NORTH CAROLINA
PUBLIC STAFF
UTILITIES COMMISSION

August 11, 2021

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

Re: Docket No. G-9, Sub 722 – Petition for Consolidated Construction/Redelivery Agreement; G-9, Sub 781 – Application for General Rate Increase; and G-9, Sub 786 – Application of Piedmont Natural Gas Company, Inc., for Modifications to Existing Energy Efficiency Program and Approval of New Energy Efficiency Programs

Dear Ms. Dunston:

Attached for filing in the above-referenced docket is the testimony of Jack L. Floyd, Manager, Electric Section – Electric Revenues, Rates, and Services, Energy Division.

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

Sincerely,

Electronically submitted
s/ Elizabeth D. Culpepper
Staff Attorney
elizabeth.culpepper@psncuc.nc.gov

s/ Megan Jost
Staff Attorney
megan.jost@psncuc.nc.gov

Attachment

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BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. G-9, SUB 722
DOCKET NO. G-9, SUB 781
DOCKET NO. G-9, SUB 786

DOCKET NO. G-9, SUB 722 In the Matter of Consolidated Natural Gas Construction and Redelivery Services Agreement Between Piedmont Natural Gas Company, Inc., and Duke Energy Carolinas, LLC DOCKET NO. G-9, SUB 781 In the Matter of Application of Piedmont Natural Gas Company, Inc., for an Adjustment of Rates, Charges, and Tariffs Applicable to Service in North Carolina DOCKET NO. G-9, SUB 786 In the Matter of Application of Piedmont Natural Gas Company, Inc., for Modification to Existing Energy Efficiency Program and Approval of New Energy Efficiency Programs	)	TESTIMONY OF JACK L. FLOYD PUBLIC STAFF – NORTH CAROLINA UTILITIES COMMISSION

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. G-9, SUB 722
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TESTIMONY OF JACK L. FLOYD

ON BEHALF OF THE PUBLIC STAFF
NORTH CAROLINA UTILITIES COMMISSION

AUGUST 11, 2021

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

A. My name is Jack L. Floyd. My business address is 430 North Salisbury Street, Dobbs Building, Raleigh, North Carolina. I am the Engineer and Manager of Rates and Energy Services – Electric Section of the Energy Division of the Public Staff – North Carolina Utilities Commission.

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 Public Staff's analysis and recommendations concerning issues related to apportioning the base margin revenue changes that will result from this case among the various customer classes of Piedmont Natural Gas Company, Inc. (Piedmont or the Company). In my analysis, I considered class rates of return (ROR) on rate base under present rates, and principles the Public Staff has historically considered in evaluating proposed revenues in setting base rates. I also discuss issues of affordability that are affecting natural gas utility customers.

Q. WHAT DID YOU REVIEW IN DEVELOPING THE PUBLIC STAFF'S RECOMMENDATIONS?

A. The Public Staff’s recommendations are based on a review of the Company's application, the testimony and exhibits of Company witnesses Pia K. Powers and Cynthia A. Menhorn, and, in particular, the Company’s cost of service study (COSS) filed with Company witness Menhorn’s testimony as Exhibit (CAM-2) and Exhibit (CAM-3). I also reviewed the Company’s responses to pertinent Public Staff data requests.

CALCULATION OF CLASS RORS AND ASSIGNMENT OF REVENUES

Q. HOW ARE RORS USED IN DETERMINING REVENUE ASSIGNMENT?

A. RORs indicate how the revenues produced by the various customer classes cover the costs to serve those classes. They also inform how any additional revenues will be apportioned to the customer classes. An ROR that is less than the overall system or jurisdictional ROR indicates that the revenues received from a specific jurisdiction or customer class do not fully cover its share of system costs.

Conversely, an ROR that is greater than the overall system or jurisdictional ROR indicates that a jurisdiction's or class's revenues exceed the necessary cost coverage. While it is appropriate to address revenue cost recovery inequities as revealed through RORs, it is equally important to keep in mind that such an assignment is based on a snapshot in time of the Company's cost and load data. A different timeframe, test year period, or other perspective would likely yield a different representation of cost causation and revenue assignment. Due to the variability in RORs, the Public Staff has historically targeted a ±10% "band of reasonableness" for class revenue assignment in electric cases. I will discuss this in more detail later in my testimony.

