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September 2, 2003

VIA FEDERAL EXPRESS


Honorable Deborah Taylor Tate
Chairman
Tennessee Regulatory Authority
460 James Roberson Parkway
Nashville, Tennessee 37243-0505

Re: Docket No. 03-00313

Dear Chairman Tate:

I have enclosed an original and fourteen copies of the Rebuttal Testimony and Schedules of Donald A. Murry on behalf of Nashville Gas Company, a Division of Piedmont Natural Gas Company, Inc. Please accept the attached for filing and return one "file-stamped" copy to me.

Very truly yours,


James H. Jeffries IV

JHJ:bo

Enclosures

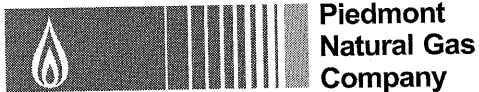
cc: All Parties of Record
Dale Grimes

**Before The
Tennessee Regulatory Authority
Docket No. 03-00313**

In the Matter of

Application of Nashville Gas Company,)
A Division of Piedmont Natural Gas)
Company, Inc., for an Adjustment of its)
Rates and Charges, the Approval of)
Revised Tariffs and the Approval of)
Revised Service Regulations)

**Rebuttal Testimony of Donald A. Murry
On Behalf Of
Nashville Gas Company,
A Division of
Piedmont Natural Gas Company, Inc.**



1 **Q. WHAT IS YOUR NAME?**

2 A. Donald A. Murry

3 **Q. ARE YOU THE SAME DONALD A. MURRY WHO PREVIOUSLY FILED**
4 **DIRECT TESTIMONY IN THIS PROCEEDING?**

5 A. Yes, I am.

6 **Q. WHAT IS THE NATURE OF YOUR TESTIMONY?**

7 A. I am offering testimony in rebuttal of the Direct Testimony of Dr. Steve Brown.

8 **Q. CAN YOU CHARACTERIZE YOUR REBUTTAL TESTIMONY?**

9 A. There are several issues raised in Dr. Brown's Direct Testimony that caused him to
10 produce an unreasonably low recommendation of a return on common stock equity
11 and a recommended allowed return for Nashville Gas Company in this proceeding.
12 From his testimony, it is apparent that his analysis is seriously deficient and
13 methodologically weak—even unsubstantiated. Perhaps one of the most troubling
14 things about Dr. Brown's testimony is its internal inconsistencies and the
15 inconsistencies of his methodology in this case with testimonies he has offered in
16 previous proceedings.

17 **Q. WHY DO YOU SAY THAT HIS ANALYSIS IS "SERIOUSLY DEFICIENT**
18 **AND METHODOLOGICALLY WEAK—EVEN UNSUBSTANTIATED"?**

19 A. First, there is the matter of his assumptions. Analytically his testimony is difficult to
20 follow because he does not specifically set out his assumptions. However, obvious
21 statements in his 75 pages of testimony reveal assumptions to his analysis that are
22 factually in error. When he applies these false assumptions, they lead him in the

1 wrong, often even silly, directions. Second, his economic and financial analysis is
2 unorthodox at best, and in some cases, is blatantly wrong by any present, professional
3 standard.

4 **Q. WHAT ARE THE INCONSISTENCIES THAT YOU FIND TROUBLING IN**
5 **DR. BROWN'S DIRECT TESTIMONY?**

6 A. Dr. Brown's testimony in this case is inconsistent with previous testimonies and in
7 direct contradiction with positions that he has taken in previous proceedings. If his
8 previous analysis was correct, then this analysis is incorrect, or vice versa. Since he
9 generally offers only his opinion as the basis for his recommendations, I cannot tell
10 when or on what basis he has changed his methodology.

11 **Q. IN WHAT AREAS DID YOU FIND METHODOLOGICAL**
12 **INCONSISTENCIES IN DR. BROWN'S DIRECT TESTIMONY?**

13 A. These inconsistencies seem to fall in the selection of a capital structure for the
14 regulated utility and in his DCF methodology. Perhaps the most troubling
15 inconsistencies were in the methodology that he used to develop his DCF
16 calculations. He has used distinctly different DCF methodologies and data sources in
17 these cases that are in relatively close proximity in time. Of course, if he had not
18 changed methodologies or data sources, the calculated results would have been
19 different. The same thing could be said about his capital structure used in this case
20 and about the measure of debt costs in this proceeding.

