

**BEFORE THE PENNSYLVANIA PUBLIC  
UTILITY COMMISSION**

<b>PENNSYLVANIA PUBLIC UTILITY COMMISSION</b>	:	
	:	
	:	
<b>v.</b>	:	<b>DOCKET NO. R-2020-3018835</b>
	:	
<b>COLUMBIA GAS OF PENNSYLVANIA, INC.</b>	:	

**DIRECT TESTIMONY OF  
KEVIN W. O'DONNELL, CFA**

**ON BEHALF OF  
OFFICE OF CONSUMER ADVOCATE**

**July 28, 2020**

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1           **I. INTRODUCTION**

2           **Q. PLEASE STATE YOUR NAME, POSITION, AND BUSINESS ADDRESS**  
3           **FOR THE RECORD.**

4           A. My name is Kevin W. O'Donnell. I am President of Nova Energy Consultants, Inc.  
5           My business address is 1350 SE Maynard Rd., Suite 101, Cary, North Carolina  
6           27511.

7  
8           **Q. ON WHOSE BEHALF ARE YOU PRESENTING TESTIMONY IN THIS**  
9           **PROCEEDING?**

10          A. I am testifying on behalf of the Pennsylvania Office of Consumer Advocate (OCA).  
11          The OCA represents consumers before the Pennsylvania Public Utility  
12          Commission (the Commission).

13  
14          **Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND**  
15          **RELEVANT EMPLOYMENT EXPERIENCE.**

16          A. I have a Bachelor of Science in Civil Engineering from North Carolina State  
17          University and a Master of Business Administration from Florida State University.  
18          I earned the designation of Chartered Financial Analyst (CFA) in 1988. I have  
19          worked in utility regulation since September 1984, when I joined the Public Staff  
20          of the North Carolina Utilities Commission (NCUC). I left the NCUC Public Staff  
21          in 1991 and have worked continuously in utility consulting since that time, first  
22          with Booth & Associates, Inc. (until 1994), then as Director of Retail Rates for the

1 North Carolina Electric Membership Corporation (1994-1995), and since then in  
2 my own consulting firm.

3 I have been accepted as an expert witness on rate of return, cost of capital,  
4 capital structure, cost of service, rate design, and other regulatory issues in general  
5 rate cases, fuel cost proceedings, and other proceedings before the North Carolina  
6 Utilities Commission, the South Carolina Public Service Commission, the  
7 Wisconsin Public Service Commission, the Virginia State Commerce Commission,  
8 the Minnesota Public Service Commission, the New Jersey Board of Public  
9 Utilities, the Colorado Public Utilities Commission, the District of Columbia Public  
10 Service Commission, and the Florida Public Service Commission. In 1996, I  
11 testified before the U.S. House of Representatives' Committee on Commerce and  
12 Subcommittee on Energy and Power, concerning competition within the electric  
13 utility industry. Additional details regarding my education and work experience are  
14 set forth in **Appendix A** to my answering testimony.

15  
16 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**  
17 **PROCEEDING?**

18 A. The purpose of my testimony in this proceeding is to present my findings and  
19 recommendations to the Commission as to the proper rate of return to allow  
20 Columbia Gas of Pennsylvania, Inc. (*i.e.*, "Columbia Gas" or "the Company") in  
21 the current proceeding.

22

1 **Q. WHAT RATE OF RETURN IS COLUMBIA GAS REQUESTING AS PART**  
 2 **OF THIS PROCEEDING?**

3 A. According to the testimony of Columbia Gas' Witness Paul R. Moul, Columbia  
 4 Gas is seeking an overall rate of return of 7.98% based on the capital structure and  
 5 cost rates as set forth in **Table 1** below.

6 **Table 1: Columbia Gas Requested Cost of Capital<sup>1</sup>**

Component	Ratio (%)	Cost Rate (%)	Wgtd. Cost Rate (%)
Long-Term Debt	42.22%	4.70%	1.98%
Short-Term Debt	3.59%	2.06%	0.07%
Total Debt	45.81%	4.48%	2.05%
Common Equity	54.19%	10.95%	5.93%
<b>Total Capitalization</b>	<b>100.00%</b>		<b>7.98%</b>

7  
 8 **Q. DO YOU AGREE WITH COLUMBIA GAS' RATE OF RETURN**  
 9 **REQUEST?**

10 A. No. I disagree with Columbia Gas' requested capital structure and its return on  
 11 equity.

12  
 13 **Q. PLEASE SUMMARIZE YOUR PRIMARY RECOMMENDATIONS IN**  
 14 **THIS CASE.**

15 A. My recommendations in this case are as follows:

<sup>1</sup> Witness Moul Pre-Filed Direct Testimony, page 2: line 2.

- 1           • The proper return on equity on which to set rates for Columbia Gas in this
- 2           proceeding should be in the range of 8.00% to 9.00% based upon my
- 3           recommended capital structure;
- 4           • The proper capital structure to use in this proceeding is 50.00% common
- 5           equity and 50.00% long-term debt;
- 6           • The proper embedded cost of debt to use in this proceeding is the Columbia
- 7           Gas of Pennsylvania’s debt cost as of March 31, 2020, which is 4.49%
- 8           (comprised of a short-term debt cost rate of 2.06% and a long-term debt cost
- 9           rate of 4.70% based on a debt ratio of 50%)<sup>2</sup>;
- 10          • My recommended capital structure and ROE is as follows:

**Table 2:**           OCA Recommended Overall Rate of Return

Component	Ratio (%)	Cost Rate (%)	Wgtd. Cost Rate (%)
Debt	50.00%	4.49%	2.25%
Common Equity	50.00%	8.50%	4.25%
<b>Total Capitalization</b>	<b>100.00%</b>		<b>6.50%</b>

- 13
- 14          • The return on equity recommended by Witness Moul for Columbia Gas of
- 15          10.95% is excessive, unreasonable, and not indicative of current market
- 16          conditions;
- 17          • The Coronavirus pandemic has dampened both near and long-term growth
- 18          prospects for gas utilities such as Columbia; and

---

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

- 1                   • The 20-basis point adder for “exemplary management” as posited by  
2                   Witnesses Moul and Huwar is not supported and not warranted, especially  
3                   in light of the economic crisis tied to the Coronavirus pandemic.

1           **II.    CURRENT STATE OF THE FINANCIAL MARKETS**

2   **Q.    HOW HAS THE DEBT MARKET FOR COLUMBIA GAS CHANGED**  
3   **SINCE THE COMPANY’S LAST RATE CASE?**

4   A.    The Company’s last rate case was in 2018. The Company made the rate filing on  
5   March 16, 2018 and the Commission approved the rate settlement on December 6,  
6   2018.<sup>3</sup> Long-term interest rates have fallen over the past year. In **Chart 1** below, I  
7   have provided the change in the 30-year US Treasury bonds since the previous rate  
8   case (*i.e.*, December 6, 2018 – July 17, 2020).

9           Over the previous year, on July 17, 2019, the yield on 30-year US Treasury  
10   bonds was 2.57%. As of July 17, 2020, the yield on 30-year US Treasury bonds  
11   was 1.33%, which equates to a decrease of 124-basis points in the yield on 30-year  
12   US Treasury bonds. The maximum value over this period was 2.61%, the average  
13   value was 1.89%, and the minimum value was 0.99%. Refer to **Chart 1** below for  
14   further details on the yield on 30-year US Treasury Bonds subsequent to the  
15   previous rate case.

16  
17  
18  
19  
20  
21  

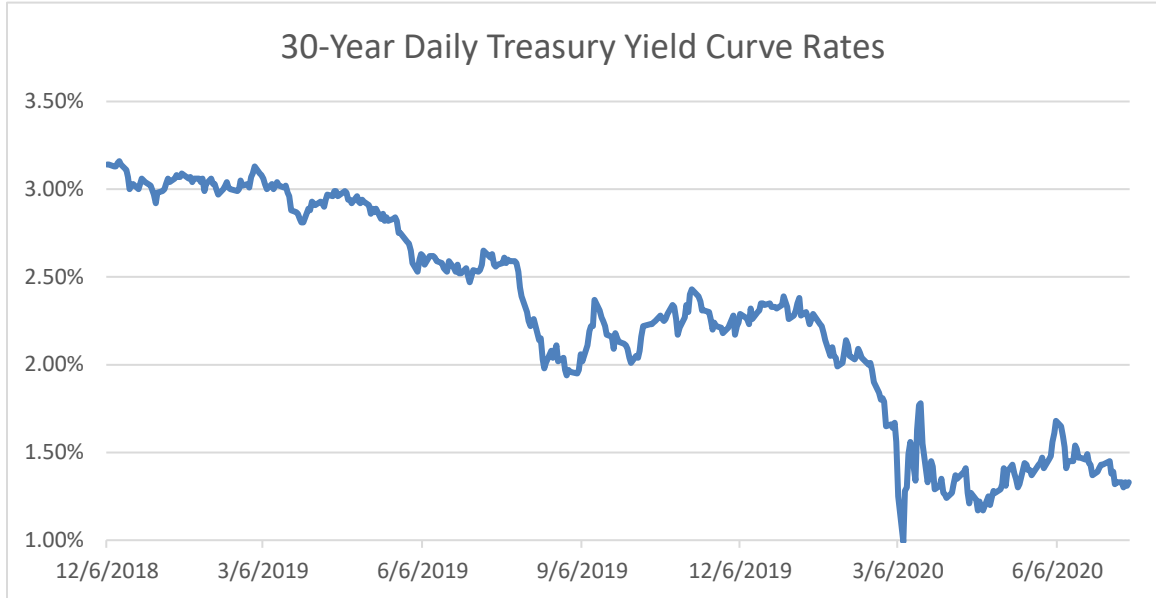
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<sup>3</sup> Pa. P.U.C. v. Columbia Gas of Pennsylvania, Docket No. R-2018-2647577, Opinion and Order (Dec 6, 2018).



1

**Chart 1:** Yield on 30-Year US Treasury Bonds



2 **Source:** Treasury.gov: Date Accessed July 20, 2020.<sup>4</sup>

3

4 **Q. HOW HAS THE FEDERAL RESERVE CHANGED THE FEDERAL**  
 5 **FUNDS RATE DURING THE LAST 12 MONTHS?**

6 A. On September 19, 2019, the Federal Reserve decreased the Federal Funds target  
 7 range to 1.75% from 2.0%.<sup>5</sup> On October 30, 2019, the Federal Reserve lowered the  
 8 target federal funds rate to 1.5% from 1.75%.<sup>6</sup> Subsequently, in its mid-December  
 9 meeting, the Federal Reserve chose not to change interest rates.<sup>7</sup> Then, on March

<sup>4</sup><https://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=yield>

<sup>5</sup> See Board of Governors of the Federal Reserve System, *Federal Reserve Issues FOMC Statement* (Sept. 18, 2019), available at:

<https://www.federalreserve.gov/newsevents/pressreleases/monetary20190918a.htm>.

<sup>6</sup> See Board of Governors of the Federal Reserve System, *Federal Reserve Issues FOMC Statement* (Oct. 30, 2019), available at:

<https://www.federalreserve.gov/newsevents/pressreleases/monetary20191030a.htm>.

<sup>7</sup> See Board of Governors of the Federal Reserve System, *Federal Reserve Issues FOMC Statement* (Dec. 11, 2019), available at:

<https://www.federalreserve.gov/newsevents/pressreleases/monetary20191211a.htm>.

1 3, 2020, the Federal Reserve decreased the Federal Funds rates 50-basis points to a  
2 targeted range of between 1% and 1.25% in response to recent market conditions.<sup>8</sup>  
3 Finally, on March 15, 2020 in response to the Coronavirus outbreak and the  
4 disruptions to economic activity in this country across the globe, the Federal  
5 Reserve reduced the Federal Funds rate to .25%.<sup>9</sup>

6 The first few items noted in the above paragraph that occurred during  
7 2019 were the result of the Federal Reserve perception that the economy was in an  
8 inflationary state and attempting to adjust the Federal Funds Rate accordingly.  
9 However, the sharp decline in the Federal Funds Rate that occurred during March  
10 2020 was the result of the Federal Reserve's reaction to the Coronavirus pandemic.  
11 In this circumstance, due to the drastic shift in the country's economic outlook,  
12 many individuals were looking for relative safe harbors for which to invest their  
13 money with the turbulence felt in the stock markets. Accordingly, prices for bonds  
14 were bid up, and the long-term yields and interest rates have also decreased as  
15 exhibited above in **Chart 1**.

16  
17 **Q. DOES THIS MEAN THAT THE COST OF CAPITAL HAS DECREASED**  
18 **FOR COMPANIES LIKE COLUMBIA GAS?**

19 A. Yes. The Federal Funds Rate represents the interest rate at which banks borrow  
20 short-term money. The decrease in the Federal Funds Rate contributed to the sharp

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<sup>8</sup> <https://www.cnbc.com/2020/03/03/heres-what-this-surprise-fed-rate-cut-means-for-you.html>

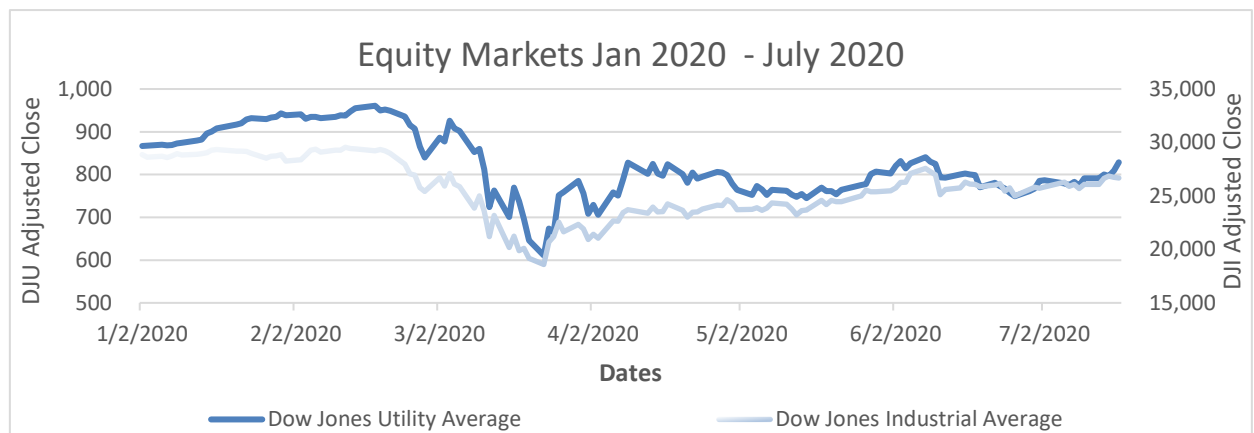
<sup>9</sup> See Board of Governors of the Federal Reserve System, *Federal Reserve Issues FOMC Statement* (Mar. 15, 2020), available at:  
<https://www.federalreserve.gov/newsevents/pressreleases/monetary20200315a.htm>

1 decline as seen within the yield on 30-year US Treasury rates as shown in **Chart 1**  
 2 above.

3  
 4 **Q. HOW HAS THE STOCK MARKET FOR UTILITIES CHANGED OVER**  
 5 **THE PAST YEAR?**

6 A. As shown in **Chart 2**, which is a double y-axis graph, below, the Dow Jones Utility  
 7 Average (DJUA) has fallen approximately 4.41% since the start of 2020, as  
 8 compared to the Dow Jones Industrial Average decrease of 7.61% over the same  
 9 period. This lesser decrease in equity prices for utilities can be attributed to the fact  
 10 that utilities are needed to provide an essential service whereas a large swath of the  
 11 economy has been shut down due to the Coronavirus.

12  
 13 **Chart 2: DJIA to DJUA Comparison**



14 **Source:** Yahoo Finance Date Accessed: July 20, 2020<sup>10</sup>

<sup>10</sup> <https://finance.yahoo.com/quote/%5EDJU/components/>

1 On April 29, 2020, the S&P Global Market Intelligence published an article entitled  
 2 “Utility sector ‘far and away’ least impacted by EPS estimate cuts.”<sup>11</sup> The article  
 3 provides the following observation:

4 *The S&P 500 utility sector has “far and away” experienced the least*  
 5 *impact from earnings revisions since Feb. 28, the corporate bond*  
 6 *research firm found. Despite market turmoil and the ongoing*  
 7 *economic downturn, analysts have only cut earnings per share*  
 8 *expectations for stocks in the utility sector by an average 1% for*  
 9 *2020 and 2021, according to CreditSights.*

10  
 11 *By comparison, consumer staples, the next least-impacted sector,*  
 12 *saw an average 5% decrease to EPS estimates for both years.*  
 13 *Technology followed with a 9% estimate cut for 2020 and 2021.*

14  
 15 *CreditSights pulled the data to measure the consensus view that*  
 16 *utilities provide a safe harbor to investors. “Water is wet, the sun*  
 17 *will rise in the east and U.S. utilities are a defensive sector, but how*  
 18 *defensive? Very defensive,” CreditSights analysts Andrew DeVries*  
 19 *and Nick Moglia wrote in an April 29 research note.*<sup>12</sup>

20 **Q. WHY ARE UTILITY STOCKS PERFORMING RELATIVELY BETTER THAN**  
 21 **OTHER INVESTMENT SECTORS?**

22 A. Utilities have always been considered a safe harbor in a storm for investors. The  
 23 current pandemic is no different. The ability to recover uncollectible expenses  
 24 related, typically, to small usage customers to demand ratchets for larger customers  
 25 all combine to provide a safety net for utilities that simply do not exist in the larger  
 26 business world.

27 Economic activity has plummeted since the outbreak of Coronavirus and  
 28 the accompanying stay-at-home orders. For comparison purposes, the United

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<sup>11</sup> <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/utility-sector-far-and-away-least-impacted-by-eps-estimate-cuts-58358458>.

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

1 States' gross domestic product ("GDP") increased at an annual rate of 2.1% during  
2 the fourth quarter of 2019.<sup>13</sup> However, in the first quarter of 2020, the GDP  
3 decreased at an annual rate of 4.8%<sup>14</sup>, with additional market contractions expected  
4 throughout 2020 pending additional developments in relation to the Coronavirus  
5 pandemic.

6 While utilities might look at such a scenario and request higher ROE's from  
7 the associated regulatory commissions in an effort to provide a greater return to  
8 investors and to combat potential credit downgrades, this type of thinking does not  
9 recognize the position of ratepayers who must continue to make non-discretionary  
10 purchases, such as gas and electricity from the monopoly utility, regardless of the  
11 impact of the Coronavirus. In order to achieve that higher ROE for the utility, rates  
12 for consumers would also need to be increased to a sufficient level to earn the  
13 authorized ROE.

14 With many consumers at the residential, commercial, and industrial levels  
15 already struggling to pay their bills, unemployment levels spiking during 2020, and  
16 various businesses being shut down for extended periods of time, a utility seeking  
17 to raise rates to customers would only exacerbate adverse financial circumstances.  
18

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<sup>13</sup> <https://www.bea.gov/news/2020/gross-domestic-product-fourth-quarter-and-year-2019-advance-estimate>.

<sup>14</sup> <https://finance.yahoo.com/news/gdp-1q-2020-us-economic-activity-coronavirus-pandemic-155756514.html>.

1 **Q. WHAT RETURN ON EQUITY (ROE) DID THE COMPANY SEEK IN ITS**  
2 **2018 BASE RATE CASE AND WHAT WAS GRANTED BY THE**  
3 **COMMISSION?**

4 A. The Company sought a 10.95% ROE in the last rate case.<sup>15</sup> The case was settled,  
5 and no ROE was presented in the settlement approved by the Commission's  
6 December 6, 2018 order.<sup>16</sup>

7  
8 **Q. WHAT ROE IS THE COMPANY SEEKING IN THIS RATE CASE?**

9 A. In the current filing, the Company is seeking a 10.95% ROE, which includes a 20-  
10 basis point adder for "*exemplary performance of the Company's management.*"<sup>17</sup>

11  
12 **Q. DO YOU BELIEVE THE COMPANY'S REQUEST IN THIS CASE IS**  
13 **APPROPRIATE GIVEN THE CHANGE IN THE COST OF CAPITAL**  
14 **SINCE ITS LAST RATE CASE?**

15 A. No. The Company's proposed ROE and weighted cost of capital fail to adequately  
16 reflect that the cost of debt financing and equity financing has decreased since its  
17 last rate case. The failure to recognize the lower expected return on utility  
18 investments, as proposed by Witness Moul, cannot be supported.

19  
20 **Q. DOES COLUMBIA GAS' RATE CASE REQUEST REFLECT THE WIDE**  
21 **SWEEPING ECONOMIC MARKET TURMOIL SPURRED BY THE**  
22 **CORONAVIRUS PANDEMIC?**

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<sup>15</sup> Data obtained from snl.com, Date Accessed: July 20, 2020.

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

<sup>17</sup> Witness Moul Pre-Filed Direct Testimony, page 5: line 4.

1 A. No. The Company did adjust the timing of its base rate filing from March 2020 to  
2 April 24, 2020 based upon consideration of the Coronavirus pandemic. The  
3 Company filed after Pennsylvania Governor Wolf's March 16, 2020 Disaster  
4 Proclamation. The Coronavirus pandemic began to significantly impact financial  
5 markets in March 2020, as exhibited within the CNN article, "The Global  
6 Coronavirus Pandemic is Beginning," published on March 16, 2020.<sup>18</sup>

7 However, the content of the Company's base rate filing does not account  
8 for the impacts of the Coronavirus pandemic on its consumers or economic  
9 conditions. In particular, the Company's cost of capital request presented by Mr.  
10 Paul Moul is largely based on information through late 2019. The Company  
11 requests a return on equity (10.95%) at the same level it requested in its previous  
12 base rate case filed in early 2018, when there was no pandemic, no state-wide  
13 Disaster Proclamation, and no economic crisis. The Company's request includes  
14 20 basis points of ROE for shareholders as a reward for what the Company claims  
15 has been exemplary management. The Company made its rate filing with  
16 knowledge of the pandemic and scope of the Disaster Proclamation.

17 The Company's "business as usual cost of capital request" is not  
18 appropriate. As noted previously within this testimony in reference to the  
19 Coronavirus pandemic, investors generally would want to obtain a greater return  
20 for their willingness to invest in and hold common stocks. While granting the  
21 Company a higher ROE would ensure in theory that investors would see a higher

---

<sup>18</sup> <https://www.cnn.com/2020/03/16/economy/global-recession-coronavirus/index.html>

1 return, the consumers are going to bear the brunt of this by being required to pay  
2 increased rates during a time when the National GDP has been dramatically  
3 declining and when unemployment has been sharply increasing.

