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BEFORE THE PUBLIC SERVICE COMMISSION

STATE OF MISSOURI

DIRECT TESTIMONY

OF

STEPHEN G. HILL

VEOLIA ENERGY KANSAS CITY, INC.

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STEPHEN G. HILL

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1   **INTRODUCTION / SUMMARY**

2

3   Q. PLEASE STATE YOUR NAME, OCCUPATION AND ADDRESS.

4   A. My name is Stephen G. Hill. I am self-employed as a financial consultant, and principal

5   of Hill Associates, a consulting firm specializing in financial and economic issues in

6   regulated industries. My business address is P. O. Box 587, Hurricane, West Virginia,

7   25526 (e-mail: hillassociates@gmail.com).

8

9   Q. BRIEFLY, WHAT IS YOUR EDUCATIONAL BACKGROUND?

10   A. After graduating with a Bachelor of Science degree in Chemical Engineering from

11   Auburn University in Auburn, Alabama, I was awarded a scholarship to attend Tulane

12   Graduate School of Business Administration at Tulane University in New Orleans,

13   Louisiana. There I received a Master's Degree in Business Administration. More

14   recently, I have been awarded the professional designation, "Certified Rate of Return

15   Analyst" by the Society of Utility and Regulatory Financial Analysts. This designation is

16   based upon education, experience and the successful completion of a comprehensive

17   examination. I have also been a member of the Board of Directors of that national

18   organization for several years. A more detailed account of my educational background

19   and occupational experience appears in Appendix A.

20

21   Q. HAVE YOU TESTIFIED BEFORE THIS OR OTHER REGULATORY

22   COMMISSIONS?

23   A. Yes, I have testified in this regulatory jurisdiction and, over the past 30 years, I have

24   testified on cost of capital, corporate finance and capital market issues in more than 275

25   regulatory proceedings before the following regulatory bodies: the West Virginia Public

26   Service Commission, the Connecticut Department of Public Utility Control, the

27   Oklahoma State Corporation Commission, the Public Utilities Commission of the State

28   of California, the Pennsylvania Public Utilities Commission, the Maryland Public Service

29   Commission, the Public Utilities Commission of the State of Minnesota, the Ohio Public

1   Utilities Commission, the Insurance Commissioner of the State of Texas, the North

2   Carolina Insurance Commissioner, the Rhode Island Public Utilities Commission, the

3   City Council of Austin, Texas, the Texas Railroad Commission, the Arizona Corporation

4   Commission, the South Carolina Public Service Commission, the Public Utilities

5   Commission of the State of Hawaii, the New Mexico Corporation Commission, the State

6   of Washington Utilities and Transportation Commission, the Georgia Public Service

7   Commission, the Public Service Commission of Utah, the Kentucky Public Utilities

8   Commission, the Illinois Commerce Commission, the Kansas Corporation Commission,

9   the Indiana Utility Regulatory Commission, the Virginia Corporation Commission, the

10   Montana Public Service Commission, the Public Service Commission of the State of

11   Maine, the Public Service Commission of Wisconsin, the Vermont Public Service Board,

12   the Federal Communications Commission and the Federal Energy Regulatory

13   Commission. I have also testified before the West Virginia Air Pollution Control

14   Commission regarding appropriate pollution control technology and its financial impact

15   on the company under review and have been an advisor to the Arizona Corporation

16   Commission on matters of utility finance.

17

18   O.   ON BEHALF OF WHOM ARE YOU TESTIFYING IN THIS PROCEEDING?

19   A.   I am testifying on behalf of the applicant in this proceeding, Veolia Energy Kansas City,

20   Inc. (Veolia, the Company). The Company is a subsidiary of Thermal North America,

21   Inc. (TNAI, the intermediate parent), which is a direct subsidiary of Veolia Energy North

22   America Holdings, Inc. (VENAH, the parent). VENAH, in turn, is a division of Veolia

23   Environment (NYSE: VE), a multi-national corporation, headquartered in France that

24   specializes in four areas: water, energy, transportation and environmental services.

25

26   Q.   CAN YOU BRIEFLY DESCRIBE THE REGULATED OPERATIONS OF VEOLIA

27   ENERGY KANSAS CITY?

28   A.   Veolia Energy Kansas City provides steam to customers in the downtown loop area of

29   Kansas City, Missouri. Veolia Energy Missouri, Inc., a sister company, supplies chilled

1   water to customers in the same area, but that service is not regulated. The primary heat-

2   generation facility, which is coal-fired, is Veolia's Grand Avenue Station, which has the

3   capacity to produce 1,260 Mlbs/hr of steam. Additional natural gas-fired capacity is

4   available to support reliable service. Veolia sells steam to customers in downtown

5   Kansas City.

6

7 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

8 A. I have been retained by the Company to present a cost of capital analysis for its regulated

9   steam heating utility operations in Kansas City, Missouri. As part of my analysis, I will

10   recommend and testify to the overall rate of return that I believe should be utilized in

11   determining regulated rates for the steam heating operations of the Company in this

12   proceeding.

13

14 Q. MR. HILL, PRIOR TO YOUR TESTIMONY IN THIS PROCEEDING, HAVE YOU

15   EVER TESTIFIED ON BEHALF OF A UTILITY IN A REGULATED RATE

16   PROCEEDING?

17 A. Yes. I have testified previously on behalf of this utility. However, the vast majority of

18   my prior testimony has been on behalf of public service commissions, consumer

19   advocates or state attorneys general, i.e., representing regulatory/ratepayer interests.

20

21 Q. IS YOUR COST OF EQUITY RECOMMENDATION IN THIS PROCEEDING ANY

22   DIFFERENT FROM WHAT IT WOULD BE IF YOU WERE TESTIFYING FOR

23   REGULATORY INTERESTS?

24 A. No. As I will explain in more detail subsequently, in my opinion a reasonable proxy for

25   the utility operations of Veolia is the market-based cost of capital of gas distribution

26   utility operations. In determining the cost of equity appropriate for Veolia, my analytical

27   methods used in estimating the cost of equity capital for the Company are no different

28   than they would be for any other client.

29

1   Q. HAVE YOU PREPARED SCHEDULES IN SUPPORT OF YOUR TESTIMONY?

2   A. Yes. Attached to this testimony are 10 Schedules that provide the analytical support for

3   the conclusions reached regarding the forward-looking overall cost of capital for Veolia's

4   steam heating utility operations presented in the body of this testimony. Also, I have

5   attached three Appendices ("A" through "C"), which contain additional detail regarding

6   certain aspects of my narrative testimony in this proceeding. These Schedules and

7   Appendices were prepared by me and are correct to the best of my knowledge and belief.

8

9   Q. PLEASE SUMMARIZE YOUR TESTIMONY AND FINDINGS CONCERNING THE

10   RATE OF RETURN THAT SHOULD BE UTILIZED IN SETTING RATES FOR

11   VEOLIA's UTILITY OPERATIONS IN THIS PROCEEDING.

12   A. My testimony is organized into three sections. First, I discuss the cost of capital standard

13   as a measure of the return to be allowed for regulated industries, and review the current

14   economic environment in which the equity return estimate is made. Second, I review the

15   Company's actual capital structure in comparison to capital structures employed by the

16   energy utility industry, generally.

17   Third, I evaluate the cost of equity capital for similar-risk operations using

18   Discounted Cash Flow (DCF), Capital Asset Pricing Model (CAPM), Modified Earnings-

19   Price Ratio (MEPR), and Market-to-Book Ratio (MTB) analyses.

20   I have estimated the equity capital cost of gas distribution utility operations

21   similar in operating (business) risk to those of the Company to be in the range of 8.75%

22   to 9.25%. As I explain in more detail in the body of my testimony, Veolia's actual

23   capital structure is not reliable for ratemaking purposes and I am recommending the use

24   of a capitalization similar to that of the energy utility industry in general. That capital

25   structure contains 48.0% common equity and 52.0% long-term debt. Also, the

26   Company's parent, VENAH, has a bond rating of "BBB", which is below the average

27   bond rating of the gas distribution utility companies used to estimate the cost of equity

28   capital (between "A" and "A-"). Therefore, a reasonable estimate of the current cost of

29   equity capital for the Company would be at the upper end of a range of equity costs

1   appropriate for the sample group—9.25%. Utilizing a 9.25% equity cost rate with a

2   current marginal cost rate of long-term utility debt, and the industry-average capital

3   structure noted above, produces an after-tax overall cost of capital for Veolia's utility

4   operations of 7.63% (see Schedule 9). That after-tax overall return, assuming the

5   Company experiences prospectively a combined Federal and State income tax rate of

6   40%, will afford the Company an opportunity to attain a pre-tax interest coverage level of

7   3.32 times.

8

9   Q. WHY SHOULD THE COST OF CAPITAL SERVE AS A BASIS FOR THE PROPER

10   ALLOWED RATE OF RETURN FOR A REGULATED FIRM?

11 A. The Supreme Court of the United States has established, as a guide to assessing an

12   appropriate level of profitability for regulated operations, that investors in such firms are

13   to be given an opportunity to earn returns that are sufficient to attract capital and are

14   comparable to returns investors would expect in the unregulated sector for assuming the

15   same degree of risk. The Bluefield and Hope cases provide the seminal decisions.

16   Bluefield Water Works v. PSC, 262 US 679 (1923); FPC v. Hope Natural Gas Company,

17   320 US 591 (1944). These criteria were restated in the Permian Basin Area Rate Cases,

18   390 US 747 (1968). However, the Court also makes quite clear in Hope that regulation

19   does not guarantee profitability and, in Permian Basin that, while investor interests

20   (profitability) are certainly pertinent to setting adequate rates, those interests do not

21   exhaust the relevant considerations.

22   As a starting point in the rate-setting process, then, the cost of capital of a

23   regulated firm represents the return investors could expect from other investments, while

24   assuming no more and no less risk. Since financial theory holds that investors will not

25   provide capital for a particular investment unless that investment is expected to yield

26   their opportunity cost of capital, the correspondence of the cost of capital with the

27   Court's guidelines for appropriate earnings is clear.

28

29   **I. ECONOMIC ENVIRONMENT**

1

2 Q. WHY IS IT IMPORTANT TO REVIEW THE ECONOMIC ENVIRONMENT IN

3   WHICH AN EQUITY COST ESTIMATE IS MADE?

4 A. The cost of equity capital is an expectational, or *ex ante*, concept. In seeking to estimate

5   the cost of equity capital of a firm, it is necessary to gauge investor expectations with

6   regard to the relative risk and return of that firm, as well as that for the particular risk-

7   class of investments in which that firm resides. Because this exercise is, necessarily,

8   based on understanding and accurately assessing investor expectations, a review of the

9   larger economic environment within which the investor makes his or her decision is most

10   important. Investor expectations regarding the strength of the U.S. economy, the

11   direction of interest rates and the level of inflation (factors that are determinative of

12   capital costs) are key building blocks in the investment decision. Those factors should be

13   reviewed by the analyst and the regulatory body in order to assess accurately investors'

14   required return—the cost of equity capital.

15

16 Q. WHAT ARE THE INDICATIONS WITH REGARD TO THE COST OF CAPITAL IN

17   THE CURRENT MARKET ENVIRONMENT?

18 A. Although two years have passed since the events of late 2008 and early 2009, any review

19   of the current economic environment and the current cost of capital must take into

20   account what was the most significant disruption in the financial markets since the Great

21   Depression in the 1930s. In the tumultuous economic environment that existed during

22   the third and fourth quarters of 2008 and early 2009, the signals with regard to the cost of

23   capital were, unsurprisingly, difficult to discern. Stock prices fell dramatically,

24   increasing dividend yields, which would indicate increasing capital costs if expected

25   growth rates were constant. However, fundamental indicators of capital cost rates—long-

26   term U.S. Treasury bond yields—declined, signaling that investors actually required and

27   expected lower returns during that difficult economic time.

28   As shown in Chart I below, although there have been wide fluctuations in *short-*

29   *term* interest rate levels since 2002 as the Federal Reserve Board (the Fed) raised and

1   lowered the Federal Funds rate to slow down and encourage (respectively) economic

2   growth, *long-term* interest rates ranged from 4.5% to 5.5% over most of that time, with a

3   slow downward trend. However, as a result of that 2008/2009 economic downturn, long-

4   term Treasury bond yields dipped, for a time, below the lower end of that historical range

5   as investors turned to bonds as a safe haven. However, as the economic downturn

6   moderated and a modest recovery began to appear, long-term T-bond yields have

7   returned to their historical trend. According to the most recent Federal Reserve Statistical

8   Release H.15, the average 20-year T-Bond yield in January, 2011 was 4.42%.[1]
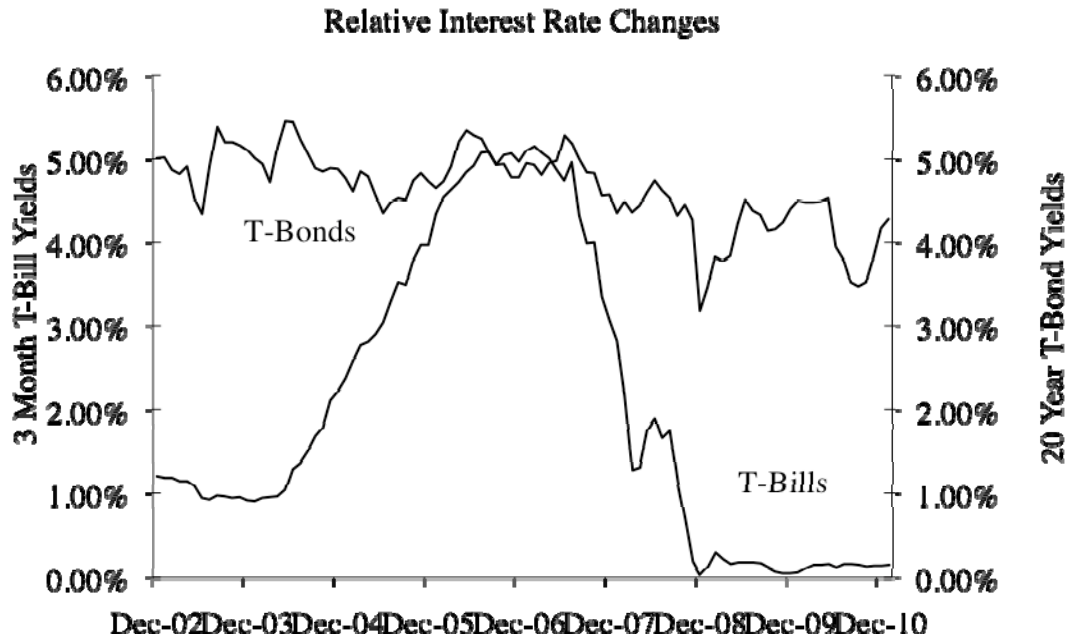
9   The interest rate data in Chart I also indicate that the Fed lowered short-term

10 interest rates to near zero to attempt to lessen the impact of the recession and, continues

11 to maintain that very accommodative stance regarding monetary policy, with short-term

12 T-Bills yielding below 1%. As a result, fundamental long-term capital costs have not

13 increased as a result the recent financial crisis and, in fact, currently indicate a

14 continuation of the long-term downward trend in capital costs begun prior to the financial

15 crisis.

16

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[1] http://www.federalreserve.gov/Releases/H15/Current/, March 21, 2011.

