COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF COLUMBIA GAS	)	
OF KENTUCKY, INC. FOR AN ADJUSTMENT OF	)	Case No.
RATES; APPROVAL OF DEPRECIATION STUDY;	)	2021-00183
APPROVAL OF TARIFF REVISIONS; ISSUANCE	)	
OF A CERTIFICATE OF PUBLIC CONVENIENCE	)	
AND NECESSITY; AND OTHER RELIEF	)	

ATTORNEY GENERAL'S RESPONSES TO DATA REQUESTS OF THE KENTUCKY PUBLIC SERVICE COMMISSION STAFF

The intervenor, the Attorney General of the Commonwealth of Kentucky, through his Office of Rate Intervention ("AG"), submits the following responses to data requests of the Kentucky Public Service Commission Staff in the above-styled matter.

Respectfully submitted,

DANIEL CAMERON
ATTORNEY GENERAL

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Certificate of Service and Filing

Pursuant to the Commission's Orders in Case No. 2020-00085, and in accord with all other applicable law, Counsel certifies that an electronic copy of the forgoing was served and filed by e-mail to the parties of record. Counsel further certifies that the responses set forth herein are true and accurate to the best of their knowledge, information, and belief formed after a reasonable inquiry.

This 13th day of October, 2021

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Assistant Attorney General

AFFIDAVIT

STATE OF GEORGIA)

COUNTY OF FULTON)

RICHARD A. BAUDINO, being duly sworn, deposes and states: that the attached is his sworn testimony and that the statements contained are true and correct to the best of his knowledge, information and belief.

Richard A. Baudino

Richard A. Baudino

Sworn to and subscribed before me on this
12th day of October 2021.

Notary Public

RANDY A FUTRAL
MY COMMISSION EXPIRES
NOTARY
PUBLIC
AUGUST 26, 2024
COBB COUNTY, GEORGIA

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF COLUMBIA GAS OF KENTUCKY, INC. FOR AN ADJUSTMENT OF RATES; APPROVAL OF DEPRECIATION STUDY; APPROVAL OF TARIFF REVISIONS; ISSUANCE OF A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY; AND OTHER RELIEF	))))))))	CASE NO. 2021-00183

AFFIDAVIT OF DAVID DITTEMORE

State of Tennessee)

DAVID DITTEMORE, being first duly sworn, states the following: The responses to Data Requests from the Kentucky Public Service Commission Staff, and from Columbia Gas of Kentucky, Inc., are true and correct to the best of his knowledge, information and belief. Affiant states that he would give the same answers set forth therein if the questions had been propounded in a live hearing. Further affiant saith naught.

David Dittemore

David Dittemore

SUBSCRIBED AND SWORN to before me this 8th day of October, 2021

James K Glass

NOTARY PUBLIC

JAMES K. GLASS STATE OF TENNESSEE NOTARY PUBLIC WILSON COUNTY My Commission Expires 01-12-2025

My Commission Expires: 1.12.2025

WITNESS / RESPONDENT RESPONSIBLE:
RICHARD A. BAUDINO

QUESTION No. 1
Page 1 of 2

Refer to the Direct Testimony of Richard Baudino (Baudino Testimony), generally.

a. Provide Exhibits RAB-2-6 in Excel format with all formula, columns, and rows unprotected and fully accessible.
b. For each of the return on equity (ROE) methods employed, provide a separate discussion of the assumptions required and why each assumption can reasonably be assumed. If assumptions cannot be reasonably assumed, explain why not.

RESPONSE:

a. Please refer to the attached spreadsheet, "BAUDINO Columbia KY 2021 ROE."

b. Mr. Baudino provided a general explanation of the assumptions for the constant growth version of the Discounted Cash Flow ("DCF") model on page 16 through 18 of his Direct Testimony. One additional assumption of this model is that dividends, earnings, and book value all grow at the same rate over time. In his book *New Regulatory Finance*, page 252, Dr. Roger Morin presented four crucial assumptions embodied in the General DCF model as follows:

1. Investors evaluate common stocks in the classical valuation framework and trade securities rationally at prices reflecting their perceptions of value.
2. Investors discount the expected cash flows at the same rate, K, in every future period.
3. The discount rate, K, obtained from the fundamental DCF equation corresponds to the specific stream of future cash flows alone, and no other.
4. Dividends, rather than earnings, constitute the source of value to the investor.

