

**BEFORE THE
ARKANSAS PUBLIC SERVICE COMMISSION**

IN THE MATTER OF THE APPLICATION OF)
OKLAHOMA GAS AND ELECTRIC COMPANY)
FOR APPROVAL OF A GENERAL CHANGE IN)
RATES AND TARIFFS)

DOCKET NO. 06-070-U

Direct Testimony

of

Donald A. Murry, Ph.D.

on behalf of

Oklahoma Gas and Electric Company

July 28, 2006

Donald A. Murry, Ph.D.
Direct Testimony

1 Q. **Please state your name and business address.**

2 A. My name is Donald A. Murry. My business address is 5555 North Grand Blvd.,
3 Oklahoma City, Oklahoma 73112.

4
5 Q. **By whom are you employed and in what position?**

6 A. I am a Vice President and Economist with C. H. Guernsey & Company, working
7 primarily out of the offices in Oklahoma City and Tallahassee. I am also a Professor
8 Emeritus of Economics on the faculty of the University of Oklahoma.

9
10 Q. **What is your educational background?**

11 A. I have a B. S. in Business Administration, and an M.A. and a Ph.D. in Economics
12 from the University of Missouri - Columbia.

13
14 Q. **Please describe your professional background.**

15 A. From 1964 to 1974, I was an Assistant and Associate Professor and Director of
16 Research on the faculty of the University of Missouri - St. Louis. For the period 1974-
17 98, I was a Professor of Economics at the University of Oklahoma and since 1998 I
18 have been Professor Emeritus at the University of Oklahoma. Until 1978, I also served
19 as Director of the Center for Economic and Management Research. In each of these
20 positions, I directed and performed academic and applied research projects related to
21 energy and regulatory policy. During this time, I also served on several state and
22 national committees associated with energy policy and regulatory matters and

1 published and presented a number of papers in the field of regulatory economics in the
2 energy industries.

3
4 Q. **Please describe your regulatory experience.**

5 A. Since 1964 I have consulted for a number of private and public utilities, state and
6 federal agencies, and other industrial clients regarding energy and regulatory matters
7 in the United States, Canada and other countries. In 1971-72, I served as Chief of the
8 Economic Studies Division, Office of Economics of the Federal Power Commission.
9 From 1978 to early 1981, I was Vice President and Corporate Economist for Stone &
10 Webster Management Consultants, Inc. I am now a Vice President with C. H.
11 Guernsey & Company. In all of these positions I have directed and performed a wide
12 variety of applied research projects and conducted other projects related to regulatory
13 matters. Recently I have assisted both private and public companies and government
14 officials in areas related to the regulatory, financial and competitive issues associated
15 with the restructuring of the utility industry in the United States and other countries.

16
17 Q. **Have you previously testified before or been an expert witness in proceedings
18 before regulatory bodies?**

19 A. Yes, I have appeared before the U.S. District Court-Western District of Louisiana,
20 U.S. District Court-Western District of Oklahoma, District Court-Fourth Judicial
21 District of Texas, U.S. Senate Select Committee on Small Business, Federal Power
22 Commission, Federal Energy Regulatory Commission, Interstate Commerce
23 Commission, Alabama Public Service Commission, Alaska Public Utilities
24 Commission, Arkansas Public Service Commission, Colorado Public Utilities

1 Commission, Florida Public Service Commission, Georgia Public Service
2 Commission, Illinois Commerce Commission, Iowa Commerce Commission, Kansas
3 Corporation Commission, Kentucky Public Service Commission, Louisiana Public
4 Service Commission, Maryland Public Service Commission, Mississippi Public
5 Service Commission, Missouri Public Service Commission, Nebraska Public Service
6 Commission, New Mexico Public Service Commission, New York Public Service
7 Commission, Power Authority of the State of New York, Nevada Public Service
8 Commission, North Carolina Utilities Commission, Oklahoma Corporation
9 Commission, South Carolina Public Service Commission, Tennessee Public Service
10 Commission, Tennessee Regulatory Authority, The Public Utility Commission of
11 Texas, the Railroad Commission of Texas, the State Corporation Commission of
12 Virginia and the Public Service Commission of Wyoming.

13
14 Q. **What is the nature of your testimony in this case?**

15 A. The Oklahoma Gas & Electric Company, also referred to as "OG&E" or the
16 "Company," has retained me to analyze the current cost of capital and to recommend a
17 rate of return that is appropriate for the Company in this proceeding.

18
19 **METHODOLOGY**

20 Q. **How did you proceed in developing your analysis and recommendation?**

21 A. First, I reviewed the current economic environment noting the increasing inflationary
22 pressures in the economy, recent rising interest rates, and the forecasted further
23 increase in inflation and interest rates. The recent inflation and interest rate increases
24 have created a current environment of anticipation that these trends will continue. The
25 forecasted levels of inflation and interest rates are especially important determinants to

1 the cost of capital of a utility. I also reviewed financial characteristics of the
2 Company, which included reviewing factors that help identify its financial and
3 business risk. In reviewing these financial characteristics of OG&E, I compared them
4 to similar financial statistics for a group of comparable electric utilities. With this
5 information as the background, I identified the Company's permanent common stock
6 equity and long-term debt components of its capital structure. Finally, I estimated the
7 costs of the common stock and debt of OG&E. In this regard, I used the generally
8 accepted Discounted Cash Flow technique and Capital Asset Pricing Model. I also
9 applied similar analyses to the group of comparable electric utilities.

10
11 Q. **How did you select the companies that you used as comparable to OG&E?**

12 A. I selected the comparable companies from the group of electric utility companies
13 reported by *Value Line*. First, I excluded all electric companies actively involved in a
14 merger. Second, I selected firms that have not reduced or eliminated their dividend in
15 the past five years. Third, I removed those utilities for which *Value Line* is forecasting
16 no or negative earnings growth. Fourth, I narrowed the group by focusing on
17 companies that have market capitalization between \$1 billion and \$5 billion. Fifth, I
18 chose those electric utilities with a common equity ratio of at least 40 percent of their
19 permanent capital. Last, I omitted those companies that earn less than 75 percent of
20 their operating income from their electric utility income.

21
22 Q. **What utilities did you select as comparable to OG&E?**

1 A. The utilities are CLECO Corporation, Energy East Corporation, Pinnacle West,
2 SCANA Corporation, WPS Resources and Wisconsin Energy.