1   Chart I.

Relative Interest Rate Changes

2

3   Data from Federal Reserve Statistical Release H.15

4   Because the market for U.S. Treasury securities remained liquid throughout the

5   2008/09 financial crisis and because the liquidity crisis existing during that crisis has

6   subsided, it is reasonable to believe that the recent yields (approximately 4.3%) on long-

7   term Treasuries are representative of investors' current long-term risk-free return

8   expectations. Therefore, this fundamental building block of capital costs (long-term T-

9   bond yields) provides an indication that in the current economic environment, capital

10   costs are somewhat lower than they were prior to the economic troubles of late 2008 and

11   early 2009.

12   However, it is also important to note that a review of recent bond yield history

13   indicates that declining yields was not the case with corporate bonds. Following the

14   demise of Lehman Brothers and the devolution of the financial community in the U.S.

15   and abroad due to enormous debt obligations related to mortgage-back securities and

16   credit default swaps—even with the commitment of government support of the successor

17   financial institutions—there was a temporary lack of liquidity in the corporate sector of

18   the bond market. The banks, investment brokerage firms, and other institutional

1   investors were holding on to capital in order to shore up their own balance sheets rather

2   than re-injecting those monies into the financial system through lending (buying

3   corporate debt). As a result, even though the Fed was driving down short-term Treasury

4   rates to provide additional liquidity for the economy in general, that liquidity was not

5   passed through to the corporate bond market and, with a lack of capital supply, corporate

6   bond yields increased in late 2008 and early 2009. The relative movement of Baa-rated

7   corporate bond yields and U.S. Treasury yields is shown in Chart II, on the next page.

8

9   Chart II

10   Financial Crisis: Bond Yield Changes
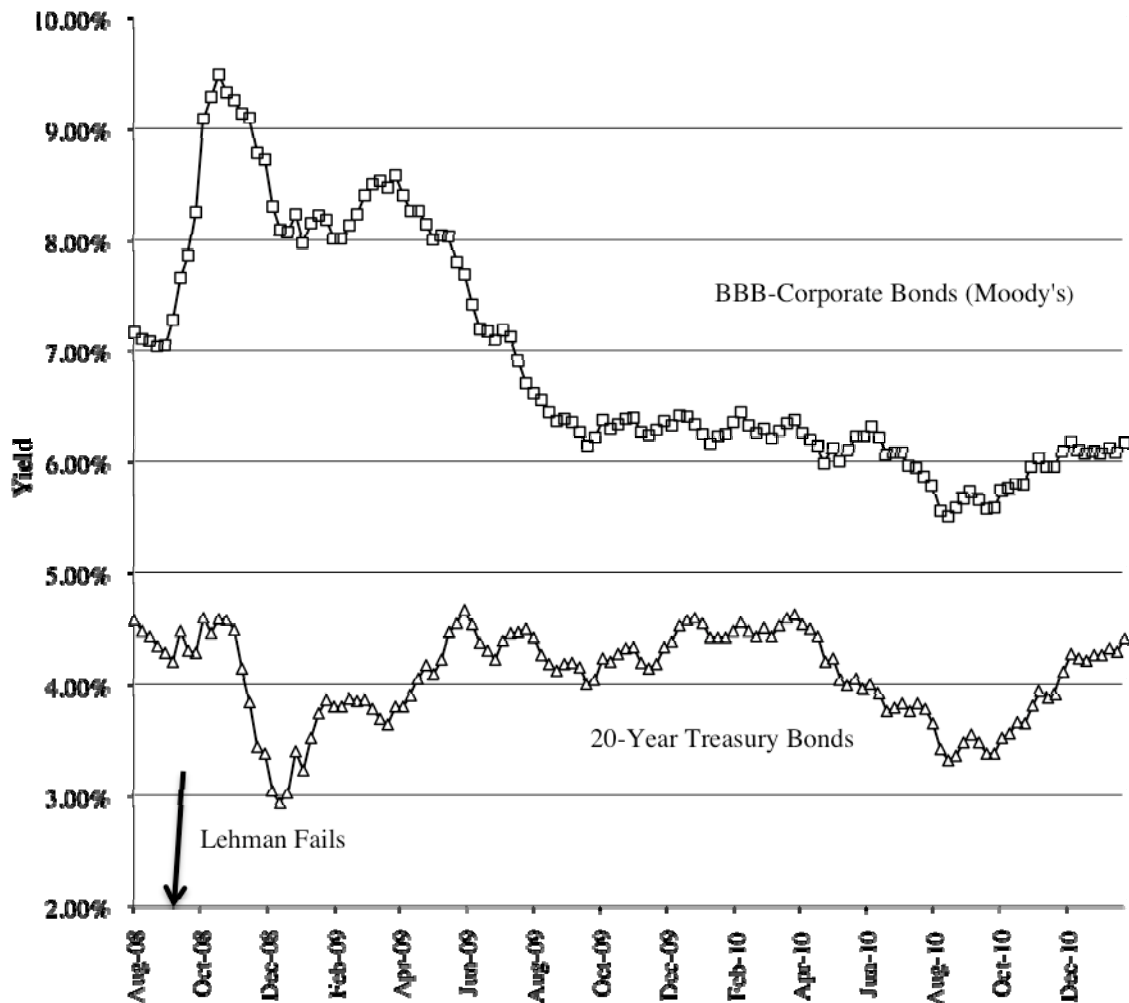
11

1   Following the failure of Lehman Brothers, as the full extent of the debt/derivative

2   risk overhang in the financial industry became known, BBB-rated corporate bond yields

3   began to increase, even as long-term Treasury yields remained relatively steady at about

4   4.5%. According to the database of the Federal Reserve, BBB-rated corporate bond

5   yields rose dramatically by 250 basis points as the risk of default, and the nervousness of

6   investors increased.

7   As liquidity began to be restored to the bond markets, initially through direct

8   government intervention and subsequently through the return of modestly positive

9   economic growth, corporate bond yields have declined substantially from the highs

10   established in the Fall of 2008. More recently, investors' concerns have eased, the stock

11   market has rebounded (recently exceeding the 12,000 mark), and corporate bond yields

12   have declined below pre-crisis levels. Also, as noted above, long-term Treasury bond

13   yields have increased from their lowest point established by a flight to quality at the end

14   of 2008, and have re-established yield levels that existed prior to the financial crisis. As a

15   result, the yield spread differential between corporate bonds and long-term Treasury

16   securities has now declined to a level *below* that experienced in the year prior to the 2008

17   financial crisis. Therefore, because both the absolute level of the risk-free rate and the

18   yield spread between Treasury bonds and corporate bonds have declined since the

19   financial crisis, the concern that the 2008/09 financial crisis implies continuing financial

20   difficulty for utilities is an incorrect assessment. In terms of relative capital costs the

21   broad economic environment currently is more benign than it was prior to the financial

22   crisis—capital costs are lower—and, thus, more favorable for capital intensive industries

23   like utilities.

24   On balance, then, the fixed-income data available in the financial marketplace

25   indicate that while there were technical difficulties in the corporate bond market that

26   drove up yields for a period of time, those difficulties have not proven to be a long-term

27   phenomenon and the high yields experienced in the latter part of 2008 and early 2009 do

28   not represent investors' long-term expectations. Those data also indicate that investors'

29   required return for a risk-free investment remains low by historical standards—around

1   4.3%. Therefore, the bond yield data available in the market place indicates that the risk-

2   free rate of return, a fundamental element of all capital costs has declined from pre-crisis

3   levels, corporate bond yields have declined well below pre-crisis levels, which indicate a

4   lower cost of capital in the current economic environment.

5

6   Q. WHAT IS THE CURRENT EXPECTATION WITH REGARD TO THE ECONOMY

7   AND INTEREST RATES?

8   A. As Value Line notes in its most recent Quarterly Review, the current expectation for the

9   U.S. economy is that recovery from the recent economic recession is likely to be slow,

10   but the economy will eventually expand at a moderate pace with the aid of

11   accommodative Federal Reserve credit policy. Moreover, the Fed is expected to keep

12   interest rates low until the economic recovery becomes more robust.

13

14   **Economic Growth:** As noted, the pace of business activity
15   has stepped up a notch in the past three months, and instead
16   of looking at GDP growth on the order of 2.0%-2.5% this
17   year, as we had been, our forecast is now in the 3.0%-3.5%
18   range. The recent forth-quarter GDP improvement of 3.2%
19   will probably be representative of the average quarterly
20   increase in 2011 [Chart omitted], although the current
21   period is likely to exceed that figure…. We think that an
22   average growth rate of 3.3%-3.5% will be in place through
23   2014-2016, with no more than some incremental gyrations
24   along the way.

25

26   **Inflation**: Three months ago, we opined "here, the outlook
27   is good, if one's focus is strictly inflation, but less hopeful,
28   if we allow for the risks of deflation." Now, the risks have
29   been shifted. Data on producer (wholesale) and consumer
30   prices show selective pricing pressures starting to emerge.
31   That is especially so for oil and food. What's more, we're
32   seeing increases in commodity prices (i.e., copper and
33   cotton) and in semi-finished products (i.e., aluminum and
34   steel). Inflation is not a major worry as yet, particularly
35   with regard to so-called core inflation (i.e., prices outside of
36   energy and food), while wage inflation is muted. In fact,
37   the selective risk in prices seen so far is actually good news
38   in the sense that deflation seems on the wane as a potential

1   risk [Chart omitted]. (The Value Line Investment Survey,

2   *Selection & Opinion*, February 25, 2011, pp. 2373-4.)

3

4   In that most recent Quarterly Economic Review, cited above, Value Line projects

5 long-term Treasury bond rates will average 4.6% through 2011 and 4.9% in 2012.

6 According to Value Line's *Selection and Opinion,* 30-year Treasury bond yields have

7 averaged 4.64% over the most recent six weeks.[2] Therefore, the indicated expectation

8 with regard to long-term interest rates is that they expected move somewhat higher in the

9 future, provided the economic recovery continues to advance at a moderate pace. Simply

10 put, due to the moderate pace of the economy and low core inflation, capital costs are low

11 and are expected to remain low until the economy shows more rapid growth, at which

12 time interest rates and capital costs are expected to increase moderately.

13

14 Q. IS IT REASONABLE TO CONLUDE THAT UTILITY INVESTORS ARE AWARE

15   OF THE EXPECTATIONS FOR SOMEWHAT HIGHER INTEREST RATES IN THE

16   FUTURE, AND HAVE REACTED TO THAT NEWS?

17 A. Yes. A widely accepted tenet of modern finance is that U.S. capital markets are efficient

18   in quickly assimilating into stock prices news that impacts stock valuation. Higher

19   interest rates have been forecast for some time and, it is reasonable to believe, utility

20   investors have incorporated that expectation into the stock prices they are willing to

21   provide for utility stocks. Therefore, when estimating the cost of equity capital it is

22   necessary to consider current interest rate levels, not projected levels, because current

23   interest rates best represent investors' current expectations for the future.

24

25   **II. CAPITAL STRUCTURE**

26

27 Q. ACCORDING TO ITS BOOKS OF ACCOUNT, HOW IS VEOLIA CAPITALIZED?

---

[2] The Value Line Investment Survey, *Selection & Opinion*, "Selected Yields," 2/11/11 through 3/18/11.

1   A. As shown on page 1 of Schedule 1 attached to my testimony, at year-end for the last two

2   years, Veolia had a capital structure with between 50% and 60% common equity, when

3   goodwill is removed from the common equity balances.[3] However, that capital structure

4   is not appropriate for ratemaking consideration for several reasons.

5   First, the Company is a rather small subsidiary of a much larger company and, as

6   such, its capital structure is not "market-based" as would be the capitalization of a

7   publicly traded entity. Second, the capitalization of small subsidiaries of larger

8   companies can be the result of accounting decisions that are influenced by other

9   overarching corporate objectives that may not be germane to the appropriate financial

10   mix relative to the business risk of that small subsidiary. Third, the debt that appears on

11   the book of account for Veolia is a loan from a large customer (a hospital) that will

12   enable the Company to build a pipeline to service that customer. Therefore, that capital

13   does not represent investor-supplied capital that should receive a return supplied by

14   ratepayers. Absent that debt, the Company would have a 100% common equity ratio—

15   substantially above energy industry averages and not suitable for ratemaking purposes.

16   Page 2 of Schedule 2 shows that VENAH's (the Company's parent company)

17   consolidated capital structure over the last two years has equity balances that approximate

18   the goodwill appearing on its balance sheet. While not all of VENAH's subsidiaries are

19   utility operations, eliminating goodwill from common equity balances (a normal

20   treatment for regulatory purposes), produces a ratemaking capital structure with common

21   equity balances near zero. This, too, is an unacceptable ratemaking capital structure that

22   would be too risky for the Company and is not representative of the manner in which

23   energy utilities are capitalized in today's markets.

24

25   Q. HOW ARE ENERGY UTILITIES CAPITALIZED TODAY?

---

[3] "Goodwill" represents the difference between the purchase price of an asset and its book value. For
ratemaking purposes, because rates are based on depreciated book value, goodwill is usually removed from
common equity balances when calculating capital structures that support rate base (book value) investment.

1 A. Page 3 of Schedule 1 shows that the recent average common equity ratio of the gas

2   industry (distribution and integrated companies) is approximately 49.5% of total capital.

3   Also, the average capital structure of the gas distribution utilities used as a proxy to

4   model the Company's cost of equity capital is similar, at 49% of total capital.

5   Page 4 of Schedule 1 shows that the current average common equity ratio of the

6   electric utility industry is 47.3%, and the average common equity ratio for the

7   combination gas and electric utility industry is 45.2% of total capital. The overall

8   average common equity ratio for the entire electric industry, then, is 46.0% of total

9   capital.

10

11 Q. WHAT ARE THE REGULATORY OPTIONS WITH REGARD TO DETERMINING A

12   RATEMAKING CAPITAL STRUCTURE?

13 A. There are two options. First, the actual capital structure can be used to calculate the

14   overall cost of capital. That is the preferred option in that it is more likely to produce

15   rates that mirror the firm's actual costs—a primary goal of regulation.

16   However, when the actual capital structure for a firm is not appropriate for

17   ratemaking, as is the case with the Company in this proceeding, the second regulatory

18   treatment is to use a hypothetical or imputed capital structure, which balances the

19   interests of the Company and its ratepayers by recognizing in rates the manner in which

20   other market-traded utility companies are capitalized.

21   In the Company's last rate proceeding, Case No. HR-2008-0300, the Missouri

22   Commission Staff recommended the use of the average capital structure of the proxy

23   group of gas distributors used to estimate the cost of equity capital, as the basis for

24   determining the overall cost of capital for the Company. I believe that is a reasonable

25   approach in this instance.

26

27 Q. WHAT IS YOUR RECOMMENDATION WITH REGARD TO THE CAPITAL

28   STRUCTURE THAT SHOULD BE USED IN DETERMINING THE OVERALL

29   CAPITAL COSTS TO BE USED IN SETTING RATES IN THIS PROCEEDING?

1   A. I believe a ratemaking capital structure based on the average capital structures currently

2   existing for market traded energy utilities (46% for electric utilities and 49% for gas

3   utilities) would provide a reasonable basis for setting rates for Veolia's utility operations

4   in Kansas City. For purposes of determining the overall cost of capital in this

5   proceeding, then, I will use a ratemaking capital structure consisting of 48.0% common

6   equity and 52.0% long-term debt.

