

BEFORE THE TENNESSEE REGULATORY AUTHORITY

NASHVILLE, TENNESSEE

	September 8, 2016	
IN RE:)	
)	
AUDIT OF PIEDMONT NATURAL GAS)	DOCKET NO.
COMPANY'S WEATHER NORMALIZATION)	16-00063
ADJUSTMENT FOR THE PERIOD OCTOBER 1,)	
2015 TO APRIL 30, 2016)	

**ORDER ADOPTING WNA AUDIT REPORT OF THE UTILITIES DIVISION
OF THE TENNESSEE REGULATORY AUTHORITY**

This matter came before Chairman David F. Jones, Director Herbert H. Hilliard, and Director Kenneth C. Hill of the Tennessee Regulatory Authority (the "Authority" or "TRA"), the voting panel assigned to this docket, at a regularly scheduled Authority Conference held on August 8, 2016 for consideration of the Weather Normalization Adjustment Audit Report ("Audit Report") of the Authority's Utilities Division (the "Staff") resulting from the Staff's audit of Piedmont Natural Gas Company's ("PNG" or the "Company") Weather Normalization Adjustment ("WNA") for the period October 1, 2015 through April 30, 2016. The Audit Report, which was filed on July 18, 2016, is attached hereto as Exhibit 1 and incorporated by reference in this Order.

The Audit Report contained one finding. The Company used incorrect actual heating degree days for eleven days in the period, which resulted in inaccurate WNA factors billed in eighty-five (85) billing cycles. As a result of these errors, customers were under-billed \$992,808. Due to the material amount of the under-billing, Staff stated that it would accept re-billing of the affected customers, but after conducting further analysis on the impact of

allocating the under-billed amount through the commodity ACA factor, Staff recommended the Company add the under-collection to the Company's next Actual Cost Adjustment ("ACA") filing with the Authority. The Company concurred with the finding and recommendation. Except for the finding noted, the Staff concluded that it appears PNG is correctly implementing the mechanics of its WNA Rider in all material aspects.

At the regularly scheduled Authority Conference held on August 8, 2016, the panel considered the Audit Report and voted unanimously to approve the finding and recommendation contained therein.

IT IS THEREFORE ORDERED THAT:

1. The Audit Report, a copy of which is attached to this Order as Exhibit 1, is approved and adopted and incorporated in this Order as if fully rewritten herein.
2. Piedmont Natural Gas Company shall include the under-collection amount in its next Actual Cost Adjustment filing with the TRA.

Chairman David F. Jones, Director Herbert H. Hilliard and Director Kenneth C. Hill concur.

ATTEST:



Earl R. Taylor, Executive Director

EXHIBIT 1

2016 JUL 18 AM 11:48

RY AUTHORITY
T.R.A. LOCKET ROOM

NASHVILLE, TENNESSEE

July 18, 2016

IN RE:

PIEDMONT NATURAL GAS**WEATHER NORMALIZATION ADJ. (WNA) AUDIT)**

Docket No. 16-00063

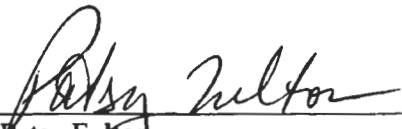
**NOTICE OF FILING BY THE UTILITIES DIVISION OF THE TENNESSEE
REGULATORY AUTHORITY**

Pursuant to Tenn. Code Ann. §§65-4-104, 65-4-111 and 65-3-108, the Utilities Division of the Tennessee Regulatory Authority (the “Utilities Division”) hereby gives notice of its filing of the Piedmont Natural Gas 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 Piedmont Natural Gas (the "Company").
2. The Company's WNA filings were received October 1, 2015, through April 30, 2016, and the Staff completed its audit of same on July 8, 2016.
3. On July 8, 2016, the Utilities Division submitted its preliminary WNA audit findings to the Company via e-mail. The Company responded on July 13, 2016 via e-mail and this response has been incorporated into the final report. The Report is attached to this Notice as Exhibit A and is fully incorporated herein by this reference.

