Tennessee Regulatory Authority
Docket No. 99-00994

In the Matter of	)
	)
Application of Nashville Gas Company, a	)
Division of Piedmont Natural Gas Com-	)
pany, Inc., for an Adjustment of its Rates	)
and Charges, the Approval of Revised	)
Tariffs and the Approval of Revised	)
Service Regulations	)

Petition, Testimony, and Exhibits on Behalf of Nashville Gas Company, a Division of Piedmont Natural Gas Company, Inc.

Piedmont Natural Gas Company

NashvilleGas
Your Energy Partner

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99 DEC 30 AM 10:17

December 30, 1999

Mr. David Waddell
Executive Secretary
Tennessee Regulatory Authority
460 James Robertson Parkway
Nashville, TN 37243-0505

Re: 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
Docket No. 99-00994

Dear Mr. Waddell:

Pursuant to T.C.A. § 65-5-203, I am enclosing for filing in the above captioned proceeding, the original and fourteen copies of the following documents on behalf of Nashville Gas Company, a Division of Piedmont Natural Gas Company, Inc. requesting and adjustment of its rates and charges, approval of revised tariffs and approval of revised service regulations effective February 1, 2000:

1. Petition of Nashville Gas Company;
2. Testimony of Ware F. Schiefer;
3. Testimony and Exhibits of Bill R. Morris;
4. Testimony and Exhibits of Chuck W. Fleenor; and
5. Testimony and Exhibits of Dr. Donald A. Murry.

I am enclosing six (6) copies of the workpapers supporting the foregoing testimony and exhibits and a check in the amount of $25.00 in payment of the filing fee.

I am enclosing an additional copy of the filing package that I would appreciate your stamping filed.

Sincerely,

Jerry W. Amos

Paid $25.00
CK# 84258

JWA:kam
Encl.
c: Vincent Williams, Consumer Advocate
T.G. Pappas, Esq.

Before The
Tennessee Regulatory Authority

Nashville, Tennessee

In re:	)	
	)	
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.	)	**Petition**

Docket No. _____

Pursuant to Section 65-5-203 of the Tennessee Code Annotated and the rules and regulations of the Tennessee Regulatory Authority (Authority), Nashville Gas Company (Nashville Gas), a division of Piedmont Natural Gas Company, Inc. (Piedmont), hereby applies (1) for authority to adjust its rates and charges for natural gas service for the purposes of obtaining a general increase in its rates, (2) for approval of revised tariffs, and (3) for approval of revised service regulations. In support of this petition, Nashville Gas respectfully shows:

Description of
Piedmont Natural Gas Company
and
Nashville Gas Company

1. Piedmont is incorporated under the laws of the State of North Carolina and is engaged in the business of transporting, distributing and selling gas in the States of Tennessee, North Carolina and South Carolina. Piedmont's principal office and place of business is located at 1915 Rexford Road, Charlotte, North Carolina.

2. Piedmont conducts its natural gas distribution business in the State of Tennessee through its operating division, Nashville Gas. Nashville Gas' natural gas distribution business is subject to regulation and supervision by the Authority pursuant to Chapter 4 of Title 65 of the Tennessee Code Annotated.

3. Nashville Gas has its principal offices at 665 Mainstream Drive, Nashville, Tennessee, and it is engaged in the business of furnishing natural gas to customers located in Davidson County and portions of the adjoining counties of Cheatham, Dickson, Robertson, Rutherford, Sumner, Trousdale, Williamson and Wilson and in certain incorporated towns and cities located therein.

Request for General Rate Increase

4. Nashville Gas' existing rates for natural gas service are not adequate to permit it to earn a fair and reasonable return on its investment. If Nashville Gas is (a) to maintain its facilities and services in accordance with the reasonable requirements of its customers in its service area, (b) to compete in the market for capital funds on terms which are reasonable and which are fair to its customers and to its existing investors and (c) to produce a fair profit for its stockholders, it must be granted a general increase in its rates.

5. As shown in the exhibits filed with this petition, Nashville Gas will be able to earn an overall return of only 7.55 % during the attrition period (12-months ending May 31, 2001). Such rate of return is not fair and reasonable and is confiscatory under Article I, Section 8 of the Constitution of Tennessee and the 14th Amendment of the Constitution of the United States.

6. Nashville Gas' inability to earn a fair and reasonable return on its investment results from a number of factors, including the following:

a. Since its rates were last increased, Nashville Gas has invested $84.9 million in new plant and facilities to serve its customers, including more than 24,000 customers who have been added since that date.

b. Since its rates were last increased, Nashville Gas has been required to acquire additional capital to enable it to improve and extend its natural gas services to its customers.

c. Since its rates were last increased, Nashville Gas' expenses have increased because of the need to offer improved and expanded service to new and existing customers.

7. Additional reasons supporting Nashville Gas' request for a general rate increase are set forth in the testimony and exhibits of witnesses being filed with this petition, all of which testimony and exhibits are incorporated herein.

8. The proposed rates for which Nashville Gas seeks approval are set forth in Exhibit ___(CWF-5) and are incorporated herein.

Request for Approval of Revised Tariffs and Service Regulations

9. Nashville Gas is seeking approval of certain changes to its service regulations and to the language of its tariffs.

Supporting Documentation

10. In further support of this petition, Nashville Gas is filing herewith the following:

a. Testimony of Ware F. Schiefer, President and Chief Operating Officer of Piedmont Natural Gas Company;

b. Testimony and exhibits of Charles W. Fleenor, Vice President of Gas Services of Piedmont Natural Gas Company;

c. Testimony and exhibits of Bill R. Morris, Director of Rates, Piedmont Natural Gas Company;

d. Testimony and exhibits of Donald A. Murry, Economist with C.H. Guernsey & Company, Oklahoma City, Oklahoma; and

e. Miscellaneous workpapers supporting the above referred to exhibits.

Notices

11. It is respectfully requested that any notice or other communications with respect to this Petition be sent to:

Ware F. Schiefer
President
Piedmont Natural Gas Company, Inc.
P. O. Box 33068
Charlotte, NC 28233

T.G. Pappas
R. Dale Grimes
Bass, Berry & Sims
2700 First American Center
Nashville, TN 37238

Jerry W. Amos
Amos, Jeffries & Robinson, L.L.P.
PMB 317, 3817 Fairview Road
Charlotte, NC 28226

Prayer for Relief

Wherefore, it is respectfully requested that the Authority (1) set this application for hearing at an early date, (2) cause notice to be issued as required, (3) find that Nashville Gas' existing tariffs and rates are inadequate and that the proposed tariffs and rates attached hereto as Exhibit ___ (CWF-5) are fair, just and reasonable and in the public interest and permit them to become effective on February 1, 2000 or as soon thereafter as lawfully permitted, (4) approve the requested changes to Nashville Gas' revised tariffs and service regulations and (5) grant such other relief as may be required in light of the evidence to be produced at the hearing of this cause.

This the 29th day of December, 1999.

Piedmont Natural Gas Company, Inc.

By: _____
Ware F. Schiefer, President

STATE OF NORTH CAROLINA)
)
COUNTY OF MECKLENBURG)

Ware F. Schiefer, being first duly sworn, states that he is President of Piedmont Natural Gas Company, Inc.; that he has read the foregoing Petition; that the facts stated therein are true to the best of his knowledge, information and belief; and that he has been duly authorized to execute the foregoing Petition on behalf of Piedmont Natural Gas Company, Inc.

W F Schiefer
Ware F. Schiefer

Sworn to and subscribed before me
this the 29 th day of December, 1999.

Lee E. Howard
Notary Public

My commission expires:

My Commission Expires October 29, 2000

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Testimony of Ware F. Schiefer
on Behalf of
Nashville Gas Company,
a Division of
Piedmont Natural Gas Company, Inc.

Piedmont Natural Gas Company

NashvilleGas
Your Energy Partner

I. Identification of Witness.

Q. Please state your name and your business address.

A. My name is Ware F. Schiefer. My business address is 1915 Rexford Road, Charlotte, North Carolina.

Q. By whom and in what capacity are you employed?

A. I am President and Chief Operating Officer of Piedmont Natural Gas Company, Inc. (Piedmont).

Q. Please describe your educational and professional background.

A. I received a B.S. degree in Civil Engineering from The Citadel in Charleston, South Carolina in 1959. In 1968, I completed the requirements for and became a Registered Professional Engineer in North Carolina. I was employed by Piedmont in 1965 as an Industrial Sales Engineer. In 1969, I was promoted to supervisor of Piedmont's Heating and Air-conditioning Department and Commercial Sales Manager. In 1973, I was named Director of Gas Utilization, and I remained in this capacity until 1976 when I was named Assistant Vice President – Director Gas Utilization. I was elected a Vice President in 1978, Senior Vice President in1986, Executive Vice President in 1995, and President and Chief Operating Officer in February 1999.

Q. Please describe the scope of your present responsibilities for Piedmont.

A. As President and Chief Operating Officer, I am responsible for the day-to-day operations of Piedmont. My activities primarily focus on operations, sales and marketing, and gas supply.

Q. Have you previously testified before this Authority or any other regulatory authority?

A. I have testified on numerous occasions before the Tennessee Public Service Commission. I have also testified before the North Carolina Utilities Commission,

the Public Service Commission of South Carolina, and the Federal Energy Regulatory Commission (FERC).

Q. In what areas have you testified?

A. At the state level, I have testified in the areas of gas supply requirements, gas supply prudence, revenue requirements, cost of service and rate design. At the FERC, I have testified on customer requirements, curtailment priorities, gas allocation and other areas dealing with pipeline rates.

Q. Have you held any positions in natural gas trade associations?

A. Yes. I have served on the board of directors of the Southern Gas Association and the Southeastern Gas Association. I also served as president of the Southeastern Gas Association.

II. Purpose of Testimony.

Q. What is the purpose of your testimony in this proceeding?

A. My testimony is being filed to support Piedmont's application in this case. I will (1) provide a brief description of Piedmont and its businesses, (2) provide a brief description of our application in this docket and (3) explain why we filed the application in this case.

III. Identification of Piedmont.

Q. Please describe Piedmont and its business.

A. Piedmont Natural Gas Company, Inc., is a North Carolina corporation with headquarters in Charlotte, North Carolina. Piedmont is principally engaged in the natural gas distribution business and as of November, 1999, delivered gas to approximately 620,000 customers, including 134,000 in Tennessee, 382,000 in North Carolina and 104,000 in South Carolina.

Q. Please describe your gas business in Tennessee.

A. Our natural gas operations in Tennessee are conducted through Nashville Gas Company (Nashville Gas), an operating division of Piedmont. Nashville Gas furnishes natural gas to customers located in Davidson County and portions of the adjoining counties of Cheatham, Dickson, Robertson, Rutherford, Sumner, Trousdale, Williamson and Wilson.

Q. How long has the Nashville Gas Division been owned and operated by Piedmont?

A. Piedmont acquired Tennessee Natural Resources Inc., the then parent company of Nashville Gas on March 15, 1985. At the time of the acquisition Nashville Gas served 67,000 customers and had net-utility plant of $48 million. Due to its inability to raise sufficient capital, Nashville Gas had not been meeting the needs of this rapidly growing area. Piedmont committed to placing $50 million in new plant in Tennessee within five years, a 100% increase.

Q. Has Piedmont lived up to its commitment to this Commission?

A. Yes. During the first five years Piedmont owned Nashville Gas, $85 million in plant was added to upgrade the system and to add 22,000 new customers. This commitment has continued as the Company has increased gross plant in service, from the 1985 acquisition date to the date of this filing, by $277.3 million or an increase of 344% over the original plant purchased. During this same time period we have added 67,000 new customers net, an increase of 100%.

IV. Description of Application.

Q. What is Nashville Gas seeking in this application?

A. Nashville Gas is seeking a general increase in its rates and charges. The increase in rates and charges is necessary to cover the costs (including a return

on investment) of additional plant constructed to expand and improve natural gas services in Tennessee. We are also seeking approval of certain changes to our service regulations and to the language of our tariffs.

Q. Will other witnesses offer testimony on Piedmont's behalf in this proceeding?

A. Yes. Mr. Bill Morris will testify in support of our accounting exhibits, including our revenue, expenses and plant. Mr. Donald Murry will provide testimony in support of our requested rate of return. Mr. Chuck Fleenor will provide testimony in support of our proposed rate design and the changes we are proposing in our tariff language.

Q. How did Piedmont determine what rate increase to seek in this proceeding?

A. We first determined the rate increase that would be required to permit us to recover all of our prudently incurred expenses and to earn what we believe to be a fair return on our investment. Based on those calculations, we determined that we required a rate increase of $12,076,449.

Next we examined the "Final Order" issued by the Authority in our last general rate case (Docket No. 96-00977) to see if our determination of the required rate increase was consistent with that Order. We also examined the Authority's final order in Docket No. 97-00982, which we believe to be the only general rate case order issued by the Authority in a natural gas utility case subsequent to the order issued in our last general rate case.

Q. Why did you examine the Authority's order in Docket No. 97-00982?

A. We wanted to determine if the Authority had made any new or different pronouncements with respect to the proper treatment of various items in natural gas general rate cases.

Q. Did you find any new or different pronouncements in Docket No. 97-00982?

A. We found one such pronouncement. In our last general rate case, we sought to recover our actual test period advertising expenses of $1,486,000. The Authority allowed us to recover one-half of that amount, but ordered the staff to conduct a study and to submit it to the Authority no later than May 31, 1997. In Docket No. 97-00982, which was decided after the due date of the study, the Authority allowed the gas utility to recover 100% of its advertising expenses.

Q. After examining the two orders, did you determine that your original determination of your rate increase was consistent with those orders?

A. No. We determined that it was not; therefore, we revised our calculations to be consistent with those two orders.

Q. What was the effect of those revisions on your requested rate increase?

A. It reduced our requested rate increase by $1,388,837.

Q. Why were you willing to reduce your request?

A. The Authority's order in our last general rate case was appealed to the court, and the court affirmed that order. Although we do not agree with all portions of that order or the court's decision, we believe it would be a waste of time for the Authority and all of the parties to attempt to relitigate those issues in this proceeding.

Q. In your last rate case, the Authority authorized a return on common equity of 11.5%. Did you file for the same return in this case?

A. No. A review of past orders by the Authority and its predecessor, the Tennessee Public Service Commission, indicates that the authorized rate of return depends upon a number of factors that change from time to time and that the rate of return

authorized by the Authority at one point in time is not necessarily indicative of the rate of return that will be authorized at a different time. As a result, we employed an expert cost of capital witness, and we are requesting the 12.5% rate of return on common equity recommended by him.

Q. Please explain why it was necessary to file this rate case.

A. Nashville Gas has invested $84.9 million in additional utility plant since our last rate case. That investment represents a 30.4% increase in our utility plant in the three and one-half years since our last rate case. In addition, we have added approximately 24,000 customers during this period. Of course, the addition of this plant and these customers has increased our operation and maintenance expenses.

Q. How has Nashville Gas financed the addition of these customers?

A. Since Nashville Gas is an operating division of Piedmont, the financing for our expansion in Tennessee, as well as our expansion in North Carolina and South Carolina, was provided by Piedmont. Piedmont provided this financing through a combination of internally generated cash flow and long-term debt and equity financing. The following table shows a comparison of the total company customers added, the capital invested to add those customers and the long-term financing required to finance these additions over the past five years:

Table 1

Year Ended October 31	Customers Added	Capital Investments	Long-Term Financing
1995	28,500	$100.8 Million	$98.4 Million
1996	31,230	$98.3 Million	$55.9 Million
1997	33,000	$93.5 Million	$15.7 Million
1998	31,400	$93.5 Million	$17.1 Million
1999	34,650	$102.0 Million	$71.4 Million

For the year ending October 31, 2000, Piedmont expects to add approximately 32,780 customers, to invest $117.0 million in its utility operations and to sell in excess of $56 million of long-term securities.

Q. How does Piedmont's capital investment and customer additions in Tennessee compare with its investment and customer additions in the other states in which it operates?

A. Piedmont is committed to expanding its facilities and providing natural gas service to as many customers as feasible in all states in which we operate. The following table shows how much Piedmont has invested in Tennessee and how many customers Nashville Gas has added in Tennessee just during the past five years:

Table 2

Year Ended October 31	Customers Added	Capital Invested
1995	6,065	$24.7 Million
1996	6,110	$25.1 Million
1997	6,064	$26.5 Million
1998	5,691	$17.8 Million
1999	6,082	$21.7 Million

As shown in Table 2, we have added a total of 30,012 customers in Tennessee over the past five years, an average yearly increase of over 5.6%. During this same five-year period, we have invested over $115.8 million in capital additions, an average 9.2% increase in plant per year. In fact, we have in the past five years increased our investment in Tennessee by over 46%.

Q. How does the addition of these customers and the plant constructed to serve these customers affect your need for rate relief?

A. Most of the capital required to construct the additional plant required to serve these new customers comes from long-term financing. The investors who provide this financing expect to be paid a fair return on their investment. Thus, when we issue new securities, we increase our need for funds to pay the interest, dividends or other return on those securities. To place this need in proper perspective, over 36% of our issued and outstanding long-term securities were issued within the past five years. In addition, when we add new customers, we must read their meters, prepare and mail their bills, answer their inquiries, meet regulatory requirements and provide additional services to

them. There are significant costs associated with providing these services to new customers.

Q. Don't you also receive additional revenues from these new customers?

A. We do receive additional revenues, however, these additional revenues are not sufficient to cover the additional costs. Our existing rates are based on the embedded original costs of our property after depreciation of $1,929 per customer allowed in our last rate case. During the three and one-half years following that rate case, we added $45,972,898 of additional net plant. When divided by the 20,245 net customers added during that period, the incremental cost per new customer was $2,245. In addition, our existing rates are based on the level of expenses that existed at our last general rate case, and, as shown in the exhibits filed by Piedmont witness Bill R. Morris, these expenses have increased. As a result, existing rates do not cover the higher costs of the additional property and do not cover the current costs of providing service.

Q. Have you taken any steps to reduce the costs of serving existing and new customers?

A. Yes. We have taken many such steps over the years. One such step was taken in the spring and summer of 1997 when the Company set out to reorganize its corporate goals and planning strategies. During this process, it was determined that Piedmont and Nashville would have to either (a) reduce their capital investments in new facilities and services or (b) continue to file repeated rate cases unless some method was found for reducing expenses. It was for this reason that the GAP process was begun. ("GAP" refers to the difference between (x) the income that would be required to permit Piedmont and Nashville to continue to raise the necessary capital for future customer

additions and (y) the income that would actually be produced without either an increase in revenue through rate cases or a decrease in expenses.)

The GAP process involved a solicitation of suggestions from all employees, a consideration of those suggestions by various "teams" of employees from all levels, a review and approval of various suggestions by senior management, and, finally, consideration of the final recommendations by the Company's Board of Directors.

Over 2,000 employee suggestions on ways to become more efficient, to better serve our customers and to generate increased shareholder value were received and evaluated. As a result of implementing proposals relating to every area of the Company's operations – from outsourcing our main-frame computer center to overtime and expense reductions – we achieved substantial cost reductions.

The most difficult cost reduction measure was the reduction in personnel. Through a "Special Event Voluntary Severance Plan" and by not filling certain vacant positions, we achieved a significant reduction in our payroll costs. Under this Plan, most of the reductions in work force were obtained through voluntary terminations. Financial incentives were offered to certain employees to obtain these voluntary terminations and to eliminate or lessen any financial burdens for the terminated employees. Only eight Nashville employees were terminated involuntarily. We provided assistance to terminated employees to obtain other employment. It is our understanding that, with one possible exception, all of the terminated employees who wished to remain employed were able to find new positions. One of the terminated employees has moved

from Tennessee and we have not been able to determine his current employment status.

Q. Were any of the costs associated with the severance plan paid by ratepayers?

A. No. This plan cost approximately $1.8 million. The full amount was written off in 1997, resulting in a $0.04 per share reduction in earnings for our shareholders. None of the costs were recovered from our ratepayers.

Q. Do you have any evidence that Piedmont's efforts to reduce costs have been effective?

A. Yes. Exhibit WFS-1 shows the number of customers served by each employee of Nashville Gas at the time of our last rate case in 1995 and the number of customers served in 1999. As you can see, each employee now serves 80 more customers than in 1995.

Q. Does the total number of employees include the employees who are located in the general office in Charlotte, North Carolina as well as the employees who are located in Tennessee?

A. Yes. The number of employees shown for both 1995 and 1999 includes an allocation of general office employees using the allocation method approved in our last rate case.

Q. Can you provide an estimate of the savings that result from the increase in the number of customers served per employee?

A. If we had not increased the number of customers served per employee since 1995, we would need an additional 81 employees today. Based on the average cost per employee, our payroll costs would be approximately $3.1 million higher than included in this case.

Q. Can you provide any other evidence that your efforts to reduce costs have been effective?

A. Yes. Our average cost of adding a new customer in Tennessee in 1995 was $3,178 and in 1996 was $3,176. In 1999, we had been able to reduce this cost to $2,383, a reduction of almost 25%.

Q. Has the increase in the number of customers served per employee reduced the quality of customer service provided by Nashville?

A. No. As a result of the increased competition in our business, we constantly monitor our customer service to make sure that we are responding to our customers' needs. As we have increased the number of customers served per employee, we have also increased our employee training so they can be more efficient but no less effective in responding to the needs of our customers. We have also implemented new technology to better serve our customers. We are satisfied that the quality of our customer service has not deteriorated as a result of the increase in number of customers served per employee.

Q. How does a reduction in the cost of adding a customer produce savings for your customers?

A. The following table quantifies the savings in our cost of capital.

Table 3

Piedmont Natural Gas Co.
Cost of Capital Reduction Attributable to Reduction in Cost Per Customer Addition

	Year Ended				
	1995	**1996**	**1997**	**1998**	**1999**
Customers Added	28,500	31,200	33,000	31,400	34,653
Cost Per Customer Added	$2,455	$2,246	$2,082	$1,883	$1,800
Capital Expenditures Avoided	——	$6.5mm	$12.3mm	$18.0mm	$22.7mm
Cumulative Capital Expenditures Avoided	——	$6.5mm	$18.8mm	$36.8mm	$59.5mm
Reduction in Cost of Capital (10.15%)	——	$.3mm	$1.3mm	$2.8mm	$4.9mm
Cumulative Reduction in Cost of Capital	——	$.3mm	$1.6mm	$4.4mm	$9.3mm

Q. You have stated that the addition of new plant and customers and the additional costs associated with that plant and those new customers is the major cause of this rate proceeding. Couldn't you just stop adding customers and avoid future rate cases?

A. No. We also add plant to replace existing plant as that plant deteriorates over time. In addition, from time to time we must relocate plant as new roads are built and as existing buildings are torn down and replaced. The cost of replacing or relocating existing plant and serving replacement customers would continue even if we did not increase the total number of customers served by us. We would also need to continue the twelve-year comprehensive cast iron main replacement program. A program begun in 1992 which is expected to cost in excess of $42 million when completed. Nevertheless, I do agree that rate cases would be filed

less frequently if were not to increase the total number of customers served by the Company.

Q. If that is the case, why do you continue to add new plant to serve more customers?

A. In their efforts to remain economically strong, Nashville and its environs must compete with other areas both within and outside of the State of Tennessee. Study after study shows that no community can remain economically healthy for very long without the necessary infrastructure, including the availability of natural gas and other utilities. As a good corporate citizen, we are committed to do our part to provide our part of this infrastructure.

Q Do you have anything to add at this time?

A. Yes. We are proud of our Company's contribution to the State of Tennessee, in general, and to Nashville and its environs, in particular. We believe our efforts to expand our service as rapidly as possible while at the same time maintaining reasonable rates has contributed to the economic growth of our service area. As indicated by the testimony in this case, we have taken substantial and, in some instances, very difficult steps to reduce our costs for the benefit of our customers. I can assure this Authority that under my leadership we will continue that policy.

Finally, I would like to thank the Authority for its assistance in helping us meet our mutual objective of providing natural gas service to our existing and new customers at reasonable rates while at the same time providing a fair and reasonable return to those investors who provide the funds to make it possible for us to pay for the plant needed to serve those customers.

I have appeared before various regulatory agencies for more than 30 years, and I have concluded that the best results for all of the many interests involved are reached when the Company, the consumer representatives and the Authority work

together in a cooperative, rather than an adversarial, environment. That was the conclusion that led us to follow the past decisions of this Authority in this rate case even in those instances when those decisions did not favor the Company. We hope to avoid unnecessary controversy and to obtain a result that fairly balances the interests of our customers, our employees, our investors and the communities we serve.

Affidavit

State of North Carolina)
)
County of Mecklenburg)

Ware F. Schiefer, being first duly sworn, deposes and says that he is the same Ware F. Schiefer whose prepared testimony accompanies this affidavit.

Ware F. Schiefer 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.

Ware F. Schiefer

Sworn to and subscribed before me, a Notary Public, on this the 29 th day of December, 1999.

Notary Public

My Commission Expires:

My Commission Expires October 29, 2000

Nashville
Customers Per Employee

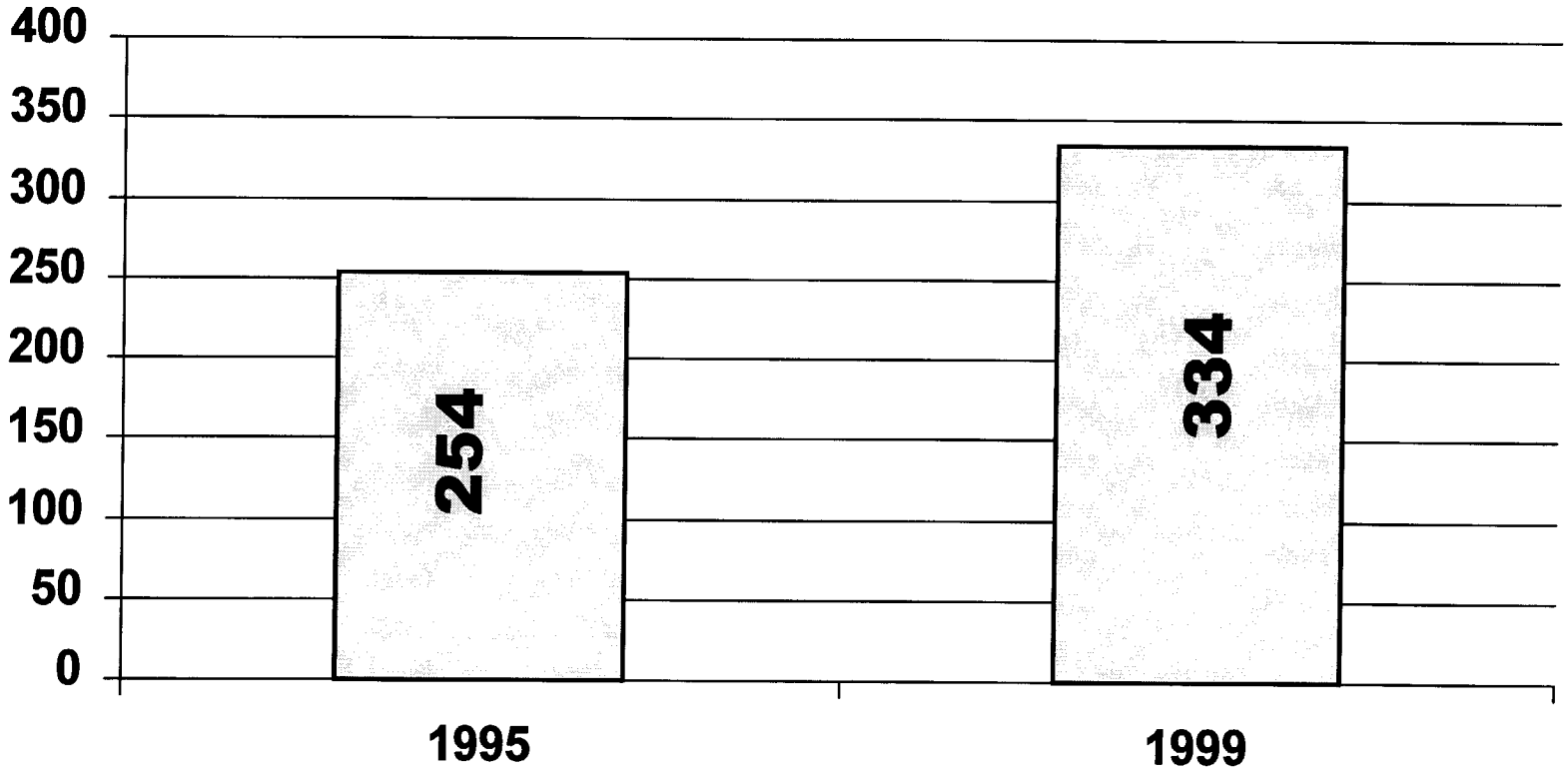

Exhibit WFS - 1

Tennessee Regulatory Authority
Docket No. _____

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Testimony of Bill R. Morris
on Behalf of
Nashville Gas Company,
a Division of
Piedmont Natural Gas Company, Inc.