Dr. Morin also listed additional assumptions for the standard DCF model as follows on pages 255 - 258:

1. The discount rate, K, must exceed the growth rate, g.

2. The dividend growth rate is constant in every year to infinity.

3. Investors require the same return, K, every year.

4. No external financing.

Mr. Baudino also provided an overview of the Capital Asset Pricing Model ("CAPM") foundation and assumptions on pages 22 through 23 of his Direct Testimony, as well as an explanation of some of the model's shortcomings on pages 24 through 25.

On pages 147 - 148 of *New Regulatory Finance*, Dr. Morin noted that the CAPM has two general assumptions that, in his view, overshadow the others:

1. Capital markets are competitive and efficient, and information is freely available to all investors.
2. Investors are rational profit-maximizers who pursue their monetary self-interests and demand higher returns for higher risks.

Please refer to Chapter 5 and Appendix 5-A of *New Regulatory Finance* for a thorough discussion of the additional assumptions underlying the CAPM.

The assumptions underlying the DCF and CAPM support these models, which have been accepted in regulatory jurisdictions throughout the United States. Their assumptions are not always met in practice in the real world. Nonetheless, these models are still useful in attempting to estimate the investor required ROE. As Mr. Baudino also pointed out in his Direct Testimony, the CAPM has shortcomings that make it less reliable for estimating the investor required ROE.

WITNESS / RESPONDENT RESPONSIBLE:
RICHARD A. BAUDINO

QUESTION No. 2
Page 1 of 1

Refer to the Baudino Testimony, page 11, Table 1. Provide an update with the most recent data available.

RESPONSE:

For August 2021, the 30-Year Treasury Yield was 1.92% and the average public utility bond yield was 2.99%. Mr. Baudino does not have the September 2021 Mergent public utility bond yield. The 30-Year Treasury Bond yield for September 2021 was 1.94%.

TABLE 1
30-Year Treasury and
Avg. Utility Bond Yields
January 2020 - August 2021

	30-Year Treasury	Avg. Public Utility
Jan-20	2.22	3.34
Feb-20	1.97	3.16
Mar-20	1.46	3.59
Apr-20	1.27	3.31
May-20	1.38	3.22
Jun-20	1.49	3.10
Jul-20	1.31	2.77
Aug-20	1.36	2.76
Sep-20	1.42	2.88
Oct-20	1.57	2.80
Nov-20	1.62	2.89
Dec-20	1.67	2.80
Jan-21	1.82	2.94
Feb-21	2.04	3.13
Mar-21	2.34	3.48
Apr-21	2.30	3.33
May-21	2.32	3.36
Jun-21	2.16	3.19
Jul-21	1.94	2.99
Aug-21	1.92	2.99