21 **Q. HOW DO YOU KNOW THAT DR. BROWN HAS CHANGED**
22 **METHODOLOGIES AND DATA SOURCES IN VARIOUS CASES?**

1 A. I have five other testimonies in rate cases that he has filed before the Tennessee
2 Regulatory Authority (TRA) in addition to this one, and I compared them.

3 **Q. IN THIS COMPARISON, WHAT DID YOU LEARN CONCERNING HIS**
4 **CAPITAL STRUCTURE METHODOLOGY IN THESE SIX CASES?**

5 A. In these six cases, he has used a different methodology in each case. No two cases use
6 similar methodologies. I have illustrated the differences among capital structures in
7 Schedule DAM-R1. That he did not use Piedmont's, the regulated utility's capital
8 structure and used capital structures of comparable companies was a significant
9 choice. In one of these cases, the Tennessee American Water Company, hereinafter
10 referred to as "Tennessee American" (Docket No. 03-00118), he also used the capital
11 ratios of comparable companies; however, as the schedule shows, the data sources
12 differ.

13 **Q. DID YOU INVESTIGATE HOW THESE VARIOUS CAPITAL STRUCTURE**
14 **METHODS MIGHT DIFFER?**

15 A. Since it is a current case, I applied his method and data sources, as I understand them,
16 for the Tennessee American case. I have illustrated the calculation of the equity ratio
17 that he would have calculated for Piedmont in Schedule DAM-R2 if he had used the
18 same methodology in this case as he used in the Tennessee American testimony. His
19 common equity ratio for Piedmont would have been 51.9 percent.

20 **Q. YOU COMMENTED ABOUT THE INCONSISTENCIES IN THE DCF**
21 **METHODS USED BY DR. BROWN. IN THE COMPARISON THAT YOU**
22 **MADE OF THESE SIX TESTIMONIES BY DR. BROWN, WHAT DID YOU**
23 **DETERMINE ABOUT HIS DCF METHODOLOGIES?**

1 A. As I have illustrated in Schedule DAM-R3, apparently, he calculated the growth rates
2 for his DCF calculation in six different ways in these six cases. He did not use the
3 same methodology for his DCF calculation in any two of them. In calculating the
4 dividend yields in his DCF, he used the same method in just two cases. All of the
5 others were different. In three cases he did not identify the sources of the data that he
6 used. I could identify that he did use the same data sources in only two cases.

7 **Q. YOU MENTIONED DATA INCONSISTENCIES. WHAT DATA**
8 **INCONSISTENCIES ARE YOU REFERRING TO?**

9 A. At a number of instances in his Direct Testimony, Dr. Brown criticized my use of
10 *Value Line* as a data source, despite the obvious common use of *Value Line* as a
11 source of financial information by many analysts and investors and its solid
12 reputation. His statements at page 5, lines 21-28, page 27, lines 29-32, are examples.
13 Of course, *Value Line* is a highly respected source of financial information. It is one
14 also one of the mostly widely used sources by investors. This alone would make
15 *Value Line* an important relevant source for the DCF analysis because it is the
16 investor's perceptions that an analyst is trying to determine when using a DCF
17 analysis in utility a rate proceeding. This makes it a reliable source of information for
18 a DCF analysis in a rate proceeding.

19 Dr. Brown's criticism of *Value Line* in this case is surprising because he
20 himself has attested to the reliability and use of *Value Line*. In fact, he has criticized a
21 witness who did not use *Value Line* earnings forecasts before the Tennessee Public
22 Service Commission, in Docket No. 95-02614 in page 13, with the following
23 statement at lines 11-32:

1 ... "I chose to use *Value Line's* rates for two reasons. Value Line provides
2 projected growth rates for dividends and earnings while IBES provides
3 projections only for earnings. *Value Line* supports its analysis with a
4 substantive analysis, but the IBES forecast provides no similar support. *Value*
5 *Line* provides reasons for its forecasts and IBES does not. The IBES earnings
6 forecast is a simple arithmetic average ascribed to the anonymous estimates of
7 nameless and faceless security analysts. The anonymity makes it impossible to
8 check on possible inconsistencies in the data, such as the starting point from
9 which the analysts make their projections. *Value Line* provides a narrative and
10 the name of the analyst, who can be consulted regarding the basis of the
11 projections. A copy of *Value Line's* analysis of Bell South and a copy of
12 IBES's analysis are attached to my testimony. Schedule 2 provides the
13 earnings forecasts for both *Value Line* and IBES."

