

BASS
BERRY • SIMS_{PLC}

150 Third Avenue South, Suite 2800
Nashville, TN 37201
(615) 742-6200

David Killion
PHONE: (615) 742-7718
FAX: (615) 742-0414
E-MAIL: dkillion@bassberry.com

October 2, 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 Responses to the TRA's First Set of Data Requests. Responses to all Data Requests are being filed at this time with the exception of Data Request No. 4, which will be supplemented as soon as possible.

This material is also being filed today by way of email to the Tennessee Regulatory Authority docket manager, Sharla Dillon. Filed along with this material is a Confidential version of the Responses, submitted under seal, containing Exhibits A, B, C, and E. 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

Piedmont Natural Gas Company, Inc.
Docket No. 13-00118
TRA Data Request No. 1
Date Sent: September 24, 2013
Date Due: October 2, 2013

1. When did Piedmont begin the regimens prescribed by these regulations and how long will it take to complete these requirements?

Response: Development of the DOT regulations that eventually established the TIMP and DIMP requirements began in 2002. The full scope and applicability of the rules and Piedmont's initiation of substantive efforts to comply with TIMP have only occurred in the last several years, and for DIMP these are just beginning. The requirements for both TIMP and DIMP will continue to be ongoing.

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

Piedmont Natural Gas Company, Inc.
Docket No. 13-00118
TRA Data Request No. 1
Date Sent: September 24, 2013
Date Due: October 2, 2013

2. Provide the account # and name of the deferred account to which the related capital costs are booked.

Response: Approval of the IMR will not change Piedmont's accounting for utility investments in Tennessee. In other words, the Integrity Management Investment Amount will continue to be recorded in the same balance sheet accounts for utility plant (accounts 10100, 10600, and 10700) and the same utility plant accounts (accounts 3xxxx) that would ordinarily be used. Upon approval of the IMR, Piedmont will create a new deferred account (account 186xx) for recording the Integrity Management Deferred Account Balance for Tennessee. The capital expenditures pertaining to integrity will be separately identified in monthly reports to the TRA, as detailed in paragraph 7 of proposed Service Schedule No. 317.

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

Piedmont Natural Gas Company, Inc.
Docket No. 13-00118
TRA Data Request No. 1
Date Sent: September 24, 2013
Date Due: October 2, 2013

3. Provide an itemized list of the costs incurred to date that comprise the approximately \$78 million in new capital invested in Tennessee. Include the date, location, and project description for each itemized cost.

Response: See [Attachment A](#) which contains the detail of projects that made up the \$78 million in integrity capital expenditures referenced in the petition. The \$78 million includes \$33 million in forecasted integrity costs that were included in the 2011 general rate case (Docket No. 11-00144). The \$78 million was included in the petition to indicate the material nature of the issue. The Company would exclude the \$33 million included in attrition period rate base from any filings under the requested rider.

The Company's current comprehensive projections of integrity expenditures (Tennessee direct and joint property) is shown in [Attachment B](#).

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

Piedmont Natural Gas Company, Inc.
Docket No. 13-00118
TRA Data Request No. 1
Date Sent: September 24, 2013
Date Due: October 2, 2013

5. Provide a copy of the general ledger, showing the individual transactions recorded in the deferred account.

Response: As noted in the Company's response to question 2 of this data request, the Integrity Management Investment Amount will continue to be recorded in the normal utility plant accounts. The deferred account related to the IMR would not be created until the proposed Rider becomes effective.

There will be four possible entries to the books each month following the effective date of the Rider:

- a) Integrity Management Deferred Account Adjustment - debit the deferred account and credit an income account for the monthly amount determined in the annual filing.
- b) Recovery of the deferred account through an increment on customer rates - credit the deferred account and debit revenues.
- c) Recording of interest owed to or owed from customers – debit/credit the deferred account and debit/credit interest expense.
- d) Recovery or refund of the balance in the deferred account at the end of each plan year through an increment or decrement on customer rates – debit/credit the deferred account and debit/credit revenues.