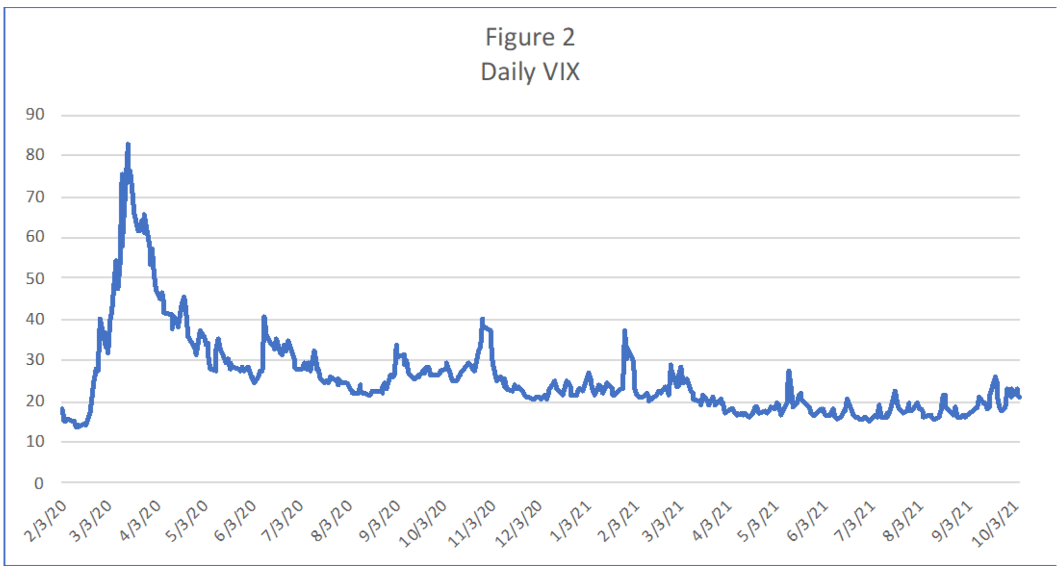
WITNESS / RESPONDENT RESPONSIBLE:
RICHARD A. BAUDINO

QUESTION No. 3
Page 1 of 1

Refer to the Baudino Testimony, page 12, Figure 2. Provide an update with the most recent data available.

RESPONSE:

An updated Figure 2 is provided below, with data through October 6, 2021. Also, please refer to the attached Excel file entitled "BAUDINO Updated Figure 2.xlsx".



WITNESS / RESPONDENT RESPONSIBLE:
RICHARD A. BAUDINO

QUESTION No. 4
Page 1 of 1

Refer to the Baudino Testimony, page 18 lines 10–15.

a. Explain whether a proxy group of seven regulated gas distribution utilities represents a large enough representative sample on which to derive statistically significant ROE estimates.

b. In addition to using gas utilities, explain whether using water utilities as additional proxy companies would be appropriate in the DCF and CAPM analyses, and if not, why not.

RESPONSE:

a. In this case, it is Mr. Baudino's conclusion that the proxy group of seven gas distribution companies represents a large enough sample to reasonably estimate the required ROE for the proxy group and for Columbia Gas of Kentucky.

b. Mr. Baudino would not advise including water utilities in a proxy group of gas distribution companies given the different markets in which water utilities operate and the attendant different business risks faced by water utilities.

WITNESS / RESPONDENT RESPONSIBLE:
RICHARD A. BAUDINO

QUESTION No. 5
Page 1 of 1

Refer to the Baudino Testimony, page 18 lines 18–20. Explain why six months is the most reasonable period over which to estimate dividend yields.

RESPONSE:

Six months is a reasonable period over which to measure the current dividend yield for the proxy group. This length of time is not overly long compared to one year, in which stock prices earlier in the period may no longer reflect current investor requirements. However, six months is a reasonable period over which to smooth out any extreme fluctuations that may occur in stock prices, making shorter periods such as one or three months unreflective of longer-term expectations of investors.

WITNESS / RESPONDENT RESPONSIBLE:
RICHARD A. BAUDINO

QUESTION No. 6
Page 1 of 1

Refer to the Baudino Testimony, pages 26 lines 19–22 and 27 lines 1–5. Explain why the "historical risk premium of stock returns over the long term government bond returns has been significantly influenced upward by substantial growth in the P/E ratio" is important and why Duff and Phelps subtracted the P/E ratio for stocks from the historical risk premium.

RESPONSE:

It is important to consider removal of the increase in the P/E ratio from historical risk premiums on the basis that continued expansion of the P/E ratio cannot be predicted to continue indefinitely. Duff and Phelps cited the work of Roger Ibbotson and Peng Chen in this area in the development and quantification of the supply-side equity risk premium.