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

Respectfully Submitted:



Patsy Fulton
Utilities Division
Tennessee Regulatory Authority

CERTIFICATE OF SERVICE

I hereby certify that on this 18th day of July 2016, 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:

Earl Taylor
Executive Director
Tennessee Regulatory Authority
502 Deaderick Street
Nashville, TN 37243

David F. Jones
Chairman
Tennessee Regulatory Authority
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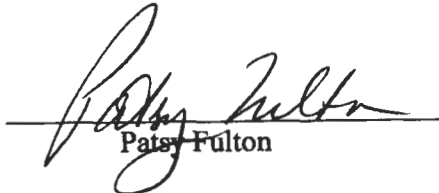

Patsy Fulton

EXHIBIT A

COMPLIANCE AUDIT REPORT

OF

PIEDMONT NATURAL GAS

WEATHER NORMALIZATION ADJUSTMENT (WNA) RIDER

DOCKET NO. 16-00063

TENNESSEE REGULATORY AUTHORITY

UTILITIES DIVISION

July 2016

COMPLIANCE AUDIT OF
Piedmont Natural Gas
WEATHER NORMALIZATION ADJUSTMENT (WNA) RIDER
Docket No. 16-00063

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COMPLIANCE AUDIT
PIEDMONT NATURAL GAS
WEATHER NORMALIZATION ADJUSTMENT (WNA) RIDER

Docket No. 16-00063

I. INTRODUCTION AND AUDIT OPINION

The subject of this compliance audit is the Weather Normalization Adjustment (WNA) Rider of Piedmont Natural Gas (hereafter “PNG,” “Piedmont” or the “Company”). The objective of this audit was to determine if the WNA adjustments were calculated correctly and applied to customers' bills appropriately between October 1, 2015 and April 30, 2016. As a result of the WNA Rider, the Company surcharged a net \$6,225,662.15 and \$3,387,779.89 to the residential and commercial customers respectively, during the period. The impact of WNA revenues on the Company's total revenues is detailed in Section V, Table 1.

The Audit Staff's (“Staff”) audit results produced one finding for the audit period under review. Except for the finding reported in Section VI, Staff concludes that the Company is correctly implementing the mechanics of the WNA Rider as specified by the Tennessee Regulatory Authority (“TRA” or the “Authority”) and included in the Company's tariff. (See Attachment 2)

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 (ADD) to National Oceanic and Atmospheric Administration (“NOAA”) actual heating degree days;
- (2) The Company's normal heating degree days (NDD) 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.

Staff also selected a sample of customer bills to verify that the WNA factor had been correctly applied to customer bills. The Staff also examined each sample bill to determine whether the Base Rates and Purchased Gas Adjustments were billed correctly. As a result of the bill audit, Staff maintains PNG is correctly billing its customers.

Patsy Fulton and Pat Murphy of the Utilities Division conducted this audit.

III. BACKGROUND INFORMATION ON PIEDMONT NATURAL GAS

Piedmont Natural Gas Company corporate headquarters are located at 4720 Piedmont Row Drive, Charlotte, North Carolina. Local offices are located at 83 Century Blvd., Nashville, Tennessee. PNG is a natural gas distributor that provides service to Nashville and several other communities in the Middle Tennessee area, as well as service areas in North and South Carolina. The natural gas used to serve Tennessee is purchased from producers and marketers and transported to Nashville's city gate through the interstate transmission facilities of Tennessee Gas Pipeline (TGP), Columbia Gas Transmission Corporation (CGTC), Texas Eastern Gas Pipeline (TETCO), and Midwestern Gas Transmission Company (MGTC).

IV. 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.¹

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 over-earnings 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 under-earn.

In recognition of this fact, on September 26, 1991, the Tennessee Public Service Commission² ("TPSC") approved a three-year experimental Weather Normalization Adjustment Rider ("WNA Rider") to the tariffs of Chattanooga Gas Company, Nashville Gas Company, a division of Piedmont Natural Gas Company, Inc. and United Cities Gas

¹ Weather data is published monthly by the National Oceanic and Atmospheric Administration ("NOAA").

² By legislative action, the Public Service Commission was replaced on July 1, 1996 by the Tennessee Regulatory Authority. See Act of May 24, 1995, ch. 305, 1995 Tenn. Pub. Acts 450. The TRA retains jurisdiction over the above named gas companies. See Tenn. Code Ann. § 65-4-104; see also Tenn. Code Ann. § 65-4-101 (a) (defining public utility).

Company.³ 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 WNA Rider was to be applied to residential and commercial customers' bills during the months of October through May of each year. On June 21, 1994, the TPSC issued an Order authorizing the above mentioned gas companies to permanently implement an amended version of the WNA Rider.⁴

Piedmont Natural Gas was authorized to calculate WNA adjustments during the months of November through March of each year until its last rate case in Docket No. 11-00144 when the WNA period was extended to October through April effective March 1, 2012.⁵ The TRA Staff audits these calculations annually.