Q. PLEASE DISCUSS THE PUBLIC STAFF'S GOALS IN ASSIGNING CHANGES IN REVENUES.

A. The Public Staff believes that the assignment of a proposed revenue change, whether it is an increase or a decrease, should be governed by four fundamental principles. Using the ROR as determined by the COSS, and incorporating all adjustments and allocation factors associated with the proposed revenue change, the Public Staff seeks to:

1. Limit any revenue increase assigned to any customer class such that each class is assigned an increase that is no more than two percentage points

greater than the overall jurisdictional revenue percentage increase, thus avoiding rate shock;

2. Maintain a $\pm$10% "band of reasonableness" for RORs, relative to the overall jurisdictional ROR such that to the extent possible, the class ROR stays within this band of reasonableness following assignment of the proposed revenue changes;
3. Move each customer class toward parity with the overall jurisdictional ROR; and
4. Minimize subsidization of customer classes by other customer classes.

Q. HAS THE PUBLIC STAFF APPLIED SIMILAR PRINCIPLES TO NATURAL GAS UTILITIES IN PREVIOUS RATE CASES?

A. No. These revenue assignment principles have not been applied to natural gas utilities in past general rate case proceedings. I reviewed the Company's last four general rate cases (Subs 499, 550, 631, and 743), including the final order and stipulations for each. Neither the stipulations nor the final orders addressed the issue of revenue assignment and RORs in a prominent way. Intervenors representing industrial customers in those cases did discuss the disparity of class RORs. However, it is not obvious from the final orders and the resulting revenue changes in those cases that these principles were a material consideration. Similar disparities exist in this case.

Electric utility revenues and natural gas utility revenues are derived in different ways. “Sales” revenues are derived from customers who rely on the Company to secure the natural gas commodity and provide the facilities to distribute that natural gas to all customers at rates and pressures necessary to maintain an adequate level of service. “Transportation” revenues are derived from customers who secure the natural gas commodity on their own and use the Company’s transmission and distribution facilities to distribute the customer’s natural gas commodity to their respective points of delivery. Whether customers receive firm or interruptible service, or have special contracts that dictate their cost causation, each class of customers is responsible for its share of the costs to provide utility service. Those cost causation principles are typically determined through the cost functionalization, classification, and allocation processes that are associated with the Company’s COSS. This makes a COSS inextricably linked to the rate designs. Cost causation should be the first consideration when approving rates and rate designs. Once cost causation is established, then the Commission can apply its public policy objectives. While this process may result in a deviation from the Public Staff’s revenue assignment principles, both steps nevertheless conclude with a just and reasonable portfolio of rates.

Q. HOW DO THE RORS FOR THESE PAST GENERAL RATE CASES COMPARE TO THE PRESENT CASE?

A. Table 1 below summarizes the "per books" RORs from each case for each customer class that was part of that case. I used the "per books" values for the respective test year periods. This snapshot provides the best representation of the actual activities taking place in the test year. The RORs for the Large General Service (Rates 103 and 113) and the Interruptible Services (Rates 104 and 114) were each a consolidated customer class in the Sub 499, 550, and 631 proceedings. The Medium General Service (Rate 152) customer class did not exist in the Sub 499 case.

Table No. 1 Comparison of Returns on Rate Base (%s)

Customer Classes	Sub 499	Sub 631	Sub 550	Sub 743	Sub 781
Residential (Rate 101)	3.00	0.01	6.50	4.55	6.37
Small General Service (Rate 102)	11.00	9.40	9.51	8.09	11.20
Medium General Service (Rate 152)	Not included	28.84	10.35	18.86	19.03
Large General Service (Rate 103)	18.00	4.62	4.88	(4.80)	1.30
Large General Service Transportation (Rate 113)	18.00	4.62	4.88	(3.31)	(1.75)
Interruptible Sales (Rate 104)	31.00	18.40	5.80	13.05	51.71
Interruptible Transportation (Rate 114)	31.00	18.40	5.80	29.64	22.75
Military Transportation (Rate T-10)	34.00	0.15	18.91	(2.36)	(1.55)
Special Contracts	9.00	12.18	0.47	15.52	12.21
Municipal Contracts	Not included	Not included	Not included	(1.25)	(1.29)
Power Generation Contracts	Not included	Not included	14.32	4.63	6.21
Total Company	7.46	6.07	7.19	5.04	6.82

