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October 7, 2014

Via Hand-Delivery

The Honorable Earl Taylor **Executive Director** Tennessee Regulatory Authority c/o Sharla Dillon 502 Deaderick Street, Fourth Floor Nashville, Tennessee 37243

> Petition of Piedmont Natural Gas, Inc. for Approval of a CNG Infrastructure Re:

Rider to Its Approved Rate Schedules and Service Regulations

Docket No. 14-00086

Dear Mr. Taylor:

I enclose and original and five (5) copies of Piedmont Natural Gas Company, Inc.'s Testimony and Exhibits of Pia K. Powers and of Ken Valentine.

This material is also being filed by way of email to the Tennessee Regulatory Authority Docket Manager, Sharla Dillon. Please file the original and four copies of this filing and stamp the additional copy as "filed". Then please return the stamped copies 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.

With kindest regards, I remain

Very truly yours P. 1 Munics

R. Dale Grimes

Enclosures

cc:

Melvin Malone, Esq.

Wayne Irvin, Esq.

Sharla Dillon (via email)

Before the Tennessee Regulatory Authority

Docket No. 14-00086

Petition of Piedmont Natural Gas Company, Inc. For Approval of a CNG Infrastructure Rider to Its Approved Rate Schedules and Service Regulations

Testimony and Exhibits of Pia K. Powers

On Behalf of Piedmont Natural Gas Company, Inc.



1	Q.	Please state your name and business address.
2	A.	My name is Pia K. Powers. My business address is 4720 Piedmont Row Drive,
3		Charlotte, North Carolina.
4	Q.	By whom and in what capacity are you employed?
5	A.	I am the Director - Regulatory Affairs for Piedmont Natural Gas Company,
6		Inc., ("Piedmont" or "the Company").
7	Q.	Please briefly describe your educational and professional background.
8	A.	I have a Bachelor of Arts degree in economics from Fairfield University and a
9		Master of Science degree in environmental and resource economics from the
10		University College London. From 1999 through 2003, I was employed as an
11		Economist with the Energy Information Administration, the statistical agency of
12		the U.S. Department of Energy, where I focused on international energy
13		forecasting and environmental issues. I was hired by Piedmont as a Regulatory
14		Analyst in 2003, promoted to Supervisor - Federal Regulatory in 2005, and
15		promoted to Manager of Regulatory Affairs in 2006. In 2013, I was promoted
16		to my current position.
17	Q.	Have you previously testified before the Tennessee Regulatory Authority
18		or any other regulatory authority?
19	A.	Yes. I have presented testimony before the Tennessee Regulatory Authority,
20		the Public Service Commission of South Carolina, and the North Carolina
21		Utilities Commission.
22	Q.	What is the purpose of your testimony in this proceeding?

1	A.	The purpose of my testimony in this proceeding is to support Piedmont's
2		proposed Compressed Natural Gas ("CNG") Infrastructure Recovery ("IR")
3		mechanism in this proceeding.
4	Q.	Do any exhibits accompany your testimony?
5	A.	Yes. The following exhibits are part of my testimony:
6		Exhibit(PKP-1) CNG Infrastructure Rider
7		Exhibit(PKP-2) Piedmont Capitalization Policy
8		Exhibit(PKP-3) Illustration of the Operation of the CNG IR Mechanism
9	Q.	Were these exhibits prepared by you or under your direction?
10	A.	Yes, Exhibit(PKP-1), Exhibit(PKP-2) and Exhibit(PKP-3) were all
11		prepared by me or under my direction.
12		Establishment of the CNG Infrastructure Rider Mechanism
12	Q.	Establishment of the CNG Infrastructure Rider Mechanism Why is Piedmont proposing the establishment of a CNG IR mechanism?
	Q. A.	
13		Why is Piedmont proposing the establishment of a CNG IR mechanism?
13 14		Why is Piedmont proposing the establishment of a CNG IR mechanism? By this filing, Piedmont proposes to implement a new CNG IR mechanism in its
13 14 15		Why is Piedmont proposing the establishment of a CNG IR mechanism? By this filing, Piedmont proposes to implement a new CNG IR mechanism in its tariff in order to allow it to recover, on an intra-rate case basis, the costs
13 14 15		Why is Piedmont proposing the establishment of a CNG IR mechanism? By this filing, Piedmont proposes to implement a new CNG IR mechanism in its tariff in order to allow it to recover, on an intra-rate case basis, the costs associated with levels of capital expenditures incurred as a result of the
13 14 15 16		Why is Piedmont proposing the establishment of a CNG IR mechanism? By this filing, Piedmont proposes to implement a new CNG IR mechanism in its tariff in order to allow it to recover, on an intra-rate case basis, the costs associated with levels of capital expenditures incurred as a result of the expansion of existing CNG infrastructure and the construction of new CNG
13 14 15 16 17		Why is Piedmont proposing the establishment of a CNG IR mechanism? By this filing, Piedmont proposes to implement a new CNG IR mechanism in its tariff in order to allow it to recover, on an intra-rate case basis, the costs associated with levels of capital expenditures incurred as a result of the expansion of existing CNG infrastructure and the construction of new CNG filling stations to increase accessibility and improve safety in response to the
113 114 115 116 117 118		Why is Piedmont proposing the establishment of a CNG IR mechanism? By this filing, Piedmont proposes to implement a new CNG IR mechanism in its tariff in order to allow it to recover, on an intra-rate case basis, the costs associated with levels of capital expenditures incurred as a result of the expansion of existing CNG infrastructure and the construction of new CNG filling stations to increase accessibility and improve safety in response to the incremental growth in demand for natural gas as an alternative motor vehicle

through June 2014 to expand it CNG infrastructure in Tennessee. Furthermore,
Piedmont currently projects capital investments of approximately \$4.6 million
dollars. This capital investment and costs are not being recovered in Piedmont's
currently approved rates, are not fully offset by any incremental revenues
associated with the increased investments, and are being incurred as the direct
result of Piedmont's obligations to respond to the challenges of economic
development through improving accessibility, supply and safety.

