

NORTH CAROLINA PUBLIC STAFF UTILITIES COMMISSION

October 26, 2023

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

Re: Docket No. E-7, Sub 1276 – Application of Duke Energy Carolinas, LLC for Adjustment of Rates and Charges Applicable to Electric Service in North Carolina and Performance Based Regulation

Dear Ms. Dunston:

In compliance with the Commission's Order Responding To Second Motion To Strike and Establishing Hearing Procedures filed on October 24, 2023, please find attached the original pre-filed supplemental testimony, corrected supplemental exhibits, and errata of David M. Williamson, Engineer with the Energy Division of the Public Staff – North Carolina Utilities Commission.

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

Sincerely,

Electronically submitted
/s/ Lucy E. Edmondson
Chief Counsel
lucy.edmondson@psncuc.nc.gov

/s/ Robert B. Josey
Staff Attorney
robert.josey@psncuc.nc.gov

Attachments

/s/ Nadia L. Luhr Staff Attorney nadia.luhr@psncuc.nc.gov

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CERTIFICATE OF SERVICE

I certify that a copy of this Supplemental Testimony with exhibits has been served on all parties of record or their attorneys, or both, in accordance with Commission Rule R1-39, by United States mail, first class or better; by hand delivery; or by means of facsimile or electronic delivery upon agreement of the receiving party.

This the 26th day of October, 2023.

Electronically submitted /s/Nadia Luhr Staff Attorney

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-7, SUB 1276

In the Matter of Application of Duke Energy Carolinas, LLC for Adjustment of Rates and Charges Applicable to Electric Service in) DAVID M. WILLIAMSON North Carolina and Performance Based Regulation

) SUPPLEMENTAL) TESTIMONY OF) PUBLIC STAFF -) NORTH CAROLINA) UTILITIES COMMISSION

October 13, 2023

- 1 Q. Please state your name, business address, and present
- 2 position.
- 3 A. My name is David M. Williamson. My business address is 430 North
- 4 Salisbury Street, Dobbs Building, Raleigh, North Carolina. I am an
- 5 Engineer with the Energy Division of the Public Staff North Carolina
- 6 Utilities Commission.
- 7 Q. Are you the same David M. Williamson who previously filed
- 8 direct testimony in this proceeding on July 19, 2023?
- 9 A. Yes.

10 Q. What is the purpose of your supplemental testimony?

- 11 Α. The purpose of my supplemental testimony is to present the Public 12 Staff's recommended distribution of revenues to retail customer 13 classes based on the results of the Modified Average and Excess 14 (MAE) cost-of-service methodology. 1 My calculations are based on 15 the request of Duke Energy Carolinas, LLC (DEC or the Company) 16 for a base revenue increase, which includes an update to the 17 Company's current Excess Deferred Income Tax rider (EDIT-4) and 18 the Public Staff's adjustments to that request.
- 19 The Company's request covers a historical base period (Base Case)

¹ The application of this cost-of-service study (COSS) methodology was determined as part of an "Agreement and Stipulation of Partial Settlement" between Carolina Industrial Group for Fair Utility Rates II and III, DEC, and the Public Staff, and filed on September 12, 2022, in this proceeding and in DEP's general rate case, Docket No. E-2, Sub 1300 (Sub 1300) (COS Agreement).

and three forecasted periods (Rate Years), with each Rate Year spanning 12 months beginning January 1, 2024, and continuing through December 31, 2026. Additionally, each Rate Year builds on the previous Rate Year to determine the new incremental revenue requirement to be used in determining customer rates that will change on January 1 of each Rate Year. The update to EDIT-4 is applied to the Base Case revenue requirement as a \$10.394 million dollar credit.

The Public Staff's recommended total revenue change (in 000s) by Rate Year is as follows:

	Public Staff Recommended Revenue Requirement under Present Rates (Base)	Public Staff Recommended Change in Revenue Requirement (Incremental)	Public Staff Recommended Change in Revenue Requirement (Cumulative)
Base Case	\$5,427,913	\$146,502	\$5,574,415
Rate Year 1		\$117,126	\$5,691,541
Rate Year 2		\$164,650	\$5,856,191
Rate Year 3		\$151,235	\$6,007,425

The dollar amounts in the table above are taken from the joint supplemental and settlement testimony and exhibit of Public Staff witnesses Zhang, Boswell, and Metz filed in this same docket on this same date. I have used this information to assign the revenues and credits to the individual customer classes.

Q. Do you have any exhibits to your testimony?

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Yes.

Α. testimony includes exhibits. D. Williamson Mν two 3 Supplemental Exhibit 1 provides the rates of return (ROR) on rate base, the percentage change in base revenues, and the impact of 4 5 the additional EDIT-4 credits for the MAE cost-of-service 6 methodology. D. Williamson Supplemental Exhibit 2 provides the 7 Public Staff's recommended revenue distribution for this case and 8 several other scenarios that illustrate how the base revenue and 9 updated EDIT-4 credit assignments could be assigned for each Rate 10 Year. The other scenarios include revenue assignments under a "no 11 change in revenue" scenario, an "equal rate of return" scenario, and 12 an "equal percentage increase" scenario for the MAE cost-of-service 13 methodology.

