

INFORMATION SHEET

PRESIDING: Commissioner Mitchell, Presiding
PLACE: Dobbs Building, Room 2115, Raleigh, NC
DATE: Tuesday, March 6, 2018
TIME: 10:00 a.m. – 10:12 a.m.
DOCKET NO.: G-40, Sub 145
COMPANY: Frontier Natural Gas Company, LLC
DESCRIPTION: Application for Annual Review of gas Costs Pursuant to G.S. 62-133.4(c) and
Commission Rule R1-17(k)(6)
VOLUME:

APPEARANCES

FOR FRONTIER NATURAL GAS COMPANY, LLC:
James H. Jeffries, IV, Esq.

FOR THE USING AND CONSUMING PUBLIC:
Elizabeth Culpepper, Esq.

WITNESSES

None

EXHIBITS

Steele Schedules 1-4, 8, 10 and 11 – I/A
Steele Confidential Exhibits A and B (filed under seal) – I/A
Steele Exhibit C – I/A
Public Staff Panel Exhibits I, II and III – I/A

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REPORTED BY: Kim Mitchell
DATE FILED: April 6, 2018

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NAME OF ATTORNEY JAMES H. JEFFRIES IV
TITLE _____
FIRM NAME MOORE & VAN ALLEN PLLC
ADDRESS 100 N. TRYON STREET, SUITE 4700
CITY CHARLOTTE, NC
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APPEARING FOR: FROTIER NATURAL GAS COMPANY

APPLICANT ☒ COMPLAINANT _____ INTERVENOR R _____
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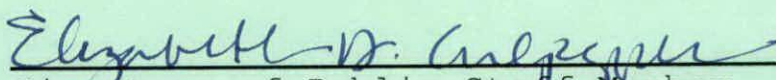
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Steele Schedules 1-4, 8, 10 & 11

I/A

Docket No. G-40, Sub 145
Annual Review

Frontier Natural Gas, LLC

Schedule 1	Summary of Cost of Gas Expense
Schedule 2	Summary of Demand and Storage Charges
Schedule 3	Summary of Commodity Gas Costs
Schedule 4	Summary of Other Cost of Gas Charges/(Credits)
Schedule 8	Summary of Deferred Account Activity
Schedule 10	Summary of Gas Supply
Schedule 11	Summary of Natural Gas Hedge Transactions

Docket No. G-40, Sub 145
Annual Review

Frontier Natural Gas, LLC
Docket No. G-40, Sub 145
SUMMARY OF COST OF GAS EXPENSE
For the Twelve Months Ended September 30, 2017
Schedule 1

	ITEM	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Total
1	NC Demand and Storage Costs Expensed (Sch 2)	\$84,448	\$80,537	\$95,962	\$130,290	\$119,865	\$122,869	\$107,754	\$108,812	\$103,573	\$108,335	\$109,877	\$110,213	\$1,282,535
2	NC Commodity Costs Expensed (Sch 3)	235,084	279,588	502,438	701,421	430,568	289,371	192,379	180,851	143,107	135,553	183,202	234,335	\$3,507,893
3	Other Gas Costs Expensed (Sch 4)	(94,181)	(68,320)	(65,522)	(268,000)	229,965	349,705	52,803	18,562	34,904	(14,586)	(106,768)	(53,762)	\$13,800
4	Total Cost of Gas Expensed (Sum of L1 - L3)	\$225,351	\$291,803	\$532,876	\$562,711	\$780,398	\$761,945	\$352,936	\$308,226	\$281,584	\$229,302	\$186,311	\$290,786	\$4,804,228

THIS SET OF PRUDENCY REVIEW FORMS COMPUTES THE DEFERRED ACCOUNT UNDER THE PRIOR PRORATION METHOD.
THE RESULT IS COST OF GAS FOR THE PRUDENCY PERIOD IS LOWER BY \$104,724 THAN THE AMOUNT INCLUDED IN
THE INCOME STATEMENT.

Docket No. G-40, Sub 145
Annual Review

Frontier Natural Gas, LLC
Docket No. G-40, Sub 145
Demand and Storage Costs Expensed
For the Twelve Months Ended September 30, 2017
Schedule 2

ITEM		Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Total
Demand and Storage Charges:														
1	Transco Capacity Charge - Frontier Capacity	\$68,755	\$66,537	\$68,755	\$88,268	\$92,456	\$102,362	\$98,923	\$102,220	\$98,923	\$102,220	\$102,220	\$98,923	\$1,090,562
2	Other Capacity Charges	15,693	14,000	27,207	42,022	27,409	20,507	8,831	6,592	4,650	6,115	7,657	11,290	\$191,973
3	Peaking Contracts													
4	Total Demand Charges	\$84,448	\$80,537	\$95,962	\$130,290	\$119,865	\$122,869	\$107,754	\$108,812	\$103,573	\$108,335	\$109,877	\$110,213	\$1,282,535
5	Storage Charges													
6	Total Demand and Storage Charges Expensed	\$84,448	\$80,537	\$95,962	\$130,290	\$119,865	\$122,869	\$107,754	\$108,812	\$103,573	\$108,335	\$109,877	\$110,213	\$1,282,535

Docket No. G-40, Sub 145
Annual Review

Frontier Natural Gas, LLC
Docket No. G-40, Sub 145
SUMMARY OF COMMODITY GAS COSTS
For the Twelve Months Ended September 30, 2017
Schedule 3

ITEM	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Total
Commodity Cost at City Gate													
Supplier #1:													
1 Gas Supply Baseload Purchases	335,403	367,200	590,240	903,974	606,060	395,250	205,920	152,272	143,100	139,500	171,988	230,398	\$4,241,295
2 Daily Purchases (Zone 3)		634											634
3 Daily Delivered Purchases (Zone 5)	3,075	11,287	53,365	201,483	6,708	22,939	44,146	56,396	36,547	15,533	29,322	25,589	506,388
4 Hedging Purchases													-
5 Other - Self Back	(103,394)	(99,535)	(141,169)	(404,036)	(182,188)	(128,818)	(57,687)	(27,817)	(36,540)	(19,480)	(18,108)	(21,642)	(1,240,424)
6 Timing Difference													
6 Total Commodity Cost Expense	\$235,084	\$279,586	\$502,436	\$701,421	\$430,568	\$289,371	\$192,379	\$180,851	\$143,107	\$135,553	\$183,202	\$234,335	\$3,507,893

Docket No. G-40, Sub 145
Annual Review

Frontier Natural Gas, LLC
Docket No. G-40, Sub 145
SUMMARY OF OTHER COST OF GAS CHARGES (CREDITS)
For the Twelve Months Ended September 30, 2017
Schedule 4

	ITEM	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Total
	Deferred Account Activity													
1	Gas Cost True-up (excluding interest)	(94,195)	(71,824)	(73,959)	(299,334)	149,760	297,867	44,712	23,754	11,010	(21,938)	(106,682)	(34,854)	(175,683)
2	Transportation Cust Balancing True-up	1,532	954	(107)	886	(16,576)	23,906	4,805	(2,064)	11,694	3,784	17	(2,231)	26,600
3	Retro Gas Pricing True-up	(675)	(15)			390								(300)
	GAS COST ADJUSTMENT					112,974							(8,250)	104,724
4	Miscellaneous Charges (a) Net Cash Out	(843)	2,565	8,544	29,448	(16,583)	27,932	3,286	(3,128)	12,200	3,568	(103)	(8,427)	58,459
5	Total Other Cost of Gas	(94,161)	(68,320)	(65,522)	(269,000)	229,965	349,705	52,803	18,562	34,904	(14,586)	(106,768)	(53,762)	13,800

Frontier Natural Gas, LLC
Docket No. G-40, Sub 145
Summary of Deferred Account Activity
For the Twelve Months Ended September 30, 2017
Schedule 8

Month	Beginning Balance	Gas Cost True-Up	Adjustments	Transportation Balancing True-Up DB (CR)	Interest	Ending Balance
Oct-16	(\$7,898.76)	\$94,195.37	\$675.38	(\$1,532.34)	(\$65.82)	\$85,373.83
Nov-16	\$85,373.83	\$71,823.97		(\$954.10)	\$711.45	\$156,955.15
Dec-16	\$156,955.15	\$73,958.98		\$107.40	\$1,307.96	\$232,329.49
Jan-17	\$232,329.49	\$299,333.67		(\$885.81)	\$1,486.91	\$532,264.26
Feb-17	\$532,264.26	(\$149,760.31)	\$112,973.90	\$16,575.99	\$3,406.49	\$515,460.33
Mar-17	\$515,460.33	(\$297,866.93)		(\$23,906.03)	\$3,298.95	\$196,986.32
Apr-17	\$196,986.32	(\$44,712.28)		(\$4,804.50)	\$1,260.71	\$148,730.25
May-17	\$148,730.25	(\$23,753.51)		\$2,064.02	\$951.87	\$127,992.63
June-17	\$127,992.63	(\$11,009.90)	-	(\$11,693.85)	\$819.15	\$106,108.03
Jul-17	\$106,108.03	\$21,938.44		(\$3,784.02)	\$679.09	\$124,941.54
Aug-17	\$124,941.54	\$106,681.82	(\$8,249.85)	(\$16.65)	\$799.63	\$224,156.49
Sep-17	\$224,156.49	\$34,854.22	-	\$2,231.47	\$1,434.60	\$262,676.78
TOTALS		\$175,683.54	\$105,399.43	(\$26,598.42)	\$16,090.99	

OCTOBER 2016 ADJUSTMENT

TRANSCO REFUND	(14.61)
ROUNDING ADJUSTMENT	(0.01)
NCUC ANNUAL REVIEW ADJUST	690.00
TOTAL ADJUSTMENT	675.38

FEBURARY AND AUGUST ADJUSTMENTS

THE ADJUSTMENTS REFLECTED ON LINES 14 & 20 COMES FROM THE CHANGE IN THE BENCHMARK GAS COST ON FEBRUARY 1 AND AUGUST 1 2017. THIS ADJUSTMENT NEEDS TO BE INCLUDED IN THE DEFERRED ACCOUNT IN ORDER FOR FRONTIER TO RECOVER GAS COSTS INCURRED DURING THE PERIOD ENDING SEPTEMBER 30, 2017.