V. IMPACT OF WNA RIDER

The table below quantifies the number of actual heating degree days by month as compared to the normal heating degree days for that month. It shows that during the audit period, the weather (overall) was warmer than normal, resulting in a net surcharge from PNG to its customers for the period. See also the graph (Attachment 1) which visually compares the actual heating degree days to normal heating for Piedmont during the 2015-2016 heating season.

<i>Month</i>	<i>Actual Heating Degree Days</i>	<i>Normal Heating Degree Days</i>	<i>Warmer/Colder than Normal</i>
September 2015	3	20	Warmer
October 2015	137	175	Warmer
November 2015	283	438	Warmer
December 2015	370	742	Warmer
January 2016	850	826	Colder
February 2016	600	651	Warmer
March 2016	285	447	Warmer
April 2016	136	203	Warmer
Total	2,664	3,502	Warmer

Since the overall weather during the October 1, 2015 through April 30, 2016 period was warmer than normal, the net impact of the WNA Rider was that residential and commercial customers were **surcharged \$6,225,662.15 and \$3,387,779.89 respectively.**

³ See petition of Chattanooga Gas Company, Nashville Gas Company, a Division of Piedmont Natural Gas Company, Inc. and United Cities Gas Company for a Rulemaking Hearing to Adopt a Weather Normalization Adjustment (WNA) Rider, Docket No. 91-01712, *Order* (September 26, 1991).

⁴ The amendment directed Chattanooga Gas Company and United Cities Gas Company to eliminate from their WNA Rider the shoulder months of October and May, and Nashville Gas Company to eliminate the shoulder months of October, April and May.

⁵ See *In Re: Petition of Piedmont Natural Gas Company, Inc. for an Adjustment to Its Rates, Approval of Changes to its Rate Design, Amortization of Certain Deferred Assets, Approval of New Depreciation rates, Approval of Revised Tariffs and Service Regulations, and Approval of a New Energy Efficiency Program and GTI Funding*, Docket No. 11-00144, *Order*, p. 14.

This equates to an increase from total residential and commercial sales revenues of 7.3% and 7.0%, respectively (See Table 1). This is an increase from the WNA refund in the previous year when the residential and commercial customers were refunded a net \$2,954,384 and \$1,522,140 respectively. Table 2 below compares the WNA surcharges/refunds over the last three (3) winter heating seasons.

Table 1

**Impact of WNA Rider on Residential & Commercial Revenues
October 1, 2015 - April 30, 2016**

	<u>WNA Rider Revenues</u>	<u>Total Revenues</u>	<u>Percentage Impact of WNA Rider on Revenue</u>
Residential Sales	\$ 6,225,662	\$ 85,711,009	7.3%
Commercial Sales	<u>3,387,779</u>	<u>48,412,219</u>	<u>7.0%</u>
Total	<u>\$ 9,613,441</u>	<u>\$134,123,228</u>	<u>7.2%</u>

Table 2

**Amount Surcharged (Refunded)
2013 - 2016**

	<u>Residential</u>	<u>Commercial</u>	<u>Total Surcharge/Refund</u>
10/13-4/14	\$(4,069,177)	\$(1,992,197)	\$(6,061,374)
10/14-4/15	(2,954,384)	(1,522,140)	(4,476,524)
10/15-4/16	<u>6,225,662</u>	<u>3,387,779</u>	<u>9,613,442</u>
Total	<u>\$ (797,899)</u>	<u>\$ (125,558)</u>	<u>\$ (924,456)</u>

VI. WNA FINDING

As noted in Section I of this report, Staff's audit resulted in one finding for the winter heating season of October 2015 through April 2016. This finding is described in detail below.

FINDING:

Exception

The Company used incorrect actual heating degree days (ADD) during 2015/2016 WNA heating season on October 19, October 21, October 22, October 29, November 2, November 3, December 16, February 8, March 19, March 20 and March 31.

Discussion

The Company used incorrect actual heating degree days for eleven (11) days in the review period, which resulted in inaccurate WNA factors billed in eighty-five (85) billing cycles out of 132 total billing cycles. Therefore, incorrect WNA factors were used in approximately 65% of the billing cycles.