7

8   Q. WHAT VALUE DID YOU USE FOR THE COST OF DEBT?

9   A. I am recommending that the current average yield on BBB-rated long-term utility debt be

10   used as the debt cost rate in this proceeding. The six most recent editions of Value Line's

11   *Selection & Opinion* (February 2, 2011 through March 18, 2011) indicate an average

12   yield on BBB-rated 20 to 30-year debt of 6.13%. I will use that value as the Company's

13   imputed cost of long-term debt.[4]

14

15   Q. DOES THIS CONCLUDE YOUR DISCUSSION OF CAPITAL STRUCTURE

16   ISSUES?

17   A. Yes, it does.

18

19   **III. METHODS OF EQUITY COST EVALUATION**

20

21   A. DISCOUNTED CASH FLOW MODEL

22

23   Q. PLEASE DESCRIBE THE DISCOUNTED CASH FLOW (DCF) MODEL YOU USED

24   TO ARRIVE AT AN ESTIMATE OF THE COST RATE OF COMMON EQUITY

25   CAPITAL FOR THE COMPANY IN THIS PROCEEDING.

26   A. The DCF model relies on the equivalence of the market price of the stock (P) with the

---

[4] In the Commission Staff Report in the Company's last rate proceeding, the Staff estimated the average debt cost of the sample group of gas distributors as a proxy for the Company's debt cost rate. While that is certainly a legitimate alternative approach, I believe the use of a widely-published recent average yield for BBB-rated utility debt is a more straightforward methodology.

1   present value of the cash flows investors expect from the stock, and assumes that the

2   percentage rate which discounts the future cash flows (dividends) to the present value

3   (the stock price) equals the cost of capital. The total return to the investor, which equals

4   the required return according to this theory, is the sum of the dividend yield and the

5   expected growth rate in the dividend.

6   The theory is represented by the equation,

7

8                                $$k = D/P + g, \qquad\qquad (1)$$

9

10   where "k" is the equity capitalization rate (cost of equity, required return), "D/P" is the

11   dividend yield (dividend divided by the stock price) and "g" is the expected sustainable

12   growth rate.

13

14   Q. WHAT GROWTH RATE (g) DID YOU ADOPT IN DEVELOPING YOUR DCF COST

15   OF COMMON EQUITY FOR THE GAS UTILITIES?

16   A. The growth rate variable in the traditional DCF model is quantified, theoretically, as the

17   dividend growth rate investors expect to continue into the indefinite future. The DCF

18   model is actually derived by 1) considering the dividend a growing perpetuity, that is, a

19   payment to the stockholder which grows at a constant rate indefinitely, and 2) calculating

20   the present value (the current stock price) of that perpetuity. The model also assumes that

21   the company whose equity cost is to be measured exists in a steady state environment,

22   i.e., the payout ratio and the expected return are constant and the earnings, dividends,

23   book value and stock price all grow at the same rate, forever.

24   While that assumption seems unrealistic because, in the short term, growth rates

25   in those parameters (dividends, earnings and book value) can be quite different, over the

26   long term it has proven to be true. For example, according to Value Line's published

27   year-by-year retrospective of the Dow Jones Industrials Index (DJI) from 1920 through

28   2005, the average earnings, dividend and book value growth rates for the companies in

1   the DJI over that time period were 5.3%, 4.9% and 5.2%.[5] For utility companies, over

2   the long term, average growth rates in earnings, dividends and book value are even

3   closer. Moody's Public Utility Manual reports that, between 1947 and 1999,[6] average

4   growth in earnings, dividend and book value growth of Moody's Electric Utilities was

5   3.34%, 3.22% and 3.66%, respectively. Therefore, the fundamental DCF assumption that

6   earnings, dividends and book value are expected to grow, over the long-term, at the same

7   sustainable rate of growth is reasonable and is an accurate representation of how firms

8   actually grow over time.

9   However, even though the long-term fundamental assumptions of the DCF have

10   proven to be sound, as with all mathematical models of real-world phenomena, the DCF

11   theory does not precisely "track" reality in the shorter term. Payout ratios and expected

12   equity returns as well as earnings and dividend growth rates do change over the short-

13   term. Therefore, in order to properly apply the DCF model to any real-world situation

14   and, in this case, to find the long-term sustainable growth rate called for in the DCF

15   theory, it is essential to understand the determinants of long-run expected dividend

16   growth.

17

18   Q. CAN YOU PROVIDE AN EXAMPLE TO ILLUSTRATE THE DETERMINANTS OF

19   LONG-RUN EXPECTED DIVIDEND GROWTH?

20   A. Yes, in Appendix B, I provide an example of the determinants of a sustainable growth

21   rate on which to base a reliable DCF estimate. In addition, in Appendix B, I show how

22   reliance on earnings or dividend growth rates alone, absent an examination of the

23   underlying determinants of long-run dividend growth, can produce inaccurate DCF

24   results.

25

26   Q. HOW HAVE YOU DEVELOPED AN ESTIMATE OF THE EXPECTED GROWTH

27   RATE FOR THE DCF MODEL?

---

[5] www.valueline.com, Dow Jones Long Term Chart (PDF)
[6] Moody's ceased publication of its Public Utility Manual in 2001.

1   A. While I have calculated both the historical and projected sustainable growth rates for a

2   sample of utility firms with similar risk to Veolia, I have relied on other growth rate

3   indicators as well. To estimate an appropriate DCF growth rate, I have also relied on

4   published data regarding both historical and projected growth rates in earnings,

5   dividends, and book value for the sample group of utility companies. Recall that DCF

6   theory assumes that earnings, dividends and book value all grow at the same rate.

7   Through an examination of all of those data, which are available to and used by investors,

8   I estimate investors' long-term growth rate expectations. To that long-term growth rate

9   estimate, I add any additional growth that is attributable to investors' expectations

10   regarding the on-going sale of stock for each of the companies under review.

11

12   Q. WHY HAVE YOU USED THE TECHNIQUE OF ANALYZING THE MARKET

13   DATA OF SEVERAL COMPANIES?

14   A. I have used the "similar sample group" approach to cost of capital analysis because it

15   yields a more accurate determination of the cost of equity capital than does the analysis

16   of the data of one individual company. Any form of analysis, in which the result is an

17   estimate, such as growth in the DCF model, is subject to measurement error, i.e., error

18   induced by the measurement of a particular parameter or by variations in the estimate of

19   the technique chosen. When the technique is applied to only one observation (e.g.,

20   estimating the DCF growth rate for a single company) the estimate is referred to,

21   statistically, as having "zero degrees of freedom." This means, simply, that there is no

22   way of knowing if any observed change in the growth rate estimate is due to

23   measurement error or to an actual change in the cost of capital. The degrees of freedom

24   can be increased and exposure to measurement error reduced by applying any given

25   estimation technique to a sample of companies rather than one single company.

26   Therefore, by analyzing a group of firms with similar characteristics, the estimated value

27   (the growth rate and the resultant cost of capital) is more likely to equal the "true" value

28   for that type of operation.

29

1   Q. HOW WERE THE SAMPLE COMPANIES SELECTED?

2   A.   In selecting a sample of gas distribution firms to analyze, I screened all the gas

3   distribution firms followed by Value Line. I selected companies from that group that had

4   a continuous financial history and had approximately 50% of revenues generated by gas

5   distribution operations.[7] In addition, I eliminated companies that were in the process of

6   merging or being acquired, or companies that had recently omitted dividends. The data

7   for the gas sample group were obtained from A. G. Edwards Natural Gas Industry

8   Summary Data, December 31, 2020, the Value Line Investment Survey, *Ratings and*

9   *Reports*, March 11, 2011, and A.U.S. Utility Reports, March 2011.

10   The companies included in the similar-risk sample group in this proceeding are

11   AGL Resources (ATG), Atmos Energy Corporation (ATO), Laclede Group (LG), Nicor,

12   Inc. (GAS), NiSource (NI), Northwest Natural Gas (NWNG), Piedmont Natural Gas

13   Company (PNY), South Jersey Industries (SJI), Southwest Gas (SWX) and WGL

14   Holdings (WGL). [Note: In the Schedules accompanying this testimony, the sample

15   group companies are referred to by their stock ticker symbols.]

16

17   Q. HOW HAVE YOU CALCULATED THE DCF GROWTH RATES FOR THE SAMPLE

18   OF COMPARABLE COMPANIES?

19   A. Schedule 2 pages 1 through 4, shows the retention ratios, equity returns, sustainable

20   growth rates, book values per share and number of shares outstanding for the comparable

21   companies for the past five years. Also included in the information presented in

22   Schedule 2, are Value Line's projected 2011, 2012 and 2014-2016 values for equity

23   return, retention ratio, book value growth rates and number of shares outstanding.

24   In evaluating these data, I first calculate the five-year average sustainable growth

25   rate, which is the product of the earned return on equity (r) and the ratio of earnings

26   retained within the firm (b). For example, Schedule 2, page 1, shows that the five-year

27   average sustainable growth rate for AGL Resources (AGL) is 5.24%. The simple five-

---

[7] Many of the gas distributors have recently added energy merchant functions to their operations, lowering the percentage of revenues provided by regulated utility operations and increasing overall investment risk.

1   year average sustainable growth value is used as a benchmark against which I measure

2   the company's most recent growth rate trends. Recent growth rate trends are more

3   investor-influencing than are simple historical averages. Continuing to focus on AGL, we

4   see that sustainable growth in 2010 was 5.33%—very close to the average growth for the

5   five-year period. That recent historical data, then, indicate a stable growth rate trend. By

6   the 2014-2016 period, Value Line projects AGL's sustainable growth will reach a level

7   above the recent five-year average—about 6%. These forward-looking data indicate that

8   investors expect AGL to grow at a rate in the future greater than the growth rate that has

9   existed, on average, over the past five years.

10   At this point I should note that, while the five-year projections are given

11   consideration in estimating a proper growth rate because they are available to and are

12   used by investors, they are not given sole consideration. Without reviewing all the data

13   available to investors, both projected and historic, sole reliance on projected information

14   may be misleading. Value Line readily acknowledges to its subscribers the subjectivity

15   necessarily present in estimates of the future:

16
17   "We have greater confidence in our year-ahead ranking
18   system, which is based on proven price and earnings
19   momentum, than in 3- to 5-year projections." (Value Line
20   Investment Survey, Selection and Opinion, June 7, 1991,
21   p.854).

22

23   Another factor to consider is that PNY's book value growth is expected to

24   increase at a 5.5% level over the next five years, after increasing at a 5.5% rate

25   historically. That signals steady growth for AGL. However, as shown on Schedule 3,

26   page 2, that company's dividend growth rate, which was 7.5% historically, is expected to

27   decline to a 2% rate of growth in the future—considerably lower than the sustainable

28   growth rate projections, and below historical levels. That information would tend to

29   moderate investor expectations regarding growth in the future. Earnings growth rate data

30   available from Value Line indicate that investors can expect a steady growth rate in the

31   future (4.5%), i.e., the same that has existed over the past five years (4.5%). However,

1   IBES and Zack's (investor advisory services that poll institutional analysts for growth

2   earnings rate projections) project higher earnings growth rate for AGL—5.3% and 5.4%,

3   respectively—over the next five years.

4   AGL's projected sustainable growth, as well as projected earnings growth

5   indicates that investors can expect higher growth in the future similar to that which has

6   occurred, on average, in the past. Those projections are moderated by an expectation of

7   lower dividend growth. A long-term sustainable growth rate of 5.5% is a reasonable

8   expectation for AGL.

9

10   Q. IS THE INTERNAL (b x r) GROWTH RATE THE FINAL GROWTH RATE YOU

11   USE IN YOUR DCF ANALYSIS?

12   A. No. An investor's sustainable growth rate analysis does not end upon the determination

13   of an internal growth rate from earnings retention. Investor expectations regarding

14   growth from external sources (sales of stock) must also be considered and examined. For

15   AGL, page 1 of Schedule 2 shows that the number of outstanding shares increased at

16   about a 0.10% rate over the most recent five-year period. Value Line expects the number

17   of shares outstanding to decline through the 2014-2016 period, bringing the share growth

18   rate to 0.26% rate by that time. Therefore, an expectation of share growth of 0.25% is

19   reasonable for this company.

20   As shown on page 1 of Schedule 3, because AGL is currently trading at a market

21   price that is greater than its book value, a long-term expectation of increasing the number

22   of shares outstanding will also increase investors' growth expectations for that company.

23   Multiplying the expected growth rate in shares outstanding by (1-(Book Value/Market

24   Value)) increases the long-term DCF growth rate for AGL by 8 basis points.[8]

25   I have included the details of my growth rate analyses for AGL as an example of

26   the methodology I use in determining the DCF growth rate for each company in the gas

---

[8] As explained in Appendix B attached to this testimony, according to Gordon's original DCF formula the factor that accounts for additional growth due to sales of stock is "s" the rate of increase in shares outstanding, times "v" the equity accretion rate, defined as (1-M/B). For the gas utilities under study, the "sv" term adds an additional 75 basis points to the DCF cost of equity capital.

1   utility sample group. A description of the growth rate analyses of each of the companies

2   included in my sample group is set out in Appendix C. Schedule 3, page 1, attached to

3   this testimony shows the internal, external and resultant overall growth rates for all the

4   utility companies analyzed.

5

6   Q. HAVE YOU CHECKED THE REASONABLENESS OF YOUR GROWTH RATE

7   ESTIMATES AGAINST OTHER, PUBLICLY AVAILABLE, GROWTH RATE

8   DATA?

9   A. Yes. Page 2 of Schedule 3 shows the results of my DCF sustainable growth rate analysis

10   as well as 5-year historic and projected earnings, dividends and book value growth rates

11   from Value Line, earnings growth rate projections from Reuters, the average of Value

12   Line and Reuters growth rates and the 5-year historical compound growth rates for

13   earnings, dividends and book value for each company under study.

14   For the gas distribution sample group, Schedule 3 page 2 shows that my DCF

15   growth rate estimate for those companies is 5.07%. That long-term growth rate estimate

16   is higher than Value Line's projected average earnings, dividend and book value growth

17   rate, 3.85% and higher than the historical average of those same parameters, 4.08%. In

18   addition, my DCF growth rate estimate for the gas distributors is also higher than IBES

19   earnings growth rate projections (3.74%)[9] and also above earnings growth projections by

20   Zack's (4.5%). My DCF growth rates for the gas distribution companies are conservative

21   (on the high side) when compared to available published information.

22

23   Q. DOES THIS CONCLUDE THE GROWTH RATE PORTION OF YOUR DCF

24   ANALYSIS?

25   A. Yes, it does.

26

27   Q. HOW HAVE YOU CALCULATED THE DIVIDEND YIELDS?

---

[9] Absent the unusual negative earnings growth projection for NICOR, the IBES earnings growth average
would be 4.2%.

1   A. I have estimated the next quarterly dividend payment of each firm analyzed and

2   annualized them for use in determining the dividend yield. If the quarterly dividend of

3   any company was expected to be increased in the next quarter (2nd or 3rd quarter 2011),

4   I increased the current quarterly dividend by (1+g). For the utility companies in the

5   sample groups, a dividend adjustment was unnecessary for many of the companies under

6   study because they either recently raised their dividend or were not projected to raise the

7   dividend in 2011. A dividend adjustment was required only for Piedmont Natural Gas

8   and WGL Holdings.

