

**Before the  
Tennessee Public Utility Commission  
Docket No. 17-00138**

**Petition of Piedmont Natural Gas Company, Inc.  
for Approval of an Integrity Management Rider to its  
Approved Rate Schedules and Service Regulations**

**Rebuttal Testimony and Exhibit  
of  
Victor M. Gaglio**

**On Behalf of  
Piedmont Natural Gas Company, Inc.**



March 7, 2018

1 **Q. Please state your name and business address.**

2 A. My name is Victor M. Gaglio. My business address is 4720 Piedmont Row  
3 Drive, Charlotte, North Carolina.

4 **Q. What is your position with Piedmont Natural Gas Company, Inc.**  
5 **(“Piedmont”)?**

6 A. I am a Senior Vice President and Chief Utility Operations Officer.

7 **Q. Please describe your educational and professional background.**

8 A. I graduated from Virginia Polytechnic Institute and State University with a B.S.  
9 in Engineering Science and Mechanics. I have attended development programs  
10 at the University of Virginia’s Darden School of Business, University of  
11 Pennsylvania’s Wharton School of Business and the University of Michigan’s  
12 Ross School of Business. I have served on the Board of Directors for the  
13 Interstate Natural Gas Association of America (“INGAA”) and I have  
14 previously held various leadership positions on technical committees for the  
15 Southern Gas Association (“SGA”) and the American Gas Association  
16 (“AGA”). From 1981 until 2012, I served in various positions with Columbia  
17 Gas and NiSource culminating in my final position with that company of  
18 Senior Vice President of Operations for NiSource Gas Transmission and  
19 Storage. I joined Piedmont in 2012 and am employed as Senior Vice President  
20 and Chief Utility Operations Officer.

21 **Q. Have you previously testified before this Tennessee Public Utility**  
22 **Commission (“Commission”) or any other regulatory authority?**

1 A. Yes. I presented testimony to the Tennessee Regulatory Authority (“TRA”) in  
2 Docket Number 13-00118 in October of 2013. This is the docket that resulted  
3 in approval of the IMR mechanism reflected in Piedmont’s Service Schedule  
4 No. 317. I have also previously testified before the North Carolina Utilities  
5 Commission.

6 **Q. Have you previously testified in this proceeding?**

7 A. No. I have not.

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

9 A. The purpose of my rebuttal testimony is to respond to the issues raised in the  
10 testimony of Consumer Advocate Witness Dittmore relating to alleged cost  
11 over-runs associated with several Piedmont integrity management programs  
12 and his apparent contention that the OASIS program was mismanaged by  
13 Piedmont to a degree that would justify a disallowance of cost recovery in this  
14 docket.

15 **Q. Which Piedmont IMR projects is Mr. Dittmore critical of in his prefiled**  
16 **testimony?**

17 A. Mr. Dittmore singles out the South Nashville project and the OASIS project as  
18 symptomatic of what he describes as a “history of incurring IMR costs on  
19 major projects which greatly exceed forecasted costs.”

20 **Q. What were your responsibilities with respect to these two projects?**

1 A. When I joined Piedmont in 2012 as Chief Utility Operations Officer, I became  
2 the senior management officer directly responsible for the planning and  
3 execution of these projects. These projects were executed by Piedmont  
4 engineers who report to me and for whom I am responsible. As a result, I am  
5 intimately familiar with each of these projects.

6 **Q. Is Mr. Dittmore correct in his assessment that the final costs for each of**  
7 **these projects was substantially higher than the originally budgeted costs?**

8 A. Yes but he is mistaken in his apparent assessment that this was due to some  
9 form of mismanagement or negligence by Piedmont.

10 **Q. Can you explain?**

11 A. Yes. I will start with the South Nashville project. That project involved critical  
12 reinforcement of Piedmont's transmission system on the south side of  
13 Nashville which became necessary to continue and reinforce the provision of  
14 natural gas service in an area of Piedmont's service territory with growing  
15 demand. It was necessitated as a result of regulations issued by the federal  
16 Pipeline and Hazardous Materials Safety Administration ("PHMSA") which  
17 precluded Piedmont's continuing use of existing transmission facilities  
18 previously used to serve south Nashville. It involved the installation of  
19 approximately 15 miles of 20 inch transmission line and 1 mile of 12 inch  
20 transmission line and was a significant project for Piedmont.

1           When Piedmont planned the project, the Company conducted a map  
2           analysis to determine the best route for the new facilities. Making such  
3           assessments is a difficult exercise, particularly in urban areas where a number  
4           of factors are in play, including avoiding to the extent possible, the need to dig  
5           up urban streets in order to place pipe and attempting to avoid high-density  
6           population centers. Ideally, we would like to place our facilities in  
7           undeveloped areas because there are fewer collateral interests to consider and  
8           generally less complications from an engineering perspective. This was not  
9           possible with regard to the South Nashville project but we did select a route  
10          that was optimized to avoid the types of complications that would be involved  
11          in running the pipe down public streets or through heavily urbanized areas.

