

David Killion

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October 4, 2013

VIA HAND DELIVERY

Executive Director Earl Taylor c/o Sharla Dillon Tennessee Regulatory Authority 460 James Robertson Parkway Nashville, Tennessee 37243

Re:

In re: Petition of Piedmont Natural Gas Company, Inc. for Approval of an Integrity Management Rider to Its Approved Rate Schedules and Service Regulations

Docket No. 13-00118

Dear Mr. Taylor:

Enclosed please find an original and five (5) copies of Piedmont Natural Gas Company, Inc's Supplemental Responses to the TRA's First Set of Data Requests, including Piedmont's response to Data Request No. 4 and supplemental response to Data Request No. 7.

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 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

cc:

James H. Jeffries, IV

David Foster, Chief, Utilities Division

Joe Shirley, Consumer Advocate and Protection Division

12438329.1

Piedmont Natural Gas Company, Inc. Docket No. 13-00118 TRA Data Request No. 1 Date Sent: September 24, 2013

Date Due: October 2, 2013

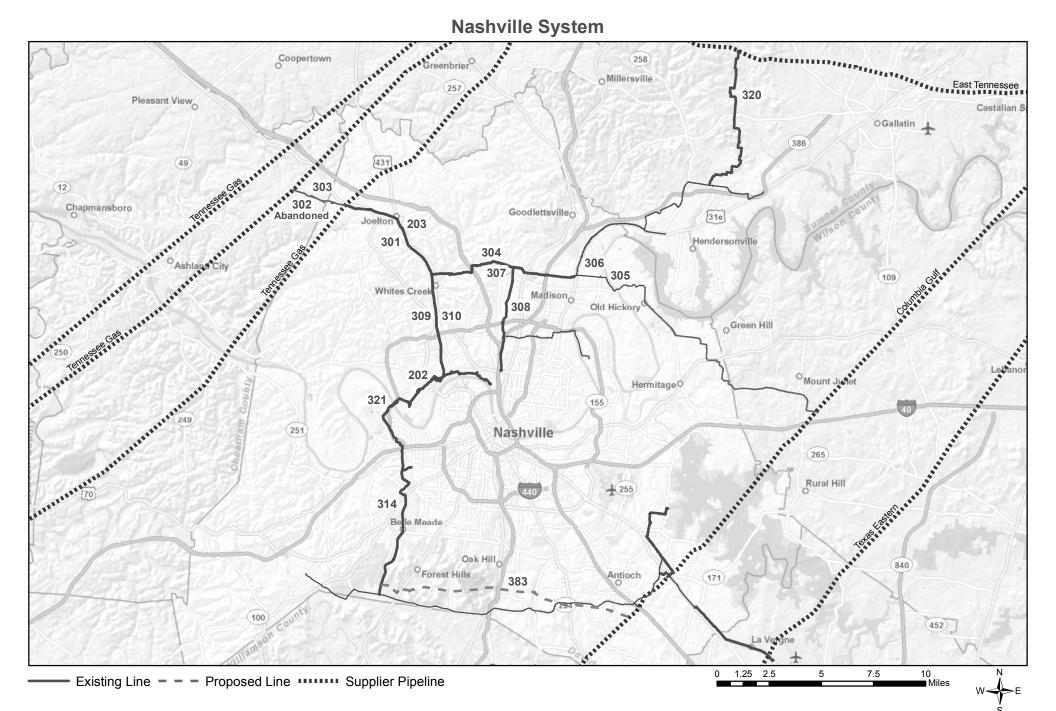
4. Provide updated Exhibits mirroring Exhibits RM-1 and RM-2 which were attached to the Testimony of Rodney Myers in the rate case Docket No. 11-00144, supporting the \$78 million in new capital.

Response: See Attachment F.

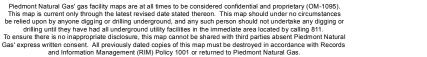
Response provided by Piedmont Natural Gas on October 4, 2013.

ATTACHMENT F

Nashville System







			Nashville Transmis	sion Syster	n Inform	ation 2013			
Old Pipeline Segment Designations	Line Numbers	IR#	Description	Approximate Mileage	Pipe Size(s)	Total Direct Project Costs (thru Aug 2013)*	Forecast Outlook (Sept, 2013 - forward)	Current Classification	Future Classification
Lines A, B, D	302, 303	1733393	Pipelines from Westernia Interconnect with Tenneco through KP Interconnect and ending at Holts Holder Valve Setting northwest of Nashville downrated to distribution	11	8, 10	\$1,880,553	\$0	Distribution	Distribution
Lines C, E	203, 301	1733428	Pipelines operating between KP Interconnect and Holts Holder Valve Setting	14	16, 20	\$12,269,133	\$0	Transmission	Transmission
Lines F, G, H, I, CC, DD	304, 305, 306, 307	1733485	Pipelines operating between Holts Holder Valve Setting and Madison Regulator Station, Gallatin Interconnect, and Dupont to the northeast of Nashvillenorth of Nashville	32	4, 6, 8, 12	\$8,166,855	\$0	Transmission / HP Distribution	Transmission / HP Distribution
Lines L, K	309, 310	1733486	Pipelines operating between Holts Holder Valve Setting and Bordeaux Regulator Station	14	8,12	\$7,457,693	\$0	Transmission	Transmission
Line M	202	1733487	Pipelines operating between Bordeaux Regulator Station and LNG Plant	4	12	\$5,674,776	\$0	Transmission	Transmission
Lines R, V, W, X,	314, 321	1733392	Pipelines operating between LNG Plant, Chickering Road, Columbia Gulf Interconnect #1, and Texas Eastern Interconnect to the south of Nashville	42	8, 10, 12	\$1,060,042	\$0	Transmission / HP Distribution	HP Distribution
South Nashville 20" Project	383	1733418	Proposed Pipeline from a new Columbia Gulf Interconnect to Chickering Road to the south of Nashville	15	12, 20	\$63,275,329	\$33,606,269	Transmission	Transmission
Line J	308	1733391 / 1733468	Pipeline from Dalmere Junction to Trinitiy Lane Regulator Station to the north of Nashville	5	8	\$5,784,278	\$0	Transmission	Transmission
Hendersonville Lateral	320	TBD	Pipeline from East Tennessee Interconnect to Stop 30 Road Regulator Station to the northeast of Nashville	9	12	\$0	\$500,000	Transmission	Transmission

^{*} Does not include AFUDC

			Nashville Transmission System	Informatio	n (NEW	BREAKDOWN)			
Old Pipeline Segment Designations	Line Numbers	IR#	Description	Approximate Mileage	`	Total Direct Project Costs (thru Aug, 2013)***	Forecast Outlook (Sept, 2013 - forward)	Current Classification	Future Classification
Lines A, B, D	302, 303	1733393	Pipelines from Westernia Interconnect with Tenneco through KP Interconnect and ending at Holts Holder Valve Setting northwest of Nashville downrated to distribution	11	8, 10	\$1,880,553	\$0	Distribution	Distribution
Lines C, E	203, 301	1733428	Pipelines operating between KP Interconnect and Holts Holder Valve Setting	14	16, 20	\$12,269,133	\$0	Transmission	Transmission
Lines F, G, H, I, CC, DD	304, 305, 306, 307	1733485	Pipelines operating between Holts Holder Valve Setting and Madison Regulator Station, Gallatin Interconnect, and Dupont to the northeast of Nashvillenorth of Nashville	32	4, 6, 8, 12	\$8,166,855	\$0	Transmission / HP Distribution	Transmission / HP Distribution
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Line M	202	1733487	Pipelines operating between Bordeaux Regulator Station and LNG Plant	4	12	\$5,674,776	\$0	Transmission	Transmission
Lines R, V, W, X,	314, 321	1733392	Pipelines operating between LNG Plant, Chickering Road, Columbia Gulf Interconnect #1, and Texas Eastern Interconnect to the south of Nashville	42	8, 10, 12	\$1,060,042	\$0	Transmission / HP Distribution	HP Distribution
South Nashville 20" Project	383	1733418	Proposed Pipeline from a new Columbia Gulf Interconnect to Chickering Road to the south of Nashville	15	12, 20	\$63,275,329	\$33,606,269	Transmission	Transmission
Line J	308	1733391 / 1733468	Pipeline from Dalmere Junction to Trinitiy Lane Regulator Station to the north of Nashville	5	8	\$5,784,278	\$0	Transmission	Transmission
Hendersonville Lateral	320	TBD	Pipeline from East Tennessee Interconnect to Stop 30 Road Regulator Station to the northeast of Nashville	9	12	\$0	\$500,000	Transmission	Transmission

^{***} Does not include AFUDC

\$105,568,660 \$34,106,269 \$139,674,929

Nashville	Transmission S	ystem In	formatic	on (Cost (Sompari	ison))
	Ι.Α.		D:			Α.	

