CONSTANT**  
8 **GROWTH DCF ANALYSIS?**

9 A33. Yes, Mr. Lorton's decision to average all individual growth rates together, and then  
10 compute a single DCF estimate for the entire proxy group, presents another serious  
11 flaw in the OUCC's DCF analysis. This approach ignores the reality that each growth  
12 rate represents a stand-alone estimate of investors' future expectations, and each value  
13 should be evaluated on its own merits. The fact that an average of several growth  
14 rates might produce a DCF estimate that could be considered reasonable does not  
15 absolve the need to evaluate each underlying growth rate separately.

16 For example, consider a utility with a dividend yield of 3.5% and three  
17 hypothetical growth estimates of 0.0%, 6.5%, and 14.0%. Under the OUCC's method,  
18 the DCF estimate would be computed by adding the 6.8% average of the three  
19 individual growth rates to the dividend yield, resulting in a cost of equity estimate of  
20 10.3%. The problem with this method is that it disguises the fact that two of the  
21 underlying growth rates – 0.0% and 14.0% – do not provide a meaningful guide to  
22 investors' expectations. Rather than averaging the good with the bad, each implied

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<sup>51</sup> Stephen Ciccone, "Trends in analyst earnings forecast properties," *International Review of Financial Analysis*, 14:2-3 (2005); Jeffery Abarbanell and Lehavy Reuven, "Biased forecasts or biased earnings? The role of reported earnings in explaining apparent bias and over/under reaction in analysts' earnings forecasts," *Journal of Accounting and Economics*, 36: 142 (2003); Laim Denning, "Wall Street's Missed Expectations," *Wall Street Journal* at C8 (Apr. 26, 2010).

1 cost of equity estimate (in this example, 3.5%, 10.0%, and 17.5%) should be evaluated  
2 on a stand-alone basis.<sup>52</sup> Mr. Lorton simply calculated the average of the individual  
3 growth rates with no consideration for the reasonableness of the underlying data.  
4 Because Mr. Lorton failed to perform this essential step, his DCF analysis included  
5 individual growth rates that do not reflect investors' expectations. Therefore, his  
6 results are biased downward.

7 **Q34. CAN YOU SHOW THE DOWNWARD BIAS IN MR. LORTON'S CONSTANT**  
8 **GROWTH ANALYSIS?**

9 A34. Yes. For example, Mr. Lorton reports a 5-year historical dividend growth rate of 0.5%  
10 for NiSource, Inc.<sup>53</sup> Combining this growth rate with the OUCC's corresponding 12-  
11 month dividend yield of 3.0%<sup>54</sup>, and adjusting for a half-year's growth, results in a  
12 cost of equity estimate of 3.5%. Likewise, Mr. Lorton reports a five-year historical  
13 book value growth rate of 2.5% for Northwest Natural Gas. Combining this growth  
14 rate with OUCC's corresponding average dividend yield of 3.2%, and again adjusting  
15 for a half year's growth, results in a cost of equity estimate of 5.7%. These implied  
16 costs of equity either fall below, or do not sufficiently exceed yields on current and  
17 projected public utility bonds. As a result, these illogical growth measures should  
18 have been removed from Mr. Lorton's constant growth DCF analysis.

19 **Q35. WHAT IS THE IMPACT OF ADJUSTING MR. LORTON'S DCF RESULTS TO**  
20 **REMOVE ALL ILLOGICAL ROE OUTCOMES THAT ARE HIDDEN IN HIS**  
21 **AVERAGING APPROACH?**

22 A35. Rather than lump all of the data into group averages that camouflage illogical results,  
23 in Exhibit AMM-14 I break out the discrete DCF calculations for each company in his

---

<sup>52</sup> The implied cost of equity estimates are calculated as the sum of the dividend yield (3.5%) and the respective growth rates (0.0%, 6.5%, and 14.0%).

<sup>53</sup> Lorton Attachment BEL-5, page 4.

<sup>54</sup> *Id.* page 2.

1 proxy group. The individual company dividend yields are shown on page 1 of this  
2 exhibit, with the corresponding growth rates being shown on page 2. Finally, on page  
3 3, I combine the dividend yields and growth rates and show the individual DCF  
4 estimates for each company in the proxy group. The results shown on page 3 of  
5 Exhibit AMM-14 reveal the unreasonableness of many of his growth rate estimates.  
6 Of the 75 total outcomes (nine growth rate values for nine companies, minus 6  
7 negative growth rates), 32 fall below 7.0%. Eleven of the ROE results are between  
8 6% and 7%, eleven are between 5% and 6%, and ten of the results are less than 5%.  
9 These results are simply below any rational expectation for a reasonable ROE under  
10 current capital market conditions and it is inconceivable that investors are not  
11 requiring a substantially higher rate of return for holding common stock.

12 As I stated in my direct testimony, it is essential that model outcomes pass  
13 basic tests of reasonableness and economic logic. Accordingly, DCF estimates that are  
14 implausibly low or high should be eliminated when evaluating the results of this  
15 method. Since the rate of return required on equity is significantly higher than that  
16 required on debt, DCF results that are not sufficiently higher than the yield available  
17 on less risky utility bonds must be removed.

18 On page 3 of Exhibit AMM-14, I have highlighted all ROE results below  
19 7.0%.<sup>55</sup> This is the same threshold I applied in my direct testimony. The average and  
20 midpoint values, excluding the highlighted outliers, are provided for each growth rate  
21 source. These revised results reveal a much different picture than the one presented by  
22 Mr. Lorton. The individual average and midpoint results imply a cost of equity of  
23 9.8%. In this light, the extreme nature of Mr. Lorton's 9.0% ROE recommendation is  
24 unmistakable.

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<sup>55</sup> In addition, I eliminated one high-end value of 15.0%.

**B. Capital Asset Pricing Model**

1  
2 **Q36. WHAT IS THE FUNDAMENTAL PROBLEM ASSOCIATED WITH THE**  
3 **APPROACH THAT MR. LORTON USED TO APPLY THE CAPM?**

4 A36. Like the DCF model, the CAPM is an *ex-ante*, or forward-looking model based on  
5 expectations of the future. As a result, in order to produce a meaningful estimate of  
6 investors' required rate of return, the CAPM must be applied using data that reflects  
7 the expectations of actual investors in the market. However, the CAPM application  
8 presented by Mr. Lorton was based entirely on *historical* – not projected – rates of  
9 return.<sup>56</sup> Morningstar has recognized the primacy of current expectations:

10           The cost of capital is always an expectational or forward-looking  
11           concept. While the past performance of an investment and other  
12           historical information can be good guides and are often used to estimate  
13           the required rate of return on capital, *the expectations of future events*  
14           *are the only factors that actually determine cost of capital.*<sup>57</sup>

15           Because he failed to look directly at the returns investors are currently requiring in the  
16           capital markets, the 7.87% historical CAPM estimate developed by Mr. Lorton falls  
17           woefully short of investors' current required rate of return.

18 **Q37. IS THERE GOOD REASON TO ENTIRELY DISREGARD THE RESULTS OF**  
19 **MR. LORTON'S HISTORICAL CAPM ANALYSIS?**

20 A37. Yes. Applying the CAPM is complicated by the impact of the recent capital market  
21 turmoil and Federal Reserve policies on investors' risk perceptions and required  
22 returns. As the Staff of the Florida Public Service Commission concluded regarding  
23 historical applications of the CAPM:

24           [R]ecognizing the impact the Federal Government's unprecedented  
25           intervention in the capital markets has had on the yields on long-term

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<sup>56</sup> Public's Exhibit No. 4 at 20: "I calculated long-term market risk premiums based on historical data from the Preview version of *Stocks, Bonds, Bills and Inflation (SBBI), 2017 Yearbook*, by Duff & Phelps / John Wiley and Sons. ... The SBBI database covers the period between 1926 and 2016."

<sup>57</sup> Morningstar, *Ibbotson SBBI, 2013 Valuation Yearbook*, at 21 (emphasis added).

1 Treasury bonds, staff believes models that relate the investor-required  
2 return on equity to the yield on government securities, such as the  
3 CAPM approach, produce less reliable estimates of the ROE at this  
4 time.<sup>58</sup>

5 Similarly, in *Orange & Rockland Utilities*, FERC determined that CAPM  
6 methodologies based on historical data were suspect because whatever historical  
7 relationships existed between debt and equity securities may no longer hold.<sup>59</sup> FERC  
8 concluded that historical risk premiums are downward biased given recent trends of  
9 near-historic low yields for Treasury bonds,<sup>60</sup> and has endorsed the use of the same  
10 application of the CAPM presented in my direct testimony to overcome the failings of  
11 the historical approach exemplified by Mr. Lorton's analysis.<sup>61</sup>

12 The CAPM cost of common equity estimate is calibrated from investors'  
13 required risk premium between Treasury bonds and common stocks. In response to  
14 heightened uncertainties, investors have repeatedly sought a safe haven in U.S.  
15 government bonds. Coupled with the Federal Reserve's stimulus policies, this "flight  
16 to safety" has pushed Treasury yields significantly lower. This distortion not only  
17 impacts the absolute level of the CAPM cost of equity estimate, but also affects  
18 estimated risk premiums. Economic logic would suggest that investors' required risk  
19 premium for common stocks over Treasury bonds has increased.

20 Meanwhile, the backward-looking approach used by Mr. Lorton incorrectly  
21 assumes that investors' assessment of the relative risk differences, and their required  
22 risk premium, between Treasury bonds and common stocks is constant and equal to  
23 some historical average. As the Commission has previously noted:

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<sup>58</sup> *Staff Recommendation for Docket No. 080677-E1 - Petition for increase in rates by Florida Power & Light Company*, Docket No. 080677-E1, at 280 (Dec. 23, 2009).

<sup>59</sup> *See, Orange & Rockland Utils., Inc.*, 40 FERC ¶ 63,053 at 65,208-09 (1987), *aff'd*, Opinion No. 314, 44 FERC ¶ 61,253 at 65,208 (2008).

<sup>60</sup> *See, New York Independent System Operator, Inc.*, 146 FERC ¶ 61,043 at P 105 (2014).

<sup>61</sup> *See, Opinion No. 531-B*, 150 FERC ¶ 61,165 at P 109 (2015); *Opinion No. 551*, 156 FERC ¶ 61,234 at P 165 (2016).