4  
5 **Q. HOW HAVE THE CAPITAL MARKETS FOR UTILITIES CHANGED AS**  
6 **A RESULT OF THE CORONAVIRUS PANDEMIC?**

7 A. As can be seen in **Chart 1** and **Chart 2** above, the Coronavirus pandemic has  
8 contributed to declining interest rates and equity markets. Businesses are closed  
9 and workers are staying home as the United States and world economies have  
10 slowed dramatically for months prior to efforts to begin phased reopening plans in  
11 various parts of the world. There is currently no definitive timetable for the re-  
12 opening of the economy, but the expectation is that economic indicators such as  
13 gross domestic product (GDP) and jobless claims will be extremely negative for  
14 the second and third quarters of 2020, with a rebound expected in the fourth quarter.  
15 While we note that there is expectation of the economy beginning to rebound by  
16 the end of 2020, there is no current expectation that the economy will fully recover  
17 anytime in the near-term.

18 As referenced within an interview with CBS 60 Minutes on May 13, 2020,  
19 Federal Reserve Chairman Jerome Powell noted the following regarding economic  
20 recovery:

21 *It may take a while. It may take a period of time. It could stretch through*  
22 *the end of next year...I will say that it's a reasonable assumption that the*  
23 *economy will begin to recover in the second half of the year, that*  
24 *unemployment will move down, that economic activity will pick up.... And I*  
25 *think it's a reasonable expectation that there'll be growth in the second half*



1                    *of the year. I would say though we're not going to get back to where we*  
2                    *were quickly. We won't get back to where we were by the end of the year.*  
3                    *That's unlikely to happen.*<sup>19</sup>  
4

5                    The above-stated drop in interest rates provides some benefits to utilities as interest  
6                    rates are currently very low. On April 2, 2020, S&P Global Intelligence published  
7                    an article entitled "*US utilities demonstrate access to capital with billions in debt*  
8                    *offerings*". This article described how utilities are tapping the current credit markets  
9                    to obtain low-cost debt as noted in the excerpt below:

10                    *Several utilities, including Xcel Energy and NextEra Energy Inc.*  
11                    *subsidiary Florida Power & Light Co., which issued \$1.1 billion in*  
12                    *first mortgage bonds, are "using the opportunity to take advantage*  
13                    *of attractive borrowing costs, so there does not appear to be an*  
14                    *inability to access capital," they said.*  
15

16                    *"Utilities are reporting that recent deals have been significantly (7x)*  
17                    *oversubscribed, highlighting that the capital markets are open for*  
18                    *investment grade-rated utilities," the analysts wrote. "At the same*  
19                    *time, we have also observed some utility companies that have fully*  
20                    *drawn their bank lines as a precaution to provide them with liquidity*  
21                    *in the event that markets seize up," such as Duke Energy Corp. and*  
22                    *American Electric Power Co. Inc.*<sup>20</sup>  
23

24                    In regard to equities, the decline in utility prices has caused an increase in dividend  
25                    yields but also a drop in expected growth rates. Also, on April 2, 2020, S&P Global  
26                    Intelligence published an article entitled "*Gas Utilities Tap Great Recession*  
27                    *Playbook, New Tools to Confront Coronavirus.*"

28                    *Utilities are bracing for a drop in gas volumes and electric power*  
29                    *load during the looming recession, just like they experienced in the*  
30                    *2007-2009 downturn. Once again, they are looking to take out*

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<sup>19</sup> <https://www.cbsnews.com/news/full-transcript-fed-chair-jerome-powell-60-minutes-interview-economic-recovery-from-coronavirus-pandemic/>

1 *costs, but new or expanded technologies and regulatory policies*  
2 *also give some utilities additional levers to pull.*<sup>21</sup>

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<sup>21</sup> <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/gas-utilities-tap-great-recession-playbook-new-tools-to-confront-coronavirus-57859955>

1           **III.   ECONOMIC AND REGULATORY POLICY**  
2           **GUIDELINES FOR A JUST AND REASONABLE RATE OF**  
3           **RETURN**

4   **Q.   PLEASE BRIEFLY DESCRIBE THE ECONOMIC AND REGULATORY**  
5           **POLICY CONSIDERATIONS YOU HAVE TAKEN INTO ACCOUNT IN**  
6           **DEVELOPING YOUR RECOMMENDATION CONCERNING THE JUST**  
7           **AND REASONABLE RATE OF RETURN THAT UTILITY COMPANIES**  
8           **SHOULD HAVE AN OPPORTUNITY TO EARN.**

9   A.   The theory of utility regulation assumes that public utilities perform functions that  
10           are natural monopolies. Historically, it was believed or assumed that it was more  
11           efficient for a single firm to provide a particular utility service than multiple firms.  
12           Even though deregulation for the supply of natural gas and generation of electric  
13           power and energy has occurred in recent years, delivery distribution and  
14           transmission of these products to end-use customers is still a monopolistic business  
15           and will, for the foreseeable future, be regulated. On this basis, state legislatures  
16           and state utility commissions establish exclusive franchised territories to public  
17           utilities, in order for these utilities to provide services more efficiently and at the  
18           lowest reasonable cost. In exchange for the protection within its monopoly service  
19           area, the utility is obligated to provide service that is adequate and non-  
20           discriminatory at just and reasonable rates.

21           This trade-off logically leads to the question - what constitutes a just and  
22           reasonable rate? The generally accepted answer is that a prudently managed natural

1 gas utility should be allowed to charge prices that allow the utility the opportunity  
2 to recover the reasonable and prudent costs of providing utility service and the  
3 opportunity to earn a just and reasonable rate of return on invested capital. The just  
4 and reasonable rate of return on capital should allow the utility, under prudent  
5 management, to provide adequate service and attract capital to meet future  
6 expansion needs in its service area. Since public utilities are capital-intensive  
7 businesses, the cost of capital is a crucial issue for utility companies, their  
8 customers, and regulators.

9 If the allowed rate of return is set too high, then consumers are burdened  
10 with excessive costs, current investors receive a windfall, and the utility has an  
11 incentive to overinvest. If the return is set too low, adequate service is jeopardized  
12 because the utility will not be able to raise capital on reasonable terms. As such,  
13 regulators are tasked with balancing the related interests of the interested parties  
14 (*i.e.*, the utility's equity investors, the utility itself, and the utility's customers at the  
15 varying residential, commercial, and industrial levels). This balancing act results in  
16 what regulators, analysts, and courts often refer to as setting rates within a "zone of  
17 reasonableness". Since every equity investor faces a risk-return tradeoff, the issue  
18 of risk is an important element in determining the just and reasonable rate of return  
19 for a utility.

20 As I previously referenced above, Columbia Gas of Pennsylvania filed this  
21 rate case on April 24, 2020, a time during which the country is in the midst of an  
22 economic recession spurred on by a pandemic the likes of which have not been seen  
23 in this country for over a century. Accordingly, what might have deemed as

1 constituting “just and reasonable” rates earlier on during 2020 may simply be  
2 construed as unreasonable today given the current economic climate.

3  
4 **Q. PLEASE EXPLAIN THE SIGNIFICANCE OF THE SUPREME COURT’S**  
5 ***HOPE AND BLUEFIELD DECISIONS.***

6 A. Regulatory law and policy recognize that utilities compete with other firms in the  
7 market for investor capital. The United States Supreme Court set the guidelines for  
8 a fair, just, and reasonable rate of return in two often-cited cases: *Bluefield Water*  
9 *Works and Improvement Co. v. Public Service Comm'n.* 262 U.S. 679; and the  
10 *Federal Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591 (1944).

11  
12 In the *Bluefield* case, the U.S. Supreme Court stated:

13 *A public utility is entitled to such rates as will permit it to earn a return*  
14 *upon the value of the property which it employs for the convenience of*  
15 *the public equal to that generally being made at the same time and in*  
16 *the same general part of the country on investments in other business*  
17 *undertakings which are attended by corresponding risks and*  
18 *uncertainties; but it has no constitutional right to profits such as are*  
19 *realized or anticipated in highly profitable enterprises or speculative*  
20 *ventures. The return should be reasonably sufficient to assure*  
21 *confidence in the financial soundness of the utility and should be*  
22 *adequate, under efficient and economical management, to maintain and*  
23 *support its credit, and enable it to raise the money necessary for the*  
24 *proper discharge of its public duties. (262 U.S. at 692)*

25  
26 In the above finding, the Court found that utilities are entitled to earn a return on  
27 investments of comparable risks and that corresponding return should be sufficient  
28 enough to support credit activities and to raise funds to carry out its mission.

29 In *Federal Power Commission v. Hope Natural Gas Company*, 320 U.S.  
30 591 (1944), the U.S. Supreme Court recognized that utilities compete with other

1 firms in the market for investor capital. Historically, this case has provided legal  
2 and policy guidance concerning the return which public utilities should be allowed  
3 to earn. In *Hope Natural Gas*, the U.S. Supreme Court stated that the return to  
4 equity owners (or shareholders) of a regulated public utility should be  
5 commensurate to returns on investments in other enterprises whose risks  
6 correspond to those of the utility being examined:

7 *[T]he return to the equity owner should be commensurate with returns*  
8 *on investments in other enterprises having corresponding risks. That*  
9 *return, moreover, should be sufficient to assure confidence in the*  
10 *financial integrity of the enterprise so as to maintain credit and attract*  
11 *capital. (320 U.S. at 603)*

1           **IV. DEVELOPMENT OF PROXY GROUP**

2           **Q. PLEASE DESCRIBE HOW YOU SELECTED A PROXY GROUP FOR**  
3           **ESTIMATING COLUMBIA GAS' RETURN ON EQUITY.**

4           A. The number of available gas utilities needed to develop a reasonably reliable  
5           comparable group is dwindling. Over the past several years, gas utilities, such as  
6           AGL Resources and Piedmont Natural Gas, have announced that they were being  
7           acquired by large electric utility holding companies. These acquisitions make sense  
8           for the electric utilities as they desire to grow their source of regulated earnings  
9           while, at the same time, gain control over natural gas infrastructure that allows them  
10          to control the distribution of natural gas, which expects to be the predominant fuel  
11          choice for many years to come.

12                     In regard to the composition of my proxy group, I've opted to use the full  
13          group of gas utilities compiled and followed by *Value Line*. As such, each of the  
14          companies included by Mr. Moul within his proxy group are also included within  
15          my own proxy group. However, in contrast to Mr. Moul, I did not remove UGI  
16          Corporation from my proxy group. My reasoning for this is detailed in the below  
17          Q&A.

18                     Additionally, unlike Mr. Moul, I have chosen to perform an analysis directly  
19          on NiSource. Columbia Gas is directly owned as a wholly owned subsidiary by  
20          NiSource Gas Distribution Group, which is itself a wholly owned subsidiary of  
21          NiSource, Inc. As such, I found it appropriate to perform a specific, singular  
22          analysis of NiSource, Inc. as it would provide the most directly observable link  
23          between any company within the comparable proxy group and Columbia Gas.

1           Mr. Moul also opted to include a non-utility comparable proxy group for  
2 comparison purposes to Columbia Gas within his Comparable Earnings Analysis  
3 as he noted that:

4                   *I have not used returns for utility companies in order to avoid the circularity*  
5                   *that arises from using regulatory-influenced returns to determine a*  
6                   *regulated return.*<sup>22</sup>  
7

8           I have chosen not to include a non-utility group within any of the analyses included  
9 within my testimony as, in my view, such non-regulated companies are not truly  
10 comparable to Columbia Gas and should not be examined in regard to the proper  
11 ROE to grant a regulated utility such as Columbia Gas. While utilities are in a sense  
12 “competing” against non-utilities strictly for the capital of investors looking to build  
13 their portfolio, only regulated utilities have the ability to seek regulatory relief as  
14 does Columbia Gas. Columbia Gas has a set of consumers at the residential,  
15 commercial, and industrial levels that are locked into purchasing natural gas service  
16 from Columbia Gas. If Columbia Gas feels that they need to increase their ROE in  
17 order to result in a greater overall Rate of Return, they have the ability to request  
18 regulatory relief through a rate case in an effort to increase rates to captive  
19 customers. Unregulated entities do not have the ability to ask for rate relief as did  
20 regulated utilities. Seeking rate relief is an integral part of the business model of a  
21 utility and is not a practice that is available to any such non-utilities.  
22

---

<sup>22</sup> Witness Moul Pre-Filed Direct Testimony, page 42: lines 10 – 12.



1 **Q. WHY DID YOU CHOOSE TO INCLUDE UGI CORP WITHIN YOUR**  
2 **COMPARABLE GROUP, WHILE MR. MOUL OMITTED THE**  
3 **COMPANY FROM HIS ANALYSIS?**

4 A. On page 4 of his testimony, Mr. Moul states that in developing his proxy group, he  
5 first began with the companies included in *Value Line's* Natural Gas Utility  
6 industry. However, he made an adjustment in that he excluded those companies that  
7 were not predominantly engaged in natural gas distribution (*i.e.*, UGI Corp).  
8 Specifically, he noted that he excluded “*UGI Corporation was removed due to its*  
9 *diversified businesses consisting of six reportable segments, including propane,*  
10 *two international LPG segments, natural gas utility, energy services, and electric*  
11 *generation.*”<sup>23</sup>

12 For context, UGI Corp. has a diversified business portfolio that, along with  
13 the natural gas utility, contains propane, international liquid propane gas (LPG),  
14 energy service, and electric generation. By comparison, Chesapeake Utilities,  
15 which Mr. Moul included in his proxy group, also operates a diverse set of  
16 businesses that includes natural gas distribution, natural gas transmission, electric  
17 distribution operations, propane distribution, propane wholesale marketing and  
18 natural gas marketing operations, and real estate operations.<sup>24</sup> As such, for  
19 consistency purposes, and in consideration of the fact that both companies are  
20 included by *Value Line* within their Natural Gas Utility Industry, I did not feel it

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<sup>23</sup> Witness Moul Pre-Filed Direct Testimony, page 4: lines 13 – 15

<sup>24</sup> Note that Chesapeake Utilities (CPK) as referenced throughout this testimony is not related to Chesapeake Energy (CHK), which recently declared bankruptcy.

1 appropriate to include one diverse company within my proxy group, while  
2 simultaneously excluding another.

3

4 **Q. PLEASE EXPLAIN WHY YOU PERFORMED A COST OF EQUITY**  
5 **ANALYSIS SEPARATELY ON NISOURCE.**

6 A. Columbia Gas is owned by NiSource. As the owner of Columbia Gas, NiSource  
7 therefore represents the most direct link to Columbia Gas and an analysis performed  
8 specifically on NiSource helps to provide a large body of knowledge of investor  
9 expectations.

1           **V.    CAPITAL STRUCTURE**

2   **Q.    WHAT IS A CAPITAL STRUCTURE AND HOW DOES IT IMPACT THE**  
3           **REVENUES THAT COLUMBIA GAS IS SEEKING?**

4    A.    The term “*capital structure*” refers to the relative percentage of debt, equity, and  
5           other financial components that are used to finance a company’s investments. A  
6           company’s capital structure typically includes some combination of three principal  
7           financing methods. The first method is to finance an investment with common  
8           equity, which essentially represents ownership in a company and its investments.  
9           Common equity is comprised of all investments from investors, including common  
10          stock, retained earnings, and additional paid in capital. Returns on common equity,  
11          which in part take the form of dividends to stockholders, are not tax deductible  
12          which, on a pre-tax basis alone, makes this form of financing about 21% more  
13          expensive than debt financing.

14                 The second form of corporate financing is preferred stock, which is  
15                 normally used to a much smaller degree in capital structures. Dividend payments  
16                 associated with preferred stock are not tax deductible.

17                 Corporate debt is the third major form of financing used in the corporate  
18                 world. There are two basic types of corporate debt: long-term and short-term. Long-  
19                 term debt is generally understood to be debt that matures in a period of more than  
20                 one year. Short-term debt is debt that matures in a year or less. Long-term debt and  
21                 short-term debt, both of which are “above the line” expenses for tax purposes,  
22                 represent liabilities on the company’s books that must be repaid prior to any

1 common stockholders or preferred stockholders receiving a return on their  
2 investment.

3  
4 **Q. HOW IS A UTILITY'S TOTAL RETURN CALCULATED?**

5 A. A utility's total return is developed by multiplying the component percentages of  
6 its capital structure represented by the percentage ratios of the various forms of  
7 capital financing relative to the total financing on the company's books by the cost  
8 rates associated with each form of capital and then totaling the results over all of  
9 the capital components. When these percentage ratios are applied to various cost  
10 rates, a total after-tax rate of return is developed. Because the utility must pay  
11 dividends associated with common equity and preferred stock with after-tax funds,  
12 the post-tax returns are then converted to pre-tax returns by grossing up the  
13 common equity and preferred stock dividends for taxes. The final pre-tax return is  
14 then multiplied by the Company's rate base in order to develop the amount of  
15 money that customers must pay to the utility for return on investment and tax  
16 payments associated with that investment.

17  
18 **Q. HOW DOES CAPITAL STRUCTURE IMPACT THIS CALCULATION?**

19 A. Costs to consumers are greater when the utility finances a higher proportion of its  
20 rate base investment with common equity and preferred stock versus long-term  
21 debt. However, long-term debt, which is first in line for repayment, imposes a  
22 contractual obligation to make fixed payments on a pre-established schedule, as  
23 opposed to common equity where no similar obligations exist.

1 **Q. WHY SHOULD THIS COMMISSION BE CONCERNED ABOUT HOW**  
2 **COLUMBIA GAS FINANCES ITS RATE BASE INVESTMENT?**

3 A. There are two reasons that the Commission should be concerned about how  
4 Columbia Gas finances its rate base investment. First, Columbia Gas' cost of  
5 common equity is higher than the cost of long-term debt, meaning that a relatively  
6 higher equity percentage will translate into higher costs to Columbia Gas'  
7 customers without any corresponding improvement in quality of service. Long-  
8 term debt is a financial promise made by the company and is carried as a liability  
9 on the company's books. Common stock is ownership in the company. Due to the  
10 contingent nature of an equity investment, common stockholders require higher  
11 rates of return to compensate them for the extra risk involved in owning part of the  
12 company versus having a more senior claim against the company's assets.

13 The second reason the Commission should be concerned about Columbia  
14 Gas' capital structure is due to the tax treatment of debt versus common equity.  
15 Public corporations, such as NiSource Inc. (the parent company of Columbia Gas),  
16 can deduct payments associated with debt financing. Corporations are not,  
17 however, allowed to deduct common stock dividend payments for tax purposes.  
18 All dividend payments must be made with after-tax funds, which are more  
19 expensive than pre-tax funds. The regulatory process allows utilities to recover  
20 reasonable and prudent expenses, including taxes, within their rates. Accordingly,  
21 if a utility is allowed to use a capital structure for ratemaking purposes that is top-  
22 heavy in common stock, customers will be forced to cover the higher income tax  
23 burden, which can result in unjust, unreasonable, and unnecessarily high rates.

1           Setting rates through the use of capital structure that is weighted too heavily to  
2           common equity violates the fundamental principles of utility regulation that rates  
3           must be just and reasonable and only high enough to support the utility's provision  
4           of safe, adequate, and reliable service at a fair price.

5  
6       **Q.    HOW DOES THE UTILITY'S SELECTION OF EQUITY VERSUS DEBT**  
7       **IMPACT RATEPAYERS?**

8       A.    Selecting the ratio of equity to debt is important. Entities in more competitive  
9           markets have a profit motive that provides an incentive for such entities to select  
10          the most efficient capitalization ratio. However, utilities operating in monopoly,  
11          rate-regulated service territories have an incentive to maximize the amount of  
12          common equity in their capital structure so as to increase rates and,  
13          correspondingly, the utility profit. Rate-regulated utilities should only be allowed  
14          to recover in rates a revenue requirement derived from a capitalization ratio that  
15          allows the utility to provide reliable service at the least cost. Therefore, finding the  
16          right balance between debt and equity is critical.

17                If a utility issues more common equity and less debt for a certain project,  
18                the rates could potentially be set at an unbalanced debt to equity level. This could  
19                result in the ratepayer paying higher rates to support a capital structure that is  
20                neither prudent nor reasonable to support the current credit rating or have adequate  
21                access to the capital markets. It is also important to recognize how rate levels affect  
22                economic development. The reality in today's economy is that economic  
23                development opportunities for large loads occurs in places where costs are lower.

1 A utility with high rates will, all else being equal, cause its service territory to lose  
2 out on economic development opportunities.

3 If, on the other hand, the utility incurs too much debt, the utility's  
4 capitalization ratios present excess financial risk to the capital markets, thereby  
5 driving up the costs required by the equity markets to compensate for the added  
6 risk. In this case, the consumer would also suffer harm because the cost it must pay  
7 the utility for accessing the capital markets is higher than it would pay using a less  
8 debt-leveraged capital structure.

9 One role of regulation is to balance the needs of the capital markets,  
10 including utility stockholders, with the needs of ratepayers. Either too much equity  
11 or too much debt can harm both the stockholders of the corporation as well as the  
12 consuming public. Careful study of the risks and costs of various capitalization  
13 ratios is important.

14

15 **Q. HAVE YOU REVIEWED THE CAPITAL STRUCTURE REQUESTED BY**  
16 **THE COMPANY IN THIS PROCEEDING?**

17 A. Yes, I have.

18

19 **Q. WHAT CAPITAL STRUCTURE IS COLUMBIA GAS PROPOSING IN**  
20 **THIS CASE?**

21 A. Columbia Gas has proposed the following capital structure:

22

1

**Table 3: Columbia Gas Requested Capital Structure<sup>25</sup>**

Component	Capital Structure Ratio (%)
Total Debt	45.81%
Common Equity	54.19%
<b>Total Capitalization</b>	<b>100.00%</b>

2

3 **Q. WHAT IS THE AVERAGE COMMON EQUITY RATIO OF THE**  
 4 **COMPANIES IN YOUR PROXY GROUP?**

5 A. **Table 4** below shows the average common equity ratio of each company in the  
 6 proxy group, as well as for NiSource (Columbia Gas' parent company).

7

**Table 4: Proxy Group Equity Ratio<sup>26</sup>**

Company	2019 Ratio
Atmos	62.00%
Chesapeake	56.10%
New Jersey Res	50.20%
NWNG	51.80%
OneGas	62.30%
South Jersey	40.80%
Southwest Gas	52.10%
Spire	55.00%
UGI Corp.	39.80%
<b>Average</b>	<b>52.23%</b>
NiSource	36.90%

<sup>25</sup> Witness Moul Pre-Filed Direct Testimony, page 2: line 2.

<sup>26</sup> *The Value Line Investment Survey*, May 29, 2020.



1 As can be seen in the table above, the average common equity ratio in the proxy  
2 group is 52.23%, and the equity ratio for NiSource (*i.e.*, the ultimate parent of  
3 Columbia Gas as previously referenced) is 36.90%, which are both below the  
4 requested equity ratio in this case of 54.19%.