FEBURARY ADJUSTMENT	\$112,973.90
AUGUST ADJUSTMENT	(\$8,249.85)
TOTAL GAS COST ADJUSTMENT	\$104,724.05

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Annual Review

Frontier Natural Gas, LLC
Docket No. G-40, Sub 145
SUMMARY OF GAS SUPPLY
For the Twelve Months Ended September 30, 2017
Schedule 10

	ITEM	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Total
	Sources of Supply at City Gate: (dts)													
	Supplier #1:													
1	Gas Supply Baseload Purchases	114,700	135,000	184,450	232,384	182,000	155,000	66,000	49,600	45,000	46,500	58,900	81,000	1,350,534
2	Daily Purchases (Zone 3)		210											210
3	Daily Delivered Purchases (Zone 5)	1,054	3,991	10,700	34,619	2,122	7,484	13,738	17,812	12,140	5,115	9,798	8,660	127,213
4	Hedging Purchases		-	-	-	-	-	-	-	-	-	-	-	-
5	Other -Hedge Buy Back	(39,607)	(42,549)	(40,006)	(118,222)	(67,401)	(43,496)	(19,188)	(9,018)	(12,781)	(6,593)	(6,252)	(7,172)	(412,285)
	Gas Supply Current													-
6	Period Delivery	76,147	98,652	165,144	148,781	116,721	118,968	60,550	58,394	44,359	45,022	62,446	82,488	1,065,672

Frontier Natural Gas, LLC
Docket No. G-40, Sub 145
Summary of Natural Gas Hedge Transactions
For the Twelve Months Ended September 30, 2017
Schedule 11

Month	Hedged dts	Actual dts	Projected dts	Percent Hedged	Hedged Cost \$/dth	Baseload \$/dth 1/	(Savings) Excess \$/dth	Hedge (Gain) Loss
Oct-16	-	NO HEDGES		#VALUE!			\$0.000	\$0
Nov-16	-	NO HEDGES		#VALUE!			\$0.000	\$0
Dec-16	-	NO HEDGES		#VALUE!			\$0.000	\$0
Jan-17	-	NO HEDGES		#VALUE!			\$0.000	\$0
Feb-17	-	NO HEDGES		#VALUE!			\$0.000	\$0
Mar-17	-	NO HEDGES		#VALUE!			\$0.000	\$0
Apr-17	-	NO HEDGES		#VALUE!			\$0.000	\$0
May-17	-	NO HEDGES		#VALUE!			\$0.000	\$0
Jun-17	-	NO HEDGES		#VALUE!			\$0.000	\$0
Jul-17	-	NO HEDGES		#VALUE!			\$0.000	\$0
Aug-17	-	NO HEDGES		#VALUE!			\$0.000	\$0
Sep-17	-	NO HEDGES		#DIV/0!			\$0.000	\$0
Total	-	-	-	#DIV/0!				\$0

Kan Huston Associates

Consultant's Report

To the Management of
Frontier Natural Gas Company LLC
Elkin, North Carolina

Report on the Policy Statements

We have reviewed the accompanying policy statements of Frontier Natural Gas Company LLC (hereinafter referred to as "Company"), as provided in Exhibit A. Kan Huston Associates LLC (hereinafter referred to as "KHA"), an "independent and unbiased third party", was retained to provide "review, critic and comments" (hereinafter referred to as "Review") on the Company's Demand Day, Gas Supply Procurement, Curtailment and Technical Training Policy Statements.

Management's Responsibility for the Policy Statements

Management is responsible for the preparation and fair presentation of these policy statements in accordance with the Stipulation In the Matter of Consideration of Management Performance, Techniques, Personnel, and Operations of Frontier Natural Gas Company, LLC – Docket No. G-40, Sub 124 – before the North Carolina Utility Commission's (hereinafter referred to as "Commission"); dated June 27, 2014.

Management attests that the policy statements contained in Exhibit A are accurate depictions of their policies and practices and are free from material misstatement, whether due to fraud or error.

Consultant's Responsibility

KHA's responsibility is to express an objective opinion on these Policy statements based on our examination of only the statements. We conducted our examination in accordance with generally accepted management principles and standards applicable to a diligence and comprehensive review.

In preparing this Review, KHA has made certain assumptions with respect to conditions that may occur in the future. While we believe these assumptions are reasonable for this Review, they are dependent upon anticipated future events. Actual conditions may differ from those assumed. KHA has drawn upon its utility experience and used policy and practice information provided by other sources. A source of information includes a survey of small municipal natural gas distribution operations in the North Carolina (See Exhibit B - hereinafter referred to as "Survey"). Although the municipal natural gas distribution systems are not regulated by the Commission, they face similar challenges due to their smaller size. The systems do not possess the economies of scale that larger utility systems enjoy. The mode of operation by municipal utility system management may create a standard where a balance is achieved among risk management and control while remaining economically viable.

The examination of Frontier's policy(s) involves comparing the policy and practices to laws and regulations as well as comparison to the policies and practices of other similarly situated entities. The Survey questions selected depended on the consultant's judgment, including the assessment of the risks of material misstatement of policy and practices. The Survey results are taken into account with best practices that KHA has found to be effective at other utilities during our previous utility management engagements.

While we believe the policy statements, information and sources to be reliable, we have not verified the information and offer no assurances with respect to actual practice, accuracy or completeness.

Review

An entity's mission statement(s) is the foundation of its policy as set forth in policy statements. Only when the mission changes or when there is an extraordinary change in environment, conditions or philosophy of the entity does policy change. Thus, policy statements must promote an entity's mission statement. Also, there should be clarity of how the policy will advance a particular aspect of the entity's mission. In turn, objective and goals are the building blocks that must be consistent with and promote the policy.

If an entity finds that it repeatedly updates or revises its policy statement, it could be that the policy statement is too narrowly written with specifics as opposed to broad policy. If the policy statement contains procedures, goals or objective statements rather than policy, this too can lead to continual revisions with an entity's performance.

Policy and Practices for Design Day Demand Requirements

Best Practices

The best practices for design day demand requirements (or peak day) estimation and determination suggest that it is part of a comprehensive econometric forecast and gas supply plan. A written policy should delineate in precise terms the peak day projected quantity to be acquired and is usually stated as a percentage of requirements and/or winter severity (*i.e.*, one-in-fifty year winter), which is pertinent to Commission Rules R6-23. A surplus or safety cushion is usually stated as a percentage that is added to the forecast peak day requirement target for which resources are acquired to meet. Procedures and practices further delineate the details for how the forecast will be constructed and type of model but are not necessarily part of the policy statement. The forecast and plan is compiled by a staff of individuals with training, education and experience in such matters. This minimizes the likelihood of variables being omitted, improves the consistency in forecast assumptions, and factors can be considered in the context of a comprehensive approach. The forecast and plan are approved by committee and submitted to senior management to be ratified and incorporated into budgets.

A gas supply plan and forecast is typically revised and updated each Spring after the heating season. Although the model inputs may be revised intermittently, a formal document is ratified and becomes part of the budget process that occurs each year. A gas supply plan and forecast provides documentation of efforts to implement and follow the policy.

Typically, forecast models estimate the supply and demand components for subset groups separately. These components are then consolidated to form the overall forecast for the total system. For a gas distribution utility, forecasts by rate class or schedule would be the minimum level of detail. To illustrate the need for such detail, gas systems have a variety of different customer usage patterns, sometimes even within an individual rate schedule or class. Econometric models lend themselves to estimating changes in usage patterns due to variety of factors such as improving technology, aging appliances, changing regulation, transforming economy and operational constraints to name a few. In such instances, further detailed estimates within the rate class may be necessary to achieve greater accuracy.

The number of customers and temperature, as measured by heating degree days, are the two most critical forecasting variables for heating load usage. The correlation between heating degree days (hereinafter referred to as "HDD") and residential and commercial heating load usage per HDD per customer is often 90% or greater in the Carolinas. Industrial customers are estimated based on past usage because they are typically non-heating load. Although the usage of interruptible customers is estimated for budgeting and operational reasons, no additional resources are acquired to meet this class of customer's requirements.

In an effort to improve the forecasting model and estimating efforts, best practices suggest that a reconciliation or post-audit analysis is performed the following year to determine accuracy of the forecast

Exhibit C

versus actual experience. The reconciliation analysis and subsequent changes made to estimating methods is included in the following year's annual gas supply plan.

Survey

Due to the lack of economies of scale, smaller gas systems are constrained by a combination of lack of resources, size and political pressures. The determination of peak day projections and requirements is made informally. Often it is merely made through telephone conversations between one or two individuals within the gas system and their natural gas marketer. The plan of action is implemented immediately and is confirmed in an email. None of the systems perform post-audit or reconciliation analyses that review prior performance.