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

Piedmont Natural Gas Company, Inc.
Docket No. 13-00118
TRA Data Request No. 1
Date Sent: September 24, 2013
Date Due: October 2, 2013

6. Is Piedmont utilizing outside consultants or outside contractors to facilitate compliance with federal and state pipeline safety requirements? If so, provide a copy of the related contract(s).

Response: Yes. See [Attachment C](#).

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

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](#).

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

Piedmont Natural Gas Company, Inc.
Docket No. 13-00118
TRA Data Request No. 1
Date Sent: September 24, 2013
Date Due: October 2, 2013

8. Please clarify the fourteen (14) day notice provision for filing revised tariffs as stated in the proposed tariff under Section 8 “Filing with Authority.” Is this meant to override TRA Rule 1220-4-1-.04 that requires at least thirty (30) days notice before the effective date of tariff changes? Explain.

Response: In its filing, Piedmont assumed that any tariff revisions – because they were being made in accordance with an approved rider to its tariffs – would not require a full thirty day notice as anticipated by TRA Rule 1220-4-1-.04. That being said, Piedmont has no objection to modifying the proposed notice period to 30 days.

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

Piedmont Natural Gas Company, Inc.
Docket No. 13-00118
TRA Data Request No. 1
Date Sent: September 24, 2013
Date Due: October 2, 2013

9. What is the total dollar amount Piedmont is expecting to expend on complying with Subpart O of Part 192 of the US DOT? Is any portion of this amount attributable to interstate transmission?

Response: See [Attachment B](#). No portion of this amount is attributable to interstate transmission.

Since TIMP is ongoing, these forecasted capital expenditure amounts for FY2014 through FY2018 represent only those capital expenditures which can be anticipated at the current time. Future periodic pipeline assessments (pigging) to be performed under TIMP may reveal system integrity issues which require capital expenditures that cannot be foreseen or predicted at the current time.

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

Piedmont Natural Gas Company, Inc.
Docket No. 13-00118
TRA Data Request No. 1
Date Sent: September 24, 2013
Date Due: October 2, 2013

10. What is the total dollar amount Piedmont is expecting to expend on complying with Subpart P of Part 192 of the US DOT? Is any portion of this amount attributable to interstate distribution?

Response: See [Attachment B](#). No portion of this amount is attributable to interstate distribution. DIMP is ongoing and the assessments pursuant to this program have only just begun. As such, the Company's current forecast for capital expenditure amounts under DIMP is not a valid indicator of the likely costs to be incurred under this program. DIMP assessments are not based on a prescriptive cycle like TIMP, but are rather based on the Company's implementation of a risk mitigation plan for its distribution facilities consistent with federal mandates.

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

Piedmont Natural Gas Company, Inc.
Docket No. 13-00118
TRA Data Request No. 1
Date Sent: September 24, 2013
Date Due: October 2, 2013

11. In the Company's rate case Docket No. 11-00144, Mr. Carpenter stated in his Testimony (page 11):

“During the attrition period the Company projects spending approximately \$33 million in pipeline system integrity and safety program capital expenditures required by Subpart O, Part 192 of the United States Department of Transportation Pipeline Integrity Management Regulations.” and

“The cost impact of these budgeted attrition period capital expenditures are included in Piedmont's proposed revenue requirement in this case.”

a) Is the above referenced \$33 million for TIMP compliance included in the approximately \$78 million in new capital invested in Tennessee since the effective date (March 1, 2012) of rates established in Docket No. 11-00144?

b) Explain the Company's assertion that the costs of new capital investments are not being recovered in Piedmont's current rates.

Response: The \$78 million in new capital in Tennessee discussed in the petition includes the \$33 million in forecasted integrity costs that were included in the 2011 General Rate Case (Docket No. 11-00144). The \$78 million was included in the petition to indicate the material nature of the issue. The Company would exclude the \$33 million from the 2011 rate case from any filings under the requested rider.

The Company's current comprehensive projections of integrity expenditures (Tennessee direct and joint property) is shown in [Attachment B](#).