- Q. Have you drafted a proposed rider that would accomplish the goals that you have identified?
- Yes, a proposed Infrastructure Rider mechanism was included as an exhibit to our petition in this proceeding and a copy is also attached hereto as Exhibit __(PKP-1).
- Q. Can you describe how that mechanism would work?

A. Yes, the Company will file quarterly reports with the Authority detailing the amount of capital expenditures for CNG investment, not otherwise included in the Company's rate base, resulting from capital expenditures incurred in additional infrastructure and equipment expansion. The costs associated with those capital expenditures will be recorded in a deferred account. Once a year, the Company will file a request with the Authority to update rates in order to recover the costs of its capital investments in infrastructure and equipment expansion projects. This recovery will include return, depreciation and taxes,

consistent with the cost of service treatment authorized in Piedmont's last Tennessee rate case. The recovery of these costs will be allocated to our customer classes based upon the revenue allocations in Piedmont's last general rate proceeding. The increment within each customer group will be applied to the customer's volumetric usage rates relying on annual determinants established in the most recent rate proceeding. At the time of the next general rate proceeding, all CNG infrastructure costs would be included in Piedmont's overall cost of service and CNG Infrastructure Rider mechanism would be reset to zero (absent any balance in the CNG IR deferred account related to over or under recoveries due to or from customers). How would Piedmont determine which costs are included under the O. Rider? Piedmont would utilize its capitalization policy attached hereto as Exhibit A. (PKP-2) in making those determinations in order to ensure consistency and propriety in its capitalization of CNG infrastructure costs. This exhibit also was previously filed with the Company's conditional CNG Infrastructure Rider

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Q. What is the legal basis for the Company's proposal?

annual filing on September 30, 2014.

A. The legal basis for this proposal is T.C.A. § 65-5-103(d)(3)(A)(1), which allows a public utility to request and the Authority to authorize, among other things, the implementation of alternative regulation mechanisms, outside the context of

a general rate case, allowing public utilities to recover the operational expenses, 1 2 capital costs, or both related to the expansion of infrastructure for the purpose 3 of economic development, if such expenses or costs are found by the authority to be in the public interest. Expansion of economic development infrastructure 4 may include, but is not limited to, the costs associated with infrastructure and 5 equipment associated with alternative motor vehicle transportation fuel. 6 7 Has the TRA previously authorized Piedmont to operate any other tariff Q. 8 rider mechanisms pursuant to the legal basis in T.C.A. § 65-5-103(d)? 9 Yes, the TRA approved the Company's Integrity Management Rider in Docket A. No. 13-00118 pursuant to the legal basis in T.C.A. § 65-5-103(d). The 10 11 Company's Integrity Management Rider, however, does not address capital 12 expenditures related to the development and expansion of the alternative vehicle fuel market. 13 Is the proposed CNG IR mechanism similar in operation to any other 14 Q. TRA-approved rider mechanism for Piedmont? 15 16 A. Yes, the proposed CNG IR mechanism operates in a near identical fashion to the Company's Integrity Management Rider (Rate Schedule 317). Whereas the 17 annual rate changes under Rate Schedule 317 occur each January based on 18 19 monthly filings with the TRA, Piedmont proposes that the annual rate changes under the CNG IR (proposed Rate Schedule 318) occur each November based 20 on quarterly filings with the TRA. Other than this timing difference which is 21

1		meant to reduce administrative burden, there are no differences in the structure
2		of the two rider mechanisms.
3	Q.	Can you summarize your position on Piedmont's proposed CNG
4		Infrastructure Rider mechanism?
5	A.	Yes, in my view the proposed rider mechanism has the following attributes to
6		support it: (1) it is expressly authorized by Tennessee law; (2) it relates directly
7		to efforts by Piedmont to enhance economic development by providing
8		additional CNG infrastructure; (3) it is an efficient, targeted, and limited
9		mechanism to deal with intra-rate case costs that might otherwise generate
10		repeated rate case filings; (4) it will benefit Piedmont, its customers, the TRA
11		and Staff by reducing expense and administrative burden associated with serial
12		and otherwise unnecessary general rate case proceedings; and (5) it is in the
13		public interest.
14	Q.	Can you provide the Authority with an explanation of how the mechanism
15		would function?
16	A.	Yes. Exhibit_(PKP-3) illustrates the practical functioning of the CNG IR
17		mechanism. This exhibit also was previously filed with the Company's
18		conditional CNG Infrastructure Rider annual filing on September 30, 2014.
19	Q.	What are you asking the Authority to do in this proceeding?
20 2-	Α.	I am asking the Authority to approve Piedmont's proposed CNG IR mechanism
21		with an effective date of November 1, 2014.