14 Q. Briefly explain how you distributed the base revenue change.

I utilized the Company's E-1, Item 45A, which is the per books MAE COSS, to develop a distribution framework that incorporates the overall base revenues, expenses, net income, and rate base for the test year. I applied this framework to the adjusted present and proposed revenues, expenses, and rate base provided by Public Staff witnesses Zhang, Boswell, and Metz, to develop the Public Staff's recommended revenue changes by retail rate class for each Rate Year of the multi-year rate plan (MYRP). Additionally, while this framework is used as a guide to understand how costs were incurred

during the test year, I did not rely exclusively on the MAE COSS. I
also applied and balanced the Public Staff's four basic revenue
assignment principles, which I outlined in my direct testimony, to
influence the way revenue apportionment is applied to each retail
rate class. Those principles are:

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- Any revenue increase assigned to any customer class is limited to no more than two percentage points greater than the overall jurisdictional revenue percentage increase, thus avoiding undue rate shock;
- Class RORs are maintained within a <u>+/-</u> 10% band of reasonableness relative to the overall NC retail ROR;
- All class RORs move closer to parity with the overall NC retail ROR; and
- Subsidization among the customer classes is minimized.

The supplemental exhibits filed herewith present my results and are based on the application of these four principles. To the greatest extent practicable, the Public Staff's assignment of the base revenue increase and Rate Years 1, 2, and 3 adheres to each of these principles.

Q. Did you encounter any challenges when apportioning revenues based on these guiding principles?

Α.

Yes, I did. As I discussed in my direct testimony, the COS Agreement requires utilization of the MAE COSS methodology for class rate design in this case. However, DEC's last general rate case allocated costs utilizing the Summer Coincident Peak (SCP) COSS methodology. While this shift in COSS methodologies is appropriate, as it results in a better alignment in the way that the electric utilities are planning, building, and operating their systems, it does present certain challenges with respect to adhering to the Public Staff's apportionment principles. I discuss those considerations in more detail below.

When developing a COSS, the first step is to determine the methodology that will be used to conduct the study. The methodology takes each input (e.g., demand, energy, number of customers, revenues), and determines how those inputs will inform the functionalization and classification of costs to identify cost causation for each customer class through the development of specific allocation factors. A change in methodology may change the allocation of certain costs from how they have been historically allocated. Second, the change in methodology may require adjustments to resolve the resulting differences in the rate design. As an example, the lighting class was previously allocated limited

production-related costs under the SCP methodology. Under the proposed MAE methodology, the lighting class is allocated a larger portion of production-related costs that is more reflective of the class's cost to serve, resulting in the class producing less revenue compared to its allocated plant and costs from an ROR perspective. To realign the revenues to plant and costs going forward, a larger rate increase over time would be required for the lighting class to move back into alignment.

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While the shift in COS methodology has created a challenge in assigning class revenue responsibility that aligns with the Public Staff's guiding rate principles, it is important to remember that rates and rate design should be based on the overall design, operation, and use of the utility's system such that all customer classes pay for the utility's plant and other costs according to each class's use of the plant and causation of costs. The revenue apportionment illustrated in my exhibits shows a reasonable level of progress toward achieving all the guiding principles, without introducing the risk of rate shock. Additionally, the fact that the Company will likely file rate cases in a more cyclical manner moving forward fosters a higher level of confidence that the customer classes will make positive strides going forward to address their revenue responsibility. This was not the case prior to the establishment of Session Law 2021-165 (HB 951), when it was unknown how long a utility would wait before it filed a

new general rate case, delaying the ability to adjust revenue responsibility.

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Another consideration relates to the impact that an MYRP and resulting changes in revenue requirements over the term of the MYRP will have on class RORs and the apportionment of revenue requirement in each year of the MYRP. Decoupling only the residential class revenue requirement from energy sales but not doing the same for non-residential class revenue requirements makes application of the revenue assignment principles even more difficult, particularly for the MYRP annual changes. This change could lead to a dichotomy between class RORs and the percentage changes in revenues that would be assigned to all customer classes in the next rate case. In future rate case proceedings, if residential RORs remain consistent with the targeted class ROR in the base case of an MYRP and the non-residential RORs diverge over the 36 months of the MYRP, resolving those differences and adhering to the Public Staff's revenue assignment principles will be a challenge when assigning future revenue changes, as larger increases may need to be issued to the non-residential classes in the effort to move them closer to the band.

1	Q.	Given these challenges, how did you assign revenues in this
2		case?
3	A.	Noting the considerations above, I was able to apply the Public

Staff's revenue assignment principles as practicably as possible.

Moreover, given the shift in COSS methodology, customer classes
that were far outside of the band of reasonableness made substantial
movement toward the band, without creating issues with rate shock.

8 Q. How did you assign the Public Staff's recommended EDIT-4 9 credit?

10 The Company, in this case, has assigned the EDIT-4 credit across Α. 11 four customer classes. Similar to the approach taken in the last DEC 12 general rate case, I have reassigned the EDIT-4 credit revenues to 13 reflect five customer classes to include the OPT class, instead of the 14 four broad customer classes presented in witness Beveridge's 15 Exhibit 7.2 My recommended spread of revenues and energy sales 16 is consistent with the method recommended by the Public Staff in the 17 Company's previous general rate case proceeding.

² Witness Beveridge merges the impacts of the OPT class with the General Service and Industrial classes.

- 1 Q. Is the Public Staff's method for apportioning revenues the same
- 2 approach that DEC has supported in its proposed rate design?
- 3 A. No, it is not. The Company in its proposal has applied a fixed 10%
- 4 cross subsidy adjustment as part of the class rate design process.
- 5 While the Public Staff acknowledges that the Company's method is
- an approach to dealing with class cross-subsidization, I focused
- 7 primarily on the Public Staff's four rate design principles as
- 8 articulated in my July 19, 2923, direct testimony in this proceeding.
- 9 My approach to apportioning revenues independently moves each
- rate class closer to ROR parity (the band of reasonableness index
- between 0.9 and 1.1). Because some classes are already within the
- band, there is no need for additional movement toward the band,
- while other classes may need more movement toward the band.
- 14 Q. What is your recommendation regarding the assignment of
- base revenues and the updated EDIT-4 credit?
- 16 A. I recommend that the Commission approve the Public Staff's
- assignment of revenues contained within my attached exhibits as the
- appropriate level of revenue apportionment for each class.
- 19 Q. Does this conclude your testimony?
- 20 A. Yes.