9   The next quarter annualized dividends were divided by a recent daily closing

10   average stock price to obtain the DCF dividend yields. I use the most recent six-week

11   period to determine an average stock price in a DCF cost of equity determination because

12   I believe that period of time is long enough to avoid daily fluctuations and recent enough

13   so that the stock price captured during the study period is representative of current

14   investor expectations.

15   Schedule 4 contains the market prices, annualized dividends and dividend yields

16   of the utility companies under study. Schedule 4 indicates that the average dividend yield

17   for the sample group of gas companies is 3.83%. The year-ahead dividend yield

18   projection for the gas utility sample group published by Value Line is 3.77% (Value Line,

19   *Summary & Index*, March 18, 2011). By that measure, my dividend yield calculation is

20   similar to investor expectations.

21

22   Q. WHAT IS YOUR COST OF EQUITY CAPITAL ESTIMATE FOR THE UTILITY

23   COMPANIES, UTILIZING THE DCF MODEL?

24   A. Schedule 5 shows that the average DCF cost of equity capital for the gas distribution

25   companies is 8.99%.

26

27   Q. DOES THIS CONCLUDE YOUR DCF ANALYSIS OF THE COST OF EQUITY

28   CAPITAL FOR VEOLIA?

29   A. Yes, it does.

1

2   B. CAPITAL ASSET PRICING MODEL

3

4   Q. PLEASE DESCRIBE THE CAPITAL ASSET PRICING MODEL (CAPM) YOU USED

5   TO ARRIVE AT AN ESTIMATE FOR THE COST RATE OF EQUITY CAPITAL.

6   A. The CAPM states that the expected rate of return on a security is determined by a risk-

7   free rate of return plus a risk premium, which is proportional to the non-diversifiable

8   (systematic) risk of a security. Systematic risk refers to the risk associated with

9   movements in the macro-economy (the economic "system") and thus, cannot be

10   eliminated through diversification by holding a portfolio of securities. The beta

11   coefficient (β) is a statistical measure that attempts to quantify the non-diversifiable risk

12   of the return on a particular security against the returns inherent in general stock market

13   fluctuations. The formula is expressed as follows:

14

15                          $$k = r_f + \beta(r_m - r_f), \qquad\qquad (2)$$

16

17   where "k" is the cost of equity capital of an individual security, "r_f" is the risk-free rate of

18   return, "β" is the beta coefficient, "r_m" is the average market return and "$r_m - r_f$" is the

19   market risk premium. The CAPM is used in my analysis, not as a primary cost of equity

20   analysis, but as a check of the DCF cost of equity estimate. Although I believe the

21   CAPM can be useful in testing the reasonableness of a cost of capital estimate, certain

22   theoretical shortcomings of this model (when applied in cost of capital analysis) call for

23   caution in application of the model.

24

25   Q. CAN YOU EXPLAIN WHY THE CAPM ANALYSIS SHOULD BE USED WITH

26   CAUTION TO ESTIMATE OF THE COST OF EQUITY CAPITAL?

27   A. Yes. The reasons why the CAPM should be used in cost of capital analysis carefully are

28   noted briefly below. It is important to understand that my caution with regard to the use

29   of the CAPM in a cost of equity capital analysis does not indicate that the model is not a

1   useful description of the capital markets. Rather, my caution recognizes that in the

2   practical application of the CAPM to cost of capital analysis, there are problems that can

3   cause the results of that type of analysis to be less reliable than other, more widely

4   accepted models such as the DCF.

5   There has been much comment in the financial literature regarding the strength of

6   the assumptions that underlie the CAPM and the inability to substantiate those

7   assumptions through empirical analysis. Also, there are problems with the key CAPM

8   risk measure, beta, that indicate that the CAPM analysis is not a reliable primary

9   indicator of equity capital costs.

10   Cost of capital analysis is a decidedly forward-looking, or *ex-ante*, concept. Beta

11   is not. The measurement of beta is derived with historical, or *ex-post*, information.

12   Therefore, the beta of a particular company, because it is usually derived with five years

13   of historical data, is slow to change to current (i.e., forward-looking) conditions, and

14   some price abnormality that may have happened four years ago could substantially affect

15   beta while, currently, being of little actual concern to investors. Moreover, this same

16   shortcoming, which assumes that past results mirror investor expectations for the future,

17   plagues the market risk premium in an ex-post, or historically-oriented CAPM.

18

19   Q. WHAT HAVE YOU CHOSEN FOR A RISK-FREE RATE OF RETURN IN YOUR

20   CAPM ANALYSIS?

21   A. As the CAPM is designed, the risk-free rate is that rate of return investors can realize

22   with certainty. The nearest analog in the investment spectrum is the 13-week U. S.

23   Treasury Bill (T-Bill). However, T-Bills can be heavily influenced by Federal Reserve

24   policy, as they have been over the past three years. While longer-term Treasury bonds

25   (T-Bonds) have equivalent default risk to T-Bills, those longer-term government

26   securities carry maturity risk that the T-Bills do not have. When investors tie up their

27   money for longer periods of time, as they do when purchasing a long-term Treasury, they

28   must be compensated for future investment opportunities forgone as well as the potential

29   for future changes in inflation. Investors are compensated for this increased investment

1   risk by receiving a higher yield on T-Bonds. However, when T-Bills and T-Bonds

2   exhibit a "normal" (historical average) spread of about 1.5% to 2%, the results of a

3   CAPM analysis that matches a higher market risk premium with lower T-Bill yields or a

4   lower market risk premium with higher T-Bond yields, are very similar.

5   As I noted in my previous discussion of the macro-economy, in an attempt to fend

6   off a recession and to inject liquidity into the financial system, the Fed has acted

7   vigorously over the past two years to lower short-term interest rates. Over the most

8   recent six-week period, T-Bills have produced an average yield of only 0.12%. During

9   that time period Treasury Bonds have been priced to yield 4.64% (data from Value Line

10   *Selection & Opinion*, six recent weekly editions (2/11/11-3/18/11)). Therefore, for

11   purposes of analysis in this proceeding I will use 4.64% as the long-term risk-free rate.

12

13   Q. DO YOU BELIEVE THE USE OF A LONG-TERM TREASURY BOND RATE IS

14   APPROPRIATE IN THE CAPM?

15   A. In the current economic environment, with short-term Treasury Bills yielding a near zero

16   return, the use of a long-term Treasury bond would provide a more accurate indication of

17   the risk-free return investors require and produces a more accurate estimate of investors'

18   cost of equity. Therefore, in this testimony, I will present the CAPM cost of equity

19   results using only long-term Treasury bond yields. With that measure of the risk-free

20   rate, I use the corresponding measure of the market risk premium (i.e., that based on the

21   long-term historical return difference between common stocks and long-term Treasury

22   bonds).

23

24   Q. WHAT MARKET RISK PREMIUM IS USED FOR CAPM ANALYSIS?

25   A. The market risk premium is the difference between the return investors expect on stocks

26   and the return they expect on a risk-free rate of return like a U.S. Treasury bond. The

27   "traditional" view, supported primarily by the earned return data over the past 80 years

28   published by Morningstar (formerly Ibbotson), is based on the historical difference

29   between the returns on stocks and the returns on bonds. That view assumes that the

1   returns actually earned by investors over a long period of time are representative of the

2   returns they expect to earn in the future.

3   For example, the Morningstar data show that investors have earned an arithmetic

4   total return of 11.7% on stocks and 6.1% on long-term Treasury bonds since 1926.[10] A

5   geometric average of these same data series show compound returns of 9.6% and 5.7%,

6   respectively. Therefore, based on these historical data, it is assumed that investors will

7   require a risk premium in the future of 3.9% to 5.6% above the long-term risk-free rate to

8   invest in stocks [9.6% - 5.7% = 3.9% (geometric); 11.7% - 6.1% = 5.6% (arithmetic)].

9   With a current long-term T-Bond yield of 4.54%, those data indicate an investor return

10   expectation ranging from 8.44% to 10.14% for the stock market in general [4.54% +

11   (3.9% - 5.6%) = 8.44% - 10.14%]. However, current research in the field of financial

12   economics indicates that there are aspects of the Morningstar historical data set that,

13   when examined, point to lower historical risk premiums than those reported by

14   Morningstar.

15

16   Q. HAS THE RESEARCH YOU MENTION FOUND ITS WAY INTO TODAY'S

17   FINANCE TEXTBOOKS?

18   A. Yes. In the 2006 edition of their widely used finance textbook, Brealey and Meyers[11]

19   discuss the findings of many different recent studies regarding the market risk premium.

20   Importantly, in prior editions of their textbooks Brealey, et al, cited the Morningstar

21   historical data, but now they do not. Instead they cite the risk premium work of Dimson,

22   Staunton and Marsh, authors of "Triumph of the Optimists," in which they review a

23   longer-term data set than that used by Morningstar and conclude that market risk

24   premiums expected in the future are below historical averages.[12]

25   The textbook authors conclude, based on a review of the recent evidence

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[10] Morningstar, SBBI Valuation Edition, 2009 Yearbook, p. 28.

[11] Brealey, R., Meyers, S., Allen, F., Principles of Corporate Finance, 8th Edition, McGraw-Hill, Irwin, Boston MA, 2006.

[12] Dimson, E., Staunton, M., March, P., Triumph Of The Optimists, 101 Years of Global Investment Returns, Princeton University Press, Princeton, NJ, 2002.

27

1   regarding the market risk premium, that a reasonable range of arithmetic equity

2   premiums above short-term Treasury Bills is 5% to 8%.[13] Because the long-term

3   historical difference in the return between T-Bonds and T-Bills has been 1.2%, Brealey

4   and Meyers' textbook indicates a long-term market risk premium relative to T-Bonds

5   ranging from 3.8% to 6.8% [5% - 1.2% = 3.8%; 8% - 1.2% = 6.8%].[14] The mid-point of

6   that 3.8% to 6.8% reasonable risk premium range is 5.3%. That average market risk

7   premium added to a current T-Bond yield of 4.54%, would produce a current equity

8   return expectation for U.S. equities of 9.84%. Because utility stocks are less risky than

9   the market as a whole, an appropriate return on equity for utilities would be lower,

10   according to CAPM theory.

11

12 Q. WHAT HAVE YOU CHOSEN AS THE MARKET RISK PREMIUM FOR THE CAPM

13   ANALYSIS?

14 A. In their 2009 edition of <u>Ibbotson Risk Premia Over Time Report</u>, Morningstar indicates

15   that the average total return difference between stocks and T-Bonds over the 1926–2008

16   time period is 5.6% (based on an arithmetic average), and 3.9% (based on a geometric

17   average). I have, in prior testimony, used the most current values of those parameters as

18   estimates of the market risk premium in the CAPM analysis.

19   Also, current finance textbooks (i.e., Brealey & Meyers) indicate that the long-

20   term arithmetic average market risk premium ranges from 3.8% to 6.8%. The mid-point

21   of Brealey & Meyer's long-term risk premium range is 5.3%, which falls within the 3.9%

22   to 5.6% range published by Morningstar. For purposes of determining the CAPM cost of

23   equity in this proceeding, I will use the mid-point of the long-term risk premium range set

24   out in the most recent Brealey & Meyer's text—5.3%, as well as the Morningstar market

25   risk premiums to develop a range of CAPM equity cost estimates.

26

27 Q. WHAT VALUES HAVE YOU CHOSEN FOR THE BETA COEFFICIENTS IN THE

---

[13] Op cit, p. 154.
[14] Op cit, pp. 149, 222.

1   CAPM ANALYSIS?

2   A. Value Line reports beta coefficients for all the stocks it follows. Value Line's beta is

3   derived from a regression analysis between weekly percentage changes in the market

4   price of a stock and weekly percentage changes in the New York Stock Exchange

5   Composite Index over a period of five years. The average beta coefficient of the sample

6   of electric companies under study is 0.69.

7

8   Q. WHAT IS YOUR RECOMMENDED COST OF EQUITY CAPITAL FOR THE

9   SAMPLE OF ELECTRIC COMPANIES USING THE CAPITAL ASSET PRICING

10   MODEL ANALYSIS?

11   A. Schedule 6 shows that the average Value Line beta coefficient for the group of electric

12   companies under study is 0.69. Using the historical average market risk premium

13   published by Morningstar (6.5%) would, upon the adoption of a 0.69 beta, become a

14   sample group risk premium of 4.51% (0.69 x 6.5%). That non-specific risk premium

15   added to the recent average T-Bond rate of 4.64% yields a common equity cost rate

16   estimate of 9.15%. Using the market risk premium published by Brealey & Meyers

17   (5.3%) the resulting CAPM equity cost estimate for the electric companies would be

18   8.40%.

19

20   C. MODIFIED EARNINGS-PRICE RATIO ANALYSIS

21

22   Q. PLEASE DESCRIBE THE MODIFIED EARNINGS-PRICE RATIO (MEPR)

23   ANALYSIS OF THE COST OF COMMON EQUITY CAPITAL.

24   A. The earnings-price ratio is the expected earnings per share divided by the current market

25   price. In cost of capital analysis, the earnings-price ratio alone (which is one portion of

26   this MEPR analysis) can be useful in a corroborative sense, since it can be a good

27   indicator of the proper range of equity costs when the market price of a stock is near its

28   book value. When the market price of a stock is *above* its book value, the earnings-price

29   ratio *understates* the cost of equity capital. Schedule 7 contains mathematical proof for

1　　this concept. The opposite is also true, i.e.; the earnings-price ratio *overstates* the cost of

2　　equity capital when the market price of a stock is *below* book value.

3　　　　　Under current market conditions, the utilities under study have an average market-

4　　to-book ratio of 1.67 and, therefore, the average earnings-price ratio, alone, is likely to

5　　understate the cost of equity for the sample group. However, I do not use the earnings-

6　　price ratio alone as an indicator of equity capital cost rates. Because of the relationship

7　　among the earnings-price ratio, the market-to-book ratio and the investor-expected return

8　　on equity, described mathematically in Schedule 7, I have modified the earnings-price

9　　ratio analysis by averaging projected equity returns with the current earnings-price ratio

10　　for the companies under study. It is that modified analysis that I will use to assist in

11　　estimating an appropriate range of equity capital costs in this proceeding.

12

13　Q. PLEASE EXPLAIN THE RELATIONSHIP AMONG THE EARNINGS-PRICE

14　　　RATIO, THE EXPECTED RETURN ON EQUITY, AND THE MARKET-TO-BOOK

15　　　RATIO.

16　A. When the expected return (ROE) approximates the cost of equity, the market price of the

17　　utility approximates its book value and the earnings-price ratio provides an accurate

18　　estimate of the cost of equity. As the investor-expected return on equity for a utility

19　　(ROE) begins to exceed the investor-required return (the cost of equity capital), the

20　　market price of the firm will tend to exceed its book value. Also as explained above, in

21　　that instance the earnings-price ratio understates the cost of equity capital.

22　　　　　Conversely, in situations where the expected equity return is below what investors

23　　require, market prices fall below book value. Further, when market-to-book ratios are

24　　below 1.0, the earnings-price ratio overstates the cost of equity capital. Thus, the

25　　expected rate of return on equity and the earnings-price ratio tend to move in a

26　　countervailing fashion around a central locus, and that central locus is the cost of equity

27　　capital. Therefore, the average of the expected book return and the earnings price ratio

28　　provides a reasonable estimate of the cost of equity capital.