Natural gas marketers are usually the better and often the sole source of market information and resource intelligence. The great majority of small systems do not have a gas supply committee, written policy or formal procedures regarding estimation of peak day requirements or the amount of contract demand that should be procured. This appears to be due to the nature of service and upstream resources the system has under contract. At present, half of the survey respondents have insufficient upstream resources under contract to meet peak day requirements. Thus, they are forced to test the market at the beginning of the month or during peak periods by acquiring bundled supply and capacity delivered to the city-gate.

This supply strategy is based upon the belief that several years of avoided demand charges will create a savings that surpasses the higher priced bundled supply and capacity delivered to the city-gate during peak periods of demand. Those utilities that have assets to management do project peak day that is in the typical range of usage per HDD per customer protection within our region. For one gas distributor, the system merely overruns its contract, and the overrun quantity becomes their new peak day and contract demand.

Opportunities to acquire additional upstream assets are scarce for most municipal gas systems in North Carolina and are usually brought to the attention of small systems by their natural gas marketer. Since direct capacity from Transco Gas Pipe Line, the sole interstate pipeline in the state, is unavailable at present, third-party capacity is the only feasible option. Thus, most of the effort must come from the gas system to seek out additional upstream resources through request-for-proposals or other means. This requires time and effort by personnel the smaller systems do not have.

Industrial customers wield exceptional bargaining power with small systems. The majority of small systems plan and acquire resources to meet the load of their interruptible customers. These costs are not reflected in the rates charged to these customers due to the political pressure as a large, and sometimes one of the few, employers in the service territory.

Frontier's Policy

The Company's submitted policy statement closely matches the best practice for design day demand requirements or peak day estimation. The Company's Gas Supply Committee will make peak day statistical forecasts as part of a comprehensive gas supply plan. The annual plan forecast will provide monthly and rate class detail using traditional and commonly accepted variables for gas utility forecasting including usage per HDD per customer, number of customers and operational constraints.

The written policy delineates a peak day protection of a one-in-twenty-five year winter. This complies with Commission Rules R6-23. There is a provision to review this in the event of significant changes during the year. The annual plan will be compiled by a gas supply committee and approved by senior management to be implemented before the heating season. The annual plan and post-audit will provide documentation of efforts to implement and follow policy. The documentation of plan deviations will ensure a continued re-visitation of the plan document and will promote adherence to the plan and internal control.

In an effort to improve forecasting and estimating accuracy, a post-audit analysis is performed the following year to determine accuracy of the forecast versus actual experience. This reconciliation

analysis, and potential changes to estimating methods, is included in the following year's annual gas supply plan.

The principle concern, as with other small companies, is the lack of expertise in this area. The policy addresses this concern by allowing for individuals outside of the Company to serve on the committee. Per the policy, conflicts of interest by such outside participants must be disclosed. This is a normal concern when using outside personnel. Sophisticated forecasting techniques may not be necessary to achieve accuracy on a smaller system. An experienced person(s) may be able to provide judgment regarding the level of model sophistication.

Recommendation

- We recommend an earnest effort to select individuals with exceptional capabilities and experience to serve on the gas supply committee.
- Review past forecasts and estimates for accuracy. Refine methods and factors used in forecasts and estimates.

Policy and Practices for Gas Supply Procurement

Best Practices

The best practices for gas supply procurement suggest a comprehensive econometric forecast and gas supply plan. A written policy typically states a philosophy and strategy such as "least-cost dispatching" whereby the least costly supply source is used in any situation. Once that source is exhausted, the next lowest cost of supply is used.

Policies governing the use of hedging programs and other derivatives employed to fix forward prices are mandatory in good gas supply procurement policy. This is due to the large financial impact an extreme position can make. Hedging policies normally specify quantitative limits on positions as a percentage of sales relative to spot versus forward prices. Often acceptable timing, tactics and strategies are outlined. The Commission has specified guidelines for regulated North Carolina gas utilities in the past.

Good policy provides that purchase instructions to suppliers as well as derivative positions require countersignatures or authorization by a second person. This internal control thwarts fraud and mistakes by inexperienced personnel. Documentation of gas supply plan deviations are made at this time.

In North Carolina, scarce pipeline capacity is the constraint that normally drives prices. Acquisition of the supply commodity is not nearly as challenging as the acquisition of upstream assets. The development of an annual gas supply plan that delineates the upstream and on-system resources to be used to serve the system requirements throughout the year is paramount. This is pertinent to Commission Rules R6-23.

Annual gas supply plans should analyze the costs of upstream and on-system resources on both a short-term and long-term basis. Bids are acquired on the variety of services that are available from suppliers. The policy dictates the consideration of important features such as price, security, flexibility, deliverability, working relationship, creditworthiness, etc. The policy will outline how bids will be ascertained, vetting process and acceptable contract terms. In the alternative, this is included in the practices and procedures along with the protocol for weighting such attributes and ascertaining bids and cost information (*i.e.*, request for proposals) rather than a policy statement.

Once the portfolio of resources is chosen, costs are segmented on a per unit basis during comparable seasons for each of the supply options under comparison. Then, a matching of throughput versus least-cost resource strategy is performed. A rank order is determined by which a requirement is met with a particular resource during any particular season. A section regarding what specific events, operational procedures and timing of when firm customers' service interruption would commence in the event of a catastrophic winter or event is included.

As with the best practices for design day demand requirements, a plan compiled by a staff of individuals with training, education and experience in such matters is best. This minimizes the likelihood of costs being overlooked and improves the consistency in calculations. The plan is approved by the committee and senior management to be implemented through budgets.

As with the best practices for design day demand requirements, the gas supply plan and resource cost analysis is performed annually. The approach of forecast models estimates the subset components which form the larger forecast for the entire system. Sophisticated forecasting models along with the appropriate forecasting variables will improve estimating accuracy. Post-audits and reconciliation of forecasts versus actual performance will determine over time which variables improve forecasts.

Survey

As with the best practices for design day demand requirements, smaller gas systems are constrained by their lack of resources and personnel. Four of seven surveyed systems do not have formal gas supply policies and procedures. Only two of seven systems have gas supply planning committees. The other responses range from light planning to best practices standards for assessing supply options. Six of seven systems provide nominations and instructions by informal telephone conversation between gas system representative and the natural gas marketer. Supplier orders are implemented immediately and are confirmed in an email. Only one system among the seven that responded had any internal controls regarding orders to suppliers. The majority of small systems do not have generally acceptable gas supply procurement planning practices or internal controls.

A contributing factor for the apparent lack of gas supply procurement plans is that most of the small systems in North Carolina are in economically stagnant areas, opportunities are limited and they lack an appetite for investment. The sold-out capacity on the Transco interstate pipeline has left few resource opportunities to even consider. When opportunities to acquire peaking or storage resources come about, they are often cost prohibitive on their face without performing an analysis. It is not unusual for inquiries to go unanswered by suppliers or receive zero responses to a request for proposals. It is not usual for suppliers to display its disinterest by proposing an absurd price for little service to end the smaller system's inquiry. This fulfills the supplier's obligation to be responsive to inquiries.

On-system resources (*i.e.*, propane-air plant, LNG, storage) are costly to maintain if not used regularly. Recent warm winters have made acquisition or investment in peaking assets difficult arguments to make to Boards and Councils. Most systems have had a propane-air plant at one time but dismantled it as upstream alternatives proved more cost effective over time. The only system with an on-system resource (LNG plant) uses it as an important source in meeting its winter season load, not just peaking periods. On-system storage of significant size is a large investment especially if the facility requires compression.

Six of seven systems use hedging programs and other derivatives to fix forward prices. Three of six systems have formal written hedging policies. Four of six systems specify quantitative limits on positions as a percentage of sales relative to spot prices versus forward prices. The majority of small systems have good hedging policy and practices.

Four of seven systems use asset managers to operate their supply and resource portfolio. The end of the term of such an agreement is the point in time when more systems consider their supply options or when an opportunity is brought to their attention by their marketer. Systems will consider price, security, flexibility, deliverability, working relationship, creditworthiness, etc. Typically, the City's policy will dictate how bids will be ascertained, vetting process and acceptable contract terms. The Systems have non-discriminatory policy and practices in regards to evaluating supply options.

Frontier's Policy

The Company's submitted policy statement closely matches the best practices for Gas Supply Procurement. Its written policy states a philosophy and strategy of "Best Evaluated Cost". This strategy

entails seeking adequacy, flexibility, security/creditworthiness of supplier, reliability/dependability of supply, cost of gas and quality of supplier(s). Although the annual gas supply plan will attempt to ascertain costs and bids for a variety of services for its comparative cost analysis, it will meet the same lack of interest that many smaller gas distribution systems encounter from suppliers.

The Company's hedging policies provide specific quantitative guidelines that govern the use of hedging instruments and other derivatives engaged to fix forward prices. The policy provides for good internal controls that require purchase instructions to suppliers as well as derivative positions to have countersignatures or authorization by senior personnel.

The policy considers Commission Rules R6-23. Its description of its annual gas supply plan appears to be comprehensive in dictating consideration of all traditional and not as common upstream and on-system assets and resources with its annual gas supply plan. It states its general criteria for assessing supply options as including adequacy, flexibility, security/creditworthiness of supplier, reliability/dependability of supply, cost of gas and quality of supplier. The steps for ratification, implementation and control of the annual gas supply plan by management are outlined.

As with the best practices for design day demand requirements, a plan compiled by a staff of individuals with training, education and experience in such matters is preferable. This is not as crucial as for forecasting peak day and annual requirements. Most of the analysis will consist of comparing bids and proposals, which do not require the higher level skill set of forecasting.