3

4 Q. **Are you sponsoring any schedules with your testimony?**

5 A. Yes. I am sponsoring Schedule DAM-1 through Schedule DAM-28.

6

7 Q. **Did either you or someone under your direct supervision prepare these**
8 **schedules?**

9 A. Yes.

10

11 **ECONOMIC ENVIRONMENT**

12 Q. **What are the key elements of the current economic environment affecting**
13 **investors?**

14 Key determinants of the current economic environment affecting investors are
15 inflation and interest rates and projections of inflation and interest rates. Forecasts of
16 inflation and interest rate changes affect investors' expectations of returns and their
17 evaluations of the risks and returns on alternative investments. For these reasons, I
18 reviewed both the current and forecasted levels of inflation and interest rates.

19

20 Q. **What about the current economic environment did you find important for your**
21 **analysis of the cost of capital in this proceeding?**

22 A. The U. S. economy is experiencing healthy growth, but it also shows signs of inflation
23 after several years of stable prices. The economy is also characterized by tightening

1 monetary policy by the Federal Reserve and increasing interest rates. For example, the
2 U.S. economy expanded at a rate of 5.3 percent in the first quarter of 2006—a marked
3 improvement over the 1.7 percent annualized growth in real GDP experienced in the
4 fourth quarter of 2005. However, indications for the second quarter 2006 are that
5 economic activity is decelerating. *Blue Chip Financial Forecasts (Blue Chip)* expects
6 the pace of real GDP growth to moderate to 2.9 percent in the second quarter of 2006
7 and to 2.9 to 3.1 percent over the following six quarters. Economic expansion is being
8 driven by business capital spending, productivity enhancements, and job creation.
9 According to the Federal Reserve press release issued May 10th of this year:

10 Economic growth has been quite strong so far this year. The (Federal Open
11 Market) Committee sees growth as likely to moderate to a more sustainable
12 pace, partly reflecting a gradual cooling of the housing market and the lagged
13 effects of increases in interest rates and energy prices.

14
15 **Q. You mentioned inflation levels. Can you elaborate upon recent and forecasted**
16 **inflation rates, and why they were important to your analysis?**

17 **A.** The May 2006 core Consumer Price Index (“CPI”) jumped 0.3 percent for the third
18 consecutive month. This is the largest consecutive three-month increase in over ten
19 years, and it reveals a broadening of inflationary pressures in the economy. *Blue Chip*
20 is forecasting the CPI to increase in a range between 2.5 percent and 4.4 percent in
21 2006. Consistent with the annual forecasts, the standard CPI rose 0.4 percent in May
22 following the 0.6 percent increase experienced in April. Sharp increases in crude oil
23 and gasoline prices in May continue to exert upward pressure on the prices of other
24 goods and services throughout the coming year. At this time, crude oil prices on the
25 New York Mercantile Exchange are up over 20 percent year-over-year. Increasing

1 inflationary pressures are troubling to the financial markets and have the full attention
2 of Federal policymakers.

3 Manufacturing activity is increasing nationwide, putting pressure on the labor
4 markets, and health care and post-retirement costs continue to be a concern. On a
5 moderating note, housing market activity is softening, at least in part because of rising
6 interest rates, and this could lead to a generalized slowdown in consumer spending as
7 home price appreciation slows.

8
9 **Q. How has this economic activity affected interest rates?**

10 A. The economic expansion is important background for my cost of capital analysis
11 because the inflationary pressures almost certainly will lead to actions by the Federal
12 Reserve to increase interest rates. Schedule DAM-1 shows the historical trends of
13 economic statistics that the Fed evaluates when shaping monetary policy. For
14 example, the Federal Open Market Committee (“FOMC”) has raised interest rates 17
15 times since June 2004. On June 29th the FOMC raised the overnight bank rate to 5.25
16 percent from 5.00 percent. Additionally, in a related activity, the Federal Reserve
17 Board of Governors unanimously approved a 25-basis-point increase in the Discount
18 Rate to 6 percent. (The Discount Rate is the rate for short-term funds that the Fed
19 charges eligible institutions.)

20 In the Federal Reserve’s semi-annual monetary policy report to Congress on
21 February 15th, new Federal Reserve Chairman Ben Bernanke stated,

22 The risk exists that, with aggregate demand exhibiting considerable
23 momentum, output could overshoot its sustainable path, leading ultimately—in
24 the absence of countervailing monetary policy action—to further upward
25 pressure on inflation. In these circumstances, the FOMC judged that some

1 further firming of monetary policy may be necessary, an assessment with
2 which I concur.

3

4 Q. **Can you summarize what you found to be the significant interest rate**
5 **developments?**

6 A. Bond prices have decreased substantially in June, thereby raising yields on bonds to
7 their highest level since 2002. Moreover, as the economy expanded, the Federal
8 Reserve signaled it will raise interest rates to keep inflation at bay. Regarding the
9 outlook for inflation and Federal action, Richmond Federal Reserve Bank President,
10 Andrew Lacker, recently stated the inflation outlook is, “borderline acceptable and
11 perhaps even beyond” and Fed Chairman Ben Bernanke stated, “there are some upside
12 inflation risks in the economy” and “some additional firming of policy might yet be
13 needed.”

14 Schedule DAM-2 shows the *Blue Chip* consensus forecasts for inflation and
15 the 3-month Treasury Bill. As shown on Schedule DAM-3, the 10-year Treasury
16 Bond and the Baa-corporate rate are currently 5.05 percent and 6.71 percent
17 respectively. This chart also shows the steady increase in the 10-year Treasury rate
18 since 2003.

19

20 Q. **What is the forecast for the longer-term bond rates?**

21 A. The *Blue Chip* forecasts for the Baa-corporate rate and the 10-year Treasury rate are
22 for continuing increases to 7.20 percent and 5.30 percent respectively through the third
23 quarter 2007. I have illustrated this predicted increase in interest rates in Schedule
24 DAM-4.

1 Q. **Why are the current economic conditions important to this proceeding?**

2 A. The rates set in this proceeding will be in effect during a period of rising inflation and
3 rising interest rates. During this period, the Company will need to raise permanent
4 capital for system maintenance and capital expansion. Because electric utilities are
5 capital intensive, they are particularly sensitive to the effects of inflation and interest
6 rates. Rising inflation and rising interest rates adversely affect electric utility debt and
7 securities thereby increasing financial risk.

8

9 **PRINCIPAL OBJECTIVE**

10 Q. **In your experience, what is the principal objective in setting the allowed return in
11 this proceeding?**

12 A. Consistent with my understanding of regulatory precedent, setting an allowed return
13 that is sufficient, but not larger than necessary to allow a utility to recover the costs of
14 providing service is the principal objective. Alternatively, one also could say that
15 setting a "fair" rate of return on invested capital is the principal objective. This rate of
16 return must be sufficient to attract and maintain capital over the long-term which
17 implies that it must be sufficient to maintain the financial health of the utility.