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

Piedmont Natural Gas Company, Inc.
Docket No. 13-00118
TRA Data Request No. 1
Date Sent: September 24, 2013
Date Due: October 2, 2013

12. Is the \$78 million in capital costs incurred to date comprised entirely of direct costs to Tennessee or does it also include allocated costs? For any allocated costs, provide the amounts and the methodology used to allocate between the states.

Response: The majority of the system integrity capital expenditures consist of direct costs to Tennessee. Certain costs relate to systems and applications being instituted on a Company-wide basis in order to support the TIMP and DIMP utility programs. Piedmont allocates a portion of these capital expenditures to Tennessee consistent with the Company's past precedent for allocating "corporate office three-state joint property," which is to use Tennessee's percentage of Total Company Net Gas Plant Excluding Joint Property; the current Tennessee allocation based on this net plant allocator is 16.78%.

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

Piedmont Natural Gas Company, Inc.
Docket No. 13-00118
TRA Data Request No. 1
Date Sent: September 24, 2013
Date Due: October 2, 2013

13. Has Piedmont proposed similar recovery mechanisms in North Carolina and/or South Carolina? If so, provide the Docket number(s) and copies of the filed mechanisms.

Response: Piedmont and the NC Public Staff have reached a settlement in NCUC Docket No. G-9, Sub 631, which will be filed at the end of this week. Included in this settlement is an IMR mechanism similar to the one proposed by the company in TN. In SC, the Company operates under an annual rate true up mechanism which covers all cost of service issues. See PSCSC Docket No. 2013-7-G (most recent Annual RSA filing).

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

Piedmont Natural Gas Company, Inc.
Docket No. 13-00118
TRA Data Request No. 1
Date Sent: September 24, 2013
Date Due: October 2, 2013

14. Please provide a copy of the assessment plan referred to in the testimony of Rodney Myers, page 8, line 22, in Docket No. 11-00144. Also, provide a copy of any assessment plan utilized in filing the current petition including any in-line assessment plan referred on page 4 of the petition.

Response: See [Attachment E](#).

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

STATE OF NORTH CAROLINA
COUNTY OF MECKLENBURG

VERIFICATION

Pia Powers, being duly sworn, deposes and says that she is Director - Regulatory Affairs of Piedmont Natural Gas Company, Inc., that as such, she has read the foregoing Responses and knows the contents thereof; that the same are true of her own knowledge except as to those matters stated on information and belief and as to those she believes them to be true.

Pia Powers

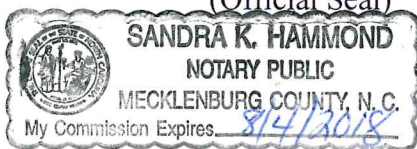
Pia Powers

Mecklenburg County, North Carolina
Signed and sworn to before me this day by Pia Powers

Date: *October 2, 2013* *Sandra K. Hammond*

Sandra K. Hammond, Notary Public

(Official Seal)



My commission expires: August 4, 2018

ATTACHMENT A

**CONFIDENTIAL
FILED UNDER SEAL**

ATTACHMENT B

**CONFIDENTIAL
FILED UNDER SEAL**

ATTACHMENT C

**CONFIDENTIAL
FILED UNDER SEAL**

ATTACHMENT D

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

Rate Period	Jan 1 2014 - Dec 31 2014	Jan 1 2015 - Dec 31 2015	Jan 1 2016 - Dec 31 2016	Jan 1 2017 - Dec 31 2017	Jan 1 2018 - Dec 31 2018	Jan 1 2019 - 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	<u>10,483,571</u>	<u>15,448,420</u>	<u>15,618,299</u>	<u>15,543,687</u>	<u>15,009,683</u>	<u>14,508,492</u>
Net Amount Collectible	<u>\$ 10,483,571</u>	<u>\$ 15,448,420</u>	<u>\$ 15,618,299</u>	<u>\$ 15,543,687</u>	<u>\$ 15,009,683</u>	<u>\$ 14,508,492</u>

(in \$ millions)	Projected Integrity Management Investment Amt	Incremental Integrity Management Revenue Req'ment	Total Amount Collectible Through 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.