Recommendation

- No changes are recommended.

Policy and Practices for Gas Supply Curtailment

Best Practices

The best practices for gas supply curtailment indicate a need for frequent communication with customers on interruptible service plans. Compliance with regulation (Commission Rules - R6-19.2) is mandatory as well as terms and conditions of the system's tariff to ensure fairness to other customers. The necessary plant and equipment to monitor and ability to enforce curtailment is necessary to control the service. A curtailment procedure should provide specific steps in the event of a curtailment and become part of the annual gas supply plan.

Frequent communication ensures that customers on these service schedules maintain familiarity with the terms of their service and that contact information is updated before the winter season. This will minimize the inconvenience of service interruptions. A monthly newsletter with constant reminders of the nature of their service and advanced warnings of approaching weather or constraints are sent electronically. Contact information for working hours and after hours ensures customers are notified immediately of curtailment orders.

Equipment to monitor and ability to enforce curtailment is required for compliance of the terms of service and fairness to other customers. On-site metering, SCADA or other real-time telemetry equipment to render monitored interruptible service is installed at the customer's expense. The cost of equipment may be paid lump sum or through rates charged to the customer. The level of usage and related costs determine whether remote shut-off capability is installed. Enforcement through sufficiently punitive rates or penalties for non-compliance is also important for fairness to other customers. An annual on-site inspection for an operable alternative fuel source is performed in cases where a secondary source is required to qualify for the service schedule.

Commission Rules should become a part of the system's curtailment policy. The policy should refer to a practice or procedural document for precise steps of when and how a curtailment will proceed. The procedure should list the rank and order (per Commission Rules - R6-19.2) of which specific customers'

service will be interrupted and the expected approximate flow and line pressure impact on the system. The procedure should list the steps to comply with notification requirements in the system's service schedule and any Commission rules and regulations. Procedures of how crews will be dispatched if physical lock-off at the customers meter is also necessary.

Survey

Communications with interruptible service customers by North Carolina municipal gas systems is the one area in which they appear to have an advantage over larger gas systems. Often the number of interruptible service customers is only a dozen or two, at most. It is practical to telephone each customer individually for notification and answer any questions. All of the survey participants exceed the mandated two-hour notice in terms of frequency and information. As stated previously, the systems often plan resources and operations to keep these customers on-line. They are essentially charged interruptible service prices for firm service.

Four of six systems have the ability to monitor flow and pressure at the interruptible service customers' meters. The other two respondents are making efforts to install equipment. None have SCADA or remote shut-off capabilities at the interruptible service customers' meters. Besides budgetary constraints, enforcement through sufficiently punitive rates or penalties for non-compliance is restrained due to political pressures. Thus, overruns and non-compliance by interruptible service customers can and do occur without repercussions. Inspection for an operable alternative fuel source where a secondary source is required to qualify for the service schedule is absent on the systems.

North Carolina small systems appear to have good communications with interruptible service customers but have weak enforcement.

Frontier's Policy

The Company's submitted policy statement closely matches the best practices for curtailment of natural gas service. The policy complies with the Commission Rules R6-19.2. It incorporates the Commission's priority list into the policy.

The communication policy consists of contacting the pertinent customers with reminders of the nature of their service before the winter season; advanced warnings of approaching weather or constraints; and compilation of current contact information, and thereby is a best practice.

The necessary plant and equipment for real-time monitoring of interruptible service is a requirement of the service. Given the limited number of pertinent customers, physical shutoff is a feasible option. Enforcement through sufficiently punitive rates or penalties for non-compliance is weak. The policy refers to the tariff where the penalty is \$25 per dekatherm. This is no longer a satisfactory penalty given that this past winter prices exceeded \$125 per dekatherm in Transco Zone 5. The language should be modified to allow pass-through of the highest costs incurred during the period of their non-compliance or unauthorized use, in addition to tariff penalties.

The policy does not refer to measures to verify an operable alternative fuel source for interruptible service customers. This should be performed annually because it is required to qualify for the interruptible service schedule. This issue is more appropriately addressed in the tariff rather than a policy statement. It is mentioned here because the policy refers to the tariff.

The policy does not reference a practice or procedural document of precise steps of when and how a curtailment will proceed. During emergencies and hurried decision making, compliance with Commission rules and regulations and tariff provisions can be forgotten. Compiling an action plan during the emergency can be a challenging task when time is of the essence. The procedure should list the rank and order (per Commission Rules - R6-19.2) of which specific customers' service will be interrupted and the expected approximate flow and line pressure impact on the system. The procedure should list the steps to comply with notification requirements in the system's service schedule and any Commission

rules and regulations. Procedures of how crews will be dispatched if physical lock-off at the customer meters is necessary.

Recommendation

- The Company's tariff remedy for unauthorized or non-compliant use within the interruptible service schedules is inadequate. The penalties or rate adjustments do not act as a significant deterrent or reflect potentially high priced supply borne by the Company and other customers. The language should be changed to allow pass-through of higher costs incurred for their non-compliance or unauthorized use in addition to penalties.
- There is no verification of an alternative fuel capability as mandated in the tariff. Policy or tariff requirements of test interruptions or visual inspection of an operable alternative source should be implemented.
- A specific procedural curtailment plan should accompany the annual gas supply plan and be referred to in the policy.

Policy and Practices for Technical Training

Best Practices

Natural gas accidents over the past few decades have brought about a significant amount of regulatory oversight, laws and regulations. This has improved technical training requirements and operator qualifications for pertinent tasks and positions to a higher level. The best practice for technical training includes compliance with federal and state laws and regulations as well as Commission mandates.

Training policies that state how compliance will be achieved and maintained for the affected positions is imperative. Best practices policies dictate that a compliance officer position, with no conflicting duties or lines of reporting, sufficient policing powers and adequate budget to rectify situations, is the most effective measure. As with any policing situation, the effort can be compromised if the compliance position can be a potential violator. Much the same, the effort can be compromised if the compliance position reports to a potential violator. The compliance position should be unfettered with other position conflicts of interest and unrestricted in identifying deficiencies and reporting to senior management. Budget restrictions can defeat a compliance effort, intentionally or unintentionally. Adequate budgeting for the compliance staffing effort and to address training needs will support an earnest compliance effort.

It is the compliance officer who will confirm the particular position's job responsibilities, descriptions and tasks to determine if positions have covered tasks which fall under operations, construction, maintenance, safety, meter testing, billing, and gas control operations and are subject to regulation. These covered task areas require operator qualifications as directed by the Pipeline and Hazardous Materials Safety Administration (PHMSA) under the U.S. Department of Transportation. The compliance officer confirms employees are trained in integrity management protocol and the system's operating and maintenance manual practices and procedures. In cooperation with other operating personnel, operating and maintenance manuals and training materials (*i.e.*, books, manuals, software, etc.) are complete and are updated periodical to reflect changes in rules, regulations, information and improved methods. In the cases of large utility systems, their resources and employees involved allow them to conduct all training needs immediately on-site. In other situations the supervisors, employees and the compliance staff have input regarding the medium (*i.e.*, on-site, off-site, hands-on, etc.) and its effectiveness. Often all methods are used depending on the number to be trained, urgency, cost and effectiveness.

The compliance officer as well as the position's supervisor will meet in person with the new hires to assess their training requirements. Any deficiencies, or further assessment, are determined at that time and an action plan is made to bring the employee into compliance. Periodic review that occur no less frequently than semi-annually will confirm and document training received and training needs. Random field inspections of employee performance will increase the frequency of observations.

Survey

Adherence to and tracking of all of the voluminous laws and regulations can be challenges, especially for a small system. However, regulations ensure that the smaller municipal systems' practice closely matches the best practices for technical training.

Four of seven systems have a compliance officer position. The remaining three have a position that assumes the compliance duties. Three of seven systems have a formal training policy. The others make their policy through job descriptions or requirements.

Employee training is documented and discussed at annual reviews. Six of seven systems review or inspect employee performance more frequently. Once identified, most use all methods depending on the number to be trained, urgency, cost and effectiveness.

Frontier's Policy

The Company's submitted policy statement matches the best practices for technical training. As a small system that lacks economies of scale, compliance with training regulations is a financial burden.

The policy mandates a compliance officer position with no conflicting duties or lines of reporting. The delineated budget and its particulars for training compliance will be evidence of the effort. Confirmation of the policy implementation and adherence will be made in budgets and personnel records.

The policy places the responsibility of training and education record keeping; update of manuals (both training and O&M) to reflect current regulation; and position documentation with the compliance officer. Employee training is document and is discussed at annual reviews. Once identified, the Company will use all methods depending on the number to be trained, urgency, cost and effectiveness.

Recommendation

- No changes are recommended.

In summary, Kan Huston Associates LLC recommends the following changes to Frontier Natural Gas Company LLC documents:

With respect to peak day forecasts and determination of contract demand policy:

- We recommend an earnest effort to select individuals with exceptional capabilities and experience to serve on the gas supply committee.
- Review past forecasts and estimates for accuracy. Refine methods and factors used in forecasts and estimates.

With respect to curtailment policy:

- The Company's tariff remedy for unauthorized or non-compliant use within the interruptible service schedules is inadequate. The penalties or rate adjustments do not act as significant deterrents or reflect potentially high priced supply borne by the Company and other customers. The language should be changed to allow pass-through of higher costs incurred for their non-compliance or unauthorized use in addition to penalties.
- There is no verification of an alternative fuel capability as mandated in the tariff. Policy or tariff requirements of test interruptions or visual inspection of an operable alternative source should be implemented.
- A specific procedural curtailment plan should accompany the annual gas supply plan and be referred to in the policy.

