BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-7, SUB 1214

In the Matter of:	**)**	
	)	**DIRECT TESTIMONY OF**
Application of Duke Energy Carolinas, LLC	**)**	**JANE L. MCMANEUS**
For Adjustment of Rates and Charges	**)**	**FOR DUKE ENERGY**
Applicable to Electric Service in North Carolina	**)**	**CAROLINAS, LLC**

I. INTRODUCTION AND PURPOSE

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

A. My name is Jane L. McManeus and my business address is 550 South Tryon Street, Charlotte, North Carolina. I am a Director of Rates & Regulatory Planning, employed by Duke Energy Carolinas, LLC, testifying on behalf of Duke Energy Carolinas ("DE Carolinas" or the "Company").

Q. WHAT ARE YOUR RESPONSIBILITIES IN THIS ROLE?

A. I have responsibility for certain rider filings for both Duke Energy Carolinas, LLC and Duke Energy Progress, LLC, including the Fuel Cost Adjustment Riders, the Renewable Energy Portfolio Standard Riders, and the Joint Agency Asset Rider.

Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE.

A. I graduated from Wake Forest University with a Bachelor of Science degree in Accountancy and received a Master of Business Administration degree from the McColl Graduate School of Business at Queens University of Charlotte. I am a certified public accountant licensed in the state of North Carolina and am a member of the Southeastern Electric Exchange Rates and Regulation Section. I began my career with Duke Power Company ("Duke Power") (now known as Duke Energy Carolinas) in 1979 as a staff accountant and have held a variety of positions in the finance organizations. From 1994 until 1999, I served in financial planning and analysis positions within the electric transmission area of Duke Power. I was named Director, Asset Accounting for Duke Power in 1999 and appointed to Assistant Controller in 2001. As Assistant Controller, I was responsible for coordinating Duke Power's operational and strategic plans, including development of the annual budget and performing special studies. I joined the Rates Department in 2003 as Director, Rate Design and Analysis. In April 2006, I became Director, Regulatory Accounting and Filings, leading the regulatory accounting, cost of service, regulatory filings, and revenue analysis functions for DE Carolinas. I began my current position in the Rates Department in October 2006.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION RELATING TO YOUR CURRENT RESPONSIBILITIES?

A. Yes. I have testified before this Commission regarding DE Carolinas' previous general rate case proceedings in Docket Nos. E-7, Sub 1146 (the "2017 Rate Case"); E-7, Sub 1026 (the "2013 Rate Case"); E-7, Sub 989; and E-7, Sub 909. I have regularly testified before this Commission in rider proceedings, most recently including Docket Nos. E-7, Subs 934, 936, 941 and 979.

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

A. The purpose of my testimony is to discuss the results of DE Carolinas' operations under present rates based on an adjusted historical Test Period using the twelve-month period ended December 31, 2018 (the "Test Period"). I discuss the additional revenue required as a result of the cost of service based on the pro forma costs in the Test Period. I discuss several pro forma adjustments to the Company's Test Period operating expenses and rate base. I request permission to defer as a regulatory asset certain severance costs incurred during the Test Period to be amortized over a 3-year period. I explain the Company's request for approval to defer certain costs related to investments in the transmission and distribution grid under the Company's Grid Improvement Plan. I also request authorization to continue deferring costs related to compliance with coal ash regulations beyond the proposed January 31, 2020 cut-off in this case. In addition, I discuss the inclusion of the costs in this request related to a new solar generation facility owned by DE Carolinas, and the Company's proposal for recovery of costs related to the recent sale of certain hydroelectric generation facilities. Finally, I propose a rider to refund federal and state income tax related amounts owed to customers as a result of the 2017 Tax Cuts and Jobs Act and recent reductions to North Carolina state income tax rates.

Q. DOES YOUR TESTIMONY INCLUDE ANY EXHIBITS?

A. Yes. I have included four exhibits. McManeus Exhibit 1 sets forth the operating results under current and proposed base rates. McManeus Exhibit 2 summarizes the total revenue adjustments proposed in this proceeding, including the proposed increase in base rates and the reduction in revenues reflected in the proposed rider. McManeus Exhibit 3 supports the cost of recently constructed solar facilities for which the Company requests recovery in this proceeding. McManeus Exhibit 4 illustrates the proposed rider to refund Excess Deferred Income Taxes (EDIT) to customers.

Q. WERE THESE EXHIBITS PREPARED BY YOU OR UNDER YOUR DIRECTION AND SUPERVISION?

A. Yes. McManeus Exhibits 1 through 4 were prepared under my supervision.

Q. DID YOU PROVIDE ANY INFORMATION INCLUDED IN THE APPLICATION?

A. Yes. I provided the pro forma adjustment work papers included in Item 10 of the Form E-1, filed with the Company's Application to Adjust Retail Rates, Request for an Accounting Order and to Consolidate Dockets (the "Application").

II. <u>DETERMINING THE REVENUE REQUIREMENT</u>

Q. WHAT IS THE REVENUE REQUIREMENT AND HOW DID DE CAROLINAS CALCULATE IT?

A. The revenue requirement represents the annual revenues necessary for the Company to recover its operating expenses (including depreciation and taxes) and provide its investors with a fair rate of return on the investment in rate base. DE Carolinas determined its operating costs by identifying depreciation and amortization expense, operations and maintenance expense ("O&M"), fuel expense, taxes, and other expenses charged to utility operations and recorded in its accounting records for the Test Period. The amount of rate base is determined by adding the year-end balances in the Company's accounting records of plant in service, accumulated depreciation, materials and supplies (including fuel inventory) and components of working capital less deferred taxes and operating reserves, including certain regulatory assets and liabilities. Next, a cost of service study is prepared that allocates and assigns these actual Company operating costs and rate base amounts to determine the per book cost for providing electric service to the Company's North Carolina retail operations. The cost of service studies, filed as Item 45 of DE Carolinas' Form E-1, were reviewed by Witness Hager and she describes the allocation process and methodologies used by the Company in this proceeding within her testimony.

Following the cost of service study, the actual Test Period expense and rate base levels, as allocated to the North Carolina retail operations, were adjusted for known and measurable changes, as described below and in the testimony of Witnesses Pirro and McGee. DE Carolinas made certain accounting and pro forma adjustments to actual operating income and rate base for the Test Period to reflect known and measurable changes to (i) normalize for abnormal events; (ii) annualize part year recurring effects to a full year effect; and (iii) show actual changes in costs, revenues or the cost of the Company's property used and useful, or to be used and useful within a reasonable time after the Test Period, in providing service.