29　　　　　These relationships represent general rather than precisely quantifiable tendencies

1   but are useful in corroborating other cost of capital methodologies. The Federal Energy

2   Regulatory Commission, in its generic rate of return hearings, found this technique useful

3   and indicated that under the circumstances of market-to-book ratios exceeding unity, the

4   cost of equity is bounded above by the expected equity return and below by the earnings-

5   price ratio (e.g., 50 <u>Fed Reg</u>, 1985, p. 21822; 51 <u>Fed Reg</u>, 1986, pp. 361, 362; 37 FERC ¶

6   61,287). The mid-point of these two parameters, therefore, produces an estimate of the

7   cost of equity capital which, when market-to-book ratios are different from unity, is far

8   more accurate than the earnings-price ratio alone.

9

10 Q. IS THERE THEORETICAL SUPPORT FOR THE USE OF AN EARNINGS-PRICE

11   RATIO IN CONJUNCTION WITH AN EXPECTED RETURN ON EQUITY AS AN

12   INDICATOR OF THE COST OF EQUITY CAPITAL?

13 A. Yes. Elton and Gruber, <u>Modern Portfolio Theory and Investment Analysis</u> (New York

14   University, Wiley & Sons, New York, 1995, pp. 401-404) provide support for reliance on

15   the modified earnings price ratio analysis.

16   The Elton and Gruber text posits the following formula,

17

18                    $k = (1-b)E/(1-cb)P$, where   (3)

19

20   "k" is the cost of equity capital, "b" is the retention ratio, "E" is earnings, "P" is market

21   price and "c" is the ratio of the expected return on equity to the cost of equity capital

22   (ROE/k). This formula shows that when ROE = k, "c" equals 1.0, and the cost of equity

23   capital equals the earnings-price ratio. Moreover, in that case, ROE is greater than "k"

24   (as it is in today's market), "c" is greater than 1.0, and the earnings-price ratio will

25   understate the cost of equity. Also, the more that ROE exceeds "k," the more the

26   earnings price ratio will understate "k." In other words, those two parameters, the

27   earnings-price ratio and the expected return on equity (ROE), orbit around the cost of

28   equity capital, with the cost of equity as the locus, and fluctuate so that their mid-point

29   approximates the cost of equity capital.

1   Assuming an industry average retention ratio of about 30% (i.e., 70% of earnings

2   are paid out as dividends), the stochastic relationship between the expected return (ROE)

3   and the earnings price ratio can be determined from Equation (3), above, as shown in

4   Table I below. Most importantly, Equation (3) shows that the average of the EPR and

5   ROE (which is my MEPR analysis) will approximate "k," the cost of equity capital.

6

7   Table I.

8   SUPPORT FOR THE MODIFIED EARNINGS PRICE RATIO ANALYSIS

9

Cost of Equity	Retention Ratio	ROE	ROE/k	Earn-Price Ratio	M.E.P.R. (ROE+EPR)/2
[1]	[2]	[3]	[4]=[3]/[1]	[5]	[6]=([3]+[5])/2
10.00%	35.00%	13.00%	1.3	8.38%	10.69%
10.00%	35.00%	12.00%	1.2	8.92%	10.46%
10.00%	35.00%	11.00%	1.1	9.46%	10.23%
10.00%	35.00%	10.00%	1.0	10.00%	10.00%
10.00%	35.00%	9.00%	0.9	10.54%	9.77%
10.00%	35.00%	8.00%	0.8	11.08%	9.54%
10.00%	35.00%	7.00%	0.7	11.62%	9.31%

[5] From Equation (3): $E/P = k(1-cb)/(1-b)$

10

11   As the data in Table I shows, the average of the expected return (ROE) and the earnings

12   price ratio (EPR) produces an MEPR estimate of the cost of common equity capital of

13   sufficient accuracy to serve as a check of other analyses, which is how I use the model in

14   my testimony.

15

16 Q. WHAT ARE THE RESULTS OF YOUR EARNINGS-PRICE RATIO ANALYSIS OF

17   THE COST OF EQUITY FOR THE SAMPLE GROUP?

18 A. Schedule 8 shows the IBES projected 2012 per share earnings for each of the firms in the

19   sample groups. Recent average market prices (the same market prices used in my DCF

20   analysis), and Value Line's projected return on equity for 2011 and 2014-2016 for each

21   of the companies are also shown.

1   The average earnings-price ratio for the gas distributor sample group, 6.61%, is

2   likely to be below the cost of equity for those companies due to the fact that their average

3   market-to-book ratio is currently well above unity (average gas utility M/B = 1.67). The

4   sample gas companies' 2011 expected book equity return averages 10.55%. For the

5   entire gas sample group, then, the mid-point of the earnings-price ratio and the current

6   equity return is 8.58%.

7   Schedule 8 also shows that the average expected book equity return for the gas

8   utilities over the next three- to five-year period is 10.85%. The midpoint of that long-

9   term projected return on book equity (10.85%) and the current earnings-price ratio

10   (6.61%) is 8.73%. Both of those results are below the cost of equity estimate provided by

11   the DCF.

12

13   D. MARKET-TO-BOOK RATIO ANALYSIS

14

15   Q. PLEASE DESCRIBE YOUR MARKET-TO-BOOK (MTB) ANALYSIS OF THE COST

16   OF COMMON EQUITY CAPITAL FOR THE SAMPLE GROUPS.

17   A. This technique of analysis is a derivative of the DCF model that attempts to adjust the

18   capital cost derived with regard to inequalities that might exist in the market-to-book

19   ratio. This method is derived algebraically from the DCF model and therefore, cannot be

20   considered a strictly independent check of that method. However, the MTB analysis is

21   useful in a corroborative sense. The MTB seeks to determine the cost of equity using

22   market-determined parameters in a format different from that employed in the DCF

23   analysis. In the DCF analysis, the available data is "smoothed" to identify investors'

24   long-term sustainable expectations. The MTB analysis, while based on the DCF theory,

25   relies instead on point-in-time data projected one year and five years into the future and

26   thus, offers a practical corroborative check on the traditional DCF. The MTB formula is

27   derived as follows:

28   Solving for "P" from Equation (1), the standard DCF model, we have

29

33

1 $$P = D/(k-g). \tag{4}$$

2

3 But the dividend (D) is equal to the earnings (E) times the earnings payout ratio, or one

4 minus the retention ratio (b), or

5

6 $$D = E(1-b). \tag{5}$$

7

8 Substituting Equation (5) into Equation (4), we have

9

10 $$P = \frac{E(1-b)}{k-g} . \tag{6}$$

11

12 The earnings (E) are equal to the return on equity (r) times the book value of that equity

13 (B). Making that substitution into Equation (6), we have

14

15 $$P = \frac{rB(1-b)}{k-g} . \tag{7}$$

16

17 Dividing both sides of Equation (7) by the book value (B) and noting from Equation (iii)

18 in Appendix B that $g = br+sv$,

19

20 $$\frac{P}{B} = \frac{r(1-b)}{k-br-sv} . \tag{8}$$

21

22 Finally, solving Equation (8) for the cost of equity capital (k) yields the MTB formula:

23

24 $$k = \frac{r(1-b)}{P/B} +br+sv. \tag{9}$$

25

26 Equation (9) indicates that the cost of equity capital equals the expected return on equity

27 multiplied by the payout ratio, divided by the market-to-book ratio plus growth.

28 Schedule 9 shows the results of applying Equation (9) to the defined parameters for the

1   gas utility firms in the comparable sample. For the gas utility sample group, page 1 of

2   Schedule 9 utilizes current year (2011) data for the MTB analysis, while page 2 utilizes

3   Value Line's 2014-2016 projections for those companies that have them.

4   The MTB cost of equity for the entire sample of gas utility firms, recognizing a

5   current average market-to-book ratio of 1.67 is 9.02% using the current year data and

6   8.85% using projected three- to five-year data. The average of those point-in-time

7   estimates is similar my DCF equity cost estimate for gas utilities.

8

9   E. SUMMARY

10

11   Q. PLEASE SUMMARIZE THE RESULTS OF YOUR EQUITY CAPITAL COST

12   ANALYSES FOR THE SAMPLE GROUP OF SIMILAR-RISK COMPANIES.

13   A. My analysis of the cost of common equity capital for the sample group of gas distribution

14   companies is summarized in the table below.

15

METHOD	COST OF EQUITY
DCF	8.99%
CAPM	8.40%/9.15%
MEPR	8.58%/8.73%
MTB	8.85%/9.02%

16   The DCF result noted above, which is my primary indication of the cost of equity

17   capital, is 8.99%. Averaging the highest and lowest results of all of the corroborative

18   methodologies indicates a cost of equity range for the gas distributors of 8.61%-8.97%.

19   My DCF result is near that range and below the higher corroborative results. Therefore,

20   weighing all the evidence presented herein, my best estimate of the cost of equity capital

21   for a company facing similar risks as that group of investment-grade gas distribution

22   utility companies ranges from 8.75% to 9.25%, with a mid-point of 9.0%.

23

1   Q. ARE THERE FACTORS THAT SHOULD BE CONSIDERED IN DETERMINING A

2   POINT-ESTIMATE FOR VEOLIA'S EQUITY RETURN RELATIVE TO THE

3   RANGE OF 8.75% TO 9.25%?

4   A. Yes. I have analyzed the market data of gas distribution utilities as reasonable proxies for

5   Veolia's operations. The current cost of equity of those companies falls in a range of

6   8.75% to 9.25%, and the mid-point of that range is 9.00%. It is also important to note

7   that the average bond rating of the sample companies fall between "A-" and "A", which

8   is above the bond rating of Veolia's parent (VENAH), which is "BBB".   As an

9   indication of the "price" of the investment risk difference contained in an "A" bond rating

10   and a "BBB" bond rating, the March 18, 2011 edition of Value Line's *Selection &*

11   *Opinion* (p. 2341) reports that "A"-rated utility debt currently exhibits a yield of 5.65%,

12   approximately 40 basis points lower than the current "BBB" yield. Therefore a 25 basis

13   point upward movement to the top end of the current cost of equity capital is appropriate

14   in this instance.

15

16   Q. WHAT IS THE OVERALL COST OF CAPITAL FOR VEOLIA'S UTILITY

17   OPERATIONS IN KANSAS CITY, BASED ON AN ALLOWED EQUITY RETURN

18   OF 9.25%, AND YOUR RECOMMENDED CAPITAL STRUCTURE?

19   A. Schedule 10 attached to my testimony shows that, with an allowed return on equity

20   capital of 10.00%, using a ratemaking capital structure based on industry-average

21   capitalization and debt cost rates, Veolia's overall cost of capital would be 7.63%. As

22   also shown on Schedule 10, if Veolia were capitalized in a manner similar to that of the

23   energy utility industry, the equity return I recommend would afford the company a pre-

24   tax interest coverage of approximately 3.32 times.

25

26   Q. DOES THIS CONCLUDE YOUR ANALYSIS OF THE COMPANY'S OVERALL

27   COST OF CAPITAL?

28   A. Yes, it does.

29

1   Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY IN THIS PROCEEDING?

2   A. Yes, it does.

APPENDIX A

EDUCATION AND EMPLOYMENT HISTORY
OF
STEPHEN G. HILL

EDUCATION

Auburn University - Auburn, Alabama - Bachelor of Science in Chemical Engineering (1971); Honors - member Tau Beta Pi national engineering honorary society, Dean's list, candidate for outstanding engineering graduate; Organizations - Engineering Council, American Institute of Chemical Engineers

Tulane University - New Orleans, Louisiana - Masters in Business Administration (1973); concentration: Finance; awarded scholarship; Organizations - member MBA curriculum committee, Vice-President of student body, academic affairs

Continuing Education - NARUC Regulatory Studies Program at Michigan State University

EMPLOYMENT

West Virginia Air Pollution Control Commission (1975)
Position: Engineer ; Responsibility: Overseeing the compliance of all chemical companies in the State with the pollution guidelines set forth in the Clean Air Act.

West Virginia Public Service Commission-Consumer Advocate (1982)
Position: Rate of Return Analyst ; Responsibility: All rate of return research and testimony promulgated by the Consumer Advocate; also, testimony on engineering issues, when necessary.

Hill Associates (1989)
Position: Principal; Responsibility: Expert testimony regarding financial and economic issue in regulated industries.

PUBLICATIONS

"The Market Risk Premium and the Proper Interpretation of Historical Data," Proceedings of the Fourth NARUC Biennial Regulatory Information Conference, Volume I, pp. 245-255.
"Use of the Discounted Cash Flow Has Not Been Invalidated," Public Utilities Fortnightly, March 31, 1988, pp. 35-38.
"Private Equity Buyouts of Public Utilities: Preparation for Regulators," National Regulatory Research Institute, Paper 07-11, December 2007.

MEMBERSHIPS

American Institute of Chemical Engineers; Society of Utility and Regulatory Financial Analysts (Certified Rate of Return Analyst, Member of the Board of Directors)

APPENDIX B

Q. PLEASE PROVIDE AN EXAMPLE WHICH DESCRIBES THE DETERMINANTS OF LONG-TERM SUSTAINABLE GROWTH.

A. Assume that a hypothetical regulated firm had a first period common equity or book value per share of $10, the investor-expected return on that equity was 10% and the stated company policy was to pay out 60% of earnings in dividends. The first period earnings per share are expected to be $1.00 ($10/share book equity x 10% equity return) and the expected dividend is $0.60. The amount of earnings not paid out to shareholders ($0.40), the retained earnings, raises the book value of the equity to $10.40 in the second period. The table below continues the hypothetical for a five year period and illustrates the underlying determinants of growth.

TABLE A.

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	GROWTH
BOOK VALUE	$10.00	$10.40	$10.82	$11.25	$11.70	4.00%
EQUITY RETURN	10%	10%	10%	10%	10%	-
EARNINGS/SH.	$1.00	$1.040	$1.082	$1.125	$1.170	4.00%
PAYOUT RATIO	0.60	0.60	0.60	0.60	0.60	-
DIVIDENDS/SH.	$0.60	$0.624	$0.649	$0.675	$0.702	4.00%

We see that under steady-state conditions, the earnings, dividends and book value all grow at the same rate. Moreover, the key to this growth is the amount of earnings retained or reinvested in the firm and the return on that new portion of equity. If we let "b" equal the retention ratio of the firm (1 – the payout ratio) and let "r" equal the firm's expected return on equity, the DCF growth rate "g" (also referred to as the internal or sustainable growth rate) is equal to their product, or

$$g = br. \hspace{2cm} \text{(i)}$$

Professor Myron Gordon, who developed the Discounted Cash Flow technique and first

introduced it into the regulatory arena, has determined that Equation (i) embodies the underlying fundamentals of growth and, therefore, is a primary measure of growth to be used in the DCF model. Professor Gordon's research also indicates that analysts' growth rate projections are useful in estimating investors' expected sustainable growth.