14
15 **Q. YOU INDICATED THAT DR. BROWN HAD USED FAULTY**
16 **ASSUMPTIONS IN HIS ANALYSIS IN THIS CASE. HOW COULD YOU**
17 **TELL?**

18 A. Comments in his testimony revealed underlying assumptions that are just factually
19 wrong. For example, Dr. Brown stated at page 3, line 30:

20 "Based on my review of relevant material and prevailing economic
21 conditions, it is my opinion, within a reasonable degree of professional
22 certainty, that the company's cost-of-capital will decrease almost immediately
23 after this rate case is concluded."
24

25 **Q. WHAT IS WRONG WITH THIS STATEMENT?**

26 A. There are two things wrong with this statement. First, Dr. Brown's assumption about
27 economic conditions is not supported by current market evidence. Second, his
28 conclusion about Nashville Gas' declining cost of capital is highly speculative and
29 without merit. Nowhere in his testimony does Dr. Brown provide any evidence, other
30 than his speculation, that the company strategically timed the rate case to be
31 completed before a decrease in the cost-of-capital.

1 A company's cost-of-capital is a function of the risk of the company. No
2 evidence or reason exists to believe that Piedmont's risk, or cost-of-capital, will
3 decrease any time in the foreseeable future. To the contrary, if the TRA adopts Dr.
4 Brown's recommendations regarding the rate of return on equity, cost of debt, or
5 capital structure, the company's actual cost of capital will increase because of the
6 increase in risk to investors.

7 **Q. WHAT WOULD HAPPEN IF THE COMPANY OR THE TRA WERE TO**
8 **ADOPT DR. BROWN'S RECOMMENDATIONS?**

9 A. If the company were to adopt Dr. Brown's recommendation and materially increase
10 its debt ratio through the inclusion of a significant amount of short-term debt, the
11 company's financial risk would increase substantially. An increase in financial risk,
12 without a corresponding decrease in business risk, of which he presents no evidence,
13 would increase the company's risk and therefore increase its cost of capital.
14 Consequently, Dr. Brown's conclusion that the company's cost-of-capital will
15 decrease almost immediately after the conclusion of this rate case and that the
16 company strategically timed this rate case to end before the company's financial
17 records reflect the decrease is highly speculative, unprofessional, and without merit.

18 **Q. WHAT IS WRONG WITH DR. BROWN'S STATEMENT CONCERNING**
19 **THE DECLINE IN CAPITAL COSTS?**

20 A. Dr. Brown's assumption that capital costs will decline is undoubtedly wrong. It is at
21 least contrary to the view of almost all competent analysts. If it is not wrong, because
22 it is contrary to the conventional wisdom, Dr. Brown should at least explain his
23 rationale for falling interest rates from these current low levels. Interest rates and

1 capital costs, in general, are generally at or near their lowest levels in over forty years.
2 Economic activity has generally been weak for the last two years. To suggest that
3 interest rates will decrease further or that economic activity may not increase in the
4 foreseeable future is highly speculative and not supported by the facts. The consensus
5 is that interest rates and economic activity are expected to increase in the coming
6 year.

7 His statement demonstrates that Dr. Brown's assumption is out of touch with
8 the reality of current markets, and any conclusions that he based on this assumption
9 are simply wrong. The Federal Reserve Board's policy tools directly affect short-term
10 rates while long-term rates are market driven. As I pointed out in my testimony, long-
11 term rates did not decline to the extent short-term rates did over the last few years,
12 and even so, long-term rates recently have been increasing due to market pressures.

13 **Q. WHAT IS THE PRESENT POSITION OF ANALYSTS?**

14 A. The generally recognized position of analysts as reported by *Blue Chip Financial*
15 *Forecasts*, is:

16 "The vast majority of our panel members now believe the FOMC (Federal
17 Open Market Committee) is finished easing policy and consensus forecasts of
18 economic growth and inflation are closely aligned with that of Fed staff. Real
19 GDP growth is expected to grow at or above its trend rate of 3.5% or so over
20 the next six quarters. Following real GDP growth of just 1.7% in Q2 (growth
21 minus trade inventories will be much stronger), the economy is expected to
22 grow at a 3.6% rate in Q3 and a 3.8% rate in Q4. Real GDP growth of 3.8% is
23 also predicted during the first half of 2004, slowing to 3.7% in Q3 and 3.6% in
24 Q4, according to the consensus." (*Blue Chip Financial Forecasts*, Pg. 1, Vol.
25 22, No. 8, August 1, 2003.
26

1 There is plentiful evidence, such as rising mortgage rates, that Dr. Brown's opinion
2 that interest rates will continue in a downward trend is not likely and very much out
3 of the mainstream of analysts' opinions.