Testimony Segment ID's	Line Numbers	IR#	Description	Approximate Mileage	Pipe Size(s)	Original Projections	Actuals / Forecast	Difference	Percentage	Current Classification	Future Classification	Additional Information
А	302, 303	1733393	Pipelines from Westernia Interconnect with Tenneco through KP Interconnect and ending at Holts Holder Valve Setting northwest of Nashville	11	8, 10	\$934,608	\$1,880,553	\$945,945	101.2%	Transmission	Distribution	1940's pipelines lowered to 75 psig. Installation of new RS to feed system
B & F	203, 301, 304, 305, 306, 307, 309, 310, 202	1733428, 1733485, 1733486, 1733487	Pipelines operating between KP Interconnect, Holts Holder Valve Setting, Bordeaux Regulator Station, LNG Plant, WC Weakley Regulator Station, and Madison Regulator Station, Gallatin Interconnect, and Dupontnorthwest of Nashville	64	4, 6, 8, 12, 16, 20	\$16,676,772	\$33,568,457	\$16,891,685	101.3%	Transmission	Transmission	Includes Holts Holder Valve Set Rebuild, KP Station Rebuild, Line M Remediation Costs, Significant ROW improvements
С	314, 321	1733392	Pipelines operating between LNG Plant, Chickering Road, Columbia Gulf Interconnect #1, and Texas Eastern Interconnect to the south of Nashville	42	8, 10, 12	\$3,641,218	\$1,060,042	-\$2,581,176	-70.9%	Transmission / HP Distribution	Transmission / HP Distribution	Cost Associated with Jack-in-th-Box remediation and casing remediation near Old Hickory Blvd
D	383	1733418	Proposed Pipeline from a new Columbia Gulf Interconnect to Chickering Road to the south of Nashville	13	20	\$61,251,320	\$96,881,598	\$35,630,278	58.2%	n/a	Transmission	SONASH 20"

E 30	8 1733391 / 1733468	Pipeline from Dalmere Junction to Trinitiy Lane Regulator Station to the north of Nashville	5	8	\$1,775,155	\$5,784,278	\$4,009,123	225.8%	Transmission	Transmission	Line J and associated replacement of unknown 10" found during pigging
G 32	O TBD	Pipeline from East Tennessee Interconnect to Stop 30 Road Regulator Station to the northeast of Nashville	9	12	\$500,000	\$500,000	\$0	0.0%	Transmission	Transmission	Future Launcher/Receiver Installation (2017 target date)

	Nashville Transmission Sys	tem Informa	tion (RI	M Testimony)		
Pipeline Segments	Description	Approximate Mileage	Pipe Size(s)	Total Project Costs	Current Classificati	Future on Classification
A	Pipelines from Westernia Interconnect with Tennec through KP Interconnect and ending at Holts Holde Valve Setting northwest of Nashville		8, 10	\$934,608	Transmissio	n Distribution
В	Pipelines operating between KP Interconnect, Holts Holder Valve Setting, Bordeaux Regulator Station, LN Plant, WC Weakley Regulator Station, and Madison Regulator Station northwest of Nashville	IG ₄₈	8, 12, 16, 20	\$16,401,404	Transmissio	n Transmission
С	Pipelines operating between LNG Plant, Chickering Road, Columbia Gulf Interconnect #1, and Texas Eastern Interconnect to the south of Nashville	42	8, 10, 12	\$3,641,218	Transmission / Distribution	I HP Distribution
D	Proposed Pipeline from a new Columbia Gulf Interconnect to Chickering Road to the south of Nashville	13	20	\$61,251,320	n/a	Transmission
E	Pipeline from Dalmere Junction to Trinitiy Lane Regulator Stationto the north of Nashville	5	8	\$1,775,155	Transmissic	n Transmission
F	Pipelines operating between Madison Regulator Station, Gallatin Interconnect, and Dupont to the northeast of Nashville	16	4, 6, 8	\$275,368	Transmission / Distribution	I HP Distribution
G	Pipeline from East Tennessee Interconnect to Stop 3 Road Regulator Station to the northeast of Nashville	u	12	\$500,000	Transmissic	n Transmission

Current	Future
Classification	Classification
Transmission	Distribution
Transmission	Transmission
Transmission / HP Distribution	HP Distribution
n/a	Transmission
Transmission	Transmission
Transmission / HP Distribution	HP Distribution
Transmission	Transmission

		Nash	ville Transn	nission Syster	n Information				
Pipeline Segments	Description	Approximate Mileage	Pipe Size(s)	Total Project Costs	Current Operating Pressure	Future Operating Pressure	Current Classification	Future Classification	Percentage in Private ROW
A	Pipelines from Westernia Interconnect with Tenneco through KP Interconnect and ending at Holts Holder Valve Setting northwest of Nashville	11	8, 10	\$934,608	720	75	Transmission	Distribution	95%
В	Pipelines operating between KP Interconnect, Holts Holder Valve Setting, Bordeaux Regulator Station, LNG Plant, WC Weakley Regulator Station, and Madison Regulator Station northwest of Nashville	48	8, 12, 16, 20	\$16,401,404	720	720	Transmission	Transmission	90%
С	Pipelines operating between LNG Plant, Chickering Road, Columbia Gulf Interconnect #1, and Texas Eastern Interconnect to the south of Nashville	42	8, 10, 12	\$3,641,218	450 / 390	300	Transmission / HP Distribution	HP Distribution	5%
D	Proposed Pipeline from a new Columbia Gulf Interconnect to Chickering Road to the south of Nashville	13	20	\$61,251,320	n/a	800	n/a	Transmission	95%
E	Pipeline from Dalmere Junction to Trinitiy Lane Regulator Stationto the north of Nashville	5	8	\$1,775,155	720	720	Transmission	Transmission	95%
F	Pipelines operating between Madison Regulator Station, Gallatin Interconnect, and Dupont to the northeast of Nashville	16	4, 6, 8	\$275,368	450	300	Transmission / HP Distribution	HP Distribution	0%
G	Pipeline from East Tennessee Interconnect to Stop 30 Road Regulator Station to the northeast of Nashville	9	12	\$500,000	780	780	Transmission	Transmission	95%

\$84,779,073

Piedmont Natural Gas Company, Inc. Docket No. 13-00118 TRA Data Request No. 1 Date Sent: September 24, 2013

Date Due: October 2, 2013

7. Provide a copy of the Company's computation of the Integrity Management Revenue Requirement and Integrity Management Adjustment which Piedmont proposes to implement effective October 1, 2013 or upon approval by the Authority.

Response: See Attachment D.

Supplemental Response: See Revised Attachment D.

Response provided by Piedmont Natural Gas on October 2, 2013.

Supplemental Response provided by Piedmont Natural Gas on October 4, 2013.