18

19 Q. **What do you mean by a fair rate of return?**

20 A. In this context I am using the term fair rate of return to refer to a return that meets the
21 standards set by the United States Supreme Court decision in *Bluefield Water Works
22 and Improvement Company vs. Public Service Commission, 262 U.S. 679 (1923)*
23 (*"Bluefield"*), as further modified in *Federal Power Commission vs. Hope Natural Gas*

1 equity. I have presented the capital structure that is appropriate for OG&E in this
2 proceeding in Schedule DAM-5. As this schedule shows, the long-term debt is 27.85
3 percent, short-term debt 1.65 percent, and common stock equity 36.85 percent.

4
5 **Q. How did you determine that this capital structure that you have recommended is**
6 **appropriate for OG&E in this proceeding?**

7 A. The capital structure that I am recommending is the capital structure that supports the
8 utility assets providing services to the Arkansas customers and conforms to what I
9 understand is the practice for developing a capital structure for ratemaking in this
10 jurisdiction. I also compared the common stock equity of OGE Energy in this case to
11 the common stock equities of a group of comparable electric utilities.

12
13 **Q. Did you observe any important patterns when you compared the common stock**
14 **equities of OGE Energy and the comparative utilities?**

15 A. Yes. According to *Value Line*, every one of the comparable companies and OGE
16 Energy increased their common ratio equity over the last five years.

17
18 **Q. To your knowledge, is this increase in common stock ratio that you observed in**
19 **these electric utilities common throughout the industry?**

20 A. Yes, I have observed that both gas and electric utilities have been increasing their
21 common stock equity in recent years. As an example of the recognition that this
22 increase in common equity is common across the electric utility industry, Standard &

1 Poor's stated in the *Quantitative Stock Report*, of May 27, 2006, "The majority of
2 utilities want to get (or keep) their debt-to-capital ratios well below the 55% level."

3
4 Q. **What do you believe is the cause for this increased common stock equity ratio of
5 all of these electric utilities?**

6 A. This increase in common stock equities, which is very common in the electric utility
7 industry in recent years, is probably a response to a shift in the industry's competitive
8 structure. The increased competition caused largely by moves toward deregulation
9 over this period increases the utilities' risk. This increase in common equity is a
10 change one could expect to see as electric utilities adjust to the market risks associated
11 with less regulated power markets. In a more competitive, changing market
12 environment, shifting to a more conservative capital structure is a financially prudent
13 response. Increasing common equity reduces the financial risk associated with larger
14 proportions of debt equity.

15
16 Q. **How does OGE Energy's common stock equity ratio, as reported by *Value Line*,
17 compare to the common equity ratios of the comparable electric utilities?**

18 A. As I illustrate in Schedule DAM-6, OGE Energy and the comparable utilities have
19 maintained similar common equity ratios over this period. *Value Line* estimates that
20 common equity ratio of OGE Energy will be 48.5 percent by the end of 2006.

1 Q. **Why is the *Value Line* common equity ratio for OGE Energy, of 48.5 percent, so**
2 **much higher than the common equity ratio, of 36.85 percent, that you are**
3 **recommending in this proceeding?**

4 A. As I understand it, the common equity percentage used by the Company in this
5 proceeding, is the result of the capital structure convention in this jurisdiction. This
6 results in a very low common stock equity for ratemaking purposes. *Value Line*
7 focuses exclusively on a utility's permanent capital including only common equity,
8 preferred stock and only long-term debt in its ratio statistics.

9

10 Q. **Why is a low common equity ration important in a rate proceeding?**

11 A. If the common equity ratio is set for ratemaking at a level that is less than the
12 actual level common equity, the regulated utility will not recover its allowed return on
13 common stock.

14

15 Q. **You mentioned that short-term debt is included in OG&E's capital structure for**
16 **the purposes of this proceeding. Can you elaborate on the reason for including**
17 **short-term debt in this case?**

18 A. My understanding is the Company includes short-term debt for ratemaking in this
19 jurisdiction because that is the convention in this jurisdiction.

20

21 Q. **At a conceptual level, do you agree that one should include short-term debt in the**
22 **capital structure for a utility in a rate proceeding?**

1 A. I believe that if short-term debt is part of the permanent capital structure and supports
2 the assets used to provide utility services to ratepayers, it belongs in the capital
3 structure used for ratemaking.

4

5 Q. **From the evidence that you have reviewed, is short-term debt part of OGE**
6 **Energy's permanent capital?**

7 A. Based on the evidence which I have reviewed, OGE Energy clearly uses short-term
8 debt to support the operating cash requirements. OGE Energy does not use short-term
9 debt to support as permanent capital used to support the permanent assets that provide
10 electric service.

11

12

COST OF DEBT

13 Q. **What is the appropriate cost of long-term debt for use in this proceeding?**

14 A. As Schedule DAM-7 shows, the Company's embedded cost of long-term debt that is
15 appropriate for this proceeding is 6.06 percent.

16

17 Q. **What is the appropriate cost of short-term debt for use in this proceeding?**

18 A. The Company's cost of short term debt is 5.25 percent.

19

20 Q. **What is the cost of the Accumulated Deferred Income Taxes, ADITC and**
21 **Customer Deposits?**

22 A. The cost of the Post 1970-ADITC is 11.75 percent. The other components are zero
23 cost capital in the proposed capital structure.

1 **FINANCIAL RISK**

2 Q. **You mentioned financial risk when you discussed the common stock equity. What**
3 **is the connection between common stock equity and financial risk?**

4 A. The level of common stock equity is a measure of financial risk because it discloses
5 the prospective precedent claims against earnings. For example, the returns to
6 common stock are subordinated to the interest on debt, which is a risk to the common
7 stock investor.

8
9 Q. **Using this measure, what did you determine about OGE Energy’s financial risk?**

10 A. By the measure of common stock equity, as reported by *Value Line*, the financial risk
11 of OG&E is similar to that of the comparable companies. As I noted previously, *Value*
12 *Line’s* estimate of OGE Energy’s common stock equity ratio is significantly higher
13 than the ratio used for ratemaking in this proceeding.

14
15 **BUSINESS RISK**

16 Q. **You mentioned business risk. What did you mean by the term business risk?**

17 A. Business risk is the exposure of investors’ anticipated returns to the uncertainties of
18 the day-to-day business activities of a company. In a recent report, Standard & Poor’s
19 described such current risks to utility investors, as follows:

20 Faced with higher bills, customers may default on their payments, resulting in
21 higher bad debt expense. Also, with customers already facing higher bills, we
22 think regulators are less likely to grant utility rate increase requests. Usage per
23 customer is likely to decline in response to higher power and gas prices.¹

24
25 Q. **What measures of business risk of OG&E did you review?**

¹ “Standard and Poor’s Quantitative Stock Report: OGE Energy,” May 27, 2006.

