State of North Carolina

North Carolina Utilities Commission
Raleigh

Docket No. G-40, Sub 158

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION:

In the Matter of	)
	)
Application of Frontier Natural Gas	)
Company for Annual Review of	)
Gas Costs Pursuant to G.S. 62-133.4(c)	)
and Commission Rule R1-17(k)(6)	)

DIRECT TESTIMONY

OF

TAYLOR B. YOUNGER

December 1, 2020

Q. Please state your name, business address, by whom you are employed, and in what capacity.

A. My name is Taylor B. Younger. My business address is 110 PGW Drive, Elkin North Carolina, North Carolina, 28621. I am employed by Frontier Natural Gas Company ("Frontier" or "the Company"), as Regulatory Compliance Engineer.

Q. Mrs. Younger, how long have you been associated with Frontier?

A. I began working with Frontier in August 2017.

Q. Mrs. Younger, what are your current responsibilities with Frontier related to gas supply planning?

A. I am responsible for the management and oversight of natural gas supply planning and purchases for Frontier. Specifically, my responsibilities include oversight of procurement and optimization of pipeline transportation, and supply assets, system demand forecasting, administration of Frontier's hedging plans, state and federal regulatory issues concerning supply and capacity, asset and risk management, and transportation administration.

Q. Mrs. Younger, please summarize your educational and professional background.

A. I am a graduate of North Carolina State University with a B.S. degree in Industrial and Systems Engineering and a minor in Business Administration. I am also currently a student in NC State's Jenkins MBA program, with an anticipated graduation date of May 2022. Since beginning my career at Frontier, I have had the opportunity to attend various training sessions to enhance my professional development. I have obtained certifications focused around leadership, system design and modeling, and pipeline integrity.

Q. Please explain the Company's gas purchasing policies.

A. The general strategy is for Frontier to serve current and incremental base load and peak period usage following a best-cost dispatch strategy. Frontier uses a "Best Evaluated Cost" supply strategy to achieve Gas Supply Procurement objectives and goals. This strategy entails seeking adequacy, flexibility, reliability/dependability of supply, cost of gas, stability of costs incurred and quality of supplier, including their creditworthiness and reliability. The Company regularly evaluates the resources needed to accomplish this task. Frontier's Gas Procurement Policy is attached as Exhibit A.

Q. Have there been changes during the review period that have impacted how Frontier achieves its objectives under its Gas Supply Procurement Policy?

A. Yes. There are three main changes to the way we operate to achieve our best cost objective for the previous review period. First, the pipeline company that serves Frontier, Transcontinental Gas Pipe Line Company, LLC ("Transco"), implemented new tariff provisions that govern balancing priorities. As a result of the changes, Frontier's flexibility to balance its daily nominations against Transco's deliveries to Frontier has become more restrictive, since only capacity that is primary to Frontier's city gate has the flexibility to balance nominations and deliveries. Second, Frontier entered into a new Asset Management Agreement ("AMA") that became effective April 1, 2020 with UGI, which reflects the changes in Transco's operations. Third, Frontier modified its hedging policy after discussions with the Public Staff.

Q. Can you briefly explain the changes made by Transco and how these changes impact Frontier's flexibility?

A. Frontier is not directly impacted by Transco's new tariff language because its Transco capacity is subject to an AMA with UGI. Frontier is, however, impacted indirectly by our asset manager, UGI, who acts as the shipper on our behalf. The previous AMA with UGI allowed us to swing off of our Z3 pipeline capacity, meaning Frontier could nominate a first of month ("FOM") amount less than our Transco-owned capacity of 8,613 dth/d, and if we actually burned more than the FOM nomination, Frontier could purchase the amount we burned over the FOM nomination up to 8,613 dth/d at the less volatile Z3 daily price. Previously, Frontier was able to swing on Transco, with some limitations, up to its full transportation capacity of 8,613 dth/d. However, following the implementation of Transco's new balancing rules, Frontier only has flexible swing rights on the portion of our capacity (3,613 dth/d) which is physically delivered to our city gate.

Q. Can you describe the process that resulted in Frontier selecting UGI as its asset manager for a second three-year term?