Kan Huston Associates, LLC

Chapel Hill, North Carolina

August 29, 2014

EXHIBIT A

POLICY STATEMENTS

Frontier Natural Gas Company, LLC

Policy and Practice of:

Determination of Gas Supply Requirements - Design Day Demand Requirements and/or Maximum Daily Quantity

Purpose

It is the Frontier Natural Gas Company, LLC (Frontier) mission to provide safe and reliable natural gas service at a reasonable price to our customers. The purpose of this policy is to provide direction for the procurement of resources to meet peak day requirements and to establish financially sound, responsible, and prudent guidelines for the assessment of peak requirements for the operation of the natural gas utility system. Per Frontier's Gas Supply Procurement Policy, a Gas Supply Planning Committee exists to pursue this mission.

Objective

The determination of gas supply requirements and design day demand requirements policy of Frontier seeks to accurately estimate the system peak day usage and requirements. This is accomplished through a diligent effort estimate in a detailed and organized approach.

Regulatory Authority

Frontier is a natural gas local distribution company and is as a public utility under the laws and regulations of the State of North Carolina pursuant to Chapter 62 of the North Carolina General Statutes. Frontier is also regulated per the rules and regulations set forth by the North Carolina Utilities Commission.

Policy

Frontier's Gas Supply Planning Committee (Committee) uses a "Best Evaluated Cost" supply strategy to achieve gas supply procurement objectives and goals. This strategy entails seeking supply sufficiency, flexibility, security/creditworthiness of supplier, reliability/dependability of supply, cost of gas and quality of supplier(s).

Each year the Committee will review in the Gas Supply Plan Report (Annual Plan) to senior management the natural gas historic sales volumes of bundled customers and forecasts of future load requirements based on firm process and heat load required to supply new bundled customers. As part of the Committee's Annual Plan to senior management, a specific section will estimate the system's maximum daily requirement (MDQ). This section of the Annual Plan will be immediately revised and updated before the next winter season when an estimated change in MDQ is significantly greater than the current firm load or firm MDQ.

The Annual Plan section regarding MDQ will be segmented monthly and the MDQ will be determined based on the maximum historic daily load and the projected additional daily volume added to the system by rate class. The MDQ is the volume Frontier's supplier is required to supply at any given time during the month.

Statistical-based forecasts and estimates will be formulated upon factors including, but not limited to, heating degree days, usage per heating degree day, customer growth and other historical correlations and factors that appear to drive natural gas consumption for particular customer classes. Engineering concerns regarding system pressure during peak periods and the challenges of skewed growth will be addressed in the Annual Plan. The Annual Plan will delineate the estimated supply to meet an MDQ or design day demand requirements under a most likely scenario and a one in twenty-five years winter scenario. A reconciliation analysis between last year's accepted plan and actual performance will be provided in the Annual Plan. The Annual Plan will explain variations from plan; adherence to policy and areas in which methods can be improved. Potential bias of any Committee members will be disclosed in this Report when their opinion alone is relied upon. The Annual Plan will contain or cite supporting documents for its conclusions and recommendations.

Notwithstanding the above Annual Plan the Committee may continually evaluate the MDQ level and adjust as necessary on a less formal basis. Representatives of the Committee will evaluate the HDD on a weekly and daily basis and coordinate through the gas marketer/shipper/supplier for necessary adjustments in gas deliveries.

The Committee will utilize, but not be limited to, consultants, industry peers, gas marketers, affiliated entities, market indicators, seasonal weather forecasts, periodicals and forecasts in pricing to gather intelligence on the direction of natural gas and pipeline capacity prices.

The Committee head will be responsible to initiate the Report, its updates, and its delivery to senior management, in a timely manner. Senior management will authorize and direct gas supply staff to implement and execute the accepted plan and any modifications in a timely manner. Adjustments to or deviations from the plan during interim periods will be documented via correspondence from the Committee head to the senior management.

Frontier Natural Gas Company, LLC

Policy and Practice of: Gas Supply Procurement

Purpose

It is the Frontier Natural Gas Company, LLC (Frontier) mission to provide safe and reliable natural gas service at a reasonable price to our customers. The purpose of this policy is to provide direction for the procurement of natural gas for resale and to establish financially sound, responsible, and prudent guidelines for the procurement of natural gas from available sources for the operation of the natural gas utility system.

Objective

The Gas Supply Procurement policy of Frontier seeks supply adequacy, reliability, diversity, and minimization of the associated costs. This begins with an accurate estimation of the customer usage requirements and how to meet them in an efficient manner. This is accomplished through a diligent effort to assess available supply options to meet system and customer requirements in an organized approach.

Regulatory Authority

Frontier is a natural gas local distribution company and is as a public utility under the laws and regulations of the State of North Carolina pursuant to Chapter 62 of the North Carolina General Statutes. Frontier is also regulated per the rules and regulations set forth by the North Carolina Utilities Commission (Commission).

Policy

It is Frontier's policy that a Gas Supply Planning Committee (Committee) be established and maintained to pursue this mission. The Committee's individuals may be comprised of persons who are company staff, consultants, industry peers, gas marketers, and from affiliated entities. The information they will use includes, but is not limited to, market indicators, seasonal weather forecasts, periodicals and forecasts in pricing to gather intelligence on the direction of natural gas and pipeline capacity prices. Frontier uses a "Best Evaluated Cost" supply strategy to achieve Gas Supply Procurement objectives and goals. This strategy entails seeking adequacy, flexibility, security/creditworthiness of supplier, reliability/dependability of supply, cost of gas and quality of supplier(s). The Committee will consider the resources available to accomplish this task.

Each year the Committee will review the natural gas historic sales volumes of bundled customers and forecasts of future load requirements based on added process and heat load required to supply new bundled customers in a Gas Supply Plan Report (Annual Plan) to senior management.

The Annual Plan will estimate the segmented monthly and daily quantity based on the historic loads and the projected additional daily volume added to the system by rate class as well as firm and interruptible

customers. Statistical-based forecasts and estimates will be formulated using heating degree days, usage per heating degree day, customer connects or losses and other historical correlations and factors that appear to drive natural gas consumption for particular customer classes. Engineering concerns regarding system pressure during peak periods and the challenges of skewed growth will be addressed in the Annual Plan. The Annual Plan will delineate the estimated supply to meet requirements under a most likely winter scenario as well as a one in 25-years (or heating degree-day equivalent) winter scenario, and thus will project reasonably expectable demand for firm service under North Carolina Utilities Commission Rule R6-23 for adequacy of supply.

In order to assess the supply needs to best pair with available capacity, a source/use section in the Annual Plan will estimate seasonal and peak demand day requirements (firm base load and heat sensitive consumption) (see also Design Day Demand policy) versus the resources use to meet these requirements. In addition to suppliers' peaking and storage services, upstream resources may include supplies that are base load, swing, seasonal supply, spot purchases, and/or hedging. Peak period resources to be considered will include, but not limited to, air-propane plants, liquefied natural gas (LNG) plants and on-system storage. Per Commission, Rule R6-23 - Adequacy of supply, assessment of the production and/or storage capacity of the utility's plant, supplemented by the gas supply regularly available from other sources, must be sufficiently large to meet all reasonably expectable demands for firm service will be made.

"Suppliers" shall mean any person or entity who locates, produces, purchases, sells, stores and/or transports natural gas or its equivalent to, for or on behalf of the Frontier. Suppliers may include, but not be limited to, interstate or intrastate pipeline transmission companies, producers, brokers, marketers, associations, joint ventures, providers of Liquefied Natural Gas, Liquefied Petroleum Gas, Synthetic Natural Gas and other hydrocarbons used as feed stock, other local gas distribution companies and end-users.

In evaluating and determining the proper resources to procure for the system, the Company will consider other important factors such as, but not limited to, adequacy, price, security, flexibility and deliverability. Market pricing, cost and operational considerations may be stable for some resources; a comprehensive evaluation each year may not be necessary for such resources. References to a prior year's Annual Plan may be sufficient for the current evaluation. In some instances, request for quotes or request for proposals may be necessary to acquire price or cost data. In such instances, Frontier will not discriminate against any entity or submitter because of race, color, religion, sex, age, national origin or handicap.

The general strategy is to serve incremental load and peak usage periods following a least-cost dispatch strategy. Typically, Frontier compares the price at which it can acquire bundled supply and capacity versus the cost of other alternatives. A determination of what type of resource(s) should be acquired or developed for meeting the Company's deliverability needs in deciding whether the Company should acquire pipeline transportation capacity; peaking service; acquire liquefied or compressed natural gas plant (LNG or CNG) and facilities; acquire a propane air plant and facilities; acquire a storage service; develop additional on-system storage deliverability or any other supply options. Assuming all other things (i.e., security, flexibility, deliverability, etc.) being equal, alternatives will be ranked and selected according to cost. The Committee will evaluate these alternatives each year for their appropriateness in the context of its strategy, portfolio and Annual Plan, and will produce a gas procurement plan that best meets the Frontier system demand for both capacity and supply.

A reconciliation analysis between the previous year's approved Annual Plan and actual performance will be provided in the current Annual Plan. The Annual Plan will provide an explanation of significant variations from the approved plan, adherence to policy, and areas in which methods can be improved. Potential bias of any Committee members will be disclosed in this Report when their opinion alone is relied upon. The Annual Plan will contain or cite supporting documents for its conclusions and recommendations.