Integrity Management Rider
Illustration of Annual Revenue Requirement Computation

Rider Rate Period: January 1, 2014 - December 31, 2014
Vintage Year 1 - Fiscal year October 31, 2013

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
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%
---------------------------	-------	-------	-------	-------	-------

Integrity Management Rider
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 bonus 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%
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
<u>Capital structure assumptions (rate case):</u>							
LTD		41.42%					
STD		5.87%					
Common equity		52.71%					
<u>Capital cost rate assumptions (rate case):</u>							
LTD		6.05%					
STD		1.59%					
Common equity		10.20%					
<u>Overall and pre-tax RORs</u>							
	Overall	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%	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	22,896,810				
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
Depreciation expense		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
Average accumulated depreciation		399,287	995,237	1,591,187	2,187,137	2,783,087	3,379,037

<u>Tax depreciation reserve</u>							
FY of completion tax depreciation	2,055,000						
Post FY tax depreciation to rider date	17%						
Tax year 2 tax depreciation	3,904,500						
Tax year 2 pre-rider tax depr	663,765						
Rider year BOY amount		2,718,765	6,556,889	10,011,549	13,122,449	15,921,770	18,459,243
Tax period A tax depreciaion		3,240,735	2,916,662	2,626,701	2,364,031	2,125,240	2,012,667
Tax period B tax depreciation		597,389	537,999	484,199	435,290	412,233	412,932
Rider year EOY amount		6,556,889	10,011,549	13,122,449	15,921,770	18,459,243	20,884,143
Average tax depreciation reserve		4,637,827	8,284,219	11,566,999	14,522,110	17,190,507	19,671,693

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

<u>Accumulated deferred taxes</u>							
Average tax depreciation reserve		4,637,827	8,284,219	11,566,999	14,522,110	17,190,507	19,671,693
Average book depreciation reserve		399,287	995,237	1,591,187	2,187,137	2,783,087	3,379,037
Difference		4,238,540	7,288,982	9,975,813	12,334,973	14,407,420	16,292,657
Composite tax rate		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

Note - composite tax rate ignores excess deferred tax flowback

Integrity Management Rider
Illustration of Annual Revenue Requirement Computation

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

Vintage Year 2 - Fiscal year October 31, 2015

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>
Plant	5,700,000	5,700,000	5,700,000
Accumulated depreciation	(55,376)	(138,026)	(220,676)
Net plant	5,644,625	5,561,975	5,479,325
ADIT	(230,575)	(396,518)	(542,681)
Net investment	5,414,049	5,165,457	4,936,644
Pre-tax ROR%	11.446%	11.446%	11.446%
Pre-tax rate of return	619,675	591,221	565,032
Depreciation expense	82,650	82,650	82,650
Property Tax expense	41,610	41,610	41,610
Total, excluding uncollectibles	743,935	715,481	689,292
Uncollectibles gross-up factor	1.000308	1.000308	1.000308
Total revenue requirement	744,164	715,702	689,505

Assumptions and calculations:

Rider computed each year.

Normal depreciation and AFUDC practices apply, AFUDC ends and depreciation begins when plant go

Plant amount	5,700,000		
Book depreciation rate	1.45%		
Property Tax Rate	0.73%		
Tax depreciation	MACRS 15	assumed no bonus depreciation	
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%
FIT rate	35.00%	35.00%	35.00%
Composite income tax rate	39.23%	39.23%	39.23%
Uncollectibles rate	0.0308%	0.0308%	0.0308%
Revenue requirement gross-up factor	1.000308	1.000308	1.000308
<u>Capital structure assumptions (rate case):</u>			
LTD	41.42%		
STD	5.87%		
Common equity	52.71%		
<u>Capital cost rate assumptions (rate case):</u>			
LTD	6.05%		

STD 1.59%
Common equity 10.20%
Overall and pre-tax RORs

	Overall			
LTD	2.506%	2.506%	2.506%	2.506%
STD	0.093%	0.093%	0.093%	0.093%
Common equity	5.376%	8.846%	8.846%	8.846%
Total	7.976%	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 service before rider	17%			
Pre-rider amount of depreciation	14,051			
Rider year BOY amount		14,051	96,701	179,351
Depreciation expense		82,650	82,650	82,650
Rider year EOY amount		96,701	179,351	262,001
Average accumulated depreciation		55,376	138,026	220,676

