**NORTH CAROLINA**
**PUBLIC STAFF**
**UTILITIES COMMISSION**

September 23, 2021

Ms. A. Shonta Dunston, Chief Clerk
North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, North Carolina 27699-4300

Re: Docket No. G-5, Sub 632 – Application of Public Service Company of North Carolina, Inc., for a General Increase in Rates and Charges; and G-5, Sub 634 - Application for Approval to Modify Existing Conservation Programs and Implement New Conservation Programs

Dear Ms. Dunston:

Attached for filing in the above-referenced docket is the testimony and exhibit(s) of Neha R. Patel, Manager, Natural Gas Section, Energy Division. The testimony and exhibits are being refiled to include divider sheets between exhibits.

By copy of this letter, I am forwarding a copy to all parties of record by electronic delivery.

Sincerely,

Electronically submitted
s/ Gina C. Holt
Staff Attorney
gina.holt@psncuc.nc.gov

s/ John Little
Staff Attorney
john.little@psncuc.nc.gov

Attachment


| Executive Director | Accounting | Consumer Services | Economic Research |
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BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. G-5, SUB 632

| | | |
|---|---|---|
| DOCKET NO. G-5, SUB 632<br><br>In the Matter of<br>Application of Public Service Company of North Carolina, Inc., for an Adjustment of Natural Gas Rates and Charges in North Carolina<br><br>DOCKET NO. G-5, SUB 634<br><br>In the Matter of<br>Application for Approval to Modify Existing Conservation Programs and Implement New Conservation Programs | ) | TESTIMONY OF<br>NEHA PATEL<br>PUBLIC STAFF – NORTH CAROLINA UTILITIES COMMISSION |

**BEFORE THE NORTH CAROLINA UTILITIES COMMISSION**

**DOCKET NO. G-5, SUB 632**
**DOCKET NO. G-5, SUB 634**

# TESTIMONY OF NEHA PATEL

**ON BEHALF OF THE PUBLIC STAFF**
**NORTH CAROLINA UTILITIES COMMISSION**

**SEPTEMBER 23, 2021**

**Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND PRESENT POSITION.**

A. My name is Neha Patel. My business address is 430 North Salisbury Street, Dobbs Building, Raleigh, North Carolina. I am the Manager of the Natural Gas Section of the Energy Division of the Public Staff – North Carolina Utilities Commission (Public Staff).

**Q. BRIEFLY STATE YOUR QUALIFICATIONS AND DUTIES.**

A. My qualifications and duties are included in Appendix A.

**Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

A. The purpose of my testimony is to present the results of my investigation into the application of Public Service Company of North Carolina, Inc. (PSNC or the Company), for a general rate increase in this proceeding.

**Q. WHAT WERE YOUR AREAS OF INVESTIGATIVE RESPONSIBILITY IN THIS CASE?**

A. My areas of investigation in this case were: (1) determining the appropriate sales and transportation volumes and customer levels, (2) evaluating the proposed weather normalization adjustment for the test period, (3) calculating the customer growth factors, (4) calculating the appropriate end-of-period level of revenues, (5) fixed gas costs and lost and unaccounted for (LUAF) adjustments, (6) calculating the appropriate level of other operating revenues, (7) calculating the updated computational factors used in the Customer Utilization Tracker (CUT) mechanism, (8) general capital additions to plant, (9) reviewing proposed revisions to the Company's tariff, which consists of its various rate schedules and service regulations, (10) evaluating PSNC's request to continue its Commission-approved Integrity Management Tracker (IMT) mechanism, (11) evaluating PSNC's programs to defer operating and maintenance (O&M) expenditures under both its Transmission Integrity Management Program (TIMP) and Distribution Integrity Management Program (DIMP), (12) Evaluating PSNC's proposed GREENTHERM™ program, (13) evaluating the Company's Research and Development proposal, and (14) evaluating PSNC's service quality.

## WEATHER NORMALIZATION AND CUSTOMER GROWTH

**Q. WHAT IS THE PURPOSE OF ADJUSTING FOR WEATHER NORMALIZATION AND CUSTOMER GROWTH?**

A. Weather normalization attempts to analyze and adjust for the impact of actual weather conditions over a specified time period (generally, a test year) on energy consumption relative to expected "normal" weather conditions (as measured over some longer historical period of time).

The customer growth adjustment adjusts test period revenues by an amount that represents the growth in sales due to the change in the number of customers.

The Public Staff runs its own weather normalization and customer growth models and compares the results to those included in the Company's general rate case filing.

The Public Staff's linear regression model that computes the baseload (minimum usage level) and a Heat-Sensitive Factor (HSF) is similar to that of the Company. Using this linear regression model, the Public Staff obtained results similar to that of the Company for comparable customer class usage for the heat sensitive customers.

**Q. PLEASE EXPLAIN HEATING DEGREE DAYS (HDDS) AND HOW THEY ARE UTILIZED IN YOUR LINEAR REGRESSION.**

A. HDD is a measurement that quantifies the demand for energy needed for space heating. HDDs are calculated by subtracting the average daily temperature from a standard temperature of 65 degrees Fahrenheit.[1] For example, a low of 20 degrees and a high of 40 degrees would yield an average of 30 degrees and an HDD of 35 degrees (65 - ((20 + 40)/2)). The normal HDDs are determined based on a 30-year historical average.

To determine customer usage under normal weather conditions, the Public Staff completed a linear regression to compare the actual customer usage to the actual HDDs to derive the baseload and the heat sensitive factors for the test year period. My completed analysis results in similar regression results to that of the Company.

**Q. PLEASE DISCUSS THE PUBLIC STAFF'S GROWTH ADJUSTMENTS TO CUSTOMER BILLS AND CONSUMPTION.**

A. The Public Staff compares actual changes in the number of monthly customer bills between the test year and the year immediately prior. This comparison produces the average growth rate that the Public

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[1] The use of 65 degrees Fahrenheit is based on an assumption that heating is not needed when the outside temperature is 65 degrees or more.

Staff applies to each rate class. Due the COVID-19 pandemic and the Commission's moratorium on disconnections for non-payment in effect during the test year, the Company did not disconnect service for non-payment of bills for a majority of the test period. As a result, the test period reflects a higher number of customer bills as compared to prior years. However, in consideration of the anticipated expiration of the disconnection moratorium, and with new customers being added to the system, the Public Staff applied a growth rate to the Residential and the High Efficiency Residential Service customer classes using the same methodology as the Company in applying the actual growth factors from customers billed from 2018 through 2019 (when there was no disconnection moratorium in place) to the above customer classes, as well as, making adjustments to certain large-volume customers with known and available information.

**Q. WHAT TOTAL SALES AND TRANSPORTATION CUSTOMER BILLS AND VOLUME DID YOU USE TO CALCULATE END-OF-PERIOD REVENUES?**

A. Based on my analysis, I determined that the appropriate level of end-of-period sales and transportation customer bills is 7,388,094 and total sales and transportation volume is 1,318,864,912 therms (ths), as shown in Patel Exhibit I.

**Q. PLEASE PROVIDE AN EXPLANATION FOR YOUR ADJUSTMENTS SHOWN IN PATEL EXHIBIT I.**

A. Patel Exhibit I, Columns (4) and (5) show the per books number of bills and the per books sales and transportation volumes segmented by rate schedule for the test year ended December 31, 2020. Weather normalized volumes, shown in Column (6), adjusts the volumes for the heat-sensitive customers (Rate Schedules 101, 102, 125, 127 and 140). The Public Staff and the Company agree on the weather normalization calculation methodology, although my adjustments differ slightly from that of the Company's pro forma bills and usage (ths) due to rounding.