ATTACHMENT D

Piedmont Natural Gas Company, Inc. Integrity Management Rider State of Tennessee

Illustration of the Spread of Revenue Requirement Across Rate Schedules

Rider Rate Period	Residential (301)	Commercial (302,352,342)	Large General Service Firm (303,313,310)	Large General Service Interruptible (304,314)	Total
Rate Case throughput (dts)	11,130,214	6,664,958	2,378,880	8,098,027	28,272,079
Jan 1 2014 -Dec 31 2014_					
Apportionment Percent	59.6439%	31.2006%	4.9463%	4.2091%	100.0000%
Dollars	6,252,813	3,270,937	518,553	441,268	10,483,571
Dekatherms	11,130,214	6,664,958	2,378,880	8,098,027	28,272,079
Rate per dekatherm	\$0.5618	\$0.4908	\$0.2180	\$0.0545	
Jan 1 2015 -Dec 31 2015		24.2224			
Apportionment Percent	59.6439%	31.2006%	4.9463%		100.0000%
Dollars	9,214,043	4,820,000	764,131	650,246	15,448,420
Dekatherms	11,130,214	6,664,958	2,378,880	8,098,027	28,272,079
Rate per dekatherm	\$0.8278	\$0.7232	\$0.3212	\$0.0803	
Jan 1 2016 -Dec 31 2016					
Apportionment Percent	59.6439%	31.2006%	4.9463%	4.2091%	100.0000%
Dollars	9,315,366	4,873,004	772,534	657,396	15,618,299
Dekatherms	11,130,214	6,664,958	2,378,880	8,098,027	28,272,079
Rate per dekatherm	\$0.8369	\$0.7311	\$0.3247	\$0.0812	
Jan 1 2017 -Dec 31 2017					
Apportionment Percent	59.6439%	31.2006%	4.9463%		100.0000%
Dollars	9,270,864	4,849,724	768,843	654,255	15,543,687
Dekatherms	11,130,214	6,664,958	2,378,880	8,098,027	28,272,079
Rate per dekatherm	\$0.8329	\$0.7276	\$0.3232	\$0.0808	

Piedmont Natural Gas Company, Inc. Integrity Management Rider State of Tennessee

Margin and	Throughput from	the Relevant Rate	Case Order	(Docket 11-00144)

2.455.83	3 909 653	4,868,611	4,633,012
682,50	96 880,548	899,370	728,423
215,86	357,459	373,276	272,366
584,1	22 941,038	1,236,854	1,246,332
973,3	36 1,730,608	2,359,111	2,385,891
Nov	Dec	<u>Jan</u>	<u>Feb</u>
	-		
\$ 104,033,94	17 100.00%		
4,378,93	4.21 %		
5,145,86	4.95%		
32,459,21	31.20 %		
\$ 62,049,92	25 59.64%		
Total	Allocation %		
Annual			
	Total \$ 62,049,92 32,459,22 5,145,86 4,378,93 \$ 104,033,94 Nov 973,3 584,1 215,86 682,56	Total Allocation % \$ 62,049,925 59.64% 32,459,219 31.20% 5,145,869 4.95% 4,378,934 4.21% \$ 104,033,947 100.00% Nov Dec 973,336 1,730,608 584,122 941,038 215,868 357,459	Total Allocation % \$ 62,049,925 59.64% 32,459,219 31.20% 5,145,869 4.95% 4,378,934 4.21% \$ 104,033,947 100.00% Nov Dec Jan 973,336 1,730,608 2,359,111 584,122 941,038 1,236,854 215,868 357,459 373,276 682,506 880,548 899,370

<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>
1,619,952	916,259	373,476	147,666	108,017	107,902	110,242
886,901	542,351	290,661	185,427	166,853	166,553	166,151
238,238	161,907	152,836	108,789	110,733	112,060	121,273
753,173	640,120	614,296	571,617	558,058	564,523	554,369
 3,498,264	2,260,637	1,431,269	1,013,499	943,661	951,038	952,034
12.37%	8.00%	5.06%	3.58%	3.34%	3.36%	3.37%

<u>Oct</u>	<u>Total</u>				
297,754 251,717 154,075 651,023	11,130,214 6,664,958 2,378,880 8,098,027				
1,354,569	28,272,079				
4.79%	100.00%				

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Piedmont Natural Gas Company, Inc. Integrity Management Rider State of Tennessee Illustration of Annual Revenue Requirement Computation

Data Daviad	lan 1 2014 -	an 1 2015 -	Jan 1 2016 -	an 1 2017 -		an 1 2018 -		Jan 1 2019 -
Rate Period	 Dec 31 2014	 Dec 31 2015	 Dec 31 2016	 Dec 31 2017	L	Dec 31 2018	L	Dec 31 2019
Vintage 1	10,483,571	10,082,607	9,713,548	9,373,240		9,058,089		8,759,364
Vintage 2		5,365,813	5,160,587	4,971,692		4,797,511		4,636,207
Vintage 3			744,164	715,702		689,505		665,348
Vintage 4				483,054		464,578		447,573
Vintage 5						587,498		565,028
Vintage 6		 		 				848,608
Total	10,483,571	 15,448,420	15,618,299	15,543,687		15,009,683		14,508,492
Net Amount Collectible Through Rider	\$ 10,483,571	\$ 15,448,420	\$ 15,618,299	\$ 15,543,687	\$	15,009,683	\$	14,508,492

(in \$ millions)	Projected	Incremental	Total
	Integrity	Integrity	Net Amount
	Management	Management	Collectible Through
	Investment Amt	Revenue Req'ment	IMR
Year 1	80.3*	10.5	10.5
Year 2	41.1	5.4	15.4
Year 3	5.7	0.7	15.6
Year 4	3.7	0.5	15.5
Year 5	4.5	0.6	15.0
Year 6	6.5	0.8	14.5

^{*} The \$80.3 million reflects the current projected Integrity Management Investment Amount of \$113.3 million at October 31, 2013 less the \$33 million included in the 2011 rate case.

State of Tennessee

Illustration of Annual Revenue Requirement Computation

Rider Rate Period: January 1, 2014 - December 31, 2014

<u>Vintage Year 1 - Fiscal year October 31, 2013</u>

	Year 1	Year 2	Year 3	Year 4	Year 5
Plant	80,300,000	80,300,000	80,300,000	80,300,000	80,300,000
Accumulated depreciation	(780,115)	(1,944,465)	(3,108,815)	(4,273,165)	(5,437,515)
Net plant	79,519,886	78,355,536	77,191,186	76,026,836	74,862,486
ADIT	(3,248,276)	(5,586,034)	(7,645,131)	(9,453,114)	(11,041,368)
Net investment	76,271,609	72,769,502	69,546,054	66,573,722	63,821,117
Pre-tax ROR%	11.446%	11.446%	11.446%	11.446%	11.446%
Pre-tax rate of return	8,729,802	8,328,962	7,960,016	7,619,813	7,304,759
Depreciation expense	1,164,350	1,164,350	1,164,350	1,164,350	1,164,350
Property Tax expense	586,190	586,190	586,190	586,190	586,190
Total, excluding uncollectibles	10,480,342	10,079,502	9,710,556	9,370,353	9,055,299
Uncollectibles gross-up factor	1.000308	1.000308	1.000308	1.000308	1.000308
Total revenue requirement	10,483,571	10,082,607	9,713,548	9,373,240	9,058,089

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 6.96% 6.96% 6.96% 6.96% 6.96%

Piedmont Natural Gas Company, Inc. Integrity Management Rider State of Tennessee

Illustration of Annual Revenue Requirement Computation

Rider Rate Period: January 1, 2015 - December 31, 2015 Vintage Year 2 - Fiscal year October 31, 2014

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Plant	41,100,000	41,100,000	41,100,000	41,100,000	41,100,000	41,100,000	41,100,000
Accumulated depreciation	(399,287)	(995,237)	(1,591,187)	(2,187,137)	(2,783,087)	(3,379,037)	(3,974,987)
Net plant	40,700,714	40,104,764	39,508,814	38,912,864	38,316,914	37,720,964	37,125,014
ADIT	(1,662,567)	(2,859,103)	(3,913,012)	(4,838,393)	(5,651,311)	(6,390,795)	(7,108,337)
Net investment	39,038,146	37,245,660	35,595,801	34,074,470	32,665,603	31,330,169	30,016,676
Pre-tax ROR%	11.446%	11.446%	11.446%	11.446%	11.446%	11.446%	11.446%
Pre-tax rate of return	4,468,180	4,263,018	4,074,180	3,900,054	3,738,799	3,585,950	3,435,612
Depreciation expense	595,950	595,950	595,950	595,950	595,950	595,950	595,950
Property Tax expense	300,030	300,030	300,030	300,030	300,030	300,030	300,030
Total, excluding uncollectibles	5,364,160	5,158,998	4,970,160	4,796,034	4,634,779	4,481,930	4,331,592
Uncollectibles gross-up factor	1.000308	1.000308	1.000308	1.000308	1.000308	1.000308	1.000308
Total revenue requirement	5,365,813	5,160,587	4,971,692	4,797,511	4,636,207	4,483,311	4,332,926

Assumptions and Calculations:
Rider computed each year.
Normal depreciation and AFUDC practices apply, AFUDC ends and depreciation begins when plant goes into service.