1 Relying on historic market returns introduces some highly questionable  
2 assumptions, which must be taken on faith. Specifically [sic], one must  
3 assume that marketplace returns experienced historically are what  
4 investors were expecting to receive and continue to guide investor  
5 expectations today. It also assumes that asset relationships prevailing  
6 over the past 62 years continue today unchanged. Mr. Brennan  
7 provided no support for either of these assumptions. Public Witness  
8 Kahal explained why these assumptions are unlikely to hold true.<sup>62</sup>

9 At no time in recent history has the fallacy of this assumption been demonstrated more  
10 concretely. The broken link between investors' current expectations and requirements  
11 and historical risk premiums is particularly relevant during periods of heightened  
12 uncertainty and rapidly changing capital market conditions, such as those experienced  
13 recently.<sup>63</sup>

14 **Q38. DO THE RISK PREMIUMS THAT MR. LORTON DERIVES FROM DUFF &**  
15 **PHELPS DATA (ATTACHMENT BEL-6, P. 4) COMPORT WITH WHAT THIS**  
16 **PUBLICATION REPORTS?**

17 A38. No. Duff & Phelps (formerly published by Morningstar) computes the equity risk  
18 premium by subtracting the arithmetic mean income return (not the total return) on  
19 long-term Treasury bonds from the arithmetic average return on common stocks. As  
20 Morningstar explained:

21 Price changes in bonds due to unanticipated changes in yields introduce  
22 price risk into the total return. Therefore, the total return on the bond  
23 series does not represent the riskless rate of return. The income return  
24 better represents the unbiased estimate of the purely riskless rate of  
25 return, since an investor can hold a bond to maturity and be entitled to  
26 the income return with no capital loss.<sup>64</sup>

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<sup>62</sup> *Indiana Michigan Power Co.*, Cause No. 38728 (Aug. 24, 1990).

<sup>63</sup> *See, e.g.*, Opinion No. 531, at P 158 (2014), finding that, "the capital market conditions since the 2008 market collapse and the record in this proceeding have shown that there is not a direct correlation between changes in U.S. Treasury bond yields and changes in ROE."

<sup>64</sup> Morningstar, *Ibbotson SBBI, 2012 Valuation Yearbook* at 56.

1 Similarly, Duff & Phelps notes that the equity risk premium is calculated as “Large  
2 company total stock returns minus long-term government bond income returns.”<sup>65</sup> In  
3 other words, Duff & Phelps concluded that using only the *income component* of the  
4 long-term government bond return provides a more reliable estimate of the expected  
5 risk premium because investors do not anticipate capital losses for a risk-free security.  
6 Mr. Lorton, however, calculated his equity risk premiums using the *total* return for  
7 Duff & Phelps long-term government bond series. As a result, the equity risk  
8 premiums presented by Mr. Lorton fall below what his own data source reports and the  
9 resulting CAPM cost of equity estimate is further understated.

10 **Q39. DID MR. LORTON FAIL TO CONSIDER OTHER IMPORTANT FACTORS IN**  
11 **APPLYING THE CAPM?**

12 A39. Yes. As noted in my direct testimony,<sup>66</sup> empirical research indicates that the CAPM  
13 does not fully account for observed differences in rates of return attributable to firm  
14 size. To account for this, Duff & Phelps has developed size premiums that need to be  
15 added to the theoretical CAPM cost of equity estimates to account for the level of a  
16 firm's market capitalization in determining the CAPM cost of equity. The size  
17 adjustment, which is documented by the primary source Mr. Lorton used to apply the  
18 CAPM,<sup>67</sup> corrects for an observed inability of the CAPM to fully reflect the risks  
19 perceived by investors. Because he ignored this fundamental relationship, Mr.  
20 Lorton's results are downward biased.

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<sup>65</sup> Duff & Phelps, *2017 Valuation Handbook, U.S. Guide to Cost of Capital (Preview Version)* at 19.

<sup>66</sup> Petitioner's Exhibit AMM at 46-47.

<sup>67</sup> Duff & Phelps, “2017 Valuation Handbook, U.S. Guide to Cost of Capital (Preview Edition),” John Wiley & Sons, Inc. at 19. See Public's Exhibit No. 4 at 20, citing Duff & Phelps.

1    **Q40. DOES MR. LORTON ACCURATELY CHARACTERIZE THE SIZE**  
2    **ADJUSTMENT, AS IT PERTAINS TO THE CAPM MODEL?**

3    A40. No. The need for the size adjustment in applying the CAPM arises because  
4    differences in investors' required rates of return that are related to firm size are not  
5    fully captured by beta. This refinement to the CAPM is distinct from a generalized  
6    risk premium for firm size, as discussed on pages 24-28 of my direct testimony.  
7    Similarly, the "Business Valuation Alert" cited by Mr. Lorton (p. 23) also  
8    acknowledges that "as a general proposition, smaller companies are riskier than larger  
9    companies,"<sup>68</sup> and merely confirms that risk premiums for a water utility are below  
10   those of the "average company."<sup>69</sup> I agree, and this industry-specific risk assessment  
11   is considered in my CAPM analysis through the use of beta values that are specific to  
12   the gas utilities in my proxy group. The size adjustment merely refines the CAPM by  
13   adjusting for the impact of size that is *not accurately reflected in beta*.

14           Mr. Lorton also places significant weight on a 1992 study by Annie Wong,<sup>70</sup>  
15   but a closer examination of this research reveals that it is largely inconclusive, and  
16   inconsistent with the CAPM. In fact, her results demonstrate no material difference  
17   between utilities and industrial firms with respect to size premiums, and her study  
18   finds no significant relationship between beta and returns, which contradicts modern  
19   portfolio theory and the CAPM. A more recent study published in the Quarterly  
20   Review of Economics and Finance reconsiders Wong's evidence and concludes that  
21   "new information . . . indicates there is a small firm effect in the utility sector."<sup>71</sup>

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<sup>68</sup> Michael Pashall and George B. Hawkins, "Do Smaller Companies Warrant a Higher Discount Rate for Risk?: The "Size Effect" Debate," *Business Valuation Alert* (Vol. 1, Issue No. 2, Dec. 1999) at 3.

<sup>69</sup> *Id.*

<sup>70</sup> Public's Exhibit No. 4 at 22.

<sup>71</sup> Zepp, Thomas M., "Utility stocks and the size effect—revisited," *Quarterly Review of Economics and Finance*, 43 (2003) 578-582.



1     **Q41. IS THERE ANY MERIT TO MR. LORTON'S CONTENTION (AT 22-23) THAT**  
2     **A SIZE ADJUSTMENT SHOULD NOT BE INCORPORATED WHEN**  
3     **APPLYING THE CAPM TO REGULATED UTILITIES?**

4     A41. No. Again, Mr. Lorton implies that I am proposing to apply a general size risk  
5     premium in arriving at a fair ROE for OVG; but this is not correct. Rather, this  
6     adjustment merely corrects for an observed inability of the CAPM to fully reflect the  
7     impact of size distinctions by market capitalization that the beta value does not  
8     otherwise capture, but which is acknowledged by empirical research.

9             The Commission decisions and articles cited on page 23 of Mr. Lorton's  
10     testimony pertain to a proposed small stock risk premium that would be added to the  
11     ROE determined for the proxy companies. In other words, this adjustment was meant  
12     to reflect a purported risk difference between the individual water utility at issue, and  
13     the overall ROE indicated by the underlying analyses. This is not at all what I am  
14     proposing in this case. My consideration of the impact of firm size in applying the  
15     CAPM does not adjust for the Company's size relative to the proxy group; nor is it  
16     applied to the results of the DCF, risk premium, or expected earnings approaches.  
17     Rather, it is specifically tied to the CAPM because empirical research indicates that  
18     beta does not capture an increment of risk related to firm size. Nor does the  
19     highlighted quotation from the article on business valuation cited by Mr. Lorton  
20     (p. 23) have any relevance to a fair ROE for Westfield in this case. Clearly, OVG's  
21     position within the industry is not one of "very low risk," and the Company does not  
22     have any "near-guarantee" of earning a fair ROE.

23             Within the CAPM paradigm, the degree of regulation, the nature of  
24     competition in the industry, the competence of management, and every other firm-  
25     specific consideration is boiled down to a single question; namely, how much does the  
26     stock's price fluctuate in relation to the market as a whole? Beta is the measure of that

1           variability, and research demonstrates that beta does not fully account for the impact  
2           of firm size. As FERC concluded in adopting a size adjustment when using the  
3           CAPM to estimate the cost of equity for electric utilities, “[t]his type of size  
4           adjustment is a generally accepted approach to CAPM analyses.”<sup>72</sup>

5           **Q42. WAS MR. LORTON JUSTIFIED IN RELYING ON GEOMETRIC MEANS AS**  
6           **A MEASURE OF AVERAGE RATE OF RETURN WHEN APPLYING THE**  
7           **HISTORICAL CAPM?**<sup>73</sup>

8           A42. No. While both the arithmetic and geometric means are legitimate measures of  
9           average return, and the Commission has recognized geometric means in the past, these  
10          measures provide different information. Each may be used correctly, or misused,  
11          depending upon the inferences being drawn from the numbers. The geometric mean  
12          of a series of returns measures the constant rate of return that would yield the same  
13          change in the value of an investment over time. The arithmetic mean measures what  
14          the expected return would have to be each period to achieve the realized change in  
15          value over time.

16                   In estimating the cost of equity, the goal is to replicate what investors expect  
17                   going forward, not to measure the average performance of an investment over an  
18                   assumed holding period. When referencing realized rates of return in the past,  
19                   investors consider the equity risk premiums in each year independently, with the  
20                   arithmetic average of these annual results providing the best estimate of what investors  
21                   might expect in future periods. *New Regulatory Finance* had this to say:

22                           The best estimate of expected returns over a given future holding  
23                           period is the arithmetic average. *Only arithmetic means are correct for*  
24                           *forecasting purposes and for estimating the cost of capital.* There is no  
25                           theoretical or empirical justification for the use of geometric mean rates

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<sup>72</sup> Opinion No. 531-B, 150 FERC ¶ 61,165 at P 117 (2015).

<sup>73</sup> Lorton Attachment BEL-6, page 1.

1                   of returns as a measure of the appropriate discount rate in computing  
2                   the cost of capital or in computing present values.<sup>74</sup>

3                   Similarly, Morningstar concluded that:

4                   For use as the expected equity risk premium in either the CAPM or the  
5                   building block approach, the arithmetic mean or the simple difference  
6                   of the arithmetic means of stock market returns and riskless rates is the  
7                   relevant number. ... The geometric average is more appropriate for  
8                   reporting past performance, since it represents the compound average  
9                   return.<sup>75</sup>

10       **Q43. ARE YOU AWARE THAT THE COMMISSION HAS IN THE PAST ELECTED**  
11       **TO CONSIDER BOTH ARITHMETIC AND GEOMETRIC MEANS IN**  
12       **APPLYING THE CAPM?**

13       A43. Yes. I understand that the Commission has expressed the view that this issue is best  
14       resolved by considering both measures.<sup>76</sup> Nonetheless, given the clear evidence of  
15       downward bias inherent in Mr. Lorton's CAPM result, this consideration lends  
16       additional support for my application of a forward-looking CAPM approach, which  
17       does not depend on geometric or arithmetic means of historical data.

18       **Q44. WHAT DOES THIS IMPLY WITH RESPECT TO MR. LORTON'S CAPM**  
19       **ANALYSES?**

20       A44. For a variable series, such as stock returns, the geometric average will *always* be less  
21       than the arithmetic average. Accordingly, Mr. Lorton's reference to geometric average  
22       rates of return provides yet another element of built-in downward bias.