1	Q.	Does this conclude your direct testimony?
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2 A. Yes.

Exhibit_(PKP-1)

SERVICE SCHEDULE NO. 318 <u>CNG Infrastructure Rider</u>

1. Provision for Adjustment

The base rates per therm (100,000 Btu) for gas service set forth in Rate Schedules 301, 302, 303, 304, 310, 313, 314, and 352 ("Applicable Rate Schedules") of Piedmont Natural Gas Company ("Company") shall be adjusted by an amount hereinafter described which amount is referred to as the "CNG Infrastructure Adjustment." The CNG Infrastructure Adjustment shall be calculated as an increment and applied to Applicable Rate Schedules to recover the "CNG Infrastructure Revenue Requirement" (CNGIRR), and the balance in the "CNG Infrastructure Deferred Account." The CNG Infrastructure Deferred Account shall be established by a monthly adjustment hereinafter described, which monthly adjustment is referred to as the "CNG Infrastructure Deferred Account Adjustment" and shall track the Company's recovery of the CNGIRR.

2. Definitions

For the purposes of this Rider:

"Authority" means the Tennessee Regulatory Authority.

"CNG Infrastructure Deferred Account" means the account reflecting the cumulative difference between the amounts authorized for collection pursuant to this Rider and the collections actually received. The over or under collected amount is a result of the billing determinants used to establish the billing increment associated with this Rider for each Applicable Rate Schedule.

"CNG Infrastructure Investment Amount" means the approved amount of actual capital investment of the Company resulting from the expansion of economic development infrastructure associated with compressed natural gas motor vehicle transportation and not otherwise included in current base rates. At the time of the Company's next general rate case proceeding, all prudently incurred CNG Infrastructure Investment Amounts associated with this Rider shall be included in base rates.

"Refund Adjustments" means the adjustment to the CNGIRR applicable to the coming annual period for the net amount of over or under collections in the CNG Infrastructure Deferred Account, as adjusted for Interest.

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

"Vintage Year" means the fiscal year during which the CNG Infrastructure Investment Amount is made.

3. Computation of CNG Infrastructure Revenue Requirement

The total revenue requirement will be calculated for each Vintage Year, as follows:

CNG Infrastructure Investment Amount Less: Accumulated Depreciation Less: Accumulated Deferred Incom Net Investment	ıe Ta	\$X,XXX,XXX XXX,XXX xxx,XXX \$X,XXX,XXX
Pre-Tax ROR set forth in the Relevant Rate Allowed Pre-Tax Return Plus: Depreciation Expense Plus: Property Taxes	e Oro	der X.XX% \$X,XXX,XXX XXX,XXX XXX,XXX
Total, Excluding Uncollectibles Multiplied by: Uncollectibles Gros Total Revenue Requirement, Excluding Re	ss-Ur efunc	\$X,XXX,XXX Factor X.XXXXX Adjustments \$X,XXXXX
Where:		
Accumulated Depreciation	=	Accumulated depreciation calculated using rates approved in Relevant Rate Order
Accumulated Deferred Income Taxes	=	An average of the actual accumulated deferred income taxes at the beginning and end of the year
Depreciation Expense	Ξ	Approved actual CNG Infrastructure Investment Amount x Depreciation Rates approved in the Relevant Rate Order
Property Taxes	=	Composite property tax rate approved in the Relevant Rate Order

PIEDMONT NATURAL GAS COMPANY, INC. TRA Service Schedule No. 318

Uncollectibles Gross-Up Factor

= Uncollectibles gross-up factor used and approved in the Relevant Rate Order

The total of the revenue requirements for each Vintage Year is the CNGIRR. The total amount to be recovered through the CNG Infrastructure Adjustment is the CNGIRR plus the Refund Adjustment.

4. Computation of CNG Infrastructure Deferred Account Adjustment

Each month the Company will record in the CNG Infrastructure Deferred Account the portion of the CNGIRR that corresponds to that month, based on the monthly allocation of throughput consistent with the Relevant Rate Order. Furthermore, each month the Company will make an offsetting entry to the CNG Infrastructure Deferred Account for the amount of the CNG Infrastructure Adjustment collected from customers. The amount of the CNG Infrastructure Adjustment collected from customers will be computed by multiplying the CNG Infrastructure Adjustment billing increment for each Applicable Rate Schedule by the corresponding actual therms of usage billed to customers for the month. The Company shall also record in the CNG Infrastructure Deferred Account each month the interest due from or to customers related to the cumulative under or over collection of the CNGIRR, pursuant to the terms described in Section 6 of this Rider. An illustration of the monthly journal entries described above is as follows:

1.	To record revenue:	<u>Debit</u>	Credit
	CNG Infrastructure Deferred Account Income	\$XXX,XXX	\$XXX,XXX
2.	To record collections:		
	Accounts Receivable CNG Infrastructure Deferred Account	\$XXX,XXX	\$XXX,XXX
3.	To record interest:		
	If the CNG Infrastructure Deferred A reflects net under-collections:	account has a net debit	t balance, which
	CNG Infrastructure Deferred Account Interest Income	\$X,XXX	\$X,XXX

If the CNG Infrastructure Deferred Account has a net credit balance, which reflects net over-collections:

Interest Expense

\$X,XXX

CNG Infrastructure Deferred Account

\$X,XXX

5. Computation of CNG Infrastructure Adjustment

The CNG Infrastructure Adjustment will be adjusted annually using 1) actual CNG Infrastructure Investment Amounts that the Authority has found to be reasonable, prudent, and necessary to comply with the safety regulations approved for recovery through this Rider, and 2) the Refund Adjustment recognizing the actual balance in the CNG Infrastructure Deferred Account.