4 **Q. ARE THERE OTHER ERRONEOUS ASSUMPTIONS BY DR. BROWN**
5 **THAT COULD HAVE AFFECTED HIS ANALYSIS AND HIS**
6 **CONCLUSIONS?**

7 A. Dr. Brown stated at page 49, line 75:

8 "...the requested return of 12.6% is not a just and reasonable cost-of-equity
9 because the recommended rate for equity overstates the prevailing return on
10 equity in the American economy."

11
12 **Q. WHY IS THIS AN ERRONEOUS ASSUMPTION?**

13 A. Dr. Brown's assumption that prevailing returns limit the cost of equity reveals his
14 confusion about cost of capital and required returns and earned returns. The cost of
15 equity is the required return on equity. Required return is a function of relevant risk
16 and is based on investor expectations. The required rate of return equates the expected
17 cash flows associated with a share of stock to the price of the stock. Conversely, the
18 earned return is simply the return a stock actually earned in the market over some
19 specified period of time. In other words, because a stock earned a market return of
20 either 1% or 100% over some time period does not mean that the cost of equity was
21 either 1% or 100% over that period. Dr. Brown has cavalierly used an improper
22 standard and reached an incorrect conclusion. He did this while ignoring obvious
23 signals that his recommended return was too low to be the true cost of capital. For
24 example, his recommended return for common stock of Piedmont Gas is below to the
25 cost of long-term debt, which possesses much less risk to investors. In the current

1 market conditions, I am unaware any allowed return recommendation for any gas
2 utility in any jurisdiction as low as Dr. Brown's recommendation. One would expect
3 analytical completeness to at least acknowledge and explain the reasons for his
4 inordinately low recommendation for Nashville Gas.

5 **Q. HOW DID DR. BROWN USE THE PREVAILING RETURNS IN HIS**
6 **ANALYSIS?**

7 A. From his Direct Testimony, it appears that Dr. Brown used the historical returns as a
8 basis for his recommended allowed return for Nashville Gas in this proceeding.

9 **Q. DID DR. BROWN PRESENT A DCF COST OF COMMON EQUITY**
10 **CALCULATION FOR PIEDMONT NATURAL GAS IN HIS DIRECT**
11 **TESTIMONY?**

12 A. No. Dr. Brown did not present a DCF analysis of the cost of common equity of
13 Piedmont Natural Gas in his Direct Testimony. He did show the results of DCF
14 calculations of the cost of common equity of the comparable companies, which
15 indicated that he did perform some DCF calculations.

16 **Q. WERE THERE OTHER ERRONEOUS ASSUMPTIONS BY DR. BROWN**
17 **THAT AFFECTED HIS RECOMMENDATION?**

18 A. Yes. He stated that it is "standard practice to include short-term debt in a utility's
19 capital structure for ratemaking." See his Direct Testimony at page 25, line 11.
20 This is not necessarily the case. As stated in a commonly referenced book about the
21 practice of utility regulatory agencies, "Some commissions include short-term debt in
22 the capital structure, some do not." (*Principles of Public Utility Rates*, Bonbright,

1 Danielsen, and Kamerschen, Public Utilities Reports, Inc., Second Edition, March
2 1988, Pg. 312).

3 How one determines equity ratios and capital structures depends on how one
4 defines them. As Dr. Brown himself noted, *Value Line* does not include short-term
5 debt in its reported capital structures. This is not unusual as short-term debt is usually
6 not a component of the permanent capital structure.

7 **Q. DO ANALYSTS CONSIDER SHORT-TERM DEBT AS PERMANENT**
8 **FINANCING?**

9 A. No. Many analysts do not consider short-term debt to be permanent financing. For
10 example, Bonbright, *et.al.* go on to state, page 312,

11 “Whether or not short-term debt is included often depends on the purposes of
12 the short-term debt. It is more likely to be included if it is permanent in nature,
13 that is, it represents a reasonably constant proportion of total capital over time.
14 Frequently, short-term debt is used as bridge financing. Construction is
15 financed with short-term debt until it accumulates to an amount sufficient to
16 justify a bond issue, then is rolled over into permanent financing.”