I should note here that the above hypothetical does not allow for the existence of external sources of equity financing, i.e., sales of common stock. Stock financing will cause investors to expect additional growth if the company is expected to issue new shares at a market price that exceeds book value. The excess of market over book would inure to current shareholders, increasing their per share equity value. Therefore, if the company is expected to continue to issue stock at a price that exceeds book value, the shareholders would continue to expect their book value to increase and would add that growth expectation to that stemming from earnings retention or internal growth. Conversely, if a company were expected to issue new equity at a price below book value, that would have a negative effect on shareholder's current growth rate expectations. In such a situation, shareholders would perceive an overall growth rate less than that produced by internal sources (retained earnings). Finally, with little or no expected equity financing or a market-to-book ratio near unity, investors would expect the sustainable growth rate for the company to equal that derived from Equation (i), "g = br." Dr. Gordon[1] identifies the growth rate which includes both expected internal and external financing as:

$$g = br + vs, \qquad\qquad\qquad \text{(ii)}$$

where,

> g = DCF expected growth rate,
> r = return on equity,
> b = retention ratio,
> v = fraction of new common stock
>   sold that accrues to the current
>   shareholder,
> s = funds raised from the sale of stock

---

[1]Gordon, M.J., The Cost of Capital to a Public Utility, MSU Public Utilities Studies, East Lansing, Michigan, 1974, pp., 30–33.

as a fraction of existing equity.

Additionally,

$$v = 1 - BV/MP, \tag{iii}$$

where,

MP = market price,
BV = book value.

I have used Equation (iii) as the basis for my examination of the investor expected long-term growth rate (g) in this proceeding.

Q. IN YOUR PREVIOUS EXAMPLE, EARNINGS AND DIVIDENDS GREW AT THE SAME RATE (br) AS DID BOOK VALUE. WOULD THE GROWTH RATE IN EARNINGS OR DIVIDENDS, THEREFORE, BE SUITABLE FOR DETERMINING THE DCF GROWTH RATE ?

A. No, not necessarily. Rates of growth derived from earnings or dividends alone can be unreliable due to extraneous influences on those parameters such as changes in the expected rate of return on common equity or changes in the payout ratio. That is why it is necessary to examine the underlying determinants of growth through the use of a sustainable growth rate analysis.

If we take the hypothetical example previously stated and assume that, in year three, the expected return on equity rises to 15%, the resultant growth rate for earnings and dividends far exceeds that which the company could sustain indefinitely. The potential error in using those growth rates to estimate "g" is illustrated in the following table.

TABLE B.

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	GROWTH
BOOK VALUE	$10.00	$10.40	$10.82	$11.47	$12.157	5.00%
EQUITY RETURN	10%	10%	15%	15%	15%	10.67%
EARNINGS/SH.	$1.00	$1.040	$1.623	$1.720	$1.824	16.20%
PAYOUT RATIO	0.60	0.60	0.60	0.60	0.60	-
DIVIDENDS/SH.	$0.60	$0.624	$0.974	$1.032	$1.094	16.20%

What has happened is a shift in steady-state growth paths. For years one and two, the sustainable rate of growth (g=br) is 4.00%, just as in the previous hypothetical. Then, in the last three years, the sustainable growth rate increases to 6.00% (g=br = 0.4x15%). If the regulated firm were expected to continue to earn a 15% return on equity and retain 40% of its earnings, then a growth rate of 6.0% would be a reasonable estimate of the long-term sustainable growth rate. However, the compound annual growth rate for dividends and earnings exceeds 16% which is the result only of an increased equity return rather than the intrinsic ability of the firm to grow continuously at a 16% annual rate. Clearly, this type of estimate of future growth cannot be used with any reliability at all. In the case of the hypothetical, to utilize a 16% growth rate in a DCF model would be to expect the company's return on common equity to increase by 50% every five years into the indefinite future. This would be a ridiculous forecast for any regulated firm and underscores the importance of utilizing the underlying fundamentals of growth in the DCF model.

It can also be demonstrated that a change in our hypothetical regulated firm's payout ratio makes the past rate of growth in dividends an unreliable basis for predicting "g". If we assume our regulated firm consistently earns its expected equity return (10%) but in the third year, changes its payout ratio from 60% to 80% of earnings, the results are shown in the table below.

TABLE C.

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	GROWTH
BOOK VALUE	$10.00	$10.40	$10.82	$11.036	$11.26	3.01%
EQUITY RETURN	10%	10%	10%	10%	10%	-
EARNINGS/SH.	$1.00	$1.040	$1.082	$1.104	$1.126	3.01%
PAYOUT RATIO	0.60	0.60	0.80	0.80	0.80	7.46%
DIVIDENDS/SH.	$0.60	$0.624	$0.866	$0.833	$0.900	10.67%

What we see here is that, although the company has registered a high dividend growth rate (10.67%), it is, again, not at all representative of the growth that could be sustained indefinitely, as called for in the DCF model. In actuality, the sustainable growth rate has declined from 4.0% the first two years to only 2.0% ($g=br = 0.2 \times 10\%$) during the last three years due to the increased payout ratio. To utilize a 10% growth rate in a DCF analysis of this hypothetical regulated firm would 1) assume the payout ratio of the firm would continue to increase 33% every five years into the indefinite future, 2) lead to the highly implausible result that the firm intends to consistently pay out more in dividends than it earns and 3) grossly overstate the cost of equity capital.

APPENDIX C
SAMPLE COMPANY GROWTH RATE ANALYSES

GAS DISTRIBUTORS

AGL - AGL Resources - AGL's sustainable growth rate has averaged 5.24% over the most recent five year period (2006-2010). VL expects AGL's sustainable growth to increase somewhat above that historical growth rate level and to reach 5.97% by the 2014-2016 period. AGL's book value growth rate is expected to be 5.50% over the next five years, continuing from the 5.5% rate of growth experienced over the past five years (indicating very steady growth). Also, AGL's earnings per share are projected to increase at a 5.3% (IBES), 5.4% (Zack's) to 4.5% (VL) rate— similar to or below historical growth and the projected sustainable growth rate. AGL's dividends are expected to show 2.0% annual growth over the next five years, moderating long-term growth expectations. Over the past five years, AGL's earnings showed 4.5% growth, while its dividends increased at a 7.5% rate. Investors can reasonably expect a sustainable growth rate in the future of **5.50%** for AGL.

Regarding share growth, AGL's shares outstanding increased at approximately a 0.10% rate over the past five years. The number of shares is projected by VL to increase at about a 0.26% rate between 2005 and the 2014-16 period. An expectation of share growth of **0.25%** for this company is reasonable.

ATO – Atmos Energy Corp - ATO's sustainable growth rate averaged only about 3.2% for the five-year historical period. Value Line projects increasing growth in 2011, and then a rise by the 2014-16 period to a level near 4.2%, through an increasing earnings retention. However, ATO's book value growth during the most recent five years (5%) is expected to moderate slightly to a 4.5% rate in the future. ATO's earnings per share are projected to increase at a 5% (VL) to 3.6% (IBES) to 4.5% (Zack's) rate, but its dividends are expected to grow at only a 2% rate, moderating long-term growth expectations. Historically ATO's earnings have shown 4% growth, while its dividends increased at a 1.5% rate. Investors can reasonably expect a sustainable growth rate higher than that established historically, but not as high as the earnings growth projected by Value Line; **4.25%** is a reasonable expectation for this company.

Regarding share growth, ATO's shares outstanding grew at approximately an 2.5% rate over the past five. The number of shares is expected to grow at approximately a 3% rate through 2014-16. An expectation of share growth of **2.75%** for this company is reasonable.

LG – Laclede Group - LG's sustainable growth rate has averaged 4.81% over the most recent five year period, with lower growth in the most recent year— indicating an moderating trend. VL expects LG's sustainable growth moderate 4.3% by the 2014-2016 period. LG's book value growth rate is expected to be 5% over the next five years, down from the 7% rate of growth experienced over the

past five years. Also, LG's earnings per share are projected to increase at 3% rate, according to Value Line—below the indicated sustainable growth rate. Analysts polled by IBES expect 3.5% earnings growth, while those polled by Zack's expect 3.0% growth over the next five years. Also, LG's dividends are expected to grow at 2.5%. Over the past five years, LG's earnings growth was 7.5% while its dividends increased at a 2.5% rate. Investors can reasonably expect a sustainable growth rate in the future of **4.0%** for LG.

Regarding share growth, LG's shares outstanding increased at approximately a 1% rate over the past five years. The number of shares outstanding is expected to have increased at a rate of 3.13% from 2010 levels. An expectation of share growth of **2%** for this company is reasonable.

GAS – Nicor, Inc. - GAS's sustainable growth rate averaged 4.44% over the five-year historical period with a decreasing trend. VL projects sustainable growth through 2014-16 below historical averages, 3.4%. GAS's book value, which increased at a 5% rate during the most recent five years, is expected to increase to a 4.0% rate in the future, below both historic book value growth and sustainable growth rates. GAS's earnings per share are projected to increase at -0.5% (VL) -0.23% (IBES) rate and 3.5% (Zack's). Its dividends are expected to remain constant (i.e., grow at a 0% rate), moderating long-term growth expectations. Historically GAS's earnings grew at a 3.5% rate, according to Value Line and its dividends showed no growth. The projected sustainable growth, earnings and book value growth rate data indicate that investors can expect the growth from GAS to be lower in the future than has existed in the past. Investors can reasonably expect a sustainable growth rate of **4.0%** for GAS.

Regarding share growth, GAS's shares outstanding showed a 0.44% increase over the past five years. Further, GAS's growth rate in shares outstanding is expected to decline at about a 0.1% rate of increase through 2014-16. An expectation of share growth of **0.25%** for this company is reasonable.

NI – NiSource - NI's sustainable growth rate has averaged 1.02% over the most recent five year period. VL expects NI's sustainable growth to continue at that historical growth rate level to reach 3.67% by the 2014-2016 period. NI's book value growth rate is expected to be 2.5% over the next five years, well above to the 1% rate of growth experienced over the past five years. NI's earnings per share are projected to increase at a 7.5% (VL) 5.7% (IBES) to 3.0% (Zack's). However, its dividends are expected to grow no growth over the next five years. Over the past five years, NI's earnings growth was -8.5% while its dividends decreased at a 3% rate. Investors can reasonably expect a sustainable growth rate in the future of **4.0%** for NI.

Regarding share growth, NI's shares outstanding increased at approximately a 0.5% rate over the past five years. That rate of increase is expected to moderate in the future with number of shares outstanding in 2014-2016 is expected to grow at a 0.04% rate. An expectation of share growth of **0.25%** for this company is reasonable.

NWN - Northwest Natural Gas - NWN's sustainable growth rate averaged 4.78% for the five-year period, with the results in the most recent year below that the average. VL expects sustainable growth to decline to a 4.13% level through the 2014-16 period. NWN's book value growth is expected to continue to increase at a 4%, equal to the historical level of 4%, showing growth stability for this company. NWN's earnings per share growth is projected to increase at 3% (VL) to 3.88% (IBES) to 4.6% (Zack's). VL projects its dividends are expected to grow at a 4.0% rate. Historically NWN's earnings and dividends increased at 9.5% and 3.5% rates, respectively, according to Value Line. Investors can reasonably expect sustainable growth from NWN to be similar to past averages, a sustainable internal growth rate of **4.5%** is reasonable for this company.

Regarding share growth, NWN's shares outstanding grew at a -0.53% rate over the past five years. The growth in the number of shares is expected by VL to be 0.2% through 2014-16. An expectation of share growth of **0%** for this company is reasonable.

PNY - Piedmont Natural Gas - PNY's sustainable internal growth rate averaged 3.64% over the five-year historical period. VL projects PNY's sustainable growth to rise to a level of 3.88% through 2014-16. Also, PNY's book value growth rate is expected to continue in the future at 3%, slightly below the historical level of 3.5%, pointing to moderating growth for this company. PNY's earnings per share are projected to increase at 3.5% (VL) to 4.5% (Zack's), to 3.5% (IBES), while its dividends are expected to grow at a 4% rate, slightly below the historical rate of 4.5%, again indicating moderating growth. Sustainable growth has been relatively consistent for this company and is expected to rise to about 4%. However, dividend and earnings growth are expected to be lower than that level, therefore, investors can reasonably expect a sustainable growth rate of **4.25%**, from PNY.

Regarding share growth, PNY's shares outstanding grew at about a -0.79% rate over the past five years, due to share repurchases. The level of share growth is expected by VL to decline at a 0.92% rate through 2014-16. An expectation of share growth of **-0.25%** for this company is reasonable.

SJI – South Jersey Industries - SJI's internal sustainable growth rate has averaged 7.39% over the most recent five-year period (2006-2010), with no definitive trend. That historical level of growth is expected to be maintained and to reach 8.96% by the 2014-2016 period, through a dramatically increased ROE. SJI's book value growth rate is expected to be 4.5% over the next five years— down from the 9% rate of growth experienced over the past five years (the product, primarily, of acquisitions). SJI's earnings per share are projected to increase at 9.0% (VL) to 6.5% (Zack's) and 6.33% (IBES), while its dividends are expected to grow at 8.5%. Over the past five years, SJI's earnings grew at an 10% rate while its dividends showed a 7.5% increase. Investors can reasonably expect a sustainable growth rate in the future to be higher than past averages, **7%** is reasonable for SJI.

Regarding share growth, SJI's shares outstanding grew at a 0.46% rate over the past five years. The number of shares outstanding is projected by VL to rise at approximately a 2.62% rate through 2014-16. An expectation of share growth of **1.75%** for this company is reasonable.

SWX – Southwest Gas - SWX's sustainable growth rate averaged 4.21% over the five-year historical period with an increasing trend. VL projects that the retention ratio will rise through 2014-16, bringing sustainable growth just above 5%. SWX's book value, which increased at a 5% rate during the most recent five years, is expected to decrease slightly to a 4.5% rate in the future, below the sustainable growth projection. SWX's earnings per share are projected to increase at a 7.5% (VL) 2.65% (IBES) and 6% (Zack's). Its dividends are expected to grow at a 4.5% rate, moderating long-term growth expectations. Historically SWX's earnings grew at a 6% rate, according to Value Line and its dividends showed 2% growth. The projected sustainable growth data indicate that investors can expect the growth from SWX to be slightly higher in the future than has existed in the past, however those expectations are moderated by the book value growth and the slower-growing dividend. Investors can reasonably expect a sustainable growth rate of **5.5%** for SWX.

Regarding share growth, SWX's shares outstanding showed a 2.2% increase over the past five years. Further, SWX's growth rate in shares outstanding is expected to increase at about a 1.9% rate of increase through 2014-16. An expectation of share growth of **2%** for this company is reasonable.

WGL – WGL Holdings - WGL's sustainable growth rate has averaged 3.97% over the most recent five year period, with an increasing trend. VL expects WGL's sustainable growth to continue at that historical growth rate level to reach 3.78% by the 2014-2016 period. WGL's book value growth rate is expected to be 4.0% over the next five years, slightly below the 5% rate of growth experienced over the past five years. WGL's earnings per share are projected to increase at 1.5% (VL), 3.1% (IBES) to 5.3% (Zack's). However, its dividends are expected to grow at only 2.5%. Over the past five years, WGL's earnings growth was 2.5% while its dividends also increased at a 2.5% rate. Investors can reasonably expect a sustainable growth rate in the future of **4.0%** for WGL.

Regarding share growth, WGL's shares outstanding increased at approximately a 0.8% rate over the past five years. That rate of increase is expected to moderate in the future with number of shares outstanding in 2014-2016 is expected to grow at a 0.57% rate. An expectation of share growth of **0.75%** for this company is reasonable.

