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October 21, 2011

filed electronically in docket office on 10/21/11

VIA HAND DELIVERY

Chairman Kenneth C. Hill
c/o Sharla Dillon
Tennessee Regulatory Authority
460 James Robertson Parkway
Nashville, Tennessee 37243

Re: ***Petition of Piedmont Natural Gas Company, Inc. 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**

Dear Chairman Hill:

Enclosed please find an original and four (4) copies of Piedmont Natural Gas Company, Inc.'s October 21st Additional Responses to TRA Data Request No. 1.

This material is also being filed today by way of email to the Tennessee Regulatory Authority docket manager, Sharla Dillon. Please file the original and four copies of this material and stamp the additional copy of this cover letter as "filed." Then please return the stamped copy to me by way of our courier.

Should you have any questions concerning this matter, please do not hesitate to contact me at the email address or telephone number listed above.

Sincerely,

David Killion

Enclosures

cc: Mr. David Foster, Chief of Utilities Division (w/o enclosure)
Mr. Jerry Kettles, Chief of Economic Analysis & Policy Division (w/o enclosure)
Ryan McGehee, Esq. (w/ enclosure)
C. Scott Jackson, Esq. (w/ enclosure)

10189579.1

Piedmont Natural Gas Company
Docket No. 11-00144
TRA DATA REQUEST NO. 1
Issued September 22, 2011

1. Please complete the Excel workbook, file name "PNG Exhibits," included on the CD accompanying this data request. This is the standard format that is most always used by the Authority. You may insert lines, cut and paste (do not use copy as this may invalidate the formulas) and add or change line numbers if necessary. Do not enter values in cells with formulas. If you have questions contact Paul Greene at (615) 741-2904 extension 156 or paul.greene@tn.gov .

Response: See attached excel file for completed PNG Exhibits.

Response provided by Piedmont Natural Gas on October 21, 2011

Piedmont Natural Gas Company, Inc.
TRA DR 1-1 Response Attachment
Index to Schedules
For the Twelve Months Ending February 28, 2013

TRA Docket No. 11-00144
Index

Piedmont Natural Gas Company, Inc.
TRA DR 1-1 Response Attachment
Revenue Deficiency (Surplus)
For the Twelve Months Ending February 28, 2013

TRA Docket No. 11-00144
Schedule 1

Line No.		PNG
1	Rate Base	$ 338,574,703
2	Operating Income at Present Rates	18,787,891
3	Earned Rate of Return (L 2 / L 1)	5.55%
4	Fair Rate of Return	8.530%
5	Required Operating Income (L 1 x L 4)	$ 28,878,729
6	Operating Income Deficiency (Surplus) (L 5 - L 2)	10,090,838
7	Gross Revenue Conversion Factor	1.642932
8	**Revenue Deficiency (Surplus)**	**$ 16,578,561**

Piedmont Natural Gas Company, Inc.
TRA DR 1-1 Response Attachment
Rate Base
For the Twelve Months Ending February 28, 2013

TRA Docket No. 11-00144
Schedule 2

Line No.		PNG
	Additions:	
1	Utility Plant in Service	$ 713,852,981
2	Construction Work in Progress	33,025,962
3	Working Capital	27,201,172
4	Total Additions	$ 774,080,115
	Deductions:	
5	Accumulated Depreciation	$ 336,693,812
6	Contributions in Aid of Construction	5,176,946
7	Advances in Aid of Construction	-
8	Accumulated Deferred Tax	93,634,654
9	Total Deductions	$ 435,505,412
10	Rate Base	$ 338,574,703

Piedmont Natural Gas Company, Inc.
TRA DR 1-1 Response Attachment
Income Statement
For the Twelve Months Ending February 28, 2013

TRA Docket No. 11-00144
Schedule 3

Line No.		PNG
1	Revenues - Sales, forfeited discounts & other	$ 188,671,154
2	Cost of Gas	94,352,421
3	Gross margin on sales and service	$ 94,318,733
4	AFUDC	2,817,115
5	Operating Margin (including AFUDC)	$ 97,135,848
6	Other Operation and Maintenance	$ 43,043,964
7	Interest on Customer Deposits	412,591
8	Depreciation and Amortization Exp.	19,664,702
9	Taxes Other Than Income	8,785,431
10	State Excise Tax	1,117,062
11	Federal Income Tax	5,324,207
12	Total Operating Expense	$ 78,347,957
13	Net Operating Income for Return	$ 18,787,891
14		-
15		-
16	Adjusted Net Operating Income	$ 18,787,891

Piedmont Natural Gas Company, Inc.
TRA DR 1-1 Response Attachment
Operation & Maintenance Expenses
For the Twelve Months Ending February 28, 2013

TRA Docket No. 11-00144
Schedule 4

Line No.		PNG
1	Salaries and Wages	$ 18,169,143
2	Other Compensation and Benefits	6,965,104
3	Transmission and Distribution Expense	5,653,320
3	Uncollectible Accounts Expense	313,138
4	Other Customer Accounts Expense	850,989
5	Administrative and General	7,819,033
6	Sales Expense	133,187
7	Deferred Expense Regulatory Amortizations	3,140,050
8	Total O&M Expense	$ 43,043,964

Piedmont Natural Gas Company, Inc.
TRA DR 1-1 Response Attachment
Taxes Other Than Income Taxes
For the Twelve Months Ending February 28, 2013

TRA Docket No. 11-00144
Schedule 5

Line No.		PNG
1	Property Taxes	$ 4,958,252
2	State Gross Receipts Tax	1,449,279
3	Net Payroll Taxes	1,434,212
4	State Franchise Tax	930,057
5	Allocated Taxes Other Than Income	13,632
6	TRA Inspection Fee	-
7	Total Taxes Other Than Income Taxes	$ 8,785,431

Piedmont Natural Gas Company, Inc.
TRA DR 1-1 Response Attachment
Excise and Income Taxes
For the Twelve Months Ending February 28, 2013

TRA Docket No. 11-00144
Schedule 6

Line No.		PNG
1	Operating Margin (including AFUDC)	$ 97,135,848
2	Other Operation and Maintenance	43,043,964
3	Depreciation and Amortization Expense	19,664,702
4	Taxes Other Than Income	8,785,431
5	NOI Before Excise and Income Taxes	$ 25,641,751
6	less Interest on Customer Deposits	412,591
7	less Interest Expense	8,801,782
8	Pre-tax Book Income	$ 16,427,378
9	Schedule M Adjustments	
10	Excise Taxable Income	$ 16,427,378
11	Excise Tax Rate	6.80%
12	Excise Tax	$ 1,117,062
13	Pre-tax Book Income	$ 16,427,378
14	Excise Tax	1,117,062
15	Schedule M Adjustments	-
16	FIT Taxable Income	$ 15,310,316
17	FIT Rate	35.00%
18	Subtotal FIT	$ 5,358,611
19	Less: ITC Amortization	2,370
20	Less: Excess Deferred IT	32,034
21	Federal Income Tax Expense	$ 5,324,207

Piedmont Natural Gas Company, Inc.
TRA DR 1-1 Response Attachment
Revenue Conversion Factor
For the Twelve Months Ending February 28, 2013

TRA Docket No. 11-00144
Schedule 7

Line No.		Amount	Balance
1	Operating Revenues		1.000000
2	Add: Forfeited Discounts	0.008081 A/	0.008081
3	Balance		1.008081
4	Uncollectible Ratio	0.003320 B/	0.003347
5	Balance		1.004734
6	State Excise Tax	0.068000	0.068322
7	Balance		0.936412
8	Federal Income Tax	0.350000	0.327744
9	Balance		0.608668
10	Revenue Conversion Factor (1 / Line 9)		1.642932

0.008081

A/ Forfeited Discount Worksheet - as shown & calculated in MFR 25, file 1, tab "Forfeited Discont Workshet"

Line No.		
1	Attrition Period Gas Sales and Transportation Revenues	$ 186,666,065.63
2	Forfeited Discount Ratio (a)	0.008569
3	Attrition Period Forfeited Discount (Line 1 x Line 2)	1,599,541.52
4	Test Period Forfeited Discount	1,769,519.42
5	Attrition Period Adjustment (Line 3 - Line 4)	$ (169,977.90)

	(a)	[1]	[2]	[3] = [1] / [2]
12 months ende May		Test Period Forfeited Discount Revenue	Test Period Gas Sales & Transportation Revenues	Forfeited Discount Ratio
	2011	$ 1,769,519.42	$ 198,556,791.93	0.008912
	2010	$ 1,577,134.51	$ 195,163,806.14	0.008081
	2009	$ 2,033,456.35	$ 234,117,214.65	0.008686
	Average	$ 1,793,370.09	$ 209,279,270.91	0.008569

0.00332

B/ Uncollectibles Summary Worksheet - as shown & calculated in MFR 25, file 13, tab "Uncollectibles Summary - PG 2"

Line No.		(1) Total Utility Operating Revenues Excluding Secondary Marketing Sales	(2) Cost of Gas	(3) = (1) - (2) Non-Gas Cost Revenues	(4) Non-Gas Cost Portion of Net Charge-Offs	(5) = (4) / (3) Non-Gas Charge-Offs as a Percentage of Total Non-Gas Revenues
1	Total 12ME May 2010	$ 197,031,313.30	$ 104,335,772.54	$ 92,695,540.76	$ 260,754.07	0.00281
2	Total 12ME May 2011	$ 200,709,806.34	$ 106,798,984.83	$ 93,910,821.51	$ 359,494.16	0.00383
3	**2- Year Annual Average**	$ 198,870,559.82	$ 105,567,378.69	$ 93,303,181.14	$ 310,124.12	0.00332

Piedmont Natural Gas Company, Inc.
TRA DR 1-1 Response Attachment
Cost of Capital
For the Twelve Months Ending February 28, 2013

Line No.		Ratio	Cost	Weighted Cost
1	Short Term Debt	5.87%	1.59%	0.09%
2	Long Term Debt	41.42%	6.05%	2.51%
3	Preferred Stock	0.00%	0.00%	0.00%
4	Stockholder's Equity	52.71%	11.25%	5.93%
5	Total	100.00%		8.529500%

Piedmont Natural Gas Company
Docket No. 11-00144
TRA DATA REQUEST NO. 1
Issued September 22, 2011

4. Identify, explain, and quantify all benefits received by Piedmont and its customers from GTI research projects over the past three (3) years.