After the determination of operating expenses and rate base for the Company's North Carolina retail operations, rate base is split between the Company's debt investors and equity investors using the Company's proposed capital structure of 53 percent equity and 47 percent debt. Then, the annual cost of debt is calculated. The income available for the Company's equity investors is determined by subtracting the cost of debt from the operating income produced by the current revenues received from North Carolina retail customers less operating expenses. Finally, the required revenue increase necessary to produce the requested equity return on the amount of the equity invested in rate base is determined.

McManeus Exhibit 1 sets forth the rate base, operating revenues, operating expenses, and operating income the Company earned during the

Test Period and the adjusted amounts the Company supports for use in calculating its proposed revenue requirement. In my Exhibit 1, I have indicated by asterisk the items the Company plans to update in this proceeding.

III. RESULTS OF OPERATIONS UNDER EXISTING AND PROPOSED RATES

Q. PLEASE DESCRIBE MCMANEUS EXHIBIT 1 TO YOUR TESTIMONY.

A. McManeus Exhibit 1 sets forth the operating results and data required by Commission Rule R1-17(b) regarding operating income, calculation of additional revenue requirement, accounting adjustments, and rate base information. The operating results are based on the Test Period noted above, using the twelve months ended December 31, 2018, with appropriate adjustments. This information is also shown on Pages 1 through 4d of Exhibit C of the Company's Application.

Q. PLEASE EXPLAIN WHAT IS PRESENTED ON PAGE 1 OF MCMANEUS EXHIBIT 1 ENTITLED "OPERATING INCOME FROM ELECTRIC OPERATIONS."

A. Page 1 summarizes the Company's operating income from electric operations for the Test Period both for total Company operations and North Carolina retail operations before the necessary accounting adjustments. It also shows the Company's operating income from electric operations for North Carolina retail operations after the necessary accounting adjustments and the rate of return on North Carolina retail rate base the Company would earn in the Test Period after reflecting those adjustments.

Column 1 and 2 set forth the actual operating revenues, expenses and rate base from the per book cost of service study (Form E-1, Item 45a) for the Company and for its North Carolina retail jurisdiction, respectively.

Column 3 summarizes the accounting adjustments allocated to North Carolina retail operations necessary to reflect a representative level of operating income and rate base based on known changes in costs. These adjustments are shown on McManeus Exhibit 1, Page 3 and are explained later in my testimony.

Column 4 shows adjusted North Carolina retail operations.

Column 5, Line 1 shows the additional base rate revenue requested in this proceeding of $445.3 million. This is the increase in revenues justified as necessary to cover the Company's cost of service, including a rate of return on members' equity of 10.30 percent as discussed in the testimony of Witnesses Newlin and Hevert. Column 5 also shows the effect of the revenue increase on the North Carolina Utilities Commission ("NCUC") regulatory fee, uncollectibles expense, income taxes, and cash working capital.

Column 6, Line 11 shows adjusted operating income after the proposed increase in revenues. Column 6, Line 12 shows the adjusted retail rate base. Dividing operating income by rate base produces the 7.58

percent overall rate of return that the Company is justifying in this case, as shown in Column 6, Line 13.

Q. PLEASE EXPLAIN WHAT IS PRESENTED ON PAGE 2 OF MCMANEUS EXHIBIT 1 ENTITLED "CALCULATION OF ADDITIONAL REVENUE REQUIREMENT."

A. Page 2 sets forth the calculation of the additional revenue requirement necessary to produce a 10.30 percent rate of return on members' equity using the format required by Commission Rule R1-17(b)(9)e. To develop this figure, the North Carolina retail rate base was allocated to its capital source components of long-term debt and members' equity. This allocation was based on the capitalization ratios of 47 percent long-term debt and 53 percent members' equity. Witness Newlin discusses and supports these ratios in his testimony.

The amount of operating income needed to cover interest applicable to North Carolina retail rate base was computed using the embedded cost of long-term debt rate. This amount is shown in Columns 4 and 7 on Line 1. Operating income needed to cover interest, shown in Columns 5 and 8 on Line 1, was deducted from total operating income shown in Column 5 on Line 3, to derive operating income remaining for members' equity at present rates as shown in Column 5 on Line 2.

Applying the 10.30 percent rate of return on members' equity to that portion of the North Carolina retail rate base financed by members' equity, shown in Column 6, Line 2 produces the operating income requirement for members' equity as shown in Column 8, Line 2.

The total operating income requirement shown in Column 8, Line 3 is the sum of the requirements for long-term debt and members' equity. Comparing the operating income requirement to the operating income before the proposed increase in Column 5, Line 3 results in the additional operating income requirement shown in Column 8, Line 5. To realize this additional operating income, the Company must also collect in revenues the increase for the NCUC regulatory fee (less the uncollectible rate) at a rate of 0.12967 percent, uncollectibles expense at a rate of 0.2501 percent, state and federal income taxes at a composite rate of 23.3503 percent, and the return on cash working capital requirements. The additional operating income requirement and the additional taxes and fees produces an additional revenue requirement of $445.3 million.

Q. PLEASE EXPLAIN THE PURPOSE OF MCMANEUS EXHIBIT 2.

A. McManeus Exhibit 2 summarizes the total change in revenue requirement requested in this proceeding. As stated above, the requested increase in revenues from base rates is $445.3 million. In addition to increased revenue from tariff rates for electric service, the Company requests that customer rates be reduced by $154.6 million, through an EDIT Rider, for amounts owed to customers related to EDIT. This rider is discussed in detail later in my testimony. As shown on McManeus Exhibit 2, the total proposed increase in revenue is $290.8 million.

Q. HOW IS THIS ADDITIONAL REVENUE REQUIREMENT ALLOCATED AMONG THE CLASSES AND USED TO DEVELOP THE TARGET REVENUE REQUIREMENT FOR RATE DESIGN?

A. Witness Pirro's Exhibit 4 shows how the additional revenue requirement is spread among the classes and how the target revenue requirements for rate design are established.

IV. ACCOUNTING AND PRO FORMA ADJUSTMENTS

Q. PLEASE EXPLAIN PAGE 3 OF MCMANEUS EXHIBIT 1 CAPTIONED "DETAIL OF ACCOUNTING ADJUSTMENTS-NORTH CAROLINA RETAIL."

A. Page 3 sets forth the individual accounting and pro forma adjustments to operating revenues, expenses and rate base, including the income tax effects for North Carolina retail electric operations, that were shown in total on Page 1 of McManeus Exhibit 1 in Column 3. The totals of the columns shown on Line 35 of Page 3 are the amounts carried forward to Column 3 of Page 1 of McManeus Exhibit 1.