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<sup>74</sup> Roger A. Morin, "New Regulatory Finance," *Public Utilities Reports, Inc.* (2006) at 116-117, (emphasis added).

<sup>75</sup> Morningstar, *Ibbotson SBBI 2013 Valuation Yearbook* at 56.

<sup>76</sup> *See, e.g.*, at 41.

**C. Other ROE Issues**

1  
2 **Q45. MR. LORTON ARGUES THAT NO CONSIDERATION SHOULD BE GIVEN**  
3 **TO THE COMPANY'S SMALL SIZE IN SETTING ITS ROE.<sup>77</sup> DO YOU**  
4 **AGREE?**

5 A45. No. As I stated in my direct testimony, a firm's relative size has important  
6 implications for investors in their evaluation of alternative investments, and it is well  
7 established that smaller firms are more risky than larger firms.<sup>78</sup>

8 **Q46. MR. LORTON CLAIMS THAT THAT REGULATION REDUCES THE RISKS**  
9 **FACED BY THE COMPANY AND THIS MITIGATES THE NEED TO**  
10 **RECOGNIZE THE IMPACT OF OVG'S SIZE WHEN COMPARED TO THE**  
11 **PROXY GROUP.<sup>79</sup> IS THIS A VALID ARGUMENT?**

12 A46. No, Mr. Lorton is mixing up two distinct considerations. The first consideration, that  
13 regulation reduces the risks faced by the Company, is not relevant. This is because all  
14 of the proxy companies relied on by Mr. Lorton (and myself) have highly regulated  
15 operations. By using the proxy companies to set OVG's ROE, regulation has already  
16 been accounted for. No additional adjustment to the Company's ROE is necessary to  
17 account for the presence of regulation.

18 The second consideration, that the Company is much smaller than the  
19 companies in the proxy group and thus possesses higher relative risk, is a legitimate  
20 one. As I pointed out in my direct testimony, OVG has total rate base of  
21 approximately \$51.7 million, while the average market capitalization for the firms in  
22 the proxy group is \$3.7 billion.<sup>80</sup> This size difference deserves some consideration in  
23 the ROE estimation process. And while Mr. Lorton claims that the Commission has

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<sup>77</sup> Public's Exhibit No. 4 at 22-23.

<sup>78</sup> Petitioner's Exhibit AMM at 24-28.

<sup>79</sup> Public's Exhibit No. 4 at 22.

<sup>80</sup> Petitioner's Exhibit AMM at 24.

1 rejected a “blind application” of a 400 basis-point size adjustment,”<sup>81</sup> that is not what I  
2 have proposed in this case. Rather, I recommend that the Commission adopt OVG’s  
3 requested 11.1% ROE, which falls 40 basis points above the upper end of the range  
4 that is indicated for large, publicly traded gas utilities. This represents a modest  
5 acknowledgement of the higher returns required to compensate for OVG’s relative  
6 size, as well as its lack of published credit metrics or other measures of investment  
7 risk. One thing is clear, however, and that is that the size risk faced by the Company is  
8 not offset by the fact that it is regulated, since that risk has already been accounted for  
9 by referencing a proxy group of other regulated gas utilities.

10 **Q47. MR. LORTON CONTENDS THAT “THE APPLICABILITY OF A SMALL**  
11 **STOCK ADJUSTMENT TO REGULATED PUBLIC UTILITIES IS**  
12 **QUESTIONABLE.”<sup>82</sup> HOW DO YOU RESPOND?**

13 A47. I disagree with his claim. Utility common stocks are included in the sample of firms  
14 used to quantify the size adjustments published by Duff & Phelps and there is no  
15 credible basis to conclude that utilities are immune from this well-documented  
16 relationship. For example, a study reported in *Public Utilities Fortnightly* noted that  
17 the betas of small companies do not fully account for the higher realized rates of return  
18 associated with small company stocks:

19 The smaller deciles show returns not fully explainable by the CAPM.  
20 The difference in risk premium (realized versus CAPM) grows larger as  
21 one moves from the largest companies in decile 1 to the smallest in  
22 decile 10. The difference is especially pronounced for deciles 9 and 10,  
23 which contain the smallest companies.<sup>83</sup>

24 The study went on to conclude that a publicly traded utility with a market  
25 capitalization of \$1.0 billion would require a small company premium of

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<sup>81</sup> Public’s Exhibit No. 4 at 23.

<sup>82</sup> *Id.* at 22.

<sup>83</sup> Michael Annin, “Equity and the Small-Stock Effect”, *Public Utilities Fortnightly* (Oct. 15, 1995), at 43.

1 approximately 130 basis points above the rate of return for larger firms. Similarly, the  
2 California Public Utilities Commission concluded that risk differences related to size  
3 warranted a differential of 230 basis points between the generic ROEs for the smallest  
4 classes of water utilities under its jurisdiction.<sup>84</sup>

5 **Q48. DID MR. LORTON CONSIDER OTHER “CHECKS OF REASONABLENESS”**  
6 **IN FORMING HIS ROE OPINIONS?**

7 A48. Beyond his flawed application of the CAPM, Mr. Lorton did not provide any  
8 meaningful checks of reasonableness on his DCF result. This approach is in contrast  
9 to my ROE analysis where I considered reasonableness checks such as a forward-  
10 looking CAPM, the ECAPM, a bond yield plus risk premium approach, an expected  
11 earnings approach, and a Non-Utility DCF approach.

12 **Q49. HOW COULD COMPARISONS TO THE RESULTS FROM OTHER ROE**  
13 **ESTIMATION METHODS HAVE SIGNALLED TO MR. LORTON THAT HIS**  
14 **DCF RESULTS WERE OUT OF THE RANGE OF REASONABLENESS?**

15 A49. Current capital market conditions continue to reflect the impact of unprecedented  
16 policy measures taken in response to recent dislocations in the economy and financial  
17 markets, and are not representative of what is likely to prevail over the near-term  
18 future. As a result, the DCF model may be affected by potentially unrepresentative  
19 financial inputs. The Commission has previously expressed reservations regarding  
20 blind adherence to the results of the DCF model, concluding that:

21 There are three principal reasons for our unwillingness to place a great  
22 deal of weight on the results of any DCF analysis. One is the reason  
23 given by Mr. Brennan: the failure of the DCF model to conform to  
24 empirical reality. The second is the undeniable fact that rarely if ever  
25 do two expert witnesses agree on the terms of a DCF equation for the  
26 same utility -- for example, as we shall see in more detail below,  
27 projections of future dividend cash flow and anticipated price

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<sup>84</sup> *California Public Utilities Commission*, Decision 92-03-093 (1992) at 19.

1 appreciation of the stock can vary widely. And, the third reason is that  
2 the unadjusted DCF result is almost always well below what any  
3 informed financial analyst would regard as defensible, and therefore  
4 requires an upward adjustment based largely on the expert witness'  
5 judgment. In these circumstances, we find it difficult to regard the  
6 results of a DCF computation as any more than suggestive.<sup>85</sup>

7 In this light, it is important to consider alternatives to the DCF model. As  
8 shown in Exhibit AMM-2 to my direct testimony, risk premium models (like the  
9 CAPM, ECAPM and Utility Risk Premium approaches) generally support an ROE for  
10 the proxy group of gas utilities in the 10% to 11% range. My expected earnings  
11 approach corroborated these outcomes. As I mentioned earlier in this rebuttal  
12 testimony, the expected earnings approach (as shown in Exhibit AMM-13) using  
13 OUCC's proxy group implies an average ROE of 11.1%. A simple examination of  
14 alternative methodologies such as these would have revealed to Mr. Lorton that his  
15 9.0% recommendation was below any basic range of reasonableness.

16 **Q50. HAVE SUCH ALTERNATIVE ROE METHODS BEEN ACCEPTED BY**  
17 **OTHER REGULATORS?**

18 A50. Yes. In its recent Opinion 551, issued September 28, 2016, FERC reiterated its  
19 support for several of the very same reasonableness checks that I referenced above and  
20 employed in my direct testimony. For example, FERC determined:

21 For the reasons discussed below, we conclude that the record in this  
22 proceeding demonstrates the presence of unusual capital market  
23 conditions, such that we have less confidence that the central tendency  
24 of the DCF zone of reasonableness (the midpoint in this case)  
25 accurately reflects the equity returns necessary to meet *Hope* and  
26 *Bluefield*.<sup>86</sup>

27 Rather, that finding supports a consideration of other cost of equity  
28 estimation methodologies in determining whether mechanically setting

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<sup>85</sup> *Indiana Michigan Power Co.*, Cause No. 38728 (Aug. 24, 1990).

<sup>86</sup> Opinion No. 551, 156 FERC ¶ 61,234 at P 119 (2016).

1           the ROE at the central tendency satisfies the capital attraction standards  
2           of *Hope* and *Bluefield*.<sup>87</sup>

3           We therefore find it necessary and reasonable to consider additional  
4           record evidence, including evidence of alternative methodologies and  
5           state-commission approved ROEs, to gain insight into the potential  
6           impacts of these unusual capital market conditions on the  
7           appropriateness of using the resulting midpoint.<sup>88</sup>

8           The “alternative methodologies” referred to above include the very same CAPM,  
9           utility risk premium, and expected earnings approaches that I utilize in my direct  
10          testimony.

11       **Q51. MR. LORTON CITES A DUKE UNIVERSITY CFO SURVEY AS SUPPORT**  
12       **FOR HIS ROE RECOMMENDATION.<sup>89</sup> DOES THIS PROVIDE ANY**  
13       **MEANINGFUL CORROBORATION OR GUIDANCE AS TO INVESTORS’**  
14       **REQUIRED RATE OF RETURN?**

15       A51. No. According to Mr. Lorton, the survey apparently predicts that equity returns for the  
16       stock market as a whole will amount to 6.6% over the next 10 years. This figure falls  
17       far out of line with any meaningful benchmark for a fair ROE for a utility.  
18       Considering that this return falls 240 basis points *below* the return that Mr. Lorton  
19       recommends for OVG, it clearly has no relevance in this case.

20       **Q52. ARE YOU IN ANY WAY ALLEGING THAT THIS SURVEY IS INHERENTLY**  
21       **FLAWED?**

22       A52. No, not at all. However, a general survey of selected corporate executives does not  
23       substitute for a comprehensive analysis of investors’ required returns for a specific  
24       industry or company like OVG. The data cited by Mr. Lorton are for the S&P 500 and  
25       certainly does not appear to come from any sort of detailed ROE analysis specific to  
26       the gas utility industry (as presented in my direct testimony). The link that Mr. Lorton

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<sup>87</sup> *Id.* at P 120.

<sup>88</sup> *Id.* at P 122.

<sup>89</sup> Public’s Exhibit No. 4 at 8.



1 tries to make between unknown, untested, and unrelated survey data and the required  
2 ROE for a gas utility like OVG is the very definition of an “apples to oranges”  
3 comparison. As such, his conclusions based on this data should be rejected.