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			
Rider year BOY amount		377,055	909,350	1,388,463
Tax period A tax depreciaion		449,445	404,501	364,287

Tax period B tax depreciation	82,850	74,613	67,152
Rider year EOY amount	909,350	1,388,463	1,819,902
Average tax depreciation reserve	643,202	1,148,906	1,604,182

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
Average book depreciation reserve	55,376	138,026	220,676
Difference	587,827	1,010,881	1,383,507
Composite tax rate	39.23%	39.23%	39.23%
Average ADIT	230,575	396,518	542,681

Note - composite tax rate ignores excess deferred tax flowback

<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>	<u>Year 7</u>
5,700,000	5,700,000	5,700,000	5,700,000
(303,326)	(385,976)	(468,626)	(551,276)
5,396,675	5,314,025	5,231,375	5,148,725
(671,018)	(783,758)	(886,315)	(985,828)
4,725,656	4,530,266	4,345,060	4,162,897
11.446%	11.446%	11.446%	11.446%
540,883	518,520	497,322	476,472
82,650	82,650	82,650	82,650
41,610	41,610	41,610	41,610
665,143	642,780	621,582	600,732
1.000308	1.000308	1.000308	1.000308
665,348	642,978	621,773	600,917

goes into service

6.50%	6.50%	6.50%	6.50%
35.00%	35.00%	35.00%	35.00%
39.23%	39.23%	39.23%	39.23%
0.0308%	0.0308%	0.0308%	0.0308%
1.000308	1.000308	1.000308	1.000308

Pre-tax RORs			
2.506%	2.506%	2.506%	2.506%
0.093%	0.093%	0.093%	0.093%
8.846%	8.846%	8.846%	8.846%
11.446%	11.446%	11.446%	11.446%

262,001	344,651	427,301	509,951
82,650	82,650	82,650	82,650
344,651	427,301	509,951	592,601
303,326	385,976	468,626	551,276

1,819,902	2,208,129	2,560,041	2,896,341
327,858	294,741	279,129	279,129

60,369	57,171	57,171	57,268
2,208,129	2,560,041	2,896,341	3,232,738
2,014,015	2,384,085	2,728,191	3,064,539

2,014,015	2,384,085	2,728,191	3,064,539
303,326	385,976	468,626	551,276
1,710,690	1,998,109	2,259,566	2,513,264
39.23%	39.23%	39.23%	39.23%
671,018	783,758	886,315	985,828

Integrity Management Rider
Illustration of Annual Revenue Requirement Computation

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

Vintage Year 4 - Fiscal year October 31, 2016

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>
Plant	3,700,000	3,700,000	3,700,000
Accumulated depreciation	(35,946)	(89,596)	(143,246)
Net plant	3,664,055	3,610,405	3,556,755
ADIT	(149,672)	(257,389)	(352,266)
Net investment	3,514,383	3,353,016	3,204,488
Pre-tax ROR%	11.446%	11.446%	11.446%
Pre-tax rate of return	402,245	383,775	366,775
Depreciation expense	53,650	53,650	53,650
Property Tax expense	27,010	27,010	27,010
Total, excluding uncollectibles	482,905	464,435	447,435
Uncollectibles gross-up factor	1.000308	1.000308	1.000308
Total revenue requirement	483,054	464,578	447,573

Assumptions and calculations:

Rider computed each year.