Q. Please state your name and business address.

A. My name is Bill R. Morris, and my business address is 1915 Rexford Road, Charlotte, North Carolina.

Q. By whom and in what capacity are you employed?

A. I am employed by Piedmont Natural Gas Company ("Piedmont") as Director of Rates.

Q. By whom were you employed prior to being employed by Piedmont?

A. I was employed by Nashville Gas Company ("Nashville Gas") as Assistant Vice President of Rates prior to my transfer to Piedmont in February 1986. Prior to my employment by Nashville Gas Company, I was employed by the Tennessee Public Service Commission ("TPSC") as a Financial Analyst from August 1974 through September 1981.

Q. Briefly describe your educational background.

A. I received a Bachelor of Science degree in accounting in 1974 from Austin Peay State University. In 1979 I became a Certified Public Accountant in the state of Tennessee.

Q. Have you previously offered testimony in any regulatory proceedings?

A. Yes. While with the TPSC, I entered testimony as a staff witness in numerous rate cases. Since being employed by Nashville Gas Company and Piedmont, I have testified before the North Carolina Utilities Commission, the South Carolina Public Service Commission and this Authority and its predecessor, the TPSC. I have also entered testimony before the Federal Energy Regulatory Commission (FERC).

Q. Are you a member of any professional associations?

A. Yes, I am a member of the American Institute of Certified Public Accountants, the Tennessee Society of Certified Public Accountants and the North Carolina Association of Certified Public Accountants. I also serve on the Southern Gas Association's Rate Committee.

Q. What is the purpose of your testimony in this case?

A. The purpose of my testimony is to present information to the Commission relative to certain adjustments made to the test period operating results. Specifically, on Exhibit ___(BRM-1), I am responsible for the adjustments in columns 2, 6, 7 and 8 relating to all items with the exception of the sale and transportation of gas revenues and cost of gas. These items will be discussed by Mr. Chuck Fleenor as will the adjustments appearing in column 4.

I am also responsible for the proposed changes to the Company's Service Regulations which are filed as part of this rate case.

Q. Would you summarize the information contained on Exhibit ___(BRM-1)?

A. Column 1 reflects the income statement and rate base for the test period—the 12 months ended August 31, 1999. The revenues, expenses and taxes represent those amounts appearing on the Company's income statement. The rate base amounts, except for the allowance for working capital, were calculated using the 13-month average of the balances appearing on the Company's balance sheet.

The amounts appearing in Column 2 are the accumulation of all adjustments necessary to reflect changes in revenues, expenses, taxes, and investment anticipated to occur from the end of the test period through the attrition period—the 12 months ending

May 31, 2001. The attrition period has traditionally been defined by this Authority as the first year in which new rates will be in effect. Based on the combined analyses of Mr. Fleenor and myself, the changes that are anticipated to occur through the attrition period will erode the current earnings of Nashville Gas. As column 3 reflects, the expected rate of return for the attrition period is only 7.55 percent, excluding Special Contract revenues. Column 4 represents the reduction in Nashville's demand gas costs that will occur during the attrition period. Unlike the commodity portion of Nashville's gas cost that fluctuates from month-to-month, demand gas costs are generally fixed costs and not subject to monthly fluctuations. This reduction is recognized on Exhibit___(BRM-1) to more accurately reflect the impact of the proposed rate design in this case. Mr. Fleenor will address this in more detail in his testimony.

Column 5 shows the effect on the attrition period after recognizing the demand gas cost reduction in Column 4. As shown in Column 5, the demand gas cost reduction has no effect on the Company's attrition period net operating income on line 18.

Column 6 of Exhibit ___(BRM-1) is the amount of additional revenues required to achieve the overall rate of return of 10.50 percent requested in this filing. The $11,577,545 revenue increase does not, however, recognize the revenues anticipated from Nashville's three Special Contract customers. Column 7 shows the total revenues from these customers under the existing contracts in the amount of $889,933. I will explain how Nashville Gas proposes to treat these revenues on an ongoing basis later in my testimony. Column 8 is the requested revenue increase in the amount of $10,687,612 after consideration is given to the Special Contract revenues. Lastly, Column 9 represents the attrition period income statement, rate base, and overall rate of return after adjustments for proposed revenues. This column includes those revenues applicable to the Special Contract customers.

Q. **How does Nashville Gas propose to handle the revenues from its Special Contract customers?**

A. Let me begin by explaining that Nashville Gas currently has Special Contracts approved for three of its large industrial transportation customers. These customers are Ford, Bridgestone and State Industries. Due to the propriety of these contracts, the revenues from these customers have been aggregated to protect the specific negotiated rates approved for each special contract.

The special contract with Ford became effective on March 1, 1998 and will expire on October 31, 2000, approximately half way through the attrition period. The Bridgestone and State Industries contracts were both entered into effective on August 1, 1998 and will expire on December 31, 2002. Because the Ford contract expires during the attrition period in this case and it is very likely that the Bridgestone and State contracts will expire prior to our next general rate case, Nashville Gas proposes to handle the revenues from these contracts through an incentive tracking mechanism. Under the proposal, the $889,933 of existing Special Contract revenue, would be set as a benchmark. Any differences in the annual revenues actually realized under these contracts and the benchmark amount would be either debited or credited to the tracking account. Nashville Gas proposes, as an incentive mechanism, to share in any differences on a 90%/10% basis. This proposal would provide an incentive for the Company during contract renegotiations in that Nashville Gas would retain 10% of any gains from a higher negotiated rate. Conversely, if a lower rate was negotiated, Nashville Gas would absorb 10% of any reductions in revenues. The 90%/10% sharing ratio was adopted by this Authority on negotiated rates for both Bridgestone and State during the period of time immediately prior to approval of the special contracts. It is also the sharing ratio adopted by the Authority for similar negotiated rate transactions for this state's other two local gas distribution companies.

Nashville feels that its proposal is fair both to the ratepayer and the Company in that it provides the Company the opportunity to achieve the rate of return ultimately allowed in this proceeding and it provides an incentive to the Company to do the best job of negotiating the highest competitive rate possible with these large volume customers which will benefit ratepayers.

Q. Please describe the procedures you used to develop the income statement amounts under your responsibility for the attrition period?

A. The attrition period amounts in this case were projected using the methodologies adopted by this Authority in Docket No. 96-00977, Nashville Gas' last rate case, with one exception. I will explain later in my testimony how this one exception, advertising expense, was projected and why the method adopted in our last rate case was not used in this rate case. Generally speaking, the items that could be calculated from a zero base, were so calculated. These calculations were based upon interviews with the appropriate company manager responsible for the item. As explained earlier in my testimony, we have attempted to employ the methodologies adopted by the Authority in our last rate case. In that case, the Authority accepted the Company's zero-based calculations and stated "it is preferable to price-out these expenses rather than apply a broad growth rate when possible."[1]

For those items which could not reasonably be calculated using the above procedure, I projected the amounts by applying growth factors to the test period amounts. On certain accounts, projections were made by applying growth factors reflecting the combined effects

[1] Order, Docket No. 96-00977, February 19, 1997, p.16

of inflation and customer growth. On other accounts, I used only the inflation growth factor.

Q. Please give some examples of how you used the described procedures to project attrition period income statement amounts?

A. An example of a zero-based calculation is the projection of salaries and wages expense. Generally, this calculation involves pricing Nashville Gas employees individually at the hourly/monthly pay rate projected for the attrition period. To this amount, anticipated overtime was added, and appropriate amounts were capitalized and assigned to non-utility functions.

An example of the growth factor procedure is the projection of various maintenance accounts. Due to the number of these accounts, it would be practically impossible to employ the zero-based procedure. Therefore, accounts were grouped, and a growth factor was applied to the test period amounts to arrive at the attrition period projections.

Q. Please explain the procedures you used to develop Rate Base amounts.

A. The starting point was to pull the August 31, 1999 balances in Plant in Service, CWIP, Accumulated Depreciation, and Accumulated Deferred Income. To these balances, the monthly projected additions in the current fiscal year 2000 construction budget and the applicable months of the fiscal year 2001 construction budget were added to project the balances for these times items through May 31, 2001. A 13-month average was then calculated for the attrition period. Non-plant related Rate Base items such as customer advances and contributions in aid of construction were calculated using historical trend analyses. The allowance for working capital is a combination of the projected average balances of current asset and liability accounts and the results of the lead/lag study adopted

by the Authority in our last rate case. In that rate case, the only issue addressed by the Authority in the lead-lag study involved the lag days for income tax expense. The lead-lag study in this case utilizes the 38 lag days for federal income tax adopted by the Authority in Docket No. 96-00977.

Q. Please explain the adjustments to the test period capital structure.

A. The Attrition Period average capital structure is the same as the average capital structure for the test period ending August 31, 1999. In Docket No. 96-00977, the Authority adopted the use of an historical capital structure, thus, as I have previously explained, we have recognized the Authority's policy in this filing.

Q. Please explain Column 5 of Exhibit ___(BRM-1).

A. Column 5 shows the operating revenues (excluding special contract revenues), operating expenses, net operating income for return and return on rate base for the attrition period. As this exhibit shows our existing rates will permit us to earn only 7.55 percent on rate base excluding special contract revenue. This return on rate base equates to a return of only 7.09 percent on Common Equity.

Q. Does Column 5 reflect your best judgment as to the attrition period return on the investment of Nashville Gas in property which is used and useful in providing natural gas service to jurisdictional customers in Tennessee under existing rates?

A. Yes.

Q. Please explain Columns 8 and 9.

A. Column 8 contains the additional revenues and related expense and tax adjustments that would result from the proposed increase in revenues after recognizing the revenues from the Special Contract customers shown in Column 7. Column 9 reflects the revenues, expenses, taxes, net operating income and rate base for the attrition period after adjustments for proposed increases in revenues. As Column 9 shows, the proposed revenues will permit us to earn 10.50 percent on our rate base. This return on rate base equates to a return on equity of 12.5 percent. Dr. Donald A. Murry will support this equity return in his testimony.

Q. You previously testified that Nashville Gas has recognized the decisions made by this Authority in Docket No. 96-00977 with the exception of advertising expense. Please identify those items that were filed in accordance with the Authority's Order in Docket No. 96-00977.

A. I have already discussed three of these items earlier in my testimony, however, for clarification purposes, I will repeat them.

- Where possible, operating expenses were projected for the attrition period using a zero-based budgeting concept as opposed to applying growth factors to the test period recorded amounts.
- The working capital allowance calculation included 38 lag days for federal income taxes rather than the negative 106 days included in the last rate case.
- The attrition period capital structure is the same as the historical test period. In the last rate case, The Company recognized proforma debt and stock transactions during the attrition period.

Additionally, the Company's attrition period projections recognize the following policies adopted in our last rate case.

- Forfeited Discounts has been included as a component in computing the Revenue Conversion Factor.

- Demand gas cost was computed by multiplying the demand billing determinants by the demand recovery component in billing rates. The result is that revenues and cost are the same, thus removing any gas cost issues from the attrition gross margin.
- Sales promotion expenses are not included in the calculation of advertising expense.
- An appropriate allocation of corporate payroll has been made reflecting the increased consolidations of functions at the corporate office
- The employee position level at the end of the test period was utilized in the priceout of salaries and wages expense .
- Long-term incentive plan (LTIP) costs are included at one-half of the projected attrition period expense level.
- Injuries and damages expenses have been calculated by applying the growth factor to the test period historical expense.
- Pension expense excludes FASB 87 expense and includes amortization of the deferred regulatory asset which was permitted in the last rate case.
- Corporate allocations were based on a net plant percentage factor.
- The gross domestic product (GDP) index was used in the computation of the attrition growth factor as opposed to the consumer price index (CPI) which the company used in the last rate case filing.
- Charitable contributions have been excluded from attrition period operating expenses.
- An attempt has been made to identify and remove all items of a non-recurring nature from the attrition period operating expenses.
- The error in the calculation of Administrative Transferred Credits has been corrected and both the test period and attrition period amounts reflect the proper amounts.
- All expenses associated with country club dues and fees for professional sports tickets are recorded in below-the-line accounts.

Q. Does the fact that you filed this rate case in accordance with the Authority's past orders indicate that the Company agrees with each of the Authorities individual decisions in those orders?

A. No. As explained in more detail in Mr. Schiefer's testimony, it simply indicates that we do not wish to relitigate those issues in this case.

Q. You mentioned that the Company has not recognized the decision made by the Authority on advertising expense in the last rate case. Would you explain why this decision was not recognized in this filing?

A. In our last rate case, the majority of the Authority[2] approved an amount equal to one-half of the advertising expense filed by the Company, or approximately $743,000. During its deliberations, the Authority also ordered that a study be performed by its Staff "of the appropriate allowance for advertising for all Class A utilities under the Authority's jurisdiction."[3] The results of the study were to be reported to the Authority no later than May 31, 1997.

I am unaware of the results of that study. However, I have reviewed the Authority's Order in the Chattanooga Gas rate case in Docket No. 97-00982 and determined that the Authority did not employ the one-half rule in that case. Instead, the Authority adopted a policy of applying the combined inflation and customer growth factor to the actual test

[2] Director Greer voted not to approve the one-half method

[3] Order, Docket No. 96-00977, February 19, 1997, p. 10.

period amount.[4] Thus, Chattanooga was allowed to recover $430,670 in non-labor sales promotion expenses (which includes advertising).

Q. What approach did you use in projecting advertising expense in this rate case?

A. I used the same method as approved by the Authority in the Chattanooga Gas rate case. That is, I have applied the combined inflation and customer growth factor to the actual test period amount.

Q. Mr. Morris, you said at the beginning of your testimony that you are also responsible for the revised Service Regulations filed in this case. Would you please describe why these revisions are needed.

A. Yes. In reviewing the Company's existing Service Regulations, I determined that the last time any revisions had been made was in May, 1993. In fact, some of the sheets dated back as far as 1983. I think it is safe to say that a review and update of our service regulations was needed in light of regulatory and market changes. The revised Service Regulations are included with my testimony as Exhibit___(BRM-2) and redline copies comparing the revised sheets with the original sheets are included as part of the worksheets filed in this case.

Q. Please summarize the significant changes in the service regulations proposed in this filing.

[4] Order, Docket No. 97-00982, October 7, 1998, pp. 34-36.

A. In my opinion, the most significant change proposed is a change in Nashville Gas' existing main extension policy. The current main extension policy was approved in 1988. The policy is predicated on a ratio method whereby the Company's investment is tied to gross revenue to be received from the main extension. Specifically, the policy allows the Company to invest an amount equal to two times the estimated annual revenue (EAR) to be received from customers in new residential developments and up to three times the EAR from customers in established residential neighborhoods.

The Company proposes to change its policy to allow main extension investments on those projects that produce a positive net present value (NPV) over the life of the project. The discount rate in the NPV calculation is equal to the overall allowed rate of return in the Company's last general rate case. This methodology has been approved by both the North Carolina Utilities Commission and the Public Service Commission of South Carolina for main extensions in Piedmont's other two jurisdictions. It is my understanding that a similar policy was approved for Chattanooga Gas Company in Docket No. 96-01174. We feel that the proposed main extension policy is preferable to the existing policy because gross annual revenues can vary significantly from one time period to another due to fluctuating wholesale gas prices. Thus, the existing policy often results in one main extension being approved when gas prices are at a high level and a similar main extension being disapproved at another time when gas prices are lower. By focusing on margin rather than revenues, customer will receive equal treatment regardless of the wholesale price of gas.

We are also proposing to eliminate the current preference given to Company employees under the existing main extension policy.

Q. Please explain the other important changes being proposed to the service regulations in this case.

A. We are proposing the elimination of the provision for 200 feet of free service line for the installation of gas air conditioning and heating which is currently included in Nashville Gas' service line policy since we no longer add gas air conditioning customers to our system. Additionally, we are proposing a change in our service line policy to provide for 100 feet of free service line for the installation of one major gas appliance where no main extension is required. An additional 50 feet of free service line would be allowed for the installation of each additional minor appliance such as an outdoor grill or fireplace logs.

We are proposing an increase in our reconnect fee from $35 to $50. Lastly, we have proposed the elimination of the entire section pertaining to mobile homes.

Q. Does this conclude your testimony?

A. Yes, it does.

Affidavit

State of North Carolina)
)
County of Mecklenburg)

Bill R. Morris, being first duly sworn, deposes and says that he is the same Bill R. Morris whose prepared testimony and exhibits accompany this affidavit.

Bill R. Morris 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.

Bill R. Morris

Bill R. Morris

Sworn to and subscribed before me, a Notary Public, on this the 29 th day of December, 1999.

Notary Public

My Commission Expires:

My Commission Expires October 29, 2000

Exhibit___(BRM-1)

Piedmont Natural Gas Company, Inc.
Net Operating Income and Rate of Return
For The Twelve Months Ending May 31,2001
Nashville Gas Division

		(1) Test Period	(2) Attrition Adjustments	(3) After Attrition Adjustments	(4) Demand Gas Cost Reduction	(5) Attrition Pd. Adjusted For Demand Reduction	(6) Adjustments For Proposed Revenues	(7) Adjustments For Special Contract Margin	(8) Proposed Revenues As Adjusted	(9) After Adjustments For Proposed Revenues
1	Operating Revenues									
2	Sale and Transportation of Gas	$125,025,392	$21,530,190	$146,555,582	($2,418,299)	$144,137,283	$11,506,010	($889,933)	$10,616,077	$155,643,293
3	Other Operating Revenues	7,655,869	(7,110,627)	545,242		545,242	71,535		71,535	616,777
4	Forfeited Discounts	875,803	0	875,803		875,803	80,427		80,427	956,230
5	Total Operating Revenue	$133,557,064	$14,419,563	$147,976,627	($2,418,299)	$145,558,328	$11,657,972	($889,933)	$10,768,039	$157,216,300
6	Cost of Gas	$60,696,940	$10,518,439	$71,215,379	($2,418,299)	$68,797,080				$68,797,080
7	Gross Margin	72,860,124	3,901,124	76,761,248	0	76,761,248	11,657,972	(889,933)	10,768,039	88,419,220
	Operating Expenses									
8	Other Operation & Maintenance	29,988,773	1,097,920	31,086,693	0	31,086,693	32,697	(2,529)	30,168	31,119,390
9	Depreciation	13,106,814	1,855,167	14,961,981	0	14,961,981	0			14,961,981
10	General Taxes	6,445,894	416,009	6,861,903	0	6,861,903	0			6,861,903
11	State Income Taxes	1,005,688	(108,833)	896,855	0	896,855	697,517	(53,244)	644,272	1,594,372
12	Federal Income Taxes	4,588,063	154,323	4,742,386	0	4,742,386	3,824,715	(291,956)	3,532,760	8,567,102
13	Total Operating Expenses	$55,135,232	$3,414,585	$58,549,817	$0	$58,549,817	$4,554,929	($347,729)	$4,207,200	$63,104,747
14	Net Operating Income	$17,724,892	$486,538	$18,211,430	$0	$18,211,430	$7,103,224	($542,204)	$6,560,839	$25,314,472
15	Interest on Customers' Deposits	(167,175)	(10,582)	(177,757)	0	(177,757)	0	0	0	(177,757)
16	Charitable Contributions	(113,132)	113,132	0	0	0	0	0	0	0
17	AFUDC	227,614	(100,095)	127,519	0	127,519	0	0	0	127,519
18	Net Operating Income for Return	$17,672,199	$488,993	$18,161,192	$0	$18,161,192	$7,103,224	($542,204)	$6,560,839	$25,264,416

		Average Test Period	Attrition Adjustments	After Attrition Adjustments	After Adjustments For Proposed Rates
	Original Cost Rate Base				
19	Plant in Service	$351,621,644	$47,261,905	$398,883,549	$398,883,549
20	CWIP	10,523,427	(4,323,830)	6,199,597	6,199,597
21	Accumulated Depreciation	(124,498,215)	(17,655,806)	(142,154,021)	(142,154,021)
22	Customer Advances for Construction	(187,158)	(741)	(187,899)	(187,899)
23	Contributions In Aid of Construction	(4,030,508)	(124,654)	(4,155,162)	(4,155,162)
24	Net Plant in Service	$233,429,190	$25,156,875	$258,586,065	$258,586,065
25	Unamortized Investment Tax Credits-Pre '71	(26,189)	13,466	(12,723)	(12,723)
26	Allowance For Working Capital	(1,773,847)	4,150,617	2,376,770	2,376,770
27	Accumulated Deferred Income Taxes	(15,127,047)	(5,219,275)	(20,346,322)	(20,346,322)
28	Total Original Cost Rate Base	$216,502,107	$24,101,683	$240,603,790	$240,603,790
29	Return on rate base	8.16%		7.55%	10.50%

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
							After Attrition Adjustments				After Adjustments For Proposed Rates	
	CAPITAL STRUCTURE AND COST RATES	Test Period	Attrition Adjustments	After Attrition Adjustments	Ratio %	Cost Net Investment	Embedded Cost %	Overall Cost Rate %	Net Operating Income	Embedded Cost %	Overall Cost Rate %	Net Operating Income
30	Long-term Debt	$377,568,915	$0	$377,568,915	42.00%	$101,064,867	8.27%	3.47%	$8,358,065	8.27%	3.47%	$8,358,065
31	Short-term Debt	30,807,692	0	30,807,692	3.43%	8,246,376	6.00%	0.21%	494,783	6.00%	0.21%	494,783
32	Common Equity	490,496,702	0	490,496,702	54.57%	131,292,546	7.09%	3.87%	9,308,344	12.50%	6.82%	16,411,568
33	Total	898,873,309	$0	$898,873,309	100.00%	$240,603,789		7.55%	$18,161,192		10.50%	$25,264,416

Piedmont Natural Gas Company

Nashville Gas Company Service Regulations

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Piedmont Natural Gas Company

Nashville Gas Company Service Regulations

Section 1 – GENERAL SERVICE POLICY OF NASHVILLE GAS

Nashville Gas (hereinafter referred to as "the Company") will make free service calls, within certain broad guidelines, around-the-clock on customer appliances connected to our mains. Those service requests requiring immediate attention will be answered as soon as possible. Those of less urgent nature will be answered on a scheduled basis according to the workload. In either case, the Company will make every effort to answer each customer's call promptly and to leave all appliances operating at maximum efficiency.

Free Services (1220-4-5-.06(iii))

The Company provides the following services at no charge to the customer during normal working hours (Mon - Fri, 8am - 5pm, excluding Holidays):

- Install gas meters and regulators for new customers
- Turn-on, turn-off, & service gas meters
- Check for gas leaks
- Investigate the possible presence of carbon monoxide
- Cut off pilots
- Disconnect appliances (disconnect & cap existing pipe only)
- Food Service equipment service including leveling, adjusting, or calibrating
- Diagnostic time or time to provide an estimate for jobbing work
- Quotes for appliance installation
- The first light-up and service call of the heating season on central furnaces (a flat charge applies for each additional light-up)
- Gaslight turn-on and re-lighting
- Service leased water heaters
- Service appliances other than central heating systems or gas air conditioners (no parts needed) including:
  - Service calls to diagnose problems
  - Check gas pressure
  - Adjust burners
  - Clean air mixers
  - Light pilots
  - Clean & adjust pilots
  - Examine flue connections & check draft
  - Check and calibrate thermostats & controls
  - Check appliance wiring & other electrical components
- Service central heating systems including floor furnaces and unit heaters

including:
  - Service calls to diagnose problems
  - Gas and air adjustments on burners and pilot assemblies
  - Adjustments of controls and thermostats
  - Minor electrical repairs that do not require materials
- Service Arkla, Bryant, and other gas-fired air conditioners including:
  - Service calls to diagnose problems
  - Gas and air adjustments on burners and pilot assemblies
  - Checks of controls and thermostats
  - Pumping of water-cooled units to maintain operation
  - Purging of non-condensables from air-cooled units

Note: When an appliance is not operating, every effort will be made to answer the call without delay, and in most circumstances, on the same day. Should repair work be required, parts needed to complete the repair will be ordered from the manufacturer and installed if the customer so desires. There is, however, a charge for this service.

The company will also provide immediate response to any hazardous situation that might cause threat to life or property after normal working hours (Mon – Fri, 5pm - 8am; Sat; Sun; & Holidays) at no charge, including:

- Fire or explosion
- Gas leak
- Damaged gas main or service (parts & labor may apply for third party damage repairs)
- Gas appliance that won't cut off
- Carbon monoxide investigation (E077 with symptoms)
- Leased water heater service within 24 hours

Services For Which There Are Charges

- Installation or connection of gas appliances
- Reconnects of gas appliances
- Repair of gas appliances where parts are needed (except central systems)
- Repair or replacement parts, electrical equipment, or thermostats on Arkla or Bryant gas air conditioners beyond Service/Warranty Contract
- Cleaning condensers and condensate lines on gas A/C units
- Gaslight repairs and reconditioning
- Miscellaneous pipe work
- Change outs and reconnects of food service equipment
- Repair of gas air conditioning units installed after January 1, 1975; units on which the Warranty/Service Contract has expired; and units or installations not approved by the Company's Service Department

- Work involving replacement of filters and out-of-warranty parts (charged on a "time and materials" basis)
- After hours work that requires a repair including commercial cooking and water heating equipment (the customer may be given the option for jobbing repair at the current overtime rate, if time and workload permits)

Work the Company Does Not Provide

- Replacement of filters in central heating equipment
- Installation, connection, or repair of unit heaters and central heating equipment
- Repair or replacement of unit heaters and other equipment requiring an electrician
- Repair or installation of gas appliances that are not AGA certified nor where gas appliances are not used in accordance with manufacturer listing
- Repairs on heating equipment that requires parts will not be made except on those units sold by Nashville Gas prior to May 1, 1974. In addition, the Company does not install furnace filters
- No work will be performed on electrical air conditioning units installed with a gas furnace (this work will be referred to the installer or mechanical contractor)

Termination Policy

Reasons for Termination of Service or Denial of Service (1220-4-5-.18)

Service may be refused or discontinued for any of the reasons listed below. Unless otherwise stated, the customer shall be allowed a reasonable time in which to comply with the rule before service is discontinued.

1. With notice in the event of a condition determined by the utility to be hazardous
2. Without notice in the event of customer use of equipment or the utility's service to others
3. Without notice in the event of tampering with the equipment furnished and owned by the utility
4. Without notice in the event of unauthorized use
5. For violation of and/or non-compliance with the utility's rules on file with and approved by the Tennessee Regulatory Authority
6. For failure of the customer to fulfill his contractual obligations for service and/or facilities subject to regulation by the Tennessee Regulatory Authority
7. For failure of the customer to permit the utility reasonable access to its equipment
8. For non-payment of bill provided that the utility has made a reasonable attempt to effectively collect and has given the customer written notice that he

has at least five (5) days, excluding Sundays and holidays, in which to make settlement on his account or have his service denied

9. For failure of the customer to provide the utility with a deposit as authorized by 1220-4-5-.14 of the Tennessee Regulatory Authority Statutes
10. For failure of the customer to furnish such services, equipment, permits, certificates, and/or rights-of-way, as shall have been specified by the utility as a condition to obtaining service, or in the event such equipment or permission are withdrawn or terminated.

Insufficient Reasons for Denying Service (1220-4-5-.19)

The following shall not constitute sufficient cause for refusal of service to a present or prospective customer:

1. Delinquency in payment for service by a previous occupant of the premises to be served
2. Failure to pay for merchandise purchased from the utility
3. Failure to pay for a different type of class of public utility service
4. Failure to pay the bill of another customer as guarantor thereof
5. Failure to pay a back bill rendered in accordance 1220-4-5-.17(a) of Tennessee Regulatory Authority Statutes.

Disconnection

The Company has the right to shut off gas from any consumer who may be in arrears for a longer period than twenty (20) days in paying for gas furnished hereunder or under any other prior or subsequent agreement, or for gas used by the consumer at the consumer's present or any prior subsequent address. The said twenty-day period commences to run from the date the bill was rendered. The Company will not shut off gas for non-payment without first mailing a notice to the consumer giving him seven (7) calendar days to pay the bill in arrears.

Reinstating Service

If natural gas service is disconnected for nonpayment, service will be restored after the customer has paid the total amount past due, paid the reconnection charge and paid a deposit.

Third-Party Notification

At the customer's request, the Company will send a copy of any disconnection notice to a designated third party. However, the designated third party is not responsible for paying the bill.

Medical Emergencies and Life Support Devices

The Company will delay disconnection of gas service for 30 days if a physician, public health officer or social service official certifies in writing that discontinuing gas service will worsen an existing medical emergency for a permanent resident of the premises where services are rendered. A prompt request is important. During the 30-day extension, payment of the bill must be guaranteed by another person or entity that is acceptable to the Company.