4 **Q53. MR. LORTON CRITICIZES THE REMOVAL OF ILLOGICAL VALUES**  
5 **FROM YOUR DCF RESULTS BECAUSE INVESTORS “DO NOT IGNORE**  
6 **LOW GROWTH RATES.”<sup>90</sup> IS THIS A REASONABLE ARGUMENT?**

7 A53. Not at all. I would point out that Mr. Lorton also eliminated low-end growth rates  
8 (*i.e.*, all negative values) from his DCF study.<sup>91</sup> Presumably, Mr. Lorton made this  
9 decision based on his determination that investors would not consider these values and  
10 the resulting cost of equity estimates to be meaningful. As a result, while Mr. Lorton  
11 and I may disagree on the specific threshold to apply in screening low-end growth  
12 rates, his analysis implicitly accepts the principle that not all growth rates are  
13 indicative of investors' expectations. As explained in my direct testimony,<sup>92</sup> reference  
14 to current and projected bond yields provides an objective basis to evaluate DCF  
15 estimates, and one that has been recognized by other regulators.

16 **Q54. MR. LORTON HAS CONCERNS WITH YOUR UTILITY RISK PREMIUM**  
17 **MODEL, CLAIMING IT IS “CIRCULAR.”<sup>93</sup> HOW DO YOU RESPOND?**

18 A54. I addressed this concern in my direct testimony.<sup>94</sup> In establishing authorized ROEs,  
19 regulators typically consider the results of independent market-based approaches,  
20 beyond comparing allowed returns. These market-based methodologies include DCF  
21 and CAPM models. Because allowed risk premiums consider the objective market

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<sup>90</sup> *Id.* at 14-15.

<sup>91</sup> *Id.* at 14. Other OUCC witnesses have applied alternative thresholds. For example, in Cause No. 44835, OUCC's witness Mr. Kaufman eliminated all DCF growth rates below 2.0%. Cause No. 44835, Public's Exhibit No. 5 (Dec. 5, 2016) at 34.

<sup>92</sup> Petitioner's Exhibit AMM at 40-42.

<sup>93</sup> Public's Exhibit No. 4 at 25.

<sup>94</sup> Petitioner's Exhibit AMM at 51.

1 data (e.g., stock prices, dividends, beta, and interest rates) that are part of these  
2 independent, market-based approaches, and are not based strictly on past actions of  
3 other regulators, concerns over any potential for circularity are resolved.

4 **Q55. MR. LORTON CLAIMS THAT YOUR USE OF FORECASTED BOND YIELDS**  
5 **“IS NOT CONSISTENT” WITH THE IMPLIED RISK PREMIUMS**  
6 **DEVELOPED IN YOUR STUDY.<sup>95</sup> IS THERE ANY VALIDITY TO THIS**  
7 **ASSERTION?**

8 A55. No. As detailed in my direct testimony,<sup>96</sup> the risk premiums referenced in my study  
9 were calculated by matching average authorized ROEs for gas utilities with a  
10 contemporaneous bond yield. In order to recognize the impact of higher interest rates  
11 over the period when the rates established in this proceeding will be in effect, page 2  
12 of Exhibit AMM-8 reflected the implications of projected bond yields. As I explained  
13 and documented on this exhibit, my application directly considered the impact of  
14 higher yields on the equity risk premium by adjusting for the inverse relationship  
15 documented in my testimony. Contrary to Mr. Lorton's unexplained allegation, my  
16 application of the risk premium approach using projected bond yields was entirely  
17 consistent with the findings of my study. Indeed, Mr. Lorton essentially undertook a  
18 similar adjustment in his historical CAPM analysis by adopting a “normalized” risk  
19 free rate of 4.0%.<sup>97</sup>

20 **Q56. MR. LORTON REJECTS ANY RELIANCE ON THE EXPECTED EARNINGS**  
21 **APPROACH.<sup>98</sup> ARE HIS CRITICISMS JUSTIFIED?**

22 A56. No. First, Mr. Lorton argues that the results of the expected earnings approach should  
23 be ignored because my application of this approach is only based on “an intermediate

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<sup>95</sup> ~~Public's Exhibit No. 4 at 25.~~

<sup>96</sup> Petitioner's Exhibit AMM at 51.

<sup>97</sup> Public's Exhibit No. 4 at 19.

<sup>98</sup> *Id.* at 25-26.

1 forecast” using 3-5 year projections from Value Line.<sup>99</sup> Of course, the very same  
2 “criticism” could be applied to Mr. Lorton’s DCF application, which considers only  
3 “intermediate” projected growth rates from the very same source. As a practical  
4 matter, there are no longer-term published estimates to apply either the DCF model or  
5 the expected earnings approach, and Value Line’s forecasts are widely referenced as a  
6 guide to investors’ expectations.

7 Mr. Lorton’s contention that the expected earnings approach is not useful  
8 because “many companies also have unregulated operations” is equally misguided.  
9 Aside from the fact that he presents no specific evidence to document his concern, my  
10 application of the expected earnings approach relied on data for the same proxy group  
11 of gas utilities accepted by Mr. Lorton and used as the basis for his analyses.  
12 Moreover, in evaluating a fair ROE under the comparable earnings standards  
13 established by the Supreme Court in *Hope* and *Bluefield*, it is the degree of risk which  
14 is important, not the nature of a firms operations. Indeed, this standard was long  
15 applied by reference to earned rates of return for firms in the competitive sector of the  
16 economy.

17 Finally, I agree in part with Mr. Lorton’s observation that the results of the  
18 expected earnings approach does not represent a market-based estimate of investors’  
19 required return. The purpose of comparable earnings methods, including the expected  
20 earnings approach, is not to derive a market cost of equity. Rather, this approach is  
21 intended to examine the book returns necessary to meet the financial attraction  
22 standards underpinning *Hope* and *Bluefield*. This expected earnings test does not  
23 require theoretical models to indirectly infer investors’ perceptions from stock prices  
24 or other market data. As long as the proxy companies are similar in risk, their

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<sup>99</sup> *Id.* at 25.

1 expected earned returns on invested capital provide a direct benchmark for investors'  
2 opportunity costs that is independent of the limitations inherent in any theoretical  
3 model of investor behavior. As FERC observed in explaining its reliance on the same  
4 methodology applied in my direct testimony, "returns on book value help investors  
5 determine the opportunity cost of investing in that particular utility instead of other  
6 companies of comparable risk."<sup>100</sup>

7 **Q57. MR. LORTON CONTENDS THAT YOUR APPLICATION OF THE ECAPM**  
8 **"INCLUDES AN ADDITIONAL UPWARD ADJUSTMENT."<sup>101</sup> IS THERE**  
9 **ANY MERIT TO THIS ASSERTION?**

10 A57. No. I addressed the faulty logic underlying this argument in my direct testimony.<sup>102</sup>

11 **Q58. HAVE OTHER REGULATORS RELIED ON THE ECAPM?**

12 A58. Yes. The ECAPM approach has been relied on by the Staff of the Maryland Public  
13 Service Commission. For example, Staff witness Julie McKenna noted that "the  
14 ECAPM model adjusts for the tendency of the CAPM model to underestimate returns  
15 for low Beta stocks," and concluded that, "I believe under current economic  
16 conditions that the ECAPM gives a more realistic measure of the ROE than the CAPM  
17 model does."<sup>103</sup> The Regulatory Commission of Alaska has also relied on the ECAPM  
18 approach, noting that:

19 Tesoro averaged the results it obtained from CAPM and ECAPM while  
20 at the same time providing empirical testimony that the ECAPM results  
21 are more accurate than [sic] traditional CAPM results. The reasonable  
22 investor would be aware of these empirical results. Therefore, we  
23 adjust Tesoro's recommendation to reflect only the ECAPM result.<sup>104</sup>

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<sup>100</sup> Opinion No. 551, 156 FERC ¶ 61,234 at P 235 (2016).

<sup>101</sup> Public's Exhibit No. 4 at 26.

<sup>102</sup> Petitioner's Exhibit AMM at 49.

<sup>103</sup> *Direct Testimony and Exhibits of Julie McKenna*, Maryland PSC Case No. 9299 (Oct. 12, 2012) at page 9.

<sup>104</sup> Regulatory Commission of Alaska, Order No. P-97-004(151) at 145 (Nov. 27, 2002).

**D. Capital Structure**

1  
2 **Q59. WHAT CAPITAL STRUCTURE DOES MR. LORTON RECOMMEND IN**  
3 **THIS CASE?**

4 A59. Mr. Lorton appears to accept the Company's proposed capital structure. At the same  
5 time, Mr. Lorton states that "OVG's lack of debt financing in its capital structure pre-  
6 empts any financial risk to the company,"<sup>105</sup> and he notes that, "Every company in the  
7 proxy group has considerably more financial risk than OVG."<sup>106</sup> Mr. Lorton's  
8 repeated references appear to suggest a view that the Company's capital structure is  
9 indicative of a lower required ROE.

10 **Q60. DO THE UNCERTAINTIES ASSOCIATED WITH FINANCIAL LEVERAGE**  
11 **EQUATE TO OVERALL INVESTMENT RISK?**

12 A60. No. Mr. Lorton's focus on capital structure, and the relative risk associated with debt  
13 leverage, ignores the fact that this is only one facet of a company's overall investment  
14 risk. A firm's total investment risk considers both business and financial risk. The  
15 evaluation of business risk involves an examination of the utility's relative markets and  
16 service area economy, competitive position, operations, regulation, management,  
17 supply position, and asset concentration. Meanwhile, the evaluation of financial risk  
18 tends to be more quantitative and involves an examination of financial data concerning  
19 earnings protection, capital structure, cash flow adequacy, and financial flexibility.  
20 The degree of debt leverage implicit in a utility's capital structure is just one aspect of  
21 the entire spectrum of considerations that ultimately determines investors' overall risk  
22 assessment.

23           The fair ROE is not evaluated in a vacuum; it is predicated on analyses for a  
24 proxy group of utilities, with the relative reliance on equity financing being just one

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<sup>105</sup> Public's Exhibit No. 4 at 6.

<sup>106</sup> *Id.*

1            facet in comparing OVG's total risks to those of large, publicly traded gas utilities. As  
2            a result, there is simply no basis for Mr. Lorton's insinuation that OVG has less  
3            investment risk than the proxy group, simply because of its capital structure.

4            **Q61. WHAT ARE THE IMPLICATIONS WITH RESPECT TO THE EVALUATION**  
5            **OF A FAIR ROE FOR OVG?**

6            A61. As discussed at length in my direct testimony,<sup>107</sup> there are a number of key  
7            considerations that distinguish the investment risks of OVG from those of the gas  
8            utilities used to estimate the cost of equity. These include the Company's lack of  
9            published risk measures, limited access to capital, dependency on a concentrated  
10           service territory, lack of regulatory diversification, and the elevated business risks  
11           associated with OVG's high concentration of industrial sales and transportation  
12           volumes. The net impact of financial risks associated with a utility's capital structure  
13           is only one piece of the puzzle and there is no basis for Mr. Lorton's myopic focus on  
14           this single consideration, to the exclusion of all others.