## <u>END-OF-PERIOD REVENUE CALCULATIONS</u>

**Q. WHAT RATES DID YOU USE TO CALCULATE THE END-OF-PERIOD PRO FORMA REVENUE LEVEL?**

A. To calculate the end-of-period pro forma revenue level, I used the rates approved by the Commission in Docket No. G-5, Sub 633[2] and the Company's updated IMT rates as approved by the Commission in Docket No. G-5, Sub 636[3]. These rates exclude any temporary

[2] <u>Application for Bi-Annual Adjustment of Rates Under Rider C to its Tariff, Order Approving Rate Adjustments Effective April 1, 2020 (March 30, 2021).</u>

[3] <u>Application of Public Service Company of North Carolina, Inc. for Bi-Annual Adjustment of Rates Under Rider E to its Tariff, Order Approving Rate Adjustments Effective September 1, 2020 (August 31, 2020).</u>

increments or decrements (temporaries) that were included in rates at that point in time. This calculation produces what is known as "clean rates."

**Q. WHY ARE TEMPORARIES REMOVED FROM RATES FOR RATE CASE ANALYSIS?**

A. Temporaries are usually associated with deferred account activities and are not related to revenue generation for the Company. The margins associated with various rate schedules are typically not affected by temporaries, except when the temporaries are associated with fixed gas costs. Temporaries are removed when calculating end-of-period rates and proposed rates to achieve consistency and for ease of understanding. After the Commission determines the proper rates in this case, the new billing rates will be adjusted for the temporaries currently in effect.

**Q. WHAT IS YOUR END-OF-PERIOD REVENUE CALCULATION FOR THE COMPANY?**

A. The Company is proposing total end-of-period revenues of $574,112,825, which is comprised of sales and transportation of gas revenues of $573,392,181 and other operating revenues of $720,644. I have calculated end-of-period revenues as shown in Patel Exhibit II and I have used a three-year average to determine the appropriate level of other operating revenues.

**Q. HOW DID YOU CALCULATE THIS END-OF-PERIOD LEVEL OF REVENUE FOR THE COMPANY?**

A. The product of the number of customer bills and facilities charge for each rate schedule is the facility charge revenue. Likewise, the volume for each rate schedule was multiplied by the end-of-period rates to arrive at the total energy revenues. The sum of the revenues for the total facilities charge for a particular rate schedule, the energy revenue for that rate schedule, corresponding IMT revenues for that rate schedule and any CUT adjustments equals the total end-of-period revenue level as shown on Patel Exhibit II.

## GAS COSTS

**Q. DO YOU AGREE WITH THE COMPANY'S ADJUSTMENT TO FIXED GAS COSTS?**

A. No. While I do agree with the Company's end of period fixed gas costs, I have also reflected an on-going level of secondary market credits in the determination of total fixed gas costs in order to allow the customers to receive the benefits of the secondary markets revenues earned each year through reduced rates. I have included a three-year average for the secondary market credits in my fixed gas cost calculations as shown in Patel Exhibit III.

## CUT MECHANISM

**Q. PLEASE EXPLAIN ANY ADJUSTMENTS REGARDING THE MDT MECHANISM.**

A. In this proceeding, the Company filed CUT adjustments to the Residential, High Efficiency Residential Service, Small General Service, High Efficiency Small General Service, and Medium General Service rate schedules. I calculated the normalized usage for heat sensitive customers on a monthly basis and determined the "R" factors. This calculation results in an adjustment in an increase to the Residential, High Efficiency Residential, and Medium General Service total pro forma revenues and a decrease to the Small General and High Efficiency Small General Service pro forma revenues. My results are similar to that of the Company but the Public Staff's CUT revenue adjustments differ slightly due to rounding.

## GENERAL CAPITAL ADDITIONS TO PLANT IN SERVICE

**Q. WHAT WERE YOUR AREAS OF INVESTIGATIVE RESPONSIBILITY IN THIS CASE?**

**A.** While I participated in and contributed to a number of areas of the Public Staff's investigation, I specifically reviewed or supervised the review of the following areas:

- Multiple transmission pipeline projects, notably the T-1 and T-30 transmission projects
- General capital spend
- Company vehicles
- Materials and supplies

**CHANGES TO PSNC'S TARIFF**

**Q. WHAT CHANGES IS PSNC PROPOSING TO ITS NORTH CAROLINA TARIFF?**

A. As mentioned by Company witness Hinson, many of the proposed changes are administrative in nature for the sole purpose of making the language more comprehensible.

- Following the 2019 SCANA merger with Dominion Energy Inc., the Company proposes to refer to itself as 'Company' throughout the tariff instead of 'PSNC' in an attempt to avoid any confusion.

- To eliminate any probable confusion between the Commission's Rules and Regulations and the Company's 'Rules and Regulations', it has elected to replace it with, 'Service Regulations.'

- The Company's Service Regulations will now render definitions for, 'Emergency Service', 'Unauthorized Gas', 'Service Regulations' and 'Tariff'. 'Standard Service' being an undefined term in the prior Service Regulations when defining 'Excess Facilities' has been removed and the proposed revision clarifies that the facilities are to provide service at a pressure higher than that as specified in the tariff using a farm tap.

- The Company is also proposing similar administrative changes to Appendix A (form for Transportation Pooling Agreement) and Appendix B (Gas Quality standards for Renewable Gas).

- Witness Hinson has proposed changes to update the Special Contract Credit amounts, margin percentages by rate class, allocation factors, and the annual billing determinants, etc., for the IMT mechanism in Rider E as is necessary with each new general rate case proceeding. Public Staff witness Perry refers to these items in her testimony.

**<u>IMT MECHANISM</u>**

**Q. PLEASE PROVIDE A BRIEF OVERVIEW OF FEDERAL GAS PIPELINE SAFETY REQUIREMENTS.**

A. As discussed by Company witness Randall[4], pipeline operators are required to perform integrity measures on their transmission and distribution pipelines by following the regulatory requirements imposed by the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) under its TIMP and DIMP.

The TIMP and DIMP activities are cyclical, are based on timing and intervals of prior assessments, and vary from year to year.

Effective July 1, 2020, PHMSA required all pipeline operators to comply with the new Gas Transmission "Mega Rule,"[5] which provides an expansion of the Integrity Management (IM) requirements for gas transmission pipelines and aims to further increase the level of safety associated with gas transmission pipelines. A significant portion of this rule outlines documentation requiring operators to: (1) Verify pipeline material properties and attributes: Operators must have information on the material strength

[4] Direct Testimony of Company witness Randall at 4.