STATE OF NORTH CAROLINA UTILITIES COMMISSION RALEIGH

DOCKET NO. E-7, SUB 1134 DOCKET NO. E-7, SUB 1276

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-7, SUB 1134 In the Matter of Application of Duke Energy Carolinas, LLC for Approval to Construct a 402 MW Natural **ERRATA SHEET:** Gas-Fired Combustion Turbine Electric **CORRECTIONS TO THE** Generating Facility in Lincoln County PREFILED SUPPLEMENTAL **EXHIBITS OF PUBLIC STAFF WITNESS** DOCKET NO. E-7, SUB 1276 DAVID M. WILLIAMSON In the Matter of Application of Duke Energy Carolinas, LLC, for Adjustment of Rates and Charges Applicable to Electric Service in North Carolina and Performance-Based Regulation

Pursuant to the North Carolina Utilities Commission's Order Rescheduling Hearing and Providing Additional Hearing Procedures issued July 26, 2023 (Order), the Public Staff hereby files this Errata Sheet showing corrections that should be made to the pre-filed supplemental exhibits of witness David M. Williamson (witness Williamson).

The Public Staff recognized errors in witness Williamson's Supplemental Exhibit 1 and 2 some of which resulted from the incorrect use of values related to the Operating Expenses of the projected portions of the MYRP, specifically, the application of cumulative Operating Expenses was used rather than the correct

use of incremental Operating Expenses for each projected rate year. The incorrect use of these Operating Expense values led to errors flowing through to some of the figures contained in witness Williamson's Supplemental Exhibit 1 and 2.

The corrections are as follows:

 The asterisk that appears after "Rate of Return" on each page of Supplemental Exhibit 1 was included in error and should be removed.

 Figures on Pages 2, 3, and 4 of Supplemental Exhibit 1 should be corrected to reflect the use of the Operating Expense figures described above.

Figures on Pages 2, 3, and 4 of Supplemental Exhibit 2.2, 2.3, and
 2.4, respectively, should be corrected to reflect the use of the
 Operating Expense figures described above.

In accordance with the Order, a complete copy of witness Williamson's corrected Supplemental Exhibit 1 and 2 will also be contemporaneously filed.

Respectfully submitted this 20th day of October, 2023.

PUBLIC STAFF
Christopher J. Ayers
Executive Director

Lucy E. Edmondson Chief Counsel

/s/ Thomas J. Felling, by electronic filling Thomas J. Felling Staff Attorney 4326 Mail Service Center Raleigh, North Carolina 27699 telephone: (919) 733-6110 email: thomas.felling@psncuc.nc.gov

CERTIFICATE OF SERVICE

I certify that copies of the following have been served on all parties of record or their attorneys, or both, in accordance with Commission Rule R1-39, by United States mail, first class or better; by hand delivery; or by means of facsimile or electronic delivery upon agreement of the receiving party.

Documents served: (1) Errata Sheet for witness Williamson; and (2) complete copies of witness Williamson's corrected Supplemental Exhibit 1 and 2.

This the 20th day of October, 2023.

/s/ Thomas J. Felling, by electronic filling
Thomas J. Felling
Staff Attorney

Comparison of Rates of Return, Indices, and % Base Revenue													
	Based on	MAE Cost-of Service	Methodology										
With Public Staff Adjustments													
	Rate Year 0												
	Rate of Return	Rate of Return Index	% Base Revenue Change	% Revenue Change with EDIT-4 Credit									
NC Retail	7.10%	1.00	2.70%	2.51%									
Residential	7.31%	1.03	2.71%	2.51%									
General Service	9.52%	1.34	-0.98%	-1.12%									
Lighting	2.32%	0.33	21.56%	21.16%									
Industrial	6.38%	0.90	2.62%	2.48%									
OPT	6.11%	0.86	3.24%	3.04%									

	Comparison of Ra	ates of Return, Indices, a	and % Base Revenue								
Based on MAE Cost-of Service Methodology											
With Public Staff Adjustments											
Rate Year 1											
	Rate of Return	Rate of Return Index	% Base Revenue Change								
NC Retail	7.22%	1.00	4.86%								
Residential	7.41%	1.03	4.93%								
General Service	9.53%	1.32	0.97%								
Lighting	2.81%	0.39	26.87%								
Industrial	6.53%	0.90	4.78%								
OPT	6.27%	0.87	5.11%								

	Comparison of Ra	ates of Return, Indices, a	and % Base Revenue								
Based on MAE Cost-of Service Methodology											
With Public Staff Adjustments											
	Rate Year 2										
	Rate of Return	Rate of Return Index	% Base Revenue Change								
NC Retail	7.33%	1.00	7.89%								
Residential	7.50%	1.02	8.15%								
General Service	9.44%	1.29	3.52%								
Lighting	3.13%	0.43	31.81%								
Industrial	6.68%	0.91	7.82%								
OPT	6.48%	0.88	7.94%								

	Comparison of R	ates of Return, Indices, a	and % Base Revenu								
Based on MAE Cost-of Service Methodology											
With Public Staff Adjustments											
Rate Year 3											
	Rate of Return	Rate of Return Index	% Base Revenue Change								
NC Retail	7.44%	1.00	10.68%								
Residential	7.59%	1.02	11.04%								
General Service	9.43%	1.27	6.04%								
Lighting	3.34%	0.45	35.63%								
Industrial	6.82%	0.92	10.61%								
OPT	6.69%	0.90	10.62%								