17 **Q. HAS DR. BROWN ACKNOWLEDGED THE TEMPORARY NATURE OF**
18 **SHORT-TERM DEBT?**

19 A. Yes. In Dr. Brown’s testimony he states, at page. 32, lines 4-7, that “short-term debt
20 that will be refinanced within six to nine months through the issuance of long-term
21 debt and equity securities.”

22 **Q. YOU MENTIONED THE DIFFICULTIES WITH DR. BROWN’S CAPITAL**
23 **STRUCTURE AND HIS DCF ANALYSIS. DID YOU HAVE ANY CONCERNS**
24 **ABOUT HIS CAPM ANALYSIS?**

25 A. He criticized my use of *Value Line* betas because they are “adjusted.” and he used
26 “raw” betas that gave him a lower calculated cost of capital for Piedmont. (See his

1 comments on page 58 of his Direct Testimony.) At lines 27-28, he stated, "Clearly,
2 Value Line's betas are not standard practice." He is simply wrong. *Value Line* betas
3 are commonly used in CAPM analyses. As Roger Morin states in his book Regulatory
4 Finance: Utilities, Cost of Capital, on page 65:

5 "Value Line betas are widely available and well-known to investors...Value
6 Line is the largest and most widely circulated independent investment
7 advisory service, and exerts influence on a large number of institutional and
8 individual investors and on the expectations of these investors."
9

10 **Q. IS DR. BROWN CORRECT ABOUT THE PROBLEM WITH *VALUE LINE'S***
11 **ADJUSTED BETAS?**

12 **A.** No. He is mistaken about this also. The need to adjust the calculated beta to avoid its
13 analytical biases remains a very important conceptual question, and *Value Line's*
14 approach is highly regarded. For example, as Morin stated on page 65:

15 "...Value Line betas are computed on a theoretically sound basis using a
16 broadly-based market index, and they are adjusted for the regression tendency
17 of betas to converge to 1.00."
18

19 Morin, who also investigated the literature concerning the need to adjust beta also
20 stated about other authors (on page 68):
21

22 "Gombola and Kahl (1990) examined the time-series properties of utility betas
23 and found strong support for the application of adjustment procedures such as
24 the Value Line and Merrill Lynch procedures. Well-known college-level
25 finance textbooks routinely discuss the use of adjusted betas."
26

27 **Q. WHAT RISK PREMIUM OR CAPM COST OF CAPITAL DID DR. BROWN**
28 **CALCULATE FOR PIEDMONT NATURAL GAS IN HIS TESTIMONY IN**
29 **THIS PROCEEDING?**

1 A. Dr. Brown did not present a risk premium analysis or a CAPM analysis of Piedmont
2 Natural Gas that he discussed in his Direct Testimony.

3 **Q. DID YOU CALCULATE THE ALLOWED TOTAL COST OF CAPITAL**
4 **THAT DR. BROWN'S CAPITAL STRUCTURE, COST OF DEBT AND**
5 **RECOMMENDED ALLOWED RETURN ON COMMON STOCK WOULD**
6 **PRODUCE?**

7 A. Yes. As Schedule DAM-R4 illustrates his recommended capital structure, cost of debt
8 and cost of common stock would result in a total cost of capital of 6.49 percent.

9 **Q. DID YOU ESTIMATE WHAT THE INTEREST COVERAGE OF PIEDMONT**
10 **WOULD BE WITH DR. BROWN'S RECOMMENDED COST OF CAPITAL?**

11 A. Yes, I did. As Schedule DAM-R5 shows, the 7.6 percent return on common stock
12 would result in an after tax interest coverage of only 2.05 times. As this schedule also
13 shows, this is much lower than any of the interest coverages of the comparable
14 companies, and it is much lower than average interest coverage of the comparable
15 companies.