Response: Many innovative products – products that have helped build a stronger natural gas infrastructure and enhance pipeline system safety - were developed with support from the OTD program, and these products are now commercially available. The OTD program has also supported several studies and reports that provide useful information in the development of new tools, processes and products for natural gas delivery and operations. Examples of these are attached. One technology in particular listed on the attachment, the Metallic Joint Locator (MJL), has provided tremendous benefit to Piedmont's operations and, in turn, our customers. Through the use of MJL, Piedmont has achieved significant operational efficiencies from the avoided time and ongoing operation and maintenance costs associated with the prior methods used to locate metallic tapping tees, flanges and repair clamps, for example, during retrofitting of pipelines to comply with transmission integrity management requirements.

Piedmont has funded and accordingly participated in GTI's Utilization Technology Development (UTD) program and Sustaining Membership Program (SMP) for several years, based on full cost recovery from the Company's NC customers. The UTD program focuses on end use applications of natural gas, thus these applications have direct benefit to the customer. The projects Piedmont has recently benefited most from under UTD has been the Source Energy and Emission Analysis Tool and the Whole House Residential Energy Wizard.

The attachments describe some of the recent achievements in these GTI programs.

Response provided by Piedmont Natural Gas on October 21, 2011.

Results in Use

Utilities, pipeline companies, service providers, and others in the natural-gas-delivery business are using a number of innovative products developed with support from the OTD program.

These products – and others on the horizon – help build a stronger infrastructure, enhance system safety, and improve the efficiency of a wide range of operations activities.

Selected OTD-Developed Products in the Marketplace

> Metallic Joint Locator (MJL)

SENSIT Technologies

The SENSIT Ultra-Trac® MJL provides an easy way to locate cast-iron joints, chill rings in welded steel pipe, metallic tapping tees, metallic flanges, and metal repair clamps. In field tests, the MJL was also able to detect bell and spigot joints for an eight-inch-diameter water main buried at a depth of six feet.

Contact: Scott Kleppe | 219-465-2700 | jScottK@gasleaksensors.com | info@gasleaksensors.com

> Portable Methane Detector (PMD)

SENSIT Technologies

The handheld SENSIT® PMD uses optical-detection technology to provide sensitivity and cost advantages over conventional techniques employing flame ionization detectors. The PMD improves the efficiency of leak surveys, is less costly to maintain than other technologies, and can detect leaks from low ppm to 100% gas.

Contact: Scott Kleppe | 219-465-2700 | jScottK@gasleaksensors.com | info@gasleaksensors.com

> GPS-Enabled Leak Surveying

Integrated Mapping Services, Inc.

Automating the leak surveying and pinpointing process with GPS eliminates paper records, providing increased efficiency and reliable compliance documentation. Implementation of the GPS-enabled system with VeroTrack AST™ software application is under way at several utility companies. *(Project Summary, p. 11)*

Contact: Langley Willauer | 207-236-3485 x306 | langley@inmaps.com | www.inmaps.com

> FLASH Excavation Shielding System

Pro-Tec Equipment, Inc.

This lightweight shielding system provides a versatile method for accessing, repairing, and rehabilitating underground pipes and facilities in congested areas where other utility lines are present. It can be easily transported (with one utility truck) and can be installed by one or two people in about 20 minutes.

Contact: Ron Wey | 1-800-292-1225 | ron@pro-tecequipment.com | www.pro-tecequipment.com

> Keyhole Pipeline Inspection Camera System

ULC Robotics

The PRX250K keyhole camera is small and flexible, making it easily maneuverable through tight bends, allowing utilities to examine pipe segments without the need to drill additional access holes for hard-to-reach locations. It is able to access pipe through 18-inch-diameter diameter surface keyholes. *(Project Summary, p. 71)*

Contact: Greg Penza | 631-667-9200 | gpenza@ulcrobotics.com | www.ulcrobotics.com

> Pavement Breaker Lift Assist

Integrated Tool Solutions

This device assists workers in lifting the pavement breaker after the bit has broken through the surface of the street and needs to be repositioned for the next penetration. By eliminating the need to manually lift and re-position the heavy tool, the lift assist makes pavement breaking easier and less physically demanding.

Contact: Jennifer Purczynski | 951-652-7175 | jpurczynski@integratedtoolsolutions.com | www.integratedtoolsolutions.com

> Utility Crew Truck

Boss Industries

This ergonomically designed truck can accommodate common utility tools as well as new technologies in a smaller package than conventional service vehicles. The truck has removable storage bins, a hydraulic lift gate, and other features to ease worker strain, increase the speed of operations, and enhance safety.

Contact: Todd Hudson | 1-800-635-6587 ext. 214 | thudson@bossair.com | www.bossair.com

> Modified Clegg Hammer

Lafayette Instrument Company

The Clegg Hammer is a soil-compaction-measuring device that obtains a measurement from a free-falling mass (hammer) from a set height onto a surface under test. Electronic modifications provide data storage and downloading capabilities. Other enhancements make it easy to transport.

Contact: Brian Brown | 765-423-1505 | brian@lafayetteinstrument.com | www.lafayetteinstrument.com

> Modified Soil Compaction Supervisor

MBW Inc.

The Soil Compaction Supervisor combines disposable buried electric sensors and an above-ground measurement instrument to determine proper soil compaction. New features include improved sensor reliability and sensitivity and modified data-processing and software to improve data output management.

Contact: Frank Multerer | 1-800- 678-5237 | fmulterer@mbw.com | www.mbw.com

> Field-Ready PCB Test Kit

Gas Technology Institute

The PCB test kit provides quick and accurate identification and field assessments of PCBs. The kit employs a user-friendly wipe-sampling method and provides a cost- and time-saving alternative to off-site laboratory testing. Improved materials handling reduces health risks to workers and the public.

Contact: Kristine Wiley | 847-768-0910 | kristine.wiley@gastechnology.org | www.gastechnology.org

> Meter X-Changer™

Mueller Co.

This new technology allows utilities to conduct meter change-outs without interrupting service. The change-out tool can increase productivity, reduce the cost of the meter change-out process, and virtually eliminate the impact on customers.

Contact: Bryan Kortte | 217-425-7516 | bkortte@muellercompany.com | www.muellercompany.com

> Directional Bag Stopper

Mueller Co.

Similar to the Meter X-Changer™ tool, the Directional Bag Stopper (DBS) technology allows for routine maintenance without interruption of gas service to the customer. It utilizes drilling, tapping, and stopping techniques using CNG as an alternative gas supply, enabling utilities to perform service and meter operations quickly. *(Project Summary, p. 51)*

Contact: Bryan Kortte | 217-425-7516 | bkortte@muellercompany.com | www.muellercompany.com

Informational Products

Selected OTD-Developed Technical Reports

In addition to the development of new tools, processes, and products, OTD supports research that results in useful information on various aspects related to gas delivery and operations.

Listed here are some of the key reports developed under OTD sponsorship.

PIPE & LEAK LOCATION

> **Residential Methane Gas Detector Program**
This reports provides results of a project initiated to determine whether commercially available combustible gas detectors are susceptible to giving false positive responses to an assortment of typical household chemicals, including ammonia, ethanol, acetone, toluene, isobutane, ethyl acetate, isopropanol, heptane, and hydrogen. *(Project Summary, p. 21)*

> **Underground Facility Pinpointing**
This report presents the results of research conducted on several technologies used by utilities to locate underground pipes and facilities. Researchers investigated standard electromagnetic locators, ground-penetrating radar, and alternative imaging tools. The report provides a comparative, technical evaluation of tools that are currently available. (OTD-06/0001)

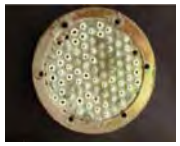
PIPE MATERIALS, REPAIR & REHABILITATION

> **50- to 70-Year Maintenance-Free Pipeline Coatings for Critical Locations**
This report summarizes an investigation of the use of thermal spray coatings for long-term pipeline corrosion protection. Applicable in various pipeline environments, the technology is especially beneficial for use in critical locations and on pipelines that are difficult to access. (OTD-10/0001)

> **Reducing Riser/Meter Set Corrosion To Lower Lifecycle Costs**
With an improved method for the constant rehabilitation of riser/meter sets, the useful life of the systems can be significantly extended and utility costs reduced. This report documents research on improved, simple, and more effective methods to clean, prepare, and coat atmospherically exposed risers and meter sets that have experienced corrosion. (OTD-07/0001)

> **"Black Powder" Contamination in the Gas Industry: Survey and Best Practice Manual**
Black powder – a substance composed mainly of iron sulfides and iron oxides – can cause corrosion and create wear on pipelines. This report provides information on issues, cleanup techniques, and management methods related to "black powder" contaminants. Results were compiled into a "best practices" industry manual. (OTD-07/0002)

> **Literature Review for Elemental Sulfur Deposits in Natural Gas Transmission Pipelines**
Deposits of "elemental sulfur" – which can block natural gas pipes and equipment – are becoming an increasing concern in the natural gas industry. This report summarizes a literature review to develop a better understanding of the sources, causes, and mitigation possibilities for sulfur deposits found in gas pipelines. (OTD-09/0001)



> **Flaw Acceptance Criteria and Repair Options for Low-Stress Natural Gas Pipelines**
Researchers partnered with pipeline companies and industry organizations to develop modified assessment criteria for low-stress pipelines. The goal, as outlined in this report, was to develop criteria for discriminating flaws that truly affect pipeline integrity from flaws that have no significant impact.

> **Technical Substantiation for an Increase in Design Factor for PE Pipe, Phase III**
This report provides details on research that demonstrates that an increase in the design factor for plastic gas piping would maintain safe operations while helping to provide more flexible system designs (based on capacity considerations), cost savings, and the ability for companies to bring natural gas service to new areas.

> Review and Selection Guide for Pipe Rehabilitation

The focus of this report is on reinforced thermoplastic pipe (RTP) as a pipe-rehabilitation option for use in the natural gas industry. To help pipeline operators gain a better understanding of the technology, researchers developed a product-selection guide based on thorough research of available RTP technology.

> Evaluation of Impact of Rework

The introduction of new plastic "rework" (also called "regrind") is a common practice in the manufacture of polyethylene (PE) pipes, where scrap pipe is re-introduced as a portion of the final product. This report documents evaluations of the impact of the use of rework on the long-term performance of PE pipe used for gas distribution.