Plant amount	41,100,000							
Book depreciation rate	1.45%							
Property Tax Rate	0.73%							
Tax depreciation	MACRS 15	assumed no bonu	s depreciation					
Plant in service date	31-Oct-14							
Rider effective date	1-Jan-15							
Fiscal year end	31-Oct-14							
SIT rate		6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50
FIT rate		35.00%	35.00%	35.00%	35.00%	35.00%	35.00%	35.00
Composite income tax rate		39.23%	39.23%	39.23%	39.23%	39.23%	39.23%	39.23
Uncollectibles rate		0.0308%	0.0308%	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	1.000308	1.00030
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-tax RORs			
LTD	2.506%	2.506%	2.506%	2.506%	2.506%	2.506%	2.506%	2.506
STD	0.093%	0.093%	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%	8.846%	8.846
Total	7.976%	11.446%	11.446%	11.446%	11.446%	11.446%	11.446%	11.446

MACRS 15 tax depreciation schedule								
	Rate	Yearly	Cumulative					
Tax year 1	5.00%	2,055,000						
Tax year 2	9.50%	3,904,500	5,959,500					
Tax year 3	8.55%	3,514,050	9,473,550					
Tax year 4	7.70%	3,164,700	12,638,250					
Tax year 5	6.93%	2,848,230	15,486,480					
Tax year 6	6.23%	2,560,530	18,047,010					
Tax year 7	5.90%	2,424,900	20,471,910					
Tax year 8	5.90%	2,424,900						
Tax year 9	5.91%	2,429,010	25,325,820					
Tax year 10	5.90%	2,424,900	27,750,720					
Tax year 11	5.91%	2,429,010	30,179,730					
Tax year 12	5.90%	2,424,900	32,604,630					
Tax year 13	5.91%	2,429,010	35,033,640					
Tax year 14	5.90%	2,424,900	37,458,540					
Tax year 15	5.91%	2,429,010	39,887,550					
Tax year 16	2.95%	1,212,450	41,100,000					
Total	100.00%	41,100,000						
Accumulated depreciation								
Portion of year in sevice before rider	17%							
Pre-rider amount of depreciation	101,312							
Rider year BOY amount		101,312	697,262	1,293,212	1,889,162	2,485,112	3,081,062	3,677,012
Depreciation expense	_	595,950	595,950	595,950	595,950	595,950	595,950	595,950
Rider year EOY amount	-	697,262	1,293,212	1,889,162	2,485,112	3,081,062	3,677,012	4,272,962
Average accumulated depreciation		399,287	995,237	1,591,187	2,187,137	2,783,087	3,379,037	3,974,987
Tax depreciation reserve								
FY of completion tax depreciation	2.055.000							
Post FY tax depreciation to rider date	2,055,000							
Tax year 2 tax depreciation	3.904.500							
Tax year 2 tax depreciation Tax year 2 pre-rider tax depr	3,904,500 663,765							
Rider year 8 DY amount	003,765	2.718.765	6.556.889	10.011.549	13.122.449	15.921.770	18.459.243	20.884.143
Tax period A tax depreciation		3,240,735	2,916,662	2.626.701	2.364.031	2.125.240	2.012.667	
		3,240,735 597.389	2,916,662 537,999	484.199	435.290	412.233	412.233	2,012,667
Tax period B tax depreciation Rider year EOY amount	-	6.556.889	10.011.549	13.122.449	435,290 15.921.770	18.459.243	20.884.143	412,932 23,309,742
	-							
Average tax depreciation reserve		4,637,827	8,284,219	11,566,999	14,522,110	17,190,507	19,671,693	22,096,942

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

Note - gap between riscal year and rider year addressed	Note - gap between instal year and noer year addressed by tax period A and tax period B.										
Accumulated deferred taxes											
Average tax depreciation reserve	4,637,827	8,284,219	11,566,999	14,522,110	17,190,507	19,671,693	22,096,942				
Average book depreciation reserve	399,287	995,237	1,591,187	2,187,137	2,783,087	3,379,037	3,974,987				
Difference	4,238,540	7,288,982	9,975,813	12,334,973	14,407,420	16,292,657	18,121,956				
Composite tax rate	39.23%	39.23%	39.23%	39.23%	39.23%	39.23%	39.23%				
Average ADIT	1,662,567	2,859,103	3,913,012	4,838,393	5,651,311	6,390,795	7,108,337				

Note - composite tax rate ignores excess deferred tax flowback

Piedmont Natural Gas Company, Inc. Integrity Management Rider State of Tennessee

Illustration of Annual Revenue Requirement Computation

Rider Rate Period: January 1, 2016 - December 31, 2016

Vintage Year 2 - Fiscal year October 31, 2015

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Plant	5,700,000	5,700,000	5,700,000	5,700,000	5,700,000	5,700,000
Accumulated depreciation	(55,376)	(138,026)	(220,676)	(303,326)	(385,976)	(468,626)
Net plant	5,644,625	5,561,975	5,479,325	5,396,675	5,314,025	5,231,375
ADIT	(230,575)	(396,518)	(542,681)	(671,018)	(783,758)	(886,315)
Net investment	5,414,049	5,165,457	4,936,644	4,725,656	4,530,266	4,345,060
Pre-tax ROR%	11.446%	11.446%	11.446%	11.446%	11.446%	11.446%
Pre-tax rate of return	619,675	591,221	565,032	540,883	518,520	497,322
Depreciation expense	82,650	82,650	82,650	82,650	82,650	82,650
Property Tax expense	41,610	41,610	41,610	41,610	41,610	41,610
Total, excluding uncollectibles	743,935	715,481	689,292	665,143	642,780	621,582
Uncollectibles gross-up factor	1.000308	1.000308	1.000308	1.000308	1.000308	1.000308
Total revenue requirement	744,164	715,702	689,505	665,348	642,978	621,773

Assumptions and calculations:

Rider computed each year.

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

Plant amount 5,700,000

Book depreciation rate 1.45%

Property Tax Rate 0.73%

Tax depreciation	MACRS 15	assumed no bo	nus depreciati	on			
Plant in service date	31-Oct-15						
Rider effective date	1-Jan-16						
Fiscal year end	31-Oct-15						
SIT rate		6.50%	6.50%	6.50%	6.50%	6.50%	6.50%
FIT rate		35.00%	35.00%	35.00%	35.00%	35.00%	35.00%
Composite income tax rate		39.23%	39.23%	39.23%	39.23%	39.23%	39.23%
Uncollectibles rate		0.0308%	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	1.000308
Capital structure assumptions (rate case)	<u>:</u>						
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							
	<u>Overall</u>				Pre-tax RORs		
LTD	2.506%	2.506%	2.506%	2.506%	2.506%	2.506%	2.506%
STD	0.093%	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%	8.846%
Total	7.976%	11.446%	11.446%	11.446%	11.446%	11.446%	11.446%

MACRS 15 tax depreciation schedule

	Rate	Yearly	Cumulative
Tax year 1	5.00%	285,000	
Tax year 2	9.50%	541,500	826,500
Tax year 3	8.55%	487,350	1,313,850
Tax year 4	7.70%	438,900	1,752,750
Tax year 5	6.93%	395,010	2,147,760
Tax year 6	6.23%	355,110	2,502,870
Tax year 7	5.90%	336,300	2,839,170