A. Frontier conducted an RFP to replace the AMA with UGI that was scheduled to expire on March 31, 2020. Seven gas suppliers were solicited and six submitted offers. Frontier evaluated proposals based on overall costs, ability to meet operational needs, gas pricing flexibility, and gas price risk management. After an evaluation of the bids, Frontier selected UGI's offer based on cost and the flexibility required to meet Frontier's operational needs and efficiently serve Frontier's customers. The Company also considered UGI's historical operational performance and pricing flexibility since 2017.

Q. In Docket No. G-40, Sub 149 the North Carolina Utilities Commission ordered "That Frontier and the Public Staff shall work together collaboratively to address future gas purchasing practices by Frontier, including hedging and other price mitigation practices, in order to reduce or eliminate concerns over customer exposure to potential gas cost volatility while maintaining reasonable up-front charges to

customers for the right to call on gas under high demand scenarios." Please summarize the steps taken by Frontier to address this directive.

A. The most significant updates to Frontier's Gas Supply Procurement Policy are under guidelines for hedging. Currently, Frontier procures hedges in winter strips during any period within the months of November through March. On June 4, 2019, Frontier met with Public Staff and the NCUC Pipeline Safety Section to discuss Frontier's updated Gas Supply Procurement Policy. The main purpose of this meeting was to share how Frontier planned to utilize its Procurement Policy to prepare for winter 2019-2020.

Q. Were there any discussion with the Public Staff in preparation for the 2020-2021 winter period?

A. Yes. Frontier had a virtual meeting with Public Staff in April of 2020. After the meeting, Frontier slightly modified its Gas Procurement Policy.

Q. Can you summarize the modifications that resulted from your discussion with Public Staff?

A. Pursuant to a contract with Marquette Energy Analytics ("Marquette"), Marquette will provide Frontier with an annual report showing a monthly forecast for the upcoming year. This forecast includes an expected daily average flow and an expected daily maximum flow for each month of the upcoming year. Marquette's report is derived from actual historical usage, historical weather patterns, and projected customer growth. Frontier will receive this report each March which will help the Company make hedging decisions for the upcoming winter. To ensure a best cost scenario without speculation, Frontier makes 1/6 of its total planned hedge purchase in each month of April to September. The modifications agreed to with Public Staff for the updated April 2020 Procurement Plan was for Frontier to increase its hedging quantities to 60% of expected average purchases for Z3, and after subtracting out the Transco capacity (8,613 dth/d) from the expected max, 60% of the capacity would be hedged for Z5.

Q. How do the three changes described above affect how Frontier plans to meet the upcoming winter period?

A It is important to understand that not only does Frontier's goals include reliability and security of supplies, but also to reduce or eliminate concerns over customer exposure to potential gas cost volatility. To achieve this, it is necessary to avoid purchasing any gas on a daily pricing basis from Z5, which has a history of extremely volatile peaks during the heating season. Since 5,000 dth of our capacity does not reach our City Gate, Frontier will either need to hedge this amount for each day of the month or nominate it with FOM nominations. It is concluded that up to sixty percent of this amount will be hedged, with the rest being purchased FOM. If the remainder of the 3,613 Transco capacity is needed on top of the total nominated daily gas volumes composed of Z3 hedged gas, Z3 FOM nominated gas, Z5 hedged gas, and Z5 FOM nominated gas, it will be priced at Z3 Daily. The minimum quantity of Z5 gas to be Forward Hedged depends on the forecasted max day flow for each winter month. Current firm Z3 transportation capacity of 8,613 dth should be subtracted from the expected max day flow to conclude how much Z5 gas should be purchased for that month. Under the current Policy up to sixty percent of this amount would be hedged, while the rest of Z5 requirements would be executed with FOM nominations. When the current estimated peak day requirements for a month indicate that no Zone 5 purchases are anticipated, there will be no Z5 hedge. Z5 Forward Hedged quantities will be reviewed annually and re-established based on changes in system needs.

Z5 FOM purchase quantity will be based upon considerations of the current market price and the most current weather forecast at the time FOM nominations are due. Exhibit B is attached to quantify an example of how we will utilize this updated policy going forward.

Q. In Docket No. G-40, Sub 149 the North Carolina Utilities Commission concluded that Frontier should examine options for bolstering its gas supply planning. Please summarize the steps taken by Frontier to address this point in the order.