Base Case - No Revenue Change - MAE

		 NC Retail	 RES	GS		Lighting		IND		ОРТ
1	Total Revenues W/ Staff Adj. @ Pres. Rates	\$ 5,427,913	\$ 2,618,114	\$ 990,270	\$	150,601	\$	177,282	\$	1,491,647
2	Proposed Revenue Change	\$ -	\$ -	\$ -	\$	-	\$	-	\$	-
3	Net Income Before Increase	\$ 1,256,133	\$ 667,675	\$ 310,369	\$	(1,767)	\$	36,609	\$	243,247
4	Change in Net Income	\$ -	\$ -	\$ -	\$	-	\$	-	\$	-
5	Total Net Income	\$ 1,256,133	\$ 667,675	\$ 310,369	\$	(1,767)	\$	36,609	\$	243,247
6	Rate Base W/ Staff Adj. @ Pres. Rates	\$ 19,232,800	\$ 9,859,263	\$ 3,179,513	\$	985,910	\$	628,729	\$	4,579,385
7	Staff's Proposed Rate Base	\$ 19,251,683	\$ 9,868,943	\$ 3,182,634	\$	986,878	\$	629,346	\$	4,583,881
8	Rate of Return (before change)	6.53%	6.77%	9.76%		-0.18%		5.82%		5.31%
9	Rate of Return Index (before change)	1.00	1.04	1.49		(0.03)		0.89		0.81
10	Rate of Return (after change)	6.52%	6.77%	9.75%		-0.18%		5.82%		5.31%
11	Rate of Return Index (after change)	1.00	1.04	1.49		(0.03)		0.89		0.81
12	Percent Change in Base Revenue	0.00%	0.00%	0.00%		0.00%		0.00%		0.00%

Equal Rates of Return for all Classes - MAE

		NC Retail		RES GS		GS	Lighting	IND		OPT	
1	Total Revenues W/ Staff Adj. @ Pres. Rates	\$	5,427,913	\$ 2,618,114	\$	990,270	\$ 150,601	\$	177,282	\$	1,491,647
2	Proposed Revenue Change	\$	146,630	\$ 43,957	\$	(110,744)	\$ 94,466	\$	10,648	\$	108,304
3	Net Income Before Increase	\$	1,256,133	\$ 667,675	\$	310,369	\$ (1,767)	\$	36,609	\$	243,247
4	Change in Net Income	\$	111,569	\$ 33,446	\$	(84,264)	\$ 71,878	\$	8,102	\$	82,407
5	Total Net Income	\$	1,367,702	\$ 701,122	\$	226,105	\$ 70,111	\$	44,711	\$	325,654
6	Rate Base W/ Staff Adj. @ Pres. Rates	\$	19,232,800	\$ 9,859,263	\$	3,179,513	\$ 985,910	\$	628,729	\$	4,579,385
7	Staff's Proposed Rate Base	\$	19,251,683	\$ 9,868,943	\$	3,182,634	\$ 986,878	\$	629,346	\$	4,583,881
8	Rate of Return (before change)		6.53%	6.77%		9.76%	-0.18%		5.82%		5.31%
9	Rate of Return Index (before change)		1.00	1.04		1.49	(0.03)		0.89		0.81
10	Rate of Return (after change)		7.10%	7.10%		7.10%	7.10%		7.10%		7.10%
11	Rate of Return Index (after change)		1.00	1.00		1.00	1.00		1.00		1.00
12	Percent Change in Base Revenue		2.70%	1.68%		-11.18%	62.73%		6.01%		7.26%

Class Revenue Changes Equal to NC Retail Change - MAE

		 NC Retail	RES G		GS	Lighting		IND		 OPT
1	Total Revenues W/ Staff Adj. @ Pres. Rates	\$ 5,427,913	\$ 2,618,114	\$	990,270	\$	150,601	\$	177,282	\$ 1,491,647
2	Proposed Revenue Change	\$ 146,630	\$ 70,726	\$	26,751	\$	4,068	\$	4,789	\$ 40,295
3	Net Income Before Increase	\$ 1,256,133	\$ 667,675	\$	310,369	\$	(1,767)	\$	36,609	\$ 243,247
4	Change in Net Income	\$ 111,569	\$ 53,814	\$	20,355	\$	3,096	\$	3,644	\$ 30,660
5	Total Net Income	\$ 1,367,702	\$ 721,490	\$	330,723	\$	1,329	\$	40,253	\$ 273,907
6	Rate Base W/ Staff Adj. @ Pres. Rates	\$ 19,232,800	\$ 9,859,263	\$	3,179,513	\$	985,910	\$	628,729	\$ 4,579,385
7	Staff's Proposed Rate Base	\$ 19,251,683	\$ 9,868,943	\$	3,182,634	\$	986,878	\$	629,346	\$ 4,583,881
8	Rate of Return (before change)	6.53%	6.77%		9.76%		-0.18%		5.82%	5.31%
9	Rate of Return Index (before change)	1.00	1.04		1.49		(0.03)		0.89	0.81
10	Rate of Return (after change)	7.10%	7.31%		10.39%		0.13%		6.40%	5.98%
11	Rate of Return Index (after change)	1.00	1.03		1.46		0.02		0.90	0.84
12	Percent Change in Base Revenue	2.70%	2.70%		2.70%		2.70%		2.70%	2.70%