Effective for the first day of November's Bill Cycle Month, the CNG Infrastructure Adjustment shall be calculated for each customer class to the nearest one-thousandth cent per therm, by the following formula:

Customer Class CNG Infrastructure = Adjustment

(Allocated portion of the CNG Infrastructure Deferred Account Balance / Customer Class Annual Therms)

+ (Allocated portion of the CNGIRR/Customer Class Annual Therms)

Where:

CNG Infrastructure Deferred Account Balance

Balance at June 30

Allocated portion of the CNG Infrastructure Deferred Account Balance CNG Infrastructure Deferred Account Balance

x (Customer Class allocated margin revenue responsibility from Relevant Rate Order / total margin revenue requirement for Applicable Rate Schedules from Relevant Rate Order)

PIEDMONT NATURAL GAS COMPANY, INC. TRA Service Schedule No. 318

Allocated portion of the CNGIRR = CNGIRR

x (Customer Class allocated margin revenue responsibility from Relevant Rate Order / total margin revenue requirement for Applicable Rate Schedules from Relevant Rate Order)

Customer Class Annual Therms = Annualized and Normalized throughput

assigned to the respective Customer Classes in the Relevant Rate Order

Residential Customer Class = Rate Schedule 301

Commercial Customer Class = Rate Schedules 302 and 352

Firm Large General Customer Class = Rate Schedules 303, 313 and 310

Interruptible Large General Customer = Rate Schedules 304 and 314

Class

6. Interest

The Company may recover interest on the "CNG Infrastructure Deferred Account" based on the average monthly balance based on the beginning and ending monthly balances. The interest rates for each calendar quarter used to compute such interest shall be a rate equal to the rate used to compute interest on the "Refund Due Customers' Account" as prescribed by TRA Rule 1220-4-7-.03.

7. Quarterly Filing with Authority

The Company will file quarterly, for quarters ending March 31, June 30, September 30 and December 31, as directed by the Authority (a) detail of the current quarter's CNG Infrastructure Investment Amount, (b) the cumulative CNG Infrastructure Investment subject to this Rider, (c) a schedule detailing the CNG Infrastructure Deferred Account Adjustment recorded for the quarter, and (d) any related general ledger support. Such reports will be filed within two months after the end of the quarter for which the report is being filed.

8. Annual Filing with Authority

The Company will include in its Annual Filing made not later than each September 30th the following information: (a) the quarterly filing (pursuant to Section 7

of this Rider), (b) a schedule of all journal entries made related to this Rider for the previous 12 months, (c) actual billing determinants for the prior 12 months as used in the computation of the CNG Infrastructure Deferred Account Adjustment, (d) capitalization policy effective for the prior 12 months, (e) the computation calculating the CNGIRR and all supporting schedules, (f) a schedule of any proposed prior period adjustments, and (g) an affirmative statement of whether the Company is aware of any changes in the market conditions or other factors that may affect whether the Rider is still in the public interest, including the identification of such factors if they exist.

The Company will simultaneously copy the Consumer Advocate on its Annual Filing.

9. Notice Requirements

The Company will file revised tariffs for Authority approval upon 30 days' notice to implement a decrement or an increment each November. With the filing, the Company will include a copy of the computation of the CNG Infrastructure Adjustment. The Company will simultaneously copy the Consumer Advocate on this filing.

10. Public Interest Review

After a period of three years from the initial effective date of this Rider, the Consumer Advocate or other interested parties may file petitions seeking the Authority to reconsider whether the Rider remains in the public interest. Notwithstanding the aforementioned, the Consumer Advocate or any other interested party may file a petition for the Authority to reconsider the public interest of the Rider within the 3-year period upon a material change in conditions affecting the public interest.

EFFECTIVE: October 1, 2014

Exhibit_(PKP-2)

PIEDMONT NATURAL GAS COMPANY, INC. CAPITAL EXPENDITURE POLICY

Capital Expenditures are major expenditures on assets that last longer than a year and improve or lengthen the expected useful life of the overall property from original expectations that are recoverable in utility rate base. As a general Company rule, projects costing less than \$1,500 are not capitalized (see section 3.0 of the Company's Corporate Accounting Manual). New additions consist of retirement unit installations that did not currently exist in the system. Replacements are the installation of retirement units where one existed before the new one was installed (see 40 ft rule for the Replacement of Mains under section 3.5 of the Company's Corporate Accounting Manual). In conjunction with a replacement, a retirement is required of the original retirement unit no longer useful.

DEFINITIONS:

Retirement Unit – A Retirement Unit is the smallest distinct component of property that is identified and costed individually in the plant records.

Property Unit - A Property Unit is an item or group of items that constitutes the minimum division of plant that is continuously associated with its cost in the plant records. It may include one or more retirement units and associated minor items. It is capitalized when placed in service and retired when no longer "used and useful".