5  
6 **Q. WHAT IS THE AVERAGE COMMON EQUITY RATIO GRANTED BY**  
7 **UTILITY REGULATORS ACROSS THE UNITED STATES?**

8 A. The average common equity ratio granted by regulators in 2018 to gas utilities was  
9 50.12% and in 2019 was 51.75%.<sup>27</sup>

10  
11 **Q. WHAT COMMON EQUITY RATIO HAS STATE REGULATORS ACROSS**  
12 **THE UNITED STATES GRANTED TO NATURAL GAS UTILITIES OVER**  
13 **THE PAST 15 YEARS?**

14 A. State regulators have been quite consistent in their rulings in natural gas cases over  
15 the past 15 years. From 2005 through 2019, common equity ratios have ranged from  
16 47.24% to 52.49%, with an average of 49.91%. If one were to evaluate this data  
17 over the previous 12 years, the average common equity ratio over this period would  
18 be 50.28%, the average ratio over the previous 10 years would be 50.58%, and the  
19 average ratio over the previous 8 years would be 50.57%. However, regardless of  
20 the period examined, the average common equity ratio granted by state regulators  
21 much more closely approximates a ratio of 50% rather than Columbia Gas' request

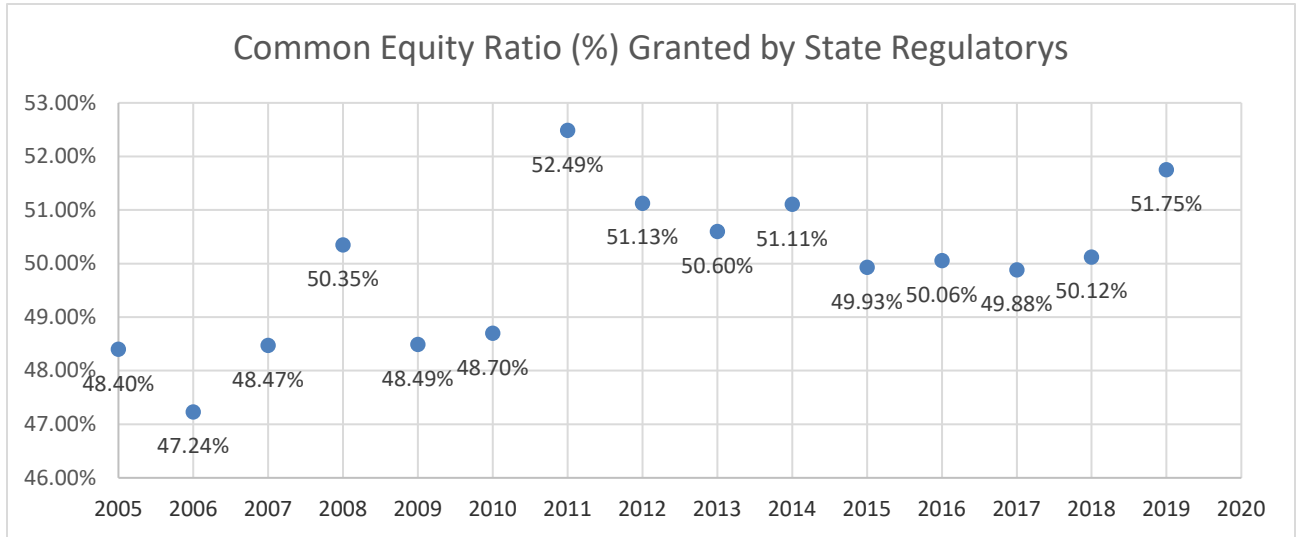
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<sup>27</sup> S&P Global Market Intelligence Rate Case Statistics; Date Range: 15 Years; Service Type: Natural Gas;  
Chart Items: Common Equity to Total Capital, Return on Equity; Date Accessed: July 20, 2020

1 of 54.19%. In **Chart 3** below I've presented the average annual common equity  
 2 ratio granted by state regulators for each year over the past 15 years.

3

4 **Chart 3:** Common Equity Ratio Granted by State Regulators (2005-2019)



5

6

7 **Q. PLEASE SUMMARIZE YOUR FINDINGS IN REGARD TO THE**  
 8 **REQUESTED EQUITY RATIO IN THIS CASE RELATIVE TO THE**  
 9 **EQUITY RATIO OF OTHER GAS UTILITIES.**

10 **A. Table 5** below provides a summary of how Columbia Gas' request in this case  
 11 compares to the average equity ratio of the proxy group companies, and the  
 12 average allowed equity ratio by state regulators across the country in 2019.

**Table 5: Common Equity Ratio Comparison**

Columbia Gas of Penn Eq Ratio Request	54.19%
OCA Eq Ratio Request	50.00%
2019 O'Donnell Proxy Group Eq Ratio Average	52.23%
2019 NiSource Eq Ratio	36.90%
2019 Average Regulator Granted Eq Ratio	51.75%
2005-2019 Average Regulator Granted Eq Ratio	49.91%

1

2 **Q. GIVEN THE ABOVE, DO YOU BELIEVE THAT THE CAPITAL**  
 3 **STRUCTURE PROPOSED BY COLUMBIA GAS IN THIS CASE IS**  
 4 **APPROPRIATE FOR RATEMAKING PURPOSES?**

5 A. No. The requested capital structure for Columbia Gas is not reasonable for  
 6 ratemaking purposes. Nothing in the make-up of Columbia Gas suggest that it  
 7 requires a high equity ratio in the range that they are requesting, which would  
 8 translate into lower financial risk, than any of the companies within the comparable  
 9 proxy group. Indeed, some of the companies in the proxy group are involved in a  
 10 wide array of different businesses that involve more business risk than the  
 11 distribution of natural gas within a monopoly service territory. As such, if anything,  
 12 the financial risk (as represented by the equity ratio) of the comparable group  
 13 should be higher, not lower than a traditional gas utility such as Columbia Gas.  
 14 Customers of Columbia Gas should not pay higher rates associated with a capital  
 15 structure that consists of so much common equity which, as previously discussed,  
 16 is much more expensive than debt.

17

1 **Q. WHAT CAPITAL STRUCTURE DO YOU RECOMMEND THIS**  
 2 **COMMISSION ADOPT FOR USE IN SETTING THE REVENUE**  
 3 **REQUIREMENT IN THIS CASE?**

4 A. My recommendation is the Commission employ a capital structure that contains an  
 5 equity ratio that is more equivalent to the common equity ratio granted by state  
 6 regulators across the country for 2019, the common equity ratio granted by state  
 7 regulators across the country over the previous 15-year period, and to the equity  
 8 ratio of the proxy group included above should one factor in the impact of NiSource  
 9 (50.70%). Specifically, my recommended capital structure and embedded cost of  
 10 debt is as follows:

11 **Table 6: OCA Recommended Capital Structure**

Component	Ratio (%)
Long-Term Debt	50.00%
Common Equity	50.00%
<b>Total Capitalization</b>	<b>100.00%</b>

12

13 **Q. HOW DID COLUMBIA GAS DEVELOP THEIR REQUESTED COMMON**  
 14 **EQUITY RATIO OF 54.19%?**

15 A. As outlined within Mr. Moul’s testimony:

16 *Since ratesetting is prospective, the rate of return should, at a*  
 17 *minimum, reflect known or reasonably foreseeable changes which*  
 18 *will occur during the course of the FPFTY (Fully Projected Future*  
 19 *Test Year). As a result, I will adopt the Company’s FPFTY capital*

1 *structure ratios of 42.22% long-term debt, 3.59% short-term debt,*  
2 *and 54.19% common equity at December 31, 2021.*<sup>28</sup>  
3

4 However, upon examination of Mr. Moul's testimony, the only substantiating  
5 discussion included as a basis for the decision to utilize the 54.19% common equity  
6 ratio is the following:

7 *The five-year common equity ratios, based on permanent capital were*  
8 *55.5% for CPA, 53.2% for the Gas Group, and 43.0% for the S&P Public*  
9 *Utilities. The Company's common equity ratio was fairly similar to the Gas*  
10 *Group, thereby indicating similar financial risk.*<sup>29</sup>  
11

12 From a purely quantitative perspective, Mr. Moul's testimony includes **Schedule 3**  
13 on page 4 of **Exhibit No. 400**. This schedule showcases the historical common  
14 equity ratios for Mr. Moul's proxy group. Within **Schedule 3** of Mr. Moul's  
15 **Exhibit No. 400**, he presents the average common equity ratios for his proxy group  
16 over the five-year historical period from 2014 through 2018 on a permanent capital  
17 and total capital basis. It is important to note that Mr. Moul's analysis, as described  
18 above, does not tell the complete picture in the analysis. As one can see as presented  
19 on **Schedule 3** on page 5 of his **Exhibit No. 400**, the common equity ratio of the  
20 Gas Group from 2014-2018 on a total capital basis is 47.9%, which is obviously  
21 well below my recommendation of a 50.00% common equity ratio.

22 Additionally, Mr. Moul's testimony includes **Schedule 5** on page 10 of  
23 **Exhibit No. 400**. This schedule simply shows the 54.19% equity ratio and sources  
24 the projection data included within the testimony as "*Investor-provided*

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<sup>28</sup> Witness Moul Pre-Filed Testimony, page 16: lines 19 – 22

<sup>29</sup> Witness Moul Pre-Filed Direct Testimony, page 13: lines 3 – 6

1           *Capitalization...Actual at November 30, 2019, Estimated at November 30, 2020,*  
2           *and Estimated at December 31, 2021*<sup>30</sup>, and also notes that this data was simply  
3           sourced as “*Company provided data*”<sup>31</sup>. There was flatly little or no substantive  
4           discussion provided by Mr. Moul within his testimony supporting his election to  
5           use 54.19% as the common equity ratio for Columbia Gas in comparison to the  
6           various ratios provided within his **Schedule 3 of Exhibit No. 400**.

7  
8       **Q.     WHAT IS THE DIFFERENCE BETWEEN A CAPITAL STRUCTURE**  
9       **BASED ON PERMANENT CAPITAL AND TOTAL CAPITAL?**

10      A.     Permanent capital excludes short-term debt whereas total capital includes short-  
11           term debt. Given that gas utilities are a definite seasonal business and that short-  
12           term debt is often replaced with long-term debt, I believe the more accurate  
13           comparison is by total capital, which includes short-term debt.

14  
15      **Q.     HOW DOES YOUR RECOMMENDED COMMON EQUITY RATIO**  
16      **DIFFER FROM MR. MOUL’S?**

17      A.     My recommended common equity ratio percentage of 50.00%, and Mr. Moul’s of  
18           54.19%, primarily differ in the data used to support our recommendations. I have  
19           utilized various percentages shown in **Table 5** above and have discussed in detail  
20           why I feel the above percentages would lead one to conclude that a 50.00%  
21           common equity ratio would be more appropriate for Columbia Gas. However,

---

<sup>30</sup> Schedule 5 of Mr. Moul’s Exhibit No. 400 (page 10 of 28)

<sup>31</sup> *Id.*

1 although his testimony does not provide any discussion as to why the 54.19% he  
2 recommends for Columbia Gas would be appropriate, Mr. Moul does present a five-  
3 year average of the common equity ratios for the companies within his proxy group  
4 from 2014 – 2018 within **Schedule 3** on page 4 of **Exhibit No. 400** as quantitative  
5 support that the reader is left to interpret on their own.

6 However, Mr. Moul excluded UGI Corp. from his comparable proxy group,  
7 but has left Chesapeake in his comparable proxy group, which I've discussed my  
8 disagreement with earlier in this testimony. Just in looking at the historical common  
9 equity ratios from 2018 and 2019 provided for UGI Corp. as published by *Value*  
10 *Line* of 37.90% and 36.90%<sup>32</sup>, respectively, if Mr. Moul had opted to include UGI  
11 Corp. within his proxy group, it would have led to a lower average common equity  
12 ratio.

13  
14 **Q. WHAT IS THE REASONING BEHIND NOT UTILIZING PROJECTED**  
15 **COMMON EQUITY RATIOS TO SUPPORT YOUR**  
16 **RECOMMENDATION?**

17 A. I have long maintained that the most accurate projection of future common equity  
18 ratios are the current common equity ratios. Most projections tend to set common  
19 equity at too high a value given the inherent subjectivity and erratic nature of where  
20 the common equity ratios may actually fall out in those future years.

21

---

<sup>32</sup> *The Value Line Investment Survey*, May 29, 2020

1 **Q. DO YOU AGREE WITH THE COMPANY'S ASSUMED COST OF DEBT?**

2 A. Yes, I will accept Mr. Moul's 2.06% cost rate for short-term debt and 4.70% rate  
3 for long-term debt.<sup>33</sup> Given my recommended capital structure of 50% equity and  
4 50% debt, the weighted cost of debt is 4.49%.

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<sup>33</sup> Witness Moul's Pre-Filed Direct Testimony, page 2: line 2.



1 **VI. COST OF COMMON EQUITY**

2 **Q. PLEASE EXPLAIN HOW THE ISSUE OF DETERMINING AN**  
 3 **APPROPRIATE RETURN ON A UTILITY’S COMMON EQUITY**  
 4 **INVESTMENT FITS INTO A REGULATORY AUTHORITY’S**  
 5 **DETERMINATION OF JUST AND REASONABLE RATES FOR THE**  
 6 **UTILITY.**

7 A. In Pennsylvania, as in virtually all regulatory jurisdictions, a utility’s rates must be  
 8 “just and reasonable.”<sup>34</sup> Thus, regulation recognizes that utilities are entitled to an  
 9 opportunity to recover the reasonable and prudent costs of providing service, and  
 10 the opportunity to earn a just and reasonable rate of return on the capital invested  
 11 in the utility’s facilities, such as gas distribution equipment, buildings, vehicles, and  
 12 similar long-lived capital assets.

13  
 14 **Q. HOW DO REGULATORY AUTHORITIES DETERMINE A JUST AND**  
 15 **REASONABLE RATE OF RETURN ON EQUITY FOR A UTILITY**  
 16 **COMPANY?**

17 A. Regulatory commissions and boards, as well as financial industry analysts,  
 18 institutional investors, and individual investors, use different analytical models and  
 19 methodologies to estimate/calculate reasonable rates of return on equity. Among  
 20 the measures used are Discounted Cash Flow (DCF) Model, the Capital Asset  
 21 Pricing Model (CAPM), and Comparable Earnings Analysis (CEA). I believe the

---

<sup>34</sup> Chapter 13 of the Pennsylvania Public Utility Code sets forth rate-making standards, including the requirement that utility rates be just and reasonable.

1 most useful methodology is the DCF analysis, but I am also presenting the CAPM  
2 and the Comparable Earnings Analysis as checks for my DCF results.

3  
4 **Q. CAN YOU EXPLAIN WHY REGULATORY AUTHORITIES AND**  
5 **FINANCIAL ANALYSTS NEED TO USE THESE METHODOLOGIES TO**  
6 **DERIVE A COMPANY'S ESTIMATED RATE OF RETURN ON EQUITY?**

7 A. Yes. There is no direct, observable way to determine the rate of return required by  
8 equity investors in any company or group of companies. Investors must make do  
9 with indications from market data and analysts' predictions to estimate the  
10 appropriate price of a share. The principal and most reliable methodology for  
11 obtaining these indications is the Discounted Cash Flow Model. Other procedures,  
12 such as the CAPM and the Comparable Earnings Analysis, are less reliable than the  
13 DCF Model in my opinion.

14  
15 **Q. PLEASE EXPLAIN WHY YOU BELIEVE THE DCF MODEL IS**  
16 **SUPERIOR TO THE CAPM AND COMPARABLE EARNINGS**  
17 **APPROACHES.**

18 A. The DCF model is an investor-driven model that incorporates current investor  
19 expectations based on daily and ongoing market prices. When a situation develops  
20 in a company that affects its earnings and/or perceived risk level, the price of the  
21 stock adjusts to reflect those developments. Since the stock price is a major  
22 component in the DCF model, the change in risk level and/or earnings expectations

1 is captured in the investor return requirement with either an upward or downward  
2 movement.

3 The Comparable Earnings Analysis is based on earned returns from book  
4 equity, not market equity, as well as a comparison of what other commissions  
5 across the country are awarding regulated utilities. There is no direct and immediate  
6 stockholder input into the Comparable Earnings Analysis and, as a fault, that model  
7 lacks a clear and unmistakable link to stockholder expectations.

8 The CAPM suffers, in my opinion, from the same inherent issues as found  
9 within the Comparable Earnings Analysis in that there is not a direct and immediate  
10 link from stock market prices to the CAPM result. The beta in the CAPM can reflect  
11 changes in the ROE, but the delay can, sometimes, make the CAPM results of little  
12 or no value.

13

14 **Q. WHY DO YOU NOT USE THE RISK PREMIUM MODEL?**

15 A. The risk premium model is, essentially, the CAPM. In both models, one examines  
16 risk premiums, but from varying comparison points. The CAPM considers the risk  
17 premium relative to the risk-free rate whereas the risk premium model often  
18 develops the risk premium relative to utility bond yields.

19

20 **Q. COULD YOU PERFORM A COST OF EQUITY ANALYSIS DIRECTLY**  
21 **ON COLUMBIA GAS?**

22 A. No. Columbia Gas is ultimately a subsidiary of NiSource. NiSource is traded on  
23 the New York Stock Exchange (NYSE). NiSource is also followed by the *Value*

1        *Line Investment Survey*, which is the data source I used extensively in my cost of  
2        equity analyses. I did examine NiSource in my ROE analysis by performing a  
3        separate analysis directly on the results provided by NiSource.

4  
5        **Q.    WHY DID YOU PRESENT THE RESULTS FOR NISOURCE**  
6        **SEPARATELY IN THIS TESTIMONY?**

7        A.    I have long maintained that it is important to show state regulators the full breadth  
8        of my analyses and let them know the reasons for my actions in a case before them.  
9        To that same end, I believe it is important to show this Commission the details of  
10       my NiSource analysis separately given that NiSource is the ultimate parent  
11       company of Columbia Gas and possesses the most direct link to Columbia Gas of  
12       any company included within my comparable group.

13  
14       **A.    DCF Model**

15       **Q.    PLEASE EXPLAIN THE DISCOUNTED CASH FLOW MODEL.**

16       A.    The DCF method is a widely used method for estimating an investor's required  
17       return on a firm's common equity. In my thirty-four years of experience, first with  
18       the Public Staff of the North Carolina Utilities Commission and later as a  
19       consultant, I have seen the DCF method used much more often than any other  
20       method for estimating the appropriate return on common equity. Consumer  
21       advocate witnesses, utility witnesses and other intervenor witnesses have used the  
22       DCF method, either by itself or in conjunction with other methods such as the  
23       Comparable Earnings Analysis or the CAPM, in their analyses.

1           The DCF method is based on the concept that the price which the investor  
 2 is willing to pay for a stock is the discounted present value (*i.e.*, its present worth)  
 3 of what the investor expects to receive in the future as a result of purchasing that  
 4 stock. This return to the investor is in the form of future dividends and price  
 5 appreciation. However, price appreciation is only realized when the investor sells  
 6 the stock, and a subsequent purchaser presumably is also focused on dividend  
 7 growth following his or her purchase of the stock. Mathematically, the relationship  
 8 is:

9  
 10 Let  $D$  = dividends per share in the initial future period  
 11  $g$  = expected growth rate in dividends  
 12  $k$  = cost of equity capital  
 13  $P$  = price of asset (or present value of a future stream of  
 14 dividends)

15  
 16 
$$\frac{D}{(1+k)} + \frac{D(1+g)}{(1+k)^2} + \frac{D(1+g)^2}{(1+k)^3} + \dots + \frac{D(1+g)^t}{(1+k)^{t+1}}$$

17 then  $P = \frac{D}{(1+k)} + \frac{D(1+g)}{(1+k)^2} + \frac{D(1+g)^2}{(1+k)^3} + \dots + \frac{D(1+g)^t}{(1+k)^{t+1}}$

18  
 19 This equation represents the amount ( $P$ ) an investor will be willing to pay *today* for  
 20 a share of common equity with a given dividend stream over ( $t$ ) periods.

21  
 22 Reducing the formula to an infinite geometric series, we have:

23

$$P = \frac{D}{k - g}$$

Solving for k yields:

$$k = \frac{D}{P} + g$$

**Q. DO INVESTORS IN UTILITY COMMON STOCKS REALLY USE THE DCF MODEL IN MAKING INVESTMENT DECISIONS?**

A. Yes, I believe that to be so. There are two primary reasons for my conclusion. First, there is much literature that supports the fact that, while emotional or so-called “irrational” behavior in the short term may affect (and has affected) share prices, over the long term a company’s financial fundamentals drive the market.<sup>35</sup> Secondly, analysts give great weight to earnings, dividend, and book value growth in formulating their recommendations to clients.

Thus, in today’s market environment, investors will likely calculate (or seek a calculation of) the amount of funds they will receive relative to the initial investment, which is defined as the current dividend yield, as well as the amount of

---

<sup>35</sup> See, for example, “*Valuation: Measuring and Managing the Value of Companies*”, 4th Edition, [McKinsey & Company Inc.](#), [Tim Koller](#), [Marc Goedhart](#), [David Wessels](#) (“Provided that a company’s share price eventually returns to its intrinsic value in the long run, managers would benefit from using a discounted-cash-flow approach for strategic decisions. What should matter is the long-term behavior of the share price of a company, not whether it is undervalued by 5 or 10 percent at any given time.” <http://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/do-fundamentals-or-emotions-drive-the-stock-market> (Date Accessed March 2, 2016). See also, for example, <http://www.businessinsider.com/what-drives-the-stock-market-2012-8> (Date Accessed March 2, 2016).

1 funds that the investor can expect in the future from the growth in the dividend. The  
2 combination of the current dividend yield and the future growth in dividends is  
3 central to the basic tenet of the DCF model.

4

5 **Q. IS THE DCF FORMULA STRAIGHTFORWARD?**

6 A. Yes. While the DCF formula as outlined above may appear complicated, it is a  
7 straightforward model to understand. To determine the total rate of return one  
8 expects from investing in a particular equity security, the investor adds the dividend  
9 yield, which they expect to receive in the future, to the expected growth in  
10 dividends over time.

11

12 **Q. CAN YOU PROVIDE AN EXAMPLE?**

13 A. Yes. If investors expect a current dividend yield of 5%, and also expect that  
14 dividends will grow at 4%, then the DCF model indicates that investors would buy  
15 the utility's common stock if it provided an ROE of 9%.

16

17 **Q. WHAT DIVIDEND YIELD DO YOU THINK IS APPROPRIATE FOR USE**  
18 **IN THE DCF MODEL?**

19 A. I have calculated the appropriate dividend yield by averaging the dividend yield  
20 expected to be paid over the next 12 months for each comparable company, as  
21 reported by the *Value Line Investment Survey*. The period covered is from May 1  
22 2020 through July 24, 2020. To study the short-term, as well as long-term,  
23 movements in dividend yields, I examined the 13-week, 4-week, and 1-week

1 dividend yields for my comparable group. These results appear in **Exhibit KWO-**  
2 **1** and show an average dividend yield for the 13-week period of 3.3%, the 4-week  
3 period of 3.5%, and the 1-week period of 3.5% for the comparable proxy group.  
4 Additionally, for NiSource (Columbia Gas' parent company), the average dividend  
5 value for the 13-week period was 3.5%, the value for the 4-week period was 3.6%,  
6 and the value for the 1-week period was 3.5%.