Q. PLEASE LIST THESE ACCOUNTING AND PRO FORMA ADJUSTMENTS.

A. The accounting and pro forma adjustments that were made by the Company are as follows (the chart below indicates which witness is sponsoring each adjustment):

ADJUSTMENTS TO OPERATING REVENUES AND EXPENSES (Page 3 of McManeus Exhibit 1)		
Line No.	**Adjustment Title**	**Witness**
1	Annualize retail revenues for current rates	Pirro
2	Update fuel costs to proposed rate	McGee
3	Normalize for weather	McManeus
4	Annualize revenues for customer growth	Pirro
5	Eliminate unbilled revenues	McManeus
6	Adjust for costs recovered through non-fuel riders	McManeus
7	Adjust O&M for executive compensation	McManeus
8	Annualize depreciation on year end plant balances	McManeus
9	Annualize property taxes on year end plant balances	McManeus
10	Adjust for post-test year additions to plant in service	McManeus
11	Amortize deferred environmental costs	McManeus
12	Annualize O&M non-labor expenses	McManeus
13	Normalize O&M labor expenses	McManeus
14	Update benefits costs	McManeus
15	Levelize nuclear refueling outage costs	McManeus
16	Amortize rate case costs	McManeus
17	Adjust aviation expenses	McManeus
18	Adjust for approved regulatory assets and liabilities	McManeus
19	Adjust for merger related costs	McManeus
20	Amortize severance costs	McManeus
21	Adjust for NC income tax rate change	McManeus
22	Synchronize interest expense with end of period rate base	McManeus
23	Adjust cash working capital for present revenue annualized and proposed revenue	McManeus
24	Adjust coal inventory	McManeus

ADJUSTMENTS TO OPERATING REVENUES AND EXPENSES (Page 3 of McManeus Exhibit 1)		
Line No.	**Adjustment Title**	**Witness**
25	Adjust credit card fees	McManeus
26	Adjust for new depreciation rates	McManeus
27	Adjust vegetation management expenses	McManeus
28	Adjust reserve for end of life nuclear costs	McManeus
29	Update deferred balance and amortize storm costs	McManeus
30	Adjust other revenue	Pirro
31	Adjust for change in NCUC regulatory fee	McManeus
32	Adjust for hydro stations sale	McManeus

Q. IN CALCULATING THE TOTAL REVENUE REQUIREMENT IN THIS PROCEEDING, DID YOU REVIEW EACH OF THE ACCOUNTING AND PRO FORMA ADJUSTMENTS?

A. Yes. I did.

Q. IN YOUR OPINION, DO THESE ACCOUNTING AND PRO FORMA ADJUSTMENTS REFLECT KNOWN AND MEASURABLE CHANGES TO THE COMPANY'S TEST PERIOD OPERATING EXPENSES, REVENUES, AND RATE BASE?

A. Yes. The adjustments set forth on Page 3 of McManeus Exhibit 1, as more fully supported below and in the testimonies of Witnesses McGee and Pirro, reflect known and measurable changes to the Company's Test Period revenues, expenses, and rate base.

Q. PLEASE DESCRIBE THE PRO FORMA ADJUSTMENTS YOU ARE SUPPORTING.

A. The following are descriptions of the pro forma adjustments:

1. Annualize retail revenues for current rates

This adjustment annualizes revenue based on the base rates in effect at the time of the application. In addition, the adjustment revises the fuel component of base rates. The adjustment removes Test Period revenues recovered through the Demand Side Management/Energy Efficiency ("DSM/EE") Rider, REPS Rider, BPM Prospective Rider and BPM True-up Rider ('the BPM Riders"), Existing DSM Program Rider, Job Retention Recovery Rider, EDIT-1 Rider, Coal Inventory Rider, and fuel Experience Modification Factor ("EMF"). This adjustment also includes the removal of the provision for rate refund recorded in the test period related to the federal tax rate change. This adjustment to revenues is discussed in more detail in the testimony of Witness Pirro.

2. Update fuel costs to proposed rate

This adjustment adjusts fuel clause expense during the Test Period to match the fuel clause revenues included in Adjustment Line 1. By matching the expenses to the revenue, the adjustment ensures that no increase is requested in this proceeding related to fuel and fuel-related expenses that are recoverable through the fuel clause. This adjustment is described in more detail in Witness McGee's testimony.

3. Normalize for weather

This adjustment adjusts revenue to normalize for the impacts of weather. The kWh weather adjustment was developed based on a 30-year history of weather. This kWh adjustment was then multiplied by an average rate for each class to derive the adjustment to revenue. The average rate is based on annualized Test Period revenues at current base rates, therefore excluding the rates for the riders identified in Adjustment 1. However, since the rate includes the base fuel rate proposed in this case, an adjustment is also made to fuel expense to reflect the change in kWh due to weather adjustment.

4. Annualize revenues for customer growth

This adjustment annualizes revenue to reflect expected changes in Test Period kWh sales related to changes in number of customers and usage per customer, using actual and estimated 2019 data and weather-normalized values. The net kWh adjustment was then multiplied by an average rate for each class to derive the adjustment to revenue. The average rate is based on annualized Test Period revenues at current base rates, therefore excluding the rates for the riders identified in Adjustment 1. However, since the rate includes the base fuel rate proposed in this case, an adjustment is also made to fuel expense to reflect the annualized change in kWh. This adjustment is described in more detail in Witness Pirro's testimony.

5. Eliminate unbilled revenues

This adjustment eliminates unbilled revenue and related taxes recorded by the Company in the Test Period.

6. Adjust for costs recovered through non-fuel riders

This adjustment removes expense and rate base items recovered through the Company's non-fuel riders. The revenues, expenses and rate base items, if applicable, in each of these riders are reviewed each year in annual rider proceedings and should not impact the increase requested in this proceeding. Any deferred revenues related to these riders are also removed in this adjustment.

7. Adjust O&M for executive compensation

This adjustment removes 50 percent of the compensation of the five Duke Energy executives with the highest level of compensation allocated to DE Carolinas in the Test Period. While the Company believes these costs are reasonable, prudent and appropriate to recover from customers, we have, for purposes of this case, made an adjustment to this item.