The Company will not disconnect service at the service address if there are natural gas appliances that are critical to maintaining the health of one or more permanent residents. The Customer Service Department must be contacted to determine whether a gas appliance is considered a life-support device.

Notice of Rights and Remedies

Should the Customer request help in paying his natural gas bill the Company will provide the customer with a list of community agencies that provide aid in paying their natural gas bill. The company will also, in some cases, make alternative pay arrangements if the customer is temporarily unable to pay his natural gas bill. However, if such an agreement is made the customer gives up their right to dispute the amount due under the agreement. If the customer does not fulfill the terms of the agreement, the Company may disconnect service and a new pay agreement will not be offered before we disconnect service.

If the Customer wants to appeal an unfavorable decision regarding a natural gas bill, they may contact the Tennessee Regulatory Authority's Complaint Division, 460 James Robertson Parkway, Nashville, TN 37219 (615-741-3939 or 800-342-8359). This must be done before the net due date if the dispute involves a disconnection notice. The Company will not disconnect service for nonpayment of the disputed portion of the bill while it is being reviewed. The Customers right to appeal will not expire if delay on the Company's part makes it impossible to contact the TRA within the required time period. The Customer also has the right to suspend payment of the disputed portion of the bill while the dispute procedures mentioned above are in progress.

Customer Classifications

Residential

Residential service applies to single private residences, including separate private units of apartment houses and other multiple dwellings, actually used for residential purposes, which are separately metered. A dwelling shall be considered non-residential which has more than one apartment or condo on the same meter. A

duplex, for example, shall be considered residential only if each of the two units is separately metered. A residential dwelling will also be considered commercial if in the Company's judgment such dwelling and/or usage is identifiable as being used primarily (more than 50%) for business or professional purposes.

Commercial

Commercial service applies to customers engaged in selling, warehousing, or distributing a commodity or service in some business activity or profession or in some other form of economic or social activity. For example, and not by way of limitation, all local, state and federal governmental agencies, any organizations or institutions whether profit or non-profit, with uses other than those involving industrial or residential requirements are classified as commercial customers. Also included are offices, stores, schools, dormitories, hotels, restaurants, apartment houses, religious institutions, orphanages, clubs, boarding and rooming houses, communes, motor courts, camps, and rehabilitation organizations.

Industrial

Industrial service applies to customers primarily engaged in a process that creates or changes raw or unfinished materials into another form of product, including the generation of electric power.

Firm Service

Firm service applies to those schedules or contracts under which the Seller is expressly obligated to deliver specific volumes within a given time period and under which the Seller anticipates no interruptions. This obligation does permit unexpected interruption in those cases where the supply to higher priority customers is threatened.

Interruptible Service

Interruptible (Limited Availability) service refers to those schedules or contracts under which the Seller is not expressly obligated to deliver specific volumes within a given time period. This category of service anticipates and permits interruption on short notice, or service under schedules or contracts that expressly or implicitly require installation of alternate fuel capability.

Temporary Customers

The following are classed as temporary customers:

- People living in rented, electrically heated houses with electric water heaters

- People using construction shanties, temporary buildings, trailers, concession stands, and similar structures
- People living in houses or using business structures in such bad state of repair that it appears likely they will be demolished or condemned within five years
- People living in houses or using business structures where it appears probable that the house or building will be demolished within five years because of urban renewal, highway construction, or the like
- People living in or using mobile homes other than those meeting the requirements set forth in Section 6.

Priority of Service

The Company has established the following categories of service in order of priority:

1. Residential, small commercial (less than 50 MCF on a peak day), school, hospital, police protection, fire protection, sanitation, or correctional facility requirements
2. Essential agricultural requirements
3. Large commercial requirements (50 MCF or more on a peak day), firm industrial requirements for plant protection, feedstock and process needs, pipeline customer storage injection requirements, and firm industrial sales up to 300 MCF per day
4. All industrial requirements not specified in 2, 3, 5, 6, 7, 8, 9 or 10
5. Firm industrial requirements for boiler fuel use at less than 3,000 MCF per day, but more than 1,500 MCF per day, where alternate fuel capabilities can meet such requirements
6. Firm industrial requirements for large volume (3,000 MCF or more per day) boiler fuel use where alternate fuel capabilities can meet such requirements
7. Limited Availability requirements of less than 300 MCF per day, where alternate fuel capabilities can meet such requirements
8. Limited Availability requirements of more than 300 MCF per day but less than 1,500 MCF per day, where alternate fuel capabilities can meet such requirements
9. Limited Availability requirements of intermediate volumes (from 1,500 MCF per day through 3,000 MCF per day), where alternate fuel capabilities can meet such requirements
10. Limited Availability requirements of more than 3,000 MCF per day, but less than 10,000 MCF per day, where alternate fuel capabilities can meet such requirements
11. Limited Availability requirements of more than 10,000 MCF per day, where alternate fuel capabilities can meet such requirements.

Meter Turn On

There is no charge for meter turn on for a new customer. There will be a flat charge for meter turn on for an existing customer or member of same family or household. For turning on meters shut off for non-payment of bills there will be a flat charge for meter turn on plus payment of all past due bills. The Company may also secure an additional customer deposit. If an existing customer requests that his/her meter be turned off for the summer to avoid minimum bills during the summer period and then requests the Company to turn the meter back on, the flat charge for meter turn on will apply.

Gas Wastage (1220-4-5-.06(iv))

Excessive gas consumption without knowledge by the customer may possibly be the result of gas leakage or appliance malfunction. Gas bill adjustments generally will not be permitted for improper and/or inefficient operation of gas appliances or for gas leaks. Adjustments for all special cases will be based upon individual merit dependent upon such factors as prompt action by the customer, the nature of the problem, maintenance of facilities by the customer, the time period involved, etc. An example might possibly be a hot water relief valve stuck open or a broken hot water line on a gas water heater. All such special adjustments shall not exceed 35% of the wastage and shall be approved by the Director of Customer Service (residential) or the General Manager of Marketing (commercial). Wastage shall be based on Service Department inspection or Customer Service Department researches. The Director of Customer Service shall determine consumption rates. Duration of the adjustment shall not exceed 30 days. Where such gas appliance malfunction or gas leakage was directly caused by actions of Company personnel or occurred within 30 days of the date the work was performed by Company personnel, the Company will grant 100% credit of wastage to the customer. The amount of wastage will be approved by the Service Superintendent and not exceed a period of 30 days.

Title to Facilities

The title to all facilities including mains, gas service lines, meters, and accessory equipment up to and including the outlet of the meter assembly shall be vested in the Company, notwithstanding any charge which may be made to the customer for extending service.

Appliance Classifications

Major appliances

- central heating systems

- circulating heater*
- floor furnaces
- gas air conditioners
- water heaters

* A circulating heater will be considered as a major appliance when it has all of the following features:

1. Has an input rating of 40,000 BTU per hour or greater (two or more smaller vented circulating heaters having a combined output of 40,000 BTU or more will be considered as one major appliance)
2. Is used for heating throughout the heating season
3. Is the major source of space heating in the building

Minor appliances

- clothes dryers
- gas fireplaces
- gaslights
- grills
- incinerators
- log starters
- logs
- ranges
- swimming pool gas water heaters

General Installation / Connection & Repair Policy

The following regulations are applicable for residential natural gas appliance connections on Nashville Gas lines. The delivery and uncrating of the appliance is the responsibility of the customer/dealer. The connection/installation of commercial and/or industrial gas appliances is the responsibility of dealer. All natural gas appliance installations on Nashville Gas lines shall comply with the provisions of the Southern Gas Code (SBCCI), as updated. All appliances must also be AGA approved. The Company reserves the right to refuse to connect those appliances which, in its judgment, do not conform to appropriate safety requirements.

Space Heaters and Central Heating

The Company will provide free of charge: a service call to diagnose the problem, gas and air adjustments on burners and pilot assemblies, adjustments to controls and thermostats, and minor electrical repairs not requiring material. The Company shall not make repairs to gas furnaces other than pilots, thermocouples, or other parts we normally stock. A heating

contractor, preferably the one who installed the equipment, will perform such repairs. The Company does not install air filters. The Company will make repairs to gas heating equipment that was installed by the Company. Such repairs will be charged to the customer on a "Time and Material" basis or at a flat charge if so provided for herein.

A **Gas Furnace Safety Inspection** is provided without charge by the Company and covers the following:

1. Check for gas leaks at the meter and on the customers' gas fuel lines.
2. Check furnace vent.
3. Safety inspection of the gas fired equipment to ascertain that safety and other limit controls are operating correctly.
4. Safety inspection of the furnace combustion chamber to determine if cracked or unsafe.

A **Gas Furnace Operational Inspection** is provided at the request of the Federal Housing Authority, Veteran's Administration, HUD, real estate/mortgage firms, or other parties interested in a more thorough operational inspection of the gas fired heating equipment. Such requests should be initially referred to the Marketing Department. There is a charge for this inspection that includes the following:

1. Check for gas leaks at the meter and on the customers' gas fuel lines.
2. Check furnace vent.
3. Safety inspection of the gas fired equipment to ascertain that safety inspection and other limit controls are operating correctly.
4. Inspection of the combustion chamber for safety (check for cracked chamber) and for operational purposes to determine the condition of furnace.
5. Calculate actual equipment input rate (Btu/h) to determine if the burner is operating in accordance with the manufacturers' instructions and rating plate.
6. Make an inspection of the air delivery system to check for the condition of ductwork and delivery of reasonable air volumes.
7. Provide a written report to the client on findings of Operational Inspection.

Automatic Vent Dampers

Automatic vent dampers that are AGA certified and UL listed are acceptable. Dampers must be installed in accordance with the manufacturer's instructions. The name of the qualified installing agency must be affixed to the damper. The vent damper must be so installed and wired so that upon failure it will "fail safe" in the open position. If not, the damper and the associated gas appliance will be red-tagged and turned off. The Company will not install, repair, or provide service on the damper installation. In the instance of a malfunction or a retrofit damper installation, the Company will secure the damper in a "make safe" position and advise the customer to secure repair through the distributor,

manufacturer, or installing dealer. The Company does not endorse any specific brand unit and does not endorse or guarantee any claimed energy savings.

Unvented Gas Heaters

The use of UL listed unvented natural gas space heaters is permitted in accordance with the Southern Gas Association Code. However, they may not be located in bedroom areas or sleeping quarters, nor in confined areas where the listed total input rating of such heaters is greater than 30 BTU/HR/CF of space volume (confined space definition). Further, the gas meter will not be turned on in the following cases:

- Where unvented heaters are the primary source of heat in a residence
- Where unvented heaters are the primary source of heat in commercial or industrial structures unless specifically approved by the Service Superintendent or General Superintendent as being unconfined space and adequately ventilated

Gas Air Conditioning

On Arkla, Bryant, and other gas-fired air conditioning units connected to our lines, the Company will provide the following services without charge to the customer:

1. Make service call to diagnose the problem.
2. Perform gas and air adjustments to all burners and pilot assemblies.
3. Check thermostats and controls.
4. Pumping of water-cooled units in order to maintain operations.
5. Purging of non-condensables from air-cooled units.

Other than that described above, and unless specifically covered under appropriate customer Warranty/Service Contract, service work involving repair or parts replacement will be charged to the customer on a "Time and Material" basis. The General Manager of Marketing or the Service Superintendent will determine any exceptions. On request by customer, the Company will replace air filters on gas air conditioning system on our lines for a flat charge, regardless of the number of filters required per job. This will apply to plain flat filters only, not bag or other types.

Water Heaters

All installations of and repairs on water heaters purchased from Nashville Gas will be charged on a "Time & Material" basis. The Company will provide dip tube replacement, thermostat control, and other repairs to the residential customer for a charge based on "Time & Material". For repairs of commercial gas water heaters, the customer is to be referred to local dealer or plumber.

Dryers

Installations of and repairs on residential gas clothes dryers will be charged on a "Time & Material" basis. Repair requests on commercial gas clothes dryers, other thermocouples or other parts normally stocked by our storeroom, will be referred to the appropriate dealer for servicing.

Gas Grills

The Company, as part of its free service program, will make burner air and gas adjustments, check controls, and assist in problem diagnosis on a no-charge basis. Installations of and repairs on gas grills will be charged on a "Time & Material" basis. Cleaning and painting of the grill will be the responsibility of customer. The Company may also perform the following:

1. Post Replacement: Gas grill posts will be replaced for "Time and Material." If a special post must be fabricated, the cost of the installation and post will be "Time and Material."
2. Repairs to Cut or Damaged Tubing: If repair to tubing is performed by the Company, the charge will be "Time and Material". A service representative can sometimes perform this work, but generally a three-man fitting crew is required.
3. All Other Repairs -- All other repairs will be performed at "Time and Material".

Gaslights

With regard to gaslights, the Company will turn on, re-light and replace mantles without charge to the residential customer. Should the residential customer wish to replace the mantles himself, the Company will, upon request, mail to him replacement mantles for residential use in his gaslights without charge. Residential customers may also pick up free replacement mantles for use only in their gaslights at the Company's storeroom. The same gaslight service policies apply to commercial/industrial customers except they will be charged for the mantles. Subdivision entrances and multi-family developments do not qualify for residential use. Services do not include the painting of gaslights or glass cleaning; these are considered the owner's responsibilities.
The Company will recondition the customer's gaslight, including replacement of mantles, cleaning and/or replacement of glass panes as required, and painting repair of gaslight as necessary, for a flat labor charge plus cost of replacement parts (other than mantles). In the case of multiple gaslights on the same piece of property, the labor charge shall apply only to the first light. For each additional light on the same property, an additional charge

plus parts (other than mantles) will apply. The same policy applies to commercial customers except they will also be charged for mantles. Installation of and repairs on gaslights will be charged on a "Time & Materials" basis. The Company may also perform the following:

1. Post and/or Light Head Replacement: Post only replacement will be performed by the company on a "Time & Material" basis. All customers needing to purchase a gaslight head will be referred to the Home Energy Center.
2. Repairs to Cut or Damaged Tubing: If repair to tubing is performed by the Company, the charge will be "Time & Material". A service representative can sometimes perform this work, but generally a three-man fitting crew is required.
3. Complete Replacement: The customer shall be referred to the Company's Home Energy Center. If the customer provides a replacement light head and post of the same basic type, the Company will connect the replacement, charging the customer on a "Time & Material" basis.
4. All Other Repairs: Other repairs will be performed on a "Time & Material" basis.

Gas Logs & Log Starters

All installations of or repairs on gas logs and log starters will be charged on a "Time & Material" basis.

Other Miscellaneous Residential Gas Appliances

All installations of or repairs on other approved gas appliances will be charged on a "Time & Material" basis.

Customer Options

In those instances where a flat charge for connection/repair is listed, the customer may elect prior to our performing the work involved to be charged on a "Time & Material" basis rather than the flat charge. However, having elected to take the T&M option, after the work is completed that decision cannot be reversed and customer will be charged on the "Time & Material" basis. All customer charges described herein are subject to change by the Company.

Appliance Parts Broken by Company Personnel

From time to time when our service personnel are repairing a customer's gas appliance, other adjacent parts become broken during the course of the repair. Such instances leave

of 16appliances at the same time, shall be "Time and Material". Conversion of furnaces or other appliances will be done on "Time and Material" basis.

Commercial
Conversion of AGA approved residential gas appliances or commercial gas appliances in a commercial structure will be performed on a "Time and Material" basis. Service line and meter installation will be on the same basis as any other new customer. Any necessary fuel line, house piping and appliance connection will be done on a "Time and Material" basis.

Temporary Conversions to Liquid Propane
When deemed necessary by Nashville Gas, new construction and conversion customers will be temporarily converted to liquid propane at no charge. The conversion back to natural gas will also be performed by Nashville Gas at no charge.

Piedmont Natural Gas Company

Nashville Gas Company Service Regulations

Section 2 – METERS

Installation & Location

The Company performs standard meter installation at no charge to the customer. However, a customer desiring an underground meter installation will be charged for the additional cost. The most desirable and serviceable location for a new residential meter installation is on the outside of the structure, approximately four feet past the front wall, where it is not subject to damage from automobiles. The new meter shall be so located unless it is physically impractical or it interferes with customer's use of his property. If a problem arises, the Service Superintendent and General Manager of Marketing will make a decision on a location after consulting with the Construction Superintendent. Underground meter locations will not be used except as approved by the Vice President of Tennessee Operations.

The proper meter location for large outside commercial or industrial meters, especially those having multiple structures, is at the property line wherever possible. Under no circumstances shall a meter be located within 10 feet of a combustion air intake. Further, meters shall not be located within 3 feet of an ignition source such as heating or air conditioning equipment, water heaters, electric meters, switch gear, electric panels, etc.

The customer or owner must at all times provide a proper and accessible location for all meters and regulators. The following rules apply as well:

1. All meters installed on high-pressure services must be installed outdoors.
2. All "farm tap" meters shall be located at the main.
3. All meters served from standard and medium pressure mains shall be installed outdoors, except in those instances in which it is extremely difficult to do so or is very undesirable from the customer's viewpoint. In such cases, the meter may be installed indoors, at the discretion of the Company, if the installation conforms to applicable codes.
4. If a customer desires to use gas solely for swimming pool water heating, the meter shall be located at the house and the fuel line run from this point to the pool heater.
5. If located indoors, the meter shall not be located:
   a. Above the ground floor
   b. Less than 3 feet from a hot air furnace or boiler
   c. Less than 3 feet from a gas oven or hot water heater
   d. On or under stairways
   e. In bathrooms or adjoining clothes closets
   f. In small, unvented, or confined spaces

g. Where subject to damage, extreme high temperature, or corrosion
h. In entrances or exits so as to obstruct passage in any way
i. Less than 10 feet from boilers or other sources of heat, if the meter capacity is 80B or larger

Meter Relocation

Outside meters will be relocated when requested by the customer, however, the customer will be charged Time and Material.

Meter Testing

The Company maintains a regular program of meter testing and change-out to insure metering accuracy. Upon written request from the customer for a special test of his meter, the Company will inspect the meter at a reasonable time in accordance with provisions of Rules, Regulations and Statutes Governing Public Utilities as issued by the Tennessee Regulatory Authority. Such meters will be considered to register correctly if the error is not greater than plus or minus two percent (2%). If the meter is found to be registering incorrectly, the meter will be repaired or adjusted to conform to standards with no charge to the customer for testing or repair. If the meter is registering correctly, there will be a meter testing charge to the customer.

Meter Tampering or By-pass

The term "metered gas" is defined as "all gas that has passed through the customer's meter." It is Company policy to prosecute those persons involved where the Company finds evidence of meter tampering or by-pass. Such acts are illegal, as well as extremely dangerous, and Tennessee State Law provides for substantial punishment. In such cases, the customer or party involved will be charged for all gas used and the cost of meter repair including travel time and all other related expenses on a "Time and Materials" basis. At the Company's option, gas service may also be terminated. The Regional Customer Service Manager, the Manager of Meter Reading, and the Service Superintendent will handle such investigations.

Meter Damage

The customer has a responsibility to provide reasonable protection for the Company's metering facilities from damage by his employees, customers, and the general public. It is not, however, his equipment and he cannot be expected to provide security such as guards, surveillance, enclosures, etc. to protect the Company's meters from acts of vandalism or from the general public. The Company selects and approves meter locations.

If a location is in a drive, parking lot, alley, etc. where damage is likely, then it is the Company's responsibility to provide adequate protection such as posts, etc. In cases where the Company's metering facilities are damaged, the Service Department shall conduct investigations of the incidents. The Chief Engineer will approve all proposed meter damage bills after consultation with the General Manager of Marketing and the Service Superintendent. With regard to actual damage responsibility, the following applies:

1. If the customer or his employees cause damage (accidentally or purposely), then the customer should be billed for damages.
2. If a visitor, commercial vehicle, or general public vehicle damages a meter, damage relief should come from that person or firm causing the damage. Damage relief shall not come from the customer, unless it can be proven that the damage by a third party resulted from negligence on the customer's part.

Piedmont Natural Gas Company

Nashville Gas Company Service Regulations

Section 3 – FUEL LINES

Customer gas fuel lines installed on Company mains shall comply with provisions of the Southern Gas Code (SBCCI), the appropriate gas code recognized by the Metropolitan Government of Nashville and Davidson County, Nashville Gas, or other county regulations. The care and maintenance of all customer-owned underground fuel lines is the responsibility of the customer. All piping carrying metered gas is considered a fuel line. When in place in a finished building, hidden from view and not easily accessible, the piping is considered a concealed fuel line. All fuel lines will be (a) standard threaded and coupled or welded steel minimum schedule 40 pipe (depending on operating pressure), or (b) plastic pipe or tubing of the following types: TR-418 PE 2306 -- orange color, Drisco 7000 or 8000 PE 3406 -- black color, or approved equal.

Fuel Lines May

- Be installed underground in accordance with applicable codes to include corrosion protection.
- Be installed to serve any number of buildings if all the buildings are located on a single or continuous tract of land with common ownership.
- Be concealed if installed in accordance with applicable codes.

Fuel Lines May Not

- Be smaller than 1-1/4" coated steel or 1-1/8" x.090 wt Polyethylene (PE) tubing if installed underground (unless serving only gaslights, grills, or logs). Fuel lines to remote heating units may be smaller as approved by the Service Department. The Service Department will determine the size of fuel lines for mobile homes.
- Extend to or across property under different ownership.
- Cross any public street, alley, or highway. Fuel lines shall be sized to have a minimum pressure drop between the meter outlet and any appliance of 0.3-inch water column. Those fuel lines served from standard pressure distribution systems will be sized on 0.2-inch water column pressure drop.

Installation Charges

All fuel lines will be installed at the customer's expense with one exception: when determined necessary, the Company may choose to install a fuel line instead of a service line. In this event, ownership with maintenance responsibility shall remain with the customer. In such cases, footage of fuel line installed shall be equal to the footage of

service line that would be "free service" if the customer were served in the usual manner (a "farm tap" customer is an example). Charges for residential underground fuel lines will be "Time & Material." Pre-installation estimates may be obtained from the Service Department (for plastic tubing) or the Construction Department (for all other underground fuel lines). The customer at his expense will replace any sidewalk or pavement cut. The customer will be charged "Time and Materials" for all fuel line repairs (excluding tubing to gaslights and grills) made by the Company.

Commercial or Industrial Fuel Lines

Commercial or Industrial fuel line piping work requests shall be referred to local plumbing contractors, except in special cases as approved by the Superintendent of Construction and the General Manager of Marketing. If the Company installs a customer's underground fuel line, the charge will be "Time and Materials."

Piedmont Natural Gas Company

Nashville Gas Company Service Regulations

Section 4 – SERVICE LINES

Service lines are pipes used to carry unmetered gas from the main to the customer's meter. The preferred route of the service line will be from the nearest adequate main to four (4) feet beyond the customer's nearest building wall. Service lines, service relocations, and extensions may be installed in accordance with applicable codes by either the Company or by a contractor approved by the Company. The complete installation must be inspected and approved, prior to being backfilled, by the appropriate Company representative. In general, service lines should not be laid on vacant property adjoining the building to be served if there is likelihood that a building will be constructed on the vacant property. Service line installation policies are subject to conditions of gas supply and the Company's limited service attachment programs.

Customer Types

Residential

The Company will install free of charge 100 feet of service line for one major appliance where no main extension is required. An additional 50 feet of service line shall be installed free of charge for each additional appliance. These footages refer to the service line between the customer's property line and four (4) feet past the nearest outside building wall. The customer shall replace any sidewalk or pavement on his property that is cut.

For service lines to supply appliances not included as major appliances, the customer shall be charged the Company's actual cost for the entire length of the service line from the main to the meter. However, this rule shall not be construed as prohibiting the Company from installing service lines for certain groups of minor appliances as long as the installation is made under more favorable terms to the customer and no discrimination is practiced between customers whose service requirements are similar.

Commercial or Industrial

For permanent use and where revenues justify, the Company will install free of charge 100 feet of service line measured from customer's property line or four feet past the nearest building wall, whichever is less.

Charges

The facilities to be installed by the Company as described above will be at no cost to the customer if (1) at a minimum the customer will be installing central gas heating or gas water heating, (2) the gas service line extends along the route selected by the Company and (3) the length of the gas service line is no greater than allowed, as shown above. In the event that the above conditions are not met, the service line installed for the customer must provide a reasonable return to the Company, If the customer wishes the facilities to be constructed along a route other than the route selected by the Company and/or if the gas service line is more than the length allowed above and/or the service to be rendered to the customer will not produce a reasonable return to the Company, the Company may require the customer to pay the excess cost of constructing the facilities along the alternate route or in excess of the footage allowed and/or to make a contribution which will permit the Company to earn a reasonable return. In all cases any pavement or sidewalk cut will be replaced by and at the customer's expense.

Exceptions

In cases where there is exceptional cost due to length of service, paving (such as crossing major street), rock, etc., these service orders shall be reviewed by the Engineering Department on a case-by-case basis to determine if revenue received will justify the added expense. The Chief Engineer and the General Manager of Marketing must approve these exceptions. Examples: A residence may have several hundred feet of excess service line but the revenue would justify the added expense of the service line or a customer may have a small revenue and the paving cost would be so great as to make it uneconomical.

Excess Service

Excess service refers to that portion of the total cost of a service line installed for a customer that is in excess of the Company's justifiable investment and is that portion of service line cost paid for by the customer. A customer may pay the excess service charge with cash or credit with approval, and may spread the cost over three years on a monthly installment payment basis. Interest will be computed on the unpaid balance at a rate of 1.5% monthly.

Repairs

Repairs to service lines damaged by others shall be charged at the Company's actual repair costs.

Service Extensions

A service extension includes all piping carrying unmetered gas from the termination of the previous service line to the inlet of the meter. Service extensions and relocations shall be installed at the customer's expense.

Branch Services

Branch services will be permitted only when the point of junction of the two services is either in the public right-of-way or on a customer's property. In the latter case, written and notarized permission of the property owner must be obtained and filed with the Register of Deeds of the appropriate county. In the case of services requiring in-line valves, the service must be branched in the public right-of-way, and the Construction Department must confirm presence of a valve in each branch.

Multiple Buildings on Same Lot

In those cases where two or more buildings are located on the same lot in such a manner as to be reasonably suited to subdividing, the Company will, if requested, run separate service lines to these buildings. However, if the buildings are not so situated (e.g. garage apartments or combination commercial and residential buildings), the Company will not run separate services except where the full cost of the additional service from main to meter, including paving, is borne by the customer.

Service Line Enlargements

If the load through an existing service is so increased as to require a larger service line, the Company will enlarge the existing service to a point four (4) feet beyond the customer's nearest outside building wall without charge. Any enlargement of the service line beyond this point will be at the customer's expense. Any fuel line changes will be at the customer's expense.

Shopping Centers

A shopping center shall be considered as a single structure containing a minimum of 7,500 square feet of floor space and a minimum of four (4) tenants or business stores operating within the structure. The Company shall install one service line and one bank of gas meters for each 12,000 square feet of floor space. The final number of meter banks shall be at the discretion of the General Manager of Marketing, based upon the size and layout of the particular shopping center under consideration.

Nashville Gas Company Service Regulations

Section 5 – MAINS

The Company has a policy of extending its main(s) to serve a new customer (or customers) provided such main extension is determined to be economically feasible. The criteria for economic feasibility shall be met when the total annual net revenue to be obtained from the customer (or customers) provides a rate of return that is equal to or greater than the overall cost of capital established in the Company's last general rate case.

The determination of the anticipated rate of return on the main extension will be based on a net present value (NPV) computation utilizing the following parameters:

1. Net revenues will be calculated by applying the applicable tariff margin rate to the estimated annual total usage.
2. Estimated annual total usage shall be based on those appliances that will be in use during the first five (5) years of service, except as provided in paragraph 3 under "Main Extension Contract".
3. The required investment will be based upon engineering cost estimates as determined by the Company and will include the costs of all facilities required for providing service including material and labor costs associated with the installation of mains, service lines, metering and regulating equipment, easements, rights of way, street crossings, and all other required equipment or facilities.
4. The discount rate shall be equal to the overall cost of capital allowed in the Company's last general rate case adjusted for taxes and depreciation.
5. The discount period shall be equal to the economic useful life of the investment in the mains and services.
6. Main extensions producing a positive net present value at the end of the discount period shall be considered economically feasible.

Main Extension Contract

To the extent the net present value computation produces a negative result:

1. The customer shall pay to the Company an amount equal to the negative net present value at the end of the discount period, plus any additional funds required to provide for the payment of resulting taxes. This payment may be made in a lump sum or in periodic payments (without interest) -- annual, monthly, etc.
2. If within three (3) years after the original installation, the customer making the payment adds additional major or minor appliances, the Company will refund to the customer (if paid in advance or credit his account if on extended terms), upon written request, an

amount equal to the net annual revenues anticipated to be realized from the usage of the additional appliance(s).