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

Plant amount	3,700,000		
Book depreciation rate	1.45%		
Property Tax Rate	0.73%		
Tax depreciation	MACRS 15	assumed no bonus depreciation	
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%
FIT rate	35.00%	35.00%	35.00%
Composite income tax rate	39.23%	39.23%	39.23%
Uncollectibles rate	0.0308%	0.0308%	0.0308%
Revenue requirement gross-up factor	1.000308	1.000308	1.000308
<u>Capital structure assumptions (rate case):</u>			
LTD	41.42%		
STD	5.87%		
Common equity	52.71%		
<u>Capital cost rate assumptions (rate case):</u>			
LTD	6.05%		

STD 1.59%
Common equity 10.20%
Overall and pre-tax RORs

	Overall			
LTD	2.506%	2.506%	2.506%	2.506%
STD	0.093%	0.093%	0.093%	0.093%
Common equity	5.376%	8.846%	8.846%	8.846%
Total	7.976%	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 service before rider	17%			
Pre-rider amount of depreciation	9,121			
Rider year BOY amount		9,121	62,771	116,421
Depreciation expense		53,650	53,650	53,650
Rider year EOY amount		62,771	116,421	170,071
Average accumulated depreciation		35,946	89,596	143,246

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
Tax period A tax depreciaion		291,745	262,571	236,467

Tax period B tax depreciation	53,780	48,433	43,590
Rider year EOY amount	590,280	901,283	1,181,340
Average tax depreciation reserve	417,517	745,781	1,041,311

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
Average book depreciation reserve	35,946	89,596	143,246
Difference	381,572	656,186	898,066
Composite tax rate	39.23%	39.23%	39.23%
Average ADIT	149,672	257,389	352,266

Note - composite tax rate ignores excess deferred tax flowback

<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>	<u>Year 7</u>
3,700,000	3,700,000	3,700,000	3,700,000
(196,896)	(250,546)	(304,196)	(357,846)
3,503,105	3,449,455	3,395,805	3,342,155
(435,573)	(508,755)	(575,327)	(639,923)
3,067,531	2,940,699	2,820,478	2,702,231
11.446%	11.446%	11.446%	11.446%
351,100	336,583	322,823	309,289
53,650	53,650	53,650	53,650
27,010	27,010	27,010	27,010
431,760	417,243	403,483	389,949
1.000308	1.000308	1.000308	1.000308
431,893	417,371	403,607	390,069

oes into service

6.50%	6.50%	6.50%	6.50%
35.00%	35.00%	35.00%	35.00%
39.23%	39.23%	39.23%	39.23%
0.0308%	0.0308%	0.0308%	0.0308%
1.000308	1.000308	1.000308	1.000308

Pre-tax RORs			
2.506%	2.506%	2.506%	2.506%
0.093%	0.093%	0.093%	0.093%
8.846%	8.846%	8.846%	8.846%
11.446%	11.446%	11.446%	11.446%

170,071	223,721	277,371	331,021
53,650	53,650	53,650	53,650
223,721	277,371	331,021	384,671
196,896	250,546	304,196	357,846

1,181,340	1,433,347	1,661,781	1,880,081
212,820	191,323	181,189	181,189

39,187	37,111	37,111	37,173.90
1,433,347	1,661,781	1,880,081	2,098,444
1,307,343	1,547,564	1,770,931	1,989,262

1,307,343	1,547,564	1,770,931	1,989,262
196,896	250,546	304,196	357,846
1,110,448	1,297,018	1,466,736	1,631,417
39.23%	39.23%	39.23%	39.23%
435,573	508,755	575,327	639,923

Integrity Management Rider
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>	<u>Year 2</u>	<u>Year 3</u>
Plant	4,500,000	4,500,000	4,500,000
Accumulated depreciation	(43,718)	(108,968)	(174,218)
Net plant	4,456,283	4,391,033	4,325,783
ADIT	(182,033)	(313,041)	(428,432)
Net investment	4,274,250	4,077,992	3,897,350
Pre-tax ROR%	11.446%	11.446%	11.446%
Pre-tax rate of return	489,217	466,754	446,078
Depreciation expense	65,250	65,250	65,250
Property Tax expense	32,850	32,850	32,850
Total, excluding uncollectibles	587,317	564,854	544,178
Uncollectibles gross-up factor	1.000308	1.000308	1.000308
Total revenue requirement	587,498	565,028	544,346

Assumptions and calculations:

Rider computed each year.

