

BEFORE THE TENNESSEE REGULATORY AUTHORITY

NASHVILLE, TENNESSEE

August 9, 1999

REC'D TH
REGULATORY AUTH.

'99 AUG 9 AM 11 37

OFFICE OF THE
EXECUTIVE SECRETARY

IN RE:

NASHVILLE GAS COMPANY

WEATHER NORMALIZATION ADJ. (WNA) AUDIT)

)

)

) **Docket No. 99-00514**

**NOTICE OF FILING BY ENERGY AND WATER DIVISION OF THE TENNESSEE
REGULATORY AUTHORITY**

Pursuant to Tenn. Code Ann. §§ 65-4-104, 65-4-111 and 65-3-108, the Energy and Water Division of the Tennessee Regulatory Authority (the "Energy and Water Division") hereby gives notice of its filing of the Nashville Gas Company WNA Audit Report in this docket and would respectfully state as follows:

1. The present docket was opened by the Authority to hear matters arising out of the audit of Nashville Gas Company (the "Company").

2. The Company's WNA filings were received on November 1, 1998, through March 31, 1999, and the Staff completed its audit of same on July 21, 1999.

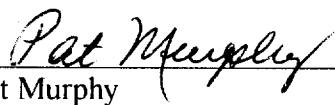
3. On July 22, 1999, the Energy and Water Division issued its preliminary WNA audit findings to the Company, and on July 28, 1999, the Company responded thereto.

4. The preliminary WNA audit report was modified to reflect the Company's responses and a final WNA audit report (the "Report") resulted therefrom. The Report is attached hereto as Exhibit A and is fully incorporated herein by this reference. The Report

contains the audit findings of the Energy and Water Division, the Company's responses thereto and the recommendations of the Energy and Water Division in connection therewith.

5. The Energy and Water Division hereby files its Report with the Tennessee Regulatory Authority for deposit as a public record and approval of the recommendations and findings contained therein.

Respectfully Submitted:



Pat Murphy
Energy and Water Division of the
Tennessee Regulatory Authority

CERTIFICATE OF SERVICE

I hereby certify that on this 9 day of August, 1999, a true and exact copy of the foregoing has been either hand-delivered or delivered via U.S. Mail, postage pre-paid, to the following persons:

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

Mr. Bill R. Morris
Director-Rates
Piedmont Natural Gas Company
P.O. Box 33068
Charlotte, North Carolina 28233


Pat Murphy

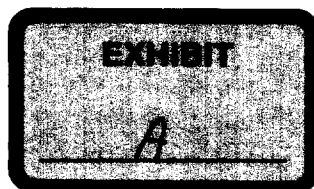
COMPLIANCE AUDIT REPORT
OF
NASHVILLE GAS COMPANY
WEATHER NORMALIZATION ADJUSTMENT (WNA) RIDER
DOCKET NO. 99-00514

PREPARED BY

TENNESSEE REGULATORY AUTHORITY

ENERGY AND WATER DIVISION

AUGUST, 1999



**COMPLIANCE AUDIT
NASHVILLE GAS COMPANY
WEATHER NORMALIZATION ADJUSTMENT (WNA) RIDER**

TABLE OF CONTENTS

	<u>PAGE NO.</u>
I. Objective of Audit	1
II. Scope of Audit	1
III. Background on Weather Normalization Adjustment (WNA) Rider	1
IV. Impact of WNA Rider	3
V. Background Information on Nashville Gas Company	4
VI. Findings	5
VII. Recommendations and Conclusions	6

COMPLIANCE AUDIT
NASHVILLE GAS COMPANY
WEATHER NORMALIZATION ADJUSTMENT (WNA) RIDER

I. OBJECTIVE OF AUDIT

In its September 26, 1991 Order in Docket 91-01712, the Tennessee Regulatory Authority (TRA), formerly the Tennessee Public Service Commission, approved a three year experimental Weather Normalization Adjustment (WNA) Rider to be applied to residential and commercial customers' bills during the months of October through May of each year (See Attachment 1). In its June 21, 1994 order, the TRA adopted the WNA Rider as a permanent rule, to be applied November through March of each year for Nashville Gas Company. The purpose of this audit is to determine if the WNA rider was calculated and applied to customers' bills correctly between November 1, 1998 and March 31, 1999.