The Annual Plan shall contain an action plan with time table to implement the Annual Plan recommendations. The Committee head will be responsible to initiate the Annual Plan, its updates and delivery to senior management in a timely manner. Senior management will direct staff to implement the accepted plan and any modifications in a timely manner.

Notwithstanding the above Annual Plan, it is the Committee's practice to continually evaluate the current requirements and make adjustments as necessary on a less formal basis. Representatives of the Committee will evaluate the HDD on a weekly and daily basis and coordinates through the shipper/supplier for necessary adjustments in gas deliveries.

Suppliers will be notified of individuals that can execute instructions and orders. Instructions and orders will be counter-signed by another individual familiar with the Annual Plan. Document or notation will be made at this time if significant deviation from the Annual Plan is instructed or ordered. Suppliers will provide written confirmation of instructions and orders via fax or electronic communication to appointed individuals as documentation.

Current Practice

It is Frontier's current practice to employ one supplier to centralize purchasing and reliability of gas deliveries under a full requirements contract. It is Frontier's policy to evaluate this and different strategies and tactics to promote price stability and cost efficient purchasing in the Annual Plan or as opportunities arise.

The core of Frontier's current strategy is to obtain reliability and price stability by fixing components of the gas cost, including fixing commodity costs and/or transportation costs of the commodity.

The objective behind the weighted average approach is to take advantage of any market movements in pricing that may occur as a protective measure and/or saving opportunity. Frontier has a three part pricing strategy in gas purchasing: 1) Hedging, 2) First of the month and 3) daily. Depending on current pricing compared to historical, Frontier will incorporate the best pricing methodology to obtain the optimum opportunity in savings and price stability. Frontier purchases gas in Summer and Winter strips and evaluates their hedging or fixed pricing opportunity based on these individually and as a whole.

To stabilize Frontier gas cost and to obtain pricing opportunities, the strategy is to buy gas through a combination of hedging, first of the month, and daily. This strategy, depending on market conditions, is approached through three methodologies: 1) Conservative, 2) Moderate and 3) Aggressive:

Exhibit C

1. Conservative: Hedge 0-25% of forecasted volumes when pricing is +/- 10% historical pricing levels for the strip period or for the month.
2. Moderate: Hedge 25-40% of forecasted volumes when pricing is 25% less than historical levels.
3. Aggressive: Hedge 40-75% of forecasted volumes when pricing is 50% less than historical levels.

If Frontier is unable to meet pricing targets to lock in gas for the upcoming winter period prior to September, then the Frontier will lock in a minimum of each monthly volume of between 25% and 50% to provide upward price protection. In order to procure the most competitive natural gas pricing available for Frontier consumers, the company will seek a minimum of three responses to an RFP for its supply of natural gas.

Frontier Natural Gas Company, LLC

Policy and Practice of: Curtailment of Natural Gas Service

Purpose

It is the Frontier Natural Gas Company, LLC (Frontier) mission to provide safe and reliable natural gas service at a reasonable price to our customers. The purpose of this policy is to provide direction for operation of the system during periods of curtailed natural gas service and to establish financially sound, fair, responsible, and prudent guidelines for operation of the natural gas utility system during such periods.

Objective

The curtailment of natural gas service objectives of Frontier establishes compliance, fairness, responsibility, prudence, and minimization of the associated costs. It is also Frontier's objective to comply with regulatory body policy regarding priority and order of disruption of natural gas service where operationally possible. This is accomplished by having the best available and real-time system and customer gas flow information as well as system operations. The ability to enforce curtailment orders and operations during times of constraint are paramount in maintaining a safe and reliable system.

Regulatory Authority

Frontier is a natural gas local distribution company and is as a public utility under the laws and regulations of the State of North Carolina pursuant to Chapter 62 of the North Carolina General Statutes. Frontier is also regulated per the rules and regulations set forth by the North Carolina Utilities Commission (Commission).

Policy

Frontier's policy is to acquire or construct resources necessary to meet reasonable expectations of natural gas supply requirements, in compliance with Commission rules and regulations under R6-23 – Adequacy of supply and Frontier's gas supply procurement policy, for its firm requirements customers. In the event that Frontier cannot supply the demands of all of its firm customers, curtailment of natural gas service may be necessary to maintain the system's operational status. It is Frontier's policy and its tariff provisions to curtail firm customers under the priority established under Commission rules and regulations R6-19.2 – Curtailment of service.

In compliance with Rule R6-19.2, Frontier follows the policy that, in instances where firm customer curtailment of natural gas service is required, customers paying the least margin per dekatherm will be curtailed first. This applies to all customers, be they transportation customers, regular sales rate customers, municipal customers or otherwise. However, if operating conditions require some interruption of service to a

particular geographical area instead of a utility's entire system, then curtailment by margin will be applied only to those customers within the affected areas.

If it is necessary to interrupt some but not all customers paying the same margin per dekatherm, then, to the extent practicable, service shall be curtailed to the customers paying the same margin per dekatherm on a pro rata basis for the season. Customers may refer to Frontier's tariff and general terms and conditions for specifics of which rate schedule they receive service under and the rate schedule's curtailment priority. It is Frontier's policy and the Commission's rules and regulations that curtailment categories are:

(i) Priority 1. Residential. Essential Human Needs With No Alternate Fuel Capability. Commercial less than 50 Dth/day.

1.1 Residential requirements and essential human needs with no alternate fuel capability.

1.2 Commercial less than 50 Dth/day.

1.3 Agriculture

Priority 2. Industrial Less Than 50 Dth/day. Process, Feedstock and Plant Protection With No Alternate Fuel Capability. Large commercial requirements of 50 or more per day except for large commercial boiler fuel requirements above 300 Dth/day.

2.1 Industrial less than 50 Dth/day.

2.2 Commercial between 50 and 100 Dth/day.

2.3 Commercial greater than 100 Dth/day, non boiler use.

2.4 Commercial greater than 100 Dth/day, with no alternate fuel capability.

2.5 Industrial process, feedstock and plant protection between 50 and 300 Dth/day, with no alternate fuel capability.

2.6 Industrial process, feedstock and plant protection between 300 and 3,000 Dth/day, with no alternate fuel capability.

2.7 Industrial process, feedstock and plant protection greater than 3,000 Dth/day, with no alternate fuel capability.

2.8 Commercial over 100 Dth/day (excluding commercial Priorities 2.3 and 2.4 and commercial boiler fuel requirements over 300 Dth/day).

Priority 3. All other industrial requirements not greater than 300 Dth per day.

3.1 Industrial non boiler between 50 and 300 Dth per day.

3.2 Other industrial between 50 and 300 Dth per day.

Priority 4. Non boiler use between 300 and 3,000 Dth/day.

Priority 5. Non boiler use greater than 3,000 Dth/day.

Priority 6. Boiler fuel requirements of more than 300 Dth per day but less than 1,500 Dth per day.

Priority 7. Boiler fuel requirements between 1,500 and 3,000 Dth/day.

Priority 8. Boiler fuel requirements between 3,000 and 10,000 Dth/day.

Priority 9. Boiler fuel requirements greater than 10,000 Dth/day.

Operational considerations of the natural gas system will take precedence over the above priority list.

Per Frontier's Determination of Gas Supply Requirements - Design Day Demand Requirements and/or Maximum Daily Quantity Policy, Frontier acquires resources based on firm requirements only. During high system usage or operational constraints, customers under interruptible service rate schedules or agreements may experience interruption. All firm customers will have priority over interruptible classes of service where possible.

It is Frontier's policy and practice to maintain contact information of the individuals at the entities that are served under interruptible service rate schedules or agreements for notification purposes. Frontier will communicate with interruptible customers at the beginning of the winter season of the nature of their service via letter or electronic means. In the event of high system usage or operational constraints (i.e., operational flow orders, etc.) forecast, Frontier will attempt to notify customers as far in advance as practicable of potential curtailment.

Per Frontier's tariff for customers under Rate Schedule 161 – Large General Interruptible Service, customers will be notified at least two hours in advance of orders to curtail usage. Customers are expected to comply. Customers receiving service under Rate Schedule 171 – Interruptible Transport Service, may have service suspended on any day if system conditions require interruption of supplies. It is Frontier's policy and practice to have equipment and facilities in place to provide telemetry and real time flow information at the city-gate(s) where it receives supply, key operational points on the system, and at interruptible customers' meter(s). Failure by interruptible customers to comply with curtailment orders will resort in the remedies detailed in the tariff which includes penalties and physically locking off the meter at the customer's premises during curtailment.

Frontier Natural Gas Company, LLC

Policy and Practice of: Technical Training and Education

Purpose

It is the Frontier Natural Gas Company, LLC (Frontier) mission to provide safe and reliable natural gas service at a reasonable price to our customers. The training and education of employees in the operational positions are vital in support of this mission. The purpose of this policy is to set forth the authority to establish financially sound, responsible, and prudent guidelines for the training for the operations employees of the natural gas utility system.

Objective

Frontier's objective is to operate and maintain a safe, efficient and reliable natural gas distribution system. A key factor in pursuing this objective is to have properly trained and educated employees in all operations departments, which include, but are not limited to, operations, construction, maintenance, safety and billing employees. This objective is achieved through adherence to operator qualification requirements, Frontier's operating and maintenance manual (O&M manual), and integrity management principals as provided for by pertinent regulations.