> Evaluation of Polyamide 12 (PA12) for High-Pressure Gas-Distribution Applications

The introduction of new plastic materials will allow utilities to use plastic pipe at higher pressures and temperatures than possible with current plastic materials. Presented in this report are the results of studies on the use of Polyamide 12 (PA12) pipe for high-pressure gas-distribution applications.

EXCAVATION & SITE RESTORATION

> Evaluation of Permanent Cold-Patch Mixes

Research was conducted to identify and test permanent cold-patch materials for use in utility restorations. Various commercial products were evaluated under real wheel-loading conditions to help determine their long-term performance. *(Project Summary, p. 61)*

> Evaluation of Flowable Fill Around Buried Pipes

Flowable fill is required by some agencies for use as backfill material pipe repairs, rehabilitations, and other operations. Presented in this report are the results of performance tests of flowable fill, including the effects of flowable fill on pipeline corrosion and on the detection of gas flow and leaks through the backfill. (OTD-07/0004)

> Alternative Methods of Pavement Cutting

In an effort to reduce the costs and improve the process of pavement cutting, researchers investigated the application of current and new pavement-cutting methods. Technologies examined and summarized in this report include impact breaking, sawing, chemical and thermal methods, water-jetting, and laser cutting.

PIPELINE INTEGRITY MANAGEMENT & AUTOMATION

> Field-Applied Pipeline Coatings: Short- and Long-Term Performance

This report presents the culmination of a 10-year research program to assess more than 80 different commercially available field-applied pipeline-coating products. The goal was to establish an unbiased, third-party basis for operators to select the most appropriate coating system for particular applications. *(Project Summary, p. 47)*

> In-Field Corrosion Rate Measurement/Determination for Integrity Reassessment Intervals and Risk Prioritization

Research was conducted to develop a systematic and simple method to calculate realistic corrosion growth rates for determining pipeline-reassessment intervals.

OPERATIONS INFRASTRUCTURE SUPPORT

> Guidelines for the Use of Copper-Clad Steel Tracer Wire

Copper-clad steel (CCS) wire may prove to be a more economical alternative to the more common solid-copper wire used as buried tracer wire to help locate plastic gas pipes. For this study, investigators evaluated CCS tracer wire under various conditions and developed guidelines for its use.

> Study of Anode Effectiveness

The objective of the study was to quantify soil moisture, chemistry, conductivity, installation practices, or other factors that determine the effectiveness of cathodic protection provided by sacrificial anodes. The specific focus of the study was on one-pound drivable anodes used to protect isolated steel service risers.

> Evaluating Vapor Dispersion Models for Safety Analysis of LNG Facilities

Along with the American Gas Association, OTD supported the Fire Protection Research Foundation in the development of a Model Evaluation Protocol to assess the suitability of dispersion models for predicting hazard ranges associated with large spills of liquefied natural gas. This report reviews the protocol and models, with guidance on model applications.

> Integrating GPS into Routine Operations

This report provides a set of recommendations and GPS implementation strategies developed through pilot programs, literature searches, and reviews of existing applications. Operations that were considered included meter reading, leak surveying, new installations, corrosion monitoring, and valve inspections.

> Integrating Radio Frequency Identification into Daily Gas Operations

Research indicates that the use of buried facilities and markers equipped with Radio Frequency Identification (RFID) can save considerable time and effort in daily utility operations. This report presents the results of a demonstration program conducted to further verify the benefits and applications for RFID in the utility industry.

> DVDs for Training First Responders

DVD training products help gas companies better educate first-responding personnel about natural gas emergencies. Learning modules with realistic scenarios cover a variety of issues to enhance public and worker safety. The product also serves to improve emergency-response effectiveness and coordination.

ENVIRONMENTAL, RENEWABLES & GAS QUALITY

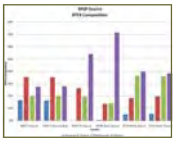
> Field Measurement Program to Improve Uncertainties for Key Greenhouse Gas Emission Factors for Distribution Sources

This report summarizes the results of field surveys conducted at six natural gas utilities. With the support of the American Gas Association, research updated emissions factors for metering stations, regulating stations, and customer meters. (OTD-10/0002)

> Pipeline-Quality Methane: North American Guidance Document for Introduction of Dairy-Waste-Derived Biomethane into Existing Natural Gas Networks

The guidance document provides reference and recommendations for the consideration of biomethane from dairy-waste digestion for introduction into gas pipeline networks. The report details results of a biogas/biomethane Gas Technology Institute research program.

> Innovative Forensic Technique for Identifying VOC Sources



This report details the results of research conducted to evaluate indoor air samples from former manufactured gas plant (MGP) sites and non-MGP sites. The study demonstrated that the use of compound specific isotope ratios of benzene, toluene, ethylbenzene, and xylenes may be used to discriminate between MGP-related VOCs and non-MGP-related VOCs.

> Mercury Vapor in Indoor Air: Testing & Correlations Between Monitoring Techniques

Research presented in this report focused on the investigation of techniques to test the quality of indoor air following the removal of mercury-containing devices or the cleanup of a mercury spill. Research compared the effectiveness of methods expected to be more efficient and less expensive than currently accepted practices.

> Modified Cross-Sector-Averaging Technique Using Optical Remote Sensing for Perimeter Air Monitoring During MGP Site Cleanups

New air-monitoring methods were investigated for use at former MGP sites during cleanup operations. Researchers tested a promising technology in the field and developed a guidance document based on research results.

Contact: Maureen Droessler
847-768-0608
maureen.droessler@otd-co.org
www.otd-co.org

August 2011 | **UTD Update**

Utilization Technology Development

We're excited about the progress UTD has achieved on several fronts. Below is a summary depicting our available products and resources, projects that have accomplished significant milestones, and new awards which help leverage UTD member funds. If you have any questions regarding this report or it's content, please give us a call.

Ron Snedic
847-768-0572

Greg Maxfield
952-250-7197

Our members serve over 20 million natural gas consumers in North America. Together we are shaping the energy future with new efficient end-use technologies.

Products Commercially Available or Being Readied for Commercialization

> Transport Membrane Condenser (TMC) Technology

An advanced heat-and-water recovery system, including TMC technology, was installed and commissioned at Baxter Healthcare in Thousand Oaks, CA, meeting performance expectations and increasing the boiler efficiency from 80% to 93% – saving the customer 15% on fuel bills, reducing greenhouse emissions by 15%, and saving over 250,000 gallons of water. The Ultramizer® system is available from Cannon Boiler Works, Inc.

Chris Giron

Cannon Boiler Works
724-335-8541 x414
sales@cannonboilerworks.com
www.cannonboilerworks.com

> Low-Oil-Volume Fryers

A new commercial foodservice low-oil-volume fryer has undergone development and pre-commercial testing with successful results. The fryer, marketed by Frymaster as Protector® fryers, increases energy efficiency while also extending cooking-oil quality and life to provide significant customer savings.

Linda Brugler

Frymaster
318-866-2488
lbrugler@frymaster.com
www.frymaster.com

> Equinox Solar-Assisted Heating System

The Equinox system is a combination thermal storage tank and instantaneous water heater capable of providing 100% of domestic hot-water and space heating needs. A staple in European and Australian markets, the technology has been made available in the U.S. through the efforts of Gas Technology Institute and Solar Usage Now, LLC. The technology – marketed as S.U.N. Equinox Heating Systems® – is one of the most energy-efficient systems available for residential and commercial applications.

Tom Rieker

Solar Usage Now, LLC
614-759-7242
service@netwalk.com
www.solarusagenow.com

> RASERT Technology

The Reverse-Annulus Single-Ended Radiant Tube (RASERT) technology increases productivity, raises thermal efficiency, and decreases NO_x emissions for industrial heat treating and other indirect heating applications.

Dennis Quinn

Fives North American Combustion, Inc.
216-271-6000, x417
dennis.quinn@fivesgroup.com
www.fivesgroup.com

> Stellar Countertop Steamer

This compact gas-fired countertop steamer for commercial food service offers enhanced cooking rates while providing users with added savings of energy and water consumption. The unit was the first gas-fired boilerless steamer with an ENERGY STAR rating.

Market Forge Industries/ Stellar Steam

617-387-4100
866-698-3188
custserv@mfii.com
www.mfii.com
www.stellarsteam.com

> Avantec Combi-Oven

The combination oven uses a patented technology for improving cooking performance, quality, and efficiency. Able to operate in various cooking modes, the oven provides enhanced uniformity when compared to similar-sized ovens.

Dave Goble

Avantec Food Service Equipment
800-322-4374
dave@twomarket.com
www.avantecequipment.com

> Cummins 8.9L Ultra-Low Emissions Engine

This is the first engine certified to the highly stringent California 2010 standards for heavy-duty vehicle engines—achieving emission levels below the 0.2 g NO_x/hp-hr requirement while also retaining high shaft efficiency. Since commercial introduction in 2007, the engine has been widely used in the United States (with 2010 sales of approximately 10,000 units) and throughout the world in transit, refuse-collection, and regional hauling applications.

Scott Baker

Cummins Westport Inc.
604-718-2025
scott.baker@cummins.com
www.cumminswestport.com

> FuelMaker's *Phill*

A field demonstration program was conducted to assess the performance, reliability, and economics of a natural-gas-fueling system that allows for the refueling of natural gas vehicles at homes and businesses. Six units were installed and monitored for one year. Data was analyzed and a user survey was conducted at the conclusion of the demonstration. Performance met or exceeded the manufacturer's specification and users' attitudes were very positive.

Paula Hebert

IMPCO Technologies/BRC FuelMaker
714-656-1268
phebert@impcotechnologies.com

> NovelAire ComfortDry™ 400

This advanced space-conditioning system was developed for residential and light-commercial buildings where humidity or allergen concerns prevail. Research provided enhanced operation and reduced cost, weight, size, and installation requirements.

Scott Janke

NovelAire Technologies
770-664-4756
sljanke@aol.com
www.novelaire.com

> Westport HPDI NGV Fuel System

High-Pressure, Direct-Injection (HPDI) technology enables engines designed for diesel combustion to operate with natural gas while retaining the same critical performance features of high torque, power, and fuel economy of a traditional diesel engine. A 2010 demonstration of the Westport HD-powered tractor allowed fleets to obtain first-hand experience with the new technology. Feedback was very positive and resulted in one company ordering 48 Westport HD-powered tractors.