_							
Tax year 8	5.90%	336,300	3,175,470				
Tax year 9	5.91%	336,870	3,512,340				
Tax year 10	5.90%	336,300	3,848,640				
Tax year 11	5.91%	336,870	4,185,510				
Tax year 12	5.90%	336,300	4,521,810				
Tax year 13	5.91%	336,870	4,858,680				
Tax year 14	5.90%	336,300	5,194,980				
Tax year 15	5.91%	336,870	5,531,850				
Tax year 16	2.95%	168,150	5,700,000				
Total	100.00%	5,700,000					
Accumulated depreciation							
Portion of year in sevice before rider	17%						
Pre-rider amount of depreciation	14,051						
Rider year BOY amount		14,051	96,701	179,351	262,001	344,651	427,301
Depreciation expense	_	82,650	82,650	82,650	82,650	82,650	82,650
Rider year EOY amount	_	96,701	179,351	262,001	344,651	427,301	509,951
Average accumulated depreciation	_	55,376	138,026	220,676	303,326	385,976	468,626
Tax depreciation reserve							
FY of completion tax depreciation	285,000						
·	-						
Post FY tax depreciation to rider date	17%						
Tax year 2 tax depreciation	541,500						
Tax year 2 pre-rider tax depr	92,055	277.055	000 050	4 200 462	4 040 000	2 200 420	2 500 044
Rider year BOY amount		377,055	909,350	1,388,463	1,819,902	2,208,129	2,560,041
Tax period A tax depreciaion		449,445	404,501	364,287	327,858	294,741	279,129
Tax period B tax depreciation	_	82,850	74,613	67,152	60,369	57,171	57,171
Rider year EOY amount	_	909,350	1,388,463	1,819,902	2,208,129	2,560,041	2,896,341
Average tax depreciation reserve		643,202	1,148,906	1,604,182	2,014,015	2,384,085	2,728,191

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

Accumulated deferred taxes

Average tax depreciation reserve	643,202	1,148,906	1,604,182	2,014,015	2,384,085	2,728,191
Average book depreciation reserve	55,376	138,026	220,676	303,326	385,976	468,626
Difference	587,827	1,010,881	1,383,507	1,710,690	1,998,109	2,259,566
Composite tax rate	39.23%	39.23%	39.23%	39.23%	39.23%	39.23%
Average ADIT	230,575	396,518	542,681	671,018	783,758	886,315

Note - composite tax rate ignores excess deferred tax flowback

Year 7
5,700,000
(551,276)
5,148,725
(985,828)
4,162,897
11.446%
476,472
82,650
41,610
600,732
1.000308
600,917

6.50%

35.00%

39.23%

0.0308%

1.000308

2.506%

0.093%

8.846%

11.446%

509,951 82,650 592,601 551,276

2,896,341 279,129

57,268

3,232,738

3,064,539

3,064,539 551,276 2,513,264 39.23% 985,828 Piedmont Natural Gas Company, Inc. Integrity Management Rider State of Tennessee

Illustration of Annual Revenue Requirement Computation

Rider Rate Period: January 1, 2017 - December 31, 2017

Vintage Year 4 - Fiscal year October 31, 2016

	Year 1	Year 2	Year 3	<u>Year 4</u>	Year 5	<u>Year 6</u>
Plant	3,700,000	3,700,000	3,700,000	3,700,000	3,700,000	3,700,000
Accumulated depreciation	(35,946)	(89,596)	(143,246)	(196,896)	(250,546)	(304,196)
Net plant	3,664,055	3,610,405	3,556,755	3,503,105	3,449,455	3,395,805
ADIT	(149,672)	(257,389)	(352,266)	(435,573)	(508,755)	(575,327)
Net investment	3,514,383	3,353,016	3,204,488	3,067,531	2,940,699	2,820,478
Pre-tax ROR%	11.446%	11.446%	11.446%	11.446%	11.446%	11.446%
Pre-tax rate of return	402,245	383,775	366,775	351,100	336,583	322,823
Depreciation expense	53,650	53,650	53,650	53,650	53,650	53,650
Property Tax expense	27,010	27,010	27,010	27,010	27,010	27,010
Total, excluding uncollectibles	482,905	464,435	447,435	431,760	417,243	403,483
Uncollectibles gross-up factor	1.000308	1.000308	1.000308	1.000308	1.000308	1.000308
Total revenue requirement	483,054	464,578	447,573	431,893	417,371	403,607

Assumptions and calculations:

Rider computed each year.

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

Plant amount 3,700,000

Book depreciation rate 1.45%

Property Tax Rate 0.73%

Tax depreciation	MACRS 15	assumed no bo	nus depreciati	on			
Plant in service date	31-Oct-16						
Rider effective date	1-Jan-17						
Fiscal year end	31-Oct-16						
SIT rate		6.50%	6.50%	6.50%	6.50%	6.50%	6.50%
FIT rate		35.00%	35.00%	35.00%	35.00%	35.00%	35.00%
Composite income tax rate		39.23%	39.23%	39.23%	39.23%	39.23%	39.23%
Uncollectibles rate		0.0308%	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	1.000308
Capital structure assumptions (rate case)	<u>.</u>						
LTD	41.42%						
STD	5.87%						
Common equity	52.71%						
Capital cost rate assumptions (rate case):	<u>.</u>						
LTD	6.05%						
STD	1.59%						
Common equity	10.20%						
Overall and pre-tax RORs							
	<u>Overall</u>				Pre-tax RORs		
LTD	2.506%	2.506%	2.506%	2.506%	2.506%	2.506%	2.506%
STD	0.093%	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%	8.846%
Total	7.976%	11.446%	11.446%	11.446%	11.446%	11.446%	11.446%

MACRS 15 tax depreciation schedule

	Rate	Yearly	Cumulative
Tax year 1	5.00%	185,000	
Tax year 2	9.50%	351,500	536,500
Tax year 3	8.55%	316,350	852,850
Tax year 4	7.70%	284,900	1,137,750
Tax year 5	6.93%	256,410	1,394,160
Tax year 6	6.23%	230,510	1,624,670
Tax year 7	5.90%	218,300	1,842,970

Tax year 8	5.90%	218,300	2,061,270				
Tax year 9	5.91%	218,670	2,279,940				
Tax year 10	5.90%	218,300	2,498,240				
Tax year 11	5.91%	218,670	2,716,910				
Tax year 12	5.90%	218,300	2,935,210				
Tax year 13	5.91%	218,670	3,153,880				
Tax year 14	5.90%	218,300	3,372,180				
Tax year 15	5.91%	218,670	3,590,850				
Tax year 16	2.95%	109,150	3,700,000				
Total	100.00%	3,700,000					
Accumulated depreciation							
Portion of year in sevice before rider	17%						
Pre-rider amount of depreciation	9,121						
Rider year BOY amount		9,121	62,771	116,421	170,071	223,721	277,371
Depreciation expense		53,650	53,650	53,650	53,650	53,650	53,650
Rider year EOY amount	_	62,771	116,421	170,071	223,721	277,371	331,021
Average accumulated depreciation	_	35,946	89,596	143,246	196,896	250,546	304,196
Tax depreciation reserve							
FY of completion tax depreciation	185,000						
Post FY tax depreciation to rider date	17%						
Tax year 2 tax depreciation	351,500						
Tax year 2 pre-rider tax depr	59,755						
Rider year BOY amount		244,755	590,280	901,283	1,181,340	1,433,347	1,661,781
Tax period A tax depreciaion		291,745	262,571	236,467	212,820	191,323	181,189
Tax period B tax depreciation		53,780	48,433	43,590	39,187	37,111	37,111
Rider year EOY amount	_	590,280	901,283	1,181,340	1,433,347	1,661,781	1,880,081
Average tax depreciation reserve	-	417,517	745,781	1,041,311	1,307,343	1,547,564	1,770,931
-							