Source: Subs 499, 631, and 743 - Cost of Service Studies filed in the respective cases as Form G-1, Item 3. For Sub 550 – Normand Exhibit No. PMN-2.

Q. IS THE PUBLIC STAFF MAKING A RECOMMENDATION ON THE ASSIGNMENT OF THE REVENUE REQUIREMENT TO THE NORTH CAROLINA CUSTOMER CLASSES?

A. The Public Staff intends to update its recommended jurisdictional revenue requirement and file supplemental testimony to provide its final recommended revenue change. I will provide the Public Staff's assignment of our proposed revenue change at that time.

Q. IF THE COMMISSION ORDERS A BASE REVENUE DECREASE IN THIS PROCEEDING, WHAT RECOMMENDATIONS DOES THE PUBLIC STAFF HAVE REGARDING THE ASSIGNMENT OF THE REVENUE DECREASE TO THE CUSTOMER CLASSES?

A. In the event of a base revenue decrease, I believe it is appropriate to focus on addressing any disparities in the class RORs. In addressing disparities in RORs, any revenue decreases assigned to individual customer classes should be limited so that no other customer class sees an increase in its assigned revenue requirement simply to address a disparity in RORs. In other words, in the event of a revenue requirement decrease, no customer class should see an increase simply to bring the class ROR within 10% of the jurisdictional ROR.

Whether there is an increase or decrease in base margin revenues, Piedmont's customer classes exhibit significant differences in class

RORs. Because the process of bringing customer classes more in alignment may not be possible without creating significant rate shock to certain customer classes, strict adherence to the principles I outlined above may not be possible in this proceeding. Nevertheless, the process must begin at some level.

RATE DESIGN

Q. PLEASE DISCUSS THE RELATIONSHIP BETWEEN A COSS AND RATE DESIGN.

A. Rate design should follow the same cost causation approach underlying the COSS, such that each customer class or customer is responsible for an appropriate share of the costs that are planned for and incurred in order to serve them, including both fixed and variable costs. However, strict adherence to this cost causation principle may not always be possible if doing so would result in “rate shock” for certain customers or customer classes. In addition, and depending on the COSS methodology utilized, cost responsibility results can vary significantly due to unusual events that occur in the test year. The COSS functionalizes costs, thus providing a basis from which to start rate design, but does not necessarily dictate the final rate design. Other considerations and objectives such as undue impacts on low-usage customers must also be considered when developing rate design.

Q. DOES THE PUBLIC STAFF HAVE ANY ISSUES WITH THE COMPANY'S COSS IN THIS PROCEEDING?

A. Not for purposes of this proceeding. Due to constraints on time and resources, I was unable to complete a thorough review of the Company's COSS in this proceeding. Given the disparities in class RORs, the need to more fully understand the Company's calculations and applications of some of the allocation factors, and the degree to which interruptible customers and contract-related customers share in the recovery of fixed costs, I believe it is appropriate to conduct a deeper investigation into the COSS. I simply am not able to complete that study to my satisfaction in this case. Therefore, I do not oppose the use of the filed COSS in this proceeding. However, the Public Staff intends to work with the Company to achieve a fuller understanding of the COSS prior to the Company's next general rate case filing.