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

Plant amount	4,500,000		
Book depreciation rate	1.45%		
Property Tax Rate	0.73%		
Tax depreciation	MACRS 15	assumed no bonus depreciation	
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%
FIT rate	35.00%	35.00%	35.00%
Composite income tax rate	39.23%	39.23%	39.23%
Uncollectibles rate	0.0308%	0.0308%	0.0308%
Revenue requirement gross-up factor	1.000308	1.000308	1.000308
<u>Capital structure assumptions (rate case):</u>			
LTD	41.42%		
STD	5.87%		
Common equity	52.71%		
<u>Capital cost rate assumptions (rate case):</u>			
LTD	6.05%		

STD 1.59%
Common equity 10.20%
Overall and pre-tax RORs

	Overall			
LTD	2.506%	2.506%	2.506%	2.506%
STD	0.093%	0.093%	0.093%	0.093%
Common equity	5.376%	8.846%	8.846%	8.846%
Total	7.976%	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	

Accumulated depreciation

Portion of year in service before rider	17%			
Pre-rider amount of depreciation	11,093			
Rider year BOY amount		11,093	76,343	141,593
Depreciation expense		65,250	65,250	65,250
Rider year EOY amount		76,343	141,593	206,843
Average accumulated depreciation		43,718	108,968	174,218

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
Tax period A tax depreciaion		354,825	319,343	287,595

Tax period B tax depreciation	65,408	58,905	53,015
Rider year EOY amount	717,908	1,096,155	1,436,765
Average tax depreciation reserve	507,791	907,031	1,266,460

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
Average book depreciation reserve	43,718	108,968	174,218
Difference	464,074	798,064	1,092,242
Composite tax rate	39.23%	39.23%	39.23%
Average ADIT	182,033	313,041	428,432

Note - composite tax rate ignores excess deferred tax flowback

<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>	<u>Year 7</u>
4,500,000	4,500,000	4,500,000	4,500,000
(239,468)	(304,718)	(369,968)	(435,218)
4,260,533	4,195,283	4,130,033	4,064,783
(529,751)	(618,757)	(699,722)	(778,285)
3,730,781	3,576,526	3,430,310	3,286,497
11.446%	11.446%	11.446%	11.446%
427,013	409,358	392,622	376,162
65,250	65,250	65,250	65,250
32,850	32,850	32,850	32,850
525,113	507,458	490,722	474,262
1.000308	1.000308	1.000308	1.000308
525,275	507,614	490,873	474,408

oes into service

6.50%	6.50%	6.50%	6.50%
35.00%	35.00%	35.00%	35.00%
39.23%	39.23%	39.23%	39.23%
0.0308%	0.0308%	0.0308%	0.0308%
1.000308	1.000308	1.000308	1.000308

Pre-tax RORs			
2.506%	2.506%	2.506%	2.506%
0.093%	0.093%	0.093%	0.093%
8.846%	8.846%	8.846%	8.846%
11.446%	11.446%	11.446%	11.446%

206,843	272,093	337,343	402,593
65,250	65,250	65,250	65,250
272,093	337,343	402,593	467,843
239,468	304,718	369,968	435,218

1,436,765	1,743,260	2,021,085	2,286,585
258,836	232,691	220,365	220,365

47,660	45,135	45,135	45,211.50
1,743,260	2,021,085	2,286,585	2,552,162
1,590,012	1,882,172	2,153,835	2,419,373

1,590,012	1,882,172	2,153,835	2,419,373
239,468	304,718	369,968	435,218
1,350,545	1,577,455	1,783,868	1,984,156
39.23%	39.23%	39.23%	39.23%
529,751	618,757	699,722	778,285

Integrity Management Rider
Illustration of Annual Revenue Requirement Computation

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

Vintage Year 6 - Fiscal year October 31, 2018

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>
Plant	6,500,000	6,500,000	6,500,000
Accumulated depreciation	(63,148)	(157,398)	(251,648)
Net plant	6,436,853	6,342,603	6,248,353
ADIT	(262,936)	(452,170)	(618,846)
Net investment	6,173,916	5,890,433	5,629,506
Pre-tax ROR%	11.446%	11.446%	11.446%
Pre-tax rate of return	706,646	674,200	644,335
Depreciation expense	94,250	94,250	94,250
Property Tax expense	47,450	47,450	47,450
Total, excluding uncollectibles	848,346	815,900	786,035
Uncollectibles gross-up factor	1.000308	1.000308	1.000308
Total revenue requirement	848,608	816,151	786,277

Assumptions and calculations:

Rider computed each year.