Stephen Ptucha

Westport Innovations Inc.
604-718-2024
SPtucha@westport.com
www.westport.com

Significant Milestones

> FlexCHP High Efficiency Ultra-Clean Power and Steam Package

Researchers are developing a cost-effective supplemental burner, integrated with a gas-turbine based combined heat-and-power system, that can significantly increase energy efficiency while meeting stringent air emissions regulations. Laboratory tests have shown total efficiency of over 85% and NO_x emissions that are below stringent California emission levels. Field testing is planned at a food-processing plant in California.

Dave Cygan

Gas Technology Institute
847-768-0524
david.cygan@gastechnology.org
www.gastechnology.org

> Solar-Assisted Natural Gas Energy Systems

Researchers foresee significant efficiency improvements in several applications by combining higher-temperature solar-related technologies with natural-gas-fired equipment. Progress continues with the installation of solar thermal collectors using B2U Solar's External Compound Parabolic Concentrator (XCPC) technology at Gas Technology Institute. Additional testing is planned with SABMiller at its Los Angeles area brewery.

Dave Cygan

Gas Technology Institute
847-768-0524
david.cygan@gastechnology.org
www.gastechnology.org

> Wok Burner

A new commercial foodservice wok-burner range system – developed in cooperation with a major Asian restaurant chain – increases efficiency 100% (compared to current products) while enhancing kitchen comfort by lowering ambient temperatures. Activities are under way to license the wok technology to a manufacturing partner and build a prototype unit for a sponsor test site.

Frank Johnson

Gas Technology Institute
847-768-0670
frank.johnson@gastechnology.org
www.gastechnology.org

Cummins Westport (CWI) High-Horsepower NGV Engine

CWI, with UTD support, is developing a new 400-HP NGV engine for the large truck and bus market segment that includes regional haulers, refuse transfer trucks, and other larger vehicles. The new engine will satisfy the stringent California emission requirements. An alpha engine is undergoing field testing and the new engine is expected to be available in 2012.

Scott Baker

Cummins Westport Inc.
604-718-2025
scott.baker@cummins.com
www.cumminswestport.com

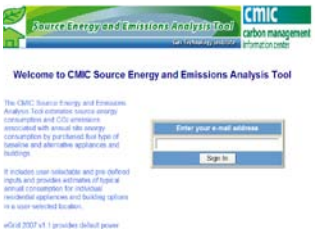
Analytical Tools & Information Products

> Venting Solutions

VENT-II, the industry standard software program for vent system design, offers application with commonly used desktop operating systems and spreadsheet tools. A venting Technical Advisors Group includes 30 subject matter experts, manufacturers, industry groups and associations, and GTI.

Larry Brand

Gas Technology Institute
847-768-0968
larry.brand@gastechnology.org
www.gastechnology.org



Source Energy and Emissions Analysis Tool

Neil Leslie

Gas Technology Institute
847-768-0926
neil.leslie@gastechnology.org
www.gastechnology.org

The Source Energy and Emissions Analysis Tool (SEEAT) allows calculation of the energy source and greenhouse-gas emissions related to point-of-use (site) energy consumption by fuel type for each energy consuming device (e.g., appliances and vehicles). SEEAT includes a source-energy and carbon-emission calculation methodology that accounts for primary energy consumption and related emissions for the full fuel cycle (extraction, processing, transportation, conversion, distribution, and consumption of energy) for residential and commercial buildings, industrial applications, and light-duty vehicles. (Available online at www.cmictools.com.)

International Green Construction Code (IGCC)

Neil Leslie

Gas Technology Institute
847-768-0926
neil.leslie@gastechnology.org
www.gastechnology.org

Based on the technical merits and societal benefits of source energy presented at code-development and hearing-committee meetings and conference calls, the International Green Construction Code (IGCC) development committee shifted from site energy to source energy and greenhouse-gas (GHG) emissions as the basis of the performance requirements in IGCC PV 1.0. The PV 2.0 hearing committee also approved a critical technical comment shifting to a single-reference building approach that will implement the source energy and GHG emission compliance requirements consistently and equitably. IGCC is scheduled to be published by the International Code Council as a model code in March 2012.

Whole House Residential Energy Efficiency Wizard (REEW)

Marek Czachorski

Gas Technology Institute
847-768-0526
marek.czachorski@gastechnology.org
www.gastechnology.org

The REEW provides UTD members and their customers with a user-friendly Internet-server-based tool allowing for the analysis and easy selection of the latest technologies applicable to residential building energy efficiency measures customized to a specific member service territory.

Commercial Green Building Analyzer (CGBA)

Marek Czachorski

Gas Technology Institute
847-768-0526
marek.czachorski@gastechnology.org
www.gastechnology.org

A Beta version of the CGBA, an Internet-server-based tool, has completed testing. The CGBA is designed to be a user-friendly tool allowing for easy selection of the latest applicable commercial “green” building energy efficiency measures customized to a specific member service territory.

Select New Cofunding and Leveraged Funding Sources

- GTI signed a contract with the California Energy Commission for a new $2 million program focused on technology development for the commercial foodservice market. Restaurants and institutional foodservice represents a major natural gas energy user. This program will develop a suite of higher-efficiency natural gas appliances for commercial kitchens. The program compliments the Conveyor Oven, Convection Oven and Commercial Range UTD projects.

- Under a contract with the U.S. Department of Energy Building America Program, GTI will address retrofit whole house, energy efficiency, and related building efficiency initiatives.

- Field testing of two new solarthermal systems, one at a winery in California and the other with a brewery operation in California, are being funded by the California Energy Commission.

- Southern California Air Quality Management District awarded GTI a $450,000 contract to address the development and testing of low NO_x emission home furnaces and space heating equipment to comply with future emission requirements.

- GTI was awarded a $1.8 million contract from the CEC for the demonstration of the planned Cummins 12 L natural gas vehicle (NGV) engine.

Piedmont Natural Gas Company
Docket No. 11-00144
TRA DATA REQUEST NO. 1
Issued September 22, 2011

5. Does Piedmont's participation in the Operations Technology Development partnership program with GTI provide a benefit to its operations outside of Tennessee? If yes, do those operations in other states contribute separately to participate in the program or does the proposed $150,000 contribution in this case cover all of Piedmont's operations?

Response: Many innovative products – products that have helped build a stronger natural gas infrastructure and enhance pipeline system safety - were developed with support from the OTD program, and these products are now commercially available. The OTD program has also supported several studies and reports that provide useful information in the development of new tools, processes and products for natural gas delivery and operations. Examples of these are provided as an attachment to the Company's response to Item 4 of this data request. The participant local gas distribution companies and their customers who funded the research and studies were effectually leaders for the industry; they reaped the benefits from the technological advances, as presumably did the free-riders (the non-contributing companies and their customers) to some extent as well. One can construe from this that Piedmont's participation in the OTD initiative with recovered dollars from our Tennessee customers will provide benefits to our Tennessee operations, and likely to operations outside of Tennessee. By directly contributing to the OTD program, however, Piedmont is granted participation on the OTD Board and Technical Committee, which allows Piedmont to have a say in which projects receive funding. Piedmont will also be able to directly access the body of knowledge behind the years of research conducted under OTD, since certain OTD research reports are only accessible to program members.

Piedmont separately contributes to GTI on behalf of our customers in our other two jurisdictions – South Carolina and North Carolina. Specifically, Piedmont was recently granted regulatory approval in SC to contribute and recover from customers $150,000 per year to fund GTI's OTD program. In North Carolina, Piedmont has operated for several years with regulatory approval to contribute and recover $250,000 per year for funding of GTI's Utilization Technology Development (UTD) projects and GTI's Sustaining Membership Program (SMP). In both states, Piedmont's recovery of its full annual GTI funding level is through base rates, since the full annual funding level was included in the cost of service in those states.

Response provided by Piedmont Natural Gas on October 21, 2011.

Piedmont Natural Gas Company
Docket No. 11-00144
TRA DATA REQUEST NO. 1
Issued September 22, 2011

7. Please provide a detailed explanation of Piedmont's involvement with the Interior Gas Line Coverage from HomeServe.

Response: Piedmont entered into a contractual arrangement with Home Service USA Corp., a Pennsylvania corporation ("HomeServe"), for the purpose of marketing and providing Piedmont's customers the option to participate in HomeServe's Interior Gas Line Coverage warranty program. Notwithstanding provisions that safeguard customer information, Piedmont provides HomeServe with certain customer information that facilitates HomeServe's marketing efforts to our customers.

Piedmont reviews and approves all marketing literature from HomeServe prior to distribution by HomeServe. Such marketing literature is mailed using Piedmont's logo and signed by a Piedmont representative, but includes a disclaimer that the warranty program is not a part of Piedmont's regulated utility service offerings nor is it sanctioned by the Tennessee Regulatory Authority, the North Carolina Utilities Commission, nor the Public Service Commission of South Carolina.

Customers who sign up for the warranty program do so directly with HomeServe. Piedmont bills the customer the monthly premiums for coverage on behalf of HomeServe, collects payments on behalf of HomeServe, and retains a commission based on payment of these premiums for the warranty product.

HomeServe is responsible for all repairs under the warranty program and is responsible for the recruitment of contractors to provide such repair. Piedmont is an authorized contractor for HomeServe Interior Gas Line Coverage repairs.

Response provided by Piedmont Natural Gas on October 21, 2011.

Piedmont Natural Gas Company
Docket No. 11-00144
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Issued September 22, 2011

8. Provide the Tennessee Only Income Statement for Home Service USA Repair Management Corp. ("HomeServe") for the 12-months ending May 31, 2011. If not specifically detailed on this statement provide the individual net earnings realized from the Interior Gas Line Coverage Program/Contracts.

Response: Home Service USA Corp./Home Service Repair Management Corp. ("HomeServe") is an independent entity. As such, Piedmont does not have access to any of HomeServe's internal financial statements. Neither does Piedmont maintain financial information that would permit the preparation of a detailed income statement for Piedmont's involvement with HomeServe for the Interior Gas Line Coverage Program.

Response provided by Piedmont Natural Gas on October 21, 2011.

Piedmont Natural Gas Company
Docket No. 11-00144
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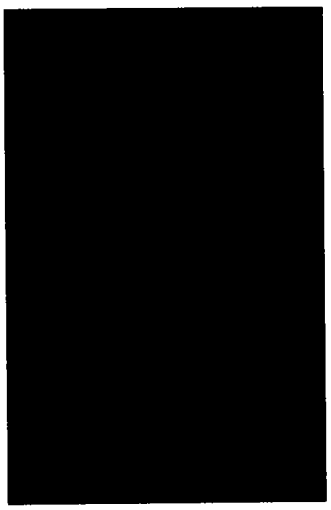
9. Provide the monthly journal entries for any direct expenses for the HomeServe Program/Contracts and/or repairs pursuant to these contracts that were recorded by Piedmont for the twelve months ended May 31, 2011.