7  
8 **Q. PLEASE EXPLAIN HOW YOU DEVELOPED THE DIVIDEND YIELD**  
9 **RANGES DISCUSSED ABOVE.**

10 A. I developed the dividend yield range for the comparable proxy group by averaging  
11 each company's *Value Line* forecasted 12-month dividend yield over the above-  
12 stated periods, as well as examining the most recent forecasted 12-month dividend  
13 yield reported by *Value Line* for each company. I averaged the dividend yield over  
14 multiple time periods in order to minimize the possibility of an isolated event  
15 skewing the DCF results.

16  
17 **Q. HOW DID YOU DERIVE THE EXPECTED GROWTH RATE?**

18 A. I used several methods in determining the growth in dividends that investors expect.  
19 The first method I used was an analysis commonly referred to as the "plowback  
20 ratio" method. If a company is earning a rate of return ( $r$ ) on its common equity,  
21 and it retains a percentage of these earnings ( $b$ ), then each year the earnings per  
22 share (EPS) are expected to increase by the product ( $br$ ) of its earnings per share in  
23 the previous year. Therefore,  $br$  is a good measure of growth in dividends per share.



1 For example, if a company earns 10% on its equity and retains 50% of that 10%  
 2 (*i.e.*, with the other 50% of the 10% earnings on equity being paid out in dividends),  
 3 then the expected growth rate in earnings and dividends is 5% (*i.e.*, 50% of 10%).  
 4 To calculate a plowback for the comparable group, I used the following formula:

$$5$$

$$6 \quad g = \frac{\text{br}(2018) + \text{br}(2019) + \text{br}(2020E) + \text{br}(2023E-2025E \text{ Avg})}{4}$$

$$7$$

$$8$$

9 The plowback estimates for all companies in the comparable proxy group can be  
 10 obtained from *The Value Line Investment Survey* under the title "*percent retained*  
 11 *to common equity*". **Exhibit KWO-1** and **Exhibit KWO-2** list the plowback ratios  
 12 for each company in the comparable proxy group. **Exhibit KWO-4, page 3** shows  
 13 the related calculations & results for this method with the plowback values being  
 14 added to the dividend yield averages for the time periods of 1-week, 4-weeks, and  
 15 13-weeks.

16  
 17 **Q. IF THE PLOWBACK METHOD REPRESENTED THE FIRST METHOD**  
 18 **THAT YOU USED, WHAT WERE THE OTHER METHODS USED TO**  
 19 **DERIVE THE EXPECTED GROWTH RATE?**

20 A. A key component in the DCF method is the expected growth in dividends. In  
 21 analyzing the proper dividend growth rate to use in the DCF method, the analyst  
 22 must consider how dividends are created. Since over the long-term, dividends  
 23 cannot be paid out without a corporation first earning the funds paid out, earnings

1 growth is a key element in analyzing what if any growth can be expected in  
2 dividends. Similarly, what remains in a corporation after it pays its dividend is  
3 reinvested, or “plowed back”, into a corporation in order to generate future growth.  
4 As a result, book value growth is another element that, in my opinion, must be  
5 considered in analyzing a corporation’s expected dividend growth.

6 To analyze the expected growth in dividends, I believe the analyst should  
7 also examine the historical record of past earnings, dividends, and book value.  
8 Hence, the second method I used to estimate the expected growth rate was to  
9 analyze the historical 10-year and 5-year historical compound annual rates of  
10 change for earnings per share (EPS), dividends per share (DPS), and book value  
11 per share (BPS) as reported by *Value Line* for each of the relevant corporations.

12 Some analysts do not present historical growth rates in their DCF analyses.  
13 This is true for Mr. Moul as evidenced through his DCF calculations in **Schedule**  
14 **1** on page 2 of **Exhibit No. 400**, where Mr. Moul only factors forecasted growth  
15 rates into his DCF analysis. Mr. Moul explains this choice through the following  
16 passage of his testimony:

17 *As to the issue of historical data, investors cannot purchase past earnings*  
18 *of a utility, rather they are only entitled to future earnings. In addition, when*  
19 *significant weight is assigned to historical performance results, the*  
20 *historical data is double counted. While history cannot be ignored, it is*  
21 *already factored into the analysts’ forecasts of earnings growth. In*  
22 *developing a forecast of future earnings growth, an analyst would first*  
23 *appraise himself/herself of the historical performance of a company.*<sup>36</sup>  
24

---

<sup>36</sup> Witness Moul Pre-Filed Direct Testimony, page 23: lines 5-10.

1 While Mr. Moul presents the historical growth rates for his proxy group as of  
2 November 29, 2019 on **Schedule 8** on page 15 of **Exhibit No. 400**, nowhere within  
3 his DCF calculations does he factor in historical growth rates due to the explanation  
4 from his testimony as provided above. I believe that analysts who do not present  
5 the readily available historical data fail to provide the full extent of information on  
6 which investors base their expectations. While it is true that growth rates are  
7 inherently the rate that one would expect a company's stock to grow into future  
8 years, both historical growth rates and forecasted growth rates provide valuable  
9 data for what one can expect the ultimate growth rate for an individual stock will  
10 be. In order to present the full breadth of the available information, both historical  
11 and forecasted growth rates should be used. By focusing his entire analysis on  
12 forecasted growth rates, Mr. Moul is ignoring the value in historical growth rates  
13 that is readily available to him.

14 I note that *Value Line* is the most recognized investment publication in the  
15 industry and, as such, is used by professional money managers, financial analysts,  
16 and individual investors worldwide. A prudent investor tries to examine all aspects  
17 of an enterprise's performance when making a capital investment decision. As such,  
18 it is only practical to examine historical growth rates, in addition to the forecasted  
19 growth rates, for the corporation for which the analysis is being performed. **Exhibit**  
20 **KWO-1** lists both the historical and forecasted growth rates for the comparable  
21 proxy group, and **Exhibit KWO-4, page 1** and **page 2** list the related calculations  
22 and results for this method, with the historical and forecasted growth rate values

1 being added to the dividend yield averages for the time periods of 1-week, 4-weeks,  
2 and 13-weeks.

3  
4 **Q. HOW HAVE YOU UTILIZED FORECASTED GROWTH RATES?**

5 A. The third method I used was the *Value Line* forecasted compound annual rates of  
6 change for earnings per share, dividends per share, and book value per share.

7 Additionally, the fourth method I used was the forecasted rate of change for  
8 earnings per share as recorded by the *Center for Financial Research and Analysis*  
9 (*CFRA*), a publication of S&P Global Market Intelligence.

10 The last method includes another forecasted earnings growth rate, with this  
11 rate being supplied through *Charles Schwab & Co (Schwab)*. This forecasted rate  
12 of change is not a forecast supplied by *Schwab*, but is – instead – a compilation of  
13 forecasts by industry analysts. As such, the three methods referenced above all  
14 relate to forecasted growth rates, but are sourced from three separate financial  
15 evaluation agencies, *Value Line*, *CFRA*, and *Schwab*.

16 **Exhibit KWO-1** lists the forecasted growth rates for the comparable proxy  
17 group and **Exhibit KWO-4, page 1** and **page 2** list the related calculations & results  
18 for this method with the forecasted growth rate values being added to the dividend  
19 yield averages for the time periods of 1-week, 4-weeks, and 13-weeks. My ultimate  
20 recommendation based on the entirety of my DCF results can be found on **Exhibit**  
21 **KWO-4, page 4.**

22

1 **Q. HOW SHOULD THE RESULTS REFLECTED IN EXHIBIT KWO-1 AND**  
2 **KWO-4 BE VIEWED IN LIGHT OF FUNDAMENTAL DEVELOPMENTS**  
3 **IN THE NATURAL GAS UTILITY INDUSTRY THAT HAVE OCCURRED**  
4 **DURING THE PAST TEN PLUS YEARS?**

5 A. As the Commission is aware, natural gas prices have plummeted since 2008. As a  
6 result of the drastically lower natural gas prices, many electric utilities and power  
7 generators across the country are planning to meet their future electric generation  
8 requirements through the use of natural gas. Distribution utilities that derive profits  
9 from the delivery of natural gas are now in high demand. For example, in 2016,  
10 AGL Resources and Piedmont Natural Gas were both sold to their neighboring  
11 electric utilities at sizable premiums. Remaining gas utilities are achieving solid  
12 growth as natural gas is in high demand across the country.

13  
14 **Q. WHAT IS THE INVESTOR RETURN REQUIREMENT FROM THE DCF**  
15 **ANALYSIS?**

16 A. As can be seen on **Exhibit KWO-1**, the average dividend yield for the comparable  
17 proxy group for the 13-week period was 3.3%, the 4-week time period studied was  
18 3.5%, and the 1-week period was 3.5%. Additionally, for NiSource, these values  
19 were 3.5%, 3.6%, and 3.5%, respectively.

20 In terms of the proper dividend growth rate to employ for the comparable  
21 proxy group in the DCF analysis, it is appropriate to examine the recent history of  
22 earnings and dividend growth to assess and provide the best estimate of the  
23 dividend growth that investors expect in the future.

1           We note that within **Exhibit KWO-1**, I've presented the complete set of  
2 data for the entirety of the comparable proxy group without any of the companies  
3 removed from the comparable proxy group as published by *Value Line*. The data  
4 and calculations shown therein at **Exhibit KWO-1** is the information that my  
5 recommendation was developed from.

6           An examination of the 10-year and 5-year historical growth rates for the  
7 proxy group within this exhibit show a difference between the average earnings and  
8 dividend growth rates. For the 10-year history, dividends per share (5.8%) grew  
9 much faster than earnings per share (3.9%) in the comparable proxy group.  
10 However, if one were to remove the -11.0% growth rate for Northwest Natural Gas'  
11 EPS, the now shown 6.1% earnings per share return over the past 10 years is much  
12 more in line with the 10-year historical dividends per share of 5.8%. The same  
13 situation is also evident in the 5-year historical growth rates. If one were to remove  
14 the -17.0% for Northwest Natural Gas' EPS, the average 5-year EPS for the proxy  
15 group changes from 4.1% to 6.8%, which is much more in line with the 5-year  
16 average DPS growth rate of 7.2%.

17           The forecast of the proxy group's various growth rates is consistent with the  
18 understanding that natural gas is growing in prominence in the energy industry  
19 around the country. The forecasted growth rates from *Value Line* for the proxy  
20 group range from 5.4% (DPS) to 9.3% (EPS). In relation to NiSource, this range  
21 was from 5.0% (BPS) to 13.5% (EPS). However, again we note that the high end  
22 (9.3%) of the proxy group range is significantly influenced by the 26.5% forecasted  
23 EPS for Northwest Natural Gas from *Value Line*. If one were to remove that one

1 growth rate, the average for *Value Line's* forecasted earnings per share is reduced  
2 from 9.3% to 7.2%. If one were to remove Northwest Natural Gas from the  
3 forecasted rates entirely as presented within **Exhibit KWO-1**, the forecasted  
4 growth rates from *Value Line* for the proxy group ranges from 6.0% to 7.2%.

5 In addition to the above forecasted *Value Line* growth rates, the average  
6 plowback (retained to common equity) growth rate for the proxy group is 4.3%  
7 (**Exhibit KWO-1** and **Exhibit KWO-2**), the *CFRA* 3-year forecasted EPS growth  
8 rate is 6.7% (**Exhibit KWO-1**), and the *Schwab* LT Growth Rate 3-5 year  
9 forecasted earnings growth rate is 6.7% (**Exhibit KWO-1**).

10 Specific to NiSource, the average plowback (retained to common equity)  
11 growth rate is 3.2% (**Exhibit KWO-1** and **Exhibit KWO-2**), the *CFRA* 3-year  
12 forecasted EPS growth rate is 5.0% (**Exhibit KWO-1**), and the *Schwab* LT Growth  
13 Rate 3-5 year forecasted earnings growth rate is 4.9% (**Exhibit KWO-1**).

14 In consideration of the above-stated conditions and adjustments involving  
15 Northwest Natural Gas, the proxy group's forecasted EPS, DPS, and BPS growth  
16 rates are all between approximately 5% to 7% (see **Exhibit KWO-1**) indicates that  
17 the natural gas utility industry is expecting solid and steady growth in earnings,  
18 dividends, and book value in the future. As noted above, the DCF results based on  
19 the complete set of data for the entirety of the proxy group, the results based on the  
20 specific analysis of NiSource, as well as my recommendation based on the DCF  
21 results, can be found in **Exhibit KWO-4, pages 1-4**.

22

1 **Q. HOW DOES THE CORONAVIRUS PANDEMIC IMPACT YOUR COST**  
 2 **OF EQUITY FOR COLUMBIA GAS IN THIS CASE?**

3 A. The Coronavirus has had a dramatic impact on the equity markets as well as long-  
 4 term growth prospects for Columbia Gas. Prior to the Coronavirus pandemic,  
 5 growth for gas utilities was perceived to have strong growth prospects for many  
 6 years to come. However, following the pandemic, the markets have come to realize  
 7 that the US economy will take quite a while to recover. During an interview with  
 8 CBS 60 Minutes from May 13, 2020, Federal Reserve Chairman Jerome Powell  
 9 stated that he expects that the US economy will take over a year to recover as  
 10 evidenced from the following quote:

11 *It may take a while. It may take a period of time. It could stretch through*  
 12 *the end of next year...I will say that it's a reasonable assumption that the*  
 13 *economy will begin to recover in the second half of the year, that*  
 14 *unemployment will move down, that economic activity will pick up.... And I*  
 15 *think it's a reasonable expectation that there'll be growth in the second half*  
 16 *of the year. I would say though we're not going to get back to where we*  
 17 *were quickly. We won't get back to where we were by the end of the year.*  
 18 *That's unlikely to happen.*<sup>37</sup>  
 19

20 Fed Chairman Powell's comments are reflected in current yields in fixed income  
 21 markets. On May 20, 2020, the *Wall Street Journal* stated the following in regard  
 22 to bond yields and the future market recovery.

23 *Yields on U.S. government bonds have stalled near all-time lows, a*  
 24 *sign that investors are anticipating a difficult economic recovery*  
 25 *and years of aggressive monetary stimulus.*

26 *For much of the past month and a half, the yield on the benchmark*  
 27 *10-year U.S. Treasury note has hovered around two-thirds of a*

---

<sup>37</sup> <https://www.cbsnews.com/news/full-transcript-fed-chair-jerome-powell-60-minutes-interview-economic-recovery-from-coronavirus-pandemic/>



1            *percentage point—a shade above its all-time low of around 0.5% set*  
2            *in March.*

3  
4            *Taken together, the low level of the 10-year yield and its stability*  
5            *suggest that bond investors not only hold a dreary economic*  
6            *outlook but also are unusually confident in that perspective, a*  
7            *contrast with the optimism that has carried stocks to their highest*  
8            *levels since early March.<sup>38</sup>*  
9

10           The comment from Fed Chairman Powell combined with the comments above from  
11           the May 20, 2020 *Wall Street Journal*, indicate that investors should tamp down  
12           expectations of a quick and lasting recovery. The data sources used in my analysis  
13           were developed after the initial onset of the Coronavirus pandemic. As a result, any  
14           decrease in the growth rates for the gas utility comparable group are already  
15           reflected in the sources, thereby recognizing that the US economy has significant  
16           headwinds ahead.

17  
18           **Q. PLEASE PROVIDE THE SPECIFIC RESULTS OF YOUR DCF**  
19           **ANALYSIS.**

20           A. Due to the negative growth impact of Coronavirus as well as the fundamental  
21           changes that have occurred in the natural gas utility industry over the past ten years  
22           that I mentioned previously, I believe that it is proper to place more weight on  
23           forecasted figures than historical figures in estimating the cost of equity for the  
24           comparable group. As a result, I believe that the proper growth rate range for the  
25           comparable group of companies to use in the DCF analysis is 4.0% to 6.0%. This

---

<sup>38</sup> [https://www.wsj.com/articles/behind-bond-markets-stall-investors-see-hard-times-ahead-11589967001?mod=hp\\_lead\\_pos4](https://www.wsj.com/articles/behind-bond-markets-stall-investors-see-hard-times-ahead-11589967001?mod=hp_lead_pos4)

1 4.0% to 6.0% growth rate estimate embodies the approximate range of the historical  
2 and forecasted growth rates as presented in **Exhibit KWO-4**.

3  
4 **Q. SHOULD ONLY EARNINGS GROWTH RATES BE CONSIDERED IN**  
5 **THE DCF METHODOLOGY?**

6 A. No. Since the DCF formula is dependent on future *dividend* growth, it would be  
7 inaccurate to use only earnings growth rates in the DCF. Doing so produces  
8 unrealistically high return on equity numbers that cannot be sustained indefinitely.  
9 To mitigate this problem, I have presented EPS, DPS, and BPS figures and  
10 systematically explained my rationale for arriving at the corresponding growth  
11 rates. I believe it is incumbent upon every analyst to present such a robust analysis.

12  
13 **Q. WHAT IS THE DCF RANGE THAT YOUR ANALYSES PRODUCED?**

14 A. For the results of all DCF Calculations, refer to **Exhibit KWO-4**, which presents  
15 the following calculations for both my comparable proxy group, and for NiSource:  
16 (1) the Dividend Yield Averages for the 13-weeks / 4-weeks / 1-week periods plus  
17 the Forecasted and Historical Growth Rate Averages, and (2) the Dividend Yield  
18 Averages for the 13-weeks / 4-weeks / 1-week periods plus the Plowback.

19 The comparable proxy group's dividend yield of 3.3% to 3.5% combined  
20 with the growth rate range of 4.0% to 6.0% produces a DCF range of 7.3% to 9.5%.  
21 Additionally, for NiSource, the dividend yield range of 3.5% to 3.6% combined  
22 with the growth rate range of 4.0% to 6.0% produces a range of 7.5% to 9.6%.

1 Based on this DCF analysis, the range I've selected for the comparable group is  
2 from 7.50% to 9.50%.

3  
4 **B. Comparable Earnings Analysis**

5 **Q. PLEASE EXPLAIN HOW YOU PERFORMED THE COMPARABLE**  
6 **EARNINGS ANALYSIS?**

7 A. I have conducted two different Comparable Earnings Analyses. The first examines  
8 returns on book value equity for the comparable group. The second examines  
9 allowed natural gas utility returns over an extended period of time to evaluate the  
10 trend in returns for companies of similar risk. However, as I have stated previously,  
11 the Comparable Earnings Analysis is inferior to the DCF model and should be given  
12 much less weight in the determination of the ROE recommended in this case.

13  
14 **Q. PLEASE DESCRIBE YOUR FIRST COMPARABLE EARNINGS**  
15 **ANALYSIS?**

16 A. As noted above, an appropriate Comparable Earnings Analysis should be applied  
17 to companies of similar risk. **Exhibit KWO-3** presents a list of historic and  
18 forecasted earned returns *on book value equity* of the proxy group over the period  
19 of 2018 through 2025E. I picked this range to provide the Commission with at least  
20 two periods of historical returns and a forecasted return period of at least 5 years.  
21 As can be seen in this exhibit, the average earned returns on equity for the  
22 comparable proxy group range from 8.9% (2020E) to 10.5% (2018). Additionally,

1 for NiSource, the average earned returns on equity ranged from 8.0% (2018) to  
2 11.0% (2023E – 2025E).

3

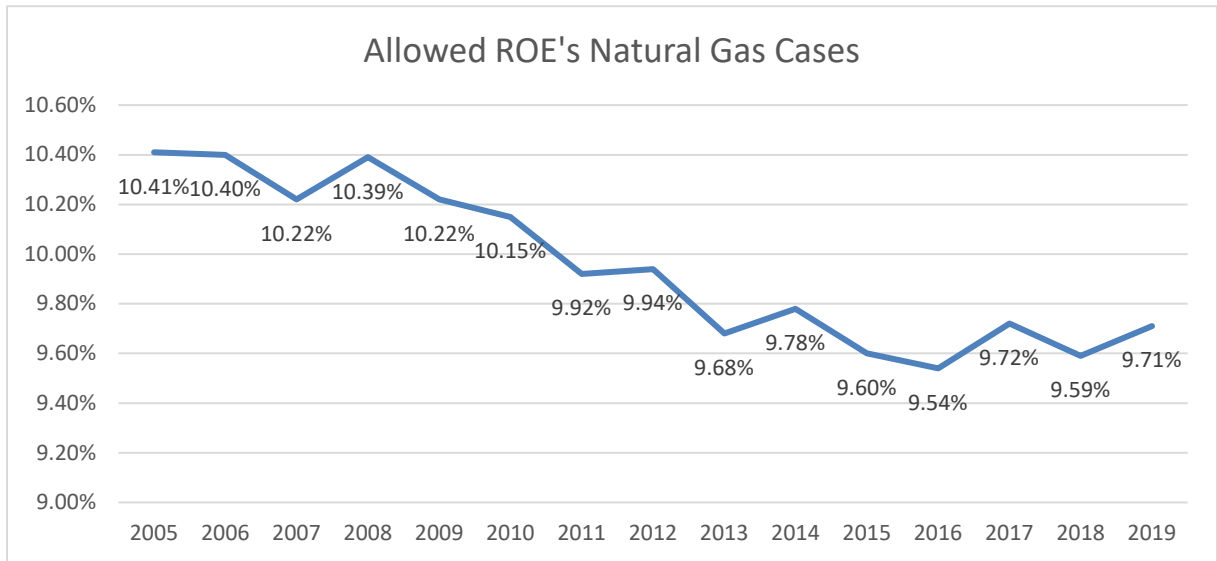
4 **Q. DO YOU HAVE ANOTHER COMPARABLE EARNINGS**  
5 **METHODOLOGY TO PRESENT IN THIS CASE?**

6 A. Yes. It is important to understand what state regulatory commissions across the  
7 country are allowing for authorized ROEs. Allowed ROEs are widely known and  
8 discussed in the financial community and investors take these regulatory decisions  
9 into account when they bid prices in the open market for which they are willing to  
10 purchase the stock of a regulated utility.

11 As this Commission is likely aware, regulated ROEs have trended down  
12 over the past 15 years. Below, **Chart 4** shows the ROEs authorized for natural gas  
13 utilities by state regulators across the United States from 2005 through 2019. The  
14 average of the allowed ROEs over this period is 9.95% based on the data presented  
15 below.

1

**Chart 1: Allowed ROEs 2005 – 2019**



2 **Source:** S&P Global Market Intelligence Rate Case Statistics; Date Range: 15 Years; Service Type:  
 3 Natural Gas; Chart Items: Return on Equity (%); Date Accessed: July 20, 2020.