[5] <u>PHMSA - Pipeline Safety: Safety of Gas Transmission Pipelines</u>

properties for all transmission pipe; (2) Reconfirm Maximum Allowable Operating Pressure (MAOP): This applies to those transmission pipelines where pressure test records are not traceable, verifiable and complete (TVC); and (3) Expand IM requirements outside HCAs: Periodic assessments of pipelines in populated areas not designated as HCAs to Moderate Consequence Areas (MCAs).[6]

**Q. PLEASE PROVIDE SOME BACKGROUND ON THE COMPANY'S IMT MECHANISM.**

A. N.C. Gen. Stat. § 62-133.7A authorizes the Commission to approve a rate adjustment mechanism to enable a natural gas local distribution company (LDC) to recover its prudently incurred capital investments and associated costs of complying with federal gas pipeline safety requirements. The Commission approved an IMT mechanism in PSNC's 2016 general rate case[7] and it is contained in Rider E to PSNC's Service Regulations. The IMT mechanism excludes recovery of certain costs (Excluded Costs) and includes bi-annual rate adjustments. The Excluded Costs percentages are

[6] Moderate Consequence Areas (MCAs) are defined as areas within a potential impact circle containing either five or more buildings intended for human occupancy or any portion of the paved surface, including shoulders, of a designated interstate, freeway, or expressway, or principal arterial roadway with four or more lanes, as defined by the Federal Highway Administration (as compared to 20 buildings which define an HCA).

[7] G-5, Sub 565Application for a General Rate Increase, Order Approving Rate Adjustments Effective March 1, 2017 (February 28, 2017)

intended to reduce the level of non-pipeline safety costs charged to customers through the IMT mechanism These costs are still eligible for recovery in rate base if prudent, in PSNC's next general rate case.

On October 4, 2018, an Agreement and Stipulation of Settlement between Dominion Energy, Inc., SCANA Corporation, Transcontinental Gas Pipe Line Company, LLC ("Transco"), and the Public Staff was filed, which included stipulated Regulatory Conditions and a Code of Conduct ("Merger Settlement")[8]. The Merger Settlement included a rate moratorium for PSNC from filing an application for a general rate case before April 1, 2021. On November 19, 2018, the Commission issued its Order Approving Merger Subject to Regulatory Conditions and Code of Conduct ("Merger Order") in Docket Nos. E-22, Sub 551, and G-5, Sub 585[9]. On June 26, 2020, PSNC filed a petition with the Commission for an extension of its IMT mechanism in Rider E (without any modification) until the earlier of two years or the Company's next general rate case. The Commission granted PSNC's request for an extension to its IMT mechanism until November 1, 2022 or its next general rate case on August 10, 2020[10].

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[8] Joint Application of Dominion Energy Inc. and SCANA Corporation

[9] Order Approving Merger Subject to Regulatory Conditions and Code of Conduct

[10] Order Approving Extension of Integrity Management Tracker

PSNC has included, as part of this proceeding, a proposal to continue operation of this mechanism.

Since the Sub 565 rate case, PSNC has applied for and received Commission approval to implement 10 bi-annual rate changes to recover the Integrity Management Revenue Requirement (IMRR) on plant investment through the IMT.

The Public Staff reviews and audits PSNC's monthly IMT reports filed with the Commission through data requests and follow-up conference calls with Company personnel regarding project scope, project need, actual project costs incurred, and the nature of IMT-associated costs. In addition, the Public Staff files an Annual IMT Report with the Commission on May fifteenth of each year in order to discuss any issues from the monthly audits, or the IMRR calculations, summarize the completed IMT projects, and provide the budgeted IMT projects for the next three years.

**Q. PLEASE EXPLAIN YOUR RECOMMENDATION REGARDING PSNC'S REQUEST TO CONTINUE THE IMT MECHANISM.**

A. Based on the importance of pipeline safety in complying with federal safety guidelines and with any additional amendments to PHMSA regulations, PSNC is required to perform integrity measures on its transmission and distribution system to protect its customers, employees, contractors and the general public. I recommend the IMT mechanism remain in place.

**DEFERRED TIMP-RELATED O&M COSTS**

The Commission has approved deferred accounting treatment for the Company's TIMP O&M costs incurred due to the pipeline safety regulations promulgated by PHMSA. Since the last general rate case, the Company has enacted significant measures to conform to the regulations promulgated by PHMSA. Under PHMSA, pipeline operators are mandated to identify High Consequence Areas (HCAs), or covered segments, in order to identify threats to their pipelines; identify and analyze the risk to help prioritize assessments; remediate conditions found during integrity assessments; maintain records; and implement preventative and mitigative measures. Based on PHMSA guidelines, operators must perform pipeline reassessments which drives up the costs added to the rate base while allowing the Company to mitigate threats and risks identified on these pipelines and ensure safely on their transmission lines. I recommend that PSNC be allowed to continue its deferral mechanism under TIMP until the resolution of the Company's next general rate case proceeding.

In order to have more transparency with the audits, I further recommend that the Company work with the Public Staff to segregate TIMP costs by pipeline pigging segments or sub-projects for better tracking purposes and to continue providing program updates to the Commission, including the project scope/description, in the monthly filings, as well as providing the budgeted and actual costs incurred in an annual filing to provide the TIMP costs and invoices from the prior 12-month period. While my area of investigation focused on the necessity of this mechanism, Public Staff accounting witness Feasel discusses the audit of these costs in the rate case.

## <u>DEFERRED DIMP-RELATED O&M COSTS</u>

**Q. PLEASE DISCUSS YOUR REVIEW OF THE COMPANY'S DEFERRED DIMP-RELATED O&M COMPLIANCE COSTS.**

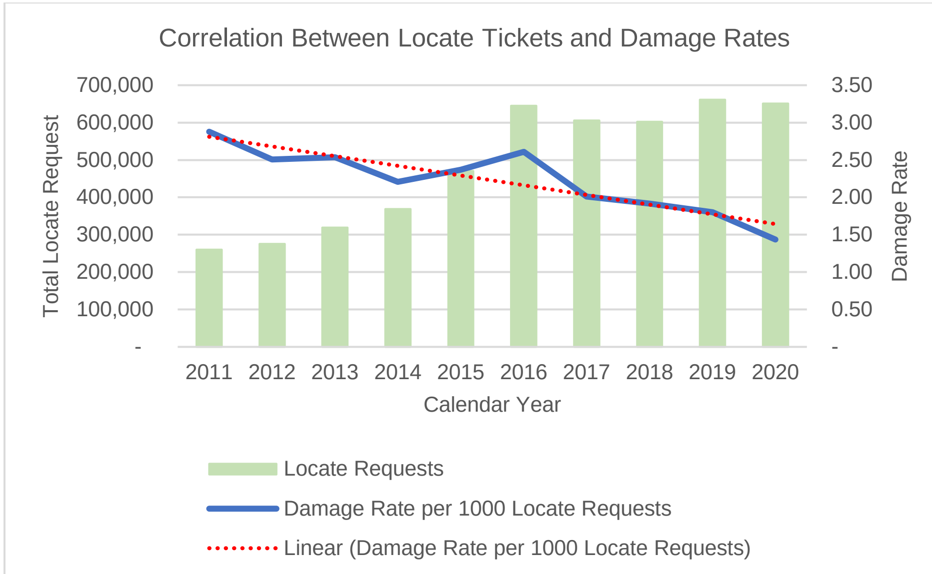
A. The Commission has approved deferred accounting treatment for PSNC's DIMP O&M costs associated with PHMSA regulatory compliance. Among other areas, the Company's DIMP primarily covers the following areas of pipeline safety:

1. Inspection/Practices: (a) Enhanced leak survey, (b) legacy cross bore, (c) Gold Shovel Standard certification[11], and (e) locatability investigations/repair untoneable assets;
2. Enhanced Cathodic Protection: (a) Anode replacement, Close internal surveys, AC mitigation;
3. Safety Communications/Public Awareness: Damage prevention, 811-verification; and
4. Records: mapping services in the GIS.