12          When we planned the project, we estimated the cost on the basis of  
13          normal pipeline construction techniques and a system average cost for rights-  
14          of-way. Once the project got underway, however, there was significant  
15          pushback from landowners along the planned route (much of which transited  
16          some relatively wealthy residential areas) and significant concerns over running  
17          a pipeline through the environmentally sensitive Radner Lake area. Inasmuch  
18          as Piedmont had no choice but to complete this project in order to sustain  
19          service to its customers, it took the steps necessary to work through the  
20          opposition to the project raised by various entities including landowners and  
21          state and municipal authorities. This involved litigation, route changes, an

1 extended construction schedule, and the utilization of very expensive horizontal  
2 directional drill technology in order to complete the project. We strongly  
3 believe that the costs ultimately incurred to implement this project were  
4 necessary and unavoidable just as constructing the line was unavoidable. We  
5 do not believe that any of the costs incurred with respect to this project were  
6 the result of mismanagement or negligence in the execution of the project and  
7 in my opinion, all of those costs qualify for inclusion in the IMR mechanism.

8 **Q. What about the OASIS Project?**

9 A. OASIS stands for Operations Assets and System Integrity Solutions. OASIS is  
10 an information management system designed to interface with a number of  
11 other Piedmont databases and programs to provide a comprehensive system  
12 management tool designed to be fully compliant with PHMSA documentation  
13 requirements. This project has been ongoing for quite some time and is  
14 designed to track and record data related to Piedmont's processes, systems,  
15 infrastructure, and projects. At its inception, OASIS was focused on the fairly  
16 limited goal of tracking and recording compliance related work. At that time,  
17 however, and for the next 7 years, PHMSA was actively engaged in issuing  
18 guidance and developing regulations for expanding requirements for  
19 transmission and distribution integrity management programs, particularly with  
20 regard to the gathering and retention of system information for risk assessment  
21 purposes. This is required by one of the core principles of PHMSA integrity

1 management requirements – the obligation to “know your system” and to have  
2 reliable, traceable, verifiable, and complete records of our system. With this  
3 information we are expected to be able to integrate multiple data sources, to  
4 assess the integrity risk on our system and subsequently put mitigation plans in  
5 place via maintenance and construction related projects. As a result of the  
6 changing landscape of federal regulations we were required to significantly  
7 (and regularly) adjust the scope and scale of OASIS functionality over time. As  
8 you would expect, these material changes to the functionality of the OASIS  
9 system resulted in increased costs both as a direct result of adding system  
10 functionality but also through the temporal extension of the project. I would  
11 tell you that the final functionality of the OASIS system is orders of magnitude  
12 greater than what was originally envisioned and budgeted and will be capable  
13 of satisfying the significantly expanded PHMSA requirements associated with  
14 system documentation and data integration.

15 **Q. Can you provide an illustration of the types of scope changes you are**  
16 **describing?**

17 A. Yes. I have attached to my testimony as Exhibit VMG-1 a timeline which  
18 illustrates the duration of the OASIS project and the multitude of scope  
19 changes implemented during the project. Each of the major scope changes and  
20 the resulting cost impacts for the project are also reflected on this exhibit.

1 **Q. Can you provide a brief explanation of several of the items shown on**  
2 **Exhibit VMG-1 and how they impacted the scope of the OASIS Project?**

3 A. Yes. The first example of a significant scope change would be the  
4 incorporation of our MAOP project into OASIS. At or about the same time  
5 OASIS was initiated by the Company, Piedmont also began a process to  
6 develop a software system to document the Maximum Allowable Operating  
7 Pressure (“MAOP”) for each segment of its system. This documentation was  
8 required by evolving PHMSA regulations and was directly related to the San  
9 Bruno explosion in California. In consideration of the fact that this separate  
10 system initiative was likely to overlap with the data to be recorded in OASIS  
11 and in response to the notion that having the MAOP system embedded in the  
12 functionality of OASIS would provide benefits to the Company and expand the  
13 operational benefits of OASIS, Piedmont decided to expand the scope of the  
14 OASIS project to incorporate the MAOP system, which involved the addition  
15 of significant new functionality and shifted dollars from the stand-alone MAOP  
16 system to OASIS. This change of scope occurred in late 2014, as indicated on  
17 Exhibit VMG-1.