II. SCOPE OF AUDIT

In meeting the objective of the audit, the Staff compared the following on a daily basis: 1) the Company's actual heating degree days to National Oceanic and Atmospheric Administration (NOAA) actual heating degree days; 2) the Company's normal heating degree days to the normal heating degree days calculated in the last rate case; and 3) the Company's calculation of the WNA factor to Staff's calculation. The Staff also audited a sample of customers' bills during the WNA period to verify that the WNA factor had been correctly applied to the bills.

This audit was conducted by Pat Murphy of the Energy and Water Division.

III. BACKGROUND ON WEATHER NORMALIZATION ADJUSTMENT (WNA) RIDER

In setting rates, the Tennessee Regulatory Authority uses a normalized level of revenues and expenses for a test year, which is designed to be the most reasonable estimate of the Company's operations during the time the rates are to be in effect. Use of normalized operating levels eliminates unusual fluctuations that may occur during the test period, which causes rates to be set too high or too low.

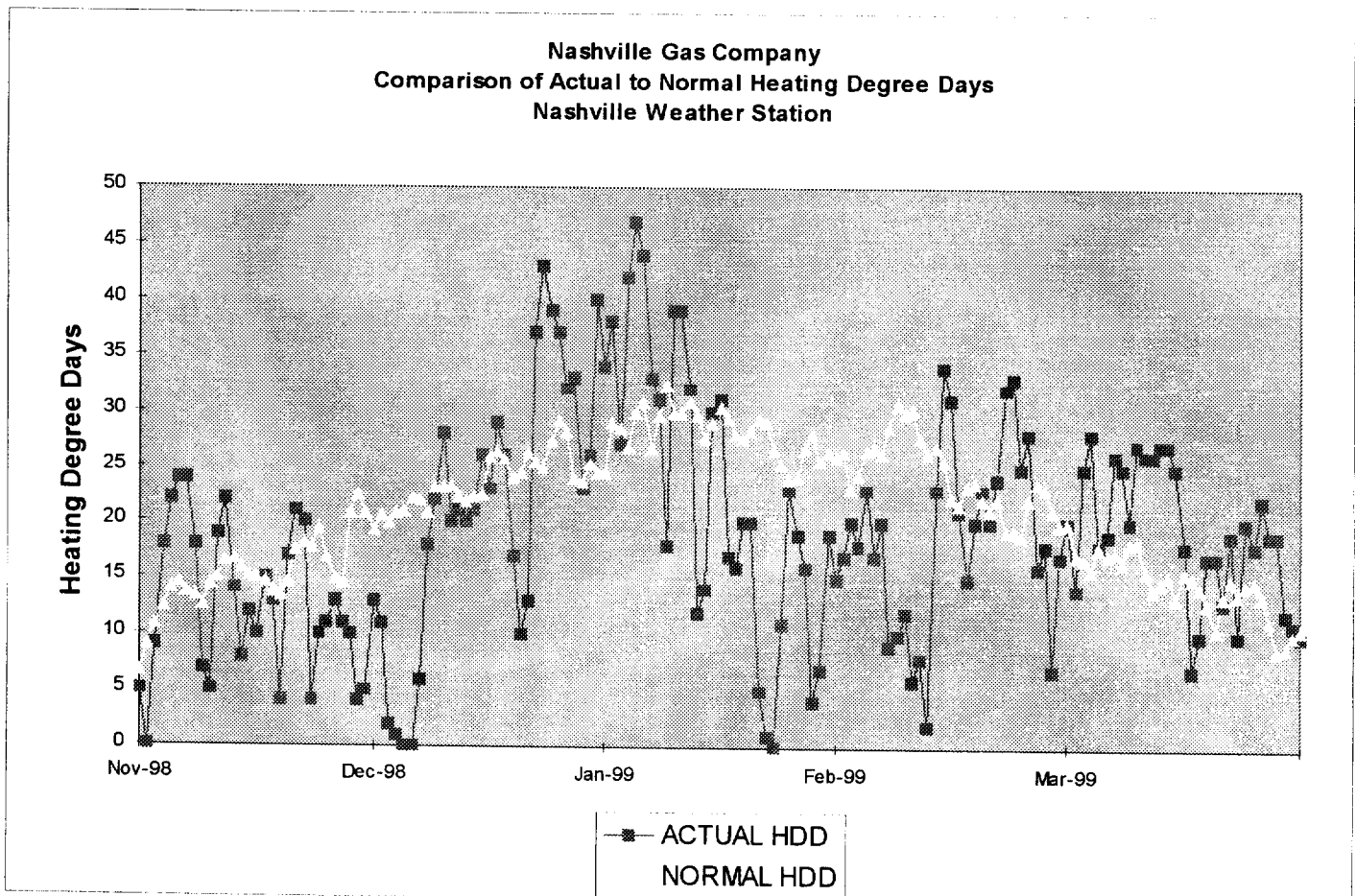
Specifically, one part of normalizing revenues consists of either increasing or decreasing the test year weather related sales volumes to reflect the difference between the normal and actual heating degree days. (A heating degree day is calculated as the difference in the average daily temperature and 65 degrees Fahrenheit.) This average daily temperature constitutes normal weather and is determined based on the previous thirty years weather data.