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

Plant amount	6,500,000		
Book depreciation rate	1.45%		
Property Tax Rate	0.73%		
Tax depreciation	MACRS 15	assumed no bonus depreciation	
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%
FIT rate		35.00%	35.00%
Composite income tax rate		39.23%	39.23%
Uncollectibles rate		0.0308%	0.0308%
Revenue requirement gross-up factor		1.000308	1.000308
<u>Capital structure assumptions (rate case):</u>			
LTD	41.42%		
STD	5.87%		
Common equity	52.71%		
<u>Capital cost rate assumptions (rate case):</u>			
LTD	6.05%		

STD 1.59%
Common equity 10.20%
Overall and pre-tax RORs

	Overall			
LTD	2.506%	2.506%	2.506%	2.506%
STD	0.093%	0.093%	0.093%	0.093%
Common equity	5.376%	8.846%	8.846%	8.846%
Total	7.976%	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 service before rider	17%			
Pre-rider amount of depreciation	16,023			
Rider year BOY amount		16,023	110,273	204,523
Depreciation expense		94,250	94,250	94,250
Rider year EOY amount		110,273	204,523	298,773
Average accumulated depreciation		63,148	157,398	251,648

Tax depreciation reserve

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			
Rider year BOY amount		429,975	1,036,978	1,583,335
Tax period A tax depreciaion		512,525	461,273	415,415

Tax period B tax depreciation	94,478	85,085	76,577
Rider year EOY amount	1,036,978	1,583,335	2,075,327
Average tax depreciation reserve	733,476	1,310,156	1,829,331

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
Average book depreciation reserve	63,148	157,398	251,648
Difference	670,329	1,152,759	1,577,683
Composite tax rate	39.23%	39.23%	39.23%
Average ADIT	262,936	452,170	618,846

Note - composite tax rate ignores excess deferred tax flowback

<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>	<u>Year 7</u>
6,500,000	6,500,000	6,500,000	6,500,000
(345,898)	(440,148)	(534,398)	(628,648)
6,154,103	6,059,853	5,965,603	5,871,353
(765,196)	(893,760)	(1,010,710)	(1,124,190)
5,388,906	5,166,093	4,954,893	4,747,163
11.446%	11.446%	11.446%	11.446%
616,797	591,294	567,121	543,345
94,250	94,250	94,250	94,250
47,450	47,450	47,450	47,450
758,497	732,994	708,821	685,045
1.000308	1.000308	1.000308	1.000308
758,730	733,220	709,039	685,256

oes into service

6.50%	6.50%	6.50%	6.50%
35.00%	35.00%	35.00%	35.00%
39.23%	39.23%	39.23%	39.23%
0.0308%	0.0308%	0.0308%	0.0308%
1.000308	1.000308	1.000308	1.000308

Pre-tax RORs			
2.506%	2.506%	2.506%	2.506%
0.093%	0.093%	0.093%	0.093%
8.846%	8.846%	8.846%	8.846%
11.446%	11.446%	11.446%	11.446%

298,773	393,023	487,273	581,523
94,250	94,250	94,250	94,250
393,023	487,273	581,523	675,773
345,898	440,148	534,398	628,648

2,075,327	2,518,042	2,919,345	3,302,845
373,874	336,109	318,305	318,305

68,842	65,195	65,195	65,305.50
2,518,042	2,919,345	3,302,845	3,686,456
2,296,684	2,718,693	3,111,095	3,494,650

2,296,684	2,718,693	3,111,095	3,494,650
345,898	440,148	534,398	628,648
1,950,787	2,278,546	2,576,698	2,866,003
39.23%	39.23%	39.23%	39.23%
765,196	893,760	1,010,710	1,124,190

ATTACHMENT E

**CONFIDENTIAL
FILED UNDER SEAL**