VEOLIA ENERGY KANSAS CITY
CAPITAL STRUCTURE

AMOUNT

Type of Capital	2009	2010
Common Equity	$11,129,800	$8,524,095
Less: Goodwill	$3,889,692	$3,889,692
Regulatory Common Equity	$7,240,108	$4,634,403
Long-term Debt	$4,763,991	$4,763,991
Total Capital	$12,004,099	$9,398,394

PERCENT

Type of Capital	2009	2010
Common Equity	60.31%	49.31%
Long-term Debt	39.69%	50.69%
Total Capital	100.00%	100.00%

Source: Company provided data.

VEOLIA ENERGY KANSAS CITY
VEOLIA ENERGY NORTH AMERICA HOLDINGS, INC.
CAPITAL STRUCTURE

AMOUNT [000]

Type of Capital	2009	2010
Common Equity	$199,427	$203,493
Less: Goodwill	$212,392	$213,127
Regulatory Common Equity	-$12,965	-$9,634
Long-term Debt	$630,660	$704,576
TOTAL	$617,695	$694,942

PERCENTAGE

Type of Capital	2009	2010
Common Equity	-2.10%	-1.39%
Long-term Debt	102.10%	101.39%
TOTAL	100.00%	100.00%

Data provided by Company.

VEOLIA ENERGY KANSAS CITY
GAS INDUSTRY COMMON EQUITY RATIOS

	COMPANY	COMMON EQUITY RATIO
1	AGL Resources Inc. (NYSE-AGL)*	39.9
2	Atmos Energy Corporation (NYSE-ATO)*	48.6
3	Chesapeake Utilities Corporation (NYSE-CPK)	60.0
4	Delta Natural Gas Company (NDQ-DGAS)	48.5
5	El Paso Corporation (NYSE-EP)	15.5
6	Energen Corporation (NYSE-EGN)	78.3
7	EQT Corporation (NYSE-EQT)	61.1
8	Gas Natural, Inc. (NDQ-EGAS)	54.4
9	Laclede Group, Inc. (NYSE-LG)*	54.3
10	National Fuel Gas Company (NYSE-NFG)	62.1
11	New Jersey Resources Corp. (NYSE-NJR)	48.4
12	NICOR Inc. (NYSE-GAS)*	55.3
13	NiSource (NYSE-NI)	39.7
14	Northwest Natural Gas Co. (NYSE-NWN)*	45.9
15	ONEOK, Inc. (NYSE-OKE)	28.2
16	Piedmont Natural Gas Co., Inc. (NYSE-PNY)*	49.8
17	Questar Corporation (NYSE-STR)	44.3
18	RGC Resources, Inc. (NDQ-RGCO)	63.3
19	South Jersey Industries, Inc. (NYSE-SJI)*	46.9
20	Southern Union Company (NYSE-SUG)	40.3
21	Southwest Gas Corporation (NYSE-SWX)*	51.0
22	WGL Holdings, Inc. (NYSE-WGL)*	59.5
23	Williams Companies, Inc. (NYSE-WMB)	42.1
	INDUSTRY AVERAGE	**49.45**
	GAS DISTRIB. AVG.	**49.09**

*Companies selected in Mr. Hill's gas distribution sample group.
AUS Utility Reports, March 2011, pp. 15, 16.

VEOLIA ENERGY KANSAS CITY
ELECTRIC UTILITY INDUSTRY COMMON EQUITY RATIOS

ELECTRIC COMPANIES	EQUITY RATIO	COMBINATION GAS & ELECTRIC COMPANIES	EQUITY RATIO
Allegheny Energy, Inc. (NYSE-AYE)	42.9	Alliant Energy Corporation (NYSE-LNT)	51.0
ALLETE, Inc. (NYSE-ALE)	55.1	Ameren Corporation (NYSE-AEE)	49.6
American Electric Power Co. (NYSE-AEP)	42.1	Avista Corporation (NYSE-AVA)	46.7
Central Vermont Public Serv. Corp. (NYSE-CV)	57.2	Black Hills Corporation (NYSE-BKH)	44.7
Cleco Corporation (NYSE-CNL)	48.8	CenterPoint Energy (NYSE-CNP)	25.1
DPL Inc. (NYSE-DPL)	47.5	CH Energy Group, Inc. (NYSE-CHG)	50.6
Edison International (NYSE-EIX)	44.7	CMS Energy Corporation (NYSE-CMS)	27.9
El Paso Electric Company (NYSE-EE)	48.2	Consolidated Edison, Inc. (NYSE-ED)	48.0
FirstEnergy Corporation (ASE-FE)	36.2	Constellation Energy Group, Inc. (NYSE-CEG)	62.4
Great Plains Energy Incorporated (NYSE-GXP)	43.4	Dominion Resources, Inc. (NYSE-D)	41.3
Hawaiian Electric Industries, Inc. (NYSE-HE)	50.9	DTE Energy Company (NYSE-DTE)	45.2
IDACORP, Inc. (NYSE-IDA)	48.3	Duke Energy Corporation (NYSE-DUK)	54.4
Nextra Energy (NYSE-NEE)	40.9	Empire District Electric Co. (NYSE-EDE)	47.8
Otter Tail Corporation (NDQ-OTTR)	53.2	Entergy Corporation (NYSE-ETR)	41.5
Pinnacle West Capital Corp. (NYSE-PNW)	50.0	Exelon Corporation (NYSE-EXC)	51.2
PNM Resources, Inc. (NYSE-PNM)	47.4	Integrys Energy Group (NYSE-TEG)	53.3
Portland General Electric (NYSE-POR)	46.4	MDU Resources Group, Inc. (NYSE-MDU)	63.4
PPL Corporation (NYSE-PPL)	47.3	MGE Energy, Inc. (NYSE-MGEE)	58.5
Progress Energy Inc. (NYSE-PGN)	44.6	NiSource Inc. (NYSE-NI)	39.7
Southern Company (NYSE-SO)	44.0	Northeast Utilities (NYSE-NU)	42.8
UIL Holdings Corporation (NYSE-UIL)	58.1	Northwestern Corporation (NYSE-NWE)	42.6
Westar Energy, Inc. (NYSE-WR)	44.3	NSTAR (NYSE-NST)	41.0
		NV Energy (NYSE-NVE)	37.3
Electric Company Average	47.3	OGE Energy Corp. (NYSE-OGE)	46.7
		Pepco Holdings, Inc. (NYSE-POM)	47.4
		PG&E Corporation (NYSE-PCG)	46.8
		Public Service Enterprise Group (NYSE-PEG)	51.6
		SCANA Corporation (NYSE-SCG)	42.6
		SEMPRA Energy (NYSE-SRE)	48.4
		TECO Energy, Inc. (NYSE-TE)	38.6
		UGI Corporation (NYSE-UGI)	43.5
OVERALL AVERAGE	**46.0**	UniSource Energy Corporation (NYSE-UNS)	30.2
		Unitil Corporation (ASE-UTL)	34.6
		Vectren Corporation (NYSE-VVC)	44.4
		Wisconsin Energy Corporation (NYSE-WEC)	43.1
		Xcel Energy Inc. (NYSE-XEL)	44.7
		Combination Company Average	45.2

Data from AUS Utility Reports, March 2011, pp. 5-14

VEOLIA ENERGY KANSAS CITY
RATEMAKNG CAPITAL STRUCTURE

Type of Capital	PERCENT	COST RATE*	WT. AVG. COST RATE
Common Equity	48.00%	-	-
Long-term Debt8	52.00%	6.13%	3.188%
TOTAL CAPITAL	100.00%		-

* Debt Cost estimated. Six week average Baa Utility Bond Yield 2/11/11-3/18/11.

VEOLIA ENERGY KANSAS CITY, INC.
DCF GROWTH RATE PARAMETERS
GAS DISTRIBUTORS

COMPANY	INTERNAL	GROWTH			EXTERNAL	GROWTH
AGL	RETENTION RATIO	EQUITY RETURN	"g"	BOOK VALUE ($/SHARE)	SHARES OUTST (MILLIONS)	SHARE GROWTH
2006	0.4559	13.2%	6.02%	20.71	77.70	
2007	0.3971	12.7%	5.04%	21.74	76.40	
2008	0.3801	12.6%	4.79%	21.48	16.90	
2009	0.4028	12.5%	5.03%	22.95	77.54	
2010	0.4133	12.9%	5.33%	23.24	78.00	
AVERAGE GROWTH			5.24%	5.50%		0.10%
2011	0.4286	12.5%	5.36%		78.20	0.26%
2012	0.4424	12.5%	5.53%		78.40	0.55%
2014-2016	0.4773	12.5%	5.97%	5.50%	79.00	0.26%

COMPANY	INTERNAL	GROWTH			EXTERNAL	GROWTH
ATO	RETENTION RATIO	EQUITY RETURN	"g"	BOOK VALUE ($/SHARE)	SHARES OUTST (MILLIONS)	SHARE GROWTH
2006	0.3750	09.8%	3.68%	20.16	81.74	
2007	0.3402	08.7%	2.96%	22.01	89.33	
2008	0.3500	08.8%	3.08%	22.60	90.81	
2009	0.3299	08.3%	2.74%	23.52	92.55	
2010	0.3796	09.2%	3.49%	24.16	90.16	
AVERAGE GROWTH			3.19%	5.00%		2.48%
2011	0.4087	09.0%	3.68%		91.00	0.93%
2012	0.4250	08.5%	3.61%		92.00	1.02%
2014-2016	0.4630	09.0%	4.17%	4.50%	105.00	3.09%

COMPANY	INTERNAL	GROWTH			EXTERNAL	GROWTH
LG	RETENTION RATIO	EQUITY RETURN	"g"	BOOK VALUE ($/SHARE)	SHARES OUTST (MILLIONS)	SHARE GROWTH
2006	0.4093	12.5%	5.12%	18.85	21.36	
2007	0.3723	11.6%	4.32%	19.79	21.65	
2008	0.4356	11.8%	5.14%	22.12	21.99	
2009	0.4760	12.4%	5.90%	23.32	22.17	
2010	0.3539	10.1%	3.57%	24.02	22.29	
AVERAGE GROWTH			4.81%	7.00%		1.07%
2011	0.3686	10.5%	3.87%		22.50	0.94%
2012	0.3774	10.5%	3.96%		23.00	1.58%
2014-2016	0.4286	10.0%	4.29%	5.00%	26.00	3.13%

VEOLIA ENERGY KANSAS CITY, INC.
DCF GROWTH RATE PARAMETERS
GAS DISTRIBUTORS

COMPANY	INTERNAL	GROWTH			EXTERNAL	GROWTH
GAS	RETENTION RATIO	EQUITY RETURN	"g"	BOOK VALUE ($/SHARE)	SHARES OUTST (MILLIONS)	SHARE GROWTH
2006	0.3519	14.7%	5.17%	19.43	44.90	
2007	0.3779	14.3%	5.40%	20.58	45.90	
2008	0.2928	12.3%	3.60%	21.55	45.13	
2009	0.3737	13.1%	4.90%	22.93	45.25	
2010	0.2874	10.8%	3.10%	24.15	45.70	
AVERAGE GROWTH			4.44%	5.00%		0.44%
2011	0.3357	11.0%	3.69%		45.50	-0.44%
2012	0.3586	11.0%	3.94%		45.50	-0.22%
2014-2016	0.3357	10.0%	3.36%	4.00%	45.50	-0.09%

COMPANY	INTERNAL	GROWTH			EXTERNAL	GROWTH
NI	RETENTION RATIO	EQUITY RETURN	"g"	BOOK VALUE ($/SHARE)	SHARES OUTST (MILLIONS)	SHARE GROWTH
2006	0.1930	06.3%	1.22%	18.32	273.65	
2007	0.1930	06.1%	1.18%	18.52	274.18	
2008	0.3134	07.8%	2.44%	17.24	274.26	
2009	-0.0952	04.8%	-0.46%	17.54	276.79	
2010	0.1321	05.6%	0.74%	17.63	279.30	
AVERAGE GROWTH			1.02%	1.00%		0.51%
2011	0.2923	07.0%	2.05%		279.40	0.04%
2012	0.3429	07.5%	2.57%		279.50	0.04%
2014-2016	0.4588	08.0%	3.67%	2.50%	279.90	0.04%

COMPANY	INTERNAL	GROWTH			EXTERNAL	GROWTH
NWN	RETENTION RATIO	EQUITY RETURN	"g"	BOOK VALUE ($/SHARE)	SHARES OUTST (MILLIONS)	SHARE GROWTH
2006	0.4085	10.9%	4.45%	22.01	27.24	
2007	0.4783	12.5%	5.98%	22.52	26.41	
2008	0.4086	10.9%	4.45%	23.71	26.50	
2009	0.4346	11.4%	4.95%	24.88	26.53	
2010	0.3846	10.5%	4.04%	25.95	26.67	
AVERAGE GROWTH			4.78%	4.00%		-0.53%
2011	0.3857	10.5%	4.05%		26.75	0.30%
2012	0.3931	10.5%	4.13%		26.80	0.24%
2014-2016	0.4125	10.0%	4.13%	4.00%	26.95	0.21%

VEOLIA ENERGY KANSAS CITY, INC.
DCF GROWTH RATE PARAMETERS
GAS DISTRIBUTORS

COMPANY	INTERNAL	GROWTH			EXTERNAL	GROWTH
PNY	RETENTION RATIO	EQUITY RETURN	"g"	BOOK VALUE ($/SHARE)	SHARES OUTST (MILLIONS)	SHARE GROWTH
2006	0.2578	11.0%	2.84%	11.83	74.61	
2007	0.2929	11.9%	3.49%	11.99	73.23	
2008	0.3087	12.4%	3.83%	12.11	73.26	
2009	0.3593	13.2%	4.74%	12.67	73.27	
2010	0.2839	11.6%	3.29%	13.35	72.28	
AVERAGE GROWTH			3.64%	3.50%		-0.79%
2011	0.2813	12.0%	3.38%		71.50	-1.08%
2012	0.3000	12.0%	3.60%		71.00	-0.89%
2014-2016	0.3105	12.5%	3.88%	3.00%	69.00	-0.92%

COMPANY	INTERNAL	GROWTH			EXTERNAL	GROWTH
SJI	RETENTION RATIO	EQUITY RETURN	"g"	BOOK VALUE ($/SHARE)	SHARES OUTST (MILLIONS)	SHARE GROWTH
2006	0.6260	16.3%	10.20%	15.11	29.33	
2007	0.5167	12.8%	6.61%	16.25	29.61	
2008	0.5110	13.1%	6.69%	17.33	29.73	
2009	0.4874	13.1%	6.38%	18.24	29.80	
2010	0.4963	14.2%	7.05%	19.08	29.87	
AVERAGE GROWTH			7.39%	9.00%		0.46%
2011	0.4983	15.0%	7.47%		31.00	3.78%
2012	0.5077	16.5%	8.38%		32.00	3.50%
2014-2016	0.5122	17.5%	8.96%	4.50%	34.00	2.62%

COMPANY	INTERNAL	GROWTH			EXTERNAL	GROWTH
SWX	RETENTION RATIO	EQUITY RETURN	"g"	BOOK VALUE ($/SHARE)	SHARES OUTST (MILLIONS)	SHARE GROWTH
2006	0.5859	08.9%	5.21%	21.58	41.77	
2007	0.5590	08.5%	4.75%	22.98	42.81	
2008	0.3525	05.9%	2.08%	23.49	44.19	
2009	0.5103	07.9%	4.03%	24.44	45.09	
2010	0.5595	08.9%	4.98%	25.59	45.60	
AVERAGE GROWTH			4.21%	5.00%		2.22%
2011	0.5435	09.0%	4.89%		46.50	1.97%
2012	0.5510	09.0%	4.96%		48.00	2.60%
2014-2016	0.5690	09.0%	5.12%	4.50%	50.00	1.86%

VEOLIA ENERGY KANSAS CITY, INC.
DCF GROWTH RATE PARAMETERS

COMPANY	INTERNAL GROWTH				EXTERNAL GROWTH	
WGL	RETENTION RATIO	EQUITY RETURN	"g"	BOOK VALUE ($/SHARE)	SHARES OUTST (MILLIONS)	SHARE GROWTH
2006	0.3041	10.3%	3.13%	18.86	48.89	
2007	0.3445	10.4%	3.58%	19.83	49.95	
2008	0.4221	11.6%	4.90%	20.99	49.92	
2009	0.4190	11.6%	4.86%	21.89	50.14	
2010	0.3392	09.9%	3.36%	22.82	50.54	
AVERAGE GROWTH			3.97%	5.00%		0.83%
2011	0.2714	09.0%	2.44%		51.00	0.91%
2012	0.3319	09.5%	3.15%		51.00	0.45%
2014-2016	0.3778	10.0%	3.78%	4.00%	52.00	0.57%

Data from Value Line Ratings & Reports, March 11, 2011.