A. Frontier has made a conscious effort to engage the Hearthstone Utilities Risk and Supply Committee in all aspects of our gas supply planning by providing committee members with not only our weekly usage updates, but also more insight into our hedging plan and purchases. Attached as Exhibit C to my testimony are the Risk and Supply Committee Meeting minutes. This creates a more collaborative approach to gas supply planning by giving committee members a chance to offer their opinions. Additionally, Frontier has sought to seek outside expertise for gas supply endeavors by utilizing Hearthstone's gas supply consultants, Al Harms and Len Gilmore. Frontier now includes Mr. Harms and Mr. Gilmore in all internal gas supply planning meetings. These consultants gave insight in revising Frontier's Gas Supply Procurement Plan. They also helped guide the Company through the process of rationalizing and choosing our Gas Supply Asset Manager for the period of April 1, 2020 - March 31, 2023.

Q. It is known that Frontier does not have firm transportation capacity sufficient to cover winter peak days. How did Frontier handle this during the review period?

A. Frontier's current AMA, attached as Exhibit D, provides up to 20,000 dth per day of firm delivered supply. Frontier utilized its current AMA to make sure we were not subject to the volatile Z5 daily market. For example, in January of 2020, Frontier was covered up to

13,500 daily dths through a combination of forward hedged Z3 and Z5 gas and Z3 and Z5 FOM nominations. From the procurement plan in place last year, we hedged 50% of expected daily average Z3 purchase volume with 3,966 dth and we hedged a reasonable percentage at Z5 with 1,200 dth. Further Z3 FOM nomination of 34 dth and a Z5 FOM nomination of 3,687 dth were nominated: for an overall fixed price nominate (FOM and forward priced hedge volumes) of 8,887 dth (3,966 Z3 Hedge + 1,200 Z5 Hedge + 34 Z3 FOM + 3,687 Z5 FOM = 8,887 dth).

Q. What was the goal of Frontier's supply scheduling and pricing strategy?

A. Frontier's goal was to have a large enough overall FOM nomination to cover the daily expected average for each winter month. This meant we had a Z3 daily flexibility of 4,613 dth for January (8,613 Capacity – 3,966 Z3 Forward Hedge – 34 Z3 FOM Nom = 4,613 dth). We were also covered up to 13,500 (8,887 Overall FOM Nom + 4,613 Z3 Daily Flex Amount = 13,500 dth Daily Coverage), which met the expected daily peak for the month of January of 12,412 dth with a reasonable reserve margin. We utilized this same philosophy for each winter month, as shown in Exhibit E.

Q. In your opinion were the Company's gas supply and capacity management practices during the review period as described above, and the costs incurred to engage in those practices, reasonable and prudent?

A. Yes, they were.

Q. Does this conclude your testimony?

A. Yes, at this time.

EXHIBIT A

Frontier Natural Gas Company

Policy and Practice of:

Gas Supply Procurement

Purpose:

It is the Frontier Natural Gas Company (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 while stabilizing prices. This begins with an accurate estimation of customer usage requirements and a plan 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:

Frontier's Gas Supply Planning Committee (Committee) has been established and maintained to pursue this objective. External Information evaluated by the Planning Committee will include, but is not limited to, market indicators, seasonal weather forecasts, periodicals and forecasts of natural gas prices, and all available intelligence on the direction of natural gas and pipeline capacity availability and prices.

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 to supply new bundled customers, in a Gas Supply Annual Budget to senior management. The Gas Supply Annual Budget in combination with the gas purchasing practices stated in this Gas Supply Procurement Plan will be referred to as the Annual Plan.

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 additions or losses and other trends and correlations that appear to drive natural gas consumption. 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 requirements under a most likely winter scenario as well as a one in 30-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.

To best pair identified supply requirements with available gas supply capacity, Frontier will review estimated monthly, seasonal and peak demand day requirements for full service customers to resources available to meet these requirements. Upstream resources may include peaking and storage services, supplies that are base load, swing, seasonal supply and/or spot purchases. Long-term planning for peak period resources to be considered will include, but not be limited to, air-propane plants, liquefied natural gas (LNG) plants and on-system storage. Per Commission, Rule R6-23 - Adequacy of Supply, there will be an assessment of the production and/or storage capacity of the utility's plant, supplemented by the gas supply regularly available from other sources, to determine if there is sufficient supply to meet all reasonably expectable demands for firm service.