4

5 As for the most recent year, 2019, the overall allowed ROE for natural gas utilities  
 6 was 9.71%, which was up slightly from the 9.59% allowed by state regulators for  
 7 natural gas utilities in 2018. However, for the first three months of 2020, the  
 8 average allowed ROE for natural gas utilities has declined to 9.35%.<sup>39</sup>

9

10 **Q. WHAT CONCLUSIONS DO YOU DRAW FROM YOUR TWO**  
 11 **COMPARABLE EARNINGS ANALYSES?**

12 **A.** As noted previously, natural gas utilities are expected to have strong growth in the  
 13 future due to the abundance of cheap natural gas now produced in the United States  
 14 and the increasing demand for natural gas services. Electric generation companies,  
 15 for example, are turning almost entirely now to constructing natural gas generation

<sup>39</sup> Regulatory Research Focus, S&P Global Market Intelligence, “Average authorized gas equity return falls to record low in Q1’20,” Date Accessed: May 8, 2020.

1 plants as opposed to nuclear and coal units. Hence, the strength in the natural gas  
2 industry should continue unabated for several years to come.

3 Regulators across the United States have continued to recognize the  
4 decrease in capital cost and, as shown above in **Chart 4**, they have steadily reduced  
5 the allowed returns of utilities over the past 15 years.

6 Based on the above-stated findings, I believe the proper rate of return using  
7 a comparable earnings analysis is in the range of 9.25% to 10.25%. The 9.25%  
8 lower end of this range is towards the middle of the comparable earnings range for  
9 the proxy group (**Exhibit KWO-3**) and is close to the ROE granted by state  
10 regulators in 2019 of 9.71% (see **Chart 4**, above). The 10.25% high end of the  
11 range is towards the high end of the range for the comparable proxy group (**Exhibit**  
12 **KWO-3**).

13 I've completed the Comparable Earnings Analyses as referenced above to  
14 provide the relevant data for the comparable group's book value equity, as well as  
15 the authorized and allowed returns across the industry over an extended period of  
16 time. However, as previously noted, it is my opinion that the DCF Model produces  
17 the most reliable results in determining an appropriate ROE. Additionally, I view  
18 the CAPM as a model that is appropriate to utilize as a check on the results of the  
19 DCF Model. Note that this is also true specific to cases in Pennsylvania, as the  
20 Pennsylvania Public Utility Commission has historically used the CAPM as a check  
21 on the reasonableness of the results derived from the DCF analysis as well.<sup>40</sup>

---

<sup>40</sup> Pa. P.U.C. v. UGI Utilities – Electric Division, Opinion and Order at 119, Docket No. R-2017-2640058 (Oct. 25, 2018).

1 Furthermore, given the current volatile economic climate brought on by the  
2 Coronavirus pandemic, the Comparable Earnings Model does not appropriately  
3 capture the economic impacts of the pandemic within the output of the Model. As  
4 such, I believe that the Comparable Earnings Model should be given much less  
5 weight in the determination of the ROE recommended in this case.

6  
7 **C. Capital Asset Pricing Model (CAPM)**

8 **Q. HAVE YOU PREVIOUSLY PRESENTED THE CAPM IN COST OF**  
9 **EQUITY TESTIMONIES?**

10 A. Yes, but I have not given it much weight in comparison to the DCF model. I have  
11 long maintained the application of the CAPM can lead one to erroneous results  
12 when it is applied in an inaccurate manner, such as when forecasted risk premiums  
13 or forecasted interest rates are employed. For this reason, I have historically not  
14 used the CAPM in cost of equity analyses. However, I am aware that some  
15 Commissions around the country are seeking review of models other than the DCF  
16 model. For example, as previously mentioned within this testimony, it is notable  
17 that the Pennsylvania Utility Commission has historically used the CAPM as a  
18 check on the reasonableness of the results derived from the DCF analysis.<sup>41</sup> As a  
19 result, I am including the CAPM in my analyses to supplement my DCF analysis  
20 as well as my Comparable Earnings Analyses.

---

<sup>41</sup> Pa. P.U.C. v. UGI Utilities – Electric Division, Opinion and Order at 119, Docket No. R-2017-2640058 (Oct. 25, 2018).

1 **Q. PLEASE EXPLAIN THE CAPITAL ASSET PRICING MODEL.**

2 A. The CAPM is a risk premium model that determines a firm's ROE relative to the  
3 overall market ROE. The formula for the CAPM is as follows:

$$4 \quad \text{ROE} = R_f + \text{Beta} [E(\text{RM}) - R_f]$$

5 Where:

6  $R_f$  is the risk-free rate;

7 Beta is the risk of the studied company relative to the overall market; and

8  $E(\text{RM})$  is the expected return on the market.

9 To be specific, the CAPM is a measure of firm-specific risk, known as unsystematic  
10 risk and measured by beta, as well as overall market risk, otherwise known as  
11 systematic risk and measured by the expected return on the market.

12 The CAPM calculates ROE based on a company's risk and can be restated  
13 as follows:

$$14 \quad \text{ROE} = R_f + (\text{Beta} * \text{Risk Premium})$$

15 Where:

16 Risk Premium represents the adjusted company-specific risk of the  
17 company.

18

19 **Q. HOW IS THE RISK-FREE RATE MEASURED?**



1 A. The risk-free rate is designated as the yield on United States government bonds as  
2 the risk of default is seen as highly unlikely. Utility witnesses and consumer  
3 witnesses all use United States government bond yields as the risk-free rate in the  
4 CAPM. However, what is often debated in the risk-free portion of the CAPM is the  
5 term of those bonds. In my analysis for this case, I have developed risk premiums  
6 relative to the 30-year US Treasury bonds as this time period is the longest available  
7 in the marketplace, thereby affording consumers the longest protection at the risk-  
8 free rate. **Chart 1**, above, provides the yield on 30-year U.S. Treasury bonds over  
9 the period outlined in the chart.

10

11 **Q. IS THE CURRENT LEVEL OF INTEREST RATES EXPECTED TO**  
12 **CHANGE MATERIALLY IN THE FORESEEABLE FUTURE?**

13 A. Economic forecasters, as well as the FOMC, all believed in previous years that the  
14 current interest rate environment was expected to remain relatively stable for many  
15 years to come.

16 However, the FOMC cut rates during 2019 and then, in its December 2019  
17 meeting, announced plans to keep interest rates at current levels throughout 2020.<sup>42</sup>  
18 Note however, that this was before the Coronavirus pandemic that played havoc on  
19 the markets throughout March and April 2020. In response to the impact that the

---

<sup>42</sup> Rugaber, C., *Federal Reserve leaves interest rates unchanged and foresees no moves in 2020*, PBS News Hour (Dec. 11, 2019), available at: <https://www.pbs.org/newshour/economy/federal-reserve-leaves-interest-rates-unchanged-and-foresees-no-moves-in-2020>.

1 pandemic had on the market, on March 3, 2020 the FOMC decreased the Federal  
2 Funds Rates 50-basis points to a targeted range of between 1% and 1.25% in  
3 response to recent market conditions.<sup>43</sup> Additionally, on March 16, 2020 the FOMC  
4 dropped interest rates to near 0%.<sup>44</sup> As such, the interest rate market has been  
5 unexpectedly turbulent due to the Coronavirus pandemic throughout the end of Q1  
6 2020 and into Q2 2020. The interest rates are thus expected to fluctuate again  
7 throughout the remainder of 2020 based on the results of the overall response to the  
8 pandemic.

9  
10 **Q. HOW IS BETA MEASURED IN THE CAPM?**

11 A. Beta is a statistical calculation of a company's stock price movement relative to the  
12 overall stock movement. A company whose stock price is less volatile than the  
13 overall market will have a beta less than 1.0. A company whose stock price is more  
14 volatile than the overall market will have a beta more than 1.0. Since utilities are  
15 generally conservative equity investments, utility betas are almost always less than  
16 1.0.

17  
18 **Q. WHAT IS THE CURRENT MARKET RISK PREMIUM APPROPRIATE**  
19 **FOR USE IN THE CAPM?**

---

<sup>43</sup> <https://www.cnn.com/2020/03/03/fed-cuts-rates-by-half-a-percentage-point-to-combat-coronavirus-slowdown.html>

<sup>44</sup> <https://www.federalreserve.gov/newsevents/pressreleases/monetary20200315a1.htm>

1 A. The development of the current market risk premium is, undoubtedly, the most  
 2 controversial aspect of the CAPM calculations. To gauge the historical risk  
 3 premium, I turned to the Ibbotson database published by Morningstar. The long-  
 4 term geometric and arithmetic returns for both equities and fixed income securities  
 5 and the resulting risk premiums are presented below in **Table 8**.

6 **Table 1: Equity Risk Premium Calculations**

Asset Class	Geometric Mean	Arithmetic Mean
Large Company Stocks	10.10%	11.90%
Long-Term Govt. Bonds	5.90%	6.30%
Resulting Risk Premium	4.10%	5.60%

7 *Source:* Ibbotson © SBBI ©, 2019 Classic Yearbook: Stocks, Bonds, Bills and  
 8 Inflation, 1926 – 2018 (Chicago: Morningstar, 2019).  
 9

10 **Q. WHAT MARKET RETURNS ARE WELL-KNOWN PROFESSIONAL**  
 11 **INVESTORS EXPECTING FOR THE FORESEEABLE FUTURE?**

12 A. On January 16, 2020, Morningstar.com published an article entitled “*Experts*  
 13 *Forecast Long-Term Stock and Bond Returns: 2020 Edition*.”<sup>45</sup> By future returns,  
 14 these market experts are discussing total market returns, and not just the equity risk  
 15 premium. Below are some of the market return forecasts from the previously  
 16 referenced article:

<sup>45</sup> <https://www.morningstar.com/articles/962169/experts-forecast-long-term-stock-and-bond-returns-2020-edition>

1        **BlackRock Investment Institute**

2        6.1% nominal mean expected return for US large-cap equities over the next decade

3        **Grantham Mayor Van Otterloo (GMO)**

4        Negative 4.4% real returns for US large caps over the next seven years

5        **JP Morgan**

6        5.6% nominal return for US equities over a 10-to-15-years horizon.

7        **Morningstar Investment Management**

8        1.7% 10-year nominal returns for US stocks <sup>46</sup>

9        **Research Affiliates**

10       0.3% real returns for US large caps during the next 10 years.

11       **Vanguard**

12       Nominal equity market returns of 3.5% to 5.5% over the next decade. <sup>47</sup>

13       The above-stated equity returns display a very large range. On the low side is GMO,  
14       which forecasts that US large caps will, after inflation, lose 4.4% of asset value  
15       annually over the next seven years. On the more positive side is BlackRock  
16       Investment that expects a nominal (before inflation adjustment) of 6.1% per year.

17                    In 2018, Duke University finance professors published equity risk premium  
18       estimates that stated the expected average risk premium exhibited by a survey of

---

<sup>46</sup> *Id.*  
<sup>47</sup> *Id.*

1 U.S. Chief Financial Officers around the country is 4.42%.<sup>48</sup> The article states as  
 2 follows:

3 *During the past 18 years, we have collected almost 25,000*  
 4 *responses to the survey. Panel A of Table 1 presents the date that*  
 5 *the survey window opened, the number of responses for each survey,*  
 6 *the 10-year Treasury bond rate, as well as the average and median*  
 7 *expected excess returns. There is relatively little time variation in*  
 8 *the risk the historical risk premiums contained in Table 1. **The***  
 9 ***current premium, 4.42%, is above the historical average of 3.64%.***  
 10 *The December 2017 survey shows that the expected annual S&P 500*  
 11 *return is 6.79% (=4.42%+2.37%) which is slightly below the*  
 12 *overall average of 7.11%. The total return forecasts are presented*  
 13 *in Fig. 1b.2”<sup>49</sup>*  
 14

15 **Q. WHAT IS YOUR CONCLUSION AS TO THE ESTIMATED EQUITY RISK**  
 16 **PREMIUM FOR USE IN THE CAPM?**

17 A. Using historical data as well as ex ante (forecasts) data, the evidence suggests the  
 18 equity risk premium is clearly within the range of 4% to 6%.

20 **Q. HOW DID YOU DETERMINE THE BETA YOU USED IN THE CAPM?**

21 A. I used the *Value Line* derived beta sourced from the most recent *Value Line* editions  
 22 for each company in the comparable proxy group.

24 **Q. WHAT WERE YOUR CAPM RESULTS?**

25 A. The actual calculations for the CAPM for both the comparable group and for  
 26 NiSource can be seen in **Exhibit KWO-5**.

---

<sup>48</sup> “The Equity Risk Premium in 2018,” John R. Graham and Campbell R Harvey, Duke University, March 28, 2018, pages 3-4.

<sup>49</sup> *Id.*, pages 3-4 (emphasis added).

1           As shown above in **Chart 1**, I have provided the change in the 30-year US  
2 Treasury bonds since the previous rate case (*i.e.*, December 6, 2018 – July 17,  
3 2020). Note that over the past year, the yield on 30-year US Treasury bonds was  
4 2.57% as of July 17, 2019 and was 1.33% as of July 17, 2020. This equates to a  
5 decrease of 124-basis points in the yield on 30-year US Treasury bonds. The  
6 Maximum value over this period was 2.61%, the Average value was 1.89%, and  
7 the Minimum value was 0.99%. Refer to **Chart 1**, above, for further details.

8           The average beta for both the proxy group, and for NiSource, is 0.85 which,  
9 when multiplied by the risk premium range of 4.0% to 6.0%, produces a beta-  
10 adjusted risk premium of 3.40% to 5.10%. The 30-year US Treasury yield (Rf)  
11 range of 0.99% to 2.65% is next added to the beta-adjusted risk premium range of  
12 3.40% to 5.10% to arrive at the comparable group and NiSource CAPM result range  
13 of 4.40% ( $3.40\% + 0.99\% = 4.39\%$ , rounded to 4.40%) to 7.80% ( $5.10\% + 2.61\%$   
14  $= 7.71\%$ , rounded to 7.80%).

15           Based on this range of results for the CAPM, as found in **Exhibit KWO-5**,  
16 I find the proper ROE derived from the CAPM is in the range of 5.50% to 7.50%.  
17 The low-end (5.50%) of this range is above the average of the comparable proxy  
18 group CAPM results using the 4.0% equity risk premium (5.30%). The high end  
19 (7.50%) of the range is above the average of the comparable proxy group CAPM  
20 results using the 6.0% equity risk premium (7.00%).

21

1 **D. Return on Equity (ROE) Summary**

2 **Q. MR. O'DONNELL, PLEASE SUMMARIZE THE RESULTS OF YOUR**  
 3 **ROE ANALYSES IN THIS CASE.**

4 A. **Table 9** below lists the results of my DCF, Comparable Earnings Analysis, and  
 5 CAPM analysis.

6 **Table 9: ROE Method Results**

Method	ROE Results	
	Low	High
DCF	7.50%	9.50%
Comparable Earnings	9.25%	10.25%
CAPM	5.50%	7.50%

7  
 8 **Q. WHAT IS YOUR ROE RECOMMENDATION IN THIS PROCEEDING?**

9 A. My recommendation in this case is for the Commission to grant Columbia Gas a  
 10 return on equity of 8.50%. This recommendation of an 8.50% ROE is in the middle  
 11 of the DCF range. This recommendation is also above the CAPM range, which the  
 12 Commission generally considers a check on the results of the DCF.

13  
 14 **Q. THE RANGE OF RESULTS FOR THE COMPARABLE EARNINGS**  
 15 **METHOD BASED ON BOOK RETURNS ARE HIGHER THAN THE**  
 16 **RESULTS OF YOUR DCF ANALYSIS. IS THERE A REASON FOR THIS?**

17 A. Yes. As previously explained, the Comparable Earnings Analysis can be  
 18 misinterpreted in that the return is often on book value and not a return on market

1 value. As a result, the return on book values must be examined in light of the fact  
2 that market values, which are a primary determinant in the DCF model, are well  
3 above book values, which are a primary determinant of the Comparable Earnings  
4 Analysis. Investors cannot typically purchase stock of a company at lower book  
5 value, but must purchase at the relatively higher market price. It is for this reason  
6 that I maintain that the Comparable Earnings Analysis should be used more as a  
7 check for the DCF results as the CEA is inferior to the DCF model.

8  
9 **Q. SIMILARLY, THE RANGE OF RESULTS FOR THE COMPARABLE**  
10 **EARNINGS BASED ON ALLOWED ROES IS HIGHER THAN THE**  
11 **RESULTS OF YOUR DCF ANALYSIS. PLEASE EXPLAIN THE REASON**  
12 **FOR THIS DIFFERENCE.**

13 A. As noted above, utility regulators have definitely noticed the declining trend in the  
14 cost of capital and the downward trend is continuing. However, market returns are  
15 much more dynamic and change every day. Regulators may not move at the pace  
16 of the general market in terms of the decline in the market cost of capital, but  
17 regulators are, without a doubt, moving in that direction.

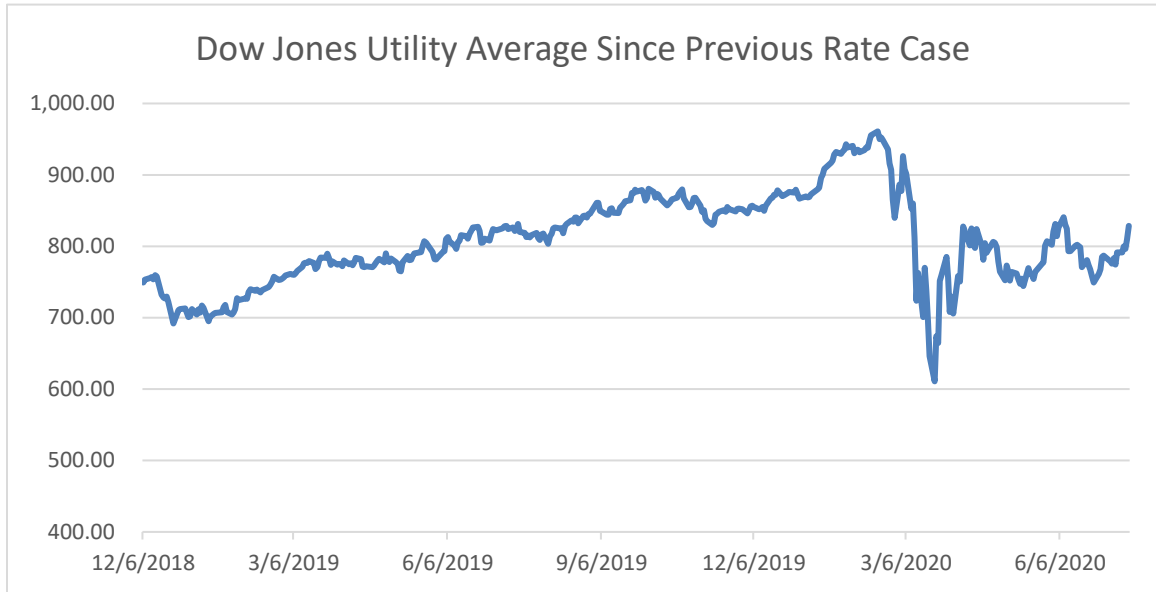
18  
19 **Q. WOULD YOU PLEASE PROVIDE THE REASONS FOR YOUR**  
20 **RECOMMENDATION?**

21 A. In making this recommendation, it is important to recognize the negative impact  
22 the Coronavirus pandemic has had on the United States and world economy.  
23 Long-term growth prospects have faced a sudden shock that have forced investors



1 to re-examine their expectations for the future. One only need to look at **Chart 5**,  
 2 below, to see how the utility market has reacted to the Coronavirus news.

3 **Chart 5: Dow Jones Utility Average**



4 **Source:** Yahoo Finance Date Accessed: July 13, 2020,  
 5 <https://finance.yahoo.com/quote/%5EDJU/history?p=%5EDJU>.

6 Utility prices were steadily moving upward until the Coronavirus news took over  
 7 the entire news cycle and the world economy was, essentially, shut down. As noted  
 8 previously, Fed Chairman Powell has indicated the economic recovery will take  
 9 longer than anticipated. In addition, the bond markets have languished into a period  
 10 of lower yields thereby, again, indicating a long recovery timeframe. My point  
 11 estimation of 8.50% is in the middle of my DCF range, which I believe is the most  
 12 accurate model in use by practitioners today.

13

14 **Q. ARE UTILITY STOCKS CONSIDERED SAFE HAVENS AT TIMES OF**  
 15 **ECONOMIC UNCERTAINTY?**

1 A. Yes. Given that the United States is currently in a deep recession due to the  
 2 Coronavirus pandemic and utility stocks, in general, produce stable dividends,  
 3 utilities are viewed as safe havens. The volatility of utility stocks is much less than  
 4 the overall market, which implies that utility stock valuations do not rise as quickly  
 5 as the overall market in good times, but they also do not fall as much as the overall  
 6 market in bad times.

7

8 **Q. WHAT IS YOUR OVERALL RECOMMENDED RATE OF RETURN IN**  
 9 **THIS PROCEEDING?**

10 A. The overall rate of return I am recommending is 6.50%, based upon a 50% long-  
 11 term debt – 50% common equity capital structure, an 8.50% ROE, and a 4.49%  
 12 cost of debt, as summarized again in **Table 10**, below.

13 **Table 10:** Recommended Overall Rate of Return

Component	Ratio (%)	Cost Rate (%)	Wgt'd. Cost Rate (%)
Debt	50.00%	4.49%	2.25%
Common Equity	50.00%	8.50%	4.25%
<b>Total Capitalization</b>	<b>100.00%</b>		<b>6.50%</b>

14

1 **VII. REVIEW OF COST OF EQUITY ANALYSIS OF**

2 **WITNESS MOUL**

3 **Q. HOW DID MR. MOUL DEVELOP HIS LIST OF COMPARABLE**  
4 **COMPANIES?**

5 A. Mr. Moul used S&P “Natural Gas” Utilities as a basis for developing his  
6 comparable group. The companies he chose to include within his S&P “Natural  
7 Gas” Utilities comparable proxy group are followed by *The Value Line Investment*  
8 *Survey*. However, as previously referenced in this testimony, of the 10 Natural Gas  
9 Utilities followed by *Value Line*, Mr. Moul opted to remove UGI from his  
10 comparable proxy group, leaving his comparable proxy group comprised of nine  
11 companies. Mr. Moul explained on page 4 of his testimony that he:

12 *...excluded one company from the Value Line group. UGI Corporation was*  
13 *removed due to its diversified businesses consisting of six reportable*  
14 *segments, including propane, two international LPG segments, natural gas*  
15 *utility, energy services, and electric generation.”<sup>50</sup>*

16 For context, UGI has a diversified business portfolio that, along with the natural  
17 gas utility, contains propane, international LPG, energy service, and electric  
18 generation. However, Chesapeake Utilities, which Mr. Moul chose to include in his  
19 proxy group, also operates a diverse set of businesses that includes natural gas  
20 distribution, natural gas transmission, electric distribution operations, propane  
21 distribution, propane wholesale marketing and natural gas marketing operations,  
22 and real estate operations. As such, for consistency purposes, I did not feel it

---

<sup>50</sup> Witness Moul Pre-Filed Direct Testimony, page 4: lines 6 – 9.