Public Staff Recommended Revenue Distribution - MAE

		 NC Retail	 RES	GS		Lighting		IND		ОРТ	
1	Total Revenues W/ Staff Adj. @ Pres. Rates	\$ 5,427,913	\$ 2,618,114	\$	990,270	\$	150,601	\$	177,282	\$	1,491,647
2	Proposed Revenue Change	\$ 146,630	\$ 70,957	\$	(9,744)	\$	32,466	\$	4,648	\$	48,304
3	Net Income Before Increase	\$ 1,256,133	\$ 667,675	\$	310,369	\$	(1,767)	\$	36,609	\$	243,247
4	Change in Net Income	\$ 111,569	\$ 53,990	\$	(7,414)	\$	24,703	\$	3,537	\$	36,754
5	Total Net Income	\$ 1,367,702	\$ 721,666	\$	302,954	\$	22,936	\$	40,145	\$	280,001
6	Rate Base W/ Staff Adj. @ Pres. Rates	\$ 19,232,800	\$ 9,859,263	\$	3,179,513	\$	985,910	\$	628,729	\$	4,579,385
7	Staff's Proposed Rate Base	\$ 19,251,683	\$ 9,868,943	\$	3,182,634	\$	986,878	\$	629,346	\$	4,583,881
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8	Rate of Return (before change)	6.53%	6.77%		9.76%		-0.18%		5.82%		5.31%
9	Rate of Return Index (before change)	1.00	1.04		1.49		(0.03)		0.89		0.81
10	Rate of Return (after change)	7.10%	7.31%		9.52%		2.32%		6.38%		6.11%
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11	Rate of Return Index (after change)	1.00	1.03		1.34		0.33		0.90		0.86
12	Percent Change in Base Revenue	2.70%	2.71%		-0.98%		21.56%		2.62%		3.24%
13	Additional EDIT-4 Credit	\$ (10,394)	\$ (5,267)	\$	(1,304)	\$	(601)	\$	(259)	\$	(2,963)
14	Percent Change in Revenue with EDIT-4 Credit	2.51%	2.51%		-1.12%		21.16%		2.48%		3.04%

Base Case - No Revenue Change - MAE

		 NC Retail	 RES	 GS		Lighting		IND		ОРТ
1	Total Revenues W/ Staff Adj. @ Pres. Rates	\$ 5,427,913	\$ 2,618,114	\$ 990,270	\$	150,601	\$	177,282	\$	1,491,647
2	Proposed Revenue Change	\$ -	\$ -	\$ -	\$	-	\$	-	\$	-
3	Net Income Before Increase	\$ 1,256,133	\$ 667,675	\$ 310,369	\$	(1,767)	\$	36,609	\$	243,247
4	Change in Net Income	\$ -	\$ -	\$ -	\$	-	\$	-	\$	-
5	Total Net Income	\$ 1,256,133	\$ 667,675	\$ 310,369	\$	(1,767)	\$	36,609	\$	243,247
6	Rate Base W/ Staff Adj. @ Pres. Rates	\$ 19,232,800	\$ 9,859,263	\$ 3,179,513	\$	985,910	\$	628,729	\$	4,579,385
7	Staff's Proposed Rate Base	\$ 20,174,549	\$ 10,342,030	\$ 3,335,200	\$	1,034,186	\$	659,515	\$	4,803,618
8	Rate of Return (before change)	6.53%	6.77%	9.76%		-0.18%		5.82%		5.31%
9	Rate of Return Index (before change)	1.00	1.04	1.49		(0.03)		0.89		0.81
10	Rate of Return (after change)	6.23%	6.46%	9.31%		-0.17%		5.55%		5.06%
	· • • ·									
11	Rate of Return Index (after change)	1.00	1.04	1.49		(0.03)		0.89		0.81
12	Percent Change in Base Revenue	0.00%	0.00%	0.00%		0.00%		0.00%		0.00%

Equal Rates of Return for all Classes - MAE

		 NC Retail	 RES	 GS	 Lighting	 IND	 ОРТ
1	Total Revenues W/ Staff Adj. @ Pres. Rates	\$ 5,427,913	\$ 2,618,114	\$ 990,270	\$ 150,601	\$ 177,282	\$ 1,491,647
2	Proposed Revenue Change	\$ 263,755	\$ 103,999	\$ (91,381)	\$ 100,469	\$ 14,477	\$ 136,191
3	Net Income Before Increase	\$ 1,256,133	\$ 667,675	\$ 310,369	\$ (1,767)	\$ 36,609	\$ 243,247
4	Change in Net Income	\$ 200,689	\$ 79,132	\$ (69,531)	\$ 76,446	\$ 11,015	\$ 103,627
5	Total Net Income	\$ 1,456,822	\$ 746,807	\$ 240,838	\$ 74,679	\$ 47,624	\$ 346,874
6	Rate Base W/ Staff Adj. @ Pres. Rates	\$ 19,232,800	\$ 9,859,263	\$ 3,179,513	\$ 985,910	\$ 628,729	\$ 4,579,385
7	Staff's Proposed Rate Base	\$ 20,174,549	\$ 10,342,030	\$ 3,335,200	\$ 1,034,186	\$ 659,515	\$ 4,803,618
8	Rate of Return (before change)	6.53%	6.77%	9.76%	-0.18%	5.82%	5.31%
9	Rate of Return Index (before change)	1.00	1.04	1.49	(0.03)	0.89	0.81
10	Rate of Return (after change)	7.22%	7.22%	7.22%	7.22%	7.22%	7.22%
11	Rate of Return Index (after change)	1.00	1.00	1.00	1.00	1.00	1.00
12	Percent Change in Base Revenue	4.86%	3.97%	-9.23%	66.71%	8.17%	9.13%