These inaccuracies are due to differences in daily heating degree days published in NOAA's Local Climatological Data report⁶ and the daily heating degree days that the Company used in calculating its WNA factors. In order to timely bill its customers, the Company must obtain actual daily degree day information from its weather information source(s) on a real time basis. The WNA Rider and the Staff's audit of this Rider are based on the official NOAA publication, which is released approximately two months later. Therefore, Staff recognizes that discrepancies can be caused by inaccurate information from the Company's weather information source. These reporting differences, however, typically result in one or two heating degree days for the day in question. When Staff observed that the differences occurring during the month of October were significant, Staff contacted Piedmont personnel to confirm that the heating degree days reported to the TRA were in fact correct and used in the calculation of the WNA factors billed to customers. Piedmont confirmed the accuracy of their reporting. The significant heating degree day differences continued throughout the review period as documented in the table below.

Date	Company Actual Degree Days	NOAA Actual Degree Days	Difference
October 19, 2015	17	12	-5
October 21, 2015	9	2	-7
October 22, 2015	11	0	-11
October 29, 2015	19	7	-12
November 2, 2015	7	0	-7
November 3, 2015	3	1	-2

⁶ This published report is the official data supplied by NOAA and is the standard that the Staff uses to audit the Weather Normalization Rider.

December 16, 2015	15	10	-5
February 8, 2016	39	27	-12
March 19, 2016	22	14	-8
March 20, 2016	14	22	8
March 31, 2016	5	0	-5
		Net Total	<u>-66</u>

The result of these errors was a total **net under-collection** of WNA revenues from customers of **\$992,808**.

Recommendation

Staff contends that the differences outlined in this finding represent a material error on the Company's part. When the significant differences in ADD were brought to the Company's attention, it appears that steps were not taken to identify and rectify problems associated with obtaining daily weather information, thereby mitigating these differences going forward. Staff understands through emails with Piedmont that the Company is updating its procedures to be followed when collecting data from the NOAA website and will be conducting additional staff training to ensure the correct NOAA data points are selected and used for billing purposes going forward.

Staff considered the options available to Piedmont for recouping this significant under-collection, which is considerably outside the normal range of findings experienced in the past for this Company. There is no mechanism outlined in the WNA Rider that must be used to correct WNA findings. One option, and the most accurate method, is for the Company to recalculate every customer bill for the affected billing cycles and post an adjustment to each individual customer bill in the next billing. The second option is to add the under or over-collection to the balance in the Company's next Actual Cost Adjustment (ACA) filing, which spreads the amount evenly based on usage over the customer base that receives the ACA true-up adjustment. Due to the immaterial amount of findings that usually result from a WNA audit, this method is the usual precedent followed by the TRA.

Staff recognizes that there is significant cost and time needed for Piedmont to go with option one. Therefore, Staff researched the ramifications of adding this significant under-collection to the ACA balance. The only point of concern is that industrial and interruptible customers (who are not subject to the WNA) also receive an allocated share of the commodity ACA factor. After reviewing past ACA filings, Staff determined that these customers on average receive approximately one tenth of one per cent (.1%) of any adjustment, which in this case is approximately \$1,045 of the \$992,808 under-collection. Staff considers this as a reasonable solution.

Based on its analysis, Staff would recommend that Piedmont add the under-collection to its next ACA filing with the TRA. If the Company opts to re-bill the affected customers, Staff would accept its decision.

Company Response

In the Discussion section of the Audit Findings report, Staff contends that the Company used incorrect actual degree days for 11 days in the review period. The Company would like to clarify this point by stating that in 2 of the 11 occurrences, the correct data was selected from the NOAA website but then transposed when entered into the Company's billing system for those dates. As these dates fell on a Saturday and Sunday when no bill cycle ran, this error on the Company's part did not further contribute to the billing error issue. In addition, one of the 11 occurrences is due to an adjustment by NOAA between their preliminary degree day data and finalized degree day data. This type of discrepancy routinely occurs due to changes in NOAA's published information and is not a result of the Company inadvertently selecting incorrect preliminary NOAA data as in the remaining 8 occurrences.

In the Recommendation section of the Audit Findings report, Staff contends that when the significant differences in actual degree days for the month of October were brought to the Company's attention, steps were not taken by the Company to identify and rectify problems associated with obtaining daily weather information. The Company would like to clarify this point by stating that it did review the data that had been used for billing purposes on the days in question but was unsuccessful at that point in time in determining that data to be in error.

The Company has reviewed Staff's audit findings and recommendations as well as thoroughly reviewed Staff's calculations of the net under-collection amount of \$992,808. The Company is in agreement with the calculation. The Company is also in agreement with Staff's recommendation that the under-collection should be added to the Company's next ACA filing with the TRA. As stated in Staff's audit report, it would be a costly and time consuming endeavor for the Company to identify every customer that was affected by this error, and then calculate and apply a billing adjustment to each of those customer accounts. The Company is in agreement with Staff's assertion that an adjustment to the ACA balance is a reasonable solution to correct the billing error.