18 **Q. Could you provide another example of expanded OASIS functionality that**  
19 **occurred during the course of the project?**

20 A. Yes. A similar type of scope change occurred with respect to functionality  
21 referred to as Pipeline Component Traceability which involved the requirement



1 to be able to record and store information about the various components parts  
2 of Piedmont's system to include serial numbers, material type, manufacturing  
3 date, barcode number and location, among others. This record-keeping was  
4 required by PHMSA regulations and Piedmont initially pursued development  
5 of a system to track and record this information on a stand-alone basis but as  
6 PHMSA regulations (and regulations under discussions) were expanded,  
7 Piedmont made the decision to fold this functionality into the OASIS system.  
8 As was the case with the roll-in of the MAOP functionality, rolling-in the  
9 functionality of the Pipeline Component Traceability system into OASIS  
10 expanded the scope of OASIS and also increased its cost.

11 **Q. Do you have another example of how the scope of OASIS changed in order**  
12 **to make it better able to assist in Piedmont's compliance efforts?**

13 A. Yes. As PHMSA regulations became progressively more demanding,  
14 Piedmont reached the conclusion that the relatively straight-forward data  
15 recordation and retention systems it had initially pursued on a stand-alone basis  
16 would not put it into the best position to comply with federal pipeline safety  
17 and integrity requirements and that, instead, it needed a full work and asset  
18 management system which was fully integrated with Piedmont's business  
19 processes and supply chain and which could help Piedmont actively manage  
20 and monitor integrity compliance on a near real-time basis. This approach to

1 integrity management was completely different and much more complex than  
2 what had been originally envisioned for OASIS.

3 It is these changes in scope and approach to the functionality that  
4 OASIS is intended to bring to the Company, including the consolidation of  
5 several stand-alone projects, that caused the original projected cost of OASIS to  
6 increase substantially. The items discussed above are a sampling of significant  
7 scope changes to OASIS during its development and others are listed on  
8 Exhibit VMG-1.

9 **Q. Were the scope changes and costs reflected on Exhibit VMG-1 prudent**  
10 **and necessary?**

11 A. Yes.

12 **Q. Were any necessitated by mismanagement or negligence on Piedmont's**  
13 **part?**

14 A. No.

15 **Q. Were there any problems encountered during the OASIS Project?**

16 A. In my experience, any time you are developing a new proprietary software  
17 system that is required to interact with other software and/or databases, you are  
18 going to have surprises and difficulties. We experienced our fair share of data  
19 integration challenges while working to create interfaces between the OASIS  
20 system and our legacy systems which OASIS needed to communicate with. In  
21 addition to the significant scope and functionality changes I mentioned above,

1       these data and system integration challenges added costs to the project as well.

2       These items are also reflected on Exhibit VMG-1.

3       **Q. Was there anything Piedmont could have done differently to reduce the**  
4       **cost of OASIS?**

5       A. With the benefit of hindsight, I am sure that if we traced the project backwards  
6       we could identify instances where a different decision or approach might have  
7       ultimately led to lower costs. I suspect this would be true of almost every  
8       project we undertake but based upon my knowledge of the OASIS project I  
9       think the decisions and actions taken by Piedmont personnel and management  
10      during the project were prudent and rational. Regulatory prudence is generally  
11      based upon reasoned decision-making based on facts and circumstances known  
12      at the time, not upon hindsight analysis. I am not aware of any actions taken  
13      (or not taken) that would justify a disallowance of costs under the IMR  
14      mechanism.

15      **Q. Can you respond to Mr. Dittimore's concerns over Piedmont's**  
16      **management of the OASIS project, particularly as set forth in his**  
17      **Supplemental testimony?**

18      A. Yes. From the time I arrived at Piedmont Natural Gas in 2012, I participated  
19      on the project Steering Team which provided management oversight for  
20      development of the OASIS system. That team existed from the onset of the  
21      project and met on a monthly basis to review the status of the project as well as

1 address scope changes and other modifications to the OASIS system under  
2 development. The “slides” Mr. Dittemore has attached to his Supplemental  
3 Testimony are typical of the form in which information was presented to the  
4 Steering Committee during the project.

5 **Q. Do you believe that Mr. Dittemore has uncovered evidence of misfeasance**  
6 **or negligence in the development of the OASIS Project which led to**  
7 **increased costs now sought to be recovered from customers?**

8 A. Not based upon the information I have seen. He seems to be concerned about a  
9 purported lack of financial accountability or reporting associated with the  
10 project prior to November of 2015 and also focuses on Steering Committee  
11 discussions of risk management and mitigation associated with the project.