Regulatory Authority

Frontier is a natural gas local distribution company and is as a public utility under the laws and regulations of the State of North Carolina pursuant to Chapter 62 of the North Carolina General Statutes. Frontier is also regulated per the rules and regulations set forth by the North Carolina Utilities Commission (Commission). The U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration provides operator qualification education and training rules and regulations for those employees performing covered tasks.

Policy

Frontier's policy is to provide training and to acquire training resources for its employees as required to comply with regulations and to assure a safe and reliable system. In order to ensure this policy, the position of compliance officer will be occupied by an individual with no conflicts of interest in Frontier and will report to senior management. This person's responsibilities will include maintaining training and education records of each employee; detailed knowledge of training and education rules and regulations; position descriptions that state all positions' training and education requirements; sources of training that are available; employee reviews that are conducted at least annually to assess training and education compliance; and action plans for employees that are deficient in their training or education. The compliance officer is responsible to ensure that O&M manual is kept up-to-date and complies with the current rules and regulations.

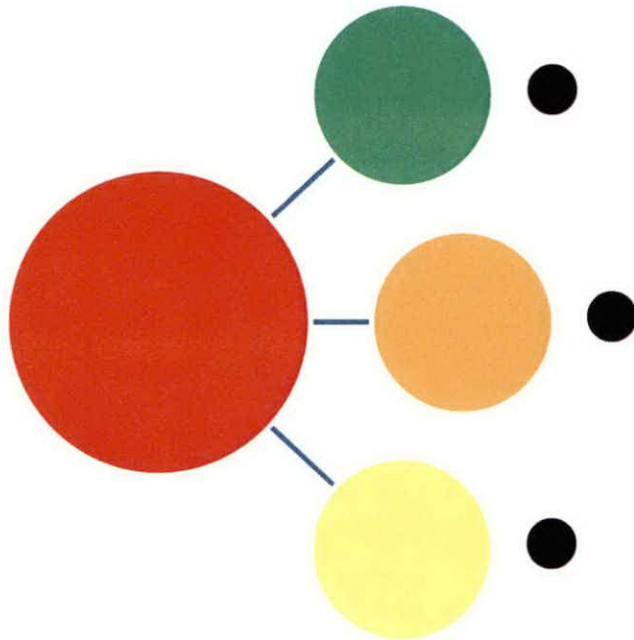
Training and education may be performed off-site or on-site. Frontier may use in-house experienced personnel or outside technical experts to conduct the training. Training and education may come in the form of, but not limited to, hands-on exercises, instruction, videos, manuals, books, and online programs. The compliance officer shall ensure in-house materials are maintained and up-to-date.

In order to ensure the compliance officer's identification of training and education needs is met, Frontier's annual budget shall delineate funding for such materials and expenses. Frontier's resulting authorized operating budget will specify how, when and where training and education will be provided or acquired.

EXHIBIT B

POLICIES AND PRACTICES SURVEY

North Carolina Municipal Gas Distribution Systems



Practices and Policies Survey

Kan Huston Associates, LLC

August, 2014

North Carolina Survey of Municipal Gas Distribution Systems

Gas Planning, System Operations, and Procurement Practices and Policies

Preface

The following is a survey of seven of North Carolina's eight municipal natural gas distribution systems in August 2014. The survey summarizes their systems and approaches to gas planning, operations, and procurement. More specifically, this survey establishes customary practices and procedures among the municipal gas distribution systems of North Carolina in the determination of peak day requirements, supply procurement, curtailment and training.

Although the municipal gas distribution systems are not regulated by the North Carolina Utilities Commission, they face similar challenges due to their smaller size. The systems do not possess the economies of scale that larger utility systems enjoy. The lack of resources possessed by larger operations requires such systems to seek policy and practice efficiencies that may exist on the lower end of a scale of controls that regulators might prefer. The mode of operation by municipal system management may create a standard where a balance is achieved among risk management and control while remaining economically viable.

The survey was conducted via telephone so that clarification questions could be asked. Kan Huston Associates makes no judgment in this report regarding the practices and procedures outlined in the municipal system's answers to the survey questions. The responses summarized below provide insight as to market forces' influence upon a municipal utility manager's allocation of resources within the economic constraints of a small system.

Kan Huston Associates, LLC

North Carolina Survey of Municipal Gas Distribution Systems

Gas Planning, System Operations, and Procurement Practices and Policies

Policy and practices for Design Day Demand Requirements

- 1) Do you have formal written policies and procedures with regard to how you determine your peak day, or MDQ, for contract demand or procurement of assets?

Frequency=5: No. Only discussions amongst gas personnel and gas marketer.

Frequency=2: Perform a long term plan that includes MDQ requirement assessment and how to meet the requirement. The policy is inferred from the plan.

- 2) Is there a formal process to ratify the final determination of MDQ/peak day/contract demand?

Frequency=5: No.

Frequency=2: The MDQ and contract demands are specified in budgets that are approved by Board/Counsel.

- 3) Is there a specified time as to when forecasts are made?

Frequency=5: No. It is a continual assessment that considers recent history.

Frequency=2: Each year or before the coming winter. However, it is continually monitored.

- 4) Are there specific assumptions regarding protection against severe cold (i.e., one-in-50 year winter, 50 heating-degree day, etc.) that estimates are based upon?

Frequency=3: No. Recent history is used as a guideline.

Frequency=1: Uses statistical forecast to estimate a 10% colder than normal winter.

Frequency=1: Uses statistical forecast with heating degree-days per customer as a major assumption for heating load. MDQ requirement is based upon 50 HDD. Delineated by class.

Frequency=1: Uses statistical forecast with heating degree-days per customer as a major assumption for heating load. MDQ requirement is based upon 53 HDD.

Frequency=1: Uses statistical forecast with heating degree-days per customer as a major assumption for heating load. MDQ requirement is based upon 55 HDD.

- 5) Does your MDQ peak day forecast incorporate interruptible customers' load in determining the acquisition of resources to the MDQ peak day?

Frequency=1: Not applicable. System has no interruptible customers.

Frequency=4: Yes. MDQ requirement estimate is based upon the total system which includes interruptible customers.

Frequency=2: No. MDQ requirement estimate is based upon firm load only which excludes interruptible customers.

- 6) Do you have procedures or controls to ensure that decisions and determinations of how MDQ peak day are going to be met are implemented?

Frequency=5: No. The resulting discussion amongst gas personnel and gas marketer are implemented immediately. Confirmation advice of actions taken is sent electronically to gas personnel.

Frequency=2: Budgets and annual plan details are ratified by Board/counsel.

Policy and practice for Gas Supply Procurement

- 7) Do you have formal written gas procurement policies and procedures?

Frequency=4: No.

Frequency=2: Perform a long term plan each year that includes gas supply procurement assessment and how to meet the requirement. The policy is inferred from the plan.

Frequency=1: Committee meetings minutes and action plans document policies and procedures.

- 8) Are policies enacted by individuals or a group (i.e., gas supply committee)?

Frequency=5: Individuals.

Frequency=2: Committee.

- 9) What is the nature of your upstream assets (i.e., pipeline capacity, storage service, peaking service, etc.)?

Frequency=3: The system has upstream pipeline capacity.

Frequency=1: The system has upstream pipeline capacity and storage service.

Frequency=1: The system has upstream pipeline capacity and peaking service.

Frequency=2: The system has upstream pipeline capacity, storage and peaking.

10) What is the nature of your on-system assets (i.e., air-propane, storage system, LNG, etc.)?

Frequency=6: None.

Frequency=1: LNG.

11) Does your policy delineate the type of resources that should be acquired or how often they should be assessed?

Frequency=4: No.

Frequency=1: Annually.

Frequency=2: During the performance of long term planning or when opportunities present themselves.

12) Do you use an asset manager who utilizes your system's idle upstream assets in return for a share of the proceeds or other compensation scheme?

Frequency=4: Yes.

Frequency=3: No.

13) Did you experience any system outages among your residential and commercial customers this past winter?

Frequency=7: No.

14) Were you forced to buy any high priced and/or penalty gas supply?

Frequency=1: No.

Frequency=6: Yes.

15) How often do you perform an in-depth evaluation of available resources and or strategy?

Frequency=2: Only in the context of an asset management agreement assessment.

Frequency=2: Annually.

Frequency=2: During long term planning.

Frequency=1: When opportunities present themselves.

16) What factors to you consider in such an evaluation? (e.i., price, security, flexibility, deliverability, etc.)

Frequency=2: Price and security are the major factors.

Frequency=2: The four suggested examples with price being the most important.

Frequency=1: The four suggested examples as well as working relationship and creditworthiness.

Frequency=2: The four suggested examples as well as working relationship and creditworthiness, with working relationship being the most important.

17) Have you considered developing on-system storage?

Frequency=1: Once a very long time ago. Determined it was not economical.

Frequency=2: Annually, along with evaluation of other resource alternatives.

Frequency=4: No. Other resource alternatives are more appealing.

18) Do you fix forward prices through purchase of futures contracts or other derivatives?

Frequency=6: Yes.

Frequency=1: No.

19) Do you have a formal written hedging program?

Frequency=3: No.

Frequency=3: Yes.

Frequency=1: Not applicable since the system does not hedge.

20) If so, do you have specific quantitative guidelines in your hedging program?

Frequency=2: No.

Frequency=4: Yes.

Frequency=1: Not applicable since the system does not hedge.

- 21) Do you have controls in place to prevent unauthorized nominations, purchases, payments, etc. with respect to gas supply?

Frequency=6: No. The instructions by gas personnel are implemented by the gas marketer. Confirmation advice of order or actions taken is sent electronically to gas personnel.