Exhibit_(PKP-3)

Piedmont Natural Gas Company, Inc. CNG Infrastructure Rider - Rate Schedule 318 State of Tennessee

Computation of the CNG Infrastructure Adjustment

			Residential	Commercial	Large General - Firm	Large General - Interruptible	
Line No.	Line No. Rider Rate Period	Reference	(301)	(302,352)	(303,313,310)	(304,314)	Total
	Nov 1 2014 - Oct 31 2015						
1	Customer Class Apportionment Percent	[Page 2]	59.6439%	31.2006%	4.9463%	4.2091%	100.0000%
2	CNGIRR for Recovery, excluding Refund Adjustment	[= Total from Page 3 x Line 1]	\$ 332,516 \$	173,944	\$ 27,576 \$	23,466 \$	557,502
m	Refund Adjustment	n/a	n/a	n/a	n/a	n/a	n/a
4	Total Amount for Recovery in this Rider	[= Line 2 + Line 3]	\$ 332,516 \$	173,944	\$ 27,576 \$	23,466 \$	557,502
Ŋ	Throughput from Relevant Rate Case Order (Dekatherms)	[Page 2]	11,130,214	6,664,958	2,378,880	8,098,027	28,272,079
9	Rate per Dekatherm	[= Line 4 / Line 5]	\$0.02990	\$0.02610	\$0.01160	\$0.00290	
7	Proposed CNG Infrastructure Adjustment per therm	[= Line 6 / 10]	\$0.00299	\$0.00261	\$0.00116	\$0.00029	

Piedmont Natural Gas Company, Inc. CNG Infrastructure Rider - Rate Schedule 318 State of Tennessee

Allocators from the Relevant Rate Case Order (Docket 11-00144)

Margin	Annuaí Total	Allocation %											
Residential (301)	\$ 62,049,925												
Commercial (302, 352)	32,459,219	9 31.20%											
Large General Service - Firm (303, 313, 310)	5,145,86												
Large General Service - Interruptible (304, 314)	4,378,934												
Total	\$ 104,033,947	7 100.00%											
	į		<u>. 1</u>	i	1		3	<u>:</u>	3	č:	i d	į	Total
Throughput (D1s)					N N	ā	May		1	7	i	š	
Residential (301)	973,336	-	2,359,111	2,385,891	1,619,952	916,259	373,476	147,666	108,017	107,902	110,242	297,754	11,130,214
Commercial (302, 352)	584,1		1,236,854	1,246,332	886,901	542,351	290,661	185,427	166,853	166,553	166,151	251,717	6,664,958
Large General Service - Firm (303, 313, 310)	215,868		373,276	272,366	238,238	161,907	152,836	108,789	110,733	112,060	121,273	154,075	2,378,880
Large General Service - Interruptible (304, 314)	682,506	6 880,548	899,370	728,423	753,173	640,120	614,296	571,617	558,058	564,523	554,369	651,023	8,098,027
Total	2,455,831	1 3,909,653	4,868,611	4,633,012	3,498,264	2,260,637	1,431,269	1,013,499	943,661	951,038	952,034	1,354,569	28,272,079
Throughput Apportionment	8.69%	13.83%	17.22%		12.37%	8.00%	2.06%	3.58%	3.34%	3.36%	3.37%	4.79%	100.00%

Summary of CNGIRR Computation

\$ 557,502	Total CNGIRR, excluding Refund Adjustment	9
557,502	Total	72
n/a	Vintage 4	4
n/a	Vintage 3	ന
n/a	Vintage 2	7
557,502	Vintage 1	1
Oct 31 2015	Line No. Vintage Year	Line No.
Nov 1 2014 -		
Rate Period		

	Spread of Total CNGIRR, excluding Refund Adjustment, by Month	onth	
7	January	\$	96,00
∞	February	•	91,359
ნ	March	φ.	68,983
10	April	↔	44,578
11	Мау	↔	28,223
12	June	\$	19,985
13	July	S	18,608
14	August	❖	18,754
15	September	ᡐ	18,773
16	October	\$	26,711
17	November	\$	48,427
18	December	S	77,095
19	Total	₩	557,502

Annual Revenue Requirement Computation Rider Rate Period: November 1, 2014 - October 31, 2015

Vintage Year 1 - Through June 30, 2014

	Year 1	Year 2	Year 3	Year 4	Year 5
Plant	4,736,707	4,736,707	4,736,707	4,736,707	4,736,707
Accumulated depreciation	(1,194)	(2,615)	(4,036)	(5,457)	(6,878)
Net plant	4,735,513	4,734,092	4,732,671	4,731,250	4,729,829
ADIT	(180,684)	(347,809)	(498,212)	(633,565)	(755,262)
Net investment	4,554,829	4,386,283	4,234,459	4,097,685	3,974,567
Pre-tax ROR%	11.446%	11.446%	11.446%	11.446%	11.446%
Pre-tax rate of return	521,331	502,040	484,662	469,008	454,916
Depreciation expense	1,421	1,421	1,421	1,421	1,421
Property Tax expense	34,578	34,578	34,578	34,578	34,578
Total, excluding uncollectibles	557,330	538,039	520,661	505,007	490,915
Uncollectibles gross-up factor	1.000308	1.000308	1.000308	1.000308	1.000308
Total revenue requirement	557,502	538,205	520,822	505,162	491,066

Assumptions and calculations:

Rider computed each year.

Normal depreciation and AFUDC practices apply, AFUDC ends and depreciation begins when plant goes into service.