3. If within three years after the original installation additional customers are connected to the main then the Company shall refund (or credit his account) to customers making the payment, upon written request, an amount equal the net annual revenues anticipated to be realized from the additional customer(s).
4. In no case shall the customer making the payment be refunded more than he paid.

The above provisions assume that only one customer will make the payments. If two or more customers make the payment, the contract will be adjusted to reflect this fact; for example, if two customers made equal payments and a refund is due because one of the two has added an additional appliance, then the entire refund shall be paid to him.

Exceptions

This rule shall not be construed as prohibiting the Company from making extensions requiring larger investment than that specified above if the extension is made under more favorable terms to the customer and no discrimination is practiced between customers whose service requirements are similar.

The Company may also make exceptions to the main extension rule when system improvements are realized by the extension or when the extension would enhance the opportunity of adding new customers in the near future.

Main Relocation

If a customer requests a re-routing or relocation of a main located on a public right-of-way, the customer will be charged for this work. If the main is located on private property, such as an easement, railroad right-of-way, the case will be referred to the Engineering Department for determination as to whether a charge shall be made. The same will apply to relocations or re-routings requested by a contractor. Repairs to mains damaged by a contractor will be charged to the contractor on a "Time and Materials" basis.

Aboveground Facilities

If the above-ground facilities (such as post regulators, vent pipe, etc.) are so located that they seriously interfere with, or make impracticable, the owner's use of this property, the relocation of such facility will be done at no cost to the customer. An example of serious interference would be when the aboveground facility was located in front of a proposed narrow driveway. In all other cases, the cost of relocation will be charged to the customer. In those cases where it is difficult to determine whether the customer is to be charged for

the relocation, the decision shall be made by the Vice President of Tennessee Operations. The charge, unless specified for any of the above items, will be either of the following, at the customer's option, prior to commencement of work:

1. Estimated cost as determined by the Construction Department
2. Actual cost

Piedmont Natural Gas Company

Nashville Gas Company Service Regulations

Section 6 - Rules and Regulations Governing Supply & Consumption of Gas

The consumer agrees to the following rules and regulations, having made proper application and deposit for service with Nashville Gas Company.

1. Consumer is responsible for damage to any gas meter or equipment belonging to the Company placed on the premises occupied by the consumer and will immediately reimburse the Company for all costs of repairing or replacing same. In accordance with Item (1), Section 1220-4-5-. 18, Reasons for Denial of Service of the Tennessee Regulatory Authority's Rules and Regulations, a consumer may be refused service if consumer has damaged the Company's equipment or tampered with the lock on a meter. The Company will charge $45.00 for a broken meter lock.
2. Consumer will use gas supplied through Company's meter only. Use of other metering devices or bypassing equipment and tampering or adjustments on company-owned metering facilities by consumer are prohibited. The Company will not permit secondary meter billing.
3. In case the meter has failed to register the quantity of gas consumed, in whole or in part, the consumer will pay such reasonable sum as is ascertained to be due for the period involved.
4. The Company's authorized agents shall have access to consumer's premises at all reasonable times for the purpose of checking, reading, servicing, and disconnecting the meter; shutting off gas; and for such other purposes as the Company may deem advisable to protect its interests.
5. The Company shall be under no duty to inspect, repair, or maintain the service of other pipes, connections, equipment, or appliances located beyond the meter outlet on the premises of the consumer.
6. The consumer shall be liable and shall pay for all gas passing through the meter until it is turned off. When termination of service is requested, consumer must ensure that the Company receives either written or verbal notice at least two days prior to the desired date of termination. Access to the meter must be provided.
7. The consumer is entitled to the usual discount allowed by the Company if bills are paid within the first twelve days following the date bills are rendered. All gas bills are due when rendered and they will be considered as rendered when mailed to the address specified by the consumer. A residential, head of household consumer dependent on social security or other retirement check may request a net to gross

discount waiver. Qualified consumers will be granted a net to gross discount waiver and the account will be monitored for continuing compliance.

8. The Company shall have the right to shut off gas from any consumer who may be in arrears for a longer period than twenty days in paying for gas furnished hereunder or under any other prior or subsequent agreement, or for gas used by consumer at consumer's present or any prior or subsequent address, it being understood hereby that said twenty day period commences to run from date the bill is rendered as above defined. The Company will not shut off gas for non-payment without first mailing a notice to the consumer giving him seven days to pay for the bill in arrears.
9. The Company is authorized to require the consumer to make a deposit, or increase any existing deposit, in such amount as the Company deems proper for its protection before restoring gas service. The deposit amount will not exceed two consecutive billing periods or ninety (90) days, whichever is less.
10. If a consumer is found using gas service without having made proper application and deposit, a notice to the consumer will be delivered to the premises and the consumer will be allowed four days in which to make proper application before the service is discontinued.
11. All consumer deposits will accrue simple interest on the principal at the rate of six (6) percent per annum.
12. The Company will charge $50.00 for turning on a meter for an existing consumer or member of the same family or household at same address. This charge applies only to those consumers who have previously elected to have the meter turned off without discontinuing service or whose account has been closed because of non-payment of a bill.
13. In the event gas is shut off because of consumer's failure to pay, a charge will be made for each restoration. The Company will charge $50.00 plus payment of past due gas bills for turning on meters shut off for non-payment of bill. The Company will not be liable for damages for shutting off gas or for delay in restoring service. An additional deposit may also be required.
14. The consumer agrees to notify Company in advance of any planned change in physical premise or environment around meter or service to determine impact on safety cases, meter reading, and meter maintenance.
15. In the event the Company is unable, wholly or in part, by reason of force majeure to carry out its obligations to provide service, the obligations of the Company so far as they are affected by such force majeure, shall be suspended during the continuance of any inability so caused but for no longer period, and such cause shall as far as possible be remedied with all reasonable dispatch. The term "force majeure" as employed above shall mean acts of God; extreme weather conditions; strikes, lockouts, or other industrial disturbances; acts of the public enemy; war; blockades;

insurrections; riots; epidemics; landslides; lightning; earthquakes; fires; storms; floods; washouts; arrests and restraints of governments and people; civil disturbances; explosions; breakage of or accidents to machinery, lines of pipe, or the Company's peak shaving plants; freezing of wells or lines of reduction in gas pressure by its suppliers; inability to obtain rights-of-way, permits, materials, equipment, or supplies for use in the Company's peak shaving plants; and any other causes whether of the kind herein enumerated or otherwise, not within control of the Company, and which by the exercise of due diligence the Company is unable to prevent or overcome. It is understood and agreed that the settlement of strikes or lockouts shall be entirely within the discretion of the Company, and the above requirement that any force majeure shall be remedied with all reasonable dispatch shall not require the settlement of strikes or lockouts when such course is inadvisable in the discretion of the Company.

16. When the Company in its discretion determines that it is necessary to curtail service to maintain the integrity of its distribution system or to provide for its or the public's safety, the Company shall have the right to curtail delivery of gas to any consumer.

17. In the event of a failure or interruption of service, the Company shall use all reasonable diligence to remove the cause or causes thereof, but the Company shall not be liable for any loss or damage resulting from such failure or interruption due to accidents, force majeure, extreme weather conditions, or causes beyond its control.

Tennessee Regulatory Authority
Docket No. _____

In the Matter of	)
	)
Application of Nashville Gas Company, a	)
Division of Piedmont Natural Gas Com-	)
pany, Inc., for an Adjustment of its Rates	)
and Charges, the Approval of Revised	)
Tariffs and the Approval of Revised	)
Service Regulations	)

Testimony of Donald A. Murry
on Behalf of
Nashville Gas Company,
a Division of
Piedmont Natural Gas Company, Inc.

BEFORE THE
TENNESSEE REGULATORY AUTHORITY

PREPARED DIRECT TESTIMONY
OF
DONALD A. MURRY, Ph.D.

On Behalf of
NASHVILLE GAS COMPANY
A DIVISION OF
PIEDMONT NATURAL GAS COMPANY

Q. Please state your name and business address.

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

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

A. I am an economist with C. H. Guernsey & Company in Oklahoma City. I am also a Professor Emeritus at the University of Oklahoma.

Q. What is your educational background?

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

Q. Please describe your professional background that might be relevant to this proceeding.

A. From 1964 to 1974, I was on the faculty of the University of Missouri - St. Louis as an Assistant and Associate Professor and Director of Research. From 1974 through the present, I have been a Professor of Economics at the University of Oklahoma. Until 1978, I also served as Director of the Center for Economic and Management Research.

In each of these positions, I directed and performed academic and applied research projects related to energy and regulatory policy. During this time, I also served on several state and national committees associated with energy policy and regulatory matters and published and presented a number of papers in the field of regulatory economics in the energy industries.

Q. What is your professional experience in regulatory affairs?

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

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

A. Yes, I have appeared before the U.S. District Court-Western District of Louisiana, U.S. District Court-Western District of Oklahoma, District Court-Fourth Judicial District of Texas, U.S. Senate Select Committee on Small Business, Federal Power Commission,

Federal Energy Regulatory Commission, Interstate Commerce Commission, Alabama Public Service Commission, Alaska Public Utilities Commission, Arkansas Public Service Commission, Colorado Public Utilities Commission, Florida Public Service Commission, Georgia Public Service Commission, Illinois Commerce Commission, Iowa Commerce Commission, Kansas Corporation Commission, Kentucky Public Service Commission, Louisiana Public Service Commission, Maryland Public Service Commission, Missouri Public Service Commission, New York Public Service Commission, Power Authority of the State of New York, Nevada Public Service Commission, North Carolina Utilities Commission, Oklahoma Corporation Commission, South Carolina Public Service Commission, Tennessee Public Service Commission, Texas Public Utilities Commission, the Railroad Commission of Texas, the State Corporation Commission of Virginia and the Public Service Commission of Wyoming.

Q. What is the purpose of your testimony in this proceeding?

A. I have been retained by Piedmont Natural Gas Company ("Piedmont" or the "Company") to develop a recommended cost of capital. This recommended cost of capital is appropriate for Piedmont's proposed tariffs in this proceeding.

Q. How did you proceed in developing your recommended cost of capital?

A. First, I evaluated the capital structure in this procedure and the Piedmont cost of debt and common stock including the planned new security issues. As is common in this type of analysis, I devoted much of my effort to calculating the cost of the common stock equity component of Piedmont's capital structure. From these analyses, I determined a rate of return to recommend in this proceeding. I also evaluated my return recommendation in

light of the ongoing restructuring of the natural gas industry and the need to maintain the financial integrity of Piedmont's securities.

Q. Are you sponsoring any exhibits that accompany your testimony?

A. Yes. I am sponsoring the attached Exhibit DAM, which consists of 22 schedules.

Q. Were these schedules prepared by you or under your direction?

A. Yes.

Q. What is the rationale for regulation of public utilities and the setting of a rate of return?

A. In general, utilities are granted franchises, which, along with obligations to serve, usually give a company some exclusive rights to provide service in a given region. Thus, utilities are subject to price regulation designed to allow utilities to recover the costs of providing service and to earn a "fair" return on invested capital. Establishing this return is the purpose of my testimony.

Q. What is a fair rate of return for a regulated public utility?

A. A fair rate of return for a utility meets the standards of the United States Supreme Court decision in the *Bluefield Water Works and Improvement Company vs. Public Service Commission*, 262 U.S. 679 (1923) case (*Bluefield*), as further modified in the *Federal Power Commission vs. Hope Natural Gas Company*, 320 U.S. 591 (1944) (*Hope*). Following these precedents, it is a rate of return which provides earnings to investors similar to the alternative investments in companies of equivalent risk. Such a rate of return will allow a company to maintain its present capital and to attract additional capital on reasonable terms.

Q. How did you determine the return necessary to attract and maintain capital?

A. I used methods that rely on market valuations of common stock in the capital market. These methods all use market information in some manner in estimating the cost of capital. That in turn is the basis for measuring the return on investments required to support the utility's operations. This rationale is consistent with the economic rationale set forth in the *Hope* decision.

Q. Why is the *Hope* decision important?

A. That decision clarified the principle that a return should be set at a level that will instill investor confidence in the financial integrity of the company and provide a return sufficient to attract capital. A company will attract and maintain capital when the return on investment in the company is equal to the return from investment in businesses with comparable investment risks.

Q. In developing your analysis what steps did you follow?

A. First, I evaluated the capital structure of Piedmont that is relevant for this proceeding. Then I developed a cost of each of the components in the capital structure. Finally, based on this information and current market conditions and relevant risks, I developed my recommended return.

Q. What is the capital structure for Piedmont that is appropriate for this proceeding?

A. The appropriate capital structure for Piedmont is $377,568,915 long-term debt, $30,807,692 short-term debt and $490,496,702 in common stock equity. That results in a total capital of $898,873,310 for Piedmont. I have illustrated this capital structure on Schedule DAM-1. Since this is Piedmont's current capital structure, it is appropriate for this proceeding.

Q. What are the ratios of the capital components that you used in your analysis?

A. As the schedule shows, the long-term debt is 42.00 percent of the total capital. The short-term debt is 3.43 percent of total capital. Therefore, the common stock equity ratio is 54.57 percent.

Q. What is Piedmont's embedded cost of its long-term debt for this proceeding?

A. Piedmont's cost of long-term debt, which is the weighted cost of long-term debt, is 8.27 percent. The embedded cost of long-term debt, which is based on the annual cost of each of the outstanding issues, is shown in Schedule DAM-2.

Q. What is the justification for the level of Piedmont's common stock equity which you are recommending for use in this case?

A. The common stock equity at August 31, 1999 is $490,496,702. I have listed components of the common stock and retained earnings in Schedule DAM-3.

Q. What methods did you use to evaluate the cost of common stock of Piedmont?

A. Since the common stock of Piedmont is publicly traded, I used two market-based evaluations for analysis. I used the Discounted Cash Flow (DCF) technique, which relies on market prices and the stream of returns that an investor would anticipate when making an investment. I also used the Capital Asset Pricing Model (CAPM), which uses the current return to risk-free securities as an analytical basis and estimates the risk differential between that value and the security in question. In all of these studies, I developed analyses of the investment requirements of investors in Piedmont's securities.

Q. How did you determine the level of returns that might be necessary for a Piedmont investor?

A. In addition to the analyses of the cost of capital based on the DCF and the CAPM methods, I evaluated financial statistics of Piedmont, and I compared them to the

financial statistics of a group of other companies. For example, I developed the same cost of capital measures for a group of companies that are comparable to Piedmont. I also considered the special risk factors that affect the cost of capital of Piedmont. Finally, I evaluated the financial integrity of my recommendations as a measure of the adequacy of these recommendations.

Q. How did you evaluate the adequacy of your recommendation?

A. To assess the results of my analysis of Piedmont, I also reviewed the market risk and financial risk of Piedmont and compared these data to that of a group of comparable companies. As to the adequacy of my recommendation, I verified that my recommendation would meet the requirements of investors. The recommended return must be sufficient to maintain the financial integrity of the company, and the basic measures of this financial integrity are the measures of interest coverage.

Q. What was the group of companies that you used in your comparative analysis of common equity costs?

A. The firms that I used as comparative companies are AGL Resources, New Jersey Resources, NICOR, Inc., Northwest Natural Gas, Peoples Energy, and Washington Gas Light. This is a group of gas distribution companies which I selected, in part, because they are similar in many respects to Piedmont.

Q. What criteria did you use to select the comparative companies in your analysis?

A. I used five criteria. First, *Value Line* must list the company so the data source is common and forecasts are comparable. Second, the company cannot have any involvement currently in a merger that is obviously influencing the value of its security prices. Third, at least two-thirds of the company's revenues must come from regulated gas distribution

service. Fourth, the company must have a market capitalization between $650 million and $1.8 billion. Fifth, I tried to avoid regulatory conflict by not selecting companies that had operations in Tennessee.

Q. These companies are all larger than Nashville Gas Company, which is the company requesting a rate adjustment before the Commission. Do you think that it is appropriate to use companies that are so much larger as comparative companies in your analysis?

A. Because larger companies can raise capital at lower costs, at least in part because they have greater market presence, the use of these larger companies is a conservative approach in my analysis of the cost of capital of Nashville Gas. Consequently, I have recognized the relative size of Nashville Gas and these comparative companies in my judgment regarding the appropriate return.

Q. You indicated that you reviewed the capital structure of Piedmont. Did you evaluate the common stock equity level of Piedmont?

A. Yes. As Schedule DAM-4 shows, Piedmont's common stock equity ratio is similar to the equity ratios of the comparative companies.

Q. How does the common stock equity ratio of a utility affect its cost of capital?

A. In general, lower common stock equity ratios mean greater financial risk. The dividend payment is less protected. Greater financial risk means that investors will view those stocks as less attractive. This, of course, raises the cost of common stock.

Q. You stated that you used the DCF method to estimate the cost of capital. What are the principal characteristics of that method?

A. The Discounted Cash Flow method relies on market price information that reflects the value that investors place on an anticipated stream of returns. Those returns are expected

dividends and any capital gains. By relating its value, or price, to the expected income stream, an analyst can estimate the cost of common stock equity.

Since the investor anticipates a return from common stock of a stream of dividends and other returns, the present value of that stream of returns equals the price, at the margin, that an investor will pay for the security. Symbolically, if K is equal to the cost of common equity, $K = D/P + g$, where D = dividends, P = price per share, and g = rate of growth of dividends. That is, K is a capitalization rate that converts a stream of future returns (dividend and stock appreciation) to a current value.

Q. Since the DCF method is an expression of a theoretical relationship, how useful is it in practice ?

A. The DCF method is conceptually sound, and analysts generally accept the theory. Although they are likely to agree that it is sound conceptually, analysts differ in how to apply the theory. One area of controversy is the growth rate that represents the expectations by investors about future earnings streams. Because many factors may influence market price at any time, the estimate of the cost of capital is also sensitive to market changes. That creates a problem in interpreting the results for ratemaking purposes.

Q. You stated that the DCF method requires an analyst to evaluate the investor expectations of the earnings stream of a common stock investment. How does one determine an estimate of investor's expectations?

A. Investors develop expectations about future returns based on information that may come to them from various sources. This information may be historical; historical data reveals recent performance and trends. Information regarding projections of future earnings are

also available to investors. For example, it is reasonable to assume that rational investors will review earnings forecasts when they are evaluating a common stock investment.

Q. Is this the type of data that you used in your analysis of investor expectations?

A. Yes. For example, I used earnings growth and dividend growth data that are readily available to investors and which they commonly use. Earnings enable the payment of dividends, and a growth in earnings enables dividends to grow. Whether earnings are paid out in dividends or retained by a company, earnings growth will raise the value of a common stock. Both earnings growth and dividend growth are key variables that investors observe and financial analysts review as expected returns from an investment. For these reasons, I used both earnings growth and dividend growth from recognized, published sources.

Q. Did you use both historical and forecasted earnings and dividend growth rates in your analysis?

A. Yes. I analyzed growth in earnings per share, dividends per share, and book values for the most recent five-year and ten-year periods. In addition I used near-term earnings and dividend growth forecasts. The expected returns are often most important to investors so I analyzed them separately, as well.

Q. What did you determine from your study of the growth in earnings and dividends?

A. As shown in Schedule DAM-5, the earnings growth rates and dividend growth rates for Piedmont are both relatively high and similar. However, the earnings growth rates and the dividend growth rates for the comparative companies clearly differ by a large margin.

Q. How do you explain the divergence in the earnings and dividend growth rates in recent years and in their forecasts?

A. This pattern reflects company financial behavior, which I believe we could expect, under the increased competitive conditions in the gas industry. Increased competition increases the risk and the uncertainty of returns to the investors of gas distribution companies. Considering this added business uncertainty, management may conserve cash from earnings rather than raising cash dividends.

Q. What earnings and dividend forecasts did you use in your analysis?

A. I used forecasts from both the *Value Line* and *Standard & Poor's*, which reports the I/B/E/S forecasts, as representative of analysts' expectations for Piedmont. Both are readily available and used by analysts and investors.

Q. How will the high growth rate in earnings forecasted for these companies by both *Value Line* and *Standard & Poor's* affect investors?

A. I believe the high growth rate in earnings forecasted by both *Value Line* and *Standard & Poor's* will attract a new type of investor. It will attract investors looking for growth. On the other hand, it may discourage investors seeking stability over time. To some investors, this will likely diminish the relative attractiveness of gas distribution companies, including Piedmont. Inevitably, investors in gas distribution companies will change from investors seeking dividends to investors seeking appreciation in value.

Q. In your opinion, is this change in investor profile important?

A. Yes. Investors looking for earnings growth and relying less on dividends are deferring their current returns in exchange for the expected future return. In the long-term, they

will demand a higher return as a tradeoff for giving up more stable near-term returns. In fact, the earnings-dividend growth differential means that the investors already are facing this tradeoff between growth and stable earnings.

Q. What price information did you use in your DCF analyses?

A. Recognizing the volatility of the securities markets, I took a longer view than looking just at current market conditions. I developed DCF estimates of the cost of common stock using the range of market prices since the beginning of 1999. Also, I used price information from a recent two-week period to estimate a current cost of capital.

Q. What did you determine from your DCF analysis?

A. My Schedules DAM-6, DAM-7, DAM-8 show estimated costs of common stock using 1999 yields. With the earnings per share growth estimates, the DCF results range between 9.72 percent and 12.4 percent. Schedules DAM-9, DAM-10, and DAM-11 show DCF results between 12.02 percent and 10.27 percent using market prices from a recent two-week period.

Q. What did you observe in your DCF analysis that applied specifically to the Piedmont cost of common stock?

A. In comparison to the selected companies, Piedmont's historical earnings per share growth rates and forecasted growth rates are higher than the selected companies. Consequently, because of the attraction of investors to these growth rates, the dividend yields are somewhat lower than the comparative companies. This means that many investors are buying and holding the Piedmont stock in anticipation of growth rather than in anticipation of early dividends. Schedule DAM-12 is a summary of the DCF analyses

showing the differences between the current prices of the Company's stock and the prices throughout 1999.

Q. In evaluating these DCF results, what factors influenced your use of them in your analysis?

A. I considered the theoretical basis of the DCF methodology in interpreting these results and using these calculations to reach my recommendation. In theory, the DCF calculation produces a marginal cost measure of the cost of common stock. There is no margin for misinterpreting the DCF results and setting the allowed return at a level below the true cost of capital. Therefore, analysts often adjust the results of the mechanical calculations in light of the theoretical basis of the DCF. For example, some analysts compensate for this shortcoming by applying either a flotation or market pressure adjustment, or both, to the results from their DCF calculations.

Q. Did you calculate a separate flotation or market pressure adjustment?

A. No, I did not. The need to raise capital in the future is important in evaluating these DCF results. I considered this need, and the theoretical basis of the DCF method, in determining my recommended return.

Q. Previously, in discussing the techniques that you used in your analysis, you stated that you used the Capital Asset Pricing Model or CAPM model. What is the CAPM model?

A. The CAPM model is based on an investor's ability to diversify by combining risky securities into an investment portfolio. The diversification of investments in this way reduces the overall risk to the investor. However, some risk is non-diversifiable, such as the market risk. Investors remain exposed to that market risk.

The formal CAPM model is expressed as:

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

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

Note that the value of market risk is the differential between the market rate and the risk-free rate. Beta is the relative measure of this risk of securities. One can interpret beta as the relationship between an individual security and the market as a whole. The Capital Asset Pricing Model is useful because it can effectively link the incremental cost of capital of an individual company with the risk differential between that company and the market as a whole.

Q. How did you apply the theory of the CAPM model in your analysis?

A. I developed two different CAPM measures. First, I developed a standard historical CAPM analysis. Then, because of recognized biases in the CAPM method, I also developed a size-adjusted CAPM analysis. This second technique compensates for bias in company size. That bias is important in ratemaking when comparing smaller companies to larger companies.

Q. Since Nashville Gas is a much smaller company than Piedmont and the comparative companies that you used in your analysis, did this size adjustment compensate for the relative risks in this case?

A No, in this case the adjustment does not account for the size adjustment for a small company such as Nashville. However, since Piedmont raises the capital for Nashville, this differential is not as significant as it would be for a stand-alone company. I do not

believe that the entire size adjustment is appropriate in this case. Because of the size bias of the CAPM method, the results of my analysis using Piedmont data are undoubtedly conservative estimates of the cost of capital of Nashville Gas.

Q. You stated that you developed a standard historical CAPM analysis. What were the results of that analysis?

A. Using a risk-free rate of long-term government securities, the current betas, and the current market rate of the cost of capital for Piedmont, the historical CAPM analysis results for Piedmont are 12.45 percent. The results of that analysis are shown in Schedule DAM-13. As shown, the beta for Piedmont is only .55 which is lower than the betas for all of the comparative companies. The beta is a measure of market price volatility, and the lower the beta the lower the market risk, and the lower the estimated cost of capital. Because of this low beta the Piedmont cost of capital is lower than the average for the comparative companies, which is 13.06 percent using this CAPM method.

Q. You stated that you also developed a size-adjusted CAPM analysis. What were the results of that calculation?

A. In a second CAPM analysis, which is a method that compensates for the risk associated with the size of a company, I calculated a cost of common equity for Piedmont. This estimate of 11.33 percent, as shown in Schedule DAM-14, is lower than the comparative companies' average of 12.06 percent. Again this lower estimate for Piedmont is because of the relatively low beta of Piedmont.

Q. In reaching your recommended return, what other factors did you consider?

A. As I stated previously, I recognized the analytical characteristics of the DCF and the CAPM methodologies. I considered the current market conditions, and I considered the current financial market's assessment of the changing risks in the gas distribution industry. Of course, these changes were brought about by the increasing competition faced by many companies in the industry.

Q. How does this increased competition affect your recommendation for a return on common stock?

A. The measured cost of capital reflects the investor's evaluation of the market structure and investor's interpretation of the financial and business risks of the investment. Consequently, I also evaluated how investors were compensating for these risks.

Q. What risks of competition did you consider?

A. I considered a number of risks that currently affect gas distribution companies because of the increased competition in the gas industry. First, there was the deregulation of pipelines, and for distributors, the increased risks in acquiring gas and uncertainties about gas price passthroughs. Now the gas distributors are facing increased competition for end-use customers. As the investors are becoming aware of the implications of competition in the retail market, they assess the associated risks. Investors will embody those risks by discounting their expected future returns in determining the current market values of securities.

Q. To your knowledge, is there evidence that Nashville is likely to be impacted by the increased competition in the gas distribution sector?

A. There is at least one major customer of Nashville Gas that will have the opportunity to renegotiate its contract in the near future. The threat of an adjustment to the forecasted revenue in this proceeding is one such competitive risk faced by investors in Nashville Gas.

Q. Do you believe that investors have taken these risks into account?

A. I believe that knowledgeable investors are aware of these risks, and they are taking them into account in their investment decisions. As they become aware of risks, investors will account for them by discounting the expected returns. This discounting will show up as lower market prices for securities.

Q. Do you believe that this is the case for the investors in gas distribution companies presently?

A. I believe that investors are recognizing the general movement to deregulation in the natural gas industry, and I believe that the markets are recognizing these risks more and more as the effects become apparent. Investors have recognized the risks to transmission companies previously, and the market performance of gas distribution companies are now indicating an investor awareness in this sector, as well.

Q. How do you know that the investors have been able to distinguish between the risks and returns of the gas distribution companies and the transmission companies?

A. I compared the market performance of the gas distribution companies and the gas transmission companies over the past year. Schedule DAM-15 illustrates that the transmission companies have experienced the same relative price appreciation as the Dow Jones Industrial Index. The gas distribution companies, at least until recently, have

lagged the transmission companies market performance. Generally, in recent months, investors have found the common stock of gas distribution companies less attractive investments than the stock of gas transmission companies and the industrial companies. The prices of the stocks reflect their relative attractiveness.

Q. Do you know what may have caused these market differences?

A. Although I cannot be certain, the relevant difference may be the investor's perceptions of the relative risks. For example, the common stocks of the gas transmission companies began tracking the increases in the industrial index subsequent to deregulation. The gas distribution companies stocks did not.

Q. How has Piedmont' common stock fared during this period?

A. Schedule DAM-16 shows that during the past 12 months Piedmont's common stock has lagged the Dow Jones Utility Index.

Q. You stated previously that you specifically reviewed the risk of Piedmont. What analyses did you perform?

A. I compared several financial statistics of Piedmont to those of the comparative companies. Several of these indicate the relative risks to investors.