1 appropriate to include one diverse company within my proxy group while  
2 simultaneously excluding another.

3 **Q. WHAT METHODS DID MR. MOUL USE IN HIS ANALYSIS OF THE**  
4 **COST OF EQUITY IN THIS PROCEEDING?**

5 A. Mr. Moul used the Discounted Cash Flow (“DCF”) model, the Comparable  
6 Earnings Method, the Capital Asset Pricing Model (“CAPM”), and the Risk  
7 Premium model in this case. Since the CAPM is a risk premium model similar in  
8 nature to the Risk Premium model, Mr. Moul is essentially employing a risk-  
9 premium model in two forms in his cost of equity analysis in this case.

10

11 **Q. DO YOU AGREE WITH THE METHODS THAT MR. MOUL USED TO**  
12 **ESTIMATE COLUMBIA GAS’ COST OF EQUITY?**

13 A. No. I do not believe the Commission should rely upon Mr. Moul’s risk-premium  
14 models (*i.e.*, the CAPM and Risk Premium models) for the reasons discussed  
15 below. Instead, I recommend that the Commission rely on the results of my  
16 application of the DCF model, with some consideration of the results of the CAPM  
17 and Comparable Earnings method as I have set forth above, to estimate the cost of  
18 equity for Columbia Gas.

19

1           **A.     Review of Moul DCF Analysis**

2           **Q.     WHAT IS THE PRIMARY DIFFERENCE BETWEEN YOUR**  
3           **APPLICATION OF THE DCF MODEL AND MR. MOUL’S APPLICATION**  
4           **OF THE DCF?**

5           A.     The primary differences between my application of the DCF model and Mr. Moul’s  
6           application of the DCF model are the following:

- 7           •     Mr. Moul applies a 10-basis point adjustment referenced in Mr. Moul’s **Schedule**  
8           **7** on page 14 of **Exhibit No. 400** to his average dividend yield for his comparable  
9           proxy group<sup>51</sup>;
- 10          •     Mr. Moul only utilizes forecasted growth rates in his analysis as included within  
11          Mr. Moul’s **Schedule 9** on page 16 of **Exhibit No. 400**, rather than using both  
12          historical and forecasted growth rates<sup>52</sup>; and
- 13          •     Mr. Moul’s applies a “unique” 172-basis point financial risk adjustment as shown  
14          in Mr. Moul’s **Schedule 10** on page 17 of **Exhibit No. 400**.<sup>53</sup>

15

16          **Q.     DO YOU AGREE WITH MR. MOUL’S 10-BASIS POINT ADJUSTMENT**  
17          **FOR HIS COMPARABLE GROUP’S AVERAGE DIVIDEND YIELD?**

18          A.     No. Mr. Moul begins his DCF calculations by determining the dividend yield  
19          across his comparable group within his **Schedule 7** on page 14 of **Exhibit No. 400**.

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<sup>51</sup> Witness Moul Pre-Filed Direct Testimony, page 20: line 16

<sup>52</sup> Witness Moul Pre-Filed Direct Testimony, page 23: lines 5 – 14

<sup>53</sup> Witness Moul Pre-Filed Direct Testimony, page 29: lines 24 – 26

1 He sources this data from *Morningstar* for the twelve-months ending December  
2 2019. However, within his testimony he notes that he:

3 *...adjusted the six-month average dividend yield in three different, but*  
4 *generally accepted, manners and used the average of the three adjusted*  
5 *values as calculated in the lower panel of data presented on Schedule 7.*  
6 *This adjustment adds ten basis points to the six-month average historical*  
7 *yield, thus producing the 2.69% adjusted dividend yield for the Gas*  
8 *Group.*<sup>54</sup>  
9

10 However, other than simply providing the names of these adjustment methods  
11 within his **Schedule 7** of **Exhibit No. 400**, Mr. Moul does not provide any  
12 explanation as to what these three “*different, but generally accepted, manners*”  
13 constitute, nor does he explain why the average of these three adjustment methods  
14 would appropriately constitute a 10-basis point adder that should be placed atop the  
15 2.59% that he previously calculated as the average dividend yield for his  
16 comparable proxy group.

17  
18 **Q. DO YOU AGREE WITH MR. MOUL’S SOLE USE OF FORECASTED**  
19 **GROWTH RATES IN HIS DCF MODEL AND OMISSION OF**  
20 **HISTORICAL GROWTH RATES?**

21 A. I previously noted in this testimony that I feel an analyst should present both the  
22 historical and forecasted growth rates within their DCF analysis for transparency  
23 purposes. Mr. Moul presents the historical growth rates for his proxy group within  
24 **Schedule 8** of his **Exhibit No. 400**, but then entirely omits the use of any historical

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<sup>54</sup> Witness Moul Pre-Filed Direct Testimony, page 20: lines 13 – 18

1 growth rates within his testimony, in favor of placing his full reliance on forecasted  
2 growth rates. If Mr. Moul finds no use for historical growth rates, then I'm unsure  
3 of why he felt the need to present these historical growth rates within the schedules  
4 include in his **Exhibit No. 400** at all. By not utilizing any of the historical growth  
5 rate data in conjunction with the use of forecasted growth rates, Mr. Moul is  
6 ignoring an entire group of data that is readily available.

7  
8 **Q. DO YOU AGREE WITH MR. MOUL'S USE OF FORECASTED GROWTH**  
9 **RATES?**

10 A. Yes, I do agree with Mr. Moul's use of forecasted growth rates within his DCF  
11 Model. However, as shown in **Schedule 9** on page 16 of his **Exhibit No. 400**, Mr.  
12 Moul sourced his forecasted growth rates from a date of August 30, 2019 from  
13 *Value Line*, and a date of October 30, 2019 for *Yahoo Finance*, *Zacks*, and  
14 *Morningstar*. The values sourced by Mr. Moul for his forecasted growth rates were  
15 between six and eight months old by the time that his testimony was filed. I  
16 understand that the Company's base rate case was developed based upon a  
17 November 30 test year. Even so, the Company's base rate filing was made April  
18 24, 2020. Solely from a *Value Line* perspective, *Value Line* publishes company-  
19 specific metrics and forecasts by industry on a quarterly basis. Mr. Moul's  
20 testimony utilized data from August 2019 and was never updated for the data  
21 published by *Value Line* during November 2019 or February 2020 prior to the filing  
22 of his testimony in April 2020.

1           If an analyst places full reliance on forecasted growth rates, as opposed to  
2 basing any of their analysis on historical growth rates, I would contest that utilizing  
3 forecasts that are between six and eight months old by the time that one's testimony  
4 is filed would not be the most prudent measure.

5  
6 **Q. DO YOU AGREE WITH MR. MOUL'S USAGE OF THE 172-BASIS POINT**  
7 **LEVERAGE ADJUSTMENT?**

8 A. No. This adjustment stems from Mr. Moul's apparent belief that investors are  
9 unaware of debt on the Company's books and, therefore, they must be compensated  
10 for the additional risk. To this point, Mr. Moul explains:

11           *My point is that when we use a market-determined cost of equity*  
12 *developed from the DCF model, it reflects a level of financial risk*  
13 *that is different (in this case, lower) from the capital structure stated*  
14 *at book value. This process has nothing to do with targeting any*  
15 *particular market-to-book ratio.*<sup>55</sup>  
16

17 **Q. DO YOU AGREE WITH MR. MOUL'S STATEMENT THAT HIS 172-**  
18 **BASIS POINT LEVERAGE ADDER IS NOT A MARKET-TO-BOOK**  
19 **RATIO ADJUSTMENT?**

20 A. No. Mr. Moul's leverage adjustment is a market-to-book ratio adder that inflates  
21 his DCF results.

22           I have been providing ROE testimony to state regulatory bodies for over 34  
23 years. I have seen Mr. Moul's market-to-book ratios in years past. In these other  
24 applications, the proposed ROE was adjusted upwards to account for a market value

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<sup>55</sup> Witness Moul's Pre-Filed Direct Testimony, page 30: lines 6 – 9.



1        that was less than the book value. In the current case, Mr. Moul proposes a similar  
 2        upward adjustment to his proposed ROE because utility market values are higher  
 3        than book values. Hence, I have seen this market-to-book adjustment used to raise  
 4        the recommended ROE in times when market values were above and below the  
 5        book values. Such an adjustment serves only one purpose, and that is to raise the  
 6        recommended ROE for the utility client.

7                In this case, Mr. Moul’s leverage adjustment is, without a doubt, a market-  
 8        to-book adjustment that should be summarily dismissed by the Commission as an  
 9        attempt to justify an unreasonable return on equity for the Company.

10  
 11    **Q.    HAS THIS COMMISSION RULED ON MR. MOUL’S “LEVERAGE”**  
 12    **ADJUSTMENT?**

13    A.    Yes. In a discovery reply, Mr. Moul noted that he has proposed a leverage  
 14        adjustment within his DCF and CAPM models in over thirty different cases on  
 15        behalf of a Pennsylvania public utility in the past ten years.<sup>56</sup> (OCA-III-10). Mr.  
 16        Moul was not aware of any Commission cases within the past ten years in which  
 17        the Commission approved one of his leverage adjustment. (OCA-III-11). For  
 18        example, in the 2012 PPL rate case, the Commission determined the following:

19                *The fact that we have granted leverage adjustments in a few select cases in*  
 20                *the past as noted by PPL does not mean that such adjustments are*  
 21                *warranted in all cases. The award of such an adjustment is not precedential*  
 22                *but discretionary with the Commission. In fact, the Commission has rejected*  
 23                *leverage/financial risk adjustments that are similar to the one proposed by*  
 24                *PPL in this proceeding. See, e.g., Pa. PUC v. Aqua Pennsylvania, Inc.,*  
 25                *Docket No. R-00072711, at 38-39 (Order entered July 31, 2008). Moreover,*

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<sup>56</sup> Witness Moul’s response to Question No. OCA-3-10.

1                    *in the context of our determination, supra, of a reasonable return on equity*  
2                    *for PPL of 10.28%, we conclude that there is no need to have an artificial*  
3                    *upwards adjustment to compensate for any perceived risk related to PPL's*  
4                    *market-to-book ratio. Accordingly, we shall deny the Exceptions of PPL and*  
5                    *adopt the ALJ's recommendation to reject PPL's requested leverage*  
6                    *adjustment.*<sup>57</sup>  
7

8                    **B. Review of Moul CAPM Analysis**

9                    **Q. PLEASE EXPLAIN HOW MR. MOUL APPLIES THE CAPM.**

10                  A. In his analysis (as shown on **Schedule 13** of his **Exhibit No. 400**), Mr. Moul  
11                  combines forecasted and historical treasury yields to apply his CAPM. Mr. Moul's  
12                  decision on when and where to use forecasted and historical values results in a  
13                  higher CAPM for his utility client(s).

14  
15                  **Q WHAT IS THE RISK-FREE RATE THAT MR. MOUL USES IN HIS CAPM**  
16                  **ANALYSIS?**

17                  A. In his pre-filed testimony, Mr. Moul cites a wide range of historical and forecasted  
18                  interest rates and then concludes that 2.75% is a proper estimate for the risk-free  
19                  rate in the CAPM.<sup>58</sup>

20  
21                  **Q. DO YOU AGREE WITH MR. MOUL'S FORECASTED RISK-FREE**  
22                  **RATE?**

23                  A. No. Mr. Moul's past forecasts have missed the mark. For example, in January 2019,  
24                  Mr. Moul filed testimony on behalf of UGI Gas before this Commission. In that

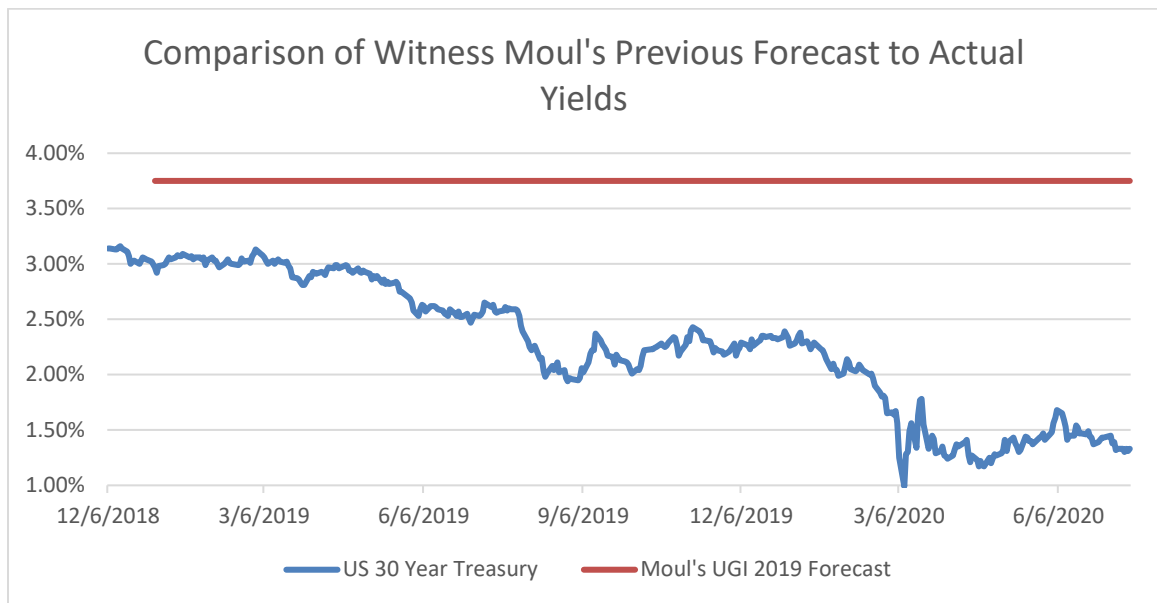
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<sup>57</sup> Pa. PUC v. PPL Electric Utilities Corp., Dkt No. R-2012-2290597, Order p. 91 (2012). Available at <http://www.puc.pa.gov/pcdocs/1206360.docx>

<sup>58</sup> Witness Moul Pre-Filed Direct Testimony, page 38: lines 14 – 15

1 rate case, Mr. Moul utilized forecasted risk-free rates within his CAPM Analysis of  
 2 3.75%.<sup>59</sup> **Chart 6** below provides the results of Mr. Moul’s forecast over this  
 3 period. As can be seen below, Mr. Moul’s forecasts were inadequate and overly  
 4 optimistic. Given that the yield on 30-year US Treasury bonds is currently well  
 5 below 2.00%<sup>60</sup>, I don’t believe the Commission should put much faith in Mr.  
 6 Moul’s interest rate forecast and, therefore, his CAPM analysis.

8 **Chart 6:** Mr. Moul’s Forecasts Compared to Actual



9  
 10  
 11 **Q. WHAT EXPECTED MARKET RETURN DOES MR. MOUL USE IN THE**  
 12 **CAPM ANALYSIS HE EMPLOYS IN THIS CASE?**

13 **A.** Mr. Moul states the following in regard to the market premium he utilizes:

<sup>59</sup> Docket No. R-2018-3006814, pre-filed direct testimony of Witness Moul, page 46.

<sup>60</sup> The value as of July 7, 2020 is 1.38% as sourced from <https://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=yield>

1                    *For the historically based market premium, I have used the arithmetic mean*  
2                    *obtained from the data presented on page 1 of Schedule 12. On that*  
3                    *schedule, the market return was 11.74% on large stocks during periods of*  
4                    *low interest rates. During those periods, the yield on long-term government*  
5                    *bonds was 2.92% when interest rates were low. As I describe above, interest*  
6                    *rates are forecast to trend upward in the long-term according to Blue*  
7                    *Chip.*<sup>61</sup>  
8

9                    In general, subsequent to the statement provided above from Mr. Moul, the yield  
10                    on long-term government bonds have consistently been trending downward in the  
11                    long-term. As presented within his **Schedule 13** on page 24 of **Exhibit No. 400**, to  
12                    produce his ultimate market premium of 7.74%, Mr. Moul averages the 11.83%  
13                    forecasted market return from *Value Line* and the 8.93% forecasted rate of return  
14                    from the *S&P 500* to arrive at 10.38%. He then deducts his forecasted risk free rate  
15                    of 2.75% from the average of 10.38% to arrive at his forecasted market premium  
16                    of 7.63%.<sup>62</sup> He then uses an 11.81% for the as the historical arithmetic mean market  
17                    return, and deducts a historical arithmetic mean risk free rate of 3.97% to arrive at  
18                    a historical market premium of 7.84%. He then uses the average of these two values  
19                    (*i.e.*, 7.63% forecasted market premium and 7.84% historical market premium) to  
20                    arrive at his overall forecasted market premium of 7.74%.

21  
22                    **Q.     DO YOU AGREE WITH MR. MOUL'S MARKET PREMIUM ANALYSIS?**

23                    A.     No. I have two concerns with Mr. Moul's analysis. First, Mr. Moul's median  
24                    appreciation potential from *Value Line* is based on only an 18-month appreciation  
25                    potential. Such price appreciation potentials vary widely. As an example, on

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<sup>61</sup> Witness Moul Pre-Filed Direct Testimony, page 38: lines 18 – 24.

<sup>62</sup> Witness Moul Pre-Filed Direct Testimony, Schedule 13: page 24 of Exhibit No. 400.

1 January 24, 2020, *Value Line's* price appreciation potential for the next 18 months  
2 was 6.00%. If Mr. Moul had used that price appreciation potential, his median total  
3 return would have been 8.10% and not the 11.83% as noted in **Schedule 13** of his  
4 **Exhibit No. 400**. On the opposite end of the spectrum, the July 17, 2020 *Value Line*  
5 has an 18-month price appreciation potential of 20.00%, which, when combined  
6 with the 2.40% dividend yield noted in that edition of *Value Line* produces median  
7 total return of 22.40%. Such a wide range of 8.10% to 22.40% is the reason why an  
8 analyst should never use such short-term highly variable components such as price  
9 potential for determining components in any cost of capital analysis.

10 Secondly, Mr. Moul has mixed apples and oranges in the development of  
11 his historical market premium as found in **Schedule 13** of his **Exhibit No. 400**. Mr.  
12 Moul uses historical values from 1926-2018 for the return on the market, but his  
13 value of 3.97% for the risk-free return is mistaken. The return for long-term  
14 government bonds is 6.0%, as noted in the 2017 Stocks, Bonds, Bills and Inflation  
15 (SBBI) Yearbook<sup>63</sup>, and not the 3.97% as cited by Mr. Moul. If Mr. Moul had used  
16 the 6.0% return for long-term government bonds from SBBI instead of the 3.97%,  
17 his historical market premium would be 6.0% (12.0% arithmetic mean for large-  
18 cap stocks<sup>64</sup> less long-term government bonds) and not the 7.84% he cites.

19  
20 **Q. HOW DOES MR. MOUL CALCULATE HIS MARKET RISK PREMIUM**  
21 **FOR USE IN THE CAPM?**

---

<sup>63</sup> 2017 SBBI Yearbook, Exhibit 2.3 .

<sup>64</sup> *Id.*

1 A. Mr. Moul compares his above-stated market returns against the risk-free rates on a  
2 projected and historical basis to derive his market risk premium range of 7.74%.<sup>65</sup>  
3 Again, to put this premium in context, Mr. Moul is telling this Commission that A-  
4 rated utility bonds will, in the future, have a yield of 4.00%<sup>66</sup> and that the risk  
5 premium for utility equity is 6.50%<sup>67</sup>, meaning that he is forecasting US utilities to  
6 produce double-digit returns of 10.50%<sup>68</sup>. Mr. Moul's forecasted US Treasury  
7 yield, and his forecasted risk premium, are both exorbitantly high.

8

9 **Q. HOW DOES MR. MOUL'S EXPECTED MARKET RETURN COMPARE**  
10 **TO FORECASTS FROM OTHER ANALYSTS?**

11 A. As I indicated previously, well-known entities such as Black Rock Investment, and  
12 JP Morgan were forecasting market returns from -4.4% to 6.1% prior to the  
13 pandemic. Mr. Moul's forecasted risk premiums referenced above are, to say the  
14 least, unrealistic.

15 In addition, the market forecasts of Black Rock Investment, JP Morgan, and  
16 Mr. Moul were all completed prior to the Coronavirus pandemic. As noted by Fed  
17 Chairman Powell as cited above,<sup>69</sup> current economic forecasts are tempered with  
18 the reality that the US economy will take more than a year to return to its pre-  
19 Coronavirus pandemic levels.

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<sup>65</sup> Witness Moul Pre-Filed Direct Testimony, page 39: line 10.

<sup>66</sup> Witness Moul Pre-Filed Direct Testimony, page 31: line 13.

<sup>67</sup> Witness Moul Pre-Filed Direct Testimony, page 34: line 10.

<sup>68</sup> Witness Moul Pre-Filed Direct Testimony, page 35: line 3.

<sup>69</sup> <https://www.cbsnews.com/news/full-transcript-fed-chair-jerome-powell-60-minutes-interview-economic-recovery-from-coronavirus-pandemic/>.

1 **Q. HOW DOES MR. MOUL’S EXPECTED MARKET RETURN COMPARE**  
2 **TO HISTORICAL RETURNS IN THE MARKET?**

3 A. As noted in **Table 8** above, the historical market return based on the period of 1926-  
4 2018 was 10.10% on a geometric return and 11.90% on an arithmetic return basis.  
5 Mr. Moul’s forecasts are far higher than even historical returns.

6 Whether the comparison is to the forecasts from current day analysts or to  
7 historical returns, Mr. Moul’s forecasts have no underlying fundamental support or  
8 reasoning.

9

10 **Q. HOW DOES MR. MOUL’S FORECASTED MARKET RETURN BEING AS**  
11 **HIGH AS 11.83% COMPARE TO WHAT NISOURCE ACTUALLY**  
12 **BELIEVES THE MARKET IS GOING TO EARN AS EVIDENCED IN**  
13 **THEIR PENSION CALCULATIONS?**

14 A. According to the Company’s response to discovery request OCA-III-1, in  
15 calculating its pension plan needs, NiSource has assumed a large cap return of  
16 8.25% and a small cap return of 9.00%. Clearly, Mr. Moul’s forecasted market  
17 return of 11.83% is excessive in comparison to what his employer in this case really  
18 believes will occur in the marketplace.

19

20 **Q. DO YOU AGREE WITH MR. MOUL’S CAPM MID-CAP SIZE**  
21 **ADJUSTMENT?**

22 A. No. As shown on his **Schedule 1** of **Exhibit No. 400**, Mr. Moul’s CAPM analysis  
23 would have produced a result of 9.17% had he not employed any size adjustment.

1           However, he opts to employ an addition of 102-basis points to his end CAPM result,  
2           which moves his result from 9.17% to 10.19%.