8. Annualize depreciation on year end plant balances

This adjustment reflects the annualization of depreciation expense using the current depreciation rates applied to the end of the Test Period level of plant in service. During the Test Period, the Company recorded depreciation for plant additions from the point in time when they went into service. This adjustment annualizes depreciation expenses to reflect a full year level of depreciation on plant in service as of the end of the Test

Period using the depreciation rates that were in effect by the end of the Test Period. Amounts for changes in solar depreciation expense included in this adjustment exclude the portion of costs expected to be recovered through the REPS Rider. Amounts for changes in catalyst depreciation expense are excluded from this adjustment due to catalyst depreciation expense being recovered through the Fuel Clause.

9. Annualize property taxes on year end plant balances

This adjustment annualizes Test Period property taxes on plant in service at December 31, 2018. Property taxes expensed in calendar year 2018 were assessed based on property balances at the end of 2017. Likewise, property taxes to be expensed in calendar year 2019 will be assessed based on property balances at the end of 2018. This adjustment increases property tax expense in the Test Period to reflect an annual level of expense for property taxes based on the end of the Test Period level of plant investment.

10. Adjust for post-test year additions to plant in service

This adjustment increases operating expenses and rate base for changes in plant, depreciation expense, and accumulated depreciation the Company has incurred and will incur from the end of the Test Period through January 31, 2020. Amounts for changes in solar plant, depreciation expense, and accumulated depreciation included in this adjustment exclude the portion of costs expected to be recovered through the REPS

Rider. Witnesses Capps, Immel, Schneider and Oliver discuss plant additions in their testimonies.

11. Amortize deferred environmental costs

In the 2017 Rate Case, the Commission granted the Company authority to defer in a regulatory asset account certain costs incurred in connection with compliance with federal and state environmental requirements as it relates to Coal Combustion Residuals ("CCRs" or "coal ash"). The nature of these costs is described in more detail in Witnesses Bednarcik and Immel's testimony. Most of the deferred compliance costs are related to ash basin closure and are subject to asset retirement obligation ("ARO") accounting per Generally Accepted Accounting Principles ("GAAP"). In addition, a portion of the deferred amounts are related to the continued operation of the active plants and are not subject to ARO accounting. These deferred amounts are revenue requirements related to capitalized plant in service amounts. No fines, penalties, or costs of which DE Carolinas has agreed to forego recovery are included in the deferral. This adjustment amortizes the deferred costs over a 5-year period. The compliance costs are based on actuals as of the end of the Test Period plus a projection through January 31, 2020. Over the 5-year amortization period, the annual amortization expense is $96.3 million, including regulatory fee impacts. When added together with the net of tax return on the unamortized balance of $27.3 million, the total revenue requirement requested in this case for deferred coal ash pond closure costs is $123.6

million. The Company requests Commission authorization to continue to defer this type of environmental cost beyond the January 2020 cutoff period, for cost recovery consideration in a future rate case.

12. Annualize O&M non-labor expenses

This adjustment annualizes certain Test Period operating and maintenance expenses to reflect the change in unit costs that occurred during this period. Operating and maintenance costs addressed in other adjustments are excluded from this adjustment. The excluded costs include fuel, purchased power, non-fuel rider costs, nuclear refueling outage costs, aviation expenses, atypical severance costs, vegetation management expenses, the NCUC regulatory fee, rate case amortizations, outside tax services, expiring amortizations, merger related costs, hydro sale related costs, and labor costs.

13. Normalize O&M labor expenses

This adjustment adjusts the wages and salaries, related employee benefits, and changes in related payroll taxes to reflect annual levels of costs as of June 30, 2019. This adjustment also restates variable short and long term pay to the target level.

14. Update benefits costs

This adjustment updates the Test Period cost of labor-related benefits to match the result of an updated study performed by the Company's consultants.

15. Levelize nuclear refueling outage costs

In the Company's 2013 Rate Case, the Commission approved an accounting mechanism that levelized certain costs related to nuclear refueling outages. Consistent with the 2017 Rate Case, this adjustment annualizes the amortization expense related to this mechanism incurred during the Test Period to the latest known and measurable level experienced through the capital cutoff period.

16. Amortize rate case costs

This adjustment amortizes the incremental rate case costs incurred for this docket over a 5-year period.

17. Adjust aviation expenses

This adjustment removes from expense 50% of certain corporate related aviation expenses incurred in the Test Period.

18. Adjust for approved regulatory assets and liabilities

This adjustment removes from Test Period costs the amortization of various regulatory assets or liabilities that have been approved by the Commission in previous general rate case proceedings. The amortization period for items removed will expire before proposed new rates are effective, and thus should not be included in Test Period expenses on which new rates are based. The adjustment also annualizes the Test Period amortizations that were approved in the 2017 Rate Case.

19. Adjust for merger related costs

This adjustment removes the impact of costs related to the Piedmont and Progress mergers included in the Test Period, as adjusted by other proformas.

20. Amortize severance costs

This adjustment removes atypical severance and retention costs included in the Test Period. The Company is also requesting permission in its Application to establish a regulatory asset to defer a North Carolina retail amount of $69.2 million of severance costs, and to amortize the regulatory asset over a 3-year period.

21. Adjust for NC income tax rate change

This adjustment adjusts current and deferred income tax expense to reflect the reduction in the North Carolina income tax rate from 3 percent to 2.5 percent effective January 1, 2019.

22. Synchronize interest expense with end of period rate base

This adjustment adjusts income taxes for the tax effect of the annualization of interest expense reflected in the pro forma cost of service.

23. Adjust cash working capital for present revenue annualized and proposed revenue

24.

This adjustment adjusts cash working capital to incorporate the impact of the other pro forma adjustments. It also calculates the additional cash working capital required due to the proposed increase in rates. The adjustment is in accordance with the Commission's March 21, 2016 order in Docket No. M-100 Sub 137, and is shown on Line 2, Columns 3 and 5, of McManeus Exhibit 1, Page 4d.

25. Adjust coal inventory

This adjustment increases the Company's actual coal inventory at the end of the Test Period to reflect a targeted 35-day full load burn for each of the coal generating plants. This change in coal inventory for the North Carolina retail jurisdiction is shown on McManeus Exhibit 1, Page 4c, Line 1, Column 3.