However, normal weather rarely occurs. This has two impacts:

- 1) The customers' bills fluctuate dramatically due to changes in weather from month to month; and
- 2) The gas companies earn more or less than their authorized rate of return. For example, if weather is colder than normal, then more gas than anticipated in the rate case will be sold. This results in higher customer bills and overearnings for the company. On the other hand, if weather is warmer than normal, less gas than anticipated in the rate case will be sold, the customers' bills will be lower and the company will underearn.

In recognition of this fact, the TRA approved an experimental WNA mechanism, which became permanent on June 21, 1994, to reduce the impact abnormal weather has on the customers' bills and on the gas utilities' operations. In periods of weather colder than normal, the customer receives a credit on his bill, while in periods of warmer than normal weather, the customer is billed a surcharge. Thus, customers' monthly bills should not fluctuate as dramatically and the gas company should have a more stable rate of return.

The following graph is a comparison of actual heating degree days to normal heating degree days for Nashville Gas during the 1998 - 1999 heating season.



IV. IMPACT OF WNA RIDER

The net impact of the WNA Rider during the November 1, 1998 through March 31, 1999 period was that residential and commercial customers were **surcharged** an additional \$2,858,841 and \$1,702,798 respectively. This equates to increases in revenues from residential and commercial sales of 6.66% and 4.94% respectively. (See Table 1) This is an increase from the previous year when the residential and commercial customers were **surcharged** \$898,107 and \$622,766 respectively (See Table 2).

Table 1

Impact of WNA Rider on Residential & Commercial Revenues November 1, 1998 - March 31, 1999

	<u>WNA Rider Revenues</u>	<u>Total Revenues</u>	<u>Percentage Impact of WNA Rider On Revenues</u>
Residential Sale	\$ 2,858,841	\$ 42,933,541	6.66%
Commercial Sales	<u>1,702,798</u>	<u>34,480,386</u>	4.94%
Total	<u>\$ 4,561,639</u>	<u>\$ 77,413,927</u>	5.89%

Table 2

Amount Surcharged (Refunded) 1996 - 1999

	<u>Residential</u>	<u>Commercial</u>	<u>Total Surcharge/(Refund)</u>
11/96-3/97	\$1,530,799	\$1,086,647	\$2,617,446
11/97-3/98	898,107	622,766	1,520,873
11/98-3/99	<u>2,858,841</u>	<u>1,702,798</u>	<u>4,561,639</u>
Total	<u>\$5,287,747</u>	<u>\$3,412,211</u>	<u>\$8,699,958</u>