The Company noted that third party contractors are engaged to perform the work covered by these programs, however due to the COVID-19 pandemic; the Company has experienced a delay in the implementation of some of the DIMP programs.

As part of my investigation, I reviewed data request responses from the Company regarding the DIMP-related O&M project scope and associated costs. Under damage prevention program, I reviewed data from 2011 to 2020 from federal pipeline safety regulators related to the Company's annual damage rates and the relationship to the number of locate requests. Patel Figure 1 below shows the history of locate requests and the associated damage rates per 1000 locate tickets.

[11] Gold Shovel Standard




**Patel Figure 1**

From 2011 to 2014, the Company received approximately 300,000 locate requests in any given year, and the damage rate averaged 2.51 damage incidents annually. After 2014, the damage rate increased; reaching a high of about 2.75, before declining substantially over the last four years despite an increase in locate requests.

The Company  implemented measures to reduce third party damages such as mailers to registered excavation companies within the Company's service territory and newspaper, billboard, US mail, signage and social media advertising. The Company has various public awareness programs in place to help reduce third party damage incidents. They are: (1) Risk Ranking "811" tickets, and Watch & Protect Program; (2) Untoneable Repair Program; and (3)

Geofencing. Such measures have had a positive impact on the damage ratio to its infrastructure; nevertheless, the Public Staff will continue to analyze this data to assess the impacts of the programs.

**Q. WHAT IS YOUR RECOMMENDATION REGARDING THE COMPANY'S DEFERRED DIMP O&M EXPENSES?**

A. The issue of pipeline safety, and specifically the testing of LDCs' systems, along with the implementation of safety programs, has come to the forefront in the past 10 to 15 years. The focus was initially on transmission systems and now includes distribution systems as well. The Company has incurred significant expenses to address pipeline safety and remain compliant with PHMSA regulations, which have been amended as recently as 2019 to expand obligations.[12]

The primary cost drivers affecting the Company's forecast include contracted labor to meet safety compliance and documentation per federal DIMP regulatory requirements. It is difficult to put a cost on pipeline safety and the prevention of property damage and personal injury or death that can occur from a natural gas incident.

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[12] Direct Testimony of Company witness Randall at page 6.

I recommend that PSNC be allowed to continue its deferral mechanism until the resolution of the Company's next general rate case proceeding, and that the Company provide to the Commission annual program updates including project scope, and the budgeted and actual costs incurred in an annual filing to provide the DIMP costs and invoices from the prior 12-month period.. While my area of investigation of focused on the necessity of this mechanism, Public Staff accounting witness Feasel discusses the audit of these costs in the rate case.

## GREENTHERM™ PROGRAM

**Q. HAS THE PUBLIC STAFF REVIEWED THE COMPANY'S PROPOSAL TO OFFER A VOLUNTARY RENEWABLE ENERGY PROGRAM ALLOWING CUSTOMERS TO SUPPORT THE DEVELOPMENT OF RENEWABLE ENERGY BY PURCHASING "GREEN ATTRIBUTES" OF RENEWABLE NATURAL GAS?**

A. Yes. The Company is proposing to offer a GreenTherm™ Program[13] modeled on a program offered by its affiliate Dominion Energy Utah. Customers would participate by paying a monthly surcharge to purchase a block of green attributes equal to five therms of renewable natural gas. PSNC plans to issue a Request for Proposals

[13] Testimony of Company witness Randall (GreenTherm™ program, pg. 17)

(RFP) if the Commission approves the program. Based on the results of the RFP, the Company will determine the appropriate rate for a five-therm block.

**Q. WHAT IS THE PUBLIC STAFF'S RECOMMENDATION REGARDING THE PROPOSED GREENTHERM™ PROGRAM?**

A. The Public Staff supports PSNC's development of a voluntary program allowing customers to support the development of renewable gas and recommends that the Commission order PSNC to proceed with the development of the program. However, the Public Staff does not believe that the program should receive final approval until the Company has received the results of the RFP, determined the cost of a block of five therms, and determined its sources for renewable gas. The Public Staff also believes the PSNC should ensure that its green attributes meet certain standards and are certified, such as the standards and certification offered by Green-e®.[14] The Company has also informed the Public Staff that it may also offer carbon offsets through this program or a separate program. Once the Company has fully developed the program, the Company should update its proposal and file it with the Commission.

[14] https://www.green-e.org/renewable-fuels

## RESEARCH AND DEVELOPMENT

**Q. WHAT IS YOUR RECOMMENDATION REGARDING THE COMPANY'S PROPOSED ADJUSTMENTS ON ITS R&D EFFORTS?**

A. PSNC has proposed in this rate case a project that focuses on studying the effects of blending hydrogen with natural gas in determining its safety and viability in the testimony of Company witness Randall, and witness Spaulding has the proposed adjustment of $285,000 to fund this initiative. An affiliated gas utility in Utah has a similar pilot project underway, which is studying the feasibility of hydrogen blending, its availability, storage and pricing. Not having retained any contractors for this study, the program costs as reflected in witness Spaulding's exhibits are based on an estimate from the Utah pilot project. Company responses to Public Staff data requests have not provided any costs specific to this program for North Carolina. The Public Staff should be given the opportunity to examine such new projects and make recommendations to the Commission before its implementation. Therefore, the Public Staff does not agree the Company's proposal of approving this project and allowing the R&D costs to be recovered.

## PSNC'S QUALITY OF SERVICE

**Q. WHAT FACTORS DID YOU CONSIDER IN YOUR EVALUATION OF PSNC'S OVERALL QUALITY OF SERVICE PROVIDED TO ITS CUSTOMERS?**

A. I reviewed the following information in my evaluation of PSNC's quality of service:

- Informal complaints and inquiries from PSNC customers received by the Public Staff's Consumer Services Division;
- Customer Call Center Monthly Reports filed in Docket No. G-100, Sub 96PSNC;
- Data on pipeline incident and damage rates (see Patel Figure 3); and
- Company initiatives that impact the level of service being provided to customers.

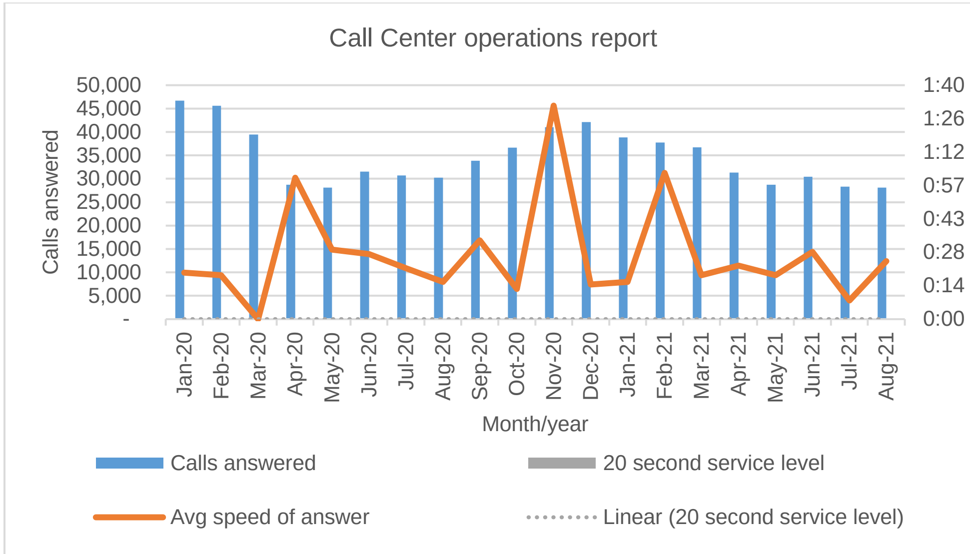
**Q. WHAT TYPES OF CUSTOMER COMPLAINTS AND INQUIRIES HAVE BEEN RECEIVED BY THE PUBLIC STAFF'S CONSUMER SERVICES DIVISION?**

**A.** For the period January 2016 through April 2021, the Public Staff's Consumer Services Division received approximately 499 contacts from PSNC customers. Of those contacts, 78% related to billing and payment issues including the establishment or modification of payment arrangements and questions about current customer bills. The remaining 22% involved rate, service, and meter-related issues.