Q. What did these comparisons show?

A. As Schedule DAM-17 shows, historically Piedmont has had a higher price-earnings ratio relative to the comparative companies; however, there was a shift in 1997-98. In that period, the price earnings ratio of Piedmont fell below that of the comparative companies. This means that the market was now valuing Piedmont's earnings at a relatively lower level than previously. Schedule DAM-18 illustrates the historical

dividend yields of these same companies, and it illustrates the shift in 1997-98. Piedmont also has had lower yields than the comparative companies for the past five years. Although *Value Line's* safety rank of Piedmont is similar to the safety rank of the comparative companies, *Value Line* has identified an investment in Piedmont's common stock as untimely. See Schedules DAM-19 and DAM-20.

Q. What is the *Value Line* Timeliness ranking?

A. The Timeliness ranking of 1 (highest) is the "... best choice for the typical investor ..." at an acceptable level of risk.

Q. What is the *Value Line* Safety ranking?

A. The Safety ranking of 1 (highest) is the "... safest, most stable, least risky. . ." common stock investments when risk is measured by the company's financial strength and stock's price stability. The rank of 5 is probably one of the riskiest, least safe common stock investments.

Q. Do you think that these measures are appropriate measures of the risk as assessment of the cost of capital in this proceeding?

A. These are appropriate measures of risk of Piedmont's securities. It is important to note that the cost of capital that I have evaluated for this proceeding is primarily based on the cost of capital of Piedmont. Using Piedmont's financial statistics to assess the risk of investing in Nashville Gas Company is appropriate, but it is a very conservative method for estimating the cost of capital in this proceeding.

Q. What is your recommendation for a return in this proceeding?

A. Based on the DCF analysis, the CAPM analysis and the current market conditions, I believe that the cost of capital for Nashville Gas Company in this proceeding falls in the range of 12.0 to 12.5 percent. Since the statistics that I used to evaluate this cost of capital of Nashville Gas were all Piedmont's, and because of the current conditions, I believe that the rate of return on common stock in this proceeding should be at the high end of this range, or 12.5 percent.

Q. Based on your analysis, what is your recommended return on total capital?

A. My recommended return on total capital is 10.50 percent, which Schedule DAM-21 illustrates.

Q. When you said that you considered current market conditions in determining your recommended return, what conditions were you referring to?

A. The Federal Reserve actions have increased the level of interest rates three times in the last several months. Consequently, because gas distribution companies of common stocks are interest-rate sensitive, the costs of equity capital for gas distribution companies are trending upward.

Q. How did you evaluate whether or not your recommended return was sufficient to attract and retain capital investment in Nashville?

A. Although the risks to capital invested in Nashville Gas are certainly higher than the risks of capital invested in Piedmont, I believe that the interest coverage ratio of Piedmont from this recommended return level is an appropriate measure of the adequacy of my recommended return. For example, the After-Tax Interest Coverage at 12.5 percent return on common stock is 2.96 times. This is shown in Schedule DAM-22. I believe that this

coverage ratio is adequate and appropriate. Note that this coverage is equal to the average of the comparative companies.

Q. Does this conclude your testimony?

A. Yes, it does.

AFFIDAVIT

STATE OF OKLAHOMA)
) SS
COUNTY OF OKLAHOMA)

Before me, the undersigned Notary Public, personally appeared DONALD A. MURRY, who being duly sworn on oath deposes and says that the foregoing prepared testimony and statement of facts contained therein are true and correct to the best of his knowledge, information and belief.

Donald A. Murry

Subscribed and sworn to before me this 3rd day of December, 1999.

Notary Public

My Commission Expires:
October 5, 2002

Nashville Natural Gas Company

A Division of Piedmont Natural Gas

Schedule DAM-1:	Thirteen Month Average Capital Structure
Schedule DAM-2:	Long Term Debt
Schedule DAM-3:	Common Equity
Schedule DAM-4:	Comparison of Common Equity Ratios
Schedule DAM-5:	DCF Growth Rate Summary
Schedule DAM-6:	1999 DCF Using Dividend per Share Growth Rates
Schedule DAM-7:	1999 DCF Using Earnings per Share Growth Rates
Schedule DAM-8:	1999 DCF Using Projected Earnings Growth Rates
Schedule DAM-9:	Current DCF Using Dividend per Share Growth Rates
Schedule DAM-10:	Current DCF Using Earnings per Share Growth Rates
Schedule DAM-11:	Current DCF Using Projected Earnings Growth Rates
Schedule DAM-12:	Summary of Discounted Cash Flow Analysis
Schedule DAM-13:	Historical Capital Asset Pricing Model
Schedule DAM-14:	Size-Adjusted Capital Asset Pricing Model
Schedule DAM-15:	Comparison of Price Appreciation of Mergent's Gas Companies
Schedule DAM-16:	Comparison of Piedmont Stock Price Appreciation and the Dow Jones Industrial Average
Schedule DAM-17:	Comparison of Price Earnings Ratios
Schedule DAM-18:	Comparison of Dividend Yields
Schedule DAM-19:	Comparison of Value Line's Safety Rank
Schedule DAM-20:	Comparison of Value Line's Timeliness Rank
Schedule DAM-21:	Proposed Capital Structure and Cost of Capital
Schedule DAM-22:	After Tax Times Interest Earned Ratios

Nashville Gas Company

A Division of Piedmont Natural Gas Company

Capitalization

Thirteen Months Average for the Period Ended August 31, 1999

	Average	Ratio
Long-Term Debt	$377,568,915	42.00%
Short-Term Debt	30,807,692	3.43%
Common Equity	490,496,702	54.57%
Total	$898,873,309	100.00%

Source: Piedmont Natural Gas Company Work Papers

Nashville Gas Company

A Division of Piedmont Natural Gas Company

Capitalization - Test Period Ended August 31, 1999

Embedded Cost of Long-Term Debt

Account #	Description	Thirteen Months Average	A Annual Cost	B Amortization of Debt Expense	C Total Annual Cost
Senior Notes:					
22415	9.19%, due 2001	30,000,000	2,757,000	0	2,757,000
22412	10.02%, due 2003	19,692,308	1,973,169	10,140	1,983,309
22413	10.06%, due 2004	11,538,462	1,160,769	0	1,160,769
22414	10.11%, due 2004	23,692,308	2,395,292	3,576	2,398,868
22416	9.44%, due 2006	35,000,000	3,304,000	0	3,304,000
22422	8.51%, due 2017	35,000,000	2,978,500	2,436	2,980,936
Medium-Term Notes:					
22423	6.23%, due 2003	45,000,000	2,803,500	37,815	2,841,315
22425	6.87%, due 2023	45,000,000	3,091,500	14,430	3,105,930
22426	8.45%, due 2024	40,000,000	3,380,000	12,892	3,392,892
22409	7.40%, due 2025	55,000,000	4,070,000	17,278	4,087,278
22421	7.50%, due 2026	40,000,000	3,000,000	11,820	3,011,820
Debentures:					
18128	8.9%	0	0	43,572	43,572
18136	8.9% redemption premium	0	0	149,909	149,909
	Total	379,923,077	30,913,731	303,867	31,217,598
Less Unamortized Debt Expense		(2,354,161)			
	Total Long-Term Debt	377,568,915			
Embedded Cost of Long-Term Debt					8.27%

Source: Piedmont Natural Gas Company Work Papers

Nashville Gas Company

A Division of Piedmont Natural Gas Company

Capitalization - Test Period Ended August 31, 1999

Common Stock Equity

	13 Month Average
Common Stock	285,299,244
Retained Earnings	205,197,458
Total Common Equity	490,496,702

Source: Piedmont Natural Gas Company Work Papers

Nashville Gas Company

A Division of Piedmont Natural Gas

Equity Ratio Comparison for the Past Five Years

	1994	1995	1996	1997	1998	Five Year Average
Piedmont Natural Gas	49.1%	49.6%	49.7%	52.4%	55.3%	51.2%
AGL Resources	45.8%	47.6%	48.9%	45.9%	47.1%	47.1%
New Jersey Resources	42.0%	41.0%	45.8%	47.1%	45.6%	44.3%
NICOR, Incorporated	59.3%	59.0%	58.1%	57.2%	57.4%	58.2%
Northwest Natural Gas	45.1%	50.3%	52.8%	49.0%	50.6%	49.6%
Peoples Energy	50.6%	50.8%	56.4%	57.6%	58.9%	54.9%
Washington Gas Light	56.7%	58.9%	59.4%	56.2%	57.1%	57.7%
Comparable Companies' Average	49.9%	51.3%	53.6%	52.2%	54.2%	52.2%

Source: Value Line Investment Survey

Schedule DAM-4

Nashville Gas Company

Comparable Local Distribution Companies

Growth Rate Summary

	1994 TO 2003 Estimate			Value Line Five Year Historical			Projections Value Line		S & P
	E/S	D/S	BK Value	E/S	D/S	BK Value	E/S	D/S	E/S
Piedmont Natural Gas	7.6%	5.2%	6.3%	8.0%	6.0%	6.5%	7.0%	4.5%	6.0%
AGL Resources	5.0%	1.6%	3.9%	5.0%	1.0%	2.5%	5.5%	2.0%	5.0%
New Jersey Resources	7.0%	2.5%	5.5%	9.5%	1.0%	2.5%	7.5%	3.0%	6.0%
NICOR, Inc.	6.1%	4.8%	4.7%	5.0%	3.5%	4.0%	7.5%	4.5%	7.0%
Northwest Natural Gas	3.4%	1.6%	4.7%	8.5%	1.0%	5.0%	6.0%	2.0%	4.0%
Peoples Energy	5.9%	1.9%	4.0%	5.0%	1.5%	3.0%	4.0%	2.0%	5.0%
Washington Gas Light	5.7%	2.2%	4.9%	7.0%	2.0%	5.0%	4.5%	2.5%	5.0%
Comparable Companies' Average	5.52%	2.43%	4.63%	6.67%	1.67%	3.67%	5.83%	2.67%	5.33%

Sources : Value Line Investment Survey
Standard & Poor's Earnings Guide

Schedule DAM-5

Nashville Gas Company

Comparable Local Distribution Companies

1999 Cost of Capital

	Share Prices High	Share Prices Low	1999 Dividend	1999 Yields High	1999 Yields Low	1993-95 Dividend	2002-04E Dividend	Growth Rate	Cost of Capital High	Cost of Capital Low
Piedmont Natural Gas	36.60	28.60	1.36	4.76%	3.72%	1.02	1.60	5.17%	9.92%	8.88%
AGL Resources	23.40	16.80	1.08	6.43%	4.62%	1.04	1.20	1.60%	8.03%	6.22%
New Jersey Resources	40.10	33.60	1.68	5.00%	4.19%	1.52	1.90	2.51%	7.51%	6.70%
NICOR, Inc.	42.90	34.10	1.54	4.52%	3.59%	1.25	1.90	4.76%	9.28%	8.35%
Northwest Natural Gas	27.90	19.50	1.23	6.31%	4.41%	1.17	1.35	1.57%	7.88%	5.98%
Peoples Energy	40.30	31.80	1.95	6.13%	4.84%	1.79	2.12	1.88%	8.01%	6.72%
Washington Gas Light	28.90	21.00	1.22	5.81%	4.22%	1.11	1.35	2.23%	8.04%	6.45%
Comparable Companies' Average	33.92	26.13	1.45	5.70%	4.31%	1.31	1.64	2.43%	8.12%	6.74%

Source : Value Line Investment Survey

Schedule DAM-6

Nashville Gas Company

Comparable Local Distribution Companies

1999 Cost of Capital

	Share Prices		1999	1999 Yields		1993-95	2002-04E	Growth	Cost of Capital	
	High	Low	Dividend	High	Low	EPS	EPS	Rate	High	Low
Piedmont Natural Gas	36.60	28.60	1.36	4.76%	3.72%	1.42	2.75	7.65%	12.40%	11.36%
AGL Resources	23.40	16.80	1.08	6.43%	4.62%	1.19	1.85	4.99%	11.42%	9.61%
New Jersey Resources	40.10	33.60	1.68	5.00%	4.19%	1.85	3.40	7.02%	12.02%	11.21%
NICOR, Inc.	42.90	34.10	1.54	4.52%	3.59%	2.00	3.40	6.07%	10.59%	9.66%
Northwest Natural Gas	27.90	19.50	1.23	6.31%	4.41%	1.66	2.25	3.44%	9.74%	7.85%
Peoples Energy	40.30	31.80	1.95	6.13%	4.84%	2.01	3.35	5.86%	11.99%	10.70%
Washington Gas Light	28.90	21.00	1.22	5.81%	4.22%	1.39	2.30	5.73%	11.54%	9.95%
Comparable Companies' Average	33.92	26.13	1.45	5.70%	4.31%	1.68	2.76	5.52%	11.22%	9.83%

Source : Value Line Investment Survey

Schedule DAM-7

Nashville Gas Company

Comparable Local Distribution Companies

1999 Cost of Capital

	Share Prices		1999	1999 Yields		EPS Estimates		Cost of Capital	
	High	Low	Dividend	High	Low	Value Line	S&P	High	Low
Piedmont Natural Gas	36.60	28.60	1.36	4.76%	3.72%	7.00%	6.00%	11.76%	9.72%
AGL Resources	23.40	16.80	1.08	6.43%	4.62%	5.50%	5.00%	11.93%	9.62%
New Jersey Resources	40.10	33.60	1.68	5.00%	4.19%	7.50%	6.00%	12.50%	10.19%
NICOR, Inc.	42.90	34.10	1.54	4.52%	3.59%	7.50%	7.00%	12.02%	10.59%
Northwest Natural Gas	27.90	19.50	1.23	6.31%	4.41%	6.00%	4.00%	12.31%	8.41%
Peoples Energy	40.30	31.80	1.95	6.13%	4.84%	4.00%	5.00%	11.13%	8.84%
Washington Gas Light	28.90	21.00	1.22	5.81%	4.22%	4.50%	5.00%	10.81%	8.72%
Comparable Companies' Average	33.92	26.13	1.45	5.70%	4.31%	5.83%	5.33%	11.78%	9.39%

Sources : Value Line Investment Survey
Standard & Poor's Earnings Guide

Schedule DAM-8

Nashville Gas Company

Comparable Local Distribution Companies

Current Cost of Capital

	Share Prices		Current	Current Yields		1993-95	2002-04E	Growth	Cost of Capital	
	High	Low	Dividend	High	Low	Dividend	Dividend	Rate	High	Low
Piedmont Natural Gas	31.84	31.14	1.36	4.37%	4.27%	1.02	1.60	5.17%	9.53%	9.44%
AGL Resources	17.29	16.80	1.08	6.43%	6.25%	1.04	1.20	1.60%	8.03%	7.85%
New Jersey Resources	40.66	40.11	1.68	4.19%	4.13%	1.52	1.90	2.51%	6.70%	6.64%
NICOR, Inc.	38.42	37.51	1.54	4.11%	4.01%	1.25	1.90	4.76%	8.87%	8.77%
Northwest Natural Gas	25.86	25.24	1.23	4.87%	4.76%	1.17	1.35	1.57%	6.44%	6.33%
Peoples Energy	36.78	35.88	1.95	5.44%	5.30%	1.79	2.12	1.88%	7.31%	7.18%
Washington Gas Light	26.18	25.64	1.22	4.76%	4.66%	1.11	1.35	2.23%	6.99%	6.89%
Comparable Companies' Average	30.86	30.20	1.45	4.97%	4.85%	1.31	1.64	2.43%	7.39%	7.28%

Sources:
Value Line Investment Survey
Wall Street Journal

Schedule DAM-9

Nashville Gas Company

Comparable Local Distribution Companies

Current Cost of Capital

	Share Prices		Current	Current Yields		1993-95	2002-04E	Growth	Cost of Capital	
	High	Low	Dividend	High	Low	EPS	EPS	Rate	High	Low
Piedmont Natural Gas	31.84	31.14	1.36	4.37%	4.27%	1.42	2.75	7.65%	12.02%	11.92%
AGL Resources	17.29	16.80	1.08	6.43%	6.25%	1.19	1.85	4.99%	11.42%	11.24%
New Jersey Resources	40.66	40.11	1.68	4.19%	4.13%	1.85	3.40	7.02%	11.21%	11.15%
NICOR, Inc.	38.42	37.51	1.54	4.11%	4.01%	2.00	3.40	6.07%	10.18%	10.08%
Northwest Natural Gas	25.86	25.24	1.23	4.87%	4.76%	1.66	2.25	3.44%	8.31%	8.19%
Peoples Energy	36.78	35.88	1.95	5.44%	5.30%	2.01	3.35	5.86%	11.30%	11.16%
Washington Gas Light	26.18	25.64	1.22	4.76%	4.66%	1.39	2.30	5.73%	10.49%	10.39%
Comparable Companies' Average	30.86	30.20	1.45	4.97%	4.85%	1.68	2.76	5.52%	10.48%	10.37%

Sources:
Value Line Investment Survey
Wall Street Journal

Schedule DAM-10

Nashville Gas Company

Comparable Local Distribution Companies

Current Cost of Capital

	Share Prices		Current	Current Yields		EPS Estimates		Cost of Capital	
	High	Low	Dividend	High	Low	Value Line	S&P	High	Low
Piedmont Natural Gas	31.84	31.14	1.36	4.37%	4.27%	7.00%	6.00%	11.37%	10.27%
AGL Resources	17.29	16.80	1.08	6.43%	6.25%	5.50%	5.00%	11.93%	11.25%
New Jersey Resources	40.66	40.11	1.68	4.19%	4.13%	7.50%	6.00%	11.69%	10.13%
NICOR, Inc.	38.42	37.51	1.54	4.11%	4.01%	7.50%	7.00%	11.61%	11.01%
Northwest Natural Gas	25.86	25.24	1.23	4.87%	4.76%	6.00%	4.00%	10.87%	8.76%
Peoples Energy	36.78	35.88	1.95	5.44%	5.30%	4.00%	5.00%	10.44%	9.30%
Washington Gas Light	26.18	25.64	1.22	4.76%	4.66%	4.50%	5.00%	9.76%	9.16%
Comparable Companies' Average	30.86	30.20	1.45	4.97%	4.85%	5.83%	5.33%	11.05%	9.93%

Sources : Value Line Investment Survey
Standard & Poor's Earnings Guide
Wall Street Journal

Schedule DAM-11

Nashville Gas Company

A Division of Piedmont Natural Gas Company

Summary of Discounted Cash Flow Analysis

	DCF Range	
	High	Low
Using 1999 Dividend Yields		
Piedmont Natural Gas	12.40%	8.88%
Comparable Companies' Average	11.78%	6.74%
Using Current Dividend Yields		
Piedmont Natural Gas	12.02%	9.44%
Comparable Companies' Average	11.05%	7.28%

Sources : Schedules DAM-4 through DAM-11

Nashville Gas Company

Comparable Local Distribution Companies

Cost of Equity : Historical Capital Asset Pricing Model

	Market Total Returns	Long-Term Corporate Bonds Return	Risk Premium	Beta	Adjusted Risk Premium	Aaa Corporate Bonds Return	Cost of Equity
Piedmont Natural Gas Company	15.30%	6.10%	9.20%	0.55	5.06%	7.39%	12.45%
AGL Resources	15.30%	6.10%	9.20%	0.65	5.98%	7.39%	13.37%
New Jersey Resources	15.30%	6.10%	9.20%	0.55	5.06%	7.39%	12.45%
NICOR, Inc.	15.30%	6.10%	9.20%	0.60	5.52%	7.39%	12.91%
Northwest Natural Gas	15.30%	6.10%	9.20%	0.60	5.52%	7.39%	12.91%
Peoples Energy	15.30%	6.10%	9.20%	0.75	6.90%	7.39%	14.29%
Washington Gas Light	15.30%	6.10%	9.20%	0.55	5.06%	7.39%	12.45%
Moody's Companies' Average	15.30%	6.10%	9.20%	0.62	5.67%	7.39%	13.06%

Sources :
Value Line Investment Survey
Ibbotson Associates 1999 SBBI Yearbook
Federal Reserve Statistical Release

Schedule DAM-13

Nashville Gas Company

Comparable Local Distribution Companies

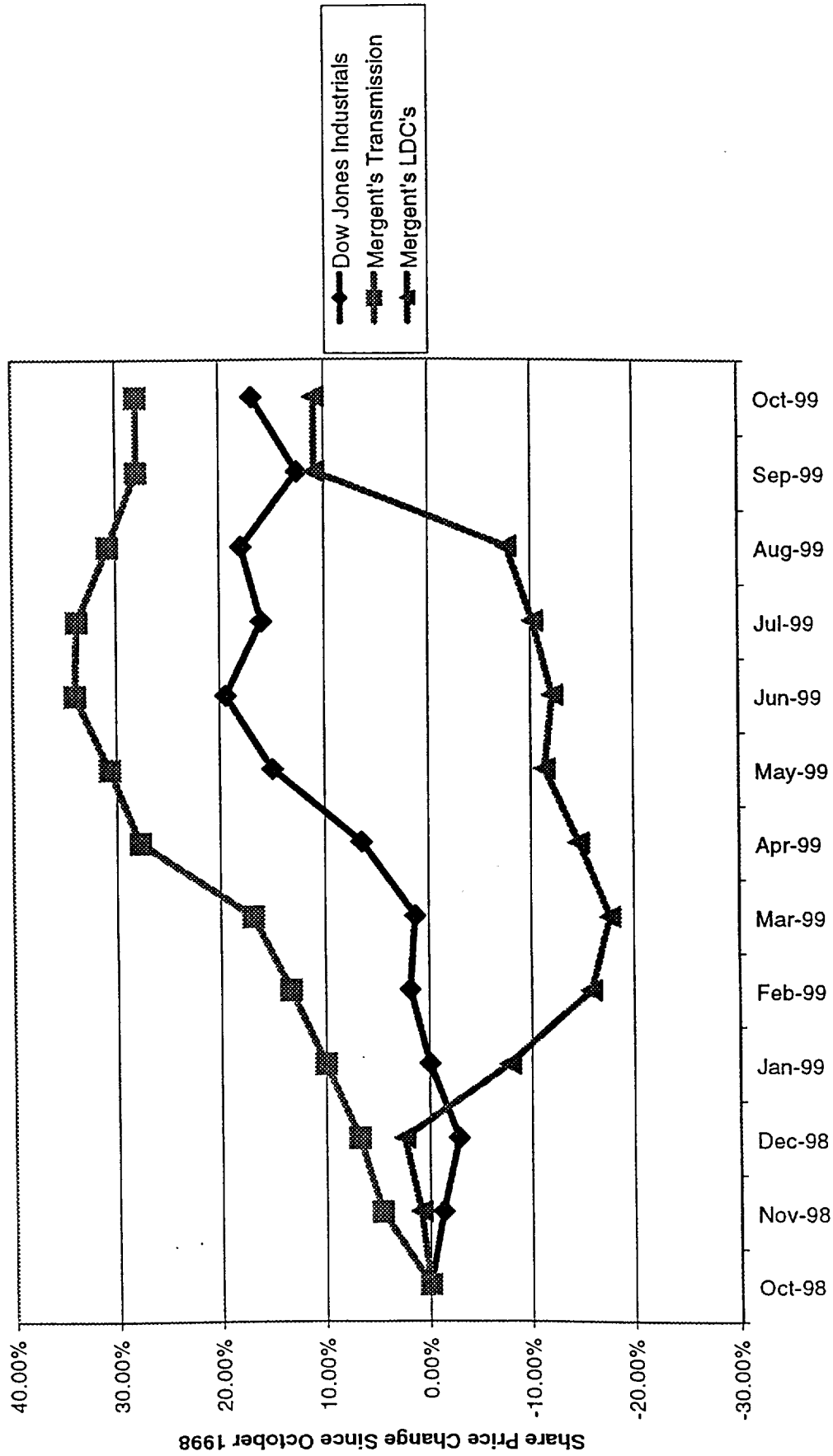
Cost of Equity : Size Adjusted Capital Asset Pricing Model

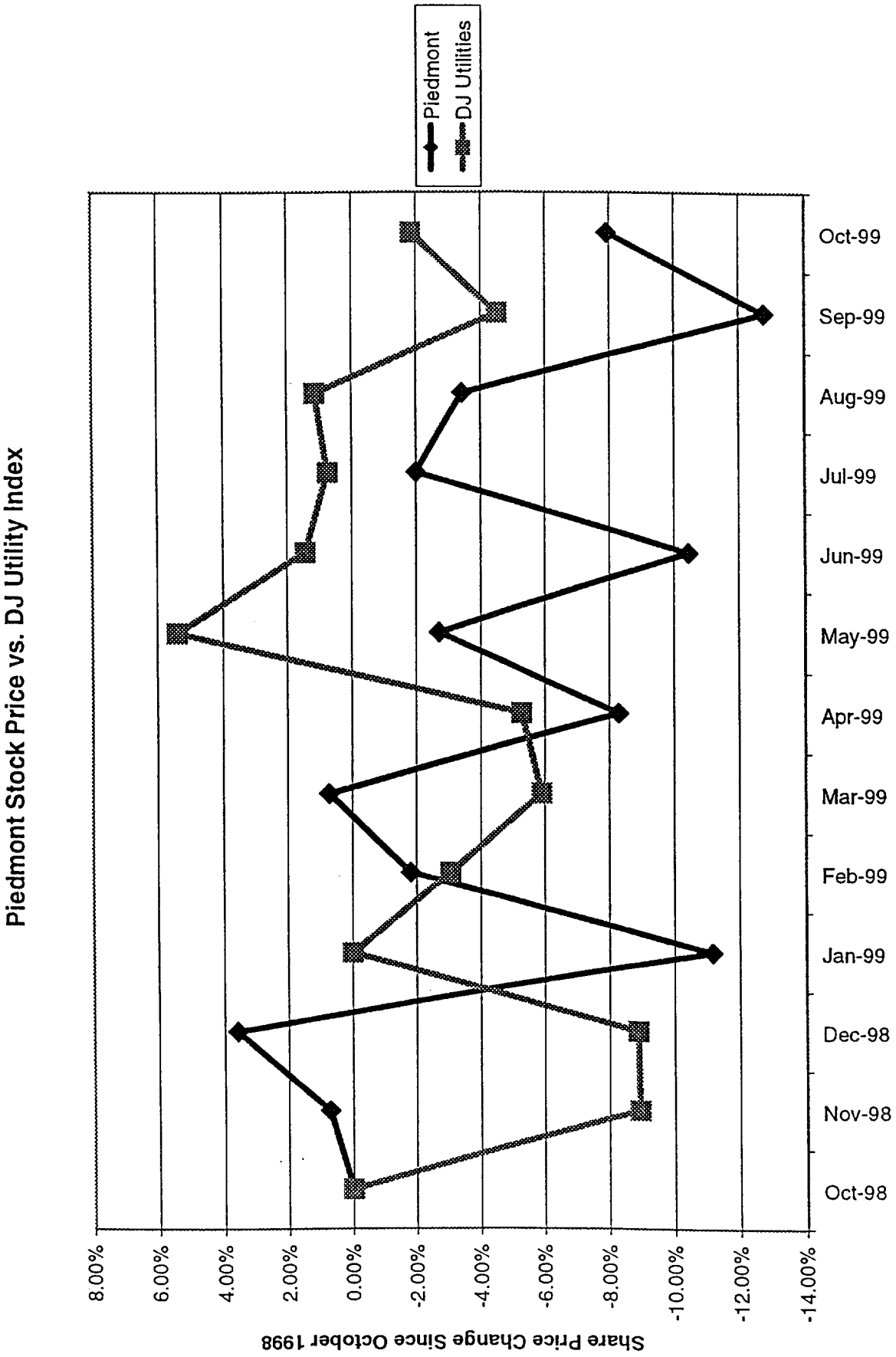
	Risk Free Return	Beta	Equity Risk Premium	Adjusted Equity Risk Premium	Size Premium	Cost of Equity
Piedmont Natural Gas Company	6.43%	0.55	8.00%	4.40%	0.50%	11.33%
AGL Resources	6.43%	0.65	8.00%	5.20%	0.50%	12.13%
New Jersey Resources	6.43%	0.55	8.00%	4.40%	1.10%	11.93%
NICOR, Inc.	6.43%	0.60	8.00%	4.80%	0.50%	11.73%
Northwest Natural Gas	6.43%	0.60	8.00%	4.80%	1.10%	12.33%
Peoples Energy	6.43%	0.75	8.00%	6.00%	0.50%	12.93%
Washington Gas Light	6.43%	0.55	8.00%	4.40%	0.50%	11.33%
Moody's Companies' Average	6.43%	0.62	8.00%	4.93%	0.70%	12.06%

Sources :
Value Line Investment Survey
Ibbotson Associates 1999 SBBI Yearbook
Federal Reserve Statistical Release

Schedule DAM-14

Comparison of Price Appreciation for Mergent's Gas Companies




Piedmont Stock Price vs. DJ Utility Index
Piedmont
DJ Utilities
Share Price Change Since October 1998
8.00%
6.00%
4.00%
2.00%
0.00%
-2.00%
-4.00%
-6.00%
-8.00%
-10.00%
-12.00%
-14.00%
Oct-99
Sep-99
Aug-99
Jul-99
Jun-99
May-99
Apr-99
Mar-99
Feb-99
Jan-99
Dec-98
Nov-98
Oct-98

Nashville Gas Company

A Division of Piedmont Natural Gas

Price / Earnings Ratios Comparison for the Past Five Years

	1994	1995	1996	1997	1998	Five Year Average
Piedmont Natural Gas	15.7	13.8	13.9	13.6	16.3	14.7
AGL Resources	15.1	12.6	13.8	14.7	13.9	14.0
New Jersey Resources	13.0	11.7	13.6	13.5	15.3	13.4
NICOR, Incorporated	12.5	13.1	12.5	14.2	17.6	14.0
Northwest Natural Gas	13.0	12.9	11.7	14.4	26.7	15.7
Peoples Energy	13.3	14.7	10.7	12.7	16.2	13.5
Washington Gas Light	14.0	12.7	11.5	12.7	17.2	13.6
Comparable Companies' Average	13.5	13.0	12.3	13.7	18.3	14.2

Source: Value Line Investment Survey

Schedule DAM-17

Nashville Gas Company

A Division of Piedmont Natural Gas

Dividend Yield Comparison for the Past Five Years

	1994	1995	1996	1997	1998	Five Year Average
Piedmont Natural Gas	4.8%	5.4%	4.9%	4.8%	4.0%	4.8%
AGL Resources	5.9%	6.2%	5.6%	5.4%	5.5%	5.7%
New Jersey Resources	6.2%	6.7%	5.6%	5.3%	4.6%	5.7%
NICOR, Incorporated	4.8%	5.0%	4.4%	3.9%	3.6%	4.3%
Northwest Natural Gas	5.5%	5.7%	5.2%	4.8%	4.5%	5.1%
Peoples Energy	6.3%	6.9%	5.7%	5.2%	5.2%	5.9%
Washington Gas Light	5.6%	6.1%	5.4%	5.0%	4.5%	5.3%
Comparable Companies' Average	5.7%	6.1%	5.3%	4.9%	4.7%	5.3%

Source: Value Line Investment Survey

Schedule DAM-18

Nashville Gas Company

A Division of Piedmont Natural Gas

Comparison of Value Line's Safety Rank

	Safety Rank
Piedmont Natural Gas	2
AGL Resources	2
New Jersey Resources	2
NICOR, Incorporated	1
Northwest Natural Gas	2
Peoples Energy	1
Washington Gas Light	1
Comparable Companies' Average	1.5

Source: Value Line Investment Survey

Nashville Gas Company

A Division of Piedmont Natural Gas

Comparison of Value Line's Timeliness Rank

	Timeliness Rank
Piedmont Natural Gas	5
AGL Resources	4
New Jersey Resources	4
NICOR, Incorporated	4
Northwest Natural Gas	3
Peoples Energy	4
Washington Gas Light	3
Comparable Companies' Average	3.67

Source: Value Line Investment Survey

Nashville Gas Company

A Division of Piedmont Natural Gas Company

Pro Forma Capital Structure

Cost of Capital

	Average	Ratio	Embedded Cost	Weighted Cost
Long-Term Debt	377,568,915	42.00%	8.27%	3.47%
Short-Term Debt	30,807,692	3.43%	6.00%	0.21%
Common Equity	490,496,702	54.57%	12.50%	6.82%
Total	898,873,309	100.00%		10.50%

Source: Piedmont Natural Gas Company Work Papers

Nashville Gas Company

Moody's Local Distribution Companies

Comparison of After-Tax Times Long Term Interest Earned Ratios

Piedmont Natural Gas Company	@12.5% ROE	2.96
AGL Resources		2.65
New Jersey Resources		3.27
NICOR, Inc.		4.17
Northwest Natural Gas		2.01
Peoples Energy		2.90
Washington Gas Light		3.32
Comparable Companies' Average		3.05

Source : Value Line Investment Survey

Tennessee Regulatory Authority
Docket No. _____

In the Matter of	)
	)
Application of Nashville Gas Company, a	)
Division of Piedmont Natural Gas Com-	)
pany, Inc., for an Adjustment of its Rates	)
and Charges, the Approval of Revised	)
Tariffs and the Approval of Revised	)
Service Regulations	)

Testimony of Chuck Fleenor
on Behalf of
Nashville Gas Company,
a Division of
Piedmont Natural Gas Company, Inc.