Q. WHAT SHOULD BE CONSIDERED WHEN ASSESSING THE DISPARITIES IN RATES OF RETURN FOR NATURAL GAS UTILITIES?

A. I believe there is a need to revisit the application of cost of service studies in rate design. The Commission's *Order on Remand* issued August 18, 1999, in Docket No. G-3, Sub 186,[1] has some bearing on

[1] https://starw1.ncuc.net/NCUC/ViewFile.aspx?Id=ebae180f-b78b-4cb5-b67b-5f8e180497b6

this matter. The Commission cited four points about the application of a COSS to the setting of natural gas utility rates. First, cost of service studies are highly subjective in nature notwithstanding their appearance of mathematical certainty. Different studies typically produce different results. Thus, the Commission did not believe it was appropriate to adopt a specific study when setting rates. Second, the Commission has historically allowed higher RORs on industrial and commercial customer classes. The *Order on Remand* seems to suggest these higher returns on industrial and commercial customers is justified because the percentage of revenue being derived from non-residential customers is very small. Third, the Commission did not believe that rates should be based on cost alone. Other factors such as the ability to switch fuels (gas to electric), and the ability of some large customers to acquire their own natural gas and become “transportation” customers should be considered. Fourth, the COSS methodology selected could affect the assignment of fixed gas costs to the classes. While there are similarities in the cost of service methods and calculations between electric and natural gas utilities, there may also be sufficient differences that continue to justify a different approach for each. Therefore, the Public Staff recommends that the Commission require the Company to address each of these revenue assignment principles in its next general rate case filing. The Commission should also require the Company to explain why any class ROR under proposed rates that falls outside of a band of reasonableness should be allowed going forward.

<u>AFFORDABILITY</u>

Q. PLEASE DISCUSS THE ISSUE OF AFFORDABILITY.

A. The issue of affordability was of substantial interest to the Commission and other parties in the Electric Dockets. The Commission issued final orders in the Electric Dockets[2] that required Duke Energy Carolinas, LLC, and Duke Energy Progress, LLC (collectively the Duke Utilities) to convene a stakeholder process regarding affordability issues. The Commission directed that the collaborative should, as part of its work:

> (1) Prepare an assessment of current affordability challenges facing residential customers. The assessment should:
>
> a. Provide an analysis of demographics of residential customers, including number of members per household, types of households (single family or multi-family), the age and racial makeup of households, household income data, and other data that would describe the types of residential customers the Company now serves. To the extent demographics vary significantly across the

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[2] *Order Accepting Stipulations, Granting Partial Rate Increase, and Requiring Customer Notice* issued March 31, 2021, in Docket No. E-7, Subs 1213, 1214, and 1187 (DEC Rate Case Order); and *Order Accepting Stipulations, Granting Partial Rate Increase, and Requiring Customer* Notice issued April 16, 2021, in Docket No. E-2, Subs 1219 and 1193 (DEP Rate Case Order).

Company's service area, provide additional analysis of these demographic clusters.

b. Estimate the number of customers who live in households with incomes at or less than 150% of the federal poverty guidelines (FPG), and those whose incomes are at or less than 200% of the FPG.

c. For the different demographic groups identified as part of a. and b., provide an analysis of patterns and trends concerning energy usage, disconnections for nonpayment, payment delinquency histories, and account write-offs due to uncollectibility.

(2) Develop suggested metrics or definitions for "affordability" in the context of the Company's provision of service in its North Carolina service territory and explore trends in affordability. Questions to be answered include but should not be limited to:

a. How is "affordability" defined and applied in other jurisdictions, particularly for those with similar legal and regulatory frameworks, i.e., vertically integrated investor-owned utilities?

b. What criteria (both qualitative and quantitative) should the Commission consider when determining who would be eligible for different types of affordability programs?