**Q. PLEASE DESCRIBE THE OTHER DATA USED IN YOUR REVIEW.**

A. The other data used in my review were obtained through PSNC's Commission-required filings and responses to Public Staff data requests. I was able to analyze the Company's: (1) call center response times to customer inquiries, (2) response times to emergency response calls/events, and (3) the correlation between damage rates and the number of locate request tickets issued to the Company.

With regard to the Customer Call Center information filed in Docket No. G-100, Sub 96PSNC, from January 2020 to August 2021, the Company and its third party call centers answered 694,788 calls with an answer rate of 98%. In addition to the number of calls answered by customer service representatives, the Company's Interactive Voice Response (IVR) answering system handled an additional 472,484 calls during this same timeframe. Per G-100, Sub 96PSNC Reports, on average, the Company's performance on the "20 second service level" to customer calls has an overall high performance of answering calls within 20 seconds as can be seen from Patel Figure 2 below, while also focusing on improving call response time during the winter months.




**Patel Figure 2**

**Q. HOW WOULD YOU RATE PSNC'S SERVICE QUALITY?**

A. Based on my investigation, I believe the overall quality of service provided by PSNC to its North Carolina customers is adequate at this time.

**Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

A. Yes, it does.

**APPENDIX A**

## QUALIFICATIONS AND EXPERIENCE

NEHA PATEL

I graduated from the University Of Mumbai in 1995 with a Bachelor of Science degree in Electronic Engineering. I began working as a Utilities Engineer with the Natural Gas Division of the Public Staff in the spring of 2014. In 2020, I became Manager of the Natural Gas Section of the Energy Division.

I have worked on purchased gas cost adjustment procedures, tariff filings, customer utilization trackers, special contract review and analysis, weather normalization adjustments, customer complaint resolutions, integrity management riders, franchise exchange filings, compressed natural gas special contracts, peak day demand and capacity calculations, fuel and electric usage trackers, gas resellers, annual review of gas costs proceedings, renewable natural gas filings, cost of service studies, general rate case proceedings, and rate design.

**PUBLIC STAFF**
**PUBLIC SERVICE COMPANY OF NORTH CAROLINA, INC.**
**SUMMARY OF VOLUME AND BILL ADJUSTMENT**
**DOCKET G-5, Sub 632**

| RATE SCHEDULE (1) | DESCRIPTION (2) | SEASON (3) | BILLS/ DEMAND UNITS (4) | VOLUMES (Ths) (5) | WEATHER NORMALIZATION ADJUSTMENT (Ths) (6) | WEATHER NORMALIZATION TOTAL (Ths) (7) (5) + (6) | CUSTOMER GROWTH ADJUSTMENT (BILLS) (8) | CUSTOMER GROWTH ADJUSTMENT (Ths) (9) | TOTAL (BILLS) (10) (4) + (8) | TOTAL (DTS) (11) (7) + (9) |
|---|---|---|---|---|---|---|---|---|---|---|
| 101 Residential Service | | W | 3,246,165 | 219,794,290 | 58,323,110 | 278,117,400 | 84,400 | 7,231,025 | 3,330,565 | 285,348,425 |
| 101 Residential Service | | S | 3,248,885 | 47,987,967 | (9,262,415) | 38,725,552 | 84,471 | 1,006,858 | 3,333,356 | 39,732,410 |
| 102 HE Residential Service | | W | 76,392 | 4,650,754 | 1,082,442 | 5,733,196 | 7,350 | 551,604 | 83,742 | 6,284,800 |
| 102 HE Residential Service | | S | 77,147 | 1,140,830 | (221,032) | 919,798 | 7,421 | 88,479 | 84,568 | 1,008,277 |
| 115 Open Flame (Gas Light) | | W | 281 | 33,714 | - | 33,714 | - | - | 281 | 33,714 |
| 115 Open Flame (Gas Light) | | S | 277 | 33,556 | - | 33,556 | - | - | 277 | 33,556 |
| 125 Small General Service | First 500 ths | | 533,875 | 67,672,208 | 19,621,522 | 87,293,730 | - | - | 533,875 | 87,293,730 |
| | Next 4,500 ths | | | 37,299,642 | 10,815,012 | 48,114,654 | | - | | 48,114,654 |
| | All Over 5,000 ths | | | 320,475 | 92,922 | 413,397 | | - | | 413,397 |
| 126 Small General Service Cooling | | | 48 | 42,260 | - | 42,260 | - | - | 48 | 42,260 |
| 127 HE Small General Service | First 500 ths | | 1,254 | 328,563 | 41,686 | 370,249 | - | - | 1,254 | 370,249 |
| | Next 4,500 ths | | | 688,196 | 87,314 | 775,510 | | - | | 775,510 |
| | All Over 5,000 ths | | | 59,711 | 7,576 | 67,287 | | - | | 67,287 |
| 135 Natural Gas Vehicle Fuel | | W | - | 57,250 | - | 57,250 | - | - | - | 57,250 |
| | | S | - | 100,641 | - | 100,641 | - | - | - | 100,641 |
| 140 Medium General Service | First 1,000 Ths | | 11,876 | 10,147,261 | 1,351,393 | 11,498,654 | - | - | 11,876 | 11,498,654 |
| | All Over 1,000 Ths | | | 21,470,504 | 2,859,402 | 24,329,906 | | - | | 24,329,906 |
| 145 Large General Service | First 15,000 Ths | | 3,133 | 25,709,920 | - | 25,709,920 | - | - | 3,133 | 25,709,920 |
| | Next 15,000 Ths | | | 6,868,036 | - | 6,868,036 | | - | | 6,868,036 |
| | Next 15,000 Ths | | | 3,814,813 | - | 3,814,813 | | - | | 3,814,813 |
| | Next 15,000 Ths | | | 2,610,463 | - | 2,610,463 | | - | | 2,610,463 |
| | Next 1,000,000 Ths | | | 7,067,001 | - | 7,067,001 | | - | | 7,067,001 |
| | Over 1,060,000 Ths | | | - | - | - | | - | | - |
| 150 Interruptible Service | First 15,000 Ths | | 103 | 1,278,460 | - | 1,278,460 | - | - | 103 | 1,278,460 |
| | Next 15,000 Ths | | | 969,240 | - | 969,240 | | - | | 969,240 |
| | Next 70,000 Ths | | | 2,623,900 | - | 2,623,900 | | - | | 2,623,900 |
| | Next 500,000 Ths | | | 2,967,960 | - | 2,967,960 | | - | | 2,967,960 |
| | All Over 600,000 Ths | | | - | - | - | | - | | - |
| 175 Large General Transportation Service | First 15,000 Ths | | 3,663 | 43,775,946 | - | 43,775,946 | - | - | 3,663 | 43,775,946 |
| | Next 15,000 Ths | | | 23,662,709 | - | 23,662,709 | | - | | 23,662,709 |
| | Next 15,000 Ths | | | 16,090,255 | - | 16,090,255 | | - | | 16,090,255 |
| | Next 15,000 Ths | | | 11,864,080 | - | 11,864,080 | | - | | 11,864,080 |
| | Next 1,000,000 Ths | | | 97,680,420 | - | 97,680,420 | | - | | 97,680,420 |
| | All Over 1,060,000 Ths | | | 17,577,890 | - | 17,577,890 | | - | | 17,577,890 |
| 180 Interruptible Transportation Service | First 15,000 Ths | | 1,293 | 17,511,730 | - | 17,511,730 | - | - | 1,293 | 17,511,730 |
| | Next 15,000 Ths | | | 14,888,370 | - | 14,888,370 | | - | | 14,888,370 |
| | Next 70,000 Ths | | | 38,767,090 | - | 38,767,090 | | - | | 38,767,090 |
| | Next 500,000 Ths | | | 45,356,760 | - | 45,356,760 | | - | | 45,356,760 |
| | All Over 600,000 Ths | | | 18,795,150 | - | 18,795,150 | | - | | 18,795,150 |
| Special Contracts | | W | 30 | 223,378,520 | - | 223,378,520 | - | (58,738,520) | 30 | 164,640,000 |
| Special Contracts | | S | 30 | 219,131,370 | - | 219,131,370 | - | 29,708,630 | 30 | 248,840,000 |
| **Subtotal w/Power Generation** | | | **7,204,452** | **1,254,217,905** | **84,798,931** | **1,339,016,836** | **183,642** | **(20,151,923.89)** | **7,388,094** | **1,318,864,912** |
| **Subtotal w/o Power Generation** | | | **7,204,392** | **811,708,015** | **84,798,931** | **896,506,946** | **183,642** | **8,877,966** | **7,388,034** | **905,384,912** |
| **Total** | | | **7,204,452** | **1,254,217,905** | **84,798,931** | **1,339,016,836** | **183,642** | **(20,151,924)** | **7,388,094** | **1,318,864,912** |