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

Accumulated deferred taxes

Average tax depreciation reserve	417,517	745,781	1,041,311	1,307,343	1,547,564	1,770,931
Average book depreciation reserve	35,946	89,596	143,246	196,896	250,546	304,196
Difference	381,572	656,186	898,066	1,110,448	1,297,018	1,466,736
Composite tax rate	39.23%	39.23%	39.23%	39.23%	39.23%	39.23%
Average ADIT	149,672	257,389	352,266	435,573	508,755	575,327

Note - composite tax rate ignores excess deferred tax flowback

Year 7
3,700,000
(357,846)
3,342,155
(639,923)
2,702,231
11.446%
309,289
53,650
27,010
389,949
1.000308
390,069

6.50%

35.00%

39.23%

0.0308%

1.000308

2.506%

0.093%

8.846%

11.446%

331,021 53,650 384,671 357,846

> 1,880,081 181,189 37,173.90 2,098,444

1,989,262

1,989,262 357,846 1,631,417 39.23% 639,923 Piedmont Natural Gas Company, Inc. Integrity Management Rider State of Tennessee

Illustration of Annual Revenue Requirement Computation

Rider Rate Period: January 1, 2018 - December 31, 2018

Vintage Year 5 - Fiscal year October 31, 2017

	<u>Year 1</u>	Year 2	Year 3	<u>Year 4</u>	Year 5	<u>Year 6</u>
Plant	4,500,000	4,500,000	4,500,000	4,500,000	4,500,000	4,500,000
Accumulated depreciation	(43,718)	(108,968)	(174,218)	(239,468)	(304,718)	(369,968)
Net plant	4,456,283	4,391,033	4,325,783	4,260,533	4,195,283	4,130,033
ADIT	(182,033)	(313,041)	(428,432)	(529,751)	(618,757)	(699,722)
Net investment	4,274,250	4,077,992	3,897,350	3,730,781	3,576,526	3,430,310
Pre-tax ROR%	11.446%	11.446%	11.446%	11.446%	11.446%	11.446%
Pre-tax rate of return	489,217	466,754	446,078	427,013	409,358	392,622
Depreciation expense	65,250	65,250	65,250	65,250	65,250	65,250
Property Tax expense	32,850	32,850	32,850	32,850	32,850	32,850
Total, excluding uncollectibles	587,317	564,854	544,178	525,113	507,458	490,722
Uncollectibles gross-up factor	1.000308	1.000308	1.000308	1.000308	1.000308	1.000308
Total revenue requirement	587,498	565,028	544,346	525,275	507,614	490,873

Assumptions and calculations:

Rider computed each year.

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

Plant amount 4,500,000

Book depreciation rate 1.45%

Property Tax Rate 0.73%

Tax depreciation	MACRS 15	assumed no bo	nus depreciati	on			
Plant in service date	31-Oct-17						
Rider effective date	1-Jan-18						
Fiscal year end	31-Oct-17						
SIT rate		6.50%	6.50%	6.50%	6.50%	6.50%	6.50%
FIT rate		35.00%	35.00%	35.00%	35.00%	35.00%	35.00%
Composite income tax rate		39.23%	39.23%	39.23%	39.23%	39.23%	39.23%
Uncollectibles rate		0.0308%	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	1.000308
Capital structure assumptions (rate case)	• <u>•</u>						
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							
	<u>Overall</u>				Pre-tax RORs		
LTD	2.506%	2.506%	2.506%	2.506%	2.506%	2.506%	2.506%
STD	0.093%	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%	8.846%
Total	7.976%	11.446%	11.446%	11.446%	11.446%	11.446%	11.446%

MACRS 15 tax depreciation schedule

	Rate	Yearly	Cumulative
Tax year 1	5.00%	225,000	
Tax year 2	9.50%	427,500	652,500
Tax year 3	8.55%	384,750	1,037,250
Tax year 4	7.70%	346,500	1,383,750
Tax year 5	6.93%	311,850	1,695,600
Tax year 6	6.23%	280,350	1,975,950
Tax year 7	5.90%	265,500	2,241,450

Tax year 8	5.90%	265,500	2,506,950				
Tax year 9	5.91%	265,950	2,772,900				
Tax year 10	5.90%	265,500	3,038,400				
Tax year 11	5.91%	265,950	3,304,350				
Tax year 12	5.90%	265,500	3,569,850				
Tax year 13	5.91%	265,950	3,835,800				
Tax year 14	5.90%	265,500	4,101,300				
Tax year 15	5.91%	265,950	4,367,250				
Tax year 16	2.95%	132,750	4,500,000				
Total	100.00%	4,500,000					
Assessment and the secretary							
Accumulated depreciation	470/						
Portion of year in sevice before rider	17%						
Pre-rider amount of depreciation	11,093	44.000	76.242	444 500	206.040	272 000	227.242
Rider year BOY amount		11,093	76,343	141,593	206,843	272,093	337,343
Depreciation expense	_	65,250	65,250	65,250	65,250	65,250	65,250
Rider year EOY amount	-	76,343	141,593	206,843	272,093	337,343	402,593
Average accumulated depreciation		43,718	108,968	174,218	239,468	304,718	369,968
Tax depreciation reserve							
FY of completion tax depreciation	225,000						
Post FY tax depreciation to rider date	17%						
Tax year 2 tax depreciation	427,500						
Tax year 2 pre-rider tax depr	72,675						
Rider year BOY amount	,	297,675	717,908	1,096,155	1,436,765	1,743,260	2,021,085
Tax period A tax depreciaion		354,825	319,343	287,595	258,836	232,691	220,365
Tax period B tax depreciation		65,408	58,905	53,015	47,660	45,135	45,135
Rider year EOY amount	-	717,908	1,096,155	1,436,765	1,743,260	2,021,085	2,286,585
Average tax depreciation reserve	=	507,791	907,031	1,266,460	1,590,012	1,882,172	2,153,835
•		,	,			, ,	

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

Accumulated deferred taxes

Average tax depreciation reserve	507,791	907,031	1,266,460	1,590,012	1,882,172	2,153,835
Average book depreciation reserve	43,718	108,968	174,218	239,468	304,718	369,968
Difference	464,074	798,064	1,092,242	1,350,545	1,577,455	1,783,868
Composite tax rate	39.23%	39.23%	39.23%	39.23%	39.23%	39.23%
Average ADIT	182,033	313,041	428,432	529,751	618,757	699,722

Note - composite tax rate ignores excess deferred tax flowback

Year 7
4,500,000
(435,218)
4,064,783
(778,285)
3,286,497
11.446%
376,162
65,250
32,850
474,262
1.000308
474,408

6.50%

35.00%

39.23%

0.0308%

1.000308

2.506%

0.093%

8.846%

11.446%

402,593 65,250 467,843 435,218

2,286,585 220,365 45,211.50 2,552,162 2,419,373 2,419,373 435,218 1,984,156 39.23% 778,285 Piedmont Natural Gas Company, Inc. Integrity Management Rider State of Tennessee

Illustration of Annual Revenue Requirement Computation

Rider Rate Period: January 1, 2019 - December 31, 2019

Vintage Year 6 - Fiscal year October 31, 2018

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Plant	6,500,000	6,500,000	6,500,000	6,500,000	6,500,000	6,500,000
Accumulated depreciation	(63,148)	(157,398)	(251,648)	(345,898)	(440,148)	(534,398)
Net plant	6,436,853	6,342,603	6,248,353	6,154,103	6,059,853	5,965,603
ADIT	(262,936)	(452,170)	(618,846)	(765,196)	(893,760)	(1,010,710)
Net investment	6,173,916	5,890,433	5,629,506	5,388,906	5,166,093	4,954,893
Pre-tax ROR%	11.446%	11.446%	11.446%	11.446%	11.446%	11.446%
Pre-tax rate of return	706,646	674,200	644,335	616,797	591,294	567,121
Depreciation expense	94,250	94,250	94,250	94,250	94,250	94,250
Property Tax expense	47,450	47,450	47,450	47,450	47,450	47,450
Total, excluding uncollectibles	848,346	815,900	786,035	758,497	732,994	708,821
Uncollectibles gross-up factor	1.000308	1.000308	1.000308	1.000308	1.000308	1.000308
Total revenue requirement	848,608	816,151	786,277	758,730	733,220	709,039

Assumptions and calculations:

Rider computed each year.