Response: The following CONFIDENTIAL schedule reflects the total monthly expenses, on a Total Company basis, charged to the Company's non-utility accounts established for HomeServe business activities.

CONFIDENTIAL:



Response provided by Piedmont Natural Gas on October 21, 2011.

Piedmont Natural Gas Company
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10. Does Piedmont receive any royalties from HomeServe related to the sale or provision of Interior Gas Line Coverage in Tennessee (royalties related to the benefit derived from the use of Piedmont's name, vide-president's signature, logo, reputation, goodwill and corporate image, etc)? If so, please provide the amount received for the twelve months ending May 31, 2011. Please provide detailed justification if no royalties were assessed or received.

Response: Yes. See CONFIDENTIAL detail provided below.

CONFIDENTIAL: [redacted]

[redacted]

Response provided by Piedmont Natural Gas on October 21, 2011.

Piedmont Natural Gas Company
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19. On page 18 of Exhibit PKP-2 it states that Duquesne Light program was developed in response to the Pennsylvania Act 129 Energy Efficiency and Conservation Program. Please state whether each of the programs listed on page 3 of Exhibit PKP-3 was implemented in response to such a mandate from the states.

Response: Page 3 of Exhibit PKP-2 listed references to certain reports on energy efficiency programs offered by natural gas or electric utilities across 11 states. To the Company's knowledge, these programs (with the exception of the referenced program for South Carolina) were implemented as a result of a commission order, rule and/or legislative statute.

Response provided by Piedmont Natural Gas on October 21, 2011.

Piedmont Natural Gas Company
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21. Provide Exhibit PKP-3 in Excel format with working formulas.

Response: Tables 1, 3 and 4 in Exhibit PKP-3 are shown on tab "Savings References (2)" of MFR 25, file 43 ("43 - EE Kit Gas Electric Avoided Costs.xls"). Table 2 in Exhibit PKP-3 is shown on tab "DOE Ref Kit" in file 43.

Response provided by Piedmont Natural Gas on October 21, 2011.

Piedmont Natural Gas Company
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27. Provide the amount of therms recorded for the weather normalization adjustment by customer class (as shown in request #24 above) by month from June 2006- May 2011 in Excel format.

Supplemental Response: The attachment provided in the Company's 10/13/2011 response to this data request item shows the monthly therms billed to customers in accordance with the weather normalization adjustment authorized under Service Schedule 315: Weather Normalization Adjustment (WNA) Rider. Pursuant to the WNA Rider, the Company adjusts the base rate per therm applied to each customer's bill during the winter months; the Company makes no adjustment to the amount of therms billed to customers. Therefore, the Company's sole record for "the amount of therms recorded for the weather normalization adjustment" is simply the therms that were used by and billed to customers in each of the winter months.

Response provided by Piedmont Natural Gas on October 21, 2011.

Piedmont Natural Gas Company
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30. First we should note that we are aware of various proposed changes in the Company rate schedules. It is requested, however, that the Company provide a price-out of the revenue deficiency using an across the board rate increase methodology and the description of rate schedules shown in PKP-1 31st revised sheet number 1. This Excel sheet should be prepared so that the requested revenue deficiency can be entered in one cell at the top of the page and under that show the percent increase to be applied across the board. It could be necessary for the Company to make certain assumptions to complete this request; if so, provide all assumptions used.

Response: See the attached excel schedule for an "across the board" spread of the proposed $16,578,738 revenue increase for margin to the rate schedules for the sale and transportation of gas. There are 2 tabs:

- current rates price out
- proposed rates price out

The excel schedule is set up so that the variables that can be entered on the proposed rates tab are the total revenue requirement target and the fixed monthly charge for each rate class. These cells are highlighted in yellow. Once these variables are entered, the per therm rates will automatically recalculate to provide proposed rates that result in "across the board" percentage increases. Also of note, these calculations do not attempt to spread the proposed revenue increase to a rate change for the following revenue streams:

- $1,733,515 of "Forfeited Discounts"
- $405,547 of "Other Revenues"
- $742,822 of "Special Contracts"

Response provided by Piedmont Natural Gas on October 21, 2011.

PIEDMONT NATURAL GAS COMPANY, INC.
Tennessee Service Territory
TRA DR 1-30 Response Attachment
Attachment Page 1 of 2

SHOWS "ACROSS THE BOARD" SPREAD OF PROPOSED OPERATING REVENUES INCREASE FOR THE SALE AND TRANSPORTATION OF GAS

Proposed Revs	202,500,902
Current Revs	185,923,248
Change	16,577,654
Percent	8.92%
Factor	1.0892

THESE COMPONENTS WERE EXCLUDED FROM THE ANALYSIS BECAUSE THEY ARE NOT PART OF SOLELY RATES

Rate Schedule	Rate Class	Description	Tariff Rate Approved In Docket No. 03-00313 <1>	Cumulative PGA Demand <2>	Cumulative PGA Commodity <3>	Current Refund <4>	Current ACA Demand <5a>	Current ACA Commodity <5b>	Current IPA <6>	Total Adj. Factor (Sum Col.2 thru Col.6) <7>	Proposed Billing Rate (Col.1+Col.7) <8>	Determinates	Proposed Revenues	Proposed	Current	Increase	%
		Customer Charge-Nov.-Mar.	13.00000								$13.00	758,266	9,857,458				
Residential		Customer Charge-Apr.-Oct.	10.00000								$10.00	1,047,656	10,476,560				
301	Value	Nov.- Mar. per TH	0.40954	0.01750	0.47680					0.49410	0.90364	3,753,470	33,918,024				
301	Value	Apr.- Oct. per TH	0.35954	0.01750	0.47680					0.49410	0.85364	1,179,057	10,064,955				
321	Standard	Nov.- Mar. per TH	0.40954	0.04733	0.47680					0.52383	0.93347	5,105,186	47,656,440				
321	Standard	Apr.- Oct. per TH	0.35954	0.04733	0.47680					0.52383	0.88347	1,035,933	9,152,204	121,124,980	111,208,839	9,915,821	8.92%
												11,073,628		121,124,980			
														0.0895			
		Customer Charge	29.00000								$29.00	195,782	5,677,678				
Small General																	
302	Standard	Nov.- Mar. per TH	0.43857	0.04811	0.47680					0.52471	0.96428	2,316,576	22,357,567				
302	Standard	Apr.- Oct. per TH	0.38857	0.04811	0.47680					0.52471	0.91328	368,429	3,638,775				
332	Value	First 2,000 TH/TH (Nov.-Mar.)	0.43857	0.01683	0.47680					0.49343	0.93300	1,136,804	10,606,383				
332	Value	Over 2,000 TH/TH (Nov.-Mar.)	0.43857	0.00903	0.47680					0.48583	0.92520	201,831	1,867,345				
332	Value	First 2,000 TH/TH (Apr.-Oct.)	0.38857	0.01683	0.47680					0.49343	0.88200	1,018,387	8,984,387				
332	Value	Over 2,000 TH/TH (Apr.-Oct.)	0.38857	0.00903	0.47680					0.48583	0.87420	56,112	480,531	53,802,875	49,214,513	4,588,161	8.92%
												5,128,121		53,802,875			
														0.0858			
		Customer Charge	75.00000								$75.00	4,642	365,150				
Medium General																	
352	Standard	Nov.- Mar. per TH	0.43029	0.01750	0.47680					0.49410	0.92439	689,127	6,370,238				
352	Standard	Apr.- Oct. per TH	0.37929	0.01750	0.47680					0.49410	0.87339	141,255	1,233,710				
382	Value	First 5,000 TH/TH (Nov.-Mar.)	0.43029	0.01648	0.47680					0.49306	0.92335	283,381	2,616,694				
382	Value	Over 5,000 TH/TH (Nov.-Mar.)	0.43029	0.00880	0.47680					0.48550	0.91579	128,001	1,172,226				
382	Value	First 5,000 TH/TH (Apr.-Oct.)	0.37929	0.01648	0.47680					0.49306	0.87235	255,419	2,228,154				
382	Value	Over 5,000 TH/TH (Apr.-Oct.)	0.37929	0.00880	0.47680					0.48550	0.86479	46,843	403,365	14,397,538	13,209,708	1,177,830	8.92%
												1,543,636		14,397,538			
														0.0763			
		Customer Charge	300.00000								$300.00	475	142,500				
		Peak Demand (Per DT)	8.00000	4.92520						4.92520	12.92520	61,947	800,579				
303		First 15,000 TH/TH	0.16332	0.00374	0.47680					0.48054	0.64386	373,585	2,404,888				
Firm		Next 25,000 TH/TH	0.15543	0.00222	0.47680					0.47902	0.63425	139,761	887,413				
Industrial		Next 50,000 TH/TH	0.13040	0.00172	0.47680					0.47832	0.60872	43,004	261,778				
		Over 80,000 TH/TH	0.09354	0.00000	0.47680					0.47680	0.57014	9,469	54,095	4,531,180	4,160,219	370,942	8.92%
												562,648		4,531,180			
														0.0859			
		Customer Charge	300.00000								$300.00	15	4,500				
304		First 15,000 TH/TH	0.17226	0.03333	0.47680					0.50993	0.68231	1,928	13,155				
Interruptible		Next 25,000 TH/TH	0.16449	0.01872	0.47680					0.49332	0.65781	0	-				
Industrial		Next 50,000 TH/TH	0.13946	0.01374	0.47680					0.49034	0.62980	0	-				
		Over 80,000 TH/TH	0.10260	0.01019	0.47680					0.48679	0.58939	0	-	17,655	16,210	1,445	8.92%
												1,928		17,655			
														0.0750			
		Customer Charge	300.00000								$300.00	1,021	306,300				
		Peak Demand (Per DT)	8.00000	4.92520						4.92520	12.92520	157,726	2,038,823				
313		First 15,000 TH/TH	0.11737	0.00262						0.00262	0.11999	1,080,164	1,296,050				
Firm		Next 25,000 TH/TH	0.10948	0.00171						0.00171	0.11118	648,397	809,743				
Transportation		Next 50,000 TH/TH	0.08445	0.00100						0.00100	0.08545	170,738	145,890				
		Over 80,000 TH/TH	0.04759	0.00000						0.00000	0.04759	5,421	3,056	4,399,661	4,039,485	360,177	8.92%
												1,805,720		4,399,661			
														0.0189			
		Customer Charge	300.00000								$300.00	841	192,360				
314		First 15,000 TH/TH	0.10202	0.00282						0.00282	0.10484	863,753	905,589				
Interruptible		Next 25,000 TH/TH	0.09413	0.00188						0.00188	0.09601	970,639	932,114				
Transportation		Next 50,000 TH/TH	0.06910	0.00106						0.00106	0.07016	1,089,542	762,191				
		Over 80,000 TH/TH	0.03224	0.00000						0.00000	0.03224	4,802,643	1,547,849	4,340,023	3,984,729	355,294	8.92%
												7,721,777		4,340,023			
														0.0046			
		Demand per DT	8.00000	4.92519						4.92519	12.92519	2,400	31,020				
310		Commodity Charge	0.16743	0.00093	0.47680					0.47753	0.64496	10,312	66,508	97,528	89,544	7,984	8.92%
Resale Service												10,312		97,528			
														0.0774			
Special Contracts	$												742,822	$ 742,822	742,822	-	0.00%
													203,243,724	203,243,724	186,666,070	16,577,654	8.88%