I. Identification of Witness.

Q. Please state your name and business address.

A. My name is Chuck Fleenor. My business address is 1915 Rexford Road, Charlotte, North Carolina 28211.

Q. By whom are you employed and in what capacity?

A. I am employed by Piedmont Natural Gas Company, Inc., (Piedmont) as Vice President-Gas Services.

Q. Please summarize your educational and professional background.

A. I received a BS degree in Physics in 1972 from the University of North Carolina at Charlotte. In 1979, I received a Masters degree in Business Administration from the same university. I became a registered Professional Engineer in the state of North Carolina in 1980. In 1987, I became a registered Professional Engineer in the state of South Carolina. I was employed by Piedmont in 1974. Prior to my current position as Vice President-Gas Services, I held the positions of Engineer-Gas Supply, Manager-Technology, Director-Technology, Director-Energy Systems, and Director-Gas Supply. I was promoted to Vice President - Gas Supply in 1985 and held that position until April 1, 1996 when my position changed to Vice President - Gas Services.

II. Purpose of Testimony.

Q. Please describe the purpose of your testimony in this proceeding.

A. The purpose of my testimony and accompanying exhibits is to present the position of Nashville Gas Company ("Nashville Gas" or the "Company") with respect to the following matters:

a) the normalization of test period consumption and the calculation of revenues for the attrition period (Exhibit__(CWF-1));

b) the calculation of attrition period revenues based on proposed rates

(Exhibit__(CWF-2));

c) the cost of serving the various customer classes under the existing rates (Exhibit__(CWF-3));

d) the cost of serving the various customer classes under the proposed rates (Exhibit__(CWF-4));

e) the changes in our tariffs necessary to reflect the changes in the rates and charges and the changes in certain other provisions necessary to update the tariffs and to respond to present market and regulatory conditions (Exhibit__(CWF-5));

f) the calculation of the "R" factors to be used in the future calculation of the Weather Normalization Adjustment (WNA) (Exhibit__(CWF-6)); and

g) the calculation of the fixed gas cost allocation to the various rates (Exhibit__(CWF-7)).

Q. What is the test period and the attrition period used by Nashville Gas in this proceeding?

A. The test period is the 12 months ended August 31, 1999. The attrition period is the12 months ended May 31, 2001.

III. Pro Forma Revenues.

Q. Please explain your revenue calculations.

A. Attrition period revenues for Nashville Gas Company are shown in Exhibit___(CWF-1). In Column (1), I show the actual test period sales and transportation volumes by rate schedules. In Column (2), I show the adjustment made to normalize the test period volumes to reflect the expected throughput levels had normal weather occurred during the test period. Column (3) shows the results of the various adjustments in Column (2) on the actual volumes shown in Column (1). Column (4) shows the growth adjustment applied

to bills and normalized consumption in order to project customer counts and volumes into the attrition period. Column (5) shows the resulting total annual bill, sales and transportation levels for adjustments due to normalization and growth.. Column (6) shows the current rates effective October 1, 1999 with our PGA filing in Docket No. 99-00675. These rates were used to compute the pro-forma revenues shown in Column (7).

Q. Please explain the normalization adjustment shown in Column (2).

A. This adjustment is necessary to adjust actual volumes to reflect delivered quantities that would have occurred had weather conditions been normal during the test period. Actual winter weather during the test period (November 1998, through March 1999) was 10.43% warmer than the 30-year average used for "normal," and the summer period was 45.6% warmer than normal. I used the method approved by the Authority or its predecessor in our last five rate cases to calculate this weather adjustment.

Q. Please explain the growth adjustments shown in Column (4).

A. Attrition period volumes for residential and commercial customers are determined utilizing historical growth patterns, historical growth from converting existing homes to gas, projected growth from new home construction and detailed analysis of projected economic conditions. Attrition period volumes for the customer classes that have small numbers of large volume customers are determined by analyzing each account individually and, often, by interviewing individual customers.

Q. In your opinion, are the attrition period volumes a just and reasonable projection of conditions most likely to occur during the attrition period?

A. Yes. In addition, these projections are consistent with Authority-approved practices.

Q. How did you calculate pro forma revenues for the attrition period?

A. The pro forma revenues were calculated using the current tariff rates reflecting the PGA level approved by the Authority placed in effect October 1, 1999, without any temporary rate

adjustments. The revenues associated with the sale and transportation of natural gas are shown in Exhibit___(CWF-1), Column (7) to be $146,555,583. This amount does not include revenue of $889,933 attributable to special redelivery contracts approved by the TRA. Additionally, I have calculated revenues using rates proposed by the Company. These revenues total $154,753,264, excluding revenues from special contract, and are displayed in Exhibit___(CWF-2).

IV. Cost of Service Study Performed on Existing Rates.

Q. What were the results of your cost of service study?

A. Exhibit___(CWF-4) shows the results of a cost of service study performed by customer class utilizing the attrition period rate base and revenues. The methodology employed to perform this study is consistent with the guidelines provided in the "Gas Distribution Rate Design Manual" prepared by the NARUC Staff Subcommittee on Gas, June 1989, and as used by me in previous proceedings before this Authority. The results of this study show extremely low rates of return under existing rates for the residential class and significantly higher rates of return for the industrial classes. It should be pointed out, however, that cost of service studies are intended only to indicate general and relative levels of profitability. Because cost of service studies are based upon various assumptions and subjective evaluations, the resulting returns are only indicative and not definitive.

V. Design of Rates - Theory.

Q. How did you use the results of the cost of service study in the development of rates?

A. The cost of service study of existing rates was used along with traditional rate design principles and the desire to provide additional services to the ratepayers. In addition, as indicated in the Company's last general rate case, we are attempting to evolve toward a set of rates and services that reflects the changes in the industry and the economic sensitivity of our markets.

Q. Please explain the traditional rate design principles you considered in designing the proposed rates.

A. In addition to cost of service, I also considered the following economic factors in designing the proposed rates: (1) value of service, (2) the need to avoid discrimination among classes of service, (3) system load equalization and (4) revenue stability. I also considered several non-economic factors.

Q. How is value of service considered in designing rates?

A. Value of service considerations rest on the premise that the value of a utility service to a consumer cannot be greater than the cost to that consumer of an equally satisfactory alternate service. Value of service is an important factor in setting industrial gas rates because gas competes with other fuels. It would make no sense to set an industrial gas rate that is significantly higher than competing fuel oil prices. It would be impossible to sell gas under such a rate. Similarly, from a value of service standpoint, it would make no sense to sell or transport industrial gas at a price that is substantially less than the price of fuel oil.

Q. How is the need to avoid discrimination among classes of customers considered in designing gas rates?

A. A utility is prohibited from making or granting any unreasonable preference or advantage to any person and from subjecting any person to any unreasonable prejudice or advantage. Likewise, a utility is prohibited from establishing or maintaining unreasonable differences in rates as between localities or as between customer classes of service. Thus, we must consider such factors as the nature of the various services provided (firm or interruptible), the quantity of use, time of use (peak or off-peak), the cost of service and the value of the service.

Q. What consideration is given to system load equalization in designing gas rates?

A. Gas used for heating only can cause serious problems for a gas utility. We must pay a demand charge to receive gas when the gas is needed by our customers. We generally pay this charge 365 days a year whether or not we take the gas. If we only sold gas to heating customers, the

demand charge would be spread out over very few sales and, therefore, would cause gas to be prohibitively expensive. To ease this problem, we sell interruptible gas to industrial customers. Nevertheless, rates for firm customers should reflect the fact that such customers have a "first call" on our gas and that we pay a demand charge to our suppliers and incur other expenses to assure that sufficient volumes of gas will be available for these customers when needed.

Q. What consideration is given to revenue stability?

A. A gas utility is characterized by a highly fixed investment. Fixed costs must be paid even if sales decline. For this reason, it is important that certain protective measures be included in the design of gas rates to avoid disastrous consequences in the event of extremely warm weather or a major economic decline.

Q. How did you consider cost of service in designing your proposed rates?

A. Obviously, the cost of providing service is a very important factor in designing rates. No business can operate for very long if it does not recover its costs. Thus, proper rates for each class of customer must recognize the costs of serving that class.

Q. Please explain the results of the cost of service study performed on existing rates.

A. The study shows that residential customers are not providing a significant average return, while the "small general service," "large general service" and "interruptible" schedules produce a return above the system average. It is evident from this study that it is crucial that we adjust the residential schedules so that they will contribute a greater return and move toward the system average.

VI Changes in Rates.

Q. Are you proposing any rate design changes in this docket?

A. Although I do not recommend any changes in the structure of the rates, I am recommending changes in the level of rates and charges. I am also proposing changes to the sales and transportation tariffs and to the assignment of fixed gas costs by customer class within the

proposed rates

Q. Please explain what changes you are proposing in the level of rates and charges which will increase the Company's margin.

A. First, I will give an overview of the changes I am recommending, and then I will further explain these recommendations as they relate to the individual rate schedules. The main objective of my rate design is to continue to develop a design and structure that will enable Nashville Gas to continue to adapt to the many changes occurring in the natural gas industry and to recommend rate levels that more properly reflect cost and value of service.

Q. What rate changes are you proposing?

A. Because of the low return currently experienced in the residential category, we propose to increase rates to this class by 7.8%. This increase will raise the return on investment for the residential class to 5%. The existing commercial rate is higher than the existing rate charged to residential customers; therefore, we are proposing to increase the commercial rate by a smaller percentage that the residential rate in this case. The Company proposes to increase the commercial rates by 3.2%.

Q. What increase does the Company propose for the larger commercial and industrial customers?

A. The Company proposes an overall increase of 2.3% to rates and charges to these customers as a group, but because the Company serves this group with four different rate schedules, the proposed changes to a specific rate schedule will vary.

Q. Do you propose differences in the rate design principles within the structure of the large commercial and industrial rates?

A. Yes. Prior to this rate case, the Company had always proposed a rate for transportation service that is typically referred to as "full margin." The purpose of a full margin is to make the Company totally economically indifferent as to whether it provides a customer with sales or a transportation service. We continue to believe that this is a worthwhile purpose, and the rates

provided in this case will continue to provide the Company with the same net margin regardless of whether we transport or sale gas to these customers. However, we are proposing to allocate fixed pipeline costs differently between sales service and bifurcated transportation only service.

VI. Allocation of Fixed Pipeline Costs

Q. Explain how the Company proposes to change the allocation of fixed pipeline costs.

A. Under the Company's proposal, large volume firm customers receiving sales service under Rate Schedule 3 and transportation service under Rate Schedule 7F will pay the same fixed pipeline charges because under either rate schedule the customers will have rights to purchase gas acquired and shipped by the Company on upstream interstate pipelines. Interruptible sales customers receiving service under Rate Schedule 4 receive service to the extent that the Company's contracted gas supplies and capacity are not required by firm customers. Accordingly, a lesser amount of fixed pipeline charges should be allocated to this interruptible sales service. Under the Company's proposal, Rate Schedule 7I service is a "transportation only" service with no rights to purchase gas supplies (sales service) from the Company. We believe that interruptible transportation service provided under Rate Schedule 7I should pay a lower amount of fixed pipeline charges since it only utilizes the Company's gas supply assets for balancing

Q. Are there any other changes to fixed pipeline demand costs that the Company is proposing in this case?

A. Yes. Because of the successful renegotiation of various pipeline contracts, the Company projects that the charges for these contracts will decrease by approximately $2.4 million during the attrition period. Simultaneously with the filing of approved tariffs in this case, the Company intends to file a purchase gas adjustment to decrease its pipeline demand charges by the $2.4 million. The Company has therefore reflected this known and measurable change in the design of the rates supporting revenue calculations in this case.

VII. Revisions to Tariff Language.

Q. What other changes are you proposing at this time?

A. We are proposing a number of changes to the provisions of various tariffs. Revisions to tariffs proposed at this time are found in Exhibit__(CWF-5).

Q. Are you planning to make any changes that are not related to the proposed rates?

A. Yes. Market and regulatory changes over the years have caused certain language in Nashville Gas' existing tariffs to become outdated and in need of revision.

Q. Please comment on the general changes that the Company proposes to the tariffs?

A. Our tariffs have always been designed for, and intended to apply to, the provision of monopolistic utility services to customers that have no alternate delivery system for natural gas. Historically, there was no need to state this intent in the tariffs since competitive gas services were not available to our customers. Today such alternatives are available; therefore, we have amended the applicability section of all of our rate schedules to state that they apply only to full requirements natural gas customers. In addition, we are proposing to clarify language and correct typographical errors that occur in several rate schedules. We also propose to modernize and strengthen the "Unauthorized Gas" provisions of the tariffs to make them more reflective of the current volatile daily gas market and to provide a greater economic disincentive for abuse.

Q. Are there changes to Rate Schedules 2, 3, 4, 7I and 7F as a group?

A. Yes. These tariffs apply to non-residential customers who may change from one of these services to another depending upon the magnitude of the customers' consumption from time to time, their ability to use alternate fuels and their election to receive sales or transportation services. To accommodate this ability to change from one rate schedule to another, we have proposed changes to better clarify the qualifications of each rate schedule and to coordinate the transfer dates of qualification with the effective dates of election.

Q. Is the Company proposing any other changes to Rate Schedules 7F and 7I?

A. Yes. Currently, Nashville Gas offers a Monthly Optional Sales Service (MOSS) that has been utilized infrequently by our customers. The Company proposes to eliminate the MOSS from both rate schedules and to lower the fixed pipeline demand cost for Rate Schedule 7I. The MOSS will be replaced by Standby Sales Service in Rate Schedule 7F, thereby giving firm customers a market-priced alternative if their transportation arrangements should fail. These provisions also increase the Company's control over operational integrity by invoking Standby Sales Service if a customer's imbalance jeopardizes the system.

Because of the changes in the nomination deadline by the interstate pipelines and the Company's ability to better process third party nominations, the Company proposes to relax the deadlines for monthly nominations from ten days to four days.

Q. Does the Company propose to make changes to Rate Schedule 6?

A. Yes. Rate Schedule 6 addresses provisions for limiting and curtailing service and currently reflects the FERC curtailment priorities that were adopted in the 1970's to address a nationwide gas shortage. The Company proposes to revise Rate Schedule 6 to facilitate curtailment by margin and to provide Emergency Gas Service for customers having difficulties using alternative fuels during curtailment periods.

Q. **Does the Company propose any changes to Rate Schedule 9?**

A. Yes, we propose to clarify the applicability section of Rate Schedule No. 9 to address alternate fuels and services.

Q. **In your opinion, are the proposes changes reasonable and fair to your customers?**

A. Yes.

Q. How does Exhibit___(CWF_6) relate to this proceeding?

A. Exhibit___(CWF-6) indicates the Company's computation of the factors to be utilized in the application of the Weather Normalization Adjustment (WNA) provided for in Rate Schedule 13.

Q. Would you please explain your Exhibit___(CWF-7)?

A. This exhibit indicates the Company's proposal of the fixed pipeline demand charges that should be recovered as a part of the proposed rates, and how changes in the pipeline charges should be allocated to the various rate schedules in the future.

Q. Does this complete your testimony at this time?

A. Yes.

Affidavit

State of North Carolina)
)
County of Mecklenburg)

Chuck W. Fleenor, being first duly sworn, deposes and says that he is the same Chuck W. Fleenor whose prepared testimony and exhibits accompany this affidavit.

Chuck W. Fleenor 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.

Chuck W. Fleenor

Sworn to and subscribed before me, a Notary Public, on this the 29 th day of December, 1999.

Notary Public

My Commission Expires:

My Commission Expires October 29, 2000

PIEDMONT NATURAL GAS COMPANY, INC.
NASHVILLE GAS DIVISION
PRO FORMA REVENUE CALCULATIONS

Exhibit__(CWF-1)

(dekatherms)	12 Mon 8/31/99 Test Period Actual (1)	Normalized Adjustment (2)	Normalized (3)	12 Mon 5/31/01 Growth Adj Thru Attrition Period (4)	Proforma Dekatherms (5)	10/01/1999 Billing Rates (6)	Proforma Revenues (7)
Residential 01							
Bills	1,403,882			104,717	1,508,599	$7.00	$10,560,194
Winter	6,541,717	1,030,317	7,572,034	635,984	8,208,017	$6.4881	$53,254,438
Summer	2,109,852	164,446	2,274,298	174,328	2,448,626	$6.1252	$14,998,325
Discounted	13,223		13,223		13,223	$5.7252	$75,701
Total Residential	8,664,791	1,194,764	9,859,554	810,312	10,669,866		$ 78,888,658
Commercial 02							
Bills	188,741			9,359	198,100	$20.00	$3,962,004
Winter	4,391,800	509,869	4,901,669	254,451	5,156,120	$6.7053	$34,573,335
Summer	1,895,685	174,268	2,069,952	101,449	2,171,402	$6.3284	$13,741,498
Discounted	3,272		3,272		3,272	$5.9284	$19,398
Total Commercial	6,290,757	684,137	6,974,894	355,900	7,330,794		$ 52,296,235
Firm Industrial Sales							
Bills	1,295			48	1,343	$0.00	$0
Demand dekatherms	144,977			4,594	149,571	$14.37247	$2,149,709
First 1,500	1,059,741	0	1,059,741	65,320	1,125,061	$3.7535	$4,222,915
Next 2,500	279,900	0	279,900	13,082	292,982	$3.6831	$1,079,082
Next 5,000	6,436	0	6,436	0	6,436	$3.4697	$22,332
Over 9,000	0	0	0	0	0	$3.1489	$0
Total Firm Ind Sales	1,346,077	0	1,346,077	78,402	1,424,479		$ 7,474,038
Interruptible Industrial Sales							
Bills	188			0	188	$200.00	$37,600
First 1,500	188,579	0	188,579	(6,760)	181,819	$3.7535	$682,457
Next 2,500	148,213	0	148,213	(2,888)	145,325	$3.6831	$535,247
Next 5,000	107,395	0	107,395	0	107,395	$3.4697	$372,629
Over 9,000	26,799	0	26,799	0	26,800	$3.1489	$84,388
Total Interruptible Ind Sale	470,986	0	470,986	(9,648)	461,339		$ 1,712,321
Firm Industrial Transportation							
Bills	625			0	625	$75.00	$46,875
Demand dekatherms	127,637				127,637	$14.37247	$1,834,459
First 1,500	704,748	0	704,748	420	705,168	$0.8326	$587,123
Next 2,500	492,312	0	492,312	400	492,712	$0.7622	$375,545
Next 5,000	152,475	0	152,475	1,500	153,975	$0.5488	$84,501
Over 9,000	175,988	0	175,988	0	175,988	$0.2280	$40,125
Total Firm Transp	1,525,522	0	1,525,522	2,320	1,527,843		$ 2,968,628
Interruptible Industrial Transportation							
Bills	526			0	526	$275.00	$144,650
First 1,500	748,260	0	748,260	7,180	755,440	$0.8326	$628,979
Next 2,500	970,639	0	970,639	(22,740)	947,900	$0.7622	$722,489
Next 5,000	1,170,993	0	1,170,993	(1,631)	1,169,362	$0.5488	$641,746
Over 9,000	3,812,003	0	3,812,003	(262,071)	3,549,933	$0.2280	$809,385
Total Int Transportation	6,701,895	0	6,701,895	(279,261)	6,422,635		$ 2,947,249
Smyrna							
	12			0	12		
Demand	15,000	0	15,000	0	15,000	$10.8010	$162,015
Commodity	31,160	0	31,160	0	31,160	$3.4158	$106,438
							$ 268,453
Total Bills	1,595,269			114,124	1,709,393		
Annual Total	25,031,188	1,878,900	26,910,089	958,028	27,868,117		**$ 146,555,583**

PIEDMONT NATURAL GAS COMPANY, INC.
NASHVILLE GAS DIVISION
CALCULATED REVENUE FROM PROPOSED RATES

	Proforma Billing Determinates	Proposed Rate	Proposed Revenue
Residential:			
Customer Charges	1,508,599	$ 8.00	$ 12,068,792
Winter Volumes	8,208,017	6.9203	56,801,940
Summer Volumes	2,448,626	6.5574	16,056,620
Air-Conditioning Volumes	13,223	6.1574	81,419
Total Residential	10,669,866		$ 85,008,771
Commercial:			
Customer Charges	198,100	$ 22.00	$ 4,358,200
Winter Volumes	5,156,120	6.8746	35,446,263
Summer Volumes	2,171,402	6.5117	14,139,518
Air-Conditioning Volumes	3,272	6.1118	19,998
Total Commercial	7,330,794		$ 53,963,979
Industrial:			
Firm Sales:			
Billing Demand	149,571	$ 14.373	$ 2,149,784
1st Step Volumes	1,125,061	3.8419	4,322,372
2nd Step Volumes	292,982	3.7644	1,102,901
3rd Step Volumes	6,436	3.5282	22,707
4th Step Volumes	-	3.1739	-
Total Firm Sales	1,424,479		$ 7,597,765
Interruptible Sales:			
Customer Charges	188	$ 300.00	$ 56,400
1st Step Volumes	181,819	4.0235	731,549
2nd Step Volumes	145,325	3.9531	574,484
3rd Step Volumes	107,395	3.7397	401,625
4th Step Volumes	26,799	3.4189	91,623
Total Interruptible Sales	461,338		$ 1,855,681
Firm Transportation:			
Customer Charges	625	-	-
Billing Demand	127,637	$ 14.373	$ 1,834,527
1st Step Volumes	705,168	0.921	649,460
2nd Step Volumes	492,712	0.8435	415,603
3rd Step Volumes	153,975	0.6073	93,509
4th Step Volumes	175,988	0.253	44,525
Total Firm Transportation	1,527,843		$ 3,037,623
Interruptible Transportation:			
Customer Charges	526	$ 300.00	$ 157,800
1st Step Volumes	755,440	0.8326	628,979
2nd Step Volumes	947,900	0.7622	722,489
3rd Step Volumes	1,169,362	0.5488	641,746
4th Step Volumes	3,549,933	0.228	809,385
Total Interruptible Transportation	6,422,635		$ 2,960,399
Sales For Resale:			
Demand	15,000	$ 14.373	$ 215,595
Commodity	31,160	3.6409	113,450
Total Sales For Resale	31,160		$ 329,045
TOTALS WITHOUT SPECIAL CONTRACTS			**$ 154,753,264**
Special Contracts			$ 889,932
TOTAL PROPOSED REVENUE INCLUDING SPECIAL CONTRACTS			**$ 155,643,196**

COST OF SERVICE STUDY

PIEDMONT NATURAL GAS COMPANY, INC.
RETURN ON RATE BASE USING EXISTING RATES
DOCKET NO. 99-

LINE NO	DESCRIPTION	TOTAL NASHVILLE GAS COMPANY	RATE 1	RATE 2	RATE 3 &7F	RATE 4 & 7I	OTHER
	REVENUES						
1	Operating Revenues -	147,445,502	78,888,657	52,296,230	10,442,660.96	4,659,568.72	1,158,386
2	Other Operating Revenues.....	1,421,045	760,310	504,019	100,643.91	44,907.83	11,164
3	TOTAL OPERATING REVENUES.....	148,866,547	79,648,967	52,800,249	10,543,305	4,704,477	1,169,550
	OPERATING EXPENSES						
4	Cost of Gas.....	71,215,379	38,662,581	25,781,358	5,281,718.16	1,347,518.81	142,203
5	Operation & Maintenance.....	31,086,693	20,771,145	7,881,476	1,382,769.92	771,295.39	349,721
6	Depreciation Expense.....	14,961,981	11,251,930	2,708,206	368,006.84	395,059.33	238,779
7	Taxes Other Than Income.....	6,861,903	4,580,205	1,693,838	295,992.26	195,512.80	97,936
8	Income Taxes - State.....	950,250	166,153	567,320	123,872.22	76,944.33	13,216
9	Income Taxes - Federal.....	5,210,539	911,075	3,110,807	679,232.89	421,911.55	72,467
10	Amortization of Investment Tax Credits	(175,369)	(30,664)	(104,699)	(22,860.67)	(14,200.11)	(2,439)
11	TOTAL OPERATING EXPENSES.....	130,111,376	76,312,426	41,638,305	8,108,731.63	3,194,042.09	911,883
12	Net Operating Income.....	18,755,171	3,336,542	11,161,944	2,434,573	1,510,434	257,667
13	Interest on Customer Deposits	(177,757)	(157,124)	(20,633)	0.00	0.00	0
14	Amortization of Debt Redempt Premium	127,519	91,184	25,947	3,755.26	4,154.97	2,476
							0
15	Net Operating Income for Return.....	18,704,933	3,270,601	11,167,258	2,438,328	1,514,589	260,143
16	Rate Base.....	240,603,790	172,046,351	48,957,158	7,085,446.79	7,839,634.72	4,671,647
17	RETURN ON RATE BASE.....	**7.77%**	**2%**	**23%**	**34%**	**19%**	**6%**

Exhibit__(CWF-3)

COST OF SERVICE STUDY

PIEDMONT NATURAL GAS COMPANY, INC.
RETURN ON RATE BASE USING PROPOSED RATES
DOCKET NO. 99-

LINE NO	DESCRIPTION	TOTAL NASHVILLE GAS COMPANY	RATE 1	RATE 2	RATE 3 &7F	RATE 4 & 7I	OTHER
	REVENUES						
1	Operating Revenues -	155,643,195	85,008,771	53,963,979	10,635,387.58	4,816,079.98	1,218,977
2	Other Operating Revenues.....	1,573,007	859,141	545,387	107,486.48	48,673.68	12,320
3	TOTAL OPERATING REVENUES.....	157,216,202	85,867,912	54,509,365	10,742,874	4,864,754	1,231,297
	OPERATING EXPENSES						
4	Cost of Gas.....	68,797,080	37,272,033	24,971,016	5,073,801.95	1,347,518.81	132,709
5	Operation & Maintenance.....	31,119,390	20,800,047	7,885,271	1,382,769.92	771,295.39	349,721
6	Depreciation Expense.....	14,961,981	11,251,930	2,708,206	368,006.84	395,059.33	238,779
7	Taxes Other Than Income.....	6,861,903	4,582,391	1,692,275	295,503.32	195,383.52	97,931
8	Income Taxes - State.....	1,594,372	535,374	776,713	163,217.11	97,197.71	18,661
9	Income Taxes - Federal.....	8,742,471	2,935,635	4,258,975	894,973.57	532,967.30	102,325
10	Amortization of Investment Tax Credits	(175,369)	(58,887)	(85,433)	(17,952.66)	(10,691.02)	(2,053)
11	TOTAL OPERATING EXPENSES.....	131,901,828	77,318,524	42,207,024	8,160,320.04	3,328,731.03	938,073
							0
12	Net Operating Income.....	25,314,374	8,549,388	12,302,342	2,582,554	1,536,023	293,224
13	Interest on Customer Deposits	(177,757)	(157,124)	(20,633)	0.00	0.00	0
14	AFUDC	127,519	91,184	25,947	3,755.26	4,154.97	2,476
15	Net Operating Income for Return.....	25,264,136	8,483,447	12,307,656	2,586,309	1,540,178	295,700
16	Rate Base.....	240,603,790	167,065,011	48,020,297	6,993,218.42	7,720,490.67	4,601,624
17	RETURN ON RATE BASE.....	10.50%	**5%**	**26%**	**37%**	**20%**	**6%**

Exhibit__(CWF-4)

Exhibit___(CWF-5)

RATE SCHEDULE NO. 1
Residential Service

AVAILABILITY

Available within the Company's service area to any full requirements single private residences, including the separate private units of apartment houses and other multiple dwellings, actually used for residential purposes, which are separately metered where the Company's distribution mains are suitable for supplying the desired service.