15           **Q62. IS IT REASONABLE FOR A SMALL UTILITY TO MAINTAIN A HIGH**  
16           **EQUITY RATIO?**

17           A62. Yes. As discussed in my direct testimony, small utilities such as OVG do not have  
18           ready access to the public capital markets in which to sell debt securities and other  
19           sources of additional debt capital may also be limited. Although in some cases the  
20           utility may be able to place debt privately with insurance companies or pension funds,  
21           these sources may not always be available. And while banks may provide another  
22           potential source of debt financing, their loans are often relatively short-term and carry  
23           a variable interest rate tied to the prime rate. Moreover, small utilities face greater  
24           uncertainties than do their larger counterparts, which also supports a conservative

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<sup>107</sup> Petitioner's Exhibit AMM at 22-29.

1 financial posture. The facts and circumstances of this case support the use of OVG's  
2 actual capital structure and preclude Mr. Lorton's suggestion of a lower ROE.

3 **Q63. DOES THIS CONCLUDE YOUR PRE-FILED REBUTTAL TESTIMONY?**

4 A63. Yes.

**OUCG PROXY GROUP**

<b>Atmos Energy</b>	State or Division	Allowed ROE	Source	Source Date
Atmos Energy	TN	<b>9.80%</b>	RRA	1/14/2016
Atmos Energy	CO	<b>9.72%</b>	RRA	1/15/2015
Atmos Energy	KY	<b>9.80%</b>	RRA	1/15/2015
Atmos Energy	KS	<b>9.10%</b>	RRA	1/15/2015
Atmos Energy	Mid-Tex	<b>10.50%</b>	RRA	1/15/2014
		<b>9.78%</b>		
<b>Chesapeake Utilities</b>				
Chesapeake Utilities-Delaware Division	DE	<b>9.75%</b>	DE PSC Order 8982	12/20/2016
Chesapeake Utilities-Florida Division	FL	<b>10.80%</b>	CPK 2015 10-K, p. 6	
		<b>10.28%</b>		
<b>New Jersey Resources</b>				
New Jersey Natural Gas	NJ	<b>9.75%</b>	RRA	1/18/2017
<b>NiSource, Inc.</b>				
NIPSCO Gas	IN	<b>9.90%</b>	Investor Presentation	5/3/2017
Columbia Gas of MA	MA	<b>9.55%</b>	Investor Presentation	5/3/2017
Columbia Gas of MD	MD	<b>9.70%</b>	Investor Presentation	5/3/2017
		<b>9.72%</b>		
<b>Northwest Natural Gas</b>				
Northwest Natural Gas	OR	<b>9.50%</b>	RRA	1/18/2013
<b>South Jersey Industries</b>				
South Jersey Gas Co.	NJ	<b>9.75%</b>	RRA	1/15/2015
<b>Southwest Gas</b>				
Southwest Gas	CA	<b>10.10%</b>	RRA	1/15/2015
Southwest Gas-Southern Division	NV	<b>9.85%</b>	RRA	1/18/2013
Southwest Gas-Northern Division	NV	<b>9.20%</b>	RRA	1/18/2013
		<b>9.72%</b>		
<b>Spire Energy</b>				
Alagasco	AL (1)	<b>10.80%</b>	Investor Presentation	9/2016
Laclede Gas	MO (2)	<b>9.70%</b>	Investor Presentation	9/2016
MGE	MO (2)	<b>9.75%</b>	Investor Presentation	9/2016
Mobile Gas	AL (1)	<b>10.80%</b>	Investor Presentation	9/2016
Willmut Gas	MS	<b>9.23%</b>	Investor Presentation	9/2016
		<b>10.06%</b>		
<b>WGL</b>				
Washington Gas Light	DC	<b>9.25%</b>	RRA	4/20/2017
Washington Gas Light	MD	<b>9.50%</b>	RRA	1/15/2014
Washington Gas Light	VA	<b>9.75%</b>	RRA	1/18/2013
		<b>9.50%</b>		
<b>Group Average</b>		<b>9.78%</b>		

Notes:

- (1) Part of Rate Stabilization and Equalization (RSE) plan
- (2) For Infrastructure System Replacement Surcharge purposes



EXPECTED EARNINGS

OUCC PROXY GROUP

	(a)	(b)	(c)
<u>Company</u>	<u>Expected Return on Common Equity</u>	<u>Mid-Year Adjustment Factor</u>	<u>Adjusted Return on Common Equity</u>
1 Atmos Energy Corp.	11.5%	1.0288	11.8%
2 Chesapeake Utilities	13.0%	1.0371	13.5%
3 New Jersey Resources	12.0%	1.0270	12.3%
4 NiSource, Inc.	12.0%	1.0321	12.4%
5 Northwest Natural Gas	10.0%	1.0177	10.2%
6 South Jersey Industries	6.0%	1.0654	6.4%
7 Southwest Gas Corp.	12.0%	1.0225	12.3%
8 Spire, Inc.	9.5%	1.0316	9.8%
9 WGL Holdings, Inc.	10.0%	1.1127	11.1%
<b>Average</b>			<b>11.1%</b>
<b>Average (excluding Low and High Values)</b>			<b>11.4%</b>

(a) The Value Line Investment Survey (Mar. 3, 2017).

(b) Computed using the formula  $2 * (1 + 5\text{-Yr. Change in Equity}) / (2 + 5 \text{ Yr. Change in Equity})$ .

(c) (a) x (b).

**REMOVE ILLOGICAL ROE RESULTS**

**DIVIDEND YIELD**

<u>Company</u>	(a) <u>Yield</u>	(b)								
		<u>Yield Based on</u>			<u>Yield Based on</u>			<u>Yield Based on</u>		
		<u>Past 10 Years Growth in:</u>			<u>Past 5 Years Growth in:</u>			<u>VL Projected Growth in:</u>		
		<u>EPS</u>	<u>DPS</u>	<u>BVPS</u>	<u>EPS</u>	<u>DPS</u>	<u>BVPS</u>	<u>EPS</u>	<u>DPS</u>	<u>BVPS</u>
1 Atmos Energy Corp.	2.3%	2.4%	2.3%	2.4%	2.4%	2.3%	2.4%	2.4%	2.4%	2.3%
2 Chesapeake Utilities	1.8%	1.9%	1.8%	1.9%	1.9%	1.8%	1.9%	1.9%	1.8%	1.9%
3 New Jersey Resources	3.0%	3.0%	3.0%	3.0%	3.1%	3.0%	3.0%	3.0%	3.0%	2.9%
4 NiSource, Inc.	2.7%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.7%	2.7%	2.8%
5 Northwest Natural Gas	3.2%	3.2%	3.3%	3.2%	3.1%	3.2%	3.2%	3.3%	3.2%	3.2%
6 South Jersey Industries	3.3%	3.4%	3.4%	3.4%	3.4%	3.5%	3.4%	3.3%	3.4%	3.5%
7 Southwest Gas Corp.	2.3%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.3%
8 Spire, Inc.	3.3%	3.4%	3.3%	3.4%	3.3%	3.4%	3.4%	3.4%	3.4%	3.4%
9 WGL Holdings, Inc.	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.5%
<b>Average</b>	<b>2.7%</b>									

(a) Average of dividend yields from Lorton Attachment BEL-5, page 2.

(b) Column (a) multiplied by one-half of corresponding growth rate from page 2 of this attachment.

REMOVE ILLOGICAL ROE RESULTS

GROWTH RATES

		(a)								
		Past 10 Years			Past 5 Years			Value Line Projected		
<u>Company</u>		<u>EPS</u>	<u>DPS</u>	<u>BVPS</u>	<u>EPS</u>	<u>DPS</u>	<u>BVPS</u>	<u>EPS</u>	<u>DPS</u>	<u>BVPS</u>
1	Atmos Energy Corp.	6.0%	2.5%	5.0%	8.0%	3.5%	5.5%	6.0%	6.5%	3.5%
2	Chesapeake Utilities	8.0%	3.5%	9.0%	10.0%	5.0%	8.0%	8.0%	5.5%	6.5%
3	New Jersey Resources	-1.0%	-0.5%	-0.5%	3.5%	0.5%	-1.0%	2.0%	1.0%	-4.0%
4	NiSource, Inc.	7.5%	7.0%	8.0%	6.5%	7.0%	6.5%	2.5%	3.5%	6.0%
5	Northwest Natural Gas	1.0%	3.5%	3.0%	-5.0%	3.0%	2.5%	6.0%	1.5%	1.5%
6	South Jersey Industries	7.0%	9.0%	8.0%	4.0%	9.5%	8.5%	3.0%	4.5%	11.5%
7	Southwest Gas Corp.	8.5%	6.0%	5.5%	10.0%	9.0%	5.5%	6.5%	8.0%	3.0%
8	Spire, Inc.	3.5%	3.0%	7.5%	1.5%	3.5%	8.5%	8.0%	5.0%	4.5%
9	WGL Holdings, Inc.	2.5%	3.0%	4.0%	2.5%	3.5%	2.5%	3.5%	3.0%	6.5%

(a) Lorton Attachment BEL-5, page 4. Past 5-Yr. EPS growth for Chesapeake Utilities from Attachment BEL-5, page 5.

**REMOVE ILLOGICAL ROE RESULTS**

**DCF RESULTS**

		(a)								
		Past 10 Years			Past 5 Years			Value Line Projected		
Company		EPS	DPS	BVPS	EPS	DPS	BVPS	EPS	DPS	BVPS
1	Atmos Energy Corp.	8.4%	4.8%	7.4%	10.4%	5.8%	7.9%	8.4%	8.9%	5.8%
2	Chesapeake Utilities	9.9%	5.3%	10.9%	11.9%	6.8%	9.9%	9.9%	7.3%	8.4%
3	New Jersey Resources	n/a	n/a	n/a	6.6%	3.5%	n/a	5.0%	4.0%	n/a
4	NiSource, Inc.	10.3%	9.8%	10.8%	9.3%	9.8%	9.3%	5.2%	6.2%	8.8%
5	Northwest Natural Gas	4.2%	6.8%	6.2%	n/a	6.2%	5.7%	9.3%	4.7%	4.7%
6	South Jersey Industries	10.4%	12.4%	11.4%	7.4%	13.0%	11.9%	6.3%	7.9%	15.0%
7	Southwest Gas Corp.	10.9%	8.4%	7.9%	12.4%	11.4%	7.9%	8.9%	10.4%	5.3%
8	Spire, Inc.	6.9%	6.3%	10.9%	4.8%	6.9%	11.9%	11.4%	8.4%	7.9%
9	WGL Holdings, Inc.	4.9%	5.4%	6.4%	4.9%	5.9%	4.9%	5.9%	5.4%	9.0%
<b>Average (b)</b>		<b>10.0%</b>	<b>10.2%</b>	<b>9.9%</b>	<b>10.3%</b>	<b>11.4%</b>	<b>9.8%</b>	<b>9.6%</b>	<b>8.6%</b>	<b>8.5%</b>
<b>Group Average</b>		<b>9.8%</b>								
<b>Midpoint (c)</b>		<b>9.6%</b>	<b>10.4%</b>	<b>9.4%</b>	<b>9.9%</b>	<b>11.4%</b>	<b>9.9%</b>	<b>9.9%</b>	<b>8.9%</b>	<b>8.4%</b>
<b>Group Average</b>		<b>9.8%</b>								

n/a -- negative growth rate excluded from analysis.