26. Adjust for credit card fees

This adjustment increases operating and maintenance expenses to include fees the Company incurs related to acceptance of credit card payments. As described in the testimony of Witness Henning, the Company is proposing to implement a transaction fee-free payment program for residential customers. The Company proposes to recover the cost of the program from all customers.

27. Adjust for new depreciation rates

This adjustment adjusts the annualized depreciation expense to reflect the new depreciation rates based on the updated depreciation study prepared by Gannett Fleming and discussed and supported by Witness Spanos. The proposed new depreciation rates reflect revised life spans for certain coal plants, as noted by Witness Spanos. Implementing the new depreciation rates will result in an increase to depreciation expense of approximately $108.5 million on a system basis, or $72.1 million on a North Carolina retail basis. The adjustment also increases depreciation reserves by an annual amount of the depreciation expense adjustment.

28. Adjust vegetation management expenses

This adjustment increases operating and maintenance expense in the Test Year to reflect known contract rate increases that took effect in 2019, which are applicable to completing the target trim mileage in the Company's on-going vegetation management program's 5/7/9 plan.

29. Adjust reserve for end of life nuclear costs

In the Company's 2013 Rate Case, DE Carolinas established reserves for end-of-life costs associated with nuclear materials and supplies and with nuclear fuel. This adjustment adjusts the Test Period amortization expense, reserve and related taxes to reflect updated estimates of the end-of-life costs.

30. Amortize deferred storm costs

This adjustment reflects an eight-year amortization of deferred costs related to incremental storm damage expenses incurred due to Hurricanes Florence and Michael, and winter storm Diego. These costs are the subject of the Company's Petition for An Accounting Order filed in Docket No. E-7, Sub 1187, pending before the Commission, and for which the Company is requesting consolidation with this proceeding. The Company is proposing to recover the incremental cost in excess of normal storm expenses, including a return on the unrecovered balance. The Company proposes to begin amortization of the costs when proposed new base rates become effective, and to include a return on the deferred balance through the end of the proposed amortization period. Over the 8-year amortization period, the North Carolina retail annual amortization expense is $24.3 million, including regulatory fee impacts. When added together with the net of tax return on the unamortized balance of $12.0 million, the total revenue requirement requested in this case for deferred incremental storm damage expenses is $36.3 million.

31. Adjust other revenues

This adjustment reflects proposed reductions to customer fees related to connection, reconnection, and returned payments, as described by Witness Pirro in his direct testimony.

32. Adjust for change in NCUC regulatory fee

This adjustment annualizes the Test Period regulatory fee at the current rate of 0.13 percent.

33. Adjust for sale of hydro stations

This adjustment removes Test Period operating expenses and rate base amounts related to five hydro stations sold August 16, 2019. The sale of the facilities and the transfer of the related certificates of convenience and necessity were approved by the Commission in Docket Nos. E-7, Sub 1181; SP-12478, Sub 0; and SP-12479, Sub 0. In addition, the Commission approved the establishment of a regulatory asset for the estimated loss on disposition of the facilities. Accordingly, this adjustment also includes amortization of the estimated loss on the sale over a 7-year period. This period was selected to closely align the revenue requirement amount associated with the loss on the sale to the revenue requirement amount associated with ownership of the facilities.

Q. PLEASE EXPLAIN WHAT IS PRESENTED ON PAGES 4 THROUGH 4d OF MCMANEUS EXHIBIT 1.

A. Page 4 shows total Company and North Carolina retail components of original cost rate base. The total Company amounts and North Carolina retail components were taken from the Company's Cost of Service Study as of December 31, 2018.

Pages 4a, 4b, 4c, and 4d are details of components making up original cost rate base as of December 31, 2018 adjusted for known and measurable changes. On each of these four pages, Column 1 shows the total Company per book amounts at December 31, 2018; Column 2 reflects the amount for North Carolina retail electric operations; Column 3 sets forth the accounting adjustments allocated to North Carolina retail operations; and Column 4 reflects the North Carolina retail amounts including adjustments.

Page 4a is a summary of the Company's investment in electric plant in service as of December 31, 2018 by functional classification. Page 4b details accumulated depreciation and amortization for each of the classes of electric plant in service. The depreciation rates for each class of property are shown at the bottom of the page on Lines 8 through 15. These depreciation rates are supported by Witness Spanos. Page 4c is a summary of the Company's investment in materials and supplies as of December 31, 2018 included in rate base. Page 4d reflects the working capital investment included in rate base.

V. UTILITY-OWNED SOLAR FACILITIES

Q. PLEASE DISCUSS THE CONDITIONS AFFECTING COST RECOVERY OF THE COMPANY'S NEW SOLAR FACILITY?

A. Since its last general rate case, DE Carolinas has placed in service one utility scale solar facility, Woodleaf Solar ("Woodleaf"). A certificate of Public Convenience & Necessity ("CPCN") was received for this facility in Docket No. E-7, Sub 1101. The Commission's order in that docket included several conditions. One condition requires DE Carolinas, in REPS Rider and general rate case proceedings, to itemize the actual monetization of certain tax benefits within its calculation of the levelized revenue requirement for each facility. Another condition requires that the incremental costs recovered through the REPS Rider be capped, and that the additional revenue requirements that exceed avoided costs and the REPS cost cap will be recovered only in base rates, based on the reasonableness and prudence of the additional costs. In addition, it is required that the costs recovered through base rates should be allocated among jurisdictions and customer classes in the same manner as any other plant in DE Carolinas' generation portfolio, and that the reasonableness and prudence of DE Carolinas' costs associated with the facilities and the methodology for recovering those costs should be addressed in future REPS Rider and general rate case proceedings. Finally, the Commission requires DE Carolinas to file a final cost accounting report within 180 days of the completion of construction of the projects.

Q. HAS THE COMPANY COMPLIED WITH THESE CONDITIONS?

A. Yes. In DE Carolinas' REPS Rider filing in Docket E-7, Sub 1191, the Company provided Williams Exhibit 7 incorporating the most current tax benefit monetization assumptions into the levelized revenue requirement shown for Woodleaf. Attached as McManeus Exhibit 3 is an update of the information previously included in Williams Exhibit 7, based on the revised costs filed in the June 20, 2019 cost accounting report.

Because Woodleaf was placed in service in late December 2018, before the end of the Test Period, Woodleaf costs are included in the Test Period amounts reflected in the cost of service studies and revenue requirement in this proceeding. The Company has excluded amounts that will be recovered through the REPS Rider. The amounts excluded represent the portion of project costs in excess of avoided cost but within the agreed upon REPS cap associated with these facilities. The Company has allocated the costs included in its proposed revenue requirements in this proceeding in the manner that it allocates the cost of other generating plants.