16 **Q. DR. BROWN'S RECOMMENDED RETURN WAS UNUSUALLY LOW AND**
17 **THE INTEREST COVERAGE ASSOCIATED WITH HIS**
18 **RECOMMENDATION WAS MUCH LOWER THAN THAT OF THE**
19 **COMPARABLE COMPANIES. WERE THERE OTHER INDICATORS FOR**
20 **DR. BROWN TO LEARN HOW EXCEPTIONALLY LOW IS**
21 **RECOMMENDATION WAS?**

22 A. Yes. He could have checked the allowed common equity returns of the utilities that
23 he used as comparable companies. Schedule DAM-R6 illustrates the current allowed

1 returns for the comparable gas distribution companies that he used in his testimony.
2 His recommendation is 260 basis points lower than the lowest allowed return of the
3 group of comparable companies. Despite this obvious anomaly, he offers no
4 explanation in his testimony for his position relative to the industry and other
5 commissions.

6 **Q. BASED ON YOUR REVIEW CAN YOU BRIEFLY SUMMARIZE THE**
7 **TESTIMONY OF DR. BROWN?**

8 A. The many conceptual errors in his testimony aside, his recommended allowed return
9 is so low that one cannot take it seriously as a return for Nashville in this proceeding.
10 He performs no direct calculation of the cost of common stock of Piedmont. His
11 recommendation is beyond the reasonable bounds as shown by allowed return of his
12 comparable companies. The interest coverage associated with his allowed return is
13 well beyond that of his comparable companies and demonstrates the unreasonable
14 level of his allowed return and its threat to the financial viability of Nashville Gas.

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

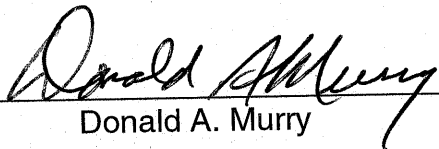
16 A. Yes, it does.

Affidavit


State of Oklahoma)
)
County of Oklahoma)

Donald A. Murry, being first duly sworn, deposes and says that he is the same Donald A. Murry whose prepared testimony and exhibits accompany this affidavit.

Donald A. Murry further states that, to the best of his knowledge and belief, his answers to the questions contained in such prepared testimony are true and accurate.

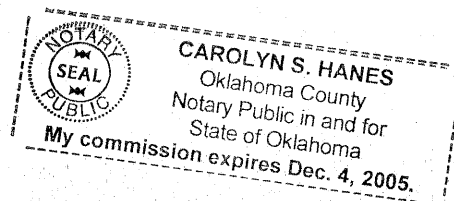

Donald A. Murry

Sworn to and subscribed before me, a Notary Public, on this the 27 th day of August, 2003.


01019787

My Commission Expires:

12-4-05

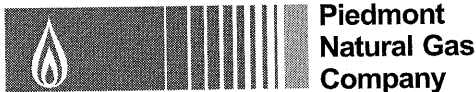


**Before The
Tennessee Regulatory Authority
Docket No. 03-00313**

In the Matter of

Application of Nashville Gas Company,)
A Division of Piedmont Natural Gas)
Company, Inc., for an Adjustment of its)
Rates and Charges, the Approval of)
Revised Tariffs and the Approval of)
Revised Service Regulations)

**Schedules of Donald A. Murry
On Behalf Of
Nashville Gas Company,
A Division of
Piedmont Natural Gas Company, Inc.**



Nashville Gas Company

Schedule DAM – R1

CAPD Witness Steve Brown

Comparison of Capital Structures from Prior Rate Cases

<u>Company</u>	<u>Docket No.</u>	<u>Date of Filing</u>	<u>Sources</u>	<u>Use of Company's Capital Structure</u>	<u>Capital Structure Methodology</u>
AGL Resources d/b/a Chattanooga Gas Co.	95-02116	1995	Company Work Papers	YES	AGL's 13 month recent average
United Cities Gas Co.	95-02258	1995	Company Work Papers	YES	Short Term Debt is average of '90-'94 of comparable companies LTD and Equity of United Cities is year ending December 1994
Bell South Telec. d/b/a South Central Bell Telephone Co.	95-02614	1995	Company Work Papers	YES	Company data as filed
Piedmont Natural Gas d/b/a Nashville Gas Co.	96-00977	1996	Company Work Papers	YES	Equity Ratio is Company's most recent annual equity ratio
Tennessee American Water Co.	03-00118	2002	www.morningstar.com	YES	Average of debt to equity ratios reported by Morningstar for comparable companies
Piedmont Natural Gas d/b/a Nashville Gas Co.	03-00313	2003	SEC - 10-K	NO	Most recent average capital structure of the comparable companies (Brown Pg 42, Ln. 7-9)

Nashville Gas Company**CAPD Witness Steve Brown****Capital Structure Method in the Tennessee American Water Company**