NOTE: In accordance with the Tennessee Public Service Commission order in Docket U-7074 customers metered inside Davidson County are required to pay an additional 6.83% for collection of the Metro Franchise Fee. Customers served by the Fairview, Greenbrier, Hartsville, Mt. Juliet and White House systems are required to pay 5.0%. Customers served by the Franklin and Nolensville systems are required to pay 3%. Commercial customers on the Ashland City system are required to pay 5%.

PIEDMONT NATURAL GAS COMPANY, INC.
Tennessee Service Territory
TRA DR 1-30 Response Attachment
Attachment Page 2 of 2

SHOWS CURRENT "CLEAN RATES" PER THE COMPANY'S TARIFF, THIRTIETH REVISED SHEET NO. 1, EFFECTIVE APRIL 1, 2011.

Rate Schedule	Rate Class.	Description	Tariff Rate Approved in Docket No. 03-00313 <1>	Cumulative PGA Demand <2>	Cumulative PGA Commodity <3>	Current Refund <4>	Current ACA Demand <5a>	Current ACA Commodity <5b>	Current IPA <6>	Total Adj. Factor (Sum Col.2 thru Col.6) <7>	Proposed Billing Rate (Col.1+Col.7) <8>	Determinates	Current Revenues	
			THESE COMPONENTS WERE EXCLUDED FROM THE ANALYSIS BECAUSE THEY ARE NOT PART OF "CLEAN RATES"											
		Customer Charge-Nov.-Mar.	$13.00								$13.00	758,266	9,857,458	
Residential		Customer Charge-Apr.-Oct.	$10.00								$10.00	1,047,858	10,478,580	
301	Value	Nov.- Mar. per TH	0.32000	0.01750	0.47660					0.49410	0.81410	3,753,470	30,556,999	
301	Value	Apr.- Oct. per TH	0.27000	0.01750	0.47660					0.49410	0.76410	1,179,057	9,009,175	
321	Standard	Nov.- Mar. per TH	0.32000	0.04733	0.47660					0.52393	0.84393	5,105,166	43,084,044	
321	Standard	Apr.- Oct. per TH	0.27000	0.04733	0.47660					0.52393	0.79393	1,035,933	8,224,583	111,208,839
Small General		Customer Charge	$28.00								$28.00	195,782	5,677,678	
302	Standard	Nov.- Mar. per TH	0.35400	0.04811	0.47660					0.52471	0.87871	2,318,578	20,373,577	
302	Standard	Apr.- Oct. per TH	0.30300	0.04811	0.47660					0.52471	0.82771	398,429	3,297,837	
332	Value	First 2,000 TH/TH (Nov.-Mar.)	0.35400	0.01683	0.47660					0.49343	0.84743	1,136,804	9,633,614	
332	Value	Over 2,000 TH/TH (Nov.-Mar.)	0.35400	0.00903	0.47660					0.48563	0.83963	201,831	1,694,637	
332	Value	First 2,000 TH/TH (Apr.-Oct.)	0.30300	0.01683	0.47660					0.49343	0.79643	1,016,367	8,094,858	
332	Value	Over 2,000 TH/TH (Apr.-Oct.)	0.30300	0.00903	0.47660					0.48563	0.78863	56,112	442,515	49,214,513
Medium General		Customer Charge	$75.00								$75.00	4,842	383,150	
352	Standard	Nov.- Mar. per TH	0.35400	0.01750	0.47660					0.49410	0.84810	689,127	5,844,486	
352	Standard	Apr.- Oct. per TH	0.30300	0.01750	0.47660					0.49410	0.79710	141,255	1,125,944	
362	Value	First 5,000 TH/TH (Nov.-Mar.)	0.35400	0.01646	0.47660					0.49306	0.84706	283,391	2,400,469	
362	Value	Over 5,000 TH/TH (Nov.-Mar.)	0.35400	0.00890	0.47660					0.48550	0.83950	126,001	1,074,572	
362	Value	First 5,000 TH/TH (Apr.-Oct.)	0.30300	0.01646	0.47660					0.49306	0.79606	255,419	2,033,288	
362	Value	Over 5,000 TH/TH (Apr.-Oct.)	0.30300	0.00890	0.47660					0.48550	0.78850	46,643	367,780	13,209,709
		Customer Charge	$300.00								$300.00	475	142,500	
303		Peak Demand (Per DT)	8.00000	4.92520						4.92520	12.92520	61,947	800,678	
Firm		First 15,000 TH/TH	0.09742	0.00374	0.47660					0.48034	0.57776	373,595	2,158,482	
Industrial		Next 25,000 TH/TH	0.08953	0.00222	0.47660					0.47882	0.56835	136,761	777,281	
		Next 50,000 TH/TH	0.06450	0.00172	0.47660					0.47832	0.54282	43,004	233,434	
		Over 90,000 TH/TH	0.02764	0.00000	0.47660					0.47660	0.50424	9,488	47,842	4,160,219
304		Customer Charge	$300.00								$300.00	15	4,500	
Interruptible		First 15,000 TH/TH	0.09742	0.03333	0.47660					0.50993	0.60735	1,928	11,710	
Industrial		Next 25,000 TH/TH	0.08953	0.01672	0.47660					0.49332	0.58285	0	-	
		Next 50,000 TH/TH	0.06450	0.01374	0.47660					0.49034	0.55484	0	-	
		Over 90,000 TH/TH	0.02764	0.01019	0.47660					0.48679	0.51443	0	-	16,210
		Customer Charge	$300.00								$300.00	1,021	306,300	
313		Peak Demand (Per DT)	8.00000	4.92520						4.92520	12.92520	157,725	2,038,623	
Firm		First 15,000 TH/TH	0.09742	0.00262						0.00262	0.10004	1,080,164	1,080,598	
Transportation		Next 25,000 TH/TH	0.08953	0.00171						0.00171	0.09124	548,397	500,357	
		Next 50,000 TH/TH	0.06450	0.00100						0.00100	0.06550	170,738	111,833	
		Over 90,000 TH/TH	0.02764	0.00000						0.00000	0.02764	6,421	1,775	4,039,485
314		Customer Charge	300.00								$300.00	641	192,300	
Interruptible		First 15,000 TH/TH	0.09742	0.00282						0.00282	0.10024	863,753	865,826	
Transportation		Next 25,000 TH/TH	0.08953	0.00188						0.00188	0.09141	970,839	887,444	
		Next 50,000 TH/TH	0.06450	0.00106						0.00106	0.06556	1,086,342	712,206	
		Over 90,000 TH/TH	0.02764	0.00000						0.00000	0.02764	4,800,843	1,326,953	3,984,729
310		Demand per DT	8.00000	4.92519						4.92519	12.92519	2,400	31,020	
Resale Service		Commodity Charge	0.09000	0.00093	0.47660					0.47753	0.56753	10,312	58,524	89,544
												Special Contracts	$ 742,822	$ 742,822
													186,666,070	186,666,070

NOTE: In accordance with the Tennessee Public Service Commission order in Docket U-7074 customers metered inside Davidson County are required to pay an additional 6.93% for collection of the Metro Franchise Fee. Customers served by the Fairview, Greenbrier, Hartsville, Mt. Juliet and White House systems are required to pay 5.0%. Customers served by the Franklin and Nolensville systems are required to pay 3%. Commercial customers on the Ashland City system are required to pay 5%.

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38. Provide all workpapers to support the statement found on page 11, lines 13 – 18 of Mr. Carpenter's Pre-filed Direct Testimony.

Response: These statements in Mr. Carpenter's testimony are supported by the analysis and findings of witness Dan Yardley. Mr. Yardley's testimony and exhibits support the derivation of specific rates and charges for service that fairly apportions the Company's revenue requirements among customer classes and among various rate elements within each class. These rates and charges are based on appropriate rate design considerations including the results of an allocated cost of service study ("ACOSS"). (See CONFIDENTIAL attachment 1 for the ACOSS model used by Mr. Yardley in this rate case, as discussed in detail in Exhibit DPY-5.) The proposed rate design was developed using the goals of fairness, revenue stability, rate moderation and simplicity as detailed on pages 14 and 15 of Mr. Yardley's testimony. His analysis also took into consideration the fixed recovery of fixed costs, federal and state energy efficiency directives, and aligning the Company's interest with those of the customer. This comprehensive approach resulted in proposed rates that are priced fairly to all customer classes and are reflective of conditions in the market place.

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45. Provide a detailed calculation with explanations for all Accounting and Pro Forma Adjustments listed on Exhibit_(PKP-1), Schedule 3, Pages 3 through 5. If provided on Workpapers submitted in response to MFR #25, reference Excel file (&tab) names.