WHAT IS THE COMPANY'S POSITION REGARDING THE PRUDENCY AND REASONABLENESS OF THE ABOVE-DESCRIBED COSTS FOR WHICH THE COMPANY IS REQUESTING RECOVERY IN THIS PROCEEDING?

A. DE Carolinas considers the costs to be reasonable and prudently incurred. In its 2019 REPS Rider filing, the Company updated its assumptions regarding timing of realization of tax benefits and explained any differences between original assumptions and updated assumptions. In filed testimony the Company noted no change in the assumptions regarding MACRS depreciation and 80% property tax abatement. The Company reported that the realization of certain other tax benefits has been delayed beyond the dates originally assumed at the time of the CPCN filings. The delay is because the Company anticipates lacking sufficient taxable income against which it can take federal investment tax credit for several more years. This circumstance is directly related to tax law changes regarding federal bonus depreciation. Although federal bonus depreciation is not one of the tax benefits to which the Commission's conditions in its CPCN orders applies, nor does it apply to the Woodleaf facility, because of changes in federal tax law, several of the Company's assets qualify for bonus depreciation, thereby reducing the Company's taxable income. In addition, the reduction of the federal income tax rate and the elimination of the federal Section 199 deduction results in increased levelized revenue requirements related to the Woodleaf facility.

The reduction in income tax rates affects two components for the revenue requirement calculation: 1) the rate base amount is increased by the lower accumulated deferred income taxes associated with the facility; and 2) the income tax associated with the equity return is decreased. The net impact is a small increase in levelized revenue requirement. The completed project costs for Woodleaf are lower than originally estimated. As a result, the updated revenue requirement, based on actual project costs and updated tax benefit assumptions, is not materially different from the originally estimated revenue requirement, as shown on McManeus Exhibit 3.

Because the delay in realization of certain other tax benefits is the direct consequence of the extension of another federal tax benefit to the projects (federal bonus depreciation), and the impact of the change in federal tax rate and elimination of a federal tax deduction cannot be avoided, the Commission should conclude that the costs of the Woodleaf facility investment were reasonably and prudently incurred, and therefore eligible for recovery.

VI. EXCESS DEFERRED INCOME TAX ("EDIT") RIDER

Q. HOW HAS THE COMPANY ADJUSTED ITS RATES TO REFLECT THE TAX IMPACTS OF THE TAX CUTS AND JOBS ACT?

A. In its most recent general rate case in Docket No. E-7 Sub 1146, the Company adjusted its rates to reflect reduced income tax expense related to the reduction in federal income tax rate, from 35% to 21%, as provided in the Tax Cuts and Jobs Act ("Tax Act") which became law December 22, 2017. The rates approved by the Commission and implemented August 2018 were reduced to reflect lower federal income taxes. The lower federal tax rate continues to be reflected in proposed rates in this proceeding.

In its order in the 2017 Rate Case, the Commission also addressed the disposition of EDIT that resulted from the reduction in the federal income tax rate; ordering that the Company should maintain the EDIT in a regulatory liability account for three years or until its next general rate case, whichever is sooner. In compliance, in this proceeding, the Company is proposing a method of returning EDIT to its customers through a rider.

Q. PLEASE EXPLAIN THE COMPANY'S PROPOSED EDIT RIDER.

A. In his direct testimony, Witness Panizza discusses in detail the implications of the Tax Act and North Carolina retail's share of the federal income tax amounts that are addressed in the EDIT Rider (also referred to as EDIT-2 in Rate Design exhibits). The Rider contains the following five categories of benefits for customers, of which the first three are discussed by Witness Panizza in his testimony:

1. Federal EDIT - Protected
2. Federal EDIT – Unprotected, PP&E related
3. Federal EDIT – Unprotected, non-PP&E related
4. Deferred revenue - Federal income tax
5. NC EDIT

<u>Federal EDIT – Protected, Unprotected PP&E related, and Unprotected, non-PP&E related</u>

At the end of 2018, the Company had a certain amount of Accumulated Deferred Income Taxes ("ADIT") on its balance sheet. These are income taxes the Company has expensed for accounting purposes and collected from customers, but will not need to pay the IRS until some point in the future. Because the Company has use of this cash for a period of time, until it must pay the IRS, the ADIT is included as a reduction to rate base and is a source of financing for investments used to benefit customers – poles, lines, generating plant, etc. With the change in the federal tax rate, the amount of income tax that the Company must pay the IRS in the future has been reduced, and must be remeasured. At the end of 2018, the Company calculated this reduction and the difference was reclassified from ADIT to EDIT, although both ADIT and EDIT remain components of rate base. Instead of having an obligation to pay the EDIT amount to the IRS in the future, the Company now has an obligation to refund it to customers. Within EDIT, there are three subcategories, as described by Company Witness John Panizza.

- Protected – These amounts are generally related to Property, Plant & Equipment ("PP&E") and there are specific IRS requirements mandating that this amount be returned to customers no more quickly than as prescribed by the IRS. The amortization period the Company is using for Protected EDIT is called the Average Rate Assumption Method ("ARAM") and results in a Year 1 amortization rate for this category of 2.53 percent. Also, as Witness Panizza notes, protected amounts ultimately become unprotected over time. As such, the Company estimated this amount and captured this transition from the Protected to Unprotected category on McManeus Exhibit 4, Page 1, Line 3.
- Unprotected PP&E related – These amounts are also related to PP&E but do not fall under the IRS guidelines for protected status. Because the Company would have paid these amounts to the IRS over the remaining life of the underlying property, the Company is proposing to return these amounts to customers over a 20-year period. As noted by Witness Panizza, this approach balances the customer and the Company's interests; minimizing customer rate volatility and addressing the Company's cash flow concerns.

- Unprotected non-PP&E related – These amounts are not related to property, plant and equipment, but are related to items such as regulatory assets and liabilities, and other balance sheet items. As noted by Witness Panizza, these items have an average life of approximately 7½ years. The Company is proposing to return these amounts to customers over a 5-year period. In addition, the Company has included in this category amounts transitioning from the Protected category to Unprotected status.