Net of tax rate of return

9.36%

896.9

Annual Revenue Requirement Computation Rider Rate Period: November 1, 2014 - October 31, 2015

Page 4b

Plant amount Book depreciation rate Property Tax Rate	4,736,707 0.03% 0.73%					
	MACRS 15	assumed no bonus depreciation	preciation			
Plant in service date	30-Jun-14					
Rider effective date	1-Nov-14					
Fiscal year end	31-Oct-14					
SIT rate		6.50%	6.50%	6.50%	6.50%	6.50%
FIT rate		32.00%	35.00%	32.00%	35.00%	32.00%
Composite income tax rate		39.23%	39.23%	39.23%	39.23%	39.23%
Uncollectibles rate		0.0308%	0.0308%	0.0308%	0.0308%	0.0308%
Revenue requirement gross-up factor		1.000308	1.000308	1,000308	1.000308	1.000308
Capital structure assumptions (rate case):						
LTD	41.42%					
STD	5.87%					
Common equity	52.71%					
Capital cost rate assumptions (rate case):						
LTD	6.05%					
STD	1.59%				-	
Common equity	10.20%					
Overall and pre-tax RORs						
	Overall			Pre	Pre-tax RORs	
LTD	2.506%	2.506%	2.506%	2.506%	2.506%	7.506%
STD	0.093%	0.093%	0.093%	0.093%	0.093%	0.093%
Common equity	5.376%	8.846%	8.846%	8.846%	8.846%	8,846%
				1 1 1		11

11.446%

11,446%

11,446%

11.446%

11.446%

7.976%

Total

CNG Infrastructure Rider - Rate Schedule 318 Piedmont Natural Gas Company, Inc. State of Tennessee

Annual Revenue Requirement Computation

Rider Rate Period: November 1, 2014 - October 31, 2015

MACRS 15 tax depreciation schedule

Page 4c

	Rate	Yearly	Cumulative			
Tax year 1	2.00%	236,835				
Tax year 2	9.50%	449,987	686,822			
Tax year 3	8.55%	404,988	1,091,811			
Tax year 4	7.70%	364,726	1,456,537			
Tax year 5	6.93%	328,254	1,784,791			
Tax year 6	6.23%	295,097	2,079,888			
Tax year 7	2.90%	279,466	2,359,354			
Tax year 8	2.90%	279,466	2,638,819			
Tax year 9	5.91%	279,939	2,918,759			
Tax year 10	2.90%	279,466	3,198,224			
Tax year 11	5.91%	279,939	3,478,164			
Tax year 12	2.90%	279,466	3,757,629			
Tax year 13	5.91%	279,939	4,037,569			
Tax year 14	2.90%	279,466	4,317,034			
Tax year 15	5.91%	279,939	4,596,974			
Tax year 16	2.95%	139,733	4,736,707			
Total	100.00%	4,736,707				
Accumulated depreciation						
Portion of year in sevice before rider	34%					
Pre-rider amount of depreciation	483					
Rider year BOY amount		483	1,904	3,325	4,746	6,167
Depreciation expense		1,421	1,421	1,421	1,421	1,421
Rider year EOY amount	ł	1,904	3,325	4,746	6,167	7,588
Average accumulated depreciation		1,194	2,615	4,036	5,457	6,878

Annual Revenue Requirement Computation Rider Rate Period: November 1, 2014 - October 31, 2015 Page 4d 1,456,537 328,254 1,620,664 1,784,791 364,726 1,274,174 1,091,811 1,456,537 404,988 889,317 686,822 1,091,811 236,835 686,822 461,829 449,987 236,835 449,987 Post FY tax depreciation to rider date FY of completion tax depreciation Average tax depreciation reserve Tax period B tax depreciation Tax year 2 pre-rider tax depr Tax period A tax depreciaion Tax year 2 tax depreciation Tax depreciation reserve Rider year BOY amount Rider year EOY amount

2,079,888

1,932,339

1,784,791

Note - gap between fiscal year and rider year addressed by tax period A and tax period B.

Accumulated deferred taxes					
Average tax depreciation reserve	461,829	889,317	1,274,174	1,620,664	1,932,339
Average book depreciation reserve	1,194	2,615	4,036	5,457	6,878
Difference	460,635	886,702	1,270,138	1,615,207	1,925,462
Composite tax rate	39.23%	39.23%	39.23%	39.23%	39.23%
Average ADIT	180,684	347,809	498,212	633,565	755,262

Note - composite tax rate ignores excess deferred tax flowback

Before the Tennessee Regulatory Authority

Docket No. 14-00086

Petition of Piedmont Natural Gas Company, Inc. For Approval of a CNG Infrastructure Rider to Its Approved Rate Schedules and Service Regulations

> Testimony of Ken Valentine

On Behalf of Piedmont Natural Gas Company, Inc.