"Suppliers" shall mean any entity which locates, aggregates, produces, purchases, sells, stores and/or transports natural gas or its equivalent to, for or on behalf of 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 annually evaluating and determining the proper resources to procure for the system, the Company will consider other important factors such as, but not limited to, current supply and capacity portfolio, adequacy, price, security, flexibility and deliverability. In some instances, requests for quotes or requests for proposals may be necessary to acquire price or cost data. In such instances, Frontier will not discriminate against any qualified entity.

The general strategy is to serve current and incremental base load and peak period usage following a best-cost dispatch strategy. Frontier uses a “Best Evaluated Cost” supply strategy to achieve Gas Supply Procurement objectives and goals. This strategy entails seeking adequacy, flexibility, and security/creditworthiness of supplier, reliability/dependability of supply, cost of gas, stability of costs incurred and quality of supplier. The Committee will consider the resources available to accomplish this task. 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) can be reasonably acquired or developed for meeting the Company's deliverability needs is necessary 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. The Committee will evaluate available alternatives each year for their appropriateness in the context of its long-term 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. The Annual Plan will contain or cite supporting documents for its conclusions and recommendations.

The Annual Plan shall contain an action plan with a 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.

Suppliers will be notified of individuals that can execute instructions and orders on behalf of Frontier. 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.

<u>Supply Contracting Practice</u>

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

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

<u>Supply Pricing Practice</u>

Frontier has a three part pricing strategy in gas purchasing: 1) Hedging, 2) First of the month and 3) Daily. The objective behind the weighted average approach is to reduce the risk of gas cost volatility by purchasing gas priced at diverse times reflective of market-based gas price indexes. Execution of the Pricing Strategy will be for the purpose of creating a hedge against market volatility, both seasonal and daily, and not for price speculation

Frontier may procure hedges in winter strips (any period within the months of November through March) . During the summer months, Frontier will seek to obtain reliable and stable commodity prices by fixing forward commodity prices for high demand periods. Although these hedges may be purchased at a premium to average supply rates during this period, bundled customers will be insulated from extremely volatile price swings that have been characteristic to Transco Zone 5.

<u>Guidelines for Hedging Quantities:</u>

Frontier will undertake the best alternative to hedge the market area price, using fixed forward hedges, or fixed options based on the regional index price that coincides with Frontier's gas supply agreement in effect at the time. Frontier will obtain periodic price quotes from its firm service provider to best evaluate the condition of the forward natural gas market.

Frontier will employ a dollar-cost averaging technique when buying the forecasted throughput for each forward hedge position. The intent of this approach is to reduce the variability on the purchases made on each hedge position. The quantity of supply to be hedged will depend on the Annual Plan. With the AMA now in place for April 1st 2020 through March 31st, 2023, it has become apparent that because of new balancing rules issued from Williams Transco, Frontier will only be able to swing on the portion of our capacity that is physically delivered to our City Gate. 3,613 dth of our 8,613 dth capacity is currently delivered to our City Gate, with the remaining 5,000 dth delivered south of our City Gate. This means that we will either need to hedge the 5,000 dth for each day of the month or nominate it with FOM nominations. It is concluded that up to sixty percent of this amount will be hedged, with the rest being purchased with FOM nominations.

If the remainder of the 3,613 capacity is needed on top of the total nominated daily gas amount made up of Z3 hedged gas, Z3 FOM nominated gas, Z5 hedged gas, and Z5 FOM nominated gas, it will be priced at Z3 Daily.

The minimum quantity of Z5 gas to be Forward Hedged will depend on the expected max day flow for each winter month. Current firm Z3 transportation capacity of 8,613 dth should be subtracted from the expected max day flow to conclude how much Z5 gas should be purchased for that month. It is concluded that up to sixty percent of this amount should be hedged, while the rest of Z5 purchases should be executed with FOM nominations. When the current estimated peak day requirements for a month indicate that no Zone 5 purchases are anticipated, there will be no required Z5 hedge volume. Z5 Forward Hedged quantity will be reviewed annually and re-established based on changes in system needs. Z5 FOM purchase quantity will be based upon considerations of the current market prices and the most current weather forecast at the time FOM nominations are due.

The quantities established in the Annual Plan for Forward Hedging will be equally divided into 6 parts with one part hedged each month from April to September. Each month's hedge will be entered into between the 10th and 25th of that month.