12 **Q. Does Mr. Dittemore have a point on these two issues?**

13 A. Not in my opinion. With respect to the contention that management was not  
14 aware of or managing OASIS system costs, I can assure you that this was not  
15 the case. Irrespective of whether such communications were reflected in  
16 Steering Committee slides or not (and budget items are found in some of the  
17 slides attached to Mr. Dittemore’s Supplemental Testimony), budget and cost  
18 reporting were a regular part of my ongoing evaluation of the project and were  
19 communicated to Piedmont’s senior management at regular intervals. I  
20 personally provided status updates on the OASIS project on multiple occasions  
21 to the Company’s Board of Directors. As I suspect Mr. Dittemore knows from

1 his own experience at operating gas utility companies, any major information  
2 systems project is monitored closely by management because of the inherent  
3 costs of such systems. That is exactly what happened at Piedmont with regard  
4 to the OASIS system. Based on the foregoing it is simply not true that the  
5 OASIS project lacked management supervision and that is as true for the costs  
6 and budgeting for the project as it is for overall system development.

7 **Q. What about the fact that Piedmont did not provide Steering Committee**  
8 **Slides for the period January 2013 through January 2015?**

9 A. We were not able to locate slides for Steering Committee meetings during this  
10 period but I do know that the Steering Committee met during that period and  
11 engaged in the same level of project scrutiny they did both before and after that  
12 period because I was an active participant in those meetings. As a result, I  
13 cannot agree with Mr. Dittmore's apparent conclusion that the project lacked  
14 management scrutiny during that period – it did not.

15 **Q. What about his concerns over the risk management slides presented to the**  
16 **Steering Committee in November of 2015?**

17 A. To me, those were indicative of proper management of the project. The goal of  
18 management of any project is to identify weaknesses in the project processes  
19 and ensure those weaknesses are corrected. That is the job of management.  
20 Inclusion of concerns over risk management processes and procedures on the

1 Steering Committee slides and the correlating identification of remedial actions  
2 are representative of proper management in my mind.

3 **Q. Are you aware of whether the identification of risk management concerns**  
4 **in the November 2015 Steering Committee slide deck resulted in additional**  
5 **costs to the project?**

6 A. To the best of my knowledge they did not. I was on the Steering Committee at  
7 that time and these were process weaknesses to the best of my recollection  
8 which we addressed and provided corrective guidance on.

9 **Q. Were the South Nashville and OASIS project costs incurred in compliance**  
10 **with federally mandated integrity management requirements?**

11 A. Yes.

12 **Q. Were these costs also reasonable, prudent and necessary?**

13 A. Yes.

14 **Q. Does this conclude your prefiled rebuttal testimony?**

15 A. Yes.

16

# **Exhibit VMG-1**

Exhibit VMG-1

OASIS (Operations Assets & System Integrity Solution)					
Project Spend / Timeline					
Original		2014	2015	2016	2017 (Deployed)
Timeline					
	\$36.3	\$83 M	\$108.5 M	\$114.5 M	\$132 M
		MAOP (Locate, review and scan assets to be used in the new application and to confirm Maximum Allowable Pressure as per PHMSA proposed rulemaking.)	Project Management Office (PMO) was formed and staffed with Piedmont Natural Gas and Integration Vendor	Project delays due to systems integration complexities	Deployment of OASIS Applications
		A Mobile GIS tool (GSA Lite) was added for visualization of data at the field level as a part of the "Know you System" PHMSA proposed rulemaking. An example of this is viewing our system maps and working digitally on mobile devices in the field.	Right Of Way (ROW) project was added to capture asset records and easement locations for dispatch of ROW compliance work.	Uttelligent Contract Added to represent Piedmont Natural Gas in program management and oversight due to expanded scope and complexity.	Contract Extensions
		Added Integration Contractor (Added integration Resources to manage the large integration needs due to the increased scope)	Mobile Devices such as tablets and hardware were procured and deployed to the field.	Extensive amount of data cleansing needs complicated integration.	Ongoing Data Clean Up
		Change Readiness added to the project to address and manage business process changes and the readiness of our team members to adopt the new technology.	Mapframe and Ventyx (Service Suite) licenses	Integration depended on all systems data to match. For example dates can be shown as 1-1-2018, 1/1/18, Jan 1st, 2018, 01-01-2018 etc.	Project Close and Transition to Support
		Service Suite upgrade was added to enable the mobile scheduling and dispatching of work to the field.		Data formatting like the dates above must match for the integration systems to work. The same is true for capitalization of letters, abbreviations like Street vs St. , and fonts.	
		Pipeline Component Traceability (PCT) was added to the scope to address the capture of attributes to be stored in the OASIS applications (System of Record). These attributes included but were not limited to serial numbers, material type, manufacturing lot number, manufacture date, barcode number, and location of the asset. Like the VIN# of a car, this information is critical for identifying and locating materials in our system.		Rising key resource cost within Integration experts, Data Integration Experts and Solution Architects drove prices upward and availability downward due to supply and demand in the technology industry for these resources.	