1 A. I looked at some *Value Line* rankings of “Safety” and “Timeliness” that are consistent
2 with business risk and bond ratings. Schedule DAM-8 shows that *Value Line* ranks
3 OGE Energy Corporation a “2” (with “1” being the highest) for Safety. The average
4 ranking of the comparable companies for Safety is also a “2”. However, *Value Line*
5 ranks all of the electric utilities lower for “Timeliness” than the average current
6 common stock investments. *Value Line* has ranked OGE Energy a “4”; this is similar
7 to the rankings for most of the comparable companies. Cleco, Energy East
8 Corporation and WPS Resources are ranked even lower at “5” for Timeliness. I have
9 shown this comparison in Schedule DAM-9.

10
11 Q. **You stated that you reviewed the bond ratings of OGE and the comparable
12 electric utilities. What did this review show?**

13 A. OGE has a Standard & Poor’s bond rating of BBB+ which is low investment grade.
14 As Schedule DAM-10 shows, OGE’s rating is similar to the credit rating of the
15 comparable electric utilities that I used in my analysis. These low bond ratings are
16 also consistent with the business risk description by Standard and Poor’s and the
17 “Timeliness” rankings by *Value Line*.

18
19 **FINANCIAL INDICATORS**

20 Q. **You stated that you reviewed financial statistics of the companies that you
21 studied. What financial statistics did you review?**

22 A. I reviewed the financial statistics for OGE and the comparable companies concerning
23 recent common stock earnings, dividends, payout ratios and price earnings ratios.

1 Q. **What did you learn when you compared OGE's recent earnings to those of the**
2 **comparable utilities?**

3 A. Over the last five years Energy East, at 8.5 percent, and Pinnacle West, at 7.8 percent,
4 have maintained very low average returns on common stock equity. The average for
5 the other four comparable companies has ranged from 10.9 percent to 11.8 percent.
6 *Value Line* predicted that OGE Energy will earn an 11.5 percent return on common
7 stock equity in 2006. For OGE, this is flat to somewhat lower than in recent years. I
8 have illustrated this comparison in Schedule DAM-11.

9

10 Q. **What did you learn from your investigation of the dividends paid by OG&E and**
11 **the comparable companies?**

12 A. When comparing dividend levels of these companies, OGE stands out. OGE Energy
13 has not increased its dividend since 1992, or for 15 years. Cleco also has had flat
14 dividends in recent years, but for a much shorter period. Following some financial
15 difficulties, Cleco has not raised its dividend since 2002. By comparison, each of the
16 other comparable electric utilities has raised its dividend steadily in recent years. I
17 have shown these comparisons in Schedule DAM-12.

18

19 Q. **OGE Energy's flat dividend for 15 years stands out from the comparable electric**
20 **utilities. How does OGE Energy's dividend history compare to the dividend**
21 **practice of the broader industry?**

22 A. In recent years electric utilities have increased dividends. For example, Standard &
23 Poor's, *Electric Utilities Industry Survey*, February 16, 2006, reported an average

1 increase of 17.9 percent for the nine-month period ending September 30, 2005 for the
2 entire industry.

3
4 Q. **OGE Energy's dividend has been constant for the past 15 years. Has the dividend
5 payout changed during this period?**

6 A. OGE Energy's dividend payout ratio has remained steady because, as I observed
7 previously, the common stock earnings have been constant or declined slightly in
8 recent years. Over the past five years, according to *Value Line's* estimates OGE
9 Energy has had a dividend payout ratio of 75.2 percent. The average dividend payout
10 of the comparable companies was 59.8 percent. I have illustrated this comparison in
11 Schedule DAM-13.

12
13 Q. **Why is the payout ratio important to investors?**

14 A. A high payout ratio, when dividends are constant as are OGE Energy's, raises the
15 question regarding whether the current dividend level is at risk.

16
17 Q. **With flat dividends and the relatively high dividend payout, does this imply that
18 OGE Energy's dividend is at risk?**

19 A. I have found no evidence that this is the case presently. This relatively high dividend
20 payout does suggest, however, that OGE Energy's common stock earnings cannot fall
21 much below current levels without threatening the dividend level which has remained
22 constant for 15 years.

23
24 Q. **What did your review of price earnings ratios of OGE and the comparable**

1 **companies reveal?**

2 A. As Schedule DAM-14 shows, OGE Energy and the comparable electric utilities have
3 very similar price earnings ratios. This indicates that generally they have similar
4 market acceptance by investors.

5
6 Q. **Why is market acceptance for OGE Energy important?**

7 A. In recent years OGE Energy has increased its issuance of securities in order to finance
8 system expansions, and from the information that I have reviewed, this expansion will
9 continue. For example, as I have illustrated in Schedule DAM-15, among the electric
10 utilities that I studied, OGE Energy is one of the utilities with significant forecasted
11 growth in shares of common stock outstanding. For the period from 2002 until 2011,
12 *Value Line* expects OGE Energy to increase its number of common stock shares
13 outstanding by 19.1 percent.

14
15 **COST OF COMMON STOCK**

16 Q. **You also stated previously that you calculated the cost of common stock equity
17 for OG&E. What methods did you use?**

18 A. I employed two common market-based methods for estimating the cost of common
19 stock in regulatory proceedings. These are the Discounted Cash Flow ("DCF")
20 analysis, which is probably the most commonly referenced method in regulatory
21 proceedings, and the Capital Asset Pricing Model ("CAPM"). I applied each of these
22 methods to estimate the cost of common stock of OGE and each of the comparable
23 companies. Of course, just mechanically applying the DCF method and the CAPM is
24 sterile analysis. So I investigated the assumptions underlying the methods in order to
25 interpret the results should conditions not satisfy these assumptions in this case. I also

1 reviewed academic literature related to the use of these two techniques for estimating
2 the cost of common stock equity.

3
4 Q. **How did you apply these methods to reach a recommended allowed return in this
5 proceeding?**

6 A. As I stated, I interpreted the results in the context of their strengths and weaknesses of
7 these methods, and, to put them into perspective, I evaluated these calculations in the
8 context of current market conditions. I reviewed financial measures that would
9 indicate the relative risk level of OG&E. This included a review of the financial,
10 regulatory and business risks of OG&E. Interpreting the results of all of these
11 measures requires some understanding of current market conditions and the standards
12 for a financially healthy utility. The overall level of interest rates, for example, directly
13 affects the cost of capital of OG&E, because investors will compare the potential
14 earnings from an investment in the utility to the return earned from a debt investment.
15 The standards for financial well-being are necessary to determine the return that is
16 sufficient to maintain a financially viable utility.