WITNESS / RESPONDENT RESPONSIBLE:
RICHARD A. BAUDINO

QUESTION No. 7
Page 1 of 1

Refer to the Baudino Testimony, page 26 lines 13–18 and to page 27 lines 7–15. Explain the reasoning for using 20-year Treasury bonds to determine the historical MRP, when 30-year Treasury bonds were used as the risk free rate.

RESPONSE:

Duff and Phelps uses a 20-Year Treasury Bond, rather than the 30-Year Treasury Bond, in its analyses of annual total returns, income returns, and capital appreciation returns for its Basic U.S. Asset Classes. Had a 30-Year Treasury Bond been used, then the risk premium compared to large company stocks would have been slightly lower since the 30-Year yield is higher than the 20-Year yield.

WITNESS / RESPONDENT RESPONSIBLE:
RICHARD A. BAUDINO

QUESTION No. 8
Page 1 of 1

Refer to the Baudino Testimony, page 27, lines 12–15. Provide a greater explanation of Duff and Phelps' "normalized" risk free rate, and how it incorporates expected inflation.

RESPONSE:

The Duff and Phelps methodology considers a range of estimates for the long-term real risk-free rate as well as a range of expected inflation forecasts. In a simple build-up method, the range of values for the long-term real risk-free rate is added to a range of inflation forecasts to obtain a range for the long-term normalized risk-free rate. Duff and Phelps' current recommended normalized risk-free rate of 2.5% is near the midpoint of the current range of estimates for the long-term normalized risk-free rate.

WITNESS / RESPONDENT RESPONSIBLE:
RICHARD A. BAUDINO

QUESTION No. 9
Page 1 of 1

Refer to the Baudino Testimony, page 30, lines 16–17. Mr. Baudino recommended that the actual debt cost rate of the June 2021 issuance also be applied to the forecasted long-term debt issuances. Explain whether Mr. Baudino believes a long-term debt rate closer to the timing of the final Order in this preceding is an appropriate proxy for the forecasted long-term debt rate.

RESPONSE:

Mr. Baudino would agree that it would be reasonable to use a long-term debt rate closer to the timing of the final Order in this proceeding.

WITNESS / RESPONDENT RESPONSIBLE:
RICHARD A. BAUDINO

QUESTION No. 10
Page 1 of 1

Refer to the Baudino Testimony, page 31, lines 8–19 and Exhibit RAB-7. Exhibit RAB-7 illustrates that except for 2019, the balance of short-term debt since 2015 has been steadily increasing. Explain whether Mr. Baudino's proposed 4.00 percent short debt rate adequately captures this trend.

RESPONSE:

Mr. Baudino's recommended 4.00% is a reasonable estimate for purposes of Columbia's ratemaking capital structure. The 4-year and 5-year averages presented by Mr. Baudino reasonably capture Columbia's use of short-term debt over a period of time. Although the balance of short-term debt increased from 2015 - 2018, it declined in 2019, then increased again in 2020. The three-year increase from 2015 - 2018 does not necessarily indicate a longer-term trend in Mr. Baudino's opinion.

WITNESS / RESPONDENT RESPONSIBLE:
RICHARD A. BAUDINO

QUESTION No. 11
Page 1 of 1

Refer to the Baudino Testimony, Exhibit RAB-3 page 1 of 2. Comparing the projected EPS growth rates of Value Line, Zacks and Yahoo! Finance, several are similar and others are very different, e.g. New Jersey Resources, South Jersey Industries, and Spire Inc. Explain the factors (if known) in Value Line's EPS analyses versus other analysts' projections that would lead to such divergent results for select companies only.

RESPONSE:

Mr. Baudino does not know the factors in Value Line's analyses and results that would lead to the significantly divergent results for the selected companies in the question. The Yahoo! Finance and Zacks earning growth estimates are consensus forecasts from more than one source, which is different from Value Line's earnings growth forecasts that are prepared by one analyst.

WITNESS / RESPONDENT RESPONSIBLE:
RICHARD A. BAUDINO

QUESTION No. 12
Page 1 of 1

Refer to the Baudino Testimony, Exhibit RAB-5. Provide an explanation for the column "Adjusted Arithmetic Mean".