1	Q.	Please state your name and business address.
2	A.	My name is Ken Valentine, and my office is located at 4720 Piedmont Row
3		Drive in Charlotte, NC.
4	Q.	By whom and in what capacity are you employed?
5	A.	I am employed by Piedmont Natural Gas Company, Inc., as Vice President,
6		Business Development and Gas Technology Services.
7	Q.	Please briefly describe your educational and professional background.
8	A.	I have a B.S. in Mineral Economics from Penn State University, College of
9		Earth & Mineral Science. While at Piedmont, I have had various responsibilities
10		including responsibility for Piedmont's interstate pipeline portfolio and Federal
11		Regulatory work, our upstream joint ventures, gas control, gas scheduling,
12		system transportation services, budgets and long range forecasting, planning,
13		gas technology and energy efficiency programs, our CNG services, the company
14		fleet, and supply chain and procurement. Prior to joining Piedmont in 1996, I
15		worked for Transco, now a pipeline subsidiary of the Williams Companies,
16		where I was an analyst and manager, primarily working in rates, tariffs, gas
17		transportation, market analysis, and planning.
18	Q.	Have you previously testified before the Tennessee Regulatory Authority
19		or any other regulatory authority?
20	A.	Yes. I have testified before the North Carolina Utility Commission in Docket
21		No. G-9, Sub 451. In addition, at one point I came over annually to meet with
22		the Commission Staff and the Consumer Advocate to review Piedmont's annual

Supply Plan. I have also presented testimony before the Federal Energy

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Regulatory Commission in Docket No. RP97-71 concerning cost allocation 1 2 issues. What is the purpose of your testimony in this proceeding? 3 Q. The purpose of my testimony in this proceeding is to support Piedmont's 4 A. proposed Compressed Natural Gas ("CNG") Infrastructure Recovery ("IR") 5 mechanism in this proceeding. 6 Why is Piedmont proposing the establishment of a CNG IR mechanism? 7 Q. Piedmont has proposed the CNG IR mechanism to allow it to recover, on an 8 A. 9 intra-rate case basis, the costs related to expansion of existing CNG infrastructure and the construction of new CNG filling stations to increase 10 11 accessibility and improve safety in response to the growing demand for natural gas as an alternative motor vehicle transportation fuel in Tennessee. T.C.A. 12 section 65-5-103(d) recognizes the positive effects of utilizing natural gas as an 13 alternative motor vehicle transportation fuel. Subsection (d) facilitates a public 14 utility's efforts to provide the public with cleaner and safer motor vehicle 15 transportation fuel, such as CNG, by authorizing a mechanism to recover the 16 operational expense and capital costs related to the expansion of infrastructure 17 associated with alternative motor vehicle transportation fuel for the purpose of 18 19 economic development. In general, is capital investment in additional CNG infrastructure to 20 Q. support the growth of natural gas as an alternative fuel in the public 21

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interest?

Yes. The Energy Independence Act of 2013, which was signed by Governor A. Haslam on April 18, 2013, recognizes the advantages of natural gas as an alternative fuel for high-mileage fleets. The Act noted that the advantages of natural gas as an alternative fuel include its domestic availability, widespread distribution infrastructure, low cost when compared with gasoline and diesel fuels, and clean burning qualities. Among other provisions to facilitate a shift to natural gas as a power supply, the Act ordered positive tax treatment for alternative fuel sites and strongly encourages the acquisition of energy-efficient alternative fuel motor vehicles in the fleet of state vehicles. In addition, the U.S. Energy Information Administration projected in its Annual Energy Outlook 2014 that natural gas use by heavy-duty vehicles, trains, and ships will show the largest growth of any transportation fuel through 2040 as more and more fleet owners discover the advantages of natural gas as a transportation fuel for themselves. CNG costs less, and produces less undesirable emissions than gasoline, diesel and propane. On a national level, Governor Haslam and the governors of fifteen other

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On a national level, Governor Haslam and the governors of fifteen other states signed a Memorandum of Understanding ("MOU"), which described a coordinated effort between the participating States to attract automobile manufacturers to develop Natural Gas Vehicle ("NGV") fleets to meet public demand. In the MOU, the States recognized the benefits and unique attributes of clean burning natural gas and understood the significant opportunity CNG

presented to save State and taxpayer dollars by encouraging an energy future that utilized domestic energy resources to fuel our nation's transportation needs. In addition, the States recognized the need for continued development and expansion of CNG fueling infrastructure and endeavored to encourage private investment, predicated on demonstrating an anticipated increase in State NGVs, to meet growing demand.

- Q. How has Piedmont's prior capital investment in developing CNG infrastructure supported economic development and served the public interest?
- A. Since 2011, on an aggregate basis, Tennessee NGV customers have saved over \$1 million in fuel costs by purchasing CNG instead of gasoline and diesel from Piedmont's stations and third-party stations served by Piedmont. Our public stations were among the first established and have served as incubators for new NGV fleets until other third-party CNG stations became available. Moreover, because CNG emits 25% less CO2 emissions than gasoline and diesel, 70% less carbon monoxide, and 87% less nitrogen oxides, providing access to and encouraging natural gas as a transportation fuel is of great benefit to the environment.

Piedmont currently operates two publicly accessible CNG filling stations within its service areas in Tennessee. These stations provide CNG for fleets and personal NGVs. Refuse truck fleets, transit and school bus fleets, taxi fleets,

shuttle bus fleets, courier and delivery fleets, utility fleets, distribution fleets, commuters, and vocational trucks are examples of businesses and individuals that could and currently do benefit from the utilization of NGVs. Piedmont has invested \$4.7 million from March 2012 to June 2014 in order to provide higher quality service to CNG customers in a timely manner. Specifically, during this period, Piedmont improved its resource center facility in Nashville to match the increase in number of NGVs, and it constructed its second CNG filling station, also in Nashville, to serve the growing number of large NGVs.