17
18 **DISCOUNTED CASH FLOW METHOD**

19 Q. **You mentioned that you used the DCF method for determining cost of common
20 stock. Can you define the DCF methodology for measuring cost of common
21 equity?**

22 A. Yes. The DCF calculation of the investor's required rate of return can be expressed by
23 the following formula:

1 **STRENGTH OF THE DCF**

2 Q. **You indicated that you chose the DCF technique to measure cost of common**
3 **stock equity. Why did you select this method for your analysis?**

4 A. The DCF is the most common method that one encounters for measuring the cost of
5 common equity in regulatory proceedings. It also has some advantages. For example,
6 among the principal advantages of the DCF technique is that it is a market-based
7 measure of the cost of capital. In addition, it is theoretically sound. It recognizes
8 investors' expectations, and it uses market price information and the company's
9 dividend and earnings performance to determine the value that an investor places on
10 anticipated returns.

11 Recognizing that an investor expects a return on investment in the form of
12 dividends and capital gains, the DCF implies that the investor is willing to pay a
13 market price that is equal to the present value of that stream of earnings to acquire the
14 common stock. Using these market relationships, an analyst can estimate the
15 opportunity cost of an investor's funds, which is consistent with the regulatory
16 objective of setting an allowed return equal to the returns to investments of equivalent
17 risk.

18
19 **WEAKNESS OF THE DCF**

20 Q. **When used in a utility rate proceeding, what do you see as important weaknesses**
21 **of the DCF method?**

22 A. I think that the DCF has both conceptual and data issues that can lead to
23 misinterpretation of the calculated results of the DCF. First, despite its theoretical

1 validity, in application the DCF can still produce results that analysts have difficulty
2 interpreting in the context of current market conditions. Often this is the result of
3 analysts not recognizing the underlying assumptions and misinterpreting the nature of
4 the DCF method itself. Second, data limitations are a common problem associated
5 with the use of the DCF method. The DCF measures the value, or market price, that an
6 investor pays for a stream of anticipated earnings.

7
8 **Q. Can you elaborate or give some examples of what you consider as important**
9 **conceptual problems of the DCF method when one uses it to measure the cost of**
10 **common stock in a ratemaking proceeding?**

11 A. Investigation of the underlying assumptions of the DCF stated by Mr. Parcell
12 illustrates why the results of the DCF calculations may be misleading. For example,
13 Mr. Parcell stated that one assumption of the DCF is that investors discount returns in
14 every time period at equivalent rates. This is, in fact, unrealistic because investors
15 have varying needs for cash income during different periods of their investment lives.
16 Any investor saving funds for retirement knows this. The assumption stated by Mr.
17 Parcell that investors base the value of common stock only on a projected stream of
18 dividends ignores investors' reactions to such non-dividend generating announcements
19 as sudden changes in earnings, landing new contracts, Research and Development
20 projects and new products and services. As an example, Microsoft's common stock
21 had a very high Price- Earnings ratio before it ever paid a dividend.

1 Q. **When you discussed conceptual problems that analysts may encounter when**
2 **using the DCF, you said that one of the problems was “the nature of the DCF**
3 **method itself”. What did you mean by that statement?**

4 A. The DCF method, because of its theoretical basis, estimates the marginal cost of
5 common stock equity to the Company. In that way, it is an estimate of the minimal
6 return necessary to attract marginal, or incremental, investment in the common stock
7 equity. However, the method does not account for any other factors that may affect the
8 ability of the company to earn that return. Unfortunately, analysts sometimes do not
9 interpret the results of the DCF calculations in the context of what they truly represent.

10

11 Q. **Does this misinterpretation create potential problems when one uses the DCF**
12 **method in a ratemaking proceeding?**

13 A. The DCF-based calculations may be misleading when an analyst misinterprets the
14 results. For example, the DCF calculated cost of common equity may not provide any
15 cushion that a regulated company has a reasonable probability to earn its allowed
16 return. In fact, this misunderstanding of the DCF results can virtually assure that a
17 regulated company will not earn its allowed return.

18

19 Q. **In your experience, is it common for regulators and analysts to recognize this**
20 **characteristic of the DCF method?**

21 A. Yes, it is. Regulators and analysts often use adjustments to compensate for the
22 marginal cost nature of the DCF adjustment. For example, some analysts specifically

1 apply a flotation adjustment. Some apply an adjustment for “market pressure”
2 associated with the sale of securities.

3
4 Q. **Recognizing the marginal cost nature of the DCF and the need of a regulated**
5 **utility to be active in the financial markets, do you recommend calculating a**
6 **flotation adjustment or a market pressure adjustment?**

7 A. No, I believe that focusing on the high end of the DCF results is adequate
8 compensation for the regulated utility because of costs of flotation. This, in my
9 opinion, directly recognizes the marginal cost nature of the DCF method. Likewise, I
10 believe that focusing on the high end of the DCF results is also adequate recognition
11 of the potential market effects of new issues.

12
13 Q. **You identified that analysts might misinterpret DCF results because of the data**
14 **used in the analysis. Can you elaborate on this point?**

15 A. Actual market prices of securities vary for many reasons, and selecting the relevant
16 prices for use in a DCF analysis is an important analytical step. Likewise, an analyst
17 can measure the earnings expectations of investors only by observing the information
18 available to them. However, these data may not represent the true expectations of the
19 investors who set the market price for the security. The failure of market data to
20 satisfy the underlying assumptions of the DCF method is an obvious, potential
21 problem. Consequently, analysts may have a difficult time discerning what data
22 actually affect investor expectations, and this is why selecting and interpreting data
23 and the calculated results are critical steps analytically.

1 Q. **Have any regulatory commissions recognized the limitations of the constant**
2 **growth DCF in rate proceedings when determining the cost of common equity?**

3 A. Yes. For example, the Indiana commission recognized in a 1990 decision that the
4 assumptions underlying the DCF model rarely, if ever, hold true.³ This commission
5 stated that an "...unadjusted DCF result is almost always well below what any
6 informed financial analyst would regard as defensible and therefore requires an
7 upward adjustment based largely on the expert witness' judgment."⁴

8

9 **DATA USED IN DCF ANALYSIS**

10 Q. **You mentioned problems associated with the data available to analysts for a DCF**
11 **analysis. What growth rate data did you use primarily in you DCF analysis?**

12 A. Because common stock earnings forecasts capture investors' expectations about future
13 returns, the forecasted growth in earnings was the primary measure that I used in my
14 DCF analysis.

15

16 Q. **Have analysts performed studies regarding which data used in a DCF analysis**
17 **are most likely to capture investors' expectations about the future returns?**

18 A. Yes. As early as 1982, published academic studies showed that analysts' forecasts
19 were superior to historical trended growth rates as predictors of growth rates for DCF
20 analyses.