<u>NC EDIT</u>

Like the EDIT that results from the reduction in the federal corporate income tax rate, there are EDIT balances that resulted from the reduction in the North Carolina state corporate tax rate. In the 2017 Rate Case, the Commission approved a 4-year State EDIT rider to return EDIT resulting from reductions in state tax rate in prior years. The State EDIT rider currently in place does not include EDIT related to the reduction in North Carolina state corporate tax rate from 3% to 2.5% effective January 1, 2019. The Company is proposing to incorporate the refund of these new state EDIT in the EDIT rider proposed in this case, over a 5-year period.

<u>Deferred Revenue</u>

As directed in Docket No. M-100, Sub 148, the Company began deferring, effective January 1, 2018, the impact on customer rates of the reduction in the federal corporate income tax rate from 35% to 21%. Beginning August 1, 2018, new rates approved by the Commission in Docket No. E-

7, Sub 1146 reflected the lower federal tax rate. After August 1, deferral amounts are related to continuing accrual of returns on the deferral balance. McManeus Exhibit 4, Page 1, Line 8, shows the projected balance of this liability as of January 31, 2020. The Company proposes to refund this amount to customers over a 5-year period. The Company will continue to defer the impact from February 1, 2020 through the new rates effective date in this case. Those additional amounts are not being estimated now, but will be included in the Year 2 EDIT rider calculation.

Q. PLEASE EXPLAIN HOW THESE FIVE CATEGORIES OF BENEFITS WILL BE INCORPORATED INTO THE EDIT RIDER.

A. The proposed rider will include the annual amortization for each of these five categories of benefits. The North Carolina retail amounts can be seen on McManeus Exhibit 4, Page 1, Columns A through E. Since these EDIT amounts are a reduction in rate base, as these amounts are refunded to customers, rate base will increase. As such, the rider also calculates the adjustment to return on rate base related to the increase in rate base resulting from the refund of EDIT to customers. This is shown in McManeus Exhibit 4, Page 2, Column L. Column M shows the revenue requirement equal to the sum of the amortization and return. Column N shows the revenue requirement grossed up for NCUC regulatory fee and uncollectible expense. The amount in the Year 1 row on McManeus Exhibit 4, Page 2 of $154.6 million decrease is the rider amount that is being proposed in this case.

The Year 1 rider amounts are based on the balance of EDIT at December 31, 2018 as described by Witness Panizza, and are updated to reflect the expected balance at July 31, 2020, when the proposed rider is expected to be implemented. This projection will be further updated to reflect actual January 31, 2020 balances, as well as the latest ARAM rate, prior to the hearing.

Years 2 through 5 are shown for illustrative purposes. The actual rider amounts for those years may change based on several factors. First, if there are additional adjustments to any of the balances on Rows 1 through 5 of McManeus Exhibit 4, the annual amortization amounts will be recalculated to accommodate the change in balance.

A second factor that would impact the calculation of the rider beyond Year 1 is changes in the ARAM rate. The Company updates this rate annually and the most current rate most be used when establishing customer rates.

A third factor that would impact the calculation of the rider beyond Year 1 is the impact of future rate cases. In future rate cases, the EDIT balance in base rates shown in Column J and the rate of return used to calculate Column L of McManeus Exhibit 4, Page 2 would be updated based on what is approved in that case.

Finally, the retention factor used to calculate Column N will be updated to reflect any future changes in the license fee or public utility assessment fee rates as needed.

The Company proposes to file the rider amounts, along with the spread to the classes and derivation of the rate for each subsequent year, with the Commission annually in this docket by April 30, for rider rates effective July 1.

The Year 1 EDIT revenue requirement, shown in McManeus Exhibit 4, was provided to Witness Pirro who explains the derivation of the rider rate in his testimony. Witness Hager explains how the amounts were allocated to the customer classes in her testimony.

VII. PETITION FOR ACCOUNTING ORDER TO DEFER GRID IMPROVEMENT PLAN COSTS

Q. WHAT IS THE COMPANY'S PROPOSAL REGARDING RECOVERY OF COSTS RELATED TO GRID IMPROVEMENT PLAN INVESTMENTS?

A. The proposed new rates requested in this proceeding include recovery of Grid Improvement Plan expenditures that are included in the Test Period and any supplemental updates that may be made for post Test Period plant additions. In addition, the Company requests permission to defer costs related to its Grid Improvement Plan in a regulatory asset, for cost recovery consideration in future general rate cases. The Company requests authorization to begin deferring incremental costs not included in this case beginning January 1, 2020. The Grid Improvement Plan is a three-year plan spanning calendar years 2020 through 2022.

Q. WHAT SPECIFIC COSTS ARE REQUESTED TO BE DEFERRED?

A. Company Witness Oliver extensively discusses the Company's Grid Improvement Plan in his direct testimony. In Oliver Exhibit 4, a listing of specific Grid Improvement Plan programs is provided, including thirteen Distribution programs, three Transmission programs, and five Enterprise programs. The Company is requesting deferral of North Carolina retail's share of the following types of costs for these identified programs: depreciation of capital investments, return on capital investments (net of accumulated depreciation) at the Company's weighted average cost of capital, O&M expense related to the installation of equipment, property tax related to the capital investments, and a return of the balance of costs deferred at the Company's weighted average cost of capital.

Witness Oliver's direct testimony provides estimated amounts to be spent as part of the Grid Improvement Plan in the state of North Carolina. However, for purposes of determining amounts to be deferred for future cost recovery from North Carolina retail customers, consideration is given to the nature of the expenditures, *i.e.*, whether the expenditures are related to improvement of the distribution system, the transmission system, or communications systems. Distribution expenditures made to improve North Carolina distribution infrastructure would be fully assigned to North Carolina retail customers. However, expenditures made to improve transmission infrastructure benefits all retail and wholesale customers, thus an appropriate share would be allocated to North Carolina retail customers. Expenditures made to improve communications systems would similarly be allocated among both retail and wholesale customers.

Q. WHAT IS THE BASIS FOR THE COMPANY'S REQUEST FOR DEFERRAL?

A. The request meets the Commission's traditional test for deferral. As described by Witness Oliver, the expenditures to be made under the Grid Improvement Plan are not simple, regularly occurring, inconsequential investments, but rather, are major non-routine investments, that produce substantial customer benefits. Further, absent deferral the Company will experience a significant adverse earnings impact. The earnings degradation is expected to grow to over 100 basis points by 2022, the third year of the plan. These effects are material to the Company's financial standing and could adversely impact the Company's financial strength and flexibility, impairing reliable access to capital on reasonable terms. As noted by Witness Newlin, the Company's capital requirements for the next three years are projected to be approximately $9.1 billon.