(a) Sum of dividend yield for each corresponding growth rate (Attachment AMM-14, p. 1) and growth rate (Attachment AMM-14, p. 2).

(b) Excludes highlighted figures.

(c) Average of low and high values, excluding highlighted figures.

BEFORE THE  
INDIANA UTILITY REGULATORY COMMISSION

JOINT PETITION OF OHIO VALLEY GAS )  
CORPORATION AND OHIO VALLEY GAS, INC. )  
FOR (1) AUTHORITY TO INCREASE THEIR )  
RATES AND CHARGES FOR GAS UTILITY )  
SERVICE; (2) APPROVAL OF NEW SCHEDULES ) CAUSE NO. 44891  
OF RATES AND CHARGES; AND (3) APPROVAL )  
OF CHANGES TO THEIR GENERAL RULES AND )  
REGULATIONS APPLICABLE TO GAS UTILITY )  
SERVICE )

PETITIONERS' EXHIBIT SMK-R

REBUTTAL TESTIMONY

OF

S. MARK KERNEY  
VICE PRESIDENT AND CHIEF ADMINISTRATIVE OFFICER

ON BEHALF OF

OHIO VALLEY GAS CORPORATION  
OHIO VALLEY GAS, INC.

MAY 24, 2017

PREPARED REBUTTAL TESTIMONY OF S. MARK KERNEY

OHIO VALLEY GAS CORPORATION  
OHIO VALLEY GAS, INC.

CAUSE NO. 44891

1. Q. **WILL YOU PLEASE STATE YOUR NAME AND BUSINESS ADDRESS?**  
A. S. Mark Kerney, 111 Energy Park Drive, Winchester, Indiana.
2. Q. **BY WHOM ARE YOU EMPLOYED?**  
A. A Petitioner, Ohio Valley Gas Corporation (OVGC), in this joint proceeding with its wholly-owned subsidiary, Ohio Valley Gas, Inc. (OVGI). Petitioners in this Cause, OVGC and OVGI, are also referred to in my rebuttal testimony as "OVG".
3. Q. **WHAT IS YOUR POSITION WITH OVGC?**  
A. Vice President and Chief Administrative Officer.
4. Q. **ARE YOU THE SAME S.MARK KERNEY WHO OFFERED DIRECT TESTIMONY IN THIS CAUSE?**  
A. Yes, I am.
5. Q. **WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?**  
A. The purpose of my rebuttal testimony is to address all changes to OVG's requested revenue requirement as proposed by OUCC witnesses Farheen Ahmed, Debra Wilcox and Mark Grosskopf with which I disagree. Although OUCC witness Bradley Lorton's proposal that OVG should utilize a 9.0% cost of equity rate in its weighted average cost of capital calculation greatly impacts OVG's requested revenue requirement, OVG's cost of capital witness Adrien McKenzie will address in his rebuttal testimony Mr. Lorton's proposed cost of equity rate.
6. Q. **IN HER TESTIMONY, OUCC WITNESS AHMED REMOVED ALL OF THE PETITIONERS' REQUESTED RECOVERY OF THEIR COSTS TO TERMINATE THEIR DEFINED-BENEFIT PENSION PLAN. DO YOU AGREE WITH HER ELIMINATION OF THAT ADJUSTMENT?**

A. No, I disagree with both the removal of the adjustment and the ratemaking theory underlying Ms. Ahmed's recommendation.

**7. Q. WHAT REASON DID MS. AHMED PROVIDE IN HER TESTIMONY FOR HER PROPOSED DISALLOWANCE OF ANY RECOVERY OF THE PENSION TERMINATION EXPENSES FROM OVG'S PRO FORMA TEST YEAR OPERATING EXPENSES?**

A. Ms. Ahmed claims OVG has already recovered its pension plan termination expenses through rates approved in OVG's previous general rate case, Cause No. 44147, which utilized a test year ending June 30, 2011, and therefore should not be allowed to recover its 2016 termination expenses on an amortized basis or otherwise in the present rate proceeding, Cause 44891, which utilizes a test year ending June 30, 2016.

**8. Q. DO YOU AGREE WITH THE MS. AHMED'S RATIONALE FOR EXCLUDING OVG'S AMORTIZED 2016 PENSION PLAN TERMINATION EXPENSES?**

A. No, I do not. Ms. Ahmed ignored a prevailing ratemaking principle that OVG's new rates for the Cause No. 44891 proceeding are to be set based on OVG's pro forma operating expenses of its test year ending June 2016. Instead, Ms. Ahmed asks the Commission to review OVG's actual expenses prior to and during the test year in this case and compare those expenses to revenues it is presumed to have received over the years from the rates established in Cause No. 44147 that were based on a test year that ended some six years ago. Those rates became effective in December, 2012.

**9. Q. WHAT IS THE EFFECT OF MS. AHMED'S RATE MAKING PROCESS FOR THIS ISSUE?**

A. By requiring OVG to "reconcile" its recurring retirement plan expenses and its non-recurring pension plan termination expenses incurred since its last rate case against its purported rate recovery applicable to pension expense for the same period, Ms. Ahmed has attempted to practice retroactive "single-issue ratemaking" when no authority exists to do so. Additionally, in her reconciliation, Ms. Ahmed is applying the full amount of what was approved for recurring pension expense as if OVG had collected 100% of its total approved revenue each year since the approval of its last rate case, Cause 44147, while at the same time she excludes from her reconciliation

\$2,761,603 of expenses incurred by OVG for employee retirement benefits, as fully discussed in Question 12 below.

**10. Q. WHAT RATE MAKING PROCEDURES SHOULD BE USED TO DETERMINE THE APPROPRIATENESS OF INCLUDING PENSION PLAN TERMINATION EXPENSES IN OVG's REVENUE REQUIREMENT?**

- A. Pension plan termination expenses are a one-time non-recurring expense. A utility's prospective annual revenue requirement on which its new rates are based is generally derived from a test-year snapshot of its recurring expenses. However, prudently-incurred non-recurring expenses – especially those that ultimately benefit ratepayers as a result of lowering the utility's operating expenses – are eligible for recovery on an amortized basis over a set number of years.
- In this case, subsequent to OVG's last rate case OVG's management made the prudent change from a defined benefit to a defined contribution retirement plan in the face of escalating and unpredictable funding requirements. This decision was made so that management could better estimate and plan for the flow of contribution funds into the plan and better control OVG's retirement benefit costs. This decision also had the advantage of lowering and making more predictable the amount of retirement plan expenses to be charged to ratepayers. An additional benefit of the change in employee retirement plans is not requiring both the utility and the regulatory body to rely on the prediction abilities of the pension actuary when setting rates. Management of the utility could have decided not to terminate the pension plan, which would have incurred no termination cost but would result in continuing escalating pension expenses passed on to rate payers. This would allow the utility to continue to be made whole without the need to recover these one-time expenses. Because the utility would presumably be granted revenue recovery for future escalating recurring pension costs, it would have been the easiest decision to make. However, management was more prudent than to only look at the fastest, easiest and most profitable decision for the utility. Instead, OVG's management asked the question "What is the best outcome for our employees, our shareholders and our customers?" That decision-making process is one that should be encouraged rather than discouraged. Although Ms. Ahmed raised no



objection to the prudence of this management decision, if the Commission accepts her recommendation to disallow recovery of this prudently-incurred plan termination expense, it will send a signal that such management prudence will be penalized.

As a result of making a prudent long-term decision that is in the best interest of both its shareholders and its rate payers, the Petitioners are asking that this specific non-recurring expense be given separate treatment from its other test year expenses and be recovered over a five year period, the expected life of the Cause No. 44891 rate request.

**11. Q. DID MS. AHMED CONTEST THE ACCURACY OF THE ADDITIONAL EXPENSE OVG INCURRED TO FULLY FUND THE PENSION PLAN TERMINATION LIABILITY IN MAY 2016 OR THE EXPENSE OVG INCURRED FOR CONSULTANT SERVICES TO TERMINATE AND LIQUIDATE THE PENSION PLAN DURING AND SUBSEQUENT TO THE TEST YEAR?**

A. No, she did not.

**12. Q. YOU MENTIONED IN QUESTION 6, ABOVE THAT YOU DISAGREED WITH THE METHODOLOGY USED BY MS. AHMED IN HER CALCULATION. CAN YOU EXPLAIN THAT DISAGREEMENT?**

A. I can. Ms. Ahmed's reconciliation calculation is significantly flawed. Ms. Ahmed claimed in her testimony that OVG has over recovered its total pension expense, including the pension termination funding expenses incurred in 2016, by \$1,496,069 since its last rate case, Cause No. 44147, when in fact, OVG has under recovered its total pension plan expenses by \$1,219,662 using her "reconciliation" approach. As a threshold matter, if OVG had under-recovered any given category of its expenses since its last rate case, it would not be entitled to go back prior to the test year in this Cause to make up the difference in this rate case.

As described in her testimony and illustrated in Attachment SMK-R (Schedule B) to my rebuttal testimony, Ms. Ahmed multiplied OVG's approved rate recovery of \$797,304 annually for recurring pension plan expense in its previous rate case by 4.5 years representing an estimated rate recovery period of January 2013 through June 2017. Ms. Ahmed compared the total purported rate recovery of \$3,587,868, to OVG's recurring pension expense plus pension plan termination

expense totaling \$2,091,799 for the same period to derive her \$1,496,069 result (Attachment SMK-R, Schedule B, Column H, Line 1).

In her reconciliation, Ms. Ahmed understated OVG's total pension plan contribution expenses incurred. OVG's pension contribution expenses during the 18 months of July 2011 through December 2012 - the period between its test year end for Cause No. 44147 and the month those rates became effective – totaled \$1,179,415. Ms. Ahmed excluded these substantial pension contribution expenses from her reconciliation because the expenses were incurred prior to OVG's rate relief taking effect. Although OVG did not begin recovering pension expenses through its new rates approved under Cause No. 44147 until December 10, 2012, OVG continued making cash contributions to its pension plan and these expenses must be included in any purported "reconciliation."

Ms. Ahmed excluded from her reconciliation OVG's pension plan termination consultant expenses totaling \$172,958 incurred during and after its Cause No. 44891 test year ending June 30, 2016 to assist OVG in the termination and liquidation of its defined benefit pension plan. These termination consultant expenses are appropriate, recoverable pension termination expenses and must be included. Again, her proposed exclusion of these termination consultant expenses has nothing to do with the accuracy of the amount or its prudence, but is solely based on her misplaced view that OVG must reconcile its pension funding expenses with rate recovery from its last rate case, and the termination consultant expenses were not plan funding expenses.