21

22 Q. **Can you cite some of the studies that demonstrated that investors look to analysts'**

³ Phillips, Charles F., Jr. and Robert G. Brown, *Chapter 9: The Rate of Return*, The Regulation of Public Utilities: Theory and Practice, (1993: Public Utility Reports, Arlington, VA) p. 423.

⁴ *Ibid*, *In re Indiana Michigan Power Company*, 116 PUR4th 1, 17 (Ind. 1990).

1 **forecasts when making investment decisions?**

2 A. Yes. A number of authors have addressed the merits of analysts' forecasts in a DCF
3 analysis of the cost of capital. For example, a well-known financial textbook by
4 Brigham and Gapenski explains why analysts' growth rate forecasts are the best
5 source for growth measures in a DCF analysis. They state:

6 Analysts' growth rate forecasts are usually for five years into the future, and
7 the rates provided represent the average growth rate over the five-year horizon.
8 Studies have shown that analysts' forecasts represent the best source for
9 growth for DCF cost of capital estimates.⁵

10 Research reported in the academic literature supports this position. For example,
11 Vander Weide and Carleton found:

12 ...overwhelming evidence that the consensus analysts' forecast of future
13 growth is superior to historically oriented growth measures in predicting the
14 firm's stock price....Our results are consistent with the hypothesis that
15 investors use analysts' forecasts, rather than historically oriented growth
16 calculations, in making stock buy-and-sell decisions.⁶

17
18 Q. **Does any of the academic literature apply specifically to the DCF growth rates as**
19 **used in regulatory proceedings?**

20 A. Yes. Timme and Eisemann examined the effectiveness of using analysts' forecasts
21 rather than historical growth rates for determining investors' expectations in rate
22 proceedings. They concluded:

23 The results show that all financial analysts' forecasts contain a significant
24 amount of information used by investors in the determination of share prices
25 not found in the historical growth rate....The results provide additional
26 evidence that the historical growth rates are poor proxies for investor

⁵ Brigham, Eugene F., Louis C. Gapenski, and Michael C. Ehrhardt, "Chapter 10: The Cost of Capital," Financial Management Theory and Practice, Ninth Edition (1999: Harcourt Asia, Singapore), p. 381.

⁶ Vander Weide, James H. and Willard T. Carleton, "Investor Growth Expectations: Analysts vs. History," *The Journal of Portfolio Management*, Spring 1988, pp. 78-82.

1 expectations; hence they should not be used to estimate utilities' cost of
2 capital.⁷

3

4 Q. **Do you find these statements by these authors credible?**

5 A. Yes. These results are not surprising because investors, when contemplating an
6 investment in a common stock, very frequently review reputable analysts' forecasts.
7 Consequently, these forecasts will influence their decision to invest and, in turn, the
8 valuation of common stocks.

9

10 Q. **Are you aware of any other empirical information that focuses on the importance
11 of common stock earnings?**

12 A. Yes. In an "event analysis", I compared the market reactions of announced dividends
13 and common stock earnings that were likely to be a surprise to the market. That is, for
14 a group of electric utilities I compared the market reactions to dividend
15 announcements and common stock earnings announcements. Specifically, I looked at
16 the price impact of both earnings announcements and dividend announcements that
17 exceeded *Value Line's* projected levels. Among these companies there were 8
18 dividend announcements and 19 common stock announcements during the period
19 from September 2001 to December 2003 that were relevant because they exceeded
20 expectations.

21

22 Q. **How did you distinguish the ordinary market movements from investors'
23 responses to the dividend and common stock earnings announcements?**

⁷ Timme, Stephen G. and Peter C. Eisemann, "On the Use of Consensus Forecasts of Growth in the Constant Growth Model: The Case of Electric Utilities," *Financial Management*, Winter 1989, pp. 23-35.

1 A. I developed index ratios of a utility's common stock price to the Dow Jones Utility
2 Index. In this way, I statistically isolated the impact of these announcements, and I
3 could link increases of contemporaneous price changes to these unexpected, or
4 surprise, announcements. Stated differently, I measured the relative market
5 movements. I have illustrated the percentage increase in the market price relative to
6 the utility index for both the unexpected earnings per share and the dividend
7 announcements in Schedule DAM-16. The impact of the unexpected earnings per
8 share announcement in these cases is dramatic and obvious. The impact of unexpected
9 dividend announcements is seemingly less important to the common stock holders.

10

11 Q. **In developing your DCF analysis, did you also review historical common stock**
12 **earnings and dividend information?**

13 A. Yes. Although I focused my analysis principally on forecasted common stock
14 earnings, which is consistent with the economic literature and the event analysis of
15 dividend and common stock earnings, I also reviewed the dividend history of the
16 companies studied. As I have illustrated in Schedule DAM-17, the growth in
17 dividends and earnings per share have diverged in recent years, showing a slower
18 growth in dividends than in earnings. As I discussed earlier, deregulation in the
19 electric utility industry, the shift to greater competition and very high fuel costs adds
20 an element of business risk to regulated electric utilities. Under these increasingly
21 competitive circumstances, prudent boards of directors are likely to conserve cash and
22 refrain from increasing dividends even as earnings grow. However, since 2003 when
23 reduced taxes on dividends altered the relationship between dividends and common

1 stock earnings, some electric utilities have increased their dividend rates again.
2 Nevertheless, for the present, the most reliable reflection of an electric utility's growth
3 for investors is undoubtedly earnings per share growth rates. In fact, earnings growth
4 must support any dividend growth.

5
6 **Q. You developed book value growth rates in this schedule, but you did not**
7 **comment on them. In your opinion, how important are book value growth rates?**

8 A. At the present time, I do not believe that book value growth rates are important to
9 most investors making investment decisions regarding common stock in an electric
10 utility. The growth in book value of a common stock comes through retained earnings,
11 so consequently, it is a derivative of the direct measure of common stock earnings.
12 The underlying book value of a common stock is important during a company's
13 liquidation, but this is not a relevant measure to determine the value of an operating
14 electric utility at this time.

15
16 **Q. How did you determine common stock prices for your DCF analysis?**

17 A. I obtained common stock prices for the past year as reported by the *Wall Street*
18 *Journal*, and I also selected current prices from a recent two-week period as reported
19 by *YAHOO! Finance*. Of course I was interested in current market valuations.
20 However, recognizing that rates from this proceeding will be in effect for a number of
21 years, I was also interested in the likely effect of changing market prices over a longer
22 time period.