<u>Company</u>	<u>Equity Ratio</u>	<u>Debt Ratio</u>
AGL	48.8%	51.2%
Atmos Energy	43.9%	56.1%
N J Resources	55.6%	44.4%
Nicor Inc	52.5%	47.5%
Northwest Natural	49.8%	50.2%
Peoples Energy Cp	49.7%	50.3%
Piedmont	56.6%	43.4%
WGL Holdings	57.9%	42.1%
Average	51.9%	48.2%

Sources:

Brown Direct Testimony, Docket No. 03-00118

www.Morningstar.com

Nashville Gas Company

Schedule DAM – R3

CAPD Witness Steve Brown

Comparison of DCF Methods from Prior Rate Cases

<u>Company</u>	<u>Docket No.</u>	<u>Date of Filing</u>	<u>Sources</u>	<u>Company Included in DCF Calculation</u>	<u>DCF Methodology</u>	
					Dividend Yield	Growth Rate
AGL Resources d/b/a Chattanooga Gas Co.	95-02116	1995	No Sources Cited	YES	52 Week Moving Average of Dividend Yield for AGL	BR Plowback Growth Rate Method of AGL
United Cities Gas Co.	95-02258	1995	No Sources Cited	YES	52 Week Moving Average of Dividend Yield for United Cities	United Cities' 13 year compounded historical growth rates
Bell South Telec. d/b/a South Central Bell Telephone Co.	95-02614	1995	Value Line IBES	YES	Annual dividend/ average annual closing price Average of comparable companies, inclusive of Bell South	Value Line projected dividend and earnings growth rates Average of comparable companies, inclusive of Bell South
Piedmont Natural Gas d/b/a Nashville Gas Co.	96-00977	1996	No Sources Cited	YES	Annual dividend/ average daily closing price Average of comparable companies, exclusive of PNY	Piedmont's 6 year compounded historical growth rates
Tennessee American Water Co.	03-00118	2002	www.morningstar.com	YES	Current dividend yield published by Morningstar Average of comparable companies, inclusive of AWR	Historical 5 year dividend growth rates published by Morningstar 5 year compounded dividend growth rate Average of comparable companies, inclusive of AWR
Piedmont Natural Gas d/b/a Nashville Gas Co.	03-00313	2003	www.morningstar.com	NO	Annual dividend/ current spot price Average of comparable companies, exclusive of PNY	Historical 5 year dividend growth rates published by Morningstar Average of comparable companies, exclusive of PNY

Nashville Gas Company

CAPD Witness Steve Brown

Proposed Cost of Capital

Item	Ratio	Proposed Cost	Weighted Cost
Long Term Debt	44.00%	6.83%	3.01%
Short Term Debt	12.20%	1.30%	0.16%
Common Stock Equity	43.80%	7.60%	3.33%
Totals	100.00%		6.49%

Sources:

CAPD Witness Brown Direct Testimony, page 34, lines 31-34
CAPD Witness Brown Direct Testimony, page 45, lines 25-26
CAPD Witness Brown Direct Testimony, page 46, lines 9-12
CAPD Witness Brown Direct Testimony, page 75, lines 33-34

Nashville Gas Company

Comparable Local Distribution Companies

Comparison CAPD Witness Brown's After Tax Times Interest Earned Ratio

Witness Brown's Interest Coverage	@7.6% ROE	2.05
AGL Resources, Inc.		2.48
Atmos Energy Corp.		2.47
New Jersey Resources		4.80
Nicor, Inc.		3.89
Northwest Natural Gas		2.55
Peoples Energy Corp.		2.78
WGL Holdings, Inc.		2.99
Comparable Companies' Average		3.14

Sources:

Murry Direct Testimony Schedule DAM-22

CAPD Witness Brown Direct Testimony

Nashville Gas Company

Comparable Local Distribution Companies

Table of Allowed Return on Equity on Most Recent Rate Case

Company	Allowed Return on Equity	Jurisdiction	Year
AGL Resources, Inc.	12.00%	Georgia	2002
Atmos Energy Corp.	10.50% -11%	Louisiana	2000
New Jersey Resources	11.50%	New Jersey	1994
Nicor, Inc.	11.10%	Illinois	1996
Northwest Natural Gas	10.20%	Oregon	2003
Peoples Energy Corp.	11.10%-11.30%	Illinois	1995
WGL Holdings	10.60%	District of Columbia	2002