**PUBLIC SERVICE COMPANY OF NORTH CAROLINA. INC.**
**PUBLIC STAFF END-OF-PERIOD REVENUE LEVEL**
**Docket G-5, Sub 632**

| RATE SCHEDULE (1) | DESCRIPTION (2) | | SEASON (3) | NUMBER OF BILLS (4) | MONTHLY FACILITIES CHARGE (5) | MONTHLY DEMAND CHARGE (6) | VOLUMES (Ths) (7) | END-OF PERIOD RATES ($/Th) (8) | FACILITIES CHARGE REVENUES ($) (9) | ENERGY CHARGE REVENUES ($) (11) | MARGIN DECOUPLING ADJUSTMENT ($) (12) | INTEGRITY MANAGEMENT RIDER REVENUES ($) (15) | TOTAL REVENUES ($) (16) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 101 | Residential Service | | Winter | 3,330,565 | $10.00 | | 285,348,425 | $0.7971 | $33,305,653 | $227,436,962 | 4,150,950 | $22,909,034 | $264,893,565 |
| | | | Summer | 3,333,356 | 10.00 | | 39,732,410 | $0.7311 | $33,333,560 | $29,046,378 | 2,117,908 | | $64,497,846 |
| | | | | 6,663,921 | | | 325,080,835 | | $66,639,213 | $256,483,340 | 6,268,858 | | $352,300,442 |
| 102 | HE Residential Service | | Winter | 83,742 | $10.00 | | 6,284,800 | $0.7471 | $837,420 | $4,695,060 | 40,224 | 513,956 | $5,572,703 |
| | | | Summer | 84,568 | 10.00 | | 1,008,277 | $0.6811 | $845,680 | $686,687 | 47,670 | | $1,580,037 |
| | | | | 168,310 | | | 7,293,077 | | $1,683,100 | $5,381,747 | 87,894 | | $7,666,697 |
| 115 | Open Flame (Gas Light) | | Winter | 281 | $10.00 | | 33,714 | 0.7970 | 2,810 | 26,871 | - | 4,741 | 29,681 |
| | | | Summer | 277 | 10.00 | | 33,556 | 0.7310 | 2,770 | 24,531 | - | | 27,301 |
| | | | | 558 | | | 67,270 | | 5,580 | 51,402 | - | | 61,723 |
| 125 | Small General Service | | | | | | | | | | | | |
| | | First 500 ths | | 533,875 | $17.50 | | 87,293,730 | $0.6770 | $9,342,813 | $59,094,363 | (939,779) | 5,245,233 | 58,154,584 |
| | | Next 4,500 ths | | | | | 48,114,654 | $0.6270 | | $30,165,963 | (517,989) | | 29,647,975 |
| | | All Over 5000 ths | | | | | 413,397 | $0.5770 | | $238,513 | (4,451) | | 234,063 |
| | | | | | | | 135,821,780 | | | $89,498,840 | (1,462,218) | | 88,036,622 |
| | **Total Rate Schedule 125** | | | 533,875 | | | 135,821,780 | | $9,342,813 | $89,498,840 | ($1,462,218) | | 102,624,668 |
| 126 | Small General Service Cooling | ths | | 48 | $30.00 | | 42,260 | 0.5770 | 1,440 | 24,382 | - | 1,632 | 25,822 |
| | **Total Rate Schedule 126** | | | 48 | | | 42.260 | | $1.440 | $24.382 | - | | $27.454 |
| 127 | HE Small General Service | | | | | | | | | | | | |
| | | First 500 ths | | 1,254 | $17.50 | | 370,249 | 0.6270 | 21,945 | 232,146 | (7,554) | 46,846 | 224,592 |
| | | Next 4,500 ths | | | | | 775,510 | 0.5770 | | 447,469 | (15,822) | | 431,648 |
| | | All Over 5000 ths | | | | | 67,287 | 0.5270 | | 35,460 | (1,373) | | 34,087 |
| | | | | | | | 1,213,045 | | | 715,075 | (24,748) | | 690,327 |
| | **Total Rate Schedule 127** | | | 1,254 | | | 1,213,045 | | $21,945 | $715,075 | (24,748) | | $759,070 |
| 135 | Natural Gas Vehilce Fuel Customer Stations | ths | Winter | | | | 57,250 | $0.7314 | - | $41,871 | | | $41,871 |
| | | | Summer | | | | 100,641 | $0.7314 | | $73,606 | | | 73,606 |
| | **Total Rate Schedule 135** | | | - | | | 157.891 | | - | $115.477 | | | $115.477 |
| 140 | Medium General Service | | | | | | | | | | | | |
| | | First 1,000 ths | | 11,876 | $100.00 | | 11,498,654 | 0.5789 | $1,187,600 | 6,656,916 | 71,364 | 1,383,645 | 6,728,280 |
| | | All Over 1,000 ths | | | | | 24,329,906 | 0.5287 | | 12,863,951 | 150,999 | | 13,014,950 |
| | | | | | | | 35,828,560 | | | 19,520,867 | 222,364 | | 19,743,231 |
| | **Total Rate Schedule 140** | | | 11,876 | | | 35,828,560 | | 1,187,600 | 19,520,867 | 222,364 | | 22,314,476 |
| 145 | Large General Sales Service | | | | | | | | | | | | |
| | | First 15,000 ths | | 3,133 | $300.00 | | 25,709,920 | 0.4481 | $939,900 | 11,519,844 | | 436,125 | 11,519,844 |