1 **DCF CALCULATIONS**

2 **Q. Please explain the findings from your DCF analysis.**

3 A. The combined historical and forecasted dividend growth rates and the common stock
4 prices for the past year produced low estimates for both OGE Energy and the
5 comparable companies. I show the results of this DCF calculation in Schedule DAM-
6 18. These results, which range from 7.10 to 7.99 percent as an average for the
7 comparable companies, are so close to the current level of short-term debt rates, that
8 they are not credible estimates of the cost of common equity for ratemaking purposes.
9 For OGE, even the high DCF measured cost of common stock using the dividend
10 growth rate was 6.79 percent. With the cost of short-term debt for OG&E of 5.25
11 percent, the current long-term debt costs would have to be higher. Consequently, this
12 is not a credible measure of OG&E's cost of common stock. When I selected current
13 prices in my DCF analysis, the resulting estimate of the cost of common equity falls
14 within a narrower range. Using current prices and historical dividend growth rates,
15 because OGE Energy has not increased its dividend for 15 years, results in an even
16 less credible estimate of the cost of common equity for OG&E. This estimate is in the
17 range of 5.54 percent and 5.61 percent, which is barely above short-term debt costs. I
18 have illustrated these results in Schedule DAM-19. Combining the historical and
19 forecasted earnings per share growth rates also was not credible for setting rates for
20 the future. The average for the comparable group was as low as 7.14 percent. These
21 calculations are shown on Schedule DAM-20. As Schedule DAM-21 shows, the
22 narrower DCF results are also not credible in current markets.

1 Q. **Did you also analyze the DCF results for these same companies using projected**
2 **earnings per share growth rates?**

3 A. Yes. The DCF calculations based on the projected earnings per share growth rates, in
4 accordance with the literature support discussed previously, are more credible for rate
5 making. As Schedule DAM-22 illustrates, the comparable electric utilities' high end
6 calculation range between 9.32 percent and 15.74 percent with an average of 11.69
7 percent. The similar results for OG&E are 9.45 percent. As Schedule DAM-23 shows
8 when I combined current prices and forecasted earnings per share forecasts in my DCF
9 calculations, the high estimates for the comparable companies ranged between 9.00
10 percent and 15.65 percent with an average of 11.43 percent.

11

12 **CAPITAL ASSET PRICING MODEL**

13 Q. **You stated that you used the Capital Asset Pricing Model in your analysis. What**
14 **is the Capital Asset Pricing Model?**

15 A. The Capital Asset Pricing Model is a risk premium method that measures the cost of
16 capital based on an investor's ability to diversify by combining securities of various
17 risk into an investment portfolio. It measures the risk differential, or premium,
18 between a given portfolio and the market as a whole. The diversification of
19 investments reduces the investor's total risk. However, some risk is non-diversifiable,
20 e.g., market risk, and investors remain exposed to that risk. The theoretical expression
21 of the CAPM model is:

22
23
24
25
26
27

$$K = R_F + \beta (R_M - R_F)$$

Where: K = the required return.
 R_F = the risk-free rate.
 R_M = the required overall market return; and
 β = beta, a measure of a given security's risk relative to that of the overall market.

1
2 In this expression, the value of market risk is the differential between the market rate
3 and the “risk-free” rate. Beta is the measure of the volatility, as a measure of risk, of a
4 given security relative to the risk of the market as a whole. By estimating the risk
5 differential between an individual security and the market as a whole, an analyst can
6 measure the relative cost of that security compared to the market as a whole.

7
8 **Q. How did you employ the CAPM in your analysis?**

9 A. I used the CAPM method primarily to provide a longer-term perspective than that of
10 the more volatile DCF analysis. As a risk premium method, it takes current debt costs
11 as a basis, or benchmark, for measuring the cost of common stock. The CAPM links
12 the incremental cost of capital of an individual company with the risk differential
13 between that company and the market as a whole. This is a rather imprecise method,
14 but it is a good tool for assessing the general level of the cost of a security. One
15 benefit of the CAPM for analysis is that, as a risk premium method, it produces a
16 relatively stable measure of the cost of capital. The CAPM results are likely to be
17 similar for companies with similar financial characteristics in the same industry, and
18 they are not likely to vary a great deal over time.

19
20 **Q. What problems do you perceive as important when using the CAPM method?**

21 A. The cost of capital calculations for a company are sensitive to the beta used in the
22 analysis. This beta is a single measure of risk, so, consequently, the CAPM will not
23 incorporate any risks not included in the measures of market volatility. Also, a number
24 of analysts have shown that the CAPM overestimates the cost of capital of companies

1 with betas greater than one and underestimates the cost of capital of companies with
2 betas less than one. In regulation this is important, because most utilities have beta
3 estimates less than one. Only Cleco, which has a special set of financial problems, is
4 the only electric utility of the comparable group with a beta greater than one. The
5 other electric utilities that I selected as comparable for OG&E have betas less than
6 one, which means that the CAPM is likely to underestimate the cost of common equity
7 of these utilities. Likewise, OGE has a beta of 0.75. At minimum, this observation
8 indicates that the CAPM calculations are conservative estimates of the cost of capital.
9 Another analytical bias of the CAPM, analysts have shown that the standard CAPM
10 method underestimates the cost of capital of smaller companies.

11
12 **Q. Please explain the CAPM methodology that you used in your analysis.**

13 **A.** I applied two different, but complementary approaches to estimate a CAPM cost of
14 capital. One of these methods examines the historical risk premium of common stock
15 over high grade corporate bonds. The other integrates the risk premium of common
16 stocks to long-term government bonds in recent markets. This second method requires
17 an adjustment for the bias because of company size that I mentioned previously. The
18 financial literature has recognized this bias as an empirical problem for a long time,
19 but correcting for this bias is a recent analytical development.

20
21 **Q. You stated that the financial literature recognizes that the CAPM method may**
22 **require an adjustment for a company's size. What is the nature of this recognized**
23 **bias?**

1 A. R. W. Banz⁸ and M. R. Reinganum⁹ in the 1980s, for example, is a good reference
2 pointing out this size bias. Reinganum examined the relationship between the size of
3 the firm and its price-earnings ratio, finding that small firms experienced average
4 returns greater than those of large firms that had equivalent risk as measured by the
5 beta. Of course, the beta is the distinguishing measure of risk in the CAPM. Banz
6 confirmed that beta does not explain all of the returns associated with smaller
7 companies; hence, the CAPM would understate their cost of common equity. In the
8 same time frame, Fama and French confirmed that the Banz analysis consistently
9 rejected the central CAPM hypothesis that beta sufficed to explain expected the return
10 of investors¹⁰.