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

Plant amount 6,500,000

Book depreciation rate 1.45%

Property Tax Rate 0.73%

Tax depreciation	MACRS 15	assumed no bo	nus depreciati	on			
Plant in service date	31-Oct-18						
Rider effective date	1-Jan-19						
Fiscal year end	31-Oct-18						
SIT rate		6.50%	6.50%	6.50%	6.50%	6.50%	6.50%
FIT rate		35.00%	35.00%	35.00%	35.00%	35.00%	35.00%
Composite income tax rate		39.23%	39.23%	39.23%	39.23%	39.23%	39.23%
Uncollectibles rate		0.0308%	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	1.000308
Capital structure assumptions (rate case)	<u>:</u>						
LTD	41.42%						
STD	5.87%)					
Common equity	52.71%						
Capital cost rate assumptions (rate case):	<u>.</u>						
LTD	6.05%)					
STD	1.59%)					
Common equity	10.20%						
Overall and pre-tax RORs							
	<u>Overall</u>				Pre-tax RORs		
LTD	2.506%	2.506%	2.506%	2.506%	2.506%	2.506%	2.506%
STD	0.093%	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%	8.846%
Total	7.976%	11.446%	11.446%	11.446%	11.446%	11.446%	11.446%

MACRS 15 tax depreciation schedule

	Rate	Yearly	Cumulative
Tax year 1	5.00%	325,000	
Tax year 2	9.50%	617,500	942,500
Tax year 3	8.55%	555,750	1,498,250
Tax year 4	7.70%	500,500	1,998,750
Tax year 5	6.93%	450,450	2,449,200
Tax year 6	6.23%	404,950	2,854,150
Tax year 7	5.90%	383,500	3,237,650

Tax year 8	5.90%	383,500	3,621,150				
Tax year 9	5.91%	384,150	4,005,300				
Tax year 10	5.90%	383,500	4,388,800				
Tax year 11	5.91%	384,150	4,772,950				
Tax year 12	5.90%	383,500	5,156,450				
Tax year 13	5.91%	384,150	5,540,600				
Tax year 14	5.90%	383,500	5,924,100				
Tax year 15	5.91%	384,150	6,308,250				
Tax year 16	2.95%	191,750	6,500,000				
Total	100.00%	6,500,000					
Accumulated depreciation							
Portion of year in sevice before rider	17%						
Pre-rider amount of depreciation	16,023						
Rider year BOY amount		16,023	110,273	204,523	298,773	393,023	487,273
Depreciation expense	<u>_</u>	94,250	94,250	94,250	94,250	94,250	94,250
Rider year EOY amount	<u>-</u>	110,273	204,523	298,773	393,023	487,273	581,523
Average accumulated depreciation	_	63,148	157,398	251,648	345,898	440,148	534,398
Tay dangeriation recents							
Tax depreciation reserve	225 000						
FY of completion tax depreciation	325,000						
Post FY tax depreciation to rider date	17%						
Tax year 2 tax depreciation	617,500						
Tax year 2 pre-rider tax depr	104,975	420.075	4 006 070	4 500 005	2 075 227	2.540.042	2 040 045
Rider year BOY amount		429,975	1,036,978	1,583,335	2,075,327	2,518,042	2,919,345
Tax period A tax depreciaion		512,525	461,273	415,415	373,874	336,109	318,305
Tax period B tax depreciation	_	94,478	85,085	76,577	68,842	65,195	65,195
Rider year EOY amount	_	1,036,978	1,583,335	2,075,327	2,518,042	2,919,345	3,302,845
Average tax depreciation reserve		733,476	1,310,156	1,829,331	2,296,684	2,718,693	3,111,095

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

Accumulated deferred taxes

Average tax depreciation reserve	733,476	1,310,156	1,829,331	2,296,684	2,718,693	3,111,095
Average book depreciation reserve	63,148	157,398	251,648	345,898	440,148	534,398
Difference	670,329	1,152,759	1,577,683	1,950,787	2,278,546	2,576,698
Composite tax rate	39.23%	39.23%	39.23%	39.23%	39.23%	39.23%
Average ADIT	262,936	452,170	618,846	765,196	893,760	1,010,710

Note - composite tax rate ignores excess deferred tax flowback

Year 7
6,500,000
(628,648)
5,871,353
(1,124,190)
4,747,163
11.446%
543,345
94,250
47,450
685,045
1.000308
685,256

6.50%

35.00%

39.23%

0.0308%

1.000308

2.506%

0.093%

8.846%

11.446%

581,523 94,250 675,773 628,648

3,302,845 318,305 65,305.50 3,686,456 3,494,650 3,494,650 628,648 2,866,003 39.23% 1,124,190