Class Revenue Changes Equal to NC Retail Change - MAE

		 NC Retail	 RES	 GS	Lighting	 IND	 OPT
1	Total Revenues W/ Staff Adj. @ Pres. Rates	\$ 5,427,913	\$ 2,618,114	\$ 990,270	\$ 150,601	\$ 177,282	\$ 1,491,647
2	Proposed Revenue Change	\$ 263,755	\$ 127,220	\$ 48,120	\$ 7,318	\$ 8,615	\$ 72,483
3	Net Income Before Increase	\$ 1,256,133	\$ 667,675	\$ 310,369	\$ (1,767)	\$ 36,609	\$ 243,247
4	Change in Net Income	\$ 200,689	\$ 96,801	\$ 36,614	\$ 5,568	\$ 6,555	\$ 55,151
5	Total Net Income	\$ 1,456,822	\$ 764,476	\$ 346,982	\$ 3,801	\$ 43,164	\$ 298,398
6	Rate Base W/ Staff Adj. @ Pres. Rates	\$ 19,232,800	\$ 9,859,263	\$ 3,179,513	\$ 985,910	\$ 628,729	\$ 4,579,385
7	Staff's Proposed Rate Base	\$ 20,174,549	\$ 10,342,030	\$ 3,335,200	\$ 1,034,186	\$ 659,515	\$ 4,803,618
8	Rate of Return (before change)	6.53%	6.77%	9.76%	-0.18%	5.82%	5.31%
9	Rate of Return Index (before change)	1.00	1.04	1.49	(0.03)	0.89	0.81
10	Rate of Return (after change)	7.22%	7.39%	10.40%	0.37%	6.54%	6.21%
11	Rate of Return Index (after change)	1.00	1.02	1.44	0.05	0.91	0.86
12	Percent Change in Base Revenue	4.86%	4.86%	4.86%	4.86%	4.86%	4.86%

Public Staff Recommended Revenue Distribution - MAE

		 NC Retail	 RES	GS	 Lighting	 IND	OPT
1	Total Revenues W/ Staff Adj. @ Pres. Rates	\$ 5,427,913	\$ 2,618,114	\$ 990,270	\$ 150,601	\$ 177,282	\$ 1,491,647
2	Proposed Revenue Change	\$ 263,755	\$ 128,999	\$ 9,619	\$ 40,469	\$ 8,477	\$ 76,191
3	Net Income Before Increase	\$ 1,256,133	\$ 667,675	\$ 310,369	\$ (1,767)	\$ 36,609	\$ 243,247
4	Change in Net Income	\$ 200,689	\$ 98,154	\$ 7,319	\$ 30,793	\$ 6,450	\$ 57,973
5	Total Net Income	\$ 1,456,822	\$ 765,829	\$ 317,688	\$ 29,026	\$ 43,059	\$ 301,220
6	Rate Base W/ Staff Adj. @ Pres. Rates	\$ 19,232,800	\$ 9,859,263	\$ 3,179,513	\$ 985,910	\$ 628,729	\$ 4,579,385
7	Staff's Proposed Rate Base	\$ 20,174,549	\$ 10,342,030	\$ 3,335,200	\$ 1,034,186	\$ 659,515	\$ 4,803,618
8	Rate of Return (before change)	6.53%	6.77%	9.76%	-0.18%	5.82%	5.31%
9	Rate of Return Index (before change)	1.00	1.04	1.49	(0.03)	0.89	0.81
10	Rate of Return (after change)	7.22%	7.41%	9.53%	2.81%	6.53%	6.27%
11	Rate of Return Index (after change)	1.00	1.03	1.32	0.39	0.90	0.87
12	Percent Change in Base Revenue	4.86%	4.93%	0.97%	26.87%	4.78%	5.11%

Base Case - No Revenue Change - MAE

		 NC Retail	 RES	GS	Lighting	 IND	 OPT
1	Total Revenues W/ Staff Adj. @ Pres. Rates	\$ 5,427,913	\$ 2,618,114	\$ 990,270	\$ 150,601	\$ 177,282	\$ 1,491,647
2	Proposed Revenue Change	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3	Net Income Before Increase	\$ 1,256,133	\$ 667,675	\$ 310,369	\$ (1,767)	\$ 36,609	\$ 243,247
4	Change in Net Income	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5	Total Net Income	\$ 1,256,133	\$ 667,675	\$ 310,369	\$ (1,767)	\$ 36,609	\$ 243,247
6	Rate Base W/ Staff Adj. @ Pres. Rates	\$ 19,232,800	\$ 9,859,263	\$ 3,179,513	\$ 985,910	\$ 628,729	\$ 4,579,385
7	Staff's Proposed Rate Base	\$ 21,591,639	\$ 11,068,469	\$ 3,569,469	\$ 1,106,828	\$ 705,840	\$ 5,141,032
8	Rate of Return (before change)	6.53%	6.77%	9.76%	-0.18%	5.82%	5.31%
9	Rate of Return Index (before change)	1.00	1.04	1.49	(0.03)	0.89	0.81
10	Rate of Return (after change)	5.82%	6.03%	8.70%	-0.16%	5.19%	4.73%
11	Rate of Return Index (after change)	1.00	1.04	1.49	(0.03)	0.89	0.81
12	Percent Change in Base Revenue	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Equal Rates of Return for all Classes - MAE

		 NC Retail	 RES	GS	 Lighting	 IND	 ОРТ
1	Total Revenues W/ Staff Adj. @ Pres. Rates	\$ 5,427,913	\$ 2,618,114	\$ 990,270	\$ 150,601	\$ 177,282	\$ 1,491,647
2	Proposed Revenue Change	\$ 428,405	\$ 188,403	\$ (64,161)	\$ 108,910	\$ 19,859	\$ 175,395
3	Net Income Before Increase	\$ 1,256,133	\$ 667,675	\$ 310,369	\$ (1,767)	\$ 36,609	\$ 243,247
4	Change in Net Income	\$ 325,970	\$ 143,354	\$ (48,820)	\$ 82,868	\$ 15,111	\$ 133,456
5	Total Net Income	\$ 1,582,103	\$ 811,030	\$ 261,549	\$ 81,102	\$ 51,720	\$ 376,703
6	Rate Base W/ Staff Adj. @ Pres. Rates	\$ 19,232,800	\$ 9,859,263	\$ 3,179,513	\$ 985,910	\$ 628,729	\$ 4,579,385
7	Staff's Proposed Rate Base	\$ 21,591,639	\$ 11,068,469	\$ 3,569,469	\$ 1,106,828	\$ 705,840	\$ 5,141,032
8	Rate of Return (before change)	6.53%	6.77%	9.76%	-0.18%	5.82%	5.31%
9	Rate of Return Index (before change)	1.00	1.04	1.49	(0.03)	0.89	0.81
10	Rate of Return (after change)	7.33%	7.33%	7.33%	7.33%	7.33%	7.33%
11	Rate of Return Index (after change)	1.00	1.00	1.00	1.00	1.00	1.00
12	Percent Change in Base Revenue	7.89%	7.20%	-6.48%	72.32%	11.20%	11.76%