| | | Next 15,000 ths | | | | | 6,868,036 | 0.4272 | | 2,934,025 | | | 2,934,025 |
| | | Next 15,000 ths | | | | | 3,814,813 | 0.4086 | | 1,558,542 | | | 1,558,542 |
| | | Next 15,000 ths | | | | | 2,610,463 | 0.3842 | | 1,002,914 | | | 1,002,914 |
| | | Next 1,000,000 ths | | | | | 7,067,001 | 0.3639 | | 2,571,823 | | | 2,571,823 |
| | | All Over 1,060,000 ths | | | | | - | 0.3474 | | - | | | - |
| | | | | | | | 46,070,233 | | | $19,587,147 | | | $19,587,147 |
| | **Total Rate Schedule 145** | | | 3,133 | | | 46,070,233 | | 939,900 | 19,587,147 | | | 20,963,173 |
| 150 | Interruptible Sales Service | | | | | | | | | | | | |
| | | First 15,000 ths | | 103 | $600.00 | | 1,278,460 | 0.3827 | $61,800 | 489,241 | | 53,968 | 489,241 |
| | | First 15,000 ths | | | | | 969,240 | 0.3627 | | 351,534 | | | 351,534 |
| | | Next 70,000 ths | | | | | 2,623,900 | 0.3427 | | 899,263 | | | 899,263 |
| | | Next 500,000 ths | | | | | 2,967,960 | 0.3231 | | 958,799 | | | 958,799 |
| | | All Over 600,000 ths | | | | | - | 0.3031 | | - | | | - |
| | | | | | | | 7,839,560 | | | $2,698,837 | | | $2,698,837 |
| | **Total Rate Schedule 150** | | | 103 | | | 7,839,560 | | $61,800 | $2,698,837 | | | $2,814,605 |
| 175 | Large General Transportation Service | | | | | | | | | | | | |
| | | First 15,000 ths | | 3,663 | $300.00 | | 43,775,946 | 0.1390 | 1,098,900 | 6,084,856 | | 1,994,137 | 6,084,856 |
| | | Next 15,000 ths | | | | | 23,662,709 | 0.1184 | | 2,800,482 | | | 2,800,482 |
| | | Next 15,000 ths | | | | | 16,090,255 | 0.0999 | | 1,607,256 | | | 1,607,256 |
| | | Next 15,000 ths | | | | | 11,864,080 | 0.0758 | | 899,179 | | | 899,179 |
| | | Next 1,000,000 ths | | | | | 97,680,420 | 0.0557 | | 5,443,730 | | | 5,443,730 |
| | | All Over 1,060,000 ths | | | | | 17,577,890 | 0.0487 | | 856,395 | | | 856,395 |
| | | | | | | | 210,651,300 | | | $17,691,897 | | | $17,691,897 |
| | **Total Rate Schedule 175** | | | 3,663 | | | 210,651,300 | | 1,098,900 | $17,691,897 | | | $20,784,934 |
| 180 | Interruptible Transportation Service | | | | | | | | | | | | |
| | | First 15,000 ths | | 1,293 | $600.00 | | 17,511,730 | 0.0976 | $775,800 | 1,708,444 | | 931,545 | 1,708,444 |
| | | First 15,000 ths | | | | | 14,888,370 | 0.0778 | | 1,158,017 | | | 1,158,017 |
| | | Next 70,000 ths | | | | | 38,767,090 | 0.0580 | | 2,249,267 | | | 2,249,267 |
| | | Next 500,000 ths | | | | | 45,356,760 | 0.0386 | | 1,748,503 | | | 1,748,503 |
| | | All Over 600,000 ths | | | | | 18,795,150 | 0.0188 | | 353,349 | | | 353,349 |
| | | | | | | | 135,319,100 | | | $7,217,580 | | | $7,217,580 |
| | **Total Rate Schedule 180** | | | 1,293 | | | 135,319,100 | | 775,800 | $7,217,580 | | | $8,924,926 |
| | Special Contracts | ths | Winter | 30 | $0.00 | | 164,640,000 | | - | $16,913,171 | | | $16,913,171 |
| | | ths | Summer | 30 | $0.00 | | 248,840,000 | | | $17,326,171 | | | $17,326,171 |
| | | | | 60 | | | 413,480,000 | | - | $34,239,341 | | | 34,239,341 |
| | **TOTAL COMPANY** | | | **7,388,094 bills** | | | **1,318,864,912 ths** | | **$81,758,091** | **$453,225,934** | **$5,092,150** | **33,520,862** | **$573,596,985** |

| | |
|---|---|
| **OTHER OPERATING REVENUES** | **$3.005.303** |
| **TOTAL OPERATING REVENUES** | **$576.602.288** |

| | |
|---|---|
| **Sales** | **$509.647.785** |
| **Transportation** | **$29.709.860** |
| **Total Sales & Transportation** | **$539.357.645** |
| **Special contracts** | **$34.239.341** |
| **Sub Total** | **$573.596.985** |
| **Other Operating Revenue** | **$3.005.303** |
| **Total** | **$576.602.288** |

**Public Service Company of North Carolina, Inc.**
**Docket No. G-5, Sub 632**
**For the Test Year Ended December 31, 2020**

