



**NORTH CAROLINA
PUBLIC STAFF
UTILITIES COMMISSION**

June 13, 2022

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

Re: Docket No. G-39, Sub 46 and G-39, Sub 47 – Cardinal Pipeline Company, LLC Depreciation Rate Study as of December 31, 2020, and Application of Cardinal Pipeline Company, LLC for an Adjustment in its Rates and Charges

Dear Ms. Dunston:

In connection with the above-captioned dockets, I transmit herewith for filing on behalf of the Public Staff the Direct Testimony and Exhibits of Neha Patel.

By copy of this letter, we are forwarding copies to all parties of record.

Sincerely,

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

Attachments

cc: Parties of Record

Executive Director (919) 733-2435	Communications (919) 733-2810	Economic Research (919) 733-2902	Legal (919) 733-6110	Transportation (919) 733-7766
Accounting (919) 733-4279	Consumer Services (919) 733-9277	Electric (919) 733-2267	Natural Gas (919) 733-4326	Water (919) 733-5610

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JUN 13 2022

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. G-39, SUB 46
DOCKET NO. G-39, SUB 47

DOCKET NO. G-39, SUB 46)
)
 In the Matter of)
 Cardinal Pipeline Company, LLC)
 Depreciation Rate Study as of)
 December 31, 2020) TESTIMONY OF
) NEHA PATEL
 DOCKET NO. G-39, SUB 47) ON BEHALF OF
) THE PUBLIC STAFF –
 In the Matter of) NORTH CAROLINA
 Application of Cardinal Pipeline) UTILITIES COMMISSION
 Company, LLC, for an Adjustment of its)
 Natural Gas Rates and Charges in)
 North Carolina)
)
)

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

**DOCKET NO. G-39, SUB 46
DOCKET NO. G-39, SUB 47**

TESTIMONY OF NEHA PATEL

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

JUNE 10, 2022

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

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

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

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

9 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**
10 **PROCEEDING?**

11 A. The purpose of my testimony is to provide the results of my
12 investigation into the application of Cardinal Pipeline Company, LLC
13 (Cardinal or Company) for an increase in its rates and charges in this
14 proceeding.

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

3 A. My areas of investigation in this case include: (1) review of the
4 Company's billing determinants; (2) review of the zonal allocation of
5 costs; (3) evaluation of the Company's allocation of the cost of
6 service between Cardinal's two zones; (4) derivation of Cardinal's
7 rates; (5) evaluation of the Company's integrity management costs
8 and its request to place certain pipeline integrity costs in a deferred
9 account for proposed future collection; and (6) evaluation of the
10 Company's request for deferred treatment of certain cybersecurity
11 expenses.

12 **Q. PLEASE EXPLAIN THE EXISTING COST CLASSIFICATION,**
13 **ALLOCATION METHODOLOGIES AND THE RATE DESIGN.**

14 A. In this case, both the Public Staff and the Company have designed
15 transportation rates using the Straight-Fixed-Variable (SFV) rate
16 design that was approved by the Commission by Order issued on
17 November 6, 1997, in Docket No. G-39, Sub 0 (the Certificate
18 Docket). The SFV rate design basically assigns all fixed costs to the
19 reservation or demand rate and variable costs to the commodity rate.
20 All of Cardinal's costs in this docket are classified as fixed and are
21 recoverable through Cardinal's Zone 1 and Zone 2 demand or
22 reservation rates.

1 **Q. WHAT ARE THE PUBLIC STAFF'S RECOMMENDED RATES?**

2 **A.** Patel Exhibit A is the allocation of the Company's cost of service by
3 zone using a rate base allocation with adjustments as recommended
4 by Public Staff witnesses Hinton, Johnson and McCullar.

5 Patel Exhibit B shows my derivation of the Public Staff's
6 recommended rates. As mentioned earlier in my testimony, the
7 Public Staff is using the Commission's approved SFV rate design
8 methodology, and this rate design incorporates that methodology.

9 The rates incorporate recommendations from Public Staff witnesses
10 Hinton, Johnson and McCullar.

11 **Q. PLEASE PROVIDE A BRIEF OVERVIEW OF THE COMPANY'S**
12 **REGULATORY ASSET TREATMENT FOR CERTAIN PIPELINE**
13 **INTEGRITY RELATED COSTS.**

14 **A.** As discussed by Company witness Miller,¹ pipeline operators are
15 required to perform integrity measures on its pipelines by following
16 the regulatory requirements imposed by the U.S. Department of
17 Transportation Pipeline and Hazardous Materials Safety
18 Administration (PHMSA) to ensure the safety and integrity of its
19 pipeline. These integrity measures are cyclical in nature, are based
20 on timing and intervals of prior assessments, and vary from year to

¹ Direct Testimony of Company witness Miller, pp. 20-21.

1 year.

2 In Cardinal's 2017 application for an adjustment in its rates and
3 charges, filed in Docket No. G-39, Sub 38, the Company requested
4 and received Commission approval to defer certain pipeline integrity
5 O&M expenses that were necessary for compliance with PHMSA
6 regulations and to ensure the safety and integrity of Cardinal's
7 pipeline. In 2018, Cardinal completed its assessment, and the
8 expenses incurred were placed in a deferred account for recovery in
9 future rates over a five-year period. The Company is set to perform
10 its next cyclic assessment in 2025 and is requesting Commission
11 approval to record its actual costs for the 2025 assessment in a
12 deferred account for proposed recovery in future rates. Cardinal
13 estimates the cost of the assessment to be approximately \$414,000.