VEOLIA ENERGY KANSAS CITY, INC.
DCF GROWTH RATES
GAS DISTRIBUTORS

COMPANY	br	+	$sv=g*(1-(1/(M/B)))$			=	g
AGL	5.50%	+	0.25% (1 - (1/ 1.50))			=	5.58%
ATO	4.25%	+	2.75% (1 - (1/ 1.23))			=	4.76%
LG	4.50%	+	2.00% (1 - (1/ 1.51))			=	5.18%
GAS	4.00%	+	0.25% (1 - (1/ 2.04))			=	4.13%
NI	4.00%	+	0.25% (1 - (1/ 1.02))			=	4.01%
NWN	4.50%	+	0.00% (1 - (1/ 1.65))			=	4.50%
PNY	4.25%	+	-0.25% (1 - (1/ 2.05))			=	4.12%
SJI	7.00%	+	1.75% (1 - (1/ 2.71))			=	8.10%
SWX	5.50%	+	2.00% (1 - (1/ 1.42))			=	6.09%
WGL	4.00%	+	0.75% (1 - (1/ 1.56))			=	4.27%

Average Market-to-Book Ratio   =   1.67

AGL	=	AGL Resources
ATO	=	Atmos Energy Corporation
LG	=	Laclede Group
GAS	=	NICOR
NI	=	NiSource
NWN	=	Northwest Natural Gas Co.
PNY	=	Piedmont Natual Gas Company
SJI	=	South Jersey Industries, Inc.
SWX	=	Southwest Gas
WGL	=	WGL Holdlings

g*= expected growth in number of shares outstanding

VEOLIA ENERGY KANSAS CITY, INC.
GROWTH RATE COMPARISON
GAS DISTRIBUTORS

COMPANY	DCF Growth	Value Line Projected			Reuters EPS	Value Line Historic			Reuters & VL AVGS.	5-yr Compound Hist.		
		EPS	DPS	BVPS		EPS	DPS	BVPS		EPS	DPS	BVPS
AGL	5.58%	4.50%	2.00%	5.50%	5.30%	4.50%	7.50%	5.50%	4.97%	2.98%	3.99%	3.59%
ATO	4.76%	5.00%	2.00%	4.50%	3.60%	4.00%	1.50%	5.00%	3.66%	2.83%	1.70%	5.30%
LG	5.18%	3.00%	2.50%	5.00%	3.50%	7.50%	2.50%	7.00%	4.43%	1.47%	2.83%	5.77%
GAS	4.13%	-0.50%	0.00%	4.00%	-0.23%	3.50%	0.00%	5.00%	1.68%	-0.49%	0.00%	4.75%
NI	4.01%	7.50%	0.00%	2.50%	5.73%	-8.50%	-3.00%	1.00%	0.75%	2.66%	0.00%	-0.35%
NWN	4.50%	3.00%	4.00%	4.00%	3.88%	9.50%	3.50%	4.00%	4.55%	3.57%	4.35%	4.09%
PNY	4.12%	3.50%	3.50%	3.00%	3.53%	5.00%	4.50%	3.50%	3.79%	4.56%	3.90%	2.83%
SJI	8.10%	9.00%	8.50%	4.50%	6.33%	10.00%	7.50%	9.00%	7.83%	3.70%	9.98%	5.45%
SWX	6.09%	7.50%	4.50%	4.50%	2.65%	6.00%	2.00%	5.00%	4.59%	3.04%	5.07%	3.64%
WGL	4.27%	1.50%	2.50%	4.00%	3.10%	2.50%	2.50%	5.00%	3.01%	1.60%	2.53%	4.54%
		4.40%	2.95%	4.15%		4.40%	2.85%	5.00%		2.59%	3.44%	3.96%
AVERAGES	5.07%		3.83%		3.74%		4.08%		3.93%		3.33%	

Zack's Earnings Growth Projections: ATG-5.4%, ATO-4.5%, LG-3.0%, GAS-3.5%, NI-3.0%, NWN-4.6%,
PNY-4.5%, SJI-6.5%, SWX-6.0%, WGL-5.3%; Average = 4.49%.

VEOLIA ENERGY KANSAS CITY, INC.
STOCK PRICE, DIVIDENDS, YIELDS
GAS DISTRIBUTORS

COMPANY	AVG. STOCK PRICE 1/31/11-3/14/11 (PER SHARE)		ANNUALIZED DIVIDEND (PER SHARE)	DIVIDEND YIELD
AGL	$37.88		$1.80	4.75%
ATO	$33.79		$1.36	4.03%
LG	$38.57		$1.62	4.20%
GAS	$52.32		$1.86	3.56%
NI	$18.89		$0.92	4.87%
NWN	$46.10		$1.74	3.77%
PNY	$29.02	*	$1.17	4.02%
SJI	$54.19		$1.36	2.51%
SWX	$38.35		$1.06	2.76%
WGL	$37.67	*	$1.51	4.01%
			AVERAGE	**3.83%**

* Dividend increased by (1+g), derived on Schedule 3.

VEOLIA ENERGY KANSAS CITY, INC.
DCF COST OF EQUITY CAPITAL
GAS DISTRIBUTORS

COMPANY	DIVIDEND YIELD (Schedule 4)	GROWTH RATE (Schedule 3)	DCF COST OF EQUITY CAPITAL
AGL	4.75%	5.58%	10.34%
ATO	4.03%	4.76%	8.79%
LG	4.20%	5.18%	9.38%
GAS	3.56%	4.13%	7.68%
NI	4.87%	4.01%	8.88%
NWN	3.77%	4.50%	8.27%
PNY	4.02%	4.12%	8.14%
SJI	2.51%	8.10%	10.61%
SWX	2.76%	6.09%	8.85%
WGL	4.01%	4.27%	8.28%
		AVERAGE	**8.99%**
		STANDARD DEVIATION	**0.98%**

VEOLIA ENERGY KANSAS CITY, INC.
CAPM COST OF EQUITY CAPITAL
GAS DISTRIBUTORS

k = rf + B (rm - rf)

$$[rf]* = 4.64\%$$
$$[rm - rf]\dagger = 3.90\% \text{ (geometric mean)}$$
$$[rm - rf]\dagger = 5.60\% \text{ (arithmetic mean)}$$
$$[rm - rf]\dagger\dagger = 5.30\%$$
$$\text{average beta} = 0.69$$

$$k = 4.64\% + 0.69 (4.90\%/5.30\%/6.50\%)$$
$$k = 4.64\% + 2.71\%/3.68\%/3.89\%$$
$$k = 7.35\% / 8.32\% / 8.53\%$$

*Current T-Bond yields, six-week average yield from Value Line Selection & Opinion (2/11/11-3/18/11)
†Geometric and arithmetic market risk premiums from Morningstar 2009 Risk Premia Over Time Report, p. 4.
†† Mid-point long- and short-term market risk premium from Brealey, R., Meyers, S., Allen, F., <u>Principles</u>
<u>of Corporate Finance</u>, 8th Edition, McGraw-Hill, Irwin, Boston MA, 2006, pp. 149, 154, 222.

VEOLIA ENERGY KANSAS CITY
PROOF

If market price exceeds book value,
the market-to-book ratio is greater than 1.0,
and the earnings-price ratio understates the cost of capital.

MP = market price
BV = book value
i = cost of equity capital
r = earned return
E = earnings

1. At MP = BV, $i = r = \dfrac{E}{MP}$.

2. E = rBV.

3. Then, $\dfrac{E}{MP} = \dfrac{rBV}{MP}$.

4. When BV < MP, i.e., $\dfrac{BV}{MP} < 1$, then,

    a. $\dfrac{E}{MP} < r$, since $\dfrac{E}{MP} = \dfrac{rBV}{MP} < r$, because $\dfrac{BV}{MP} < 1$;

    b. $i < r$, since at $\dfrac{BV}{MP} = 1$, $i = \dfrac{E}{MP} = \dfrac{rBV}{MP}$, but if $\dfrac{BV}{MP} < 1$, then $i < r$; and

    c. $\dfrac{E}{MP} < i$, since at $\dfrac{BV}{MP} = 1$, $i = \dfrac{E}{MP} = \dfrac{rBV}{MP}$, but if $\dfrac{BV}{MP} < 1$, then $\dfrac{E}{MP} < i$, because,

        1) $\dfrac{BV}{MP} < 1$, through MP increasing, and, if so, $\dfrac{E}{MP}$ decreases, therefore, $\dfrac{E}{MP} < i$, or

        2) $\dfrac{BV}{MP} < 1$, through BV decreasing, and, if so, given E = rBV, $\dfrac{E}{MP}$ decreases, therefore, $\dfrac{E}{MP} < i$.

5. Ergo, $\dfrac{E}{MP} < i < r$, the earnings-price ratio is lower than the cost of capital, which is lower than the earned return.

VEOLIA ENERGY KANSAS CITY, INC.
MODIFIED EARNINGS-PRICE RATIO ANALYSIS
GAS DISTRIBUTORS

COMPANY	Thompson/IBES 2012 EARNINGS (Per Share)	MARKET PRICE (Per share)	EARNINGS-PRICE RATIO		CURRENT R.O.E. 2011	PROJECTED R.O.E. 2014-2016
AGL	$3.30	$37.88	8.71%		12.50%	12.50%
ATO	$2.41	$33.79	7.13%		9.00%	9.00%
LG	$2.63	$38.57	6.82%		10.50%	10.00%
GAS	$2.62	$52.32	5.01%		11.00%	10.00%
NI	$1.43	$18.89	7.57%		7.00%	8.00%
NWN	$2.84	$46.10	6.16%		10.50%	10.00%
PNY	$1.67	$29.02	5.75%		12.00%	12.50%
SJI	$3.34	$54.19	6.16%		15.00%	17.50%
SWX	$2.41	$38.35	6.28%		9.00%	9.00%
WGL	$2.45	$37.67	6.50%		9.00%	10.00%
		AVERAGE	6.61%		10.55%	
		CURRENT M.E.P.R.		**8.58%**		
		AVERAGE	6.61%			10.85%
		PROJECTED M.E.P.R.		**8.73%**		

VEOLIA ENERGY KANSAS CITY, INC.
MARKET-TO-BOOK RATIO ANALYSIS
GAS DISTRIBUTORS

k = R.O.E.(1-b)/(M/B) + g
[2011]

COMPANY									MARKET-TO-BOOK COST OF EQUITY
AGL	k= 12.5%	(1-	0.4424	)/	1.50	+	5.58%	=	10.23%
ATO	k= 09.0%	(1-	0.4250	)/	1.23	+	4.76%	=	8.97%
LG	k= 10.5%	(1-	0.3774	)/	1.51	+	5.18%	=	9.51%
GAS	k= 11.0%	(1-	0.3586	)/	2.04	+	4.13%	=	7.58%
NI	k= 07.0%	(1-	0.3429	)/	1.02	+	4.01%	=	8.50%
NWN	k= 10.5%	(1-	0.3931	)/	1.65	+	4.50%	=	8.37%
PNY	k= 12.0%	(1-	0.3000	)/	2.05	+	4.12%	=	8.22%
SJI	k= 15.0%	(1-	0.5077	)/	2.71	+	8.10%	=	10.83%
SWX	k= 09.0%	(1-	0.5510	)/	1.42	+	6.09%	=	8.94%
WGL	k= 09.0%	(1-	0.2714	)/	1.56	+	4.27%	=	8.48%

AVERAGE **9.02%**

STANDARD DEVIATION **1.02%**

Note: Equity returns and retention ratios based on Value Line current year projections.

VEOLIA ENERGY KANSAS CITY, INC.
MARKET-TO-BOOK RATIO ANALYSIS
GAS DISTRIBUTORS

$$k = R.O.E.(1-b)/(M/B) + g$$

COMPANY								MARKET-TO-BOOK COST OF EQUITY
		[2014-2016]						
AGL	k= 12.5%	(1- 0.4773)/	1.50	+	5.58%	=		9.94%
ATO	k= 09.0%	(1- 0.4630)/	1.23	+	4.76%	=		8.70%
LG	k= 10.0%	(1- 0.4286)/	1.51	+	5.18%	=		8.96%
GAS	k= 10.0%	(1- 0.3357)/	2.04	+	4.13%	=		7.38%
NI	k= 08.0%	(1- 0.4588)/	1.02	+	4.01%	=		8.23%
NWN	k= 10.0%	(1- 0.4125)/	1.65	+	4.50%	=		8.07%
PNY	k= 12.5%	(1- 0.3105)/	2.05	+	4.12%	=		8.32%
SJI	k= 17.5%	(1- 0.5122)/	2.71	+	8.10%	=		11.25%
SWX	k= 09.0%	(1- 0.5690)/	1.42	+	6.09%	=		8.83%
WGL	k= 10.0%	(1- 0.3778)/	1.56	+	4.27%	=		8.27%
						AVERAGE		**8.85%**
						STANDARD DEVIATION		**1.14%**

Note: Equity returns and retention ratios based on Value Line three- to five-year projections.

VEOLIA ENERGY KANSAS CITY
OVERALL COST OF CAPITAL

Type of Capital	PERCENT	COST RATE	WT. AVG. COST RATE
Common Equity	48.00%	9.25%	4.44%
Long-term Debt	52.00%	6.13%	3.19%
TOTAL CAPITAL	100.00%		7.63%

PRE-TAX INTEREST COVERAGE* = 3.32x

*Assuming the Company experiences, prospectively, a combined income
 tax rate of 40%, the pre-tax overall return would be 10.59% [7.63%-
3.19% = 4.44%/(1-40%) = 7.40%+3.19%]. That pre-tax overall return
(10.59%%), divided by the weighted cost of debt (3.19%), indicates a pre-
tax interest coverage level of 3.32 times.