Response:

- Adjustment 1 for ($11,890,726): See the Company's response to Item 34 of this data request for further explanation. The sum of the two adjustment referenced in Item 34 of this data request total ($11,890,726).
- Adjustment 2 for $23,285: See the Company's response to Item 33 of this data request for further explanation.
- Adjustment 3 for ($169,978): See the workpapers provided in MFR 25, file 1, tab named "Forfeited Discount Worksheet." This adjustment represents the difference between the revenues from forfeited discounts in the Test Period and those in the Attrition Period. To estimate the revenues from forfeited discounts in the Attrition Period, the Company determined the average ratio for forfeited discount revenues to gas sales & transportation revenues. This average forfeited discount ratio was multiplied by the Attrition Period revenues for sales and transportation of gas, to yield the Attrition Period revenue from forfeited discounts.
- Adjustment 4 for ($12,446,554): See the Company's response to Item 36 of this data request for further explanation.
- Adjustment 5A for $1,708,709: See workpapers provided in MFR 25, files 5, 6 and 44. This adjustment reflects the difference in O&M expense for salary and wages in the Test Period vs. the Attrition Period. The first tab in file 5 is named "SW1," and it summarizes the calculation of the $18,169,143 Attrition Period salary and wage expense in O&M. The straight time wages for TN Direct employees and Corporate employees (including open positions) shown on tab "SW1" are taken from the data and calculations performed in MFR 25 file 6. To arrive at the Attrition Period salary and wage expense for O&M, the Company made adjustments 1) for the portion of salary and wages that would be capitalized rather than expensed, 2) for the portion of salary and wages that would benefit the Company's non-Utility activities, and 3) for overtime wages that would likely occur in the Attrition Period. The Company also made an adjustment to remove the portion of salary expense in the Attrition Period related to lobbying activities (see explanation in MFR 57); this adjustment was made in file 6, tab "3 17 Salary", cell N19.
- Adjustment 5B for $46,358: See the workpapers provided in MFR 25, file 7. This adjustment reflects the difference in O&M expense for the salary and payroll investment plans (401k plans) in the Test Period vs. the Attrition Period. The total Attrition Period expense for this O&M category consists of the administrative cost for operating these plans, plus the Company matching contributions to these plans.
- Adjustment 5C for $596,051: See the workpapers provided in MFR 25, file 8. This adjustment reflects the difference in O&M expense for the Long Term Incentive Plan (LTIP) in the Test Period vs. the Attrition Period.

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- Adjustment 5D for $37,775: See the workpapers provided in MFR 25, file 9. This adjustment reflects the difference in O&M expense for the Short Term Incentive Plan (STIP) in the Test Period vs. the Attrition Period.
- Adjustment 5E for $104,903: See the workpapers provided in MFR 25, file 10. This adjustment reflects the difference in O&M expense for the MVP performance incentive Plan in the Test Period vs. the Attrition Period.
- Adjustment 5F for $266,692: See the workpapers provided in MFR 25, files 11 and 12. This adjustment reflects the difference in O&M expense for transmission and distribution in the Test Period vs. the Attrition Period. File 11 shows the calculations for maintenance expenses and file 12 shows the calculations for operation expenses.
- Adjustment 5G for $255,575: See the workpapers provided in MFR 25, file 13. This adjustment reflects the difference in O&M expense for uncollectibles in the Test Period vs. the Attrition Period. The data from the Company's monthly uncollectibles reports filed with the TRA were utilized in the calculation of this adjustment, which focuses only on the margin component of uncollectibles expense. To estimate the non-gas cost (i.e. margin component) of uncollectibles in the Attrition Period, the Company determined the ratio of the non-gas cost portion of chargeoffs to total non-gas cost revenues (see MFR 25, file 13, tab "Uncollectibles Summary – PG 2"). This non-gas cost uncollectibles ratio was multiplied by the Attrition Period margin revenues, to yield the Attrition Period expense for non-gas cost uncollectibles.
- Adjustment 5H for $9,072: See the workpapers provided in MFR 25, file 14. This adjustment reflects the difference in O&M expense for other customer accounts maintenance in the Test Period vs. the Attrition Period.
- Adjustment 5I for $6,283: See the workpapers provided in MFR 25, files 15 and 16. This adjustment reflects the difference in O&M expense for general advertising and other sales expense in the Test Period vs. the Attrition Period. File 15 shows the calculations for general advertising expenses and file 16 shows the calculations for other sales expenses.
- Adjustment 5J for $8,678: See the workpapers provided in MFR 25, file 17. This adjustment reflects the difference in O&M expense for pension administrative costs and the defined contribution pension plan (called the MPP – money purchase pension plan) in the Test Period vs. the Attrition Period.
- Adjustment 5K for $2,337,853: See the workpapers provided in MFR 25, file 18. This adjustment reflects the difference in the Test Period amount for regulatory amortization of deferred pension expense (which is the amount of funded pension expense recognized rates awarded in the Company's last rate case) and the proposed regulatory amortization expense for the Attrition Period (which is a refreshed regulatory amortization calculated off the current balance for the deferred pension expense account). These deferred pension expenses relate to the defined benefit pension plan. This pension plan is now closed to new participants.
- Adjustment 5L for $243,760: See the workpapers provided in MFR 25, file 19. This adjustment reflects the difference in the Test Period amount for regulatory amortization of deferred environmental cleanup expense and the proposed regulatory amortization expense for the Attrition Period (which is a refreshed regulatory

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amortization calculated off the current balance for the environmental cleanup expense deferred account).

- Adjustment 5M for $119,963: See the workpapers provided in MFR 25, file 20. This adjustment reflects the difference in the Test Period amount for regulatory amortization of deferred 2010 TN flood expense (which is $0) and the proposed regulatory amortization expense for the Attrition Period (which is calculated off the TN flood expense deferred account balance).
- Adjustment 5N for $237,415: See the workpapers provided in MFR 25, file 21. This adjustment reflects the difference in O&M expense for group insurance in the Test Period vs. the Attrition Period.
- Adjustment 5O for $300,525: See the workpapers provided in MFR 25, file 22. This adjustment reflects the difference in O&M expense for risk insurance in the Test Period vs. the Attrition Period.
- Adjustment 5P for ($327,033): See the workpapers provided in MFR 25, files 23 and 44. This adjustment reflects the difference in O&M expense for other employee benefits & training and other compensation in the Test Period vs. the Attrition Period. File 23 shows the calculations for the expenses for other employee benefits and training. File 44 shows the calculations for other compensation; the company is not seeking to recover in this rate proceeding certain other compensation that was captured in the Test Period expense charged to GL 92000.
- Adjustment 5Q for ($12,138): See the workpapers filed in MFR 25, file 24. This adjustment reflects the difference in O&M expense for risk insurance in the Test Period vs. the Attrition Period.
- Adjustment 5R for $17,312: See the workpapers filed in MFR 25, file 25 and in response to Item 58 of this data request. This adjustment reflects the difference in O&M expense for rent in the Test Period vs. the Attrition Period.
- Adjustment 5S for $177,251: See the workpapers filed in MFR 25, file. This adjustment reflects the difference in O&M expense for outside services in the Test Period vs. the Attrition Period.
- Adjustment 5T for ($1,663,242): See the workpapers filed in MFR 25, files 27 and 28. This adjustment reflects the difference in O&M expense for other administrative and general expenses including the administrative credits (administrative expenses transferred to construction or non-utility accounts) in the Test Period vs. the Attrition Period. In preparing this data request response, the Company identified a mathematical error in its calculation of the administrative credit for pension expense. Please see the attached revision to the workpaper filed in MFR 25, file 27. After correcting for this, adjustment 5T totals ($1,328,911) rather than ($1,663,242).
- Adjustment 5U for $89,984: See the workpaper filed in MFR 25, file 29. This adjustment reflects the difference in the Test Period amount for amortization of deferred rate case expenses (which is $0) and the proposed amortization expense for the Attrition Period (which is the amortization calculated off the projected balance for the rate case expense deferred account).
- Adjustment 5V for $150,000: This reflects the expense for the proposed, annual funding level for participation in GTI's OTD program. Since this expense is not

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represented in the Test Period, there is no additional workpaper detailing this adjustment.

- Adjustment 5V for $500,000: This reflects the expense for the proposed, annual funding level for the SEP Program. Since this expense in not represented in the Test Period, there is no additional workpaper detailing this adjustment.
- Adjustment 6 for ($2,799,785): See the workpapers filed in MFR 25, file 30 and 31. This adjustment reflects the difference in depreciation & amortization expense in the Test Period vs. the Attrition Period. Piedmont proposed new depreciation rates effective March 1, 2012. The Attrition Period depreciation and amortization expense was calculated off the Company's monthly net plant projection for Tennessee Direct and Corporate allocated property. The current depreciation rates were used for the calculations through February 28, 2012 and the new rates thereafter.
- Adjustment 7 for ($124,480): See the workpaper filed in MFR 25, file 1, tab "Taxes." This adjustment reflects the difference in expense for taxes other than income in the Test Period vs. the Attrition Period, before adjustments for proposed revenue.
- Adjustment 8 for ($76,013): See the workpaper filed in MFR 25, file 1, tab "Rev Req," rows 85 to 95. This adjustment reflects the difference in state income (excise) tax expense for Tennessee in the Test Period vs. the Attrition Period, before adjustments for proposed revenue. The effective state tax rate is applied to the amount for gross margin, plus AFUDC, less operating expenses, less debt expense, less interest on customer deposits.
- Adjustment 9 for $696,586: See the workpaper filed in MFR 25, file 1, tab "Rev Req," rows 85 to 106. This adjustment reflects the difference in federal income tax expense for Tennessee in the Test Period vs. the Attrition Period, before adjustments for proposed revenue.
- Adjustment 10 for $4,398: See the workaper filed in MFR 25, file 1, tab "Cust Deposits." The adjustment reflects the difference in the 13 month average for interest on customer deposits in the Test Period vs. the Attrition Period.
- Adjustment 11 for $1,074,986: See the workaper filed in MFR 25, file 1, tab "Revenues Summary," row 6. This adjustment reflects the difference in AFUDC for Tennessee in the Test Period vs. the Attrition Period. The Attrition Period AFUDC amount was calculated by multiplying the Attrition Period CWIP amount by the weighted average cost of capital, as shown in cell N72 on tab "Rev Req."
- Adjustment 12 for $82,012,479: See the workaper filed in MFR 25, file 32. This adjustment reflects the difference in TN Direct and Corporate-allocated Plant in Service as of the end of the Test Period (plant balance at 5/31/11) vs. the 13-month average plant balance for the Attrition Period. To calculate this, the Company projected net additions by plant account by month.
- Adjustment 13 for $9,100,866: See the workaper filed in MFR 25, file 32. This adjustment reflects the difference in TN Direct and Corporate-allocated CWIP as of the end of the Test Period (balance at 5/31/11) vs. the 13-month average CWIP balance for the Attrition Period.