14 As part of my investigation in this proceeding, I reviewed data
15 request responses received from the Company regarding its integrity
16 management O&M projects and associated costs incurred in 2018.

17 Based upon my review, I recommend that Cardinal be allowed to
18 collect its pipeline integrity expenses incurred in 2018 as authorized
19 by the Commission's order in Docket No. G-39, Sub 38. For the next
20 cyclic pipeline assessment scheduled to be performed in 2025, the
21 Company is proposing a similar accounting procedure.

22 While my area of investigation focused on the necessity of the

1 integrity measures, Public Staff accounting witness Johnson
2 discusses how these costs are accounted for.

3 **Q. PLEASE PROVIDE A BRIEF OVERVIEW OF THE COMPANY'S**
4 **REQUEST FOR DEFERRED TREATMENT OF CYBERSECURITY**
5 **COSTS.**

6 A. Witness Miller's testimony² addresses the need for hardening of
7 critical infrastructure against cybersecurity threats as mandated by
8 government agencies,³ which may potentially require replacement of
9 non-compliant equipment, as well as network segmentation activities
10 and multifactor authentication (MFA) software upgrades.

11 As part of this proceeding, and to be compliant with federal
12 mandates, the Company is requesting Commission approval to defer
13 O&M costs estimated to be from \$175,000 to \$1.2 million for
14 cybersecurity expenses.

15 Since these costs are estimates, Cardinal has proposed to place the
16 actual incurred costs in a deferred account for proposed recovery in
17 future rates. While the Public Staff recognizes the importance of
18 protecting critical assets from cybersecurity threats, I recommend
19 that Cardinal provide the Commission and Public Staff a report
20 showing the final program components and costs by discrete

² Direct Testimony of Company witness Miller, pp. 21-23.

³ Department of Homeland Security's TSA-Enhancing Pipeline Cybersecurity.

1 category before commencing the overall cybersecurity program,
2 particularly given the relative uncertainty of both the proposed
3 activities and associated costs.

4 While my area of investigation focused on the necessity of complying
5 with the federal cybersecurity mandates, Public Staff accounting
6 witness Johnson discusses how these costs are accounted for.

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

8 **A.** Yes, it does.

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.

Cardinal Pipeline Company, LLC
Docket No. G-39, Sub 47
Settlement Cost of Service by Zone

Item	Zone 1			Zone 2			Total
	Demand (\$)	Commodity (\$)	Total (\$)	Demand (\$)	Commodity (\$)	Total (\$)	
Plant	28,165,617		28,165,617	128,421,356		128,421,356	156,586,972
Accumulated Depreciation	(18,503,514)		(18,503,514)	(55,817,312)		(55,817,312)	(74,320,707)
Net Plant	9,662,102	0	9,662,102	72,604,044	0	72,604,044	82,266,265
Materials & Supplies	60,268		60,268	274,553		274,553	334,821
Deferred Income Taxes	(2,220,152)		(2,220,152)	(24,044,182)		(24,044,182)	(26,264,333)
Rate Base	7,502,219	0	7,502,219	48,834,415	0	48,834,415	56,336,753
Overall Return on Rate Base	[1] 516,238		516,238	3,359,808		3,359,808	3,876,045
O&M Expenses	[1] 316,695		316,695	2,060,892		2,060,892	2,377,587
Pipeline Integrity Deferral	[1] 10,977		10,977	71,434		71,434	82,411
Depreciation	730,262		730,262	3,326,750		3,326,750	4,057,012
General Taxes	[1] 71,892		71,892	467,834		467,834	539,659
Income Taxes	[1] 110,255		110,255	717,483		717,483	827,738
EDIT Amortization	(90,317)		(90,317)	(587,736)		(587,736)	(678,052)
Settlement Cost of Service	1,666,001	0	1,666,001	9,416,466	0	9,416,466	11,082,467

[1] Rate Base Zonal Allocation Factors:

Zone 1 Rate Base	7,502,219	13.32%
Zone 2 Rate Base	48,834,415	86.68%
Total	56,336,634	100.00%

[2] Allocated between zones based on Gross Plant Factor:

Zone 1	28,165,617	18.00%
Zone 2	128,421,356	82.00%
	156,586,972	100.00%

Cardinal Pipeline Company, LLC
Docket No. G-39, Sub 47
Settlement Rates

Item	Zone 1 A		Zone 1 B		Zone 2		Total
	Demand	Commodity	Demand	Commodity	Demand	Commodity	
Revenues Generated	\$592,991	\$0	\$1,073,010	\$0	\$9,416,466	\$0	\$11,082,467
Annual Billing Determinants							
Demand (Mcf)	720,000		840,000		3,987,240		
Demand (Dt)	745,200		869,400		4,126,793		
Commodity (Dt)		0		0		0	
Rates							
Monthly Demand (\$/Mcf)	\$0.82360		\$1.27739		\$2.36165		
Monthly Demand (\$/Dt)	\$0.79575		\$1.23420		\$2.28179		
Daily Demand (\$/Dt)	\$0.02616		\$0.04058		\$0.07502		
Commodity (\$/Dt)		\$0.00000		\$0.00000		\$0.00000	
Daily Electric Power Rate	\$0.00047		\$0.00047		\$0.00047		
Excess CFT 100% Load Factor (dt)							
Zone 1A	\$0.02616						
Zone 1B	\$0.04058						
Zone 2	\$0.07502						
Zone 1 COS Split							
Zone 1A	35.5937%						
Zone 1B	64.4063%						