Class Revenue Changes Equal to NC Retail Change - MAE

		 NC Retail	 RES	GS	Lighting	 IND	OPT
1	Total Revenues W/ Staff Adj. @ Pres. Rates	\$ 5,427,913	\$ 2,618,114	\$ 990,270	\$ 150,601	\$ 177,282	\$ 1,491,647
2	Proposed Revenue Change	\$ 428,405	\$ 206,638	\$ 78,158	\$ 11,886	\$ 13,992	\$ 117,730
3	Net Income Before Increase	\$ 1,256,133	\$ 667,675	\$ 310,369	\$ (1,767)	\$ 36,609	\$ 243,247
4	Change in Net Income	\$ 325,970	\$ 157,229	\$ 59,470	\$ 9,044	\$ 10,647	\$ 89,580
5	Total Net Income	\$ 1,582,103	\$ 824,905	\$ 369,839	\$ 7,277	\$ 47,255	\$ 332,827
6	Rate Base W/ Staff Adj. @ Pres. Rates	\$ 19,232,800	\$ 9,859,263	\$ 3,179,513	\$ 985,910	\$ 628,729	\$ 4,579,385
7	Staff's Proposed Rate Base	\$ 21,591,639	\$ 11,068,469	\$ 3,569,469	\$ 1,106,828	\$ 705,840	\$ 5,141,032
8	Rate of Return (before change)	6.53%	6.77%	9.76%	-0.18%	5.82%	5.31%
9	Rate of Return Index (before change)	1.00	1.04	1.49	(0.03)	0.89	0.81
10	Rate of Return (after change)	7.33%	7.45%	10.36%	0.66%	6.69%	6.47%
11	Rate of Return Index (after change)	1.00	1.02	1.41	0.09	0.91	0.88
12	Percent Change in Base Revenue	7.89%	7.89%	7.89%	7.89%	7.89%	7.89%

Public Staff Recommended Revenue Distribution - MAE

		 NC Retail	 RES	 GS	 Lighting	 IND	 OPT
1	Total Revenues W/ Staff Adj. @ Pres. Rates	\$ 5,427,913	\$ 2,618,114	\$ 990,270	\$ 150,601	\$ 177,282	\$ 1,491,647
2	Proposed Revenue Change	\$ 428,405	\$ 213,403	\$ 34,839	\$ 47,910	\$ 13,859	\$ 118,395
3	Net Income Before Increase	\$ 1,256,133	\$ 667,675	\$ 310,369	\$ (1,767)	\$ 36,609	\$ 243,247
4	Change in Net Income	\$ 325,970	\$ 162,376	\$ 26,508	\$ 36,454	\$ 10,545	\$ 90,086
5	Total Net Income	\$ 1,582,103	\$ 830,052	\$ 336,877	\$ 34,687	\$ 47,154	\$ 333,332
6	Rate Base W/ Staff Adj. @ Pres. Rates	\$ 19,232,800	\$ 9,859,263	\$ 3,179,513	\$ 985,910	\$ 628,729	\$ 4,579,385
7	Staff's Proposed Rate Base	\$ 21,591,639	\$ 11,068,469	\$ 3,569,469	\$ 1,106,828	\$ 705,840	\$ 5,141,032
8	Rate of Return (before change)	6.53%	6.77%	9.76%	-0.18%	5.82%	5.31%
9	Rate of Return Index (before change)	1.00	1.04	1.49	(0.03)	0.89	0.81
10	Rate of Return (after change)	7.33%	7.50%	9.44%	3.13%	6.68%	6.48%
11	Rate of Return Index (after change)	1.00	1.02	1.29	0.43	0.91	0.88
12	Percent Change in Base Revenue	7.89%	8.15%	3.52%	31.81%	7.82%	7.94%

Base Case - No Revenue Change - MAE

		 NC Retail	 RES	GS	Lighting	 IND	 OPT
1	Total Revenues W/ Staff Adj. @ Pres. Rates	\$ 5,427,913	\$ 2,618,114	\$ 990,270	\$ 150,601	\$ 177,282	\$ 1,491,647
2	Proposed Revenue Change	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3	Net Income Before Increase	\$ 1,256,133	\$ 667,675	\$ 310,369	\$ (1,767)	\$ 36,609	\$ 243,247
4	Change in Net Income	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5	Total Net Income	\$ 1,256,133	\$ 667,675	\$ 310,369	\$ (1,767)	\$ 36,609	\$ 243,247
6	Rate Base W/ Staff Adj. @ Pres. Rates	\$ 19,232,800	\$ 9,859,263	\$ 3,179,513	\$ 985,910	\$ 628,729	\$ 4,579,385
7	Staff's Proposed Rate Base	\$ 22,822,630	\$ 11,699,509	\$ 3,772,973	\$ 1,169,931	\$ 746,082	\$ 5,434,134
8	Rate of Return (before change)	6.53%	6.77%	9.76%	-0.18%	5.82%	5.31%
9	Rate of Return Index (before change)	1.00	1.04	1.49	(0.03)	0.89	0.81
10	Rate of Return (after change)	5.50%	5.71%	8.23%	-0.15%	4.91%	4.48%
11	Rate of Return Index (after change)	1.00	1.04	1.49	(0.03)	0.89	0.81
12	Percent Change in Base Revenue	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Equal Rates of Return for all Classes - MAE