V. BACKGROUND INFORMATION ON THE COMPANY

Nashville Gas Company (NGC), with its headquarters at 655 Mainstream Drive, Nashville, Tennessee, is a wholly owned subsidiary of Piedmont Natural Gas Company, which has its headquarters at 1915 Rexford Road, Charlotte, North Carolina. NGC is a gas distributor, which provides service to several communities in the Middle Tennessee area. The natural gas used to serve these areas is purchased from Tennessee Gas Pipeline, Columbia Gas Transmission Corporation and Texas Eastern Gas Pipeline in accordance with separate and individual tariffs approved by the Federal Energy Regulatory Commission.

VI. WNA FINDINGS

The Staff's audit results showed an **under-recovery** from NGC's ratepayers in the amount of **\$28,622** for the period. This under-recovery resulted from a single finding, which is detailed below.

FINDING:

Exception

The Company used inaccurate actual daily heating degree days in the calculation of the WNA factor.

Discussion

The audit indicates that on two (2) days out of 182 days of weather observations in the WNA period, the Company used inaccurate actual daily heating degree days in the calculation of the WNA factor. This inaccuracy was due to the daily degree days published in NOAA's Local Climatological Data for Nashville being different from the daily degree days that the Company obtained for this particular day from a NOAA Internet site. Since the official NOAA publication, which is the standard in the TRA's audit of the Weather Normalization Adjustment, has a lag time of several months, the Company must rely on data that is immediately available. Through no fault of the Company, they relied on information from NOAA that later proved to be inaccurate.

The days involved were:

Date	Daily Degree Days Used By Company	Daily Degree Days As Published by NOAA	Degree Day Difference
01/04/99	47	46	-1
02/16/99	15	14	-1

The net result of the Company's use of this inaccurate information is that the customers were **under-charged \$28,622**.

Company Response

The Company agrees with the finding.

II. RECOMMENDATIONS AND CONCLUSIONS

The Staff concludes that the Company is correctly implementing the mechanics of the WNA Rider as specified by the TRA and included in the Company's tariff. (See Attachment 1) Since the **\$28,622 under-collection** is immaterial (approximately \$0.21 per customer), we recommend that the Company include this amount in its Actual Cost Adjustment Account. The Company has agreed to do so.

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 Commission 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:

"Commission" means the Tennessee Public Service Commission.

"Relevant Rate Order" means the final order of the Commission in the most recent litigated rate case of the Company fixing the rates of the Company or the most recent final order of the Commission 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:

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

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 Commission in the Relevant Rate Order for the purpose of determining normalized test year revenues.

- HSF_i = heat sensitive factor for the ith schedule or classification utilized by the Commission in the Relevant Rate Order for the purpose of determining normalized test year revenues.
- NDD = normal billing cycle heating degree days utilized by the Commission 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 ith schedule or classification utilized by the Commission in the Relevant Rate Order for the purpose of determining normalized test year revenues.

IV. Filing with Commission

The Company will file as directed by the Commission (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 (c) a schedule showing the factors or values derived from the Relevant Rate Order used in calculating such Weather Normalization Adjustment.

1st Revised Addendum to TRA Service Schedule No. 13

**NASHVILLE GAS COMPANY
WNA Components**

	<u>Residential</u>	<u>Commercial</u>
"R" Value:	0.29884	0.32596
Heat Sensitivity Factor:	0.20232	0.82050
Base Load:	14.24667	136.47892

ISSUED BY : John H. Maxheim
ORIGINALLY ISSUED ON : May 31, 1996 to be effective June 30, 1996
REISSUED ON: December 31, 1996 to be effective January 1, 1997

EFFECTIVE: January 1, 1997
DOCKET NO: 96-00977