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- Adjustment 14 for $22,782,822: See the workpaper filed in MFR 25, file 30. This adjustment reflects the difference in TN Direct and Corporate-allocated Accumulated Depreciation & Amortization expense as of the end of the Test Period (balance at 5/31/11) vs. the 13-month average balance for the Attrition Period. See the Company's response to Item 68 of this data request for further explanation.
- Adjustment 15 for $59,543: See the workpaper filed in MFR 25, file 1, tab "Rate Base," rows 34 to 70. This adjustment reflects the difference in the 13-month Test Period average for CIAC vs. the 13-month average for the Attrition Period.
- Adjustment 16 for ($5,065,282): See the workpaper filed in MFR 25, file 33. This adjustment reflects the difference in Test Period Working Capital Allowance vs. the Attrition Period amount.
- Adjustment 17 for $22,888,471: See the workpaper provided in the Company's response to Item 67 of this data request. This adjustment reflects the difference in ADIT balance as of the end of the Test Period (@ 5/31/2011) vs. the 13-month average balance for the Attrition Period.
- Adjustment 18 for $16,578,738: See the workpaper filed in MFR 25, file 1, tab "Rev Req."
- Adjustment 19 for $133,973: See the workpaper filed in MFR 25, file 1, tab "Rev Req."
- Adjustment 20 for $55,489: See the workpaper filed in MFR 25, file 1, tab "Rev Req."
- Adjustment 21 for $1,132,691: See the workpaper filed in MFR 25, file 1, tab "Rev Req."
- Adjustment 22 for $5,433,586: See the workpaper filed in MFR 25, file 1, tab "Rev Req."

Response provided by Piedmont Natural Gas on October 21, 2011.

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46. Complete the Excel spreadsheets (file name "Salaries and Wages" on attached CD) for every employee (both TN Direct and Corporate that is allocated to TN).

Response: See the CONFIDENTIAL attachment. Per approval from Paul Greene, the attachment includes the employee names only for those under Tennessee Direct and the top 20 salaried Corporate.

Response provided by Piedmont Natural Gas on October 21, 2011.

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62. Provide copies of all contracts and/or invoices that support the paid expenses listed for Rate Case Expense in 29-ADJUSTMENT_5U_Deferred Rate Case Expense Attrition ADJU.XLS.

Response: Please see the attached CONFIDENTIAL invoices, as well as a CONFIDENTIAL excel schedule summarizing the expenses incurred and deferred to-date for this rate case. Note that invoices are bookmarked on the left hand column in the confidential PDF file.

Response provided by Piedmont Natural Gas on October 21, 2011.

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67. Please cite workpapers previously provided or provide workpapers with calculations supporting the amounts included in rate base for Accumulated Deferred Income Taxes for the May 31, 2011 Test Period and After Attrition Adjustments listed in PKP-1, Schedule 3. Please provide a narrative explaining the amounts and calculations on these workpapers.

Response: The Accumulated Deferred Income Tax (ADIT) balance that the Company must recognize on its books for Tennessee is a cumulative balance of the difference between book treatment and tax treatment for income taxes over time. This difference is now and will continue to be much greater than it has been historically due to recent changes in federal and state tax law concerning the recognition and treatment of bonus depreciation. The effect of bonus deprecation also adds considerable complexity to the calculation of deferred taxes. The book-tax differences in the Test Period and in the Attrition Period consist of those related to:

- Bad debts
- Asset retirement costs
- Regulatory deferrals
- Cost of gas including hedging transactions
- Inventory cost required to be capitalized for tax under IRC Section 263A
- Plant related items (including depreciation and basis adjustments for AFUDC, CIAC, capitalized interest, capitalized property taxes, and tax repairs)
- Deferred compensation and employee benefits including pensions
- Gross Receipts taxes
- Property taxes
- Prepaid expenses
- Bond loss
- Deferred revenues
- Goodwill
- Accounting reserves.

The Company provided the book-tax differences in the Test Period and the Attrition Period for each of these categories in MFR 62.

Determination of ADIT through the Attrition Period requires an analysis of the income position of the entire Company (not just the Company's operations in Tennessee alone) at the end of the Company's fiscal years for 2012 and 2013, since the Attrition Period straddles these two fiscal years. Calculation of the fiscal year amount is necessary to determine if the Company should record the benefit of a net operating loss carryforward as part of deferred taxes. Deferred taxes are calculated by using Piedmont Natural Gas Company's stand alone effective tax. See attached CONFIDENTIAL workpapers for the calculation of ADIT balance for the Attrition Period (balance @ 2/28/13), as summarized in cells K207 to K218 on tab "Test Year Ending 5 31 2011."

Response provided by Piedmont Natural Gas on October 21, 2011.

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70. Please reference MFR 25, Schedule 19. For those amounts the Company is seeking recovery in this rate case (19-ADJUSTMENT_5L_DEFERRED ENVIRONMENTAL CLEANUP ATTRITION.XLStransactions_TN) please provide a detail listing with corresponding amount disbursed by location for materials and labor. Include whether this was an in house expenditure or contract. Include the number of hours worked and the function performed for each amount listed.

Response: See the attached CONFIDENTIAL excel schedule summarizing the environmental cleanup expenses that have been incurred and deferred to date, and included for recovery pursuant to this rate case filing. None of the deferred expenses were for "in house" labor, as the work was handled through contract labor. The deferred expenses consist of contract labor, materials and fees/permits. Invoices for each deferred expense, as referenced in the excel schedule, are included as CONFIDENTIAL attachments to this response.

The Company deferred expenses related to environmental cleanup projects on two Company sites in Tennessee. Specifically, these projects were: 1) an environmental assessment and soil cleanup for a small property* that formerly housed a manufactured gas plant ("MGP") gas holder, and 2) lead-based paint abatement for certain areas at the Company's liquefied natural gas (LNG) storage facility in Nashville. Expenses dispersed by location can be found in the excel columns AB and AC.

CONFIDENTIAL: [redacted]

Response provided by Piedmont Natural Gas on October 21, 2011.

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81. Reconcile the capital structure proposed by witness David Dzuricky in Exhibit DJD-1 with the response to MFR 79. Specifically, account for the lower reported equity amounts in MFR 79 relative to the amounts used in Exhibit DJD-1.

Response: The response to MFR 79 covers the two fiscal years ended October 31, 2009, and October 31, 2010. Exhibit DJD-1 computes the ratios based on a three-year average for the last three years ended June 30. Other than the different time periods, the primary difference is that MFR 79 shows book balances at each month-end and does not include retained earnings in the Common Equity balance. Additionally, MFR 79 includes an adjustment for the current portion of Long Term Debt. Each schedule includes June 30, 2010. The attached schedule shows the reconciliation between the two for June 30, 2010.

Response provided by Piedmont Natural Gas on October 21, 2011.

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TRA DR 1-81 Response Attachment

June 30, 2010	Long-Term Debt	Short-Term Debt	Common Equity	
Exhibit DJD-1	783,364,166	43,500,000	989,046,836	
MFR 79, June 30, 2010	732,128,000	43,500,000	436,908,000	(rounded to thousands)
Difference	**51,236,166**	**0**	**552,138,836**	

Book Balance	792,128,000
Current Portion	60,000,000
Unamortized Debt Discount	(8,645,834)

Current Portion	60,000,000
Unamortized Debt Discount	(8,645,834)
Reconciled Difference	**51,354,166**

Retained Earnings June 30, 2010	553,459,712
Accumulated Other Comprehensive Income	(1,320,515)
Reconciled Difference	**552,139,197**

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82. Reconcile the difference between total long-term debt as reported in MFR 85 and total long-term debt as reported in MFR 79.

Response: See attachment.

Response provided by Piedmont Natural Gas on October 21, 2011.

Piedmont Natural Gas Company, Inc.
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TRA DR 1-82 Response Attachment

Long-term debt reported on MFR 85 October 2010	731,922,000
Long-term debt reported on MFR 79 October 2010	671,922,000
Difference	60,000,000

MFR 85 is a listing of long-term debt by issue. MFR 79 is a calculation of the debt and equity ratios. As such, MFR 79 excludes from the calculation the $60,000,000 in 7.8% Medium Term Notes maturing in October 2010.

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83. Provide a calculation of the capital structure proposed by witness David Dzuricky in Exhibit DJD-1 using balances for January 2009, 2010 and 2011.

Response: See attachment.

Response provided by Piedmont Natural Gas on October 21, 2011.

Piedmont Natural Gas Company, Inc.
Docket No. 11-00144
TRA DR 1-83 Response Attachment

Capital Structure as of January 2009, 2010, and 2011

	January 31, 2009	January 31, 2010	January 31, 2011
Long-Term Debt	$ 814,377,001	$ 783,443,938	$ 723,552,865
Short-term Debt	$ 448,000,000	$ 293,000,000	$ 315,500,000
Common Equity	$ 952,275,238	$ 992,604,852	$ 1,015,514,188
	$ 2,214,652,239	$ 2,069,048,790	$ 2,054,567,053

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84. Explain the differences between the projected equity ratios contained in Confidential MFR 94 with the capital structure proposed in by witness David Dzuricky in Exhibit DJD-1. In the discussion, specifically explain the difference in the projected equity ratio for FY 2011 and the ratio implied by the data in Exhibit DJD-1.

Response: Exhibit DJD-1 computes a proposed capital structure using the average of the actual balances as of June 30, 2009, 2010 and 2011. As explained in Mr. Dzuricky's testimony, he used this methodology because "that was the methodology most recently utilized by the TRA for calculating capital structure in a natural gas distribution company rate case." Mr. Dzuricky was specifically referring to the capital structure adopted by the Authority in Docket 09-00183, which used the average actual capital structure for the Company for the three most recent June months.

In MFR 94, the Company showed the forecasted annual equity ratio for the next five fiscal years. This ratio is based on a model which computes the ratio based on forecasted issues of equities or debt during each year. The attached CONFIDENTIAL schedule provides a further breakdown of the data provided in MFR 94, to specifically show the projected debt and equity components.

Response provided by Piedmont Natural Gas on October 21, 2011.

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85. Provide a forecast capital structure based upon the responses to MFR 94 and MFR 95. Please include forecasted levels of short term debt and explain the method for determining the level of short-term debt included in the forecasted capital structure.

Response: See CONFIDENTIAL attachment.

Response provided by Piedmont Natural Gas on October 21, 2011.

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing document is being served this date via U.S. Mail or electronic mail upon:

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This the 21st day of October, 2011.

/s/ David Killion
C. David Killion