Ms. Ahmed also excluded from her reconciliation OVG's expense for its bi-weekly contributions made to its defined contribution 401k plan beginning January 2015, following the December 31, 2014 freeze date for employee benefits earned under OVG's former defined benefit pension plan. OVG's 401k plan contribution expenses for the period January 2015 through June 2017 will total \$1,409,277, and must be included in her reconciliation.

Additionally, Ms. Ahmed understated the estimated amount of OVG's rate recovery of pension expenses in her reconciliation by \$45,872, representing the partial month of December 2012 during which OVG's new rates under Cause No. 44147 were effective.

Attachment SMK-R (Schedule A) to my rebuttal testimony includes the above omissions from Ms. Ahmed's reconciliation. This revised reconciliation demonstrates that OVG's pension expenses incurred since its last rate case test year end, including the pension plan termination expense in 2016, have not already been recovered as Ms. Ahmed claims but are instead under recovered by \$1,219,662 (Attachment SMK-R, Schedule A, Column H, Line 1).

**13. Q. WHAT CHANGES TO OVG'S PAYROLL, PAYROLL TAX AND 401K EXPENSES DOES MS. AHMED PROPOSE MAKING, AND WHY DO YOU DISAGREE WITH THOSE PROPOSED CHANGES?**

A. Ms. Ahmed proposes changes to OVG's payroll, related payroll tax and related 401K plan expenses represent differences in pay rates (one lower and one higher) for two employees hired after OVG filed its case in chief for this Cause that differed from the estimated pay rates in OVG's pro forma payroll expense to fill those vacancies, as well as a downward adjustment to the salary of a management employee whose employment unexpectedly terminated November 2016 shortly before OVG filed its case in December 2016. During its discovery, the OUCC learned that OVG later determined the estimated minimum salary required to replace the terminated management employee would be approximately \$14,600 less than the amount included in OVG's case in chief filing. Ms. Ahmed's proposed adjusted 401k contribution expenses reflected the decrease in payroll expense and difference in contribution percentages applicable to the replaced management employee.

These proposed changes to OVG's payroll expense and related payroll tax and 401K contribution expenses were determined by the OUCC using updated information not available to OVG when preparing and filing its pro forma expenses as part of its case-in-chief in this cause. If, however, the OUCC's proposed changes are to be made to OVG's filing, then OVG should be allowed to update certain of its expenses to reflect information available after filing its case in chief. When OVG filed its case, 2016 property tax rates were not yet available from the taxing units to reflect in OVG's pro forma property tax expense, but became available during the first quarter of 2017. Updating OVG's pro forma property tax expenses using the 2016 rates rather than the 2015 rates

will increase this expense slightly, by \$2,565, to \$750,644 (Attachment SMK-R (Schedule C, Line 10)). Likewise, OVG's actual 2016 uncollectible account write-offs were not available at the time its case was filed in December 2016, and OVG was required to use the three-year average percentage of write-offs to customer revenues for years 2013-2015 instead of years 2014-2016 to develop its pro forma uncollectible accounts expense. Updating its pro forma uncollectible accounts expense for the more recent 2016 experience would increase OVG's expense slightly, by \$1,950, to \$110,810 (Attachment SMK-R (Schedule D, Line 7)).

14. **Q. WHAT OTHER ASPECT OF MS. AHMED'S TESTIMONY REGARDING OVG'S PRO FORMA 401K CONTRIBUTION EXPENSE DO YOU DISAGREE WITH?**

A. On page 8, line 6 of Ms. Ahmed's testimony regarding OVG's pro forma 401k contribution expense, she states "After freezing the defined benefit pension plan in January 2015, OVG started matching employees' contributions to their 401(k) plans." This is not a correct statement for several reasons. After freezing the benefits earned by employees under its defined benefit plan as of December 31, 2014, OVG established an account for each employee in its 401k plan not already having an account, and began making bi-weekly contributions to employees' accounts beginning January 2015. OVG's contributions do not require employee matching contributions; OVG's contributions to the accounts of all of its employees are in lieu of earning benefits under OVG's terminated and liquidated defined benefit pension plan.

15. **Q. WHAT CHANGE DOES MS. AHMED PROPOSE MAKING TO OVG'S PRO FORMA EXPENSE FOR ITS EMPLOYEE DEPENDENT SCHOLARSHIP PROGRAM BENEFIT, WHAT WAS HER REASON FOR HER PROPOSED CHANGE, AND WHY DO YOU DISAGREE WITH HER CHANGE?**

A. Ms. Ahmed proposed the elimination of 100% of OVG's pro forma expense, \$60,800, for its employee dependent scholarship program, an employee benefit included in OVG's employee compensation and benefit package consistently since the 1980s. Her reason for the elimination was because "payment of scholarships to OVG's employees' dependents does not benefit OVG's ratepayers. Scholarships are not necessary for the provision of gas utility service and should not be

included in Petitioner's revenue requirement." [Public's Exhibit No. 3, Pg 11, L 13.] This is an extremely weak reason, and furthermore has no validity. OVG's compensation and benefit package is critical to attracting and retaining competent and skilled employees and competing with other employers for those quality employees. These reasons certainly argue that this employee benefit expense is necessary for the provision of gas utility service and does benefit OVG's ratepayers. Only for the purpose of reaching a settlement on all issues with the OUCC in OVG's previous rate case, Cause No. 44147, did OVG agreed to remove its dependent scholarship program expenses from its revenue requirement. Although OVG did not receive rate funding for those expenses in its rates effective December 10, 2012, OVG continues to provide this highly regarded benefit to its employees.

16. **Q. MS. AHMED REMOVED VARIOUS MISCELLANEOUS EXPENSES FROM OVG'S REVENUE REQUIREMENT, CATEGORIZED BY FOUR TYPES. PLEASE DISCUSS YOUR POSITION ON EACH OF THOSE GROUPS AND MS. AHMED'S REASON FOR EXCLUDING THE EXPENSES.**

A. Ms. Ahmed removed the lobbying activity portion of OVG's dues expense to the American Gas Association and the Indiana Energy Association. I agree with Ms. Ahmed's \$1,702 adjustment. Ms. Ahmed eliminated \$2,531 of office supplies expense incurred for pension plan termination expenses for two reasons: 1) because they were non-recurring expenses and 2) for the same reason she provided for eliminating all other pension termination expense recovery [Question 7 above.]. I agree that the office expenses incurred for the pension plan termination are not recurring expenses, however they are prudently incurred expenses and should be added to the \$1,182,315 total of pension plan termination funding and consultant services expenses to be amortized and recovered in rates over a five year period for the reasons I provided above regarding the treatment of OVG's pension plan termination expenses.

Ms. Ahmed also removed \$1,329 of expenses incurred for employee "end of the year celebration(s)" which are actually year-end group dinners during which senior management reviews OVG's goals accomplishment, etc., and \$2,017 for "employee gifts". For both of these proposed changes, Ms. Ahmed provided the standard weak reasons for her proposed changes,

“These expenses provide no material benefit to ratepayers and are not necessary for the provision of gas utility service”. The end of year group dinner events are an important part of employee recognition and face-to-face management communication and motivation. These gatherings are especially important to OVG because its customer service offices and operations facilities are fairly far-flung over the southern two-thirds of Indiana. The “employee gifts” group of expenses are mostly expenditures for retiring employee lunches and retirement gifts. Additionally, this expense group includes small gifts of appreciation to two employees who developed and conducted OVG’s highly successful welder training program, avoiding the expenditure of more than \$30,000 for external training to develop these critical skills. These two groups of expenses do provide material benefit to ratepayers and are necessary for the provision of safe and reliable gas utility service at the lowest cost possible and, accordingly, should not be excluded from OVG’s revenue requirement.

17. **Q. OUCC WITNESS WILCOX PROPOSED CHANGES TO OVG’S EXPENSE ADJUSTMENT FOR TRANSPORTATION EQUIPMENT DEPRECIATION REFLECTING ANNUALIZED DEPRECIATION ON VEHICLES PURCHASED DURING THE PERIOD JULY 2015-SEPTEMBER 2016. PLEASE DISCUSS MS. WILCOX’S PROPOSED CHANGES.**

A. I agree that Ms. Wilcox’s proposed correction of the depreciation amounts for two specific months for two fully-depreciated vehicles is correct. I also agree that Ms. Wilcox’s correction to include in OVG’s expense adjustment the annual depreciation for three additional vehicles that would become fully depreciated during the July 2015 – September 2016 period is appropriate, but the amount of annual depreciation calculated by Ms. Wilcox on these three vehicles is not correct. Ms. Wilcox included depreciation for a period of more than 12 months when determining her adjustment to annualized depreciation. Ms. Wilcox’s depreciation amount for the three vehicles was overstated by \$1,994, as can be seen on her testimony Attachment DKW-2, Page 2. After adjustment for allocations to OVG’s non-O&M accounts of 28.79%, Ms. Wilcox’s depreciation expense reduction adjustment was overstated by \$1,420.

18. **Q. OUCC WITNESS GROSSKOPF PREPARED THE OUCC'S PROPOSED PRO FORMA REVENUE REQUIREMENT SCHEDULES USING THE PROPOSED ADJUSTMENTS OF THE OTHER OUCC WITNESSES. DO YOU AGREE WITH THE METHODOLOGY OF MR. GROSSKOPF'S REVENUE REQUIREMENT MODEL?**

A. I agree with the methodology of the accounting schedules included in Mr. Grosskopf's revenue requirements model except for his use of 6.00% as the Indiana income tax rate in schedules calculating OVG's pro forma Indiana income tax expense and revenue conversion factor. The 6.00% rate will not be effective until July 1, 2017, which is more than 12 months after OVG's test year end of June 30, 2016. Mr. Grosskopf has ignored the Commission's procedural schedule instructions for this Cause No. 44891 regarding the test year and accounting method which state, "The test year .....shall be the 12 months ended June 30, 2016, adjusted for changes that are fixed, known and measurable for ratemaking purposes and that occur within 12 months following the end of the test year." (Emphasis added.)

If OVG must use 6.00% as the Indiana income tax rate, then it should be allowed to update its filing for known changes becoming effective more than 12 months after the end of its test year, specifically its transportation equipment operating expenses should be increased for the \$.10 per gallon increase in the Indiana gasoline tax, also becoming effective July 1, 2017. The increase in OVG's operating expenses for the gas tax increase is \$5,539. (Attachment SMK-R (Schedule E))

19. **Q. WHAT OTHER ADJUSTMENTS DO YOU DISAGREE WITH INCLUDED IN MR. GROSSKOPF'S REVENUE REQUIREMENTS SCHEDULES?**

A. In addition to those proposed adjustments I've addressed above in Ms. Ahmed testimony and Ms. Wilcox's testimony and the Indiana income tax rate and cost of equity rate, there are calculations of items in Mr. Grosskopf's schedules where the exact amount will change based on other changes to the revenue requirement. Those items include IURC fees, utility receipts taxes and federal and state income taxes within the operating expenses and the working capital component within the rate base.