RESPONSE:

The adjusted arithmetic mean is the supply-side equity risk premium discussed by Mr. Baudino on pages 26 through 27 of his Direct Testimony. This equity risk premium has the extra return from inflation in the P/E ratio removed.

WITNESS / RESPONDENT RESPONSIBLE:
DAVID DITTEMORE

QUESTION No. 13
Page 1 of 2

Refer to the Direct Testimony of David Dittemore (Dittemore Testimony) at 13–26 and Schedule DND 2.8, O&M Adjustment.

a. Provide a detailed explanation as to why the Attorney General used a three-year Average Cost per Customer (2016–2018) excluding the O&M Costs per Customer for years 2019 and 2020 from the calculation of the Average Cost per Customer.
b. Provide a revised Schedule DND 2.8 in Excel spreadsheet format with all formulas, columns, and rows unprotected and fully accessible calculating the Attorney General's proposed O&M adjustment using the five-year Average Cost per Customer for 2016-2020.
c. Explain why the Gross Domestic Product – Implicit Price Deflator for year 2017 of 9.94 percent is the appropriate factor to increase the three-year average (2016-2018) NCSC costs to the 2022 levels.
d. Provide the Gross Domestic Product – Implicit Price Deflator for each year in the period five year period 2016-2020.
e. Identify the appropriate Gross Domestic Product – Implicit Price Deflator that should be used to increase the five-year average (2016-2020) NCSC costs to the 2022 levels.

RESPONSE:

a. There are several reasons supporting the use of the 2016 – 2018 data in identifying excessive O&M costs compared with other potential periods.

   First, the use of three-year average data from the 2016–2018-time frame is consistent with the Company's use of 2017 data in its evaluation of NCSC costs (See Attachment ST-4 attached to Company witness Taylor's testimony). Mr. Dittemore's data covers the same time frame as that used by the Company. Mr. Dittemore's adjustment incorporates the same type of inflation modifier as supported by the Company to bring its costs forward to the test period.

   Mr. Dittemore's use of a three-year average covering the 2016–2018-time frame has benefits contrasted with the Company's use of one years' data (2017) in its evaluation of service company costs. While the three-year average includes the single year used by the Company, the average is a better representation to gauge the reasonableness of test year data in that the average eliminates an abnormality in the use of a single period.

   Second, the inclusion of 2019 and 2020 O&M costs would not yield a reasonable base upon which to assess the reasonableness of 2022 costs. The Company's inflation adjusted O&M costs increased significantly in 2019 and 2020 relative to the 2016 – 2018 average O&M costs. This is an important consideration given that the Company's

QUESTION No. 13
Page 2 of 2

own study determined that the Company's 2016 – 2018 O&M costs were in the bottom quartile within a comparison of peer utilities. The inclusion of 2019 and 2020 O&M costs layered into bottom quartile results, only increases the historic O&M cost per customer and would not yield a reasonable result. Inclusion of the 2019 and 2020 costs within a five-year average essentially increases the growth of costs that were in the bottom quartile among its peers and would not result in just and reasonable rates. The use of the 2016 – 2018 average O&M costs as the basis for inflating to the 2022 test period is a very conservative approach given the bottom quartile measurement for the 2016 – 2018 period. A more aggressive method of relying upon industry average O&M results as the basis for determining inflation-adjusted 2022 O&M costs would have yielded a much larger adjustment.

b. Please see the attached Excel files "DITTEMORE 1-13b" and "DITTEMORE 1-13e."
c. The 2017 GDIPD factor was used since 2017 is the midpoint in the 2016 – 2018 average.
d. 2016 – 1.0%
   2017 – 1.88%
   2018 – 2.4%
   2019 – 1.79%
   2020 – 1.21%
e. The appropriate cumulative GDPIPD using the 2016 – 2020 average carried forward through 2022 is 1.0958 as calculated on Attachment 1-13 e.