MARGIN RATE	Winter (November-March)	Summer (April-October)
Customer Charge (per month)	$8.00	$8.00
Commodity Charge (per therm)	$.35096	$.31467
Backup Service Demand Charge (per therm of input per month)	$.534506	$.534506

AIR CONDITIONING RIDER

A Residential Customer who uses gas for summer air conditioning shall be billed at a rate of $.04 per therm less than that listed above for all gas consumed over 50 therms per month. This discount shall apply to all gas used during the billing months of June through October.

MONTHLY CUSTOMER CHARGE

A charge will be billed monthly to all Customers for the availability of gas service. This charge will be in addition to the commodity charge for gas delivered. The Customer charge will be billed from the date of initial service until service is terminated at the Customer's request. In the case of temporary discontinuance of service there will be a reconnect charge of $50.00 to be billed at the time the gas service is reinstated.

BACKUP SERVICE

When gas service is being supplied for use as a Backup Service for the dual-fuel heat pump or for similar use where the Customer's equipment is specifically designed by the manufacturer or is modified by the Customer or others for the purpose of using natural gas as the equipment's backup energy source, there shall be payable monthly in addition to all and other charges under this Rate Schedule a Backup Service Demand Charge individually determined for each Customer based upon the Customer's applicable gas equipment input rating.

Input shall be based upon individual Customer's applicable gas equipment rating in:

$$\frac{\text{BTU/Hour x 10 hours}}{\text{100,000 BTU}} = \text{TH}$$

SERVICE AGREEMENTS

All Customers purchasing gas pursuant to this schedule shall be subject to the Company's standard contracts and/or service applications and subject to the Company's Rules and Regulations as filed with the TRA.

PAYMENT TERMS

All bills for service are due upon presentation and the net rates are applicable if payment is made on or before the last date of payment stated on the bill. Payments made after that date shall be for the gross amount which is greater by five percent (5%) than the net billing.

RETURNED CHECK CHARGE

In the event a Customer's check for payment is returned to the Company marked NSF (Non Sufficient Funds) the Customer will be assessed a charge of $20.00.

ADJUSTMENTS

Bills for service are subject to adjustment caused by changes in the cost of purchased gas in accordance with Rule No. 1220-4-1-.12 of the TRA Rules and Regulations.

Purchased gas adjustments and all applicable taxes and fees are in addition to the above stated margin rates in accordance with The Rules, Regulations and Orders of the TRA and Laws of the State of Tennessee.

SERVICE AVAILABILITY

All requests for new and additional service or the transfer of existing service to higher priority end use will be considered based upon the Company's judgement as to the available gas supply, Customer's load factor or use pattern, end use, impact on the local economy, and The Rules, Regulations, and Orders of the TRA and Laws of the State of Tennessee.

SERVICE INTERRUPTION AND CURTAILMENT

Gas service under this schedule is subject to the provisions contained within TRA Schedule No. 6, "Schedule for Limiting and Curtailing Service".

WEATHER NORMALIZATION ADJUSTMENT

Gas service under this schedule is subject to the provisions contained within TRA Schedule No. 13, "Weather Normalization Adjustment Rider".

RATE SCHEDULE NO. 2
Small General Service

AVAILABILITY

Gas service under this Rate Schedule is available to any full requirements non-residential Customer whose maximum usage during any month of the 12-month period ended the 31st day of March was not more than 15,000 therms. Availability under this Rate Schedule for new Customers will be based on reasonably anticipated usage. A Customer under this Rate Schedule will be eligible to be transferred to Rate Schedules 3, 4, 7F or 7I if the Customers' usage is 110% or more of the minimum required by such rate schedule. Any such transfers will be effective June 1 of each year.

MARGIN RATE	Winter (November-March)	Summer (April-October)
Customer Charge (per month)	$22.00	$22.00
Commodity Charge (per therm)	$.35095	$.31467
Backup Service Demand Charge (per therm of input per month)	$.534506	$.534506

AIR CONDITIONING RIDER

A Small General Service Customer who uses gas for summer air conditioning shall be billed at a rate of $.04 per therm less than that listed above for all gas consumed over 500 therms per month. This discount shall apply to all gas used during the billing months of June through October.

MONTHLY CUSTOMER CHARGE

A charge will be billed monthly to all Customers for the availability of gas service. This charge will be in addition to the commodity charge for gas delivered. The Customer charge will be billed from the date of initial service until service is terminated at the Customer's request. In the case of temporary discontinuance of service there will be a reconnect charge of $5000 to be billed at the time the gas service is reinstated.

BACKUP RATE

When gas service is being supplied for use as a Backup Service for the dual-fuel heat pump or for similar use where the Customer's equipment is specifically designed by the manufacturer or is modified by the Customer or others for the purpose of using natural gas as the equipment's backup energy source, there shall be payable monthly in addition to all and other charges under this Rate Schedule a Backup Service Demand Charge individually determined for each Customer based upon the Customer's applicable gas equipment input rating.

Input shall be based upon individual Customer's applicable gas equipment rating in:

$$\frac{\text{BTU/Hour x 10 hours}}{\text{100,000 BTU}} = \text{TH}$$

SERVICE AGREEMENTS

All Customers purchasing gas pursuant to this schedule shall be subject to the Company's standard contracts and/or service applications and subject to the Company's Rules and Regulations as filed with the TRA.

PAYMENT TERMS

All bills for service are due upon presentation and the net rates are applicable if payment is made on or before the last date of payment stated on the bill. Payments made after that date shall be for the gross amount which is greater by five percent (5%) than the net billing.

RETURNED CHECK CHARGE

In the event a Customer's check for payment is returned to the Company marked NSF (Non Sufficient Funds) the Customer will be assessed a charge of $20.00.

ADJUSTMENTS

Bills for service are subject to adjustment caused by changes in the cost of purchased gas in accordance with Rule No. 1220-4-1-.12 of the TRA Rules and Regulations.

Purchased gas adjustments and all applicable taxes and fees are in addition to the above stated margin rates in accordance with The Rules, Regulations and Orders of the TRA and Laws of the State of Tennessee.

SERVICE AVAILABILITY

All requests for new and additional service or the transfer of existing service to higher priority end use will be considered based upon the Company's judgement as to the available gas supply, Customer's load factor or use pattern, end use, impact on the local economy, and The Rules, Regulations, and Orders of the TRA and Laws of the State of Tennessee.

SERVICE INTERRUPTION AND CURTAILMENT

Gas service under this schedule is subject to the provisions contained within TRA Schedule No. 6, "Schedule for Limiting and Curtailing Service".

WEATHER NORMALIZATION ADJUSTMENT

Gas service under this schedule is subject to the provisions contained within TRA Schedule No. 13, "Weather Normalization Adjustment Rider".

RATE SCHEDULE NO. 3
Large General Sales Service

AVAILABILITY

Gas service under this Rate Schedule is available to any full requirements non-residential Customer whose usage during any month of the 12-month period ended the 31st day of March was in excess of 15,000 therms. Availability under this Rate Schedule for new Customers will be based on reasonably anticipated usage. An existing Customer may also qualify for service under this Rate Schedule based upon reasonably anticipated usage by adding incremental load either by the installation of additional equipment or by increasing hours of operation. Service under this Rate Schedule is contingent upon the installation by the Company of telemetering equipment that reports daily consumption. A Customer will be transferred from this Rate Schedule to Rate Schedule No.2 if the Customers' usage is 90% or less of the minimum required by this Rate Schedule. Any such transfers will be effective June 1 of each year.

Once a qualified Customer elects service under this Rate Schedule, all services will be provided under the terms and conditions of this Rate Schedule for a term extending through the following May 31. Upon meeting the qualifications contained therein, a Customer may receive service under Rate Schedule 9 concurrent with service provided under the Rate Schedule. Subject to the requirements set forth above, a Customer may elect to discontinue service under this Rate Schedule and receive service under Rate Schedule No.7F by giving written notice to the Company prior to March 1 of any year. Proper notice having been provided, the Customer shall discontinue service under this Rate Schedule effective the first June 1 following the notice.

MARGIN RATE

Demand Charge (per therm of billing demand)	$.80000
Commodity Charge (per therm)	
1st Step (0-15,000 therms)	$.08918
2nd Step (15,001-40,000 therms)	$.08195
3rd Step (40,001-90,000 therms)	$.05904
4th Step (Over 90,000 therms)	$.02530

MONTHLY MINIMUM BILL

The minimum monthly bill shall be the monthly demand charge.

BILLING DEMAND

The billing demand shall be determined as follows:

A Customer's billing demand determinant shall be the highest daily usage during the period from November 1 to March 31 of the previous winter period as metered and reported to the Company by the telemetering equipment installed by the Company. Changes to the Customer's billing demand determinant will become effective May 1 of each year. The per unit demand charge may be adjusted from time to time to reflect rate changes, including, but not limited to, a general change in system rates or a change in pipeline capacity charges billed to the Company.

For Customers commencing initial gas service under this Rate Schedule and who do not have a consumption history from other services provided by the Company, the billing demand determinant shall be computed by multiplying the month of highest consumption for the period to date by six percent (6%). If a Customer has received gas service from the Company prior to receiving service under this rate schedule, but does not have daily telemetered records to determine peak day usage as described above, the Company shall determine a billing demand based upon the highest monthly level of consumption during the previous winter period multiplied by six percent (6%).

SERVICE AGREEMENTS

All Customers purchasing gas under this Rate Schedule shall be subject to the Company's standard contracts and/or service applications and subject to the Company's Rules and Regulations as filed with the TRA.

PAYMENT TERMS

All bills for service are due upon presentation and the net rates are applicable if payment is made on or before the last date of payment stated on the bill. Payments made after that date shall be for the gross amount which is greater by five percent (5%) than the net billing.

RETURNED CHECK CHARGE

In the event a Customer's check for payment is returned to the Company marked NSF (Non Sufficient Funds) the Customer will be assessed a charge of $20.00.

ADJUSTMENTS

Bills for service are subject to adjustment caused by changes in the cost of purchased gas in accordance with Rule No. 1220-4-1-12 of the TRA Rules and Regulations.

Purchased gas adjustments and all applicable taxes and fees are in addition to the above stated margin rates in accordance with The Rules, Regulations and Orders of the TRA and Laws of the State of Tennessee.

SERVICE AVAILABILITY

All requests for new or additional service or the transfer of existing service to a higher priority end use will be considered based upon the Company's judgement as to the available gas supply, Customer's load factor or use pattern, end use, impact on the local economy, and The Rules, Regulations, and Orders of the TRA and Laws of the State of Tennessee.

SERVICE INTERRUPTION AND CURTAILMENT

Gas service under this schedule is subject to the provisions contained within TRA Rate Schedule No.6, "Schedule for Limiting and Curtailing Service".

RATE SCHEDULE NO. 4
Interruptible General Sales Service

AVAILABILITY

Gas service under this rate schedule is available **ON AN INTERRUPTIBLE BASIS** to any full requirements non-residential Customer whose usage during any month of the 12-month period ended the 31st day of March was in excess of 15,000 therms when adjusted for curtailment and cycle length. Availability under this rate schedule for new Customers will be based on reasonably anticipated usage. An existing Customer may also qualify for service under this Rate Schedule by adding incremental load either by the installation of additional equipment or by increasing hours of operation. Service under this Rate Schedule is contingent upon the installation by the Company of telemetering equipment that reports daily consumption. A Customer will be transferred from this Rate Schedule to Rate Schedule 2 if the Customers' usage is 90% or less of the minimum required by this Rate Schedule. Any such transfers will be effective June 1 of each year.

Once a qualified Customer elects service under this Rate Schedule, all services will be provided under the terms and conditions of this Rate Schedule for a term extending through the following May 31. Upon meeting the qualifications contained therein, a Customer may receive service under Rate Schedule 9 concurrent with service provided under this Rate Schedule. Subject to the requirements set forth above, a Customer may elect to discontinue service under this Rate Schedule and receive service under Rate Schedule No.7I by giving written notice to the Company prior to March 1 of any year. Proper notice having been provided, the Customer shall discontinue service under this Rate Schedule effective the first June 1 following the notice.

Customers purchasing gas pursuant to this schedule shall maintain, in useable condition, alternate-fuel facilities with ample on-site alternate fuel capability for supplying 100% of the establishment's gas requirements during periods of gas interruption or curtailment. Such interruption or curtailment shall be immediately effective upon verbal or written notification by the Company, and Customer shall refrain from using gas until permitted to do so by the Company. It is understood and agreed that the Company will have the right to suspend gas service without further notice to the Customer in the event Customer fails to curtail Customer's use of gas in accordance with the Company's notice of curtailment.

MARGIN RATE

Customer Charge (per month)	$300.00	
Commodity Charge (per therm)		
1st Step (0-15,000 therms)		$.08034
2nd Step (15,001-40,000 therms)		$.07382
3rd Step (40,001-90,000 therms)		$.05319
4th Step (Over 90,000 therms)		$.02280

MONTHLY MINIMUM BILL

The minimum monthly bill shall be the Customer Charge.

MONTHLY CUSTOMER CHARGE

A charge will be billed monthly to all Customers for the availability of gas service. This charge will be in addition to the commodity charge for gas delivered. The Customer Charge will be billed from the date of initial service until service is terminated at the Customer's request.

SERVICE AGREEMENTS

All Customers purchasing gas pursuant to this schedule shall be subject to the Company's standard contracts and/or service applications and subject to the Company's Rules and Regulations as filed with the TRA.

PAYMENT TERMS

All bills for service are due upon presentation and the net rates are applicable if payment is made on or before the last date of payment stated on the bill. Payments made after that date shall be for the gross amount which is greater by five percent (5%) than the net billing.

RETURNED CHECK CHARGE

In the event a Customer's check for payment is returned to the Company marked NSF (Non Sufficient Funds) the Customer will be assessed a charge of $20.00.

ADJUSTMENTS

Bills for service are subject to adjustment caused by changes in the cost of purchased gas in accordance with Rule No. 1220-4-1-.12 of the TRA Rules and Regulations.

Purchased gas adjustments and all applicable taxes and fees are in addition to the above stated margin rates in accordance with The Rules, Regulations and Orders of the TRA and Laws of the State of Tennessee.

SERVICE AVAILABILITY

All requests for new and additional service or the transfer of existing service to higher priority end use will be supplied based upon the Company's judgement as to the available gas supply, Customer's load factor or use pattern, end use, impact on the local economy, and The Rules, Regulations, and Orders of the TRA and Laws of the State of Tennessee.

SERVICE INTERRUPTION AND CURTAILMENT

Gas service under this schedule is subject to the provisions contained within TRA Schedule No. 6, "Schedule for Limiting and Curtailing Service".

SERVICE SCHEDULE NO. 6
Schedule for Limiting and Curtailing Service

This Service Schedule defines the types of curtailment that the Company may invoke from time to time due to the occurrence of extreme weather conditions, operating conditions or force majeure events, and describes the process and procedures to be followed in the implementation of gas service restrictions.

DISTRIBUTION PRESSURE CURTAILMENTS

Due to extreme weather conditions, operating conditions or force majeure events as defined in the Nashville Gas Company Service Regulations, Rules and Regulations Governing Supply and Consumption of Gas, or the demands of the Company's firm Customers as the same may effect the Company's ability to provide interruptible service, the Company may experience localized pressure deficiencies. During such times and within the areas affected, the Company will curtail service to interruptible Customers served under Rate Schedule No. 4, Rate Schedule No. 9, or Rate Schedule 7I, by priority of their margin contribution to the Company (curtailing Customers with the lowest margin rate first) until the pressure situation can be alleviated. In the unlikely event that further interruption is required, the Company will proceed with curtailment by margin contribution considering end use, impact on the local economy, and The Rules, Regulations, and Orders of the TRA and Laws of the State of Tennessee.

SUPPLY OR CAPACITY RELATED CURTAILMENTS

In situations when supply and capacity services contracted by the Company are not sufficient to meet the full requirements of Customers desiring sales services from the Company, the Company will first curtail service to interruptible sales Customers receiving service under Rate Schedule No. 4 by priority of their margin contribution to the Company. Customers receiving discounted sales service under Rate Schedule No. 9 will also be curtailed according to the discounted rates. The Company reserves the right at the Company's discretion to purchase quantities being delivered to the Company by Customers under Rate Schedule 7I at market prices in order to serve Customers without operable alternative fuel capability. In the unlikely event that further interruption is required, the Company will proceed with curtailment by margin contribution considering end use, impact on the local economy, and The Rules, Regulations, and Orders of the TRA and Laws of the State of Tennessee.

EMERGENCY SERVICE

The Company will make every reasonable effort to deliver plant protection volumes to industrial and commercial Customers that do not have standby fuel systems sufficient to prevent damage to facilities or danger to personnel, or to Customers that find it impossible to continue operations on the Customer's standby or alternate energy source as a result of a bona fide existing or threatened emergency. This includes the protection of such existing material in process that would otherwise be destroyed, or deliveries required to maintain plant production. All emergency gas service is of a discretionary nature and implies no present or future obligation of the Company to any Customer to provide such service on either a temporary or continuing basis. Deliveries of gas hereunder shall be made pursuant only to advance operating arrangements between the Company's authorized personnel and the Customer and shall be subject to curtailment and interruption at any time should the Company deem it necessary.

RATE FOR EMERGENCY SERVICE

If the Company has authorized the Customer to consume limited quantities of emergency gas as provided in the above paragraph, then all gas consumed by the Customer will be at a rate of $1.00 per therm plus the commodity charge for gas provided under the Customer's appropriate TRA Rate Schedule until otherwise notified that either (1) further gas sales will be under the Customer's regular rate schedule or (2) complete curtailment is unavoidable and that further gas sales will be considered unauthorized.

UNAUTHORIZED OVER RUN PENALTY

If at any time a Customer exceeds specified contract entitlements or if during any curtailment period, any affected Customer takes, without the Company's advance written approval, a volume of natural gas in excess of the curtailment period quantity entitlement applicable to such Customer, said volume shall constitute an unauthorized over run volume. For each therm of such unauthorized over run volume taken by such Customer, such Customer shall pay to the Company a rate of $1.50 per therm plus the higher of two gas commodity indices, "Monthly Contract" and "Daily Price". "Monthly Contract" shall be defined as the monthly contract index price for the applicable calendar month as published in Gas Daily under the designation, "Monthly Contract Index" and indicated specifically under "Citygates" for Tenn. Zone 6 (delivered)". "Daily Price" shall be defined as the daily price for gas defined by Gas Daily as stated in the "Daily Price Survey", "Citygates", "Tenn. Zone 6 (delivered)", "Midpoint" price. For days of consumption when the Gas Daily is not published, the Gas Daily price shall equal the price as published on the nearest subsequent day by Gas Daily. The Customer shall be liable for the above charges together with and in addition to any incremental charges or assessments (including, but not limited to penalties) by the interstate pipeline during the time of the unauthorized usage by such Customer . The payment of a penalty for unauthorized over run volumes shall not under any circumstances be considered as giving any such Customer the right to take unauthorized over-run volumes, nor shall such payment be considered as a substitute for any other remedies available to the Company or any other Customer against the offending Customer for failure to adhere to its obligations under the provisions of this Rate Schedule.

PAYMENT TERMS

All bills for service are due upon presentation and the net rates are applicable if payment is made on or before the last date of payment stated on the bill. Payments made after that date shall be for the gross amount which is greater by five percent (5%) than the net billing.

RETURNED CHECK CHARGE

In the event a Customer's check for payment is returned to the Company marked NSF (Non Sufficient Funds) the Customer will be assessed a charge of $20.00.

ADJUSTMENTS

Bills for service are subject to adjustment caused by changes in the cost of purchased gas in accordance with Rule No. 1220-4-1-12 of the TRA Rules and Regulations.

Purchased gas adjustments and all applicable taxes and fees are in addition to the above stated margin rates in accordance with The Rules, Regulations and Orders of the TRA and Laws of the State of Tennessee.

RATE SCHEDULE NO. 7F
Firm Transportation Service

AVAILABILITY

Gas service under this Rate Schedule is available to any full requirements non-residential Customer whose usage during any month of the 12-month period ended the 31st day of March was in excess of 15,000 therms. Availability under this Rate Schedule for new Customers will be based on reasonably anticipated usage. An existing Customer may also qualify for service under this Rate Schedule based upon reasonably anticipated usage by adding incremental load either by the installation of additional equipment or by increasing hours of operation. Service under this Rate Schedule is contingent upon the installation by the Company of telemetering equipment that reports daily consumption. A Customer will be transferred from the Rate Schedule to Rate Schedule 2 if the Customers' usage is 90% or less of the minimum required by this Rate Schedule. Any such transfers will be effective June 1 of each year.

Once a qualified Customer elects service under this Rate Schedule, all services will be provided under the terms and conditions of this Rate Schedule for a term extending through the following May 31. Upon meeting the qualifications contained therein, a Customer may receive service under Rate Schedule 9 concurrent with service provided under this Rate Schedule. Subject to the requirements set forth above, a Customer may elect to discontinue service under this Rate Schedule and receive service under Rate Schedule 3 by giving written notice to the Company prior to March 1 of any year. Proper notice having been provided, the Customer shall discontinue service under this Rate Schedule effective the first June 1 following the notice.

APPLICABILITY AND CHARACTER OF SERVICE

Transportation service is available under this Rate Schedule to any qualified Customer connected to the Company's system who has obtained an independent supply of natural gas and has arranged to have this supply delivered to one of the Company's existing delivery points for transportation by the Company to the Customer's facilities.

The Company will deliver gas previously transported by a connected pipeline for the Customer's account under this Rate Schedule on a day-to-day basis in accordance with the Customer's scheduled and confirmed nominations, subject to such maximum allowable daily deliveries as may be specified in the Gas Service Contract. The Company reserves the right to suspend service on any day when, in the Company's sole opinion, its operating conditions are such that suspension of service is necessary. The Company reserves the right to limit, allocate, or direct third party gas nominations among the interstate pipelines serving the Company's distribution system, when, in the Company's sole opinion, such action is necessary to maintain the operational integrity of the system.

Receipts and deliveries of gas hereunder shall be at uniform rates of flow with no significant fluctuations or imbalance. Any imbalances shall be corrected by the Customer, insofar as practicable, during the month in which they occur. Customer may adjust its daily nominations during a month in order to correct any accumulated imbalance and maintain a monthly balance, subject to the operating limitations of the Company. The Company reserves the right to limit the amount of such imbalances to avoid operating problems and to comply with balancing requirements of any pipeline transporting gas hereunder. Customer will be responsible for any imbalance charges assessed by the pipeline in connection with any gas transported by the Company under this Rate Schedule. The Company reserves the right to reduce nominations when, in the judgment of the Company, such action is necessary to reduce or eliminate operational problems. Company will use its best efforts to notify the Customer or the Customer's agent before proceeding with a unilateral reduction and will notify Customer of any reduction to Customer's nomination that has been instituted by the Company. The Company reserves the

right to initiate Standby Sales Service, described below, when, in the judgement of the Company, such action is necessary to reduce or eliminate operational problems resulting from the gas imbalances of the Customer. The Company will use its best efforts to notify the Customer or the Customer's agent before initiating Standby Sales Service.

By 10:30am central time four business days prior to the beginning of each month, the Customer shall inform the Company of its a) nomination of the daily quantity of gas to be transported for such month, and b) choice of pipeline for transportation for such month. If the Customer does not provide a timely nomination to transport gas provided by a party other than the Company, the Customer will have requested Standby Sales Service provided herein by default. By 10:30am central time six business days prior to the beginning of each month, the Customer must inform the Company of the nominating agent for gas to be transported.
Changes to nominations for gas transportation within the month are due by 10:30am central time on the day prior to gas flow.

BALANCING

It shall be the Customer's responsibility to maintain a daily and monthly balance with its transporting pipelines to avoid any assessment of penalties against the Company. If the Company is assessed a penalty by a Customer's transporting pipeline, the Company shall have the right to pass-through all such penalties to the Customer to the extent the Customer is responsible for causing the Company to be assessed such penalties.

MONTHLY IMBALANCE RESOLUTION

Any differences between the quantities delivered to the Company's city gate facilities for the account of the Customer for the month, and the quantities consumed by the Customer as metered for the month, shall be the monthly imbalance. Unless the Company and Customer agree to correct imbalances in kind, this imbalance shall be resolved monthly by "cashing out" the imbalance as they are known to exist at that time. If the Customer consumes more gas than it has delivered to the Company, the Customer will be deemed to be "short" by the amount of the deficiency, and the Company will sell gas to the Customer in an amount equal to the deficiency and at a price equal to the highest Weighted Index Price for any week beginning in the calendar month as published in *Natural Gas Week* plus the Tennessee Gas Pipeline FT-A charges inclusive of all surcharges and fuel times the premium percentage corresponding to the percentage of the deficiency listed in the table below. If the Customer consumes less gas than it has delivered to the Company, the Customer will be deemed to be "long" by the amount of the surplus, and the Company will buy the amount of the surplus by paying the Customer a price equal to the lowest Weighted Index Price for any week beginning in the calendar month as published in *Natural Gas*

Week plus the Tennessee Gas Pipeline FT-A charges inclusive of all surcharges and fuel times the discount percentage corresponding to the percentage of the surplus listed in the table below.

Percentage of the Imbalance	Short (Premium)	Long (Discount)
Equal to or less than 5%	100%	100%
Over 5% & equal to or less than 10%	115%	85%
Over 10% & equal to or less than 15%	130%	70%
Over 15% & equal to or less than 20%	140%	60%
Over 20%	150%	50%

"The Weighted Index Price" shall be derived from the prices published in *Natural Gas Week* in the table Spot Prices on Interstate Pipeline Systems for the following pipeline designations and weighted by the corresponding percentages set forth below:

Tennessee Gas Pipeline Co. Zone 0:South Texas	X	19.47%[1]
+		
Tennessee Gas Pipeline Co. Zone 1: South Louisiana	X	73.69%[1]
+		
Columbia Gulf Transmission Co.: Rayne, La.	X	6.84% [1]

The Company will collect gross receipts tax on the incremental gas related charges.