Prior to the expansion and improvements, the CNG filling station located at Piedmont's Nashville Resource Center on Century Boulevard did not have an optimal layout for use by large trucks. Additionally, increased public use of this facility raised safety concerns regarding guests (drivers and the vehicles' passengers). Facility upgrades were conducted throughout the Resource Center to resolve these issues. The upgrades from March 2012 through June 2014 cost approximately \$1.2 million. As a result of the improvements, this CNG filling station has become more accessible, reliable and safe for the public.

The Company's newly constructed CNG filling station is located at 541 Spence Lane, Nashville, which is approximately three miles from the Company's first CNG-filling station, and is more easily accessible from the interstate highway. This CNG filling station provides easy access for large, heavy duty

vehicles such as trailer trucks because it was designed and constructed to meet 1 the needs of the rapidly growing utilization of CNG in that segment of the 2 3 transportation market. Furthermore, the new CNG filling station's location is well-suited for use by fleet and individual owners. The construction costs for 4 this new filing station incurred from March 2012 through June 2014 were 5 approximately \$3.5 million. 6 Are these costs reflected in Piedmont's rates? 7 O. No. This \$4.7 million investment was incurred after the attrition period in 8 A. 9 Piedmont's last rate case and, accordingly, none of this capital investment is 10 reflected in Piedmont's current rates. 11 Q. Do these investments create incremental revenue for Piedmont? 12 Yes, but like most new investment the incremental cost of service associated A. 13 with these facilities exceeds the initial revenues generated by these facilities. This creates downward pressure on Piedmont's return and is a disincentive to 14 15 further investment of this sort in between rate cases. 16 What are Piedmont's plans for future capital investment in CNG Q. infrastructure to support economic development and serve the interests of 17 the public? 18 In an effort to support an expanded CNG/NGV market in the greater Nashville 19 A. area, Piedmont is exploring the potential to construct, own, and operate 20 additional CNG filling stations in the area. The near-term market interest driven 21

projects include at least one additional CNG filling station for public access at a Piedmont-owned site, and at least one public CNG filling station to be owned 2 3 and operated at an existing commercial business site such as a convenience store. Piedmont anticipates that construction of these new CNG facilities will 4 cost upwards of \$4.6 million. Consistent with the underlying purpose of the 5 new state legislation, Piedmont's investment in CNG filling stations will provide 6 infrastructure and equipment to support the market for alternative motor vehicle 7 fuel, and may provide opportunities for economic development benefits in the 8 9 area to be directly served by this infrastructure. Does Piedmont intend to own and operate its own chain of convenience 10 Q. 11 stores that sell also consumer goods to CNG customers?

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- No. Our core expertise is in piping and compressing natural gas. As I alluded Α. to above, we may be a good fit for existing commercial store operators who already have locations designed to provide transportation fuel to the public.
- What are some of the challenges for Piedmont when investing capital in Q. CNG infrastructure costs?
- As discussed above, one of the challenging aspects of investing capital in CNG A. infrastructure and equipment expansion is that these investments do not guarantee in the near-term sufficient incremental revenues to offset the costs generated by the investment. Fleets tend to efficiently purchase new NGVs as they retire existing vehicles, so higher usage usually takes time to ramp up. As a

result, investment in CNG infrastructure required to respond to the market 1 demand creates immediate downward pressure on Piedmont's opportunity to 2 earn its allowed return on investment. 3 How will the IR mechanism address these challenges and promote 4 Q. Piedmont's continued investment in CNG infrastructure? 5 The costs sought to be recovered by the IR mechanism represent the costs of 6 A. 7 new capital investments and certain expenses that are not currently being recovered in Piedmont's rates, are not fully offset by the incremental revenues 8 associated with the increased investments, and are being incurred as the direct 9 result of Piedmont's obligations to respond to the challenges of economic 10 supply, 11 development through improving accessibility, Implementation of an IR mechanism will promote the continuance of economic 12 development in the region by assisting Piedmont's efforts to respond to 13 consumer demand. 14 Can you describe why it is in the public interest to allow for cost recovery 15 Q. of CNG infrastructure costs? 16 The mechanism proposed as Service Schedule 318 is in the public interest 17 A. 18 because it creates a partial and interim bridge to recover costs of new capital 19 investments by Piedmont related to the infrastructure and equipment expansion for the purpose of economic development between rate case filings. The IR --20

mechanism will allow the Company to periodically update rates for its

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customers with smaller but more frequent adjustments to rates and enhance
public safety and accessibility to Piedmont's CNG distribution system in
Tennessee. By creating this bridge, Piedmont is able to efficiently recover some
(but not all) of the costs associated with its investment in capital required to
serve the consuming public.

Q. Does this conclude your direct testimony?

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A.

Yes.

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the attached ocument was served upon the parties in this action by electronic mail and by depositing a copy of the same in the United States Mail, First Class Postage Prepaid, addressed as follows:

Counsel for Tennessee Fuel & Convenience	е
Store Assoc.	

Melvin J. Malone Butler Snow Suite 1600 150 Third Avenue South Nashville, TN 37201 Counsel for the Consumer Advocate and Protection Division of the Office of the Attorney General

Wayne Irvin
Assistant Attorney General
Office of the Tennessee Attorney General
Consumer Advocate and Protection Division
P. O. Box 20207
Nashville, TN 37202-0207

This the **2** day of October, 2014.

P. Danie