Schedule of Actions Required before Hedging:

Frontier will follow a schedule of items each year leading up to the beginning of its winter or summer seasons. These time-driven items will constitute a consistent mechanism for Frontier to complete in order to accomplish the stated objectives of the Annual Plan.

• Starting in March, Frontier will reevaluate the Annual Plan by completing its load forecast of anticipated throughput for the next twelve months. Each twelve month period will run from April through March of the following year. The forecast will determine the quantities necessary to secure to meet the requirements of each hedge position.

• Starting in April, Frontier will request various fixed price quotes for the quantities it has designated to hedge over the winter period. All pricing information will be archived and a summary will be reported at each weekly Risk and Supply Meeting to include an assessment of any potential market event that would impact forward market prices.

• During the winter period Frontier will secure the necessary first-of-month (“FOM”) or spot purchases necessary to complete the supply pricing strategy for the month.

Any deviation from the Guidelines for Hedging Quantities will be identified and reported to the Gas Supply Policy Committee. The report will identify the variation, the event or events that lead to the variation and an explanation discussing how the variation addressed the events that lead to the variation.

EXHIBIT B

	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21
Expected Highest Demand	6,828	4,584	2,984	3,022	3,296	4,228	6,139	8,758	11,005	12,403	11,277	9,372	6,963	4,131
Expected Average Demand	3,579	2,763	2,371	2,201	2,274	2,690	3,666	5,333	7,192	7,946	7,128	5,421	3,771	2,901

Capacity 8613

Z5 Hedge	**50%**	**60%**	**70%**	**80%**
Nov	73	87	102	116
Dec	1196	1435	1674	1914
Jan	1895	2274	2653	3032
Feb	1332	1599	1865	2131
Mar	380	455	531	607

	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21
Dr. Brown Expected Peak	8,758	11,005	12,403	11,277	9,372
Dr. Brown Expected Avg	5,333	7,192	7,946	7,128	5,421
Expected Monthly	159,992.18	222,962.73	246,325.85	199,582.94	168,045
Noms for Month:					
Hedged Z3	3,000	3,000	3,000	3,000	3,000
Hedged Z5	87	1,435	2,274	1,599	455
Added Nom Z3 FOM	2,000	2,000	2,000	2,000	2,000
Added Nom Z5 FOM	58	957	1,516	1,066	304
Expected Nom (Hedge Included)	5,145	7,392	8,790	7,665	5,759
Flex Amount Z3 Daily	3,613	3,613	3,613	3,613	3,613
Covered Up To (Meaning No Z5 Daily Purchases)	8,758	11,005	12,403	11,278	9,372

Daily Purchase each month April-September					
Daily Purchase	**Nov-20**	**Dec-20**	**Jan-21**	**Feb-21**	**Mar-21**
Z3	500.0	500.0	500.0	500.0	500.0
Z5	14.51	239	379	266	76

EXHIBIT C

Exhibit has been filed confidentially pursuant to N.C. Gen Stat. § 132-1.2.

EXHIBIT D

Exhibit has been filed confidentially pursuant to N.C. Gen Stat. § 132-1.2.

EXHIBIT E

	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20
Dr. Brown Expected Peak	8,580	10,906	12,412	11,065	9,141
Actual Peak	9,243	8,806	10,003	8,818	7,104
Dr. Brown Expected Avg	5,085	6,927	7,931	7,033	5,223
Actual Average	5,392	5,661	6,110	5,864	3,653
Expected Monthly	152,549.84	214,729.45	245,857.54	203,961.08	161,899.34
2016 Peak	5,367	8,138			
2017 Peak	6,090	9,690	9,720	6,801	7,794
2018 Peak	9,420	8,907	12,060	8,909	8,390
2019 Peak			12,195	8,729	9,601
Noms for Month:					
Hedged Z3	2,544	3,462	3,966	3,516	2,610
Hedged Z5	-	1,200	1,200	1,200	-
Total Hedged	2,544	4,662	5,166	4,716	2,610
Added Nom Z3 FOM	1,456	2,151	34	984	1,890
Added Nom Z5 FOM	1,000	1,187	3,687	1,287	600
Expected Nom (Hedge Included)	5,000	8,000	8,887	6,987	5,100
Flex Amount Z3 Daily	4,613	3,000	4,613	4,113	4,113
Covered Up To (No Z5 Daily Purchases)	9,613	11,000	13,500	11,100	9,213