Any difference between the actual cost of gas incurred by the Company and the Index price as defined in the previous paragraph will be accounted for in the Actual Cost Adjustment account in a manner consistent with Rule No. 1220-4-1-12 of the TRA Rules and Regulations. Increments or decrements which may result from the PGA adjustments will not apply to the cash-out of imbalances.

AGENCY AUTHORIZATION FORM

A Customer may authorize an agent to act on its behalf with respect to the nominations, imbalance resolution, and/or billing under this Rate Schedule by executing an Agency Authorization Form in the form attached to this Rate Schedule. To the extent that the Agent appointed by the Customer is common to other Customers of the Company, the Company will permit such Agent to aggregate all such qualifying Customers' transportation quantities for purposes of administering service to such Agent. Once a Customer has designated an agent, the agent is then authorized to act on behalf of that Customer and as such, the agent can be considered as the Customer in all references contained within this Rate Schedule. The Customer may not change agents within the calendar month without the permission of the Company. All agents must utilize the electronic means made available by the Company in order to submit nominations. The Company may recover all costs incurred in providing the agent access to the electronic bulletin board.

STANDBY SALES SERVICE

At the option of the Customer, an election may be made monthly to receive Standby Sales Service from the Company under this Rate Schedule for delivery to the Customer at the Company's city gate. The Customer will also receive Standby Sales Service as a default if the Customer or the Customer's agent fails to submit a timely and valid nomination for transportation service. In addition to paying the Monthly Standby Index Price set forth below for Standby Sales Service hereunder, the Customer will utilize the transportation services and incur the charges otherwise applicable under this Rate Schedule to cause such gas supplies to be delivered to the Customer's meter. The price which the Customer shall pay for the gas supplied under this paragraph will be the Monthly Standby Index Price defined as follows: "The weighted average index price for the applicable month as published in the first *Natural Gas Week* for such month in the table Spot Prices on Interstate Pipeline Systems in the column labeled "Bid Week", for:

Tennessee Gas Pipeline Co. Zone 0:South Texas	X	19.47%[1]
+		
Tennessee Gas Pipeline Co. Zone 1: South Louisiana	X	73.69%[1]
+		
Columbia Gulf Transmission Co.: Rayne, La.	X	6.84%[1]

1 These percentages are the ratio of actual test period purchases for these two pipelines determined in the Company's most recent general rate case.

If the Customer nominates transportation service hereunder and purchases gas supplies from a third party supplier, and such Customer's consumption exceeds actual deliveries to the Company from such third party supplier to the point where operational problems are created for the Company, then the Company shall have the right, at it sole discretion, to initiate Standby Sales Service to the Customer. The price for such service shall be the same as set forth above except when the Company is required by such imbalance shortfall to purchase incremental volumes of gas supplies. In this case the Customer receiving Standby Sales Service will pay the higher of (on a daily basis) the Monthly Standby Index Price or the Daily Standby Index Price defined as follows:

The midpoint daily index price as published in Gas Daily for the day of consumption as stated in the "Daily Price Survey", for the "Tennessee 500 Leg". For days of consumption when the Gas Daily is not published, the Gas Daily price shall equal the price as published on the nearest subsequent day by Gas Daily.

Applicable firm transportation tariff commodity charges, fuel and any other surcharges as defined in the above transporters' FERC approved tariffs will be added to the above standby index prices. The Company will collect gross receipts tax on the incremental gas related charges.

Any difference between the actual cost of gas incurred by the Company and the Index price as defined in the previous paragraph will be accounted for in the Actual Cost Adjustment account in a manner consistent with Rule No. 1220-4-1-12 of the TRA Rules and Regulations. Increments or decrements which may result from the PGA adjustments will not apply to the standby index prices.

MARGIN RATE

Demand Charge (per therm of billing demand)	$.80000
Commodity Charge (per therm)	
1st Step (0-15,000 therms)	$.08918
2nd Step (15,001-40,000 therms)	$.08195
3rd Step (40,001-90,000 therms)	$.05904
4th Step (Over 90,000 therms)	$.02530

MONTHLY MINIMUM BILL

The minimum monthly bill shall be the monthly demand charge multiplied by the billing demand determined as described below.

BILLING DEMAND

The billing demand shall be determined as follows:

Customer billing demand determinate shall be the highest daily usage during the period from November 1 to March 31 of the previous winter period as metered and reported to the Company by the telemetering equipment installed by the Company. Changes to the Customer's billing demand determinate will become effective May 1 of each year. The per unit charge may be adjusted from time to time to reflect rate changes, including, but not limited to, a general change in system rates or a change in pipeline capacity charges billed to the Company.

For Customers commencing initial gas service under this Rate Schedule and who do not have a consumption history from other services provided by the Company, the billing demand determinate shall be based upon a

reasonable assumption of usage considering the connected load. If a Customer has received gas service from the Company prior to receiving service under this Rate Schedule but does not have daily telemetered records to determine peak day usage as described above , the Company shall determine a billing demand based on the highest monthly level of consumption during the previous winter period multiplied by six percent (6%).

SERVICE AGREEMENTS

All Customers receiving service under this Rate Schedule shall be required to execute the Company's standard contracts and/or service applications and shall be subject to the Company's Rules and Regulations as filed with and approved by the Tennessee Regulatory Authority (TRA).

PAYMENT TERMS

All bills for service are due upon presentation and the net rates are applicable if payment is made on or before the last date of payment stated on the bill. Payments made after that date shall be for the gross amount which is greater by five percent (5%) than the net billing.

RETURNED CHECK CHARGE

In the event a Customer's check for payment is returned to the Company marked NSF (Non Sufficient Funds) the Customer will be assessed a charge of $20.00.

ADJUSTMENTS

Bills for transportation service are subject to adjustment caused by changes in the cost of purchased gas in accordance with Rule No. 1220-4-1-.12 of the TRA Rules and Regulations.

Purchased gas adjustments and all applicable taxes and fees are in addition to the above stated margin rates in accordance with the Rules, Regulations and Orders of the TRA and the Laws of the State of Tennessee.

SERVICE AVAILABILITY

All requests for new or additional service or the transfer of existing service to a higher priority end use will be considered based upon the Company's judgement as to the available gas supply, Customer's load factor or use pattern, end use, impact on the local economy, the TRA Rules and Regulations, Orders of the TRA, and the Laws of the State of Tennessee.

SERVICE CURTAILMENT

Gas service under this schedule is subject to the provisions contained within TRA Schedule No. 6, "Schedule for Limiting and Curtailing Service".

AGENCY AUTHORIZATION FORM
RATE SCHEDULE NO.7F

DATE_____

CUSTOMER_____
NAME OF FACILITY **ACCOUNT NUMBER(S)**

_____

AGENT_____

AGENT CONTACT_____PHONE #_____

This is to advise **Nashville Gas Company** that _____**(Customer)** has authorized _____**(Agent)** to act on its behalf for the following transactions:

_____nominations, _____imbalance resolution, _____ billing,

of gas for the above listed account(s). Nashville Gas Company is hereby authorized to deal with the Agent directly, and by signature below, the Customer and the Agent understand that they are responsible, jointly and severally for any amounts due Nashville Gas Company under this Rate Schedule which are not paid by agent on these accounts. Customer will provide Nashville Gas Company with a revised "AGENCY AUTHORIZATION FORM" at least six (6) business days prior to changing Agents of the accounts designated.

AUTHORIZED SIGNATURE_____
FOR THE CUSTOMER

AUTHORIZED SIGNATURE_____
FOR THE AGENT

Please Print
AGENT'S NAME_____TITLE_____
PHONE #_____FAX #_____
MAILING ADDRESS_____

Please submit to: End User Transportation
Nashville Gas Company
A Division of Piedmont Natural Gas Company
P O Box 33068
Charlotte, NC 28233
Fax # _704 365-8740

RATE SCHEDULE NO. 7I
Interruptible Transportation Service

AVAILABILITY

Gas service under this Rate Schedule is available ON AN INTERRUPTIBLE BASIS to any full requirements non-residential Customer whose usage during any month of the 12-month period ended the 31st day of March was in excess of 15,000 therms. Availability under this Rate Schedule for new Customers will be based on reasonably anticipated usage. An existing Customer may also qualify for service under this Rate Schedule based upon reasonably anticipated usage by adding incremental load either by the installation of additional equipment or by increasing hours of operation. Service under this Rate Schedule is contingent upon the installation by the Company of telemetering equipment that reports daily consumption. A Customer will be transferred from this Rate Schedule to Rate Schedule 2 if the Customers' usage is 90% or less of the minimum required by this Rate Schedule. Any such transfers will be effective June 1 of each year.

Once a qualified Customer elects service under this Rate Schedule, all services will be provided under the terms and conditions of this Rate Schedule for a term extending through the following May 31. Upon meeting the qualifications contained therein, a Customer may receive service under Rate Schedule No. 9 concurrent with service provided under this Rate Schedule. Subject to the requirements set forth above, a Customer may elect to discontinue service under this Rate Schedule and receive service under Rate Schedule No.4 and/or 10 by giving written notice to the Company prior to March 1 of any year. Proper notice having been provided, the Customer may discontinue service under this Rate Schedule effective the first June 1 following the notice.

Customers receiving services under this Rate Schedule shall maintain, in useable condition, alternate-fuel facilities with ample on-site alternate fuel capability for supplying 100% of the establishment's gas requirements during periods of gas interruption or curtailment. Such interruption or curtailment shall be immediately effective upon verbal or written notification by the Company, and Customer shall refrain from using gas until permitted to do so by the Company. It is understood and agreed that the Company will have the right to suspend gas service without further notice to the Customer in the event Customer fails to curtail Customer's use of gas in accordance with the Company's notice of curtailment.

APPLICABILITY AND CHARACTER OF SERVICE

Transportation service is available under this Rate Schedule to any qualified Customer connected to the Company's system who has obtained an independent supply of natural gas and has arranged to have this supply delivered to one of the Company's existing delivery points for transportation by the Company to the Customer's facilities.

The Company will deliver **ON AN INTERRUPTIBLE BASIS** gas previously transported by a connected pipeline for the Customer's account under this Rate Schedule on a day-to-day basis in accordance with the Customer's scheduled and confirmed nominations. The Company reserves the right to suspend service on any day when, in the Company's sole opinion, its operating conditions are such that suspension of service is necessary. The Company reserves the right to limit, allocate, or direct third party gas nominations among the interstate pipelines serving the

Company's distribution system, when, in the Company's sole opinion, such action is necessary to maintain the operational integrity of the system.

Receipts and deliveries of gas hereunder shall be at uniform rates of flow with no significant fluctuations or imbalance. Any imbalances shall be corrected by the Customer, insofar as practicable, during the month in which they occur. Customer may adjust its daily nominations during a month in order to correct any accumulated imbalance and maintain a monthly balance, subject to the operating limitations of the Company. The Company reserves the right to limit the amount of such imbalances to avoid operating problems and to comply with balancing requirements of any pipeline transporting gas hereunder. Customer will be responsible for any imbalance charges assessed by the pipeline in connection with any gas transported by the Company under this Rate Schedule. The Company reserves the right to reduce nominations when, in the judgment of the Company, such action is necessary to reduce or eliminate operational problems. Company will use its best efforts to notify the Customer or the Customer's agent before proceeding with a unilateral reduction and will notify Customer of any reduction to Customer's nomination that has been instituted by the Company.

By 10:30am central time four business days prior to the beginning of each month, the Customer shall inform the Company of its a) nomination of the daily quantity of gas to be transported for such month, and b) choice of pipeline for transportation for such month. If the Customer does not provide a timely nomination to transport gas , the Customer will not be entitled to receive gas service. By 10:30am central time six business days prior to the beginning of each month, the Customer must inform the Company of the nominating agent for gas to be transported.

Changes to nominations for gas transportation within the month are due by 10:30am central time on the day prior to gas flow.

Notwithstanding the above, if a supplier interrupts its sales service to Customer being transported hereunder, and such interruptions by the supplier occur within a month, Customer may reschedule alternative gas supplies which may be available to Customer subject to: a) normal daily nomination and confirmation deadlines and procedures b) any operational limitations of the Company and c) the availability of interruptible transportation service hereunder.

BALANCING

It shall be the Customer's responsibility to maintain a daily and monthly balance with its transporting pipelines to avoid any assessment of penalties against the Company. If the Company is assessed a penalty by a Customer's transporting pipeline, the Company shall have the right to pass-through all such penalties to the Customer to the extent the Customer or Customer's agent is responsible for causing the Company to be assessed such penalties.

MONTHLY IMBALANCE RESOLUTION

Any differences between the quantities delivered to the Company's city gate facilities for the account of the Customer for the month, and the quantities consumed by the Customer as metered for the month, shall be the monthly imbalance. Unless the Company and Customer agree to correct imbalances in kind, this imbalance shall be resolved monthly by "cashing out" the imbalance as they are known to exist at that time. If the Customer consumes more gas than it has delivered to the Company, the Customer will be deemed to be "short" by the amount of the deficiency, the Company will sell gas to the Customer in an amount equal to the deficiency and

at a price equal to the highest Weighted Index Price for any week beginning in the calendar month as published in *Natural Gas Week* plus the Tennessee Gas Pipeline FT-A charges inclusive of all surcharges and fuel times the premium percentage corresponding to the percentage of the deficiency listed in the table below. If the Customer consumes less gas than it has delivered to the Company, the Customer will be deemed to be "long" by the amount of the surplus, and the Company will buy the amount of the surplus by paying the Customer a price equal to the lowest Weighted Index Price for any week beginning in the calendar month as published in *Natural Gas Week* plus the Tennessee Gas Pipeline FT-A charges inclusive of all surcharges and fuel times the discount percentage corresponding to the percentage of the surplus listed in the table below.

Percentage of the Imbalance	Short (Premium)	Long (Discount)
Equal to or less than 5%	100%	100%
Over 5% & equal to or less than 10%	115%	85%
Over 10% & equal to or less than 15%	130%	70%
Over 15% & equal to or less than 20%	140%	60%
Over 20%	150%	50%

"The Weighted Index Price" shall be derived from the prices published in *Natural Gas Week* in the table Spot Prices on Interstate Pipeline Systems for the following pipeline designations and weighted by the corresponding percentages set forth below:

Tennessee Gas Pipeline Co. Zone 0:South Texas	X	19.47%[1]
+		
Tennessee Gas Pipeline Co. Zone 1: South Louisiana	X	73.69%[1]
+		
Columbia Gulf Transmission Co.: Rayne, La.	X	6.84% [1]

The Company will collect gross receipts tax on the incremental gross gas related charges

Any difference between the actual cost of gas incurred by the Company and the Index prices defined above will be accounted for in the Actual Cost Adjustment account in a manner consistent with Rule No. 1220-4-1-.12 of the TRA Rules and Regulations. Increments or decrements which may result from the PGA adjustments will not apply to the cash-out mechanism.

AGENCY AUTHORIZATION FORM

A Customer may authorize an agent to act on its behalf with respect to the nominations, imbalance resolution, and/or billing under this Rate Schedule by executing an Agency Authorization Form in the form attached to this Rate Schedule. To the extent that the Agent appointed by the Customer is common to other Customers of the Company, the Company will permit such Agent to aggregate all such qualifying Customers' transportation quantities for purposes of administering service to such Agent. Once a Customer has designated an agent, the agent is then authorized to act on behalf of that Customer and as such, the agent can be considered as the Customer in all references contained within this Rate Schedule. The Customer

1 These percentages are the ratio of actual test period purchases for these two pipelines determined in the Company's most recent general rate case.

may not change agents within the calendar month without the permission of the Company. All agents must utilize the electronic means made available by the Company in order to submit nominations. The Company may recover all costs incurred in providing the agent access to the electronic bulletin board.

MARGIN RATE

Customer Charge (per month)	$300.00
Commodity Charge (per therm)	
1st Step (0-15,000 therms)	$.08034
2nd Step (15,001-40,000 therms)	$.07382
3rd Step (40,001-90,000 therms)	$.05319
4th Step (Over 90,000 therms)	$.02280

MONTHLY MINIMUM BILL

The minimum monthly bill shall be the Customer Charge.

MONTHLY CUSTOMER CHARGE

A charge will be billed monthly to all Customers for the availability of gas service. This charge will be in addition to the commodity charge.

SERVICE AGREEMENTS

All Customers receiving service pursuant to this Rate Schedule shall be required to execute the Company's standard contracts and/or service applications and shall be subject to the Company's Rules and Regulations as filed with and approved by the Tennessee Regulatory Authority (TRA).

PAYMENT TERMS

All bills for service are due upon presentation and the net rates are applicable if payment is made on or before the last date of payment stated on the bill. Payments made after that date shall be for the gross amount which is greater by five percent (5%) than the net billing.

RETURNED CHECK CHARGE

In the event a Customer's check for payment is returned to the Company marked NSF (Non Sufficient Funds) the Customer will be assessed a charge of $20.00.

ADJUSTMENTS

Bills for transportation service are subject to adjustment caused by changes in the cost of purchased gas in accordance with Rule No. 1220-4-1-.12 of the TRA Rules and Regulations.

Purchase gas adjustments and all applicable taxes and fees are in addition to the above stated margin rates in accordance with the Rules, Regulations and Orders of the TRA and the Laws of the State of Tennessee.

SERVICE AVAILABILITY

All requests for new or additional service or the transfer of existing service to a higher priority end use will be considered based upon the Company's judgement as to the available gas supply,

Customer's load factor or use pattern, end use, impact on the local economy, the TRA Rules and Regulations, the Orders of the TRA, and the Laws of the State of Tennessee.

SERVICE INTERRUPTION AND CURTAILMENT

Gas service under this schedule is interruptible and is subject to the provisions contained within TRA Schedule No. 6, "Schedule for Limiting and Curtailing Service".

AGENCY AUTHORIZATION FORM
RATE SCHEDULE NO.7I

DATE_____

CUSTOMER_____
NAME OF FACILITY **ACCOUNT NUMBER(S)**

_____

AGENT_____

AGENT CONTACT_____PHONE #_____

This is to advise **Nashville Gas Company** that _____ **(Customer)** has authorized _____**(Agent)** to act on its behalf for the following transactions:

_____nominations, _____imbalance resolution, _____ billing,

of gas for the above listed account(s). Nashville Gas Company is hereby authorized to deal with the Agent directly, and by signature below, the Customer and the Agent understand that they are responsible, jointly and severally for any amounts due Nashville Gas Company under this Rate Schedule which are not paid by agent on these accounts. Customer will provide Nashville Gas Company with a revised "AGENCY AUTHORIZATION FORM" at least six (6) business days prior to changing Agents of the accounts designated.

AUTHORIZED SIGNATURE_____ FOR THE CUSTOMER

AUTHORIZED SIGNATURE_____ FOR THE AGENT

Please Print
AGENT'S NAME_____TITLE_____
PHONE #_____FAX #_____
MAILING ADDRESS_____
_____

Please submit to: End User Transportation
Nashville Gas Company
A Division of Piedmont Natural Gas Company
P O Box 33068
Charlotte, NC 28233
Fax # __704-365-8740

RATE SCHEDULE NO. 9
Special Availability Service

AVAILABILITY

Gas service under this rate schedule is available to any TRA Rate Schedule No. 3, 4, 7F, or 7I, Customer when the Company has gas supplies or services that it cannot sell at its established fixed rates where the Company's distribution mains are suitable for supplying the desired service. On such occasions, the opportunity is lost to the Company and its Customers. This Rate Schedule is designed to permit the Company to sell such gas and services at special rates for the purpose of enabling the Company to compete with alternative fuels and services available for use by its Customers.

Gas service under this Rate Schedule is available on a limited term basis to Customers who are connected to the Company's distribution system and would otherwise qualify for commercial and industrial sales or transportation service.. Gas service may be provided under this Rate Schedule only in the event that the Company has available supplies or services that cannot competitively be provided under other rate schedules. Service under this Rate Schedule is temporary and the Company has the right to discontinue such service. Gas service under this rate schedule will be curtailed prior to service under any other rate schedule.

In the event a Customer has zero consumption during any billing month, this tariff will not apply and service shall be rendered pursuant to the Company's regular rate schedules for the class of service indicated for the purpose of determining a minimum bill and qualifying provisions.

BASE RATE

The Customer shall pay the Company for all gas supplied or services provided under this schedule at a predetermined rate negotiated prior to delivery for limited term periods up to seven consecutive months.

SERVICE AGREEMENTS

All Customers purchasing gas pursuant to this Rate Schedule shall be subject to the Company's standard contracts and/or service applications and subject to the Company's Rules and Regulations as filed with the TRA.

PAYMENT TERMS

All bills for service are due upon presentation and the above stated net rates are applicable if payment is made on or before the last date of payment stated on the bill. Payments made after that date shall be for the gross amount which is greater by five percent (5%) than the net billing.

RETURNED CHECK CHARGE

In the event a Customer's check for payment is returned to the Company marked NSF (Non Sufficient Funds) the Customer will be assessed a charge of $20.00.

ADJUSTMENTS

Bills for service are subject to adjustment caused by changes in the cost of purchased gas in

accordance with Rule No. 1220-4-1-.12 of the TRA Rules and Regulations.

Purchased gas adjustments and all applicable taxes and fees are in addition to the above stated base rates in accordance with The Rules, Regulations and Orders of the TRA and Laws of the State of Tennessee.

SERVICE AVAILABILITY

All requests for new and additional service or the transfer of existing service to higher priority end use will be supplied based upon the Company's judgement as to the available gas supply, Customer's load factor or use pattern, end use priority as specified by the Federal Energy Regulatory Commission (FERC), impact on the local economy, and The Rules, Regulations, and Orders of the TRA and Laws of the State of Tennessee.

SERVICE INTERRUPTION AND CURTAILMENT

Gas service under this schedule is subject to the provisions contained within TRA Schedule No. 6, "Schedule for Limiting and Curtailing Service."

TREATMENT OF NEGOTIATED MARGIN LOSSES

Margin losses under this rate schedule shall be recovered by the Company through the Company's Actual Cost Adjustment (ACA) as provided in the Company's Purchased Gas Adjustment (PGA) Rider (TRA Service Schedule No. 11).

NASHVILLE GAS COMPANY
665 Mainstream Drive
Nashville, Tennessee 37228
A Division of Piedmont Natural Gas Company
TRA Rate Schedule No. 10

Exhibit___(CWF-5)

RATE SCHEDULE NO. 10
Resale Service

AVAILABILITY
Sales for Resale Service is available under this rate schedule to any qualified local distribution company who purchases natural gas for the purpose of reselling same, where the Company's distribution mains are suitable for supplying the desired service.

MARGIN RATE

Demand Charge (per therm of billing demand)	$.80000
Commodity Charge (per therm)	$.07000

MONTHLY MINIMUM BILL
The minimum monthly bill shall be the monthly demand charge.

BILLING DEMAND
Demand determinants shall be those agreed to in the contract.

SERVICE AGREEMENTS
All customers purchasing gas pursuant to this schedule shall be subject to the Company's standard contracts and/or service applications and subject to the Company's Rules and Regulations as filed with the TRA.

PAYMENT TERMS
All bills for service are due upon presentation and the net rates are applicable if payment is made on or before the last date of payment stated on the bill. Payments made after that date shall be for the gross amount which is greater by five percent (5%) than the net billing.

RETURNED CHECK CHARGE
In the event a customer's check for payment is returned to the Company marked NSF (Non Sufficient Funds) the customer will be assessed a charge of $20.00.

ADJUSTMENTS
Bills for service are subject to adjustment caused by changes in the cost of purchased gas in accordance with

Rule No. 1220-4-1-.12 of the TRA Rules and Regulations.

Purchased gas adjustments and all applicable taxes and fees are in addition to the above stated margin rates in accordance with The Rules, Regulations and Orders of the TRA and Laws of the State of Tennessee.

SERVICE AVAILABILITY

All requests for new and additional service or the transfer of existing service to higher priority end use will be supplied based upon the Company's judgement as to the available gas supply, customer's load factor or use pattern, end use priority as specified by the Federal Energy Regulatory Commission (FERC), impact on the local economy, and The Rules, Regulations, and Orders of the TRA and Laws of the State of Tennessee.

SERVICE INTERRUPTION AND CURTAILMENT

Gas service under this schedule is subject to the curtailment provisions contained within TRA Schedule No. 6, "Schedule for Limiting and Curtailing Service".

SERVICE SCHEDULE NO. 13
Weather Normalization Adjustment (WNA) Rider

I. Provision for Adjustment

The base rates per therm (100,000 Btu) for gas service set forth in any rate schedules utilized by the Authority in determining normalized test period revenues shall be adjusted by an amount hereinafter described, which amount is referred to as the "Weather Normalization Adjustment".

The Weather Normalization Adjustment will be applicable for bills rendered on and after November 1 and continuing through the final billing cycle in March of each year.

II. Definitions

For the purposes of this Rider:

"Authority" means the Tennessee Regulatory Authority.

"Relevant Rate Order" means the final order of the Authority in the most recent litigated rate case of the Company fixing the rates of the Company or the most recent final order of the Authority specifically prescribing or fixing the factors and procedures to be used in the application of this Rider.

III. Computation of Weather Normalization Adjustment

The Weather Normalization Adjustment shall be computed to the nearest one-hundredth cent per therm by the following formula:

$$WNA_i = R_i \quad * \quad \frac{(HSF_i(NDD-ADD))}{(BL_i + (HSF_i \times ADD)}$$

Where:

I = any particular rate schedule or billing classification within any particular rate schedule that contains more than one billing classification.

WNA_i = Weather Normalization Adjustment Factor for the i^{th} rate schedule or classification expressed in cents per therm.

R_i = weighted average base rate (base rate less any embedded gas cost) of temperature sensitive sales for the i^{th} schedule or classification utilized by the Authority in the Relevant Rate Order for the purpose of determining normalized test year revenues.

EFFECTIVE: February 1,2000
DOCKET NO: 99-

HSF_i = heat sensitive factor for the i^{th} schedule or classification utilized by the Authority in the Relevant Rate Order for the purpose of determining normalized test year revenues.

NDD = normal billing cycle heating degree days utilized by the Authority in the Relevant Rate Order for the purpose of determining normalized test year revenues.

ADD = actual billing cycle heating degree days.

BL_i = base load sales for the i^{th} schedule or classification utilized by the Authority in the Relevant Rate Order for the purpose of determining normalized test year revenues.

IV. Filing with Authority

The Company will file as directed by the Authority (a) a copy of each computation of the Weather Normalization Adjustment, (b) a schedule showing the effective date of each such Weather Normalization Adjustment, and a schedule showing the factors or values derived from the Relevant Rate Order used in calculating such Weather Normalization Adjustment.

2nd Revised Addendum to TRA Service Schedule No. 13

NASHVILLE GAS COMPANY
WNA Components

	Residential	Commercial
"R" Value:	0.35096	0.35095
Heat Sensitivity Factor	0.18769	0.79321
Base Load:	13.018	126.066

Piedmont Natural Gas Company, Inc.
Calculation of "R" Values for WNA Computations
Nashville Gas Rate Case

		Residential	Commercial
Fixed Gas Costs	($/therm)	0.04898	0.04442
Commodity	($/therm)	0.29209	0.29209
"R" Value	($/therm)	0.35096	0.35095
HSF	(therms/DDD)	0.18769	0.79321
BL	(therms/mo.)	13.018	126.066

Piedmont Natural Gas Company, Inc.
Fixed Gas Cost Embedded in Proposed Rates
Nashville Gas Rate Case

	Fixed Cost per therm	Adjustment Percentage
Residential	0.04898	49.21%
Commercial	0.04442	30.66%
Firm Sales		
Demand	0.63730	8.98%
Commodity		
1st Step Volumes	0.00292	0.31%
2nd Step Volumes	0.00240	0.07%
3rd Step Volumes	0.00169	0.00%
4th Step Volumes	0.00000	0.00%
Firm Transportation		
Demand	0.63730	7.66%
Commodity		
1st Step Volumes	0.00292	0.19%
2nd Step Volumes	0.00240	0.11%
3rd Step Volumes	0.00169	0.02%
4th Step Volumes	0.00000	0.00%
Interruptible Sales		
Commodity		
1st Step Volumes	0.02992	0.51%
2nd Step Volumes	0.02940	0.40%
3rd Step Volumes	0.02869	0.29%
4th Step Volumes	0.02700	0.07%
Interruptible Transportation		
1st Step Volumes	0.00292	0.21%
2nd Step Volumes	0.00240	0.21%
3rd Step Volumes	0.00169	0.19%
4th Step Volumes	0.00000	0.00%
Sales For Resale		
Demand	0.63730	0.90%
Commodity	0.00200	0.01%