		NC Retail	RES	GS	Lighting	IND	OPT
1	Total Revenues W/ Staff Adj. @ Pres. Rates	\$ 5,427,913	\$ 2,618,114	\$ 990,270	\$ 150,601	\$ 177,282	\$ 1,491,647
2	Proposed Revenue Change	\$ 579,639	\$ 265,929	\$ (39,160)	\$ 116,662	\$ 24,803	\$ 211,404
3	Net Income Before Increase	\$ 1,256,133	\$ 667,675	\$ 310,369	\$ (1,767)	\$ 36,609	\$ 243,247
4	Change in Net Income	\$ 441,043	\$ 202,343	\$ (29,796)	\$ 88,767	\$ 18,873	\$ 160,856
5	Total Net Income	\$ 1,697,175	\$ 870,019	\$ 280,572	\$ 87,000	\$ 55,481	\$ 404,102
6	Rate Base W/ Staff Adj. @ Pres. Rates	\$ 19,232,800	\$ 9,859,263	\$ 3,179,513	\$ 985,910	\$ 628,729	\$ 4,579,385
7	Staff's Proposed Rate Base	\$ 22,822,630	\$ 11,699,509	\$ 3,772,973	\$ 1,169,931	\$ 746,082	\$ 5,434,134
8	Rate of Return (before change)	6.53%	6.77%	9.76%	-0.18%	5.82%	5.31%
9	Rate of Return Index (before change)	1.00	1.04	1.49	(0.03)	0.89	0.81
10	Rate of Return (after change)	7.44%	7.44%	7.44%	7.44%	7.44%	7.44%
11	Rate of Return Index (after change)	1.00	1.00	1.00	1.00	1.00	1.00
12	Percent Change in Base Revenue	10.68%	10.16%	-3.95%	77.46%	13.99%	14.17%

Class Revenue Changes Equal to NC Retail Change - MAE

		NC Retail	 RES	GS	 Lighting	 IND	 ОРТ
1	Total Revenues W/ Staff Adj. @ Pres. Rates	\$ 5,427,913	\$ 2,618,114	\$ 990,270	\$ 150,601	\$ 177,282	\$ 1,491,647
2	Proposed Revenue Change	\$ 579,639	\$ 279,585	\$ 105,749	\$ 16,082	\$ 18,932	\$ 159,291
3	Net Income Before Increase	\$ 1,256,133	\$ 667,675	\$ 310,369	\$ (1,767)	\$ 36,609	\$ 243,247
4	Change in Net Income	\$ 441,043	\$ 212,734	\$ 80,464	\$ 12,237	\$ 14,405	\$ 121,203
5	Total Net Income	\$ 1,697,175	\$ 880,409	\$ 390,833	\$ 10,470	\$ 51,014	\$ 364,450
6	Rate Base W/ Staff Adj. @ Pres. Rates	\$ 19,232,800	\$ 9,859,263	\$ 3,179,513	\$ 985,910	\$ 628,729	\$ 4,579,385
7	Staff's Proposed Rate Base	\$ 22,822,630	\$ 11,699,509	\$ 3,772,973	\$ 1,169,931	\$ 746,082	\$ 5,434,134
8	Rate of Return (before change)	6.53%	6.77%	9.76%	-0.18%	5.82%	5.31%
9	Rate of Return Index (before change)	1.00	1.04	1.49	(0.03)	0.89	0.81
10	Rate of Return (after change)	7.44%	7.53%	10.36%	0.89%	6.84%	6.71%
11	Rate of Return Index (after change)	1.00	1.01	1.39	0.12	0.92	0.90
12	Percent Change in Base Revenue	10.68%	10.68%	10.68%	10.68%	10.68%	10.68%

Public Staff Recommended Revenue Distribution - MAE

		 NC Retail	 RES	 GS	 Lighting	IND	 OPT
1	Total Revenues W/ Staff Adj. @ Pres. Rates	\$ 5,427,913	\$ 2,618,114	\$ 990,270	\$ 150,601	\$ 177,282	\$ 1,491,647
2	Proposed Revenue Change	\$ 579,639	\$ 288,929	\$ 59,840	\$ 53,662	\$ 18,803	\$ 158,404
3	Net Income Before Increase	\$ 1,256,133	\$ 667,675	\$ 310,369	\$ (1,767)	\$ 36,609	\$ 243,247
4	Change in Net Income	\$ 441,043	\$ 219,844	\$ 45,532	\$ 40,831	\$ 14,307	\$ 120,528
5	Total Net Income	\$ 1,697,175	\$ 887,519	\$ 355,901	\$ 39,064	\$ 50,916	\$ 363,775
6	Rate Base W/ Staff Adj. @ Pres. Rates	\$ 19,232,800	\$ 9,859,263	\$ 3,179,513	\$ 985,910	\$ 628,729	\$ 4,579,385
7	Staff's Proposed Rate Base	\$ 22,822,630	\$ 11,699,509	\$ 3,772,973	\$ 1,169,931	\$ 746,082	\$ 5,434,134
8	Rate of Return (before change)	6.53%	6.77%	9.76%	-0.18%	5.82%	5.31%
9	Rate of Return Index (before change)	1.00	1.04	1.49	(0.03)	0.89	0.81
10	Rate of Return (after change)	7.44%	7.59%	9.43%	3.34%	6.82%	6.69%
11	Rate of Return Index (after change)	1.00	1.02	1.27	0.45	0.92	0.90
12	Percent Change in Base Revenue	10.68%	11.04%	6.04%	35.63%	10.61%	10.62%