20. **Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**

A. Yes, it does.



**Attachment SMK-R (Schedule A)  
OVG's Reconciliation**

**Ohio Valley Gas Employee Retirement Plan Benefit Expenses Incurred v. Recovered Through June 30, 2017**

	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
	Rate Recovery Thru Present Rates		Retirement Plan Benefit Expense (D)		Recovered more than (less than) Expense			Cumulative Net (Under Recovery)
	Pension Plan	401k Plan	Pension Plan	401k Plan	Pension Plan	401k Plan	Total Net	Ascending
Jan-Jun 2017	\$398,652	\$0	\$0	\$290,000	\$398,652	(\$290,000)	\$108,652	(\$1,219,662) (D)
CY2016	\$797,304	\$0	\$1,182,315 (A)	\$577,643	(\$385,011)	(\$577,643)	(\$962,654)	(\$1,328,314)
CY2015	\$797,304	\$0	\$0	\$541,584	\$797,304	(\$541,584)	\$255,720	(\$365,660)
CY2014	\$797,304	\$0	\$514,825	\$0	\$282,479	\$0	\$282,479	(\$621,380)
CY2013	\$797,304	\$0	\$567,617	\$0	\$229,687	\$0	\$229,687	(\$903,859)
CY 2012	\$45,872 20days	\$0	\$810,824	\$0	(\$764,952)	\$0	(\$764,952)	(\$1,133,546)
Jul-Dec 2011	\$0	\$0	\$368,594	\$0	(\$368,594)	\$0	(\$368,594)	(\$368,594)
<b>TOTAL</b>	<b>\$3,633,740</b>		<b>\$3,444,175</b>	<b>\$1,409,227</b>				
Jan-Jun 2011	\$0	\$0	\$229,925 (B)	\$0				
CY 2010	\$0	\$0	\$229,576	\$0				
CY 2009	\$0	\$0	\$230,000	\$0				

**NOTES:**

(A) Includes \$172,958 of termination consultant expenses to terminate and liquidate DB pension plan.

(B) Present rates under Cause 44147 were based on TYE June 30, 2011

(D) Retirement plan benefit expense includes all retirement plan contributions expense made by OVG including DB pension plan expense beginning July 2011 and 401k (DC) plan expense beginning January 2015, as well as pension plan termination funding expenses and related consultant expenses. OVG has under-recovered its retirement plan benefit expense by \$1,219,662 as of June 2017.

OVG's contributions to its defined benefit pension plan (trust) were made 1957 through 1982. Due to stable and rising markets, contributions were not required again until beginning 2009.

OVG's first rate case since pre-1982 including pension plan funding expense recovery was Cause No. 44147, TYE June 30, 2011.

Authorized recovery of \$797,304 pension expense annually in rates approved in Cause 44147 began December 10, 2012.

Benefits earned under OVG's defined benefit pension plan were frozen effective December 31, 2014.

OVG contributions to employee 401k accounts (OVG's replacement employee retirement plan) began January 2015.

DB pension plan was liquidated - all assets of the pension trust were fully distributed (paid) - by June 17, 2016. The DB plan no longer exists.

**Attachment SMK-R (Schedule B)  
OUCC's Reconciliation**

**Ohio Valley Gas Employee Pension Plan Benefit Expenses Incurred v. Recovered Through June 30, 2017**

	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
	Rate Recovery Thru Present Rates		Pension Contributions Expense		Recovered more than (less than) Expense			Cumulative Net Over Recovery
	Pension Plan	401k Plan	Pension Plan	401k Plan	Pension Plan	401k Plan	Total Net	Ascending
Jan-Jun/ 2017	\$398,652	\$0	\$0		\$398,652	\$0	\$398,652	\$1,496,069
CY2016	\$797,304	\$0	\$1,009,357 (A)		(\$212,053)	\$0	(\$212,053)	\$1,097,417
CY2015	\$797,304	\$0	\$0		\$797,304	\$0	\$797,304	\$1,309,470
CY2014	\$797,304		\$514,825		\$282,479	\$0	\$282,479	\$512,166
CY2013	\$797,304		\$567,617		\$229,687	\$0	\$229,687	\$229,687
CY 2012								
Jul-Dec 2011								
<b>TOTAL</b>	<b>\$3,587,868</b>		<b>\$2,091,799</b>	<b>\$0</b>				
Jan-Jun 2011	\$0		\$229,925 (B)					
CY 2010	\$0		\$229,576					
CY 2009	\$0		\$230,000					

**NOTES:**

**(A)** Does not include \$172,958 of termination consultant expenses to terminate and liquidate DB pension plan.

**(B)** Present rates under Cause 44147 were based on TYE June 30, 2011

**Attachment SMK-R (Schedule C)**

OHIO VALLEY GAS CORPORATION  
 OHIO VALLEY GAS, INC.

Adjustment to General Tax Expense For Property Taxes

Ln No	(1)	(2)	CORP	INC
	Assessed value of property per Dept of Indiana Local Government Finance at March 1, 2016:			
1	Locally assessed Real Estate (Form 11s)	\$3,771,600	\$3,546,200	225,400
2	State Board Distributable (DLGF Sch A) (30% of original cost of Plant in Service at Dec 31, 2015)	<u>25,454,080</u>	<u>20,865,700</u>	<u>4,588,380</u>
3	Actual March 1, 2016 assessed value (based on Plant in Service at Dec 31, 2015)	29,225,680	24,411,900	4,813,780
	Add: Additional Assessment due to 2016 Plant additions:			
4	Net Plant in Service additions January 1, 2016 - Sept 30, 2016	5,026,083	4,734,127	291,956
5	CWIP at Sept 30, 2016 (CWIP will be in service by June 30, 2017)	<u>557,896</u>	<u>552,469</u>	<u>5,427</u>
6	Total Plant additions	5,583,979	5,286,596	297,383
7	30% of January -Sept 2016 Total Plant additions (Petitioner is subject to 30% original cost floor)	<u>1,675,194</u>	<u>1,585,979</u>	<u>89,215</u>
8	Proforma assessed value at September 30, 2016 (L3 + L6)	30,900,874	25,997,879	4,902,995
9	Current weighted average tax rate based on known rates (2015 Payable 2016 bills) (L20)	<u>\$0.024209</u>		
10	Calculated property taxes on 2016 assessed valuation (L8 * L9)	748,079		
11	Less: property taxes on non-utility property	<u>4,795</u>	4,795	0
12	Property taxes on utility property	743,284		
13	Add: 2016 ditch assessments	<u>513</u>	513	0
14	Total adjusted property taxes	743,797		
15	Less: property tax expense per books for year ending June 30, 2016	<u>696,872</u>	(Acct: 408.1 - Indiana only)	
16	Proforma adjustment to property tax expense	<u>\$46,925</u>		<u>\$49,490</u>
17	<b>2015 Payable 2016 weighted average tax rate:</b>			
18	Total 2015 taxes payable 2016	\$686,737	\$576,383	110,354
19	Total March 1, 2015 assessed valuation	\$28,367,080	\$23,616,550	4,750,530
20	Weighted average tax rate (per \$100 assessed value)	\$0.024209	\$0.024406	\$0.023230
	<b>2016 payable 2017 weighted average rate:</b>			
		\$705,782	\$593,447	112,335
		\$29,054,210	\$24,240,930	4,813,280
		<b>\$0.024292</b>		

30,900,874
<b>\$0.024292</b>
Increase
<b>750,644      2,565</b>

OHIO VALLEY GAS CORPORATION  
 OHIO VALLEY GAS, INC

Adjustment to Reflect Normalized Uncollectible Accounts Expense

Ln No	(1)	(2)	(3)	(4)	(5)
		Total	2016	2015	2014
1	Uncollectible Accounts (actual write-offs; calendar year end)	347,083	73,753	124,772	148,558
	Operating Revenues (calendar year)				
2	CORP	87,326,903	25,552,418	28,968,258	32,806,227
3	INC	14,566,996	4,161,219	4,727,861	5,677,916
4	Total	101,893,898	29,713,636	33,696,119	38,484,143
5	Percentage of Uncollectibles to Operating Revenues	0.341%	0.248%	0.370%	0.386%
6	Proforma Present Rate Revenues including est'd gas costs (Sch 34, L7)	32,495,527			
7	Proforma Uncollectibles Expense (L5*L6)	110,810			
8	Test Year Uncollectibles Expense Acct 904	<u>99,897</u>			
9	Proforma adjustment to Uncollectibles Expense	<u><u>\$10,913</u></u>			

Ohio Valley Gas Corporation (Cause No. 44891)  
 Additional Expense for \$.10/Gal Increase in Indiana Gas Tax  
 Effective July 1, 2017

**Attachment SMK-R (Schedule E)**

2016 Gas Purchases (Gallons)		2016 Gas Purchases (Gallons)	
Vehicle #	gallons of gas	Vehicle #	gallons of gas
Source: monthly vehicle ledger -2016			
103	334.60	510	252.90
104	1401.40		
109	818.60	514	275.40
110	212.80	515	877.00
111	432.00	516	51.00
113	1947.90	517	578.60
116	940.70	519	1078.10
123	2175.30	521	1739.00
124	627.40	522	1762.60
201	438.20	524	494.90
		525	468.90
203	601.70	601	279.10
204	452.50	602	893.40
208	1096.30	604	225.40
209	334.30	605	114.30
		606	103.00
211	260.80	607	284.40
212	1788.80	608	257.20
213	363.40	609	436.50
216	1681.90	610	79.30
218	357.00	611	236.70
219	987.60		
220	906.00	614	45.60
221	81.10	615	241.30
222	202.10	616	719.10
226	823.10	617	1142.80
229	1406.00	618	295.80
236	948.70	620	1335.30
401	334.60	621	180.40
402	606.80		
408	2207.30	650	202.60
409	158.40	901	644.70
410	1585.30	902	
411	738.60		
412	66.50	904	594.70
413	304.30	905	1340.50
414	0.00	906	1361.10
415	237.30		
416	972.30		
417	724.10	910	140.00
418	0.00	911	652.00
419	299.50	912	323.00
420	1217.80	913	320.00
422	788.30	914	1037.50
423	1940.30		
429	883.80	916	497.10
430	1990.60	917	140.00
431	898.60	919	499.00
432	2511.70	920	1949.60
439	607.70	922	34.20
440	1495.80	923	1449.10
454	1240.60	930	1619.70
455	1274.70	931	2110.60
501	291.00	932	1132.70
503	1555.00	939	93.00
508	587.30		
509	53.00	Sub-total B	30,589.10
Sub-total A	47,191.40	<b>Sub totals A+B</b>	77,780.50
		<b>Tax increase/gal</b>	\$0.10
		Additional operating costs	\$7,778.00
		Clearing % to ops expenses (see Sch 15)	71.22%
		Additional operating expense	<b>\$5,539.00</b>