Frequency=1: Gas manager's orders authorized by Supply committee are verified by finance. Suppliers understand that orders must be counter authorized.

Policy and practice for Curtailment Policy

- 22) Other than the notification the hour or two before interruption of service, what is the nature of your on-going communications with interruptible customers to remind them of the nature of their service?

Frequency=1: Not applicable. The System has no interruptible customers.

Frequency=1: Send a monthly newsletter. Often notification of likelihood of interruption is sent the day before curtailment via fax, email or telephone (telephone during working hours.)

Frequency=1: Annual letter. Constant communication via email leading up to cold weather and potential interruption. Usually, attempt to give two-days notice when interruption is very likely.

Frequency=2: Constant communication via email/telephone leading up to cold weather/OFOs and potential interruption. Usually, attempt to give one-day notice when interruption is very likely.

Frequency=2: Contact by telephone in the Fall to confirm contact information and as a reminder of the customer's type of service. Will often contact the week before in advance of approaching cold weather.

- 23) What telemetry and SCADA systems do you have to monitor the system pressures, industrial consumption, and compliance with curtailment requests?

Frequency=1: Real-time flow/pressure data at city gate(s) and key points on the system.

Frequency=4: Real-time flow/pressure data at city gate(s), key points on the system and at the interruptible customer meters.

Frequency=1: Real-time flow/pressure data at city gate(s), key points on the system and at some of the interruptible customer meters.

Frequency=1: Real-time flow/pressure data at city gate(s), key points on the system and none of the interruptible customer meters.

24) What enforcement capabilities does your system have in place to curtail interruptible customers?

Frequency=1: Not applicable. The System has no interruptible customers.

Frequency=5: Do not have remote capabilities to shut off interruptible customers. Personnel would have to physically go to meter and lock off.

Frequency=1: No remote capabilities. Will read interruptible customers meters before and after curtailment. Will bill penalty rate for non-compliance volumes as oppose to shutting off.

25) Does your tariff require alternative fuels capability to qualify for interruptible rate schedule?

Frequency=1: Not applicable. The System has no interruptible customers.

Frequency=4: Yes.

Frequency=2: No.

26) If alternative fuel capability is required, what does the demonstration entail? Is there an ongoing policing of alternative fuel systems for interruptible customers?

Frequency=1: Not applicable. The System has no interruptible customers.

Frequency=3: None.

Frequency=2: Not applicable since it is not a requirement.

Frequency=1: Every Fall a demonstration is required. Interruptible customers are given advanced notice and are interrupted for one hour.

Policy and practice for Technical Training

27) Do you have written policy or requirements for training for job positions in operations, construction, maintenance, safety, meter testing, billing, and gas control operations?

Frequency=4: No.

Frequency=3: Yes.

28) Do you have written or unwritten internal technical training policies for these areas?

Frequency=4: The positions have job descriptions that state that they must comply and adhere to operator qualifications, integrity management protocol and the system operating and maintenance manual.

Frequency=3: Yes.

29) Do you have a compliance officer, or are the duties of a compliance officer assumed by another position?

Frequency=2: Compliance officer responsibilities are assumed by another position.

Frequency=1: There is a compliance officer for the entire combination utility system. Not for just the gas system.

Frequency=4: Yes.

30) How are training needs identified or addressed?

- a) annual reviews
- b) semi-annual reviews
- c) field reports
- d) crew meetings
- e) employee record reviews by compliance personnel
- f) pre-employment interview

Frequency=2: a

Frequency=1: a & c

Frequency=1: c, d & e

Frequency=1: a & b

Frequency=2: a & f

31) How is the type and medium (off-site, on-site, on-hands, video, on-line, manuals, etc) determined?

Frequency=3: Consider all in determining the most efficient, effective and least cost method.

Frequency=2: Consider all in determining the most efficient, effective and least cost method. If time is of the essence, will select the quickest method.

Frequency=2: Almost all on-site or in-house. Use most effective methods.

32) Is there an employee annual review where training goals are discussed?

Frequency=7: Yes.

33) Is completion of training documented in employee records?

Frequency=7: Yes.

I/A

Public Staff Panel Exhibit I

Frontier Natural Gas, LLC

Docket No. G-40, Sub 145

Reconciliation of Results of Company Monthly Filings with the Public Staff and the Commission and the Schedules of Company Witness Fred A. Steele

	<u>Company</u>	<u>Public Staff</u>	<u>Difference</u>
Schedule 1 - Total Cost of Gas	\$ 4,804,228	\$ 4,641,053 [1]	\$ 163,175 (A)
Schedule 4 - Other Cost of Gas	\$ 13,800	\$ (149,768)	\$ 163,568 (B)
Schedule 8 - Period End Deferred Gas Cost Account Balance	\$ 262,677	\$ 152,851 [2]	\$ 109,826 (C)
(A) Reconciling Items - Total Cost of Gas:			
Company Proposed Proration Adjustment			\$ 104,724
Miscellaneous Charges - Net Cash Out			58,459
Rounding			(8)
			<u>\$ 163,175</u>
(B) Reconciling Items - Other Cost of Gas:			
Company Proposed Proration Adjustment			\$ 104,724
Retro Gas Pricing True-up Entry (booked by Public Staff as a Gas Supply Cost, not a Deferred Account)			390
Miscellaneous Charges - Net Cash Out			58,459
Rounding			(5)
			<u>\$ 163,568</u>
(C) Reconciling Items - Ending Deferred Account Balance:			
Company Proposed Proration Adjustment			\$ 104,724
<u>Interest Differential:</u>			
Interest - Per Frontier Schedule 8	\$ 16,091		
LESS: Interest per monthly deferred account filings with the Commission	(10,982)		5,109
Rounding			(7)
			<u>\$ 109,826</u>

Notes:

[1] - Does not include Additional Non Deferred Account Related Gas Costs (Comparison of Gas Cost Chart, Line 11)

[2] - Does not include Ms. Perry's recommended Proration Adjustment

F/A

Frontier Natural Gas Company
Docket No. G-40, Sub 145
Public Staff Recommended Correcting Entries
To Deferred Gas Cost Account Balance
(Debit) Credit

Public Staff Panel Exhibit II
Page 1 of 2

Correcting Journal Entries as of:	Beginning Balance	Public Staff Adjustment	Interest	Gas Cost Collection Adjustment w/ Interest
Feb-17	\$0	\$112,975	\$723	\$113,698
Mar-17	\$113,698		\$728	\$114,426
Apr-17	\$114,426		\$732	\$115,158
May-17	\$115,158		\$737	\$115,895
Jun-17	\$115,895		\$742	\$116,637
Jul-17	\$116,637		\$746	\$117,383
Aug-17	\$117,383	(21,564)	\$613	\$96,432
Sep-17	\$96,432	1,102	\$624	\$98,159
		\$92,513	\$5,646	
		<u>\$98,159</u>		

Annual Interest Rate 7.680%
Monthly Interest Rate 0.640%

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Feb 22 2018

Frontier Natural Gas
Gas Cost Collections - Public Staff Proration
For the Review Period Ending September 30, 2017

Public Staff Panel Exhibit II
Page 2 of 2

	Sep-17	Aug-17	Jul-17	Jun-17	May-17	Apr-17	Mar-17	Feb-17	Jan-17	Dec-16	Nov-16	Oct-16	Adjustment
Deferred Acct Volumes:													
Frontier Filed Dis	[1] 77,424	53,612	39,031	45,861	55,472	60,961	125,756	106,271	152,108	149,841	82,371	64,382	
PS Calculated Dis	[2] 77,149	53,611	39,030	45,861	55,471	60,960	125,756	106,271	152,109	149,840	82,371	64,382	
Difference	275	1	1	0	1	1	0	0	(1)	1	0	0	279 dts
Deferred Account Collections:													
Frontier Filed Collections	[1] 309,696	186,398	\$220,525	\$259,115	\$313,417	\$344,430	\$710,521	\$700,582	\$532,378	\$524,444	\$288,299	\$225,337	
PS Calculated Collections	[2] \$308,594	207,962	220,527	259,114	313,416	344,426	\$710,519	\$587,607	\$532,378	\$524,442	\$288,300	\$225,338	
Difference	\$1,102	(\$21,564)	(\$2)	\$1	\$1	\$4	\$2	\$112,975	\$0	\$2	(\$2)	(\$1)	\$92,818 Total (\$5) Rounding \$92,813

[1] Per Company deferred account true-up filed with the Commission

[2] Revised proration - per Frontier supporting deferred account information filed each month - Revenue Detail, Invoices tab.

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Feb 22 2018

I/A

Frontier
Docket No. G-40, Sub 136
Calculation of Pre-Tax Rate-of-Return and Net-of-Tax Discount Rate

Public Staff Panel Exhibit III

Item	Capital Structure	Cost Rate	Weighted Rate	Tax Factor	Pre-Tax ROR	Net-of-Tax ROR
L-T Debt	50.00%	4.23%	2.12%	1.000000	2.1150%	1.6207%
Equity	50.00%	9.75%	4.88%	0.766300	6.3617%	4.8750%
Total	100.00%		6.99%		8.476738%	6.495725%
						<u>6.496%</u>

Composite Income Tax Factor:

a	State Taxable Income		1.000000
b	State income taxes		0.030000
c	Federal Taxable Income	[a - b]	0.970000
d	Federal income taxes	[c x 21%]	0.203700
e	Net Income	[c - d]	<u>0.766300</u>

Assumptions:

SIT rate	3.00%
FIT rate	21.00%
Composite	23.3700%

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