| Pipeline | Contract Number | Rate Schedule | MDTQ | Demand Rate | Months/ Days | Amount | Pipeline Total |
|---|---|---|---|---|---|---|---|
| **I. Fixed Costs** | | | | | | | |
| **Transportation Demand Charges:** | | | | | | | |
| DTI | 700013 | FTNN-GSS | 11,669 | $4.17410 | 5 | 243,538 | |
| DTI | 700036 | FTNN-GSS | 18,000 | $4.17410 | 5 | 375,669 | |
| DTI | 100035 | FTNN | 18,331 | $4.17410 | 12 | 918,185 | |
| DTI | 100103 | FTNN | 12,000 | $4.17410 | 12 | 601,070 | |
| DTI | 100051 | FTNN | 10,000 | $4.17410 | 12 | 500,892 | |
| DTI | 200085 | FT | 5,035 | $6.20210 | 12 | 374,731 | 3,014,085 |
| TGT | 29970 | FT 1-4 | 5,272 | $0.28420 | 365 | 546,880 | 546,880 |
| Transco | 1004190 | FT, Zn 4-5 | 4,643 | $0.38176 | 61 | 108,123 | |
| Transco | 1004190 | FT, Zn 4-5 | 30,754 | $0.38176 | 61 | 716,179 | |
| Transco | 1004190 | FT, Zn 4-5 | 5,159 | $0.38176 | 90 | 177,255 | |
| Transco | 1004190 | FT, Zn 4-5 | 34,171 | $0.38176 | 90 | 1,174,061 | 2,175,619 |
| Transco | 1004996 | FT, Zn 1-5 | 739 | $0.87626 | 90 | 58,279 | |
| Transco | 1004996 | FT, Zn 2-5 | 1,087 | $0.85217 | 90 | 83,349 | |
| Transco | 1004996 | FT, Zn 3-5 | 2,521 | $0.78911 | 90 | 179,060 | 320,688 |
| Transco | 1002264 | FT, Zn 1-5 | 385 | $0.48308 | 365 | 67,885 | |
| Transco | 1002264 | FT, Zn 2-5 | 566 | $0.46959 | 365 | 97,013 | |
| Transco | 1002264 | FT, Zn 3-5 | 1,313 | $0.43427 | 365 | 208,122 | 373,019 |
| Transco | 1003703 | FT, Zn 1-5 | 27,906 | $0.48308 | 365 | 4,920,503 | |
| Transco | 1003703 | FT, Zn 2-5 | 41,037 | $0.46959 | 365 | 7,033,756 | |
| Transco | 1003703 | FT, Zn 3-5 | 95,208 | $0.43427 | 365 | 15,091,282 | 27,045,541 |
| Transco | 1006505 | FT, Zn 3-6 | 30 | $0.51153 | 365 | 5,601 | |
| Transco | 1006505 | FT, Zn 2-6 | 1,371 | $0.54685 | 365 | 273,652 | 279,253 |
| Transco | 1012381 | FT, Zn 6 | 5,175 | $0.12806 | 365 | 241,889 | 241,889 |
| Transco | 1012028 | FT, Zn 4-5 | 44,627 | $0.38176 | 365 | 6,218,433 | 6,218,433 |
| Transco | 9103562 | FT, Zn 3-5 | 20,000 | $0.27275 | 365 | 1,991,075 | 1,991,075 |
| Transco | 9178381 | FT, Zn 6-4 | 100,000 | $0.55515 | 365 | 20,262,975 | 20,262,975 |
| Transco | 9130053 | FT, Zn 3-6 | 208 | $0.51153 | 365 | 38,835 | 38,835 |
| Transco | 9130053 | FT, Zn 2-6 | 9,425 | $0.54685 | 365 | 1,881,232 | 1,881,232 |
| Transco | 9238274 | FT, Zn 3-5 | 60,000 | $0.64578 | 365 | 14,142,582 | 14,142,582 |
| Cove Point LNG | 1003 | FTS | 25,000 | $0.56310 | 12 | 168,930 | 168,930 |
| Cardinal | 9125343 | Zone 2 | 50,000 | $0.08100 | 365 | 1,478,250 | |
| Cardinal | 1031995 | Zone 2 | 103,500 | $0.08100 | 365 | 3,059,978 | |
| Cardinal | 1031994 | Zone 1B | 72,450 | $0.03930 | 365 | 1,039,259 | 5,577,487 |
| Columbia | 49530 | SST | 35,335 | $6.89100 | 6 | 1,460,961 | |
| Columbia | 49530 | SST | 17,667 | $6.89100 | 6 | 730,460 | 2,191,421 |
| East TN Patriot | 410097 | FT-A | 30,000 | $9.29000 | 12 | 3,344,400 | 3,344,400 |
| East TN Patriot | 410333 & 8 | FT-A | 20,000 | $9.29000 | 12 | 2,229,600 | 2,229,600 |
| Texas Eastern Transmission | | | | $46,944 | 12 | 563,328 | 563,328 |
| Piedmont (Town of Faith redelivery agreement) | | | | $760 | 12 | 9,120 | 9,120 |
| EDF | | | | 147,000 | 12 | 1,764,000 | 1,764,000 |
| **Total Transportation** | | | | | | | **94,380,393** |
| Pipeline | Contract Number | Rate [$/dt] | Storage Quantity | Daily Demand | Months/ Days | Amount | Service Total |
| **Storage Charges** | | | | | | | |
| **Transco** | | | | | | | |
| GSS | 1000732 | | | | | | |
| Demand | | $0.10555 | | 33,218 | 365 | 1,279,748 | |
| Capacity | | $0.00063 | 1,835,944 | | 365 | 422,175 | 1,701,924 |
| WSS | 9019052 | | | | | | |
| Demand | | $0.03102 | | 29,416 | 365 | 333,057 | |
| Capacity | | $0.00033 | 2,794,500 | | 365 | 336,598 | 669,654 |
| LG-A | 9019071 | | | | | | |
| Demand | | $0.10316 | | 5,175 | 365 | 194,856 | |
| Capacity | | $0.01988 | 25,875 | | 365 | 187,754 | 382,611 |
| ESS | 9011146 | | | | | | |
| Demand | | $0.03901 | | 37,717 | 365 | 537,039 | |
| Capacity | | $0.00486 | 318,271 | | 365 | 564,581 | 1,101,620 |
| Eminence | 9050453 | | | | | | |
| Demand | | $0.03901 | | 38,545 | 365 | 548,829 | |
| Capacity | | $0.00486 | 321,950 | | 365 | 571,107 | 1,119,936 |
| **Columbia FSS** | | | | | | | |
| Demand | | $1.50100 | | 35,335 | 12 | 636,454 | |
| Capacity | | $0.02880 | 3,180,150 | | 12 | 1,099,060 | 1,735,514 |
| **Cove Point LNG** | | | | | | | |
| resv chg - FPS-1 | | $3.29510 | | 25,000 | 12 | 988,530 | 988,530 |
| **DTI GSS** | | | | | | | |
| Demand | | $1.87160 | | 62,669 | 12 | 1,407,496 | |
| Capacity | | $0.01450 | 3,856,000 | | 12 | 670,944 | 2,078,440 |
| **Pine Needle LNG** | | | | | | | |
| Resv chg | | $0.07602 | | 103,500 | 365 | 2,871,846 | 2,871,846 |
| **Saltville** | | | | | | | |
| Demand | | $0.11670 | 600,000 | | 12 | 840,240 | |
| Inj Reserve | | $4.00000 | | 13,333 | 12 | 639,984 | |
| WD Reserve | | $2.00000 | | 30,000 | 12 | 720,000 | 2,200,224 |
| **Saltville** | | | | | | | |
| Demand | 420034 | $0.11670 | 200,000 | | 12 | 280,080 | |
| Inj Reserve | | $4.00000 | | 10,000 | 12 | 480,000 | |
| WD Reserve | | $2.00000 | | 20,000 | 12 | 480,000 | 1,240,080 |
| Total Storage | | | | | | | **$16,090,377** |
| Secondary Market Credits | | | | | | | (23,248,469) |
| **Total Fixed Gas Costs (Demand charges)** | | | | | | | **$87,222,302** |
| **II. Commodity Costs (Annual qty):** | | | | | | | |
| Sales | | $0.2500 | 559,414,512 | | | | 139,853,628 |
| Unaccounted For Gas | | $0.2500 | 8,836,557 | | | | 2,209,139 |
| Commodity Costs - Power Generation & Special Contracts | | | - | | | | - |
| **Total Commodity Gas Cost** | | | 568,251,068 | | | | **142,062,767** |
| **III. Deferred fixed gas cost, CU&LAF:** | | | | | | | **(33,419,626)** |
| **IV. Total Gas Cost** | | | | | | | **195,865,443** |