(3) Investigate the strengths and weaknesses of existing rates, rate design, billing practices, customer assistance programs and energy efficiency programs in addressing affordability. Questions that should be addressed include:

a. What defines a "successful program" and what metrics should be monitored and presented that show the impact of programs on addressing or mitigating affordability challenges?

b. What percentage of residential customers are eligible for each existing program and what percentage of eligible customers enroll in and/or take advantage of these programs?

c. What is the impact of existing programs on the energy burden for enrolled customers?

d. Should existing programs be maintained, replaced, or terminated? If maintained, should any changes be made to improve results? If programs are replaced, what would replace them?

e. Are the following programs, in addition to any others agreed upon by the collaborative, appropriate for implementation in North Carolina and, if so, what statutory or regulatory changes are necessary to permit implementation: (1) minimum bill concepts as a substitute for fixed monthly charges; (2) income-based rate plans, such as Ohio's percentage of income payment plan; (3) segmentation of the existing residential rate class to take into account different levels of usage; (4) expanding eligibility for DEC's current SSI-based program to include additional groups of ratepayers; and (5) the inclusion of a specific component in rates to be used to fund supplemental support programs. Priority should be given to identifying affordability programs that comply with the current statutory framework, however the collaborative may describe high potential programs that have been successful in other jurisdictions but which would require statutory changes for implementation in North Carolina.

f. How do specific programs addressing affordability affect cost- causation and allowance of costs among classes?

g. How does cost-of-service allocation affect rate design and affordability of rates?

h. What, if any, practices and regulatory provisions related to disconnections for nonpayment should be modified or revised?

i. What existing utility and external funding sources are available to address affordability? Estimate the level of resources that would be required to serve additional customers

j. What are the opportunities (and challenges) of the utilities working with other agencies and organizations to collaborate and coordinate delivery of programs that affect affordability concerns?

(DEC Rate Case Order at 176-78; DEP Rate Case Order at 186.)

While not an exhaustive list, the stakeholders were given wide latitude to develop their own objectives for addressing affordability. Periodic reports were required to inform the Commission of the progress being made with a goal of making final recommendations within 12 months.

Q. DOES THE SAME ISSUE OF AFFORDABILITY EXIST IN REGARDS TO NATURAL GAS UTILITY SERVICE?

A. Yes. The Public Staff does not see a distinctive difference in natural gas utility service and electric utility service when it comes to affordability matters. Energy burden encompasses both. The Public Staff believes that if consensus can be achieved among the electric utility stakeholders delving into affordability matters, there is a high likelihood that similar consensus can be achieved among natural gas utility stakeholders. Therefore, the Public Staff recommends that either a similar stakeholder process be convened for natural gas utilities or the Company be allowed to join the Duke Utilities' affordability stakeholder process. The initial meeting was held on July 29, 2021. This is a good time for the Company to become engaged in this process.

Q. DOES THE COMPANY'S APPLICATION FOR A GENERAL RATE CASE AND DIRECT TESTIMONY ADDRESS ANY OF THE AFFORDABILITY ISSUES YOU RAISED?

A. No. Unlike the two Duke electric cases, the Commission has not requested that this issue be addressed.

Q. WHAT IS YOUR RECOMMENDATION CONCERNING AFFORDABILITY?

A. The Public Staff recommends that the Commission consider many of the same issues of affordability for low-income residential customers it considered in the Electric Dockets, and issue an order either convening a stakeholder process separate from that involving the Duke Utilities, or alternatively, bring the Company into the same stakeholder process that is already underway.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

APPENDIX A

JACK L. FLOYD

I am a graduate of North Carolina State University with a Bachelor of Science Degree in Chemical Engineering. I am licensed in North Carolina as a Professional Engineer. I have more than 17 years of experience in the water and wastewater treatment field, nine of which were with the Public Staff's Water Division. In addition, I have been with the Energy Division for almost 18 years.

Prior to my employment with the Public Staff, I was employed by the North Carolina Department of Environmental Quality, Division of Water Resources as an Environmental Engineer. In that capacity, I performed various tasks associated with environmental regulation of water and wastewater systems, including the drafting of regulations and general statutes.

In my capacity with the Public Staff's Water Division, I investigated the operations of regulated water and sewer utility companies and prepared testimony and reports related to those investigations.

Currently, my duties with the Public Staff include evaluating the operation of regulated electric utilities, including rate design, cost-of-service, and demand side management and energy efficiency resources. My duties also include assisting in the preparation of reports to the North Carolina Utilities Commission; preparing testimony regarding my investigation activities; reviewing Integrated Resource Plans; and making recommendations to the Commission concerning the level of service for electric utilities.