3           As mentioned earlier, it is my belief that the CAPM is inferior to the DCF  
4           in determining the market required return on equity. Without a direct and immediate  
5           link to current stock market prices, the CAPM simply cannot reflect current investor  
6           sentiments of the market.

7           To support his 1.02% (102-basis points) adder, Mr. Moul notes that “*as the*  
8           *size of a firm decreases, its risk and required return increases.*”<sup>70</sup> As such, he is  
9           asserting that a 1.02% adder should be employed to adjust for the size of Columbia  
10          Gas relative to other firms. He then proceeds to cite as support for this position, a  
11          single article from *Public Utilities Fortnightly* dating back 25 years to 1995.<sup>71</sup>

12          There are two errors in this 102-basis point adjustment. First, it is unclear  
13          from Mr. Moul’s testimony whether he is saying Columbia Gas of Pennsylvania is  
14          “mid-cap” or if he is saying NiSource, its parent company, is “mid-cap”. If Mr.  
15          Moul is claiming NiSource is mid-cap, I direct him to the May 29, 2020 edition of  
16          *Value Line* that has NiSource with a total capitalization of \$8.9 billion and states  
17          NiSource is “large cap”. Hence, no adjustment would be warranted if Mr. Moul  
18          was applying the adjustment to NiSource.

19          If Mr. Moul is claiming that Columbia Gas of Pennsylvania is “mid-cap”,  
20          the adjustment would make even less sense as the entire amount of the Company’s  
21          equity is owned by NiSource, its parent holding company. Since the stock of

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<sup>70</sup> Witness Moul Pre-Filed Direct Testimony, page 39: lines 14 – 15.

<sup>71</sup> Witness Moul Pre-Filed Direct Testimony, page 39: lines 19 – 26.



1 Columbia Gas of Pennsylvania is not traded publicly, there is no basis for such a  
2 large 102-basis point adder.

3 Secondly, what Mr. Moul fails to reflect is that investors already know the  
4 size of NiSource and similar utility holding companies. To the extent investors feel  
5 these companies are a higher risk than larger entities, investors will price that  
6 premium into the current stock price. Hence, Mr. Moul's 1.02% adder simply  
7 double counts any size premium, assuming one exists at all.

8  
9 **Q. HAS THIS COMMISSION PREVIOUSLY RULED ON MR. MOUL'S**  
10 **UTILITY SIZE OR LEVERAGE ADJUSTMENT ARGUMENT?**

11 A. Yes. As noted above, Mr. Moul has acknowledged proposing an adjustment based  
12 upon the size of the utility within his CAPM, and/or a leverage adjustment within  
13 his DCF and CAPM, in over thirty different cases on behalf of a Pennsylvania  
14 public utility in the past ten years.<sup>72</sup> (OCA-III-10). Mr. Moul was not aware of  
15 any Commission cases within the past ten years in which the Commission  
16 approved one of these adjustments. (OCA-III-11). For example, in the 2018 UGI  
17 Utilities - Electric general rate case, the Commission rejected Mr. Moul's  
18 leverage and firm size adjustments and stated:

19 *Finally, we reject UGI's request for a leverage adjustment and a*  
20 *size adjustment in the calculation of the CAPM cost of equity. As*  
21 *previously noted, we find no basis in this proceeding to add a*  
22 *leverage adjustment.*<sup>73</sup>  
23

<sup>72</sup> Witness Moul's response to Question No. OCA-III-10.

<sup>73</sup> Pa. P.U.C. v. UGI Utilities – Electric Division, Opinion and Order at 100, Docket No. R-2017-2640058 (Oct. 25, 2018).

1 The Commission was not persuaded by the technical literature cited by UGI  
2 Electric and was not convinced that a size adjustment for risk was appropriate in a  
3 utility setting.

4  
5 **C. Review of Moul Risk Premium Method**

6 **Q. MR. O'DONNELL, PLEASE EXPLAIN THE DIFFERENCE BETWEEN**  
7 **THE RISK PREMIUM MODEL AND THE CAPM?**

8 A. The CAPM and the Risk Premium models are both essentially risk premium  
9 models. The primary difference is the CAPM is more company-specific due to its  
10 use of beta to measure systematic risk. However, both models compare market  
11 returns (either total market or utility markets) to bond yields.

12  
13 **Q. PLEASE EXPLAIN MR. MOUL'S APPLICATION OF HIS RISK-**  
14 **PREMIUM MODEL.**

15 A. In his application of the Risk Premium model, Mr. Moul combines a forecasted  
16 utility bond yield and his determination of an appropriate risk premium. To be  
17 specific, Mr. Moul combines a forecasted A-rated bond yield of 4.00% (a risk-free  
18 rate of 2.75% combined with a yield spread of 1.25%) to a risk premium of 6.50%  
19 to derive a 10.50% risk premium result.

20  
21 **Q. DO YOU AGREE WITH MR. MOUL'S PRESENTATION OF THE RISK**  
22 **PREMIUM MODEL?**

1 A. No. First, I disagree with the use of forecasted bond yields. The best predictor of  
2 future yields is the current yield curve. If the market feels interest rates are going  
3 to increase in the future, it will bid down current bond prices so that yields  
4 correspondingly increase. The reverse is also true in that, when the market feels  
5 interest rates will soon fall, it will bid up bond prices thereby reducing bond yields.  
6 However, Mr. Moul has ignored the most important predictor of future bond yields  
7 and, instead, used his own estimate of future bond yields. As shown in **Chart 6**  
8 above, Mr. Moul's prior forecasts of bond yields have simply been poor predictors  
9 of actual results.

10

11 **D. Review of Mr. Moul's Comparable Earnings Model**

12 **Q. PLEASE EXPLAIN THE MANNER IN WHICH MR. MOUL CONDUCTED**  
13 **HIS COMPARABLE EARNINGS ANALYSIS?**

14 A. Mr. Moul developed a group of non-regulated companies that he believed were  
15 comparable in risk to Columbia Gas of Pennsylvania. Mr. Moul then compared the  
16 historical earned returns of these non-regulated companies to the results of his DCF  
17 and CAPM analyses which are based on market returns.

18

19 **Q. DO YOU AGREE WITH MR. MOUL'S COMPARABLE EARNINGS**  
20 **ANALYSIS?**

21 A. No, I have two areas of disagreement with Mr. Moul in his Comparable Earnings  
22 Analysis. First, a non-regulated firm does not operate in a monopoly service  
23 territory and does not have the ability to seek higher rates from state regulators

1 when they deem it necessary or desirable to do so. Hence, the operation of a  
2 regulated utility is inherently different from entities that operate in truly competitive  
3 markets. As an example, Mr. Moul has included “The Cheesecake Factory” and  
4 “Tootsie Roll” as part of the comparable group on which he bases his comparable  
5 earnings analysis for Columbia Gas of Pennsylvania, a regulated gas utility. I  
6 recognize that The Cheesecake Factory and Tootsie Roll may have cleared certain  
7 financial benchmarks as set out by Mr. Moul for comparability to Columbia Gas of  
8 Pennsylvania, but they are clearly not operating in businesses that are anything  
9 close to the business of a regulated utility. Mr. Moul’s comparable group is simply  
10 not comparable to the operation of a regulated gas utility with a monopoly market.

11 The second area of disagreement I have with Mr. Moul’s comparable  
12 earnings analysis is my repeated concern of comparing book value with market  
13 value. Mr. Moul continues to conflate book value with market value. Clearly, the  
14 two are totally separate entities, and since market values are not well above book  
15 values, a return on book values as Mr. Moul espouses with result in returns that are  
16 excessive relative to what investors can actually receive in the marketplace. As a  
17 result, Mr. Moul’s reliance on book value returns is misguided.

18  
19 **E. Other Observations on Moul Testimony**

20 **Q. DO YOU AGREE WITH MR. MOUL’S 20-BASIS POINT ADJUSTMENT**  
21 **FOR EXEMPLARY MANAGEMENT PERFORMANCE?**

1 A. No. I disagree with Mr. Moul's recommendation that Columbia Gas be rewarded a  
2 10.95% ROE, inclusive of a 20-basis point ROE adder for exemplary management  
3 performance.<sup>74</sup>

4 I have reviewed the testimony of Columbia Gas Witness Michael Huwar  
5 who cites several activities in which management has engaged that, in his opinion,  
6 merit the 20-basis point adder as requested by Mr. Moul.<sup>75</sup> Specifically, Mr. Huwar  
7 states that the Company's management has been effective over a variety of different  
8 categories such as leakage reduction, damage reduction, emergency response time,  
9 consumer report evaluations, etc.

10 It is important to note that the Company just implemented new base rates in  
11 December 2018. There is virtually nothing in the record to suggest that the  
12 Company's management has been exemplary since the Company's last base rate  
13 case concluded 18 months ago to the point where ratepayers in Pennsylvania should  
14 be paying increased rates as a result.

15 OCA witness Roger Colton has reviewed aspects of the Company's revenue  
16 recovery efforts compared to the Company's peer group of Pennsylvania natural  
17 gas distribution utilities over a longer period of time. Mr. Colton has concluded that  
18 Company's performance is not exemplary in these important areas, where the  
19 Company has high costs of collection, a high level of average arrearages, high  
20 disconnection rates, and low reconnection rates.

---

<sup>74</sup> Witness Moul Pre-Filed Direct Testimony, page 5: lines 3 – 9.

<sup>75</sup> Witness Huwar Pre-Filed Direct Testimony, page 18: line 14.

1                   Ratepayers in Pennsylvania are already paying Columbia Gas' management  
2                   to perform their jobs to the best of their abilities. The argument that a 20-basis point  
3                   adder be implemented in relation to exemplary management performance,  
4                   especially during a period when much of the rate paying public have been dealing  
5                   with financial struggles linked to the Coronavirus pandemic, is questionable at best.  
6                   The Company's request for an additional 20- basis points to the allowed ROE and  
7                   resulting higher rates is unwarranted, especially in light of the Coronavirus  
8                   pandemic and current economic conditions.

1 **VIII. SUMMARY**

2 **Q. MR. O'DONNELL, PLEASE SUMMARIZE YOUR TESTIMONY.**

3 A. Columbia Gas' requested rate increase in this case is excessive, unnecessary, and  
4 burdensome on the ratepayers of Pennsylvania. My specific recommendations in  
5 this case are as follows:

- 6 • The Company's proposed capital structure for ratemaking purposes is too  
7 costly;
- 8 • The proper capital structure to use in this proceeding is 50.00% common  
9 equity and 50.00% long-term debt;
- 10 • The embedded cost of debt should be set at the Company-recommended  
11 rate of 4.49%;
- 12 • The Company's allowed return on equity should be set at 8.50%, based  
13 primarily upon the results of my DCF analysis and my recommended capital  
14 structure;
- 15 • The overall rate of return that Columbia Gas should be allowed to earn in  
16 this proceeding is 6.50%; and
- 17 • Mr. Moul's recommended ROE for Columbia Gas is unreasonable,  
18 excessive, and out-of-date, especially in light of the Coronavirus pandemic.

19

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

21 A. Yes.

# Appendix A



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Kevin W. O'Donnell, is the founder of Nova Energy Consultants, Inc. in Cary, NC. Mr. O'Donnell's academic credentials include a B.S. in Civil Engineering - Construction Option from North Carolina State University as well as a MBA in Finance from Florida State University. Mr. O'Donnell is also a Chartered Financial Analyst (CFA).

Mr. O'Donnell has over thirty-four years of experience working in the electric, natural gas, and water/sewer industries. He is very active in municipal power projects and has assisted numerous southeastern U.S. municipalities cut their wholesale cost of power by as much as 67%. On Dec. 12, 1998, *The Wilson Daily Times* made the following statement about O'Donnell.

**Although we were skeptical of O'Donnell's efforts at first, he has shown that he can deliver on promises to cut electrical rates.**

Through 2018, Mr. O'Donnell has completed close to 30 wholesale power projects for municipal and university-owned electric systems throughout North and South Carolina. In May of 1996 Mr. O'Donnell testified before the U.S. House of Representatives, Committee on Commerce, Subcommittee on Energy and Power regarding the restructuring of the electric utility industry.

Mr. O'Donnell has appeared as an expert witness in over 110 regulatory proceedings before the North Carolina Utilities Commission, the South Carolina Public Service Commission, the Virginia Corporation Commission, the Minnesota Public Service Commission, the New Jersey Board of Public Utilities, the Colorado Public Service Commission, Public Service Commission of the District of Columbia, the Maryland Public Service Commission, the Public Utility Commission of Texas, the Indiana Utility Regulatory Commission, the Wisconsin Public Service Commission, the Pennsylvania Public Service Commission, the Oklahoma State Corporation Commission, the California Public Utilities Commission, and the Florida Public Service Commission. His area of expertise has included rate design, cost of service, rate of return, capital structure, creditworthiness issues, fuel adjustments, merger transactions, holding company applications, as well as numerous other accounting, financial, and utility rate-related issues.

Mr. O'Donnell is the author of the following two articles: "Aggregating Municipal Loads: The Future is Today" which was published in the Oct. 1, 1995 edition of *Public Utilities Fortnightly*; and "Worth the Wait, But Still at Risk" which was published in the May 1, 2000 edition of *Public Utilities Fortnightly*. Mr. O'Donnell is also the co-author of "Small Towns, Big Rate Cuts" which was published in the January, 1997 edition of *Energy Buyers Guide*. All of these articles discuss how rural electric systems can use the wholesale power markets to procure wholesale power supplies.

**Regulatory Cases of Kevin W. O'Donnell, CFA**  
**Nova Energy Consultants, Inc.**

Year	Name of Applicant	State Jurisdiction	Docket No.	Client/Employer	Case Issues
1985	Public Service Company of NC	NC	G-5, Sub 200	Public Staff of NCUC	Return on equity, capital structure
1985	Piedmont Natural Gas Company	NC	G-9, Sub 251	Public Staff of NCUC	Return on equity, capital structure
1986	General Telephone of the South	NC	P-19, Sub 207	Public Staff of NCUC	Return on equity, capital structure
1987	Public Service Company of NC	NC	G-5, Sub 207	Public Staff of NCUC	Return on equity, capital structure
1988	Piedmont Natural Gas Company	NC	G-9, Sub 278	Public Staff of NCUC	Return on equity, capital structure
1989	Public Service Company of NC	NC	G-5, Sub 246	Public Staff of NCUC	Return on equity, capital structure
1990	North Carolina Power	NC	E-22, Sub 314	Public Staff of NCUC	Return on equity, capital structure
1991	Duke Energy	NC	E-7, Sub 487	Public Staff of NCUC	Return on equity, capital structure
1992	North Carolina Natural Gas	NC	G-21, Sub 306	Public Staff of NCUC	Natural gas expansion fund
1992	North Carolina Natural Gas	NC	G-21, Sub 307	Public Staff of NCUC	Natural gas expansion fund
1995	Penn & Southern Gas Company	NC	G-3, Sub 186	Public Staff of NCUC	Return on equity, capital structure
1995	North Carolina Natural Gas	NC	G-21, Sub 334	Carolina Utility Customers Assoc.	Return on equity, capital structure, rate design, cost of service
1995	Carolina Power & Light Company	NC	E-2, Sub 680	Carolina Utility Customers Assoc.	Fuel adjustment proceeding
1995	Duke Power	NC	E-7, Sub 559	Carolina Utility Customers Assoc.	Fuel adjustment proceeding
1996	Piedmont Natural Gas Company	NC	G-9, Sub 378	Carolina Utility Customers Assoc.	Return on equity, capital structure, rate design, cost of service
1996	Piedmont Natural Gas Company	NC	G-9, Sub 382	Carolina Utility Customers Assoc.	Return on equity, capital structure, rate design, cost of service
1996	Public Service Company of NC	NC	G-5, Sub 356	Carolina Utility Customers Assoc.	Return on equity, capital structure, rate design, cost of service
1996	Cardinal Extension Company	NC	G-39, Sub 0	Carolina Utility Customers Assoc.	Capital structure, cost of capital
1997	Public Service Company of NC	NC	G-5, Sub 327	Carolina Utility Customers Assoc.	Return on equity, capital structure, rate design, cost of service
1998	Public Service Company of NC	NC	G-5, Sub 386	Carolina Utility Customers Assoc.	Return on equity, capital structure, rate design, cost of service
1998	Public Service Company of NC	NC	G-5, Sub 386	Carolina Utility Customers Assoc.	Return on equity, capital structure, rate design, cost of service
1999	Public Service Company of NC/ISCANA Corp	NC	G-5, Sub 400	Carolina Utility Customers Assoc.	Natural gas transportation rates
1999	Public Service Company of NC/ISCANA Corp	NC	G-43	Carolina Utility Customers Assoc.	Merger case
1999	Carolina Power & Light Company	NC	E-2, Sub 753	Carolina Utility Customers Assoc.	Merger Case
1999	Carolina Power & Light Company	NC	G-21, Sub 387	Carolina Utility Customers Assoc.	Holding company application
1999	Carolina Power & Light Company	NC	P-708, Sub 5	Carolina Utility Customers Assoc.	Holding company application
1999	Carolina Power & Light Company	NC	G-9, Sub 428	Carolina Utility Customers Assoc.	Holding company application
2000	Piedmont Natural Gas Company	NC	G-3, Sub 224	Carolina Utility Customers Assoc.	Return on equity, capital structure, rate design, cost of service
2000	NUI Corporation	NC	G-3, Sub 232	Carolina Utility Customers Assoc.	Holding company application
2000	NUI Corporation/Virginia Gas Company	NC	E-7, Sub 685	Carolina Utility Customers Assoc.	Merger application
2001	Duke Power	NC	G-3, Sub 235	Carolina Utility Customers Assoc.	Emission allowances and environmental compliance costs
2001	NUI Corporation	NC	E-2, Sub 778	Carolina Utility Customers Assoc.	Tariff change request
2001	Carolina Power & Light Company/Progress E	NC	G-3, Sub 235	Carolina Utility Customers Assoc.	Asset transfer case
2001	Duke Power	NC	E-7, Sub 694	Carolina Utility Customers Assoc.	Restructuring application
2002	Piedmont Natural Gas Company	NC	G-9, Sub 461	Carolina Utility Customers Assoc.	Return on equity, capital structure, rate design, cost of service
2002	Cardinal Pipeline Company	NC	G-39, Sub 4	Carolina Utility Customers Assoc.	Cost of capital, capital structure
2002	South Carolina Public Service Commission	SC	2002-63-G	South Carolina Energy Users Committee	Rate of return, accounting, rate design, cost of service
2003	Piedmont Natural Gas/North Carolina Natura	NC	G-9, Sub 470	Carolina Utility Customers Assoc.	Merger application
2003	Piedmont Natural Gas/North Carolina Natura	NC	E-2, Sub 825	Carolina Utility Customers Assoc.	Merger application
2003	Piedmont Natural Gas/North Carolina Natura	NC	E-2, Sub 833	Carolina Utility Customers Assoc.	Fuel case
2003	Carolina Power & Light Company	NC	2004-178-E	South Carolina Energy Users Committee	Return on equity, capital structure, rate design, cost of service
2004	South Carolina Electric & Gas	SC	E-2, Sub 868	Carolina Utility Customers Assoc.	Fuel case
2005	Carolina Power & Light Company	NC	G-9, Sub 499	Carolina Utility Customers Assoc.	Return on equity, capital structure, rate design, cost of service
2005	Piedmont Natural Gas Company	NC	2005-2-E	South Carolina Energy Users Committee	Fuel application
2005	South Carolina Electric & Gas	SC	2006-1-E	South Carolina Energy Users Committee	Fuel application
2005	Carolina Power & Light Company	SC	E-100, Sub 103	Carolina Utility Customers Assoc.	Submitted rebuttal testimony in investigation of IRP in NC.
2006	IRP in North Carolina	NC	G-9, Sub 519	Carolina Utility Customers Assoc.	Creditorship issue
2006	Piedmont Natural Gas Company	NC	G-5, Sub 481	Carolina Utility Customers Assoc.	Return on equity, capital structure, rate design, cost of service
2006	Public Service Company of NC	NC	E-7, 751	Carolina Utility Customers Assoc.	App to share net revenues from certain wholesale pwr trans