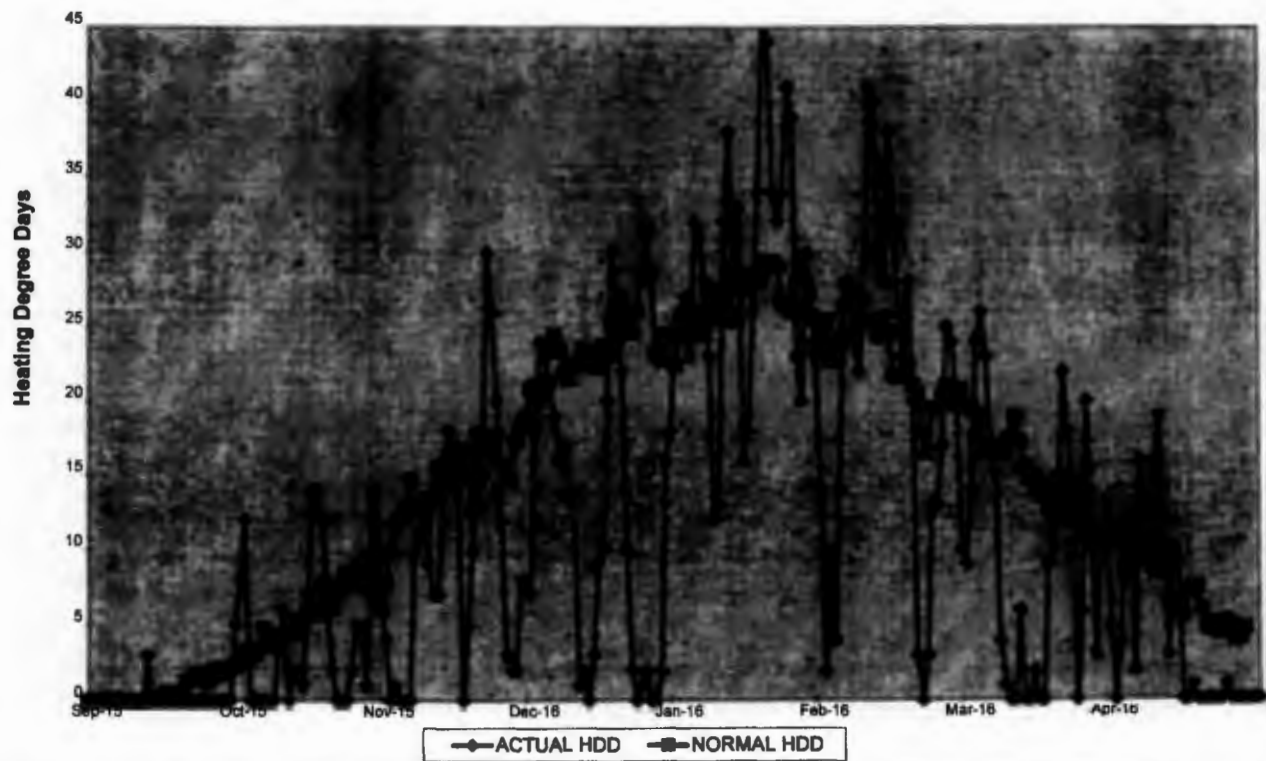
VII. CONCLUSIONS AND RECOMMENDATIONS

The Company has satisfactorily responded to the Audit Staff's Finding #1. As stated in Section I, except for the finding noted, Audit Staff concludes that it appears that PNG is correctly implementing the mechanics of its WNA Rider in all material aspects. Based on its analysis as described in Section VI, staff recommends that the Company include the \$992,808 under-collection in its next Actual Cost Adjustment filing, for the period ending June 30, 2016, with the TRA. Piedmont has agreed to do so.

Staff appreciates and thanks the Company's Staff for their cooperation during this audit process.

ATTACHMENT 1

**Piedmont Natural Gas Company
Comparison of Actual to Normal Heating Degree Days
Nashville Weather Station**



ATTACHMENT 2

SERVICE SCHEDULE NO. 315

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 October 1 and continuing through the final billing cycle in April of each year. C

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:

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

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.

- HSF_i = heat sensitive factor for the ith 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 ith 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.