Total 11,100,10 10,100,10 10,100,10 10,100,10	(dekatherms)	Attrition Period Billing Determinants	"Clean" Billing Rates	Proposed Revenues	Proposed Margin Rates	Proposed Margin	Proposed PGA Demand Rates	Proposed PGA Demand	Current PGA Commodity Rates	Current PGA Commodity
Second protects 190,001	Rate Schedule	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Minimum Age										
Warm Per- Dec 1908 190										
Same Part										
Temp Control										\$9,824,232
Math	Total	11,130,214		\$118,747,235		\$62,049,925		\$3,650,711		\$53,046,600
The Content 1,19,214 1,912,133.77 1,346,145.77 1,400										
Mart										\$0 \$53,046,600
Winder Per P										
Same Park Park Same				\$8,713,012 \$32,330,022			0.32800	\$1 228 196	4.76600	\$17 846 292
March Control 326		1,353,699	8.09400	\$10,956,840	3.00000	\$4,061,097	0.32800	\$444,013	4.76600	\$6,451,729
May	Total	5,098,200		\$51,999,874		\$26,029,643		\$1,672,209		\$24,298,021
	Medium General - 352									
Total 1566,73	Winter (Nov - Mar)	1,150,745	8.63400	\$9,935,532	3.54000	\$4,073,637				\$5,484,451 \$1,082,718
Bills \$22,47			0.00400		0.0000		0.02000		4.70000	\$7,467,169
	Total Commercial									
Bills		202,947 6,664,958		\$9,820,912 \$66,410,515		\$9,820,912 \$32,459,219				\$0 \$31,765,190
Demond of				****		****				
First 150d of 375-566 \$75-540 \$21,142,248 0.6962 \$100.775 \$0 4.7600 \$17,050 \$17,		475 61.947	800.00 12.92520	\$380,000 \$800.679	800.00 8.0000	\$380,000 \$495.577	4.92520	\$305.102	0.00000	SO.
Ned 500 di	First 1,500 dt	373,595	5.73420	\$2,142,268	0.9682	\$361,715		\$0	4.76600	\$1,780,554
Owe 1000 of 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Next 5,000 dt		5.41100	\$232,695	0.6450			\$0	4.76600	\$651,803 \$204,957
	Over 9,000 dt	9,488	5.04240	\$47,842	0.2764	\$2,622		\$0	4.76600	\$45,220
Bills		562,848		\$4,377,729		\$1,390,094		\$305,102		\$2,682,534
Ned 2,500 cf	Bills	15		\$12.000		\$12.000				
Ned 5,000 cft	First 1,500 dt		5.73420		0.9682	\$1,867		\$0	4.76600	\$9,189
Ower 1,000 cft 1,022 5,04240 S0 0,2764 S0 0,2764 S0 0,000 S0 4,7600 S TOTAL 1 1,022 5 20,000 S S	Next 2,500 dt Next 5,000 dt		5.66130		0.8953	\$0 \$0		\$0 \$0	4.76600	\$0 \$0
Firm Transportation Service - 313 Bernand cit	Over 9,000 dt	0	5.04240	\$0	0.2764	\$0		\$0	4.76600	\$0
Bills		1,928		\$23,056		\$13,867		\$0		\$9,189
Demand cit	Bills	1,021	800.00	\$816,800	800.00	\$816,800				
Next 2.500 cf	Demand dt	157,725	12.92520	\$2,038,623	8.0000	\$1,261,798	4.92520	\$776,826	0.00000	\$0 \$0
Next 5.000 clt										\$0
Total 1,805,720 \$4,504,119 \$3,727,294 \$776,826 \$8 \$1 \$1 \$1 \$1,805,720 \$1,805,	Next 5,000 dt	170,738	0.64500	\$110,126	0.6450	\$110,126		\$0	0.00000	\$0 \$0
Interruptible Transportation Service - 314 865 800.00 \$522.400 800.00 \$522.400 800.00 \$522.400 \$60.00			0.27640		0.2764				0.00000	\$0
Bills 653 80.00 5522.400 80.00 5522.400 80.00 5522.400 80.00 5522.400 80.00 5522.400 852.400 8		1,000,120		44,004,110		40,727,204		9110,020		•
Next 5.00 clt 973.339 0.89830 \$871.430 0.8983 \$871.430 0.8983 \$871.430 0.8983 \$871.430 0.8983 \$871.430 0.8983 \$871.430 0.8983 \$871.430 0.8983 \$871.430 0.8983 \$871.430 0.8983 \$871.430 0.8983 \$708.6980 \$30 0.00000 \$8.00000 \$8.00000 \$8.00000 \$8.00000 \$8.000000 \$8.000000 \$8.000000 \$8.000000 \$8.000000 \$8.000000 \$8.000000 \$8.000000 \$8.000000 \$8.000000 \$8.000000 \$8.000000 \$8.000000 \$8.0000000000	Bills									
Next 5.00 oft	Next 2,500 dt	973,339	0.89530	\$871,430	0.8953	\$871,430		\$0	0.00000	\$0
Total 18,096,099 \$4,365,067 \$4,365,067 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50	Next 5,000 dt	1,099,176	0.64500					\$0	0.00000	\$0 \$0
Total Large Volume Bills 2,464 \$1,731,200 \$1,731,200 \$5 Bills 2,466,525 \$1,8672 \$2,839,302 \$1,737,375 \$1,001,828 \$2,591,72 Bills 3,40 \$1,262,591 \$3,466,322 \$1,867,375 \$1,001,928 \$2,591,72 Resale Service - 310 Bills 3,1 \$1 Demand 2,400 \$12,922,50 \$31,920 \$31,920 \$19,200 \$19,200 \$18,200 \$0,0000 \$18,201 \$1,820 \$0,0000 \$18,201 \$1,820 \$1,860,971 \$1,820 \$1			0.27040		0.2704				0.00000	\$0
Demand 21,672 \$1,283,002 \$1,73,7375 \$1,081,928 \$2,691,72 \$1,081,928 \$2,691,72 \$1,081,928 \$2,691,72 \$1,081,928 \$2,691,72 \$1,081,928 \$2,691,72 \$1,081,928 \$2,691,72 \$1,081,928 \$2,691,72 \$1,081,928 \$2,691,72 \$1,081,928 \$2,691,72 \$1,081,928 \$2,691,72 \$1,081,928 \$2,691,72 \$1,081,928 \$2,691,72 \$1,081,928 \$2,691,72 \$1,081,928 \$2,691,72 \$1,081,928 \$2,691,72 \$1,081,928 \$2,691,72 \$1,081,928 \$2,691,72 \$2,691,928 \$2,691,72 \$2,691,928 \$2,	Total Large Volume									
Resale Service - 310 Bills	Demand	219,672		\$2,839,302		\$1,757,375		\$1,081,928		\$0 \$0
Bils 31 2,000 12,9220 8,0000 \$19,200 4,9250 \$11,820 0,0000 \$\$ Commodly 10,312 5,66600 \$88,428 0,0000 \$19,201 4,9250 \$11,820 0,0000 \$4,76600 \$40,145 Special Contracts (1) 544,713 \$807,737 \$499,532 \$118,205 TOTAL THROUGHPUT - SALES CUSTOMERS 18,70,260 \$18,947,983 \$95,941,586 \$8,153,738 \$87,552,66 \$107AL THROUGHPUT - TRANSPORTATION CUSTOMERS 9,901,819 \$8,869,186 \$38,982,361 \$776,826 \$707AL THROUGHPUT - SPECIAL CONTRACTS \$44,713 \$807,737 \$489,532 \$118,205 \$118,205 \$87,552,66 \$107AL THROUGHPUT - SPECIAL CONTRACTS \$44,713 \$807,737 \$489,532 \$118,205 \$118,205 \$87,552,66 \$107AL THROUGHPUT - SPECIAL CONTRACTS \$44,713 \$807,737 \$489,532 \$118,205 \$118,205 \$87,552,66 \$118,205 \$118,	DTs	10,466,595		\$13,269,971		\$9,496,322		\$1,081,928		\$2,691,723
Demand 2,400 12,92520 \$1,020 \$0,0000 \$19,200 4,92520 \$1,820 0,00000 \$5,281 \$0.0000 \$1,820 \$1,820 \$0.00000 \$40,140 \$1,00000 \$1,00000 \$1,00000 \$1,00000 \$1,00000 \$1,00000 \$1,00000 \$1,00000 \$1,00000 \$1,00000 \$1,00000 \$1,00000 \$1,00000 \$1,00000 \$1,00000 \$1,000000 \$1,000000 \$1,000000 \$1,000000 \$1,000000 \$1,000000 \$1,000000 \$1,000000 \$1,000000 \$1,000000 \$1,000000 \$1,000000 \$1,0000000 \$1,0000000 \$1,0000000 \$1,00000000 \$1,0000000 \$1,000000000000000000000000000000000000	Bills									
TOTAL THROUGHPUT - SALES CUSTOMERS 15.370.260 \$189.447.893 \$95.941.265 \$5.152.718 \$87.552.66 \$5.152.718 \$87.552.66 \$1.502.718 \$8.663.165 \$93.602.281 \$776.205 \$1.0764. THROUGHPUT - SPECIAL CONTRACTS \$9.01.819 \$8.663.165 \$93.602.281 \$776.205 \$1.0764. THROUGHPUT - SPECIAL CONTRACTS \$447.13 \$8.677.777 \$489.632 \$118.205 \$8.707.777 \$489.632 \$118.205 \$8.707.777 \$489.632 \$118.205 \$8.707.777 \$1.0764.779 \$1.0							4.92520	\$11,820 \$0		\$0 \$49,147
TOTAL THROUGHPUT - TRANSPORTATION CUSTOMERS 9,901.819 \$8,869,186 \$9,092.361 \$776.826 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$		544,713		\$607,737		\$489,532		\$118,205		
TOTAL 28,816,792 \$199,124,906 \$104,523,479 \$7,048,769 \$87,552,66 OTHER REVENUES GRAND TOTAL OPERATING REVENUES \$201,105,572 \$106,504,145	TOTAL THROUGHPUT - TRANSPORTATION CUSTOMERS	9,901,819		\$8,869,186		\$8,092,361		\$776,826		\$87,552,660 \$0 \$0
GRAND TOTAL OPERATING REVENUES \$201,105,572 \$106,504,145										\$87,552,660
PROFORMA OPERATING REVENUES PER WILLIAM H. NOVAK (2) \$189,205,584 \$94,603,962				\$1,980,666		\$1,980,666				
REVENUE ADJUSTMENT \$11,899,988 \$11,900,183										

⁽¹⁾ Includes only the two Tennessee Regulatory Authority ("Authority") approved special contracts currently in place, which are Bridgestone and DuPont. These special contracts were approved by the Authority, respectively, in Docket No. 10 00015 and 10-00142.

(2) Authorn Period Revenue per Villand H. Nowak Direct Testimony, Attachment WHN-4, Schedule 1, Line 14.