**Regulatory Cases of Kevin W. O'Donnell, CFA**  
**Nova Energy Consultants, Inc.**

Year	Name of Applicant	State Jurisdiction	Docket No.	Client/Employer	Case Issues
2006	South Carolina Electric & Gas	SC	2006-192-E	South Carolina Energy Users Committee	Fuel application
2007	Duke Power	NC	E-7, Sub 790	Carolina Utility Customers Assoc.	Application to construct generation
2007	South Carolina Electric & Gas	SC	2007-229-E	South Carolina Energy Users Committee	Rate of return, accounting, rate design, cost of service
2008	South Carolina Electric & Gas	SC	2008-196-E	South Carolina Energy Users Committee	Base load review act proceeding
2009	Western Carolina University	NC	E-35, Sub 37	Western Carolina University	Rate of return, accounting, rate design, cost of service
2009	Duke Power	NC	E-7, Sub 909	Carolina Utility Customers Assoc.	Cost of service, rate design, return on equity, capital structure
2009	South Carolina Electric & Gas	SC	2009-261-E	South Carolina Energy Users Committee	DSM/EE rate filing
2009	Duke Power	SC	2009-226-E	South Carolina Energy Users Committee	Return on equity, capital structure, rate design, cost of service
2009	Tampa Electric	FL	080317-EI	Florida Retail Federation	Return on equity, capital structure
2010	Duke Power	SC	2010-3-E	South Carolina Energy Users Committee	Fuel application - assisted in settlement
2010	South Carolina Electric & Gas	SC	2009-489-E	South Carolina Energy Users Committee	Return on equity, capital structure, rate design, cost of service
2010	Virginia Power	VA	PUE-2010-00006	Mead Westvaco	Rate design
2011	Duke Energy	SC	2011-20-E	South Carolina Energy Users Committee	Nuclear construction financing
2011	Northern States Power	MN	E002/GR-10-971	Xcel Large Industrials	Return on equity, capital structure
2011	Virginia Power	VA	PUE-2011-00027	Mead Westvaco	Capital structure, revenue requirement
2011	Duke Energy	NC	E-7, Sub 989	Carolina Utility Customers Assoc.	Accounting, cost of service, rate design, ROE, capital structure
2011	Duke Energy	SC	2011-271-E	South Carolina Energy Users Committee	Accounting, cost of service, rate design, ROE, capital structure
2011	Dominion Virginia Power	VA	PUE-2011-00073	Mead Westvaco	Rate design
2012	Town of Smithfield/Partners Equity Group	NC	ES-160, Sub 0	Partners Equity Group	Rate design, asset valuation
2012	Florida Power & Light	FL	I20015-EI	Florida Office of Public Counsel	Capital structure
2012	South Carolina Electric & Gas	SC	2012-218-E	South Carolina Energy Users Committee	Accounting, cost of service, rate design, ROE, capital structure
2013	Progress Energy Carolinas	NC	E-2, Sub 1023	Carolina Utility Customers Assoc.	Accounting, cost of service, rate design, ROE, capital structure
2013	Duke Energy Carolinas	NC	E-7, Sub 1026	Carolina Utility Customers Assoc.	Rate design
2013	Jersey Central Power & Light	NJ	BPU ER12111052	Gerdau Ameristeel	Return on equity, capital structure
2013	Duke Energy Carolinas	SC	2013-59-E	South Carolina Energy Users Committee	Accounting, cost of service, rate design, ROE, capital structure
2013	Tampa Electric	FL	130040-EI	Florida Office of Public Counsel	Capital structure and financial integrity
2013	Piedmont Natural Gas	NC	G-9, Sub 631	Carolina Utility Customers Assoc.	Accounting, cost of service, rate design, ROE, capital structure
2014	Dominion Virginia Power	VA	PUE-2014-00033	Mead Westvaco	Recoverable fuel costs, hedging strategies
2014	Public Service Company of Colorado	CO	14AL-0660E	Colorado Healthcare Electric Coordinating Council	Return on equity, capital structure
2015	WEC Acquisition of Integrys	WI	9400-YO-100	Staff of Wisconsin Public Service Commission	Merger analysis
2015	Dominion Virginia Power	VA	PUE-2015-00027	Federal Executive Agencies	Return on equity
2015	South Carolina Electric & Gas	SC	2015-103-E	South Carolina Energy Users Committee	Return on equity
2015	Western Carolina University	NC	E-35, Sub 45	Western Carolina University	Accounting, cost of service, rate design, ROE, capital structure
2016	Sandpiper Energy	MD	9410	Maryland Office of People's Counsel	Return on equity, capital structure
2016	Washington Gas Light	DC	FC 1137	Washington, DC Office of People's Counsel	Return on equity, capital structure
2016	Florida Power & Light	FL	160021-EI	Florida Office of Public Counsel	Capital Structure
2016	Jersey Central Power & Light	NJ	EM15060733	NJ Division of Rate Counsel	Asset valuation
2016	Rockland Electric Company	NJ	ER16050428	NJ Division of Rate Counsel	Rate design
2016	Dominion NC Power	NC	E-22, Sub 532	Carolina Utility Customers Assoc.	Accounting, cost of service, rate design, ROE, capital structure
2017	Potomac Electric Power	DC	FC 1139	Healthcare Council of the National Capitol Area (HCNCA)	ROE and capital structure
2017	Columbia Gas of Maryland	MD	FC 9447	Maryland Office of People's Counsel	ROE and capital structure
2017	Washington Gas Light	DC	FC 1142	Washington, DC Office of People's Counsel	Merger analysis
2017	Duke Energy Progress	NC	E-2, Sub 1142	Carolina Utility Customers Assoc.	Accounting, cost of service, rate design, ROE, capital structure
2018	Public Service Electric & Gas	NJ	GR17070776	NJ Division of Rate Counsel	ROE and capital structure
2018	Duke Energy Carolinas	NC	E-7, Sub 1146	Carolina Utility Customers Assoc.	Accounting, cost of service, rate design, ROE, capital structure
2018	Elkton Gas/SJI	MD	FC 9475	Maryland Office of People's Counsel	Merger analysis
2018	Energy Texas	TX	PUC 48371	Public Utilities Commission of Texas	ROE
2018	Duke Energy Carolinas	SC	2018-3-E	South Carolina Energy Users Committee	Fuel case

**Regulatory Cases of Kevin W. O'Donnell, CFA**  
**Nova Energy Consultants, Inc.**

Year	Name of Applicant	State Jurisdiction	Docket No.	Client/ Employer	Case Issues
2018	Elkton Gas Company	MD	FC 9488	Maryland Office of People's Counsel	Accounting, ROE, capital structure
2018	Baltimore Gas & Electric	MD	FC9484	Maryland Office of People's Counsel	ROE, capital structure
2018	South Carolina Electric & Gas	SC	2017-370-E	South Carolina Energy Users Committee	Creditworthiness issue
2018	Jersey Central Power & Light	NJ	EO18070728	NJ Division of Rate Counsel	ROE and capital structure
2019	Duke Energy Carolinas	SC	2018-319-E	South Carolina Energy Users Committee	Accounting, rate design
2019	Duke Energy Progress	SC	2018-318-E	South Carolina Energy Users Committee	Accounting, rate design
2019	Public Service Electric and Gas	NJ	EO18060629	NJ Division of Rate Counsel	ROE and capital structure
2019	Potomac Electric Power	MD	FC 9602	Maryland Office of People's Counsel	ROE, capital structure
2019	Oklahoma Gas and Electric	OK	PUD 201800140	Sierra Club	Creditworthiness issue
2019	Peoples Natural Gas	PA	R-2018-3006818	Pennsylvania Office of Consumer Advocate	ROE, capital structure
2019	UGI Natural Gas	PA	R-2018-3006814	Pennsylvania Office of Consumer Advocate	ROE, capital structure
2019	Dominion Virginia Power	VA	PUR-2019-00050	Federal Executive Agencies	Return on Equity
2019	Piedmont Natural Gas	NC	G-9, Sub 743	Carolina Utility Customers Assoc.	Accounting, cost of service, rate design, ROE
2019	Pacific Gas & Electric, Southern California	CA	A-1904014, et al	Federal Executive Agencies	ROE, capital structure
2019	Edison, San Diego Gas & Electric	IN	Cause 45253	Federal Executive Agencies	ROE, capital structure
2019	Duke Energy Indiana	IN			

O'Donnell Proxy Group  
DCF Summary

Company	Forecasted Annualized Dividend Yield				Value Line						Average Plowback Growth Rate [4] Exhibit KWO-2	CFRA 3 Year Projected EPS CAGR [5]	LT Growth Rate 3-5 Years EPS (AEE) [6]	Schwab Growth Rate 3-5 Years EPS (AEE) [6]		
	1.3-Wks [1]		4-Wks [2]		10 Year		5 Year		Forecasted							
	[1]	[1]	[2]	[2]	[4]	[4]	[4]	[4]	[4]	[4]					[4]	[4]
Amos Energy	2.4%	2.4%	2.4%	2.4%	7.5%	4.0%	6.5%	9.5%	8.5%	7.0%	7.5%	7.5%	4.6%	6.0%	7.2%	7.2%
Chesapeake Utilities	2.0%	2.1%	2.1%	2.1%	9.0%	5.5%	9.5%	8.0%	10.5%	9.0%	8.5%	10.0%	5.9%	10.9%	5.9%	-
New Jersey Resources	3.8%	4.0%	4.0%	4.0%	7.0%	7.0%	7.0%	6.0%	8.5%	2.0%	6.0%	8.5%	5.0%	6.0%	6.0%	6.0%
Northwest Natural	3.2%	3.6%	3.6%	3.6%	-11.0%	2.0%	1.5%	-17.0%	-0.5%	26.5%	0.5%	2.0%	2.6%	5.0%	5.0%	3.1%
ONE Gas Inc	2.8%	3.0%	3.0%	3.0%	-	-	-	9.5%	17.0%	6.5%	7.5%	4.0%	3.6%	5.0%	5.0%	5.0%
South Jersey Inds	4.6%	5.1%	5.2%	5.2%	1.5%	8.0%	6.5%	-2.5%	6.0%	12.5%	3.5%	5.5%	3.1%	9.0%	9.0%	10.2%
Southwest Gas	3.2%	3.4%	3.3%	3.3%	8.0%	8.5%	6.0%	4.5%	9.5%	8.0%	4.0%	6.0%	3.8%	6.0%	6.0%	-
Spare Inc	3.6%	3.9%	3.9%	3.9%	3.5%	4.0%	7.0%	9.5%	5.5%	5.5%	5.0%	8.5%	3.0%	4.0%	4.0%	4.7%
UGI Corp	4.3%	4.2%	4.3%	4.3%	6.0%	7.5%	8.0%	9.5%	7.0%	7.0%	6.0%	6.5%	7.5%	8.0%	8.0%	10.6%
<b>AVERAGE</b>	<b>3.3%</b>	<b>3.5%</b>	<b>3.5%</b>	<b>3.5%</b>	<b>3.9%</b>	<b>5.8%</b>	<b>6.5%</b>	<b>4.1%</b>	<b>7.2%</b>	<b>9.3%</b>	<b>5.9%</b>	<b>6.5%</b>	<b>4.3%</b>	<b>6.7%</b>	<b>6.7%</b>	<b>6.7%</b>
NISource Inc	3.5%	3.6%	3.5%	3.5%	-1.0%	-2.0%	-3.0%	-8.0%	-5.0%	13.5%	7.5%	5.0%	3.2%	5.0%	5.0%	4.9%

Notes:  
EPS = earnings per share  
DPS = dividends per share  
BPS = book value per share

Sources:  
[1] The Value Line Investment Survey, Summary and Index: 5/1/2020 5/8/2020 5/15/2020 5/22/2020 5/29/2020 6/5/2020 6/12/2020 6/19/2020 6/26/2020  
[2] The Value Line Investment Survey, Summary and Index: 7/3/2020 7/10/2020 7/17/2020 7/24/2020  
[3] The Value Line Investment Survey, Summary and Index: 7/3/2020 7/10/2020 7/17/2020 7/24/2020  
[4] The Value Line Investment Survey: 5/29/2020 (Net Gas)  
[5] CFRA Stock Report earnings estimates as of 7/20/2020 as provided by Schwab.com  
[6] Schwab Equity Report earnings estimates as of 7/20/2020 as provided by Schwab.com

**O'Donnell Proxy Group  
Plowback Ratios**

Company	2018	2019	2020E*	2023E* - 2025E*	AVERAGE
	<b>Exhibit KWO-1</b>				
Atmos Energy	4.8%	4.6%	4.5%	4.5%	4.6%
Chesapeake Utilities	6.7%	6.5%	5.0%	5.5%	5.9%
New Jersey Resources	10.2%	4.6%	2.0%	3.0%	5.0%
Northwest Natural	2.1%	1.4%	2.0%	5.0%	2.6%
ONE Gas Inc	3.7%	3.8%	3.0%	4.0%	3.6%
South Jersey Inds	1.7%	NMF	2.0%	5.5%	3.1%
Southwest Gas	3.6%	3.9%	2.0%	5.5%	3.8%
Spire Inc	4.7%	2.7%	1.5%	3.0%	3.0%
UGI Corp	8.4%	5.6%	8.0%	8.0%	7.5%
<b>AVERAGE</b>	<b>5.1%</b>	<b>4.1%</b>	<b>3.3%</b>	<b>4.9%</b>	<b>4.3%</b>
NiSource Inc	3.7%	2.7%	2.0%	4.5%	3.2%

\*E = expected

Plowback = Percent retained to common equity

The Value Line Investment Survey: 5/29/2020 (Nat Gas)

**O'Donnell Proxy Group**  
**Returns on Book Value**

<b>Company</b>	<b>2018</b>	<b>2019</b>	<b>2020E*</b>	<b>2023E* - 2025E*</b>
Atmos Energy	9.3%	8.9%	8.5%	9.0%
Chesapeake Utilities	10.9%	10.9%	9.5%	9.5%
New Jersey Resources	16.9%	11.3%	8.5%	9.5%
Northwest Natural	8.8%	7.5%	8.5%	11.5%
ONE Gas Inc	8.4%	8.8%	8.5%	9.5%
South Jersey Inds	9.2%	7.2%	9.0%	12.0%
Southwest Gas	8.1%	8.5%	7.0%	9.5%
Spire Inc	9.5%	7.9%	6.0%	7.0%
UGI Corp	13.2%	10.8%	14.5%	13.0%
<b>AVERAGE</b>	<b>10.5%</b>	<b>9.1%</b>	<b>8.9%</b>	<b>10.1%</b>
NiSource Inc	9.3%	8.6%	8.0%	11.0%

\*E = expected

The Value Line Investment Survey: 5/29/2020 (Nat Gas)

**O'Donnell Proxy Group  
DCF Results & Recommendation**

O'Donnell DCF Calculation: Comparable Proxy Group					
	VL 13-Weeks a	VL 4-Weeks b	VL 1-Week c		
	Exhibit KWO-1				
<b>VL DIVIDEND YIELD AVERAGES</b>	3.3%	3.5%	3.5%		
<b>Growth Rates</b>	VL EPS d	VL DPS e	VL BPS f		
	Exhibit KWO-1				
10-Year Growth Rate Averages	3.9%	5.8%	6.5%		
5-Year Growth Rate Averages	4.1%	7.2%	6.1%		
<b>VL HISTORICAL GROWTH RATE AVERAGES</b>	<b>4.0%</b>	<b>6.5%</b>	<b>6.3%</b>		
	VL EPS g	VL DPS h	VL BPS i	CFRA EPS j	Schwab EPS k
	Exhibit KWO-1				
<b>FORECASTED GROWTH RATE AVERAGES</b>	<b>9.3%</b>	<b>5.4%</b>	<b>6.5%</b>	<b>6.7%</b>	<b>6.7%</b>
	13-Weeks VL EPS = a + d	13-Weeks VL DPS = a + e	13-Weeks VL BPS = a + f		
	Rx				
<b>VL HISTORICAL GROWTH RATE AVERAGES + VL DIV YIELD AVERAGES</b>	7.3%	9.8%	9.6%		
	4-Weeks VL EPS = b + d	4-Weeks VL DPS = b + e	4-Weeks VL BPS = b + f		
	Rx				
	7.5%	10.0%	9.8%		
	1-Week VL EPS = c + d	1-Week VL DPS = c + e	1-Week VL BPS = c + f		
	Rx				
	7.6%	10.1%	9.8%		
	MIN ABOVE	AVG	MAX		
<b>VL HISTORICAL GROWTH RATE AVERAGES + VL DIV YIELD RANGE</b>	7.3%	9.1%	10.1%		
	13-Weeks VL EPS = a + g	13-Weeks VL DPS = a + h	13-Weeks VL BPS = a + i	13-Weeks CFRA EPS = a + j	13-Weeks Schwab EPS = a + k
	Rx				
<b>FORECASTED GROWTH RATE AVERAGES + VL DIV YIELD AVERAGES</b>	12.7%	8.7%	9.8%	10.0%	10.0%
	4-Weeks VL EPS = b + g	4-Weeks VL DPS = b + h	4-Weeks VL BPS = b + i	4-Weeks CFRA EPS = b + j	4-Weeks Schwab EPS = b + k
	Rx				
	12.8%	8.9%	10.0%	10.1%	10.2%
	1-Week VL EPS = c + g	1-Week VL DPS = c + h	1-Week VL BPS = c + i	1-Week CFRA EPS = c + j	1-Week Schwab EPS = c + k
	Rx				
	12.9%	8.9%	10.0%	10.2%	10.2%
	MIN ABOVE	AVG	MAX		
<b>FORECASTED GROWTH RATE AVERAGES + VL DIV YIELD RANGE</b>	8.7%	10.4%	12.9%		



O'Donnell DCF Calculation: NiSource					
	VL 13-Weeks a	VL 4-Weeks b	VL 1-Week c		
NiSource Div Yield Averages	Exhibit KWO-1				
NiSource Div Yield Averages	3.5%	3.6%	3.5%		
	VL EPS d	VL DPS e	VL BPS f		
NiSource Growth Rates	Exhibit KWO-1				
NiSource 10-Year Growth Rate Averages	-1.0%	-2.0%	-3.0%		
NiSource 5-Year Growth Rate Averages	-8.0%	-5.0%	-7.0%		
NISOURCE VL HISTORICAL GROWTH RATE AVERAGES	-4.5%	-3.5%	-5.0%		
	VL EPS g	VL DPS h	VL BPS i	CFRA EPS j	Schwab EPS k
NISOURCE FORECASTED GROWTH RATE AVERAGES	Exhibit KWO-1				
NISOURCE FORECASTED GROWTH RATE AVERAGES	13.5%	7.5%	5.0%	5.0%	4.9%
	13-Weeks VL EPS = a + d	13-Weeks VL DPS = a + e	13-Weeks VL BPS = a + f		
NISOURCE VL HISTORICAL GROWTH RATE AVERAGES + VL DIV YIELD AVERAGES	Rx				
	-1.0%	0.0%	-1.5%		
	4-Weeks VL EPS = b + d	4-Weeks VL DPS = b + e	4-Weeks VL BPS = b + f		
	Rx				
	-0.9%	0.1%	-1.4%		
	1-Week VL EPS = c + d	1-Week VL DPS = c + e	1-Week VL BPS = c + f		
	Rx				
	-1.0%	0.0%	-1.5%		
	MIN ABOVE	AVG	MAX		
NISOURCE VL HISTORICAL GROWTH RATE AVERAGES + VL DIV YIELD RANGE	-1.5%	-0.8%	0.1%		
	13-Weeks VL EPS = a + g	13-Weeks VL DPS = a + h	13-Weeks VL BPS = a + i	13-Weeks CFRA EPS = a + j	13-Weeks Schwab EPS = a + k
NISOURCE FORECASTED GROWTH RATE AVERAGES + VL DIV YIELD AVERAGES	Rx				
	17.0%	11.0%	8.5%	8.5%	8.4%
	4-Weeks VL EPS = b + g	4-Weeks VL DPS = b + h	4-Weeks VL BPS = b + i	4-Weeks CFRA EPS = b + j	4-Weeks Schwab EPS = b + k
	Rx				
	17.1%	11.1%	8.6%	8.6%	8.5%
	1-Week VL EPS = c + g	1-Week VL DPS = c + h	1-Week VL BPS = c + i	1-Week CFRA EPS = c + j	1-Week Schwab EPS = c + k
	Rx				
	17.0%	11.0%	8.5%	8.5%	8.4%
	MIN ABOVE	AVG	MAX		
NISOURCE FORECASTED GROWTH RATE AVERAGES + VL DIV YIELD RANGE	8.4%	10.7%	17.1%		

O'Donnell Proxy Group  
DCF Results & Recommendation

O'Donnell DCF Calculation (cont'd)

	VL DIV YIELD AVERAGES		
	13-Weeks a	4-Weeks b	1-Week c
Amos Energy	2.4%	2.4%	2.4%
Chesapeake Utilities	2.0%	2.1%	2.1%
New Jersey Resources	3.8%	4.0%	4.0%
Northwest Natural	3.2%	3.5%	3.6%
ONE Gas Inc	2.8%	3.0%	3.0%
South Jersey Inds	4.6%	5.1%	5.2%
Southwest Gas	3.2%	3.4%	3.3%
Spire Inc	3.6%	3.9%	3.9%
UGI Corp	4.3%	4.2%	4.3%
<b>AVERAGE</b>	<b>3.3%</b>	<b>3.5%</b>	<b>3.5%</b>
NISource Inc	3.5%	3.6%	3.5%

VL PLOWBACK	
Exhibit KWO-2	d
Amos Energy	4.6%
Chesapeake Utilities	5.9%
New Jersey Resources	5.0%
Northwest Natural	2.6%
ONE Gas Inc	3.6%
South Jersey Inds	3.1%
Southwest Gas	3.8%
Spire Inc	3.0%
UGI Corp	7.5%
<b>AVERAGE</b>	<b>4.3%</b>
NISource Inc	3.2%

VL PLOWBACK + VL DIV YIELD AVERAGES		
= a + d	= b + d	= c + d
7.0%	7.0%	7.0%
8.0%	8.0%	8.0%
8.8%	8.9%	9.0%
5.8%	6.1%	6.2%
6.4%	6.6%	6.6%
7.7%	8.1%	8.3%
6.9%	7.1%	7.1%
11.8%	11.7%	11.8%
<b>7.7%</b>	<b>7.8%</b>	<b>7.9%</b>
6.7%	6.8%	6.7%

**O'Donnell Proxy Group  
DCF Results & Recommendation**

<b>O'Donnell DCF Range</b>	<b>Low End Range</b>	<b>Average</b>	<b>High End Range</b>
	7.50%	8.50%	9.50%

<b>O'Donnell Recommendation</b>	8.50%
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## O'Donnell Proxy Group CAPM Results

### Comparable Group

	<b>30-Yr.Risk-Free Rate [1]</b>	<b>Average Proxy Group Beta</b>	<b>Equity Risk Premium</b>	<b>Equity Cost Rate</b>	
Treasury - Maximum	2.61%	0.85	4.0%	6.0%	
Treasury - Average	1.89%	0.85	4.0%	5.3%	
Treasury - Minimum	0.99%	0.85	4.0%	4.4%	<b>LOW</b>

	<b>30-Yr.Risk-Free Rate [1]</b>	<b>Average Proxy Group Beta</b>	<b>Equity Risk Premium</b>	<b>Equity Cost Rate</b>	
Treasury - Maximum	2.61%	0.85	6.0%	7.7%	<b>HIGH</b>
Treasury - Average	1.89%	0.85	6.0%	7.0%	
Treasury - Minimum	0.99%	0.85	6.0%	6.1%	

**Source:** [1] *US Treasury Yields, July 17, 2019 through July 17, 2020*

<https://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=yield>

### NiSource

	<b>30-Yr.Risk-Free Rate [1]</b>	<b>Average Proxy Group Beta</b>	<b>Equity Risk Premium</b>	<b>Equity Cost Rate</b>	
Treasury - Maximum	2.61%	0.85	4.0%	6.0%	
Treasury - Average	1.89%	0.85	4.0%	5.3%	
Treasury - Minimum	0.99%	0.85	4.0%	4.4%	<b>LOW</b>

	<b>30-Yr.Risk-Free Rate [1]</b>	<b>Average Proxy Group Beta</b>	<b>Equity Risk Premium</b>	<b>Equity Cost Rate</b>	
Treasury - Maximum	2.61%	0.85	6.0%	7.7%	<b>HIGH</b>
Treasury - Average	1.89%	0.85	6.0%	7.0%	
Treasury - Minimum	0.99%	0.85	6.0%	6.1%	

**Source:** [1] *US Treasury Yields, July 17, 2019 through July 17, 2020*

<https://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=yield>

BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION

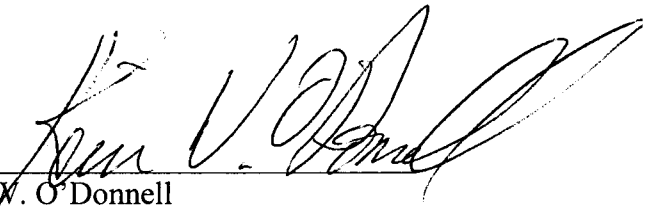
Pennsylvania Public Utility Commission :  
 :  
 v. : Docket No. R-2020-3018835  
 :  
 Columbia Gas of Pennsylvania, Inc. :

VERIFICATION

I, Kevin W. O'Donnell, hereby state that the facts set forth in my Direct Testimony, OCA Statement 3, are true and correct (or are true and correct to the best of my knowledge, information, and belief) and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa. C.S. § 4904 (relating to unsworn falsification to authorities).

DATED: July 28, 2020  
\*293026

Signature:

  
Kevin W. O'Donnell

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