11

12 Q. **What did you mean when you said that the CAPM method requires an**
13 **adjustment?**

14 A. Although repeated studies showed that the CAPM method possesses a bias that
15 understates the expected returns of small companies, this remained only an empirical
16 observation without a clear remedy. However, now Ibbotson Associates, which is the
17 common source of data for the risk premium used in CAPM analyses, has developed
18 an adjustment for this bias. Ibbotson Associates discusses the problem as follows:

19 One of the most remarkable discoveries of modern finance is that of the
20 relationship between firm size and return. The relationship cuts across the
21 entire size spectrum but is most evident among smaller companies, which have

⁸ Banz, R.W., "The Relationship Between Return and Market Value of Common Stock," *Journal of Financial Economics*, March 1981, pp. 3-18.

⁹ Reinganum, M. R., "Misspecification of Capital Asset Pricing: Empirical Anomalies Based on Earnings, Yields, and Market Values," *Journal of Financial Economics*, March 1981, pp. 19-46.

¹⁰ Fama, Eugene F., and Kenneth R. French, "The CAPM is Wanted, Dead or Alive," *The Journal of Finance*, Vol. LI, No. 5, pp. 1947-1958.

1 higher returns on average than larger ones. Many studies have looked at the
2 effect of firm size on return.¹¹

3
4 To account for this empirical bias against smaller companies, Ibbotson Associates has
5 prescribed quantitative adjustments to the CAPM, which it publishes in the same data
6 source used by many analysts to estimate the risk premium in their CAPM analyses.

7
8 **Q. Did you apply the adjustment recommended by Ibbotson Associates in your**
9 **analysis?**

10 A. Yes. In my CAPM analysis, I followed the method recommended by Ibbotson
11 Associates to compensate for this inherent data bias.

12
13 **Q. Have any regulatory commissions accepted this size adjustment to the CAPM in**
14 **rate proceedings when determining the cost of common equity?**

15 A. Yes. The Minnesota Public Utilities Commission has done so in an Interstate Power
16 and Light Company case. The Commission observed:

17 “The Administrative Law Judge takes comfort from the fact that Ibbotson
18 Associates is a widely-recognized statistical reporting firm that has a national
19 reputation. He considers it to be in the same general category as Standard &
20 Poor’s or Moody’s. There is no indication that the report in question was
21 prepared for IPL, or the utility industry, to bolster arguments in rate cases.
22 Instead, it appears that the report in question is part of an almanac-type
23 yearbook that Ibbotson prepares without any particular focus on the utility
24 industry. The Administrative Law Judge understands and shares the concerns
25 of the Staff concerning the methodology used, and thinks the issue is worthy of
26 pursuit in some other forum. But for purposes of this case, the Administrative
27 Law Judge accepts the principal conclusion of the study – that size of a firm is
28 a factor in determining risk and return.”¹²

29

¹¹ *Chapter 7: Firm Size and Return*, “Ibbotson Associates’ Stocks, Bonds, Bills, and Inflation: 2006 Yearbook Valuation Edition,” edited by James Harrington and Michael Barad, p. 129.

¹² *In the Matter of the Petition of Interstate Power and Light Company for Authority to Increase its Electric Rates in Minnesota*, Docket No. E-001/GR-03-767, p. 7.

1 Q. **Please describe the results of your CAPM analysis.**

2 A. My two CAPM studies provide comparative calculations, based on slightly different
3 assumptions. In this way, they serve as benchmarks for the DCF analysis that I had
4 developed previously. The results of my CAPM analyses are shown in Schedules
5 DAM-24 and DAM-25. For OGE, the estimated costs of common stock are 11.64
6 percent and 12.38 percent from these two CAPM analyses. For the comparable
7 companies these results are 12.95 percent and 13.82 percent. I have summarized the
8 most relevant DCF and CAPM results in Schedule DAM-26.

9

10 Q. **Taking into account the current economic environment and the results of your**
11 **DCF and CAPM analyses, what were the important influences on your**
12 **recommendation of an allowed return in this proceeding?**

13 A. The forecasted increase in interest rates is a very important consideration for
14 establishing allowed returns for rates being set for the future. Interest rates are the
15 comparative cost for alternative investments. Also, the relative risks of electric
16 utilities, including OG&E, incurred when issuing securities to finance system
17 expansion are important. OGE's low bond rating and low *Value Line* Timeliness
18 rankings are evidence that the investor community is aware of the Company's risks in
19 comparison to other securities. The long-standing flat dividend would discourage
20 investors looking for growth in this area.

21

22 Q. **How did the current forecasts of interest rates affect your judgment concerning**
23 **the appropriate allowed return for OG&E in this proceeding?**

1 A. I previously explained how the inflation concerns were now being felt in the prospects
2 for higher interest rates, and that analysts uniformly are predicting increasing interest
3 rates. The inflation concerns and forecasted rising interest rates concerns represent the
4 market environment that will be relevant during the period when the rates set by this
5 proceeding.

6

7 Q. **How did you reach your recommended return in this proceeding?**

8 A. As I indicated previously, I focused on the high end of the DCF results using
9 forecasted growth in earnings and the CAPM analysts. Both of these techniques are
10 securely anchored in the financial research on the methodologies for estimating the
11 cost of common stock discussed previously. The CAPM results ranged from 11.64
12 percent to 12.38 percent for OGE. The CAPM results for the comparable companies
13 averaged 12.95 percent and 13.82 percent for the two methods. The most relevant of
14 the volatile DCF results were 8.27 percent and 9.45 percent for OG&E and 11.43
15 percent and 11.69 percent for the comparable companies. Taking into account the
16 rising interest rates and risks of electric utilities, I believe that a appropriate range for
17 OG&E's allowed return in this proceeding is 11.5 to 12.0 percent.

18

19 Q. **Do you have a point estimate as to a recommended allowed return on common
20 stock in this proceeding?**

21 A. Yes, I believe that 11.75 percent which is the mid-point of this range is appropriate as
22 a point estimate for an allowed return for OG&E in this proceeding.

1 Q. **What is your recommended required return on total capital that is appropriate**
2 **for this proceeding?**

3 A. I have illustrated the total cost of capital of 6.29 percent associated with my
4 recommended allowed return of 11.75 percent. I have illustrated the calculation of this
5 allowed total return in Schedule DAM-27.

6

7 Q. **Did you test the adequacy of your recommendation in any way?**

8 A. Yes. I reviewed the after-tax interest coverage ratios for OG&E and the comparable
9 companies to determine if my recommended return would result in sufficient interest
10 coverage. Although difficult to estimate because of the nature of the capital structure
11 in this proceeding, as Schedule DAM-28 shows, I have estimated the after-tax interest
12 coverage of OG&E at my recommended return at 3.62 times. In comparison to the
13 after-tax coverages for the comparable electric utilities, this interest coverage is within
14 the group of the comparable companies. My recommended return is sufficient to
15 maintain and attract capital.

16

17 Q. **Does this conclude your direct testimony at this time?**

18 A. Yes, it does.