Q. ARE THERE ADDITIONAL REASONS WHY THE COMMISSION SHOULD AUTHORIZE DEFERRAL OF THESE COSTS?

A. Yes. The Commission has consistently demonstrated that deferral is not a rigid concept, but can be flexibly applied to ensure that its fundamental mandate of ensuring that rates are just and reasonable, set in a manner that balances the interests of the Company and its customers.

In the 2017 Rate Case, the Commission noted that regulatory lag is always present in an integrated, investor-owned utility market such as North Carolina. As the Commission is aware, this is particularly so in a jurisdiction (like North Carolina) that uses a historical test year to set rates. The Commission specifically noted that while grid improvement costs identified in the totality of that case were substantial, on an individual project basis the projects were by and large of insufficient length to qualify for CWIP or AFUDC prior to placement into service. The Commission noted that as a result, the Company risked erosion of its ability to earn its authorized return due to regulatory lag. However, as the magnitude of that erosion had not been quantified, the Commission declined to authorize a deferral in that case. Instead, the Commission noted that it would be willing to entertain a future deferral request outside the test year "were the Company to demonstrate that the costs can be properly classified as … grid modernization [and not customary spend]." (E-7, Sub 1146 Rate Order, p. 148.) The Commission indicated that a list of projects arising from a collaborative stakeholder process would aid it in the examination of a deferral request. Witness Oliver's testimony shows that the projects for which the Company seeks deferral do indeed arise from a robust stakeholder process. And, the Commission noted further, it could authorize deferral of "demonstrated" grid modernization costs incurred prior to the test year with "reliance on leniency in imposing the 'extraordinary expenditure' test." (E-7, Sub 1146 Order, p. 149.)

Another example of the flexibility with which the Commission may approach deferral requests is the recently decided Northbrook Hydro matter (Docket No. E-7, Sub 1181). There, the Commission looked to the benefits accruing to the Company's customers due to the sale of some of the Company's hydroelectric generation assets; found that those benefits were substantial; and allowed the Company to defer the loss experienced on the sale considering the relatively small cost that customers would have to bear in the future due to the deferral. As set out in the testimony of Company Witness Oliver, the benefit to customers of the Company's grid modernization program are significant.

VIII. <u>CONCLUSION</u>

Q. IN YOUR VIEW, ARE THE OPERATING EXPENSES AND RATE BASE CALCULATED BY DE CAROLINAS IN THIS PROCEEDING IN ACCORDANCE WITH THE PROVISIONS OF N.C. GEN. STAT. § 62-133 AND NCUC RULE R1-17?

A. Yes. They are. The Company generally experienced a level of ordinary business expenses and rate base that was reasonable and necessary to provide safe and reliable electric service to its customers for the twelve-month period ended December 31, 2018. To meet the requirements of N.C. Gen. Stat. § 62-133 and this Commission's Rule R1-17, the actual operating expenses and rate base levels for the Test Period were adjusted for known and measurable changes as described in Section IV of my testimony and in the testimonies of Witnesses McGee and Pirro.

Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?

A. Yes.

DUKE ENERGY CAROLINAS, LLC
OPERATING INCOME FROM ELECTRIC OPERATIONS
Docket No. E-7, Sub 1214 FOR THE TEST PERIOD ENDED DECEMBER 31, 2018
(Thousands of Dollars)

			North Carolina Retail Operations				
Line No.	Description	Total Company Per Books (a) (Col. 1)	Per Books (Col. 2)	Accounting Adjustments (c) (Col. 3)	Before Proposed Increase (Col. 4)	Revenue and Expenses from Proposed Increase (e) (Col. 5)	After Proposed Increase (Col. 6)
1	Electric operating revenue	$ 7,273,365	$ 4,904,084	$ (142,660)	$ 4,761,424	$ 445,331	$ 5,206,755
	Electric operating expenses:						
	Operation and maintenance:						
2	Fuel used in electric generation	1,504,692	989,374	168,854	1,158,228	-	1,158,228
3	Purchased power	317,798	194,348	(170,936)	23,412	-	23,412
4	Other operation and maintenance expense	2,029,601	1,375,939	(205,547)	1,170,392	1,691	1,172,083
5	Depreciation and amortization	1,193,762	838,805	358,330	1,197,135	-	1,197,135
6	General taxes	291,829	194,681	12,832	207,513	-	207,513
7	Interest on customer deposits	8,169 (b)	7,130	-	7,130	-	7,130
8	Net income taxes	340,714	224,997	(59,918)	165,080	103,355	268,435
9	Amortization of investment tax credit	(5,259)	(3,526)	690	(2,836)	-	(2,836)
10	Total electric operating expenses	5,681,305	3,821,748	104,306	3,926,054	105,046	4,031,100
11	Operating income	$ 1,592,059	$ 1,082,336	$ (246,966)	$ 835,370	$ 340,285	$ 1,175,655
12	Original cost rate base (e)	$ 21,361,527	$ 14,556,650	$ 908,092 (d)	$ 15,464,742	$ 47,878 (f)	$ 15,512,620
13	Rate of return on North Carolina retail rate base		7.44%		5.40%		7.58%

Notes: (a) From Form E-1 Item 45A
(b) Reclassifies interest on customer deposits to electric operating expense.
(c) From Page 3, Line 35.
(d) From Page 4, Line 9.
(e) From Page 2.
(f) Reflects an increase in operating funds per lead-lag study for the adjusted total requirements in this rate case excluding the portion already adjusted in Col. 3, Line 12.

DUKE ENERGY CAROLINAS, LLC
CALCULATION OF ADDITIONAL REVENUE REQUIREMENT
Docket No. E-7, Sub 1214 FOR THE TEST PERIOD ENDED DECEMBER 31, 2018
(Thousands of Dollars)

				North Carolina Retail Operations					
				Before Proposed Increase			After Proposed Increase		
Line No.	Description	Dec. 31, 2018 Amount (Col. 1)	Pro forma Ratio (Col. 2)	Retail Rate Base (Col. 3)	Embedded Cost/ Return % (Col. 4)	Operating Income (Col. 5)	Retail Rate Base (Col. 6)	Embedded Cost/ Return % (Col. 7)	Operating Income (Col. 8)
1	Long-term debt	$ 10,993,064	47.00%	$ 7,268,429	4 51%	$ 327,806	$ 7,290,932	4.51%	$ 328,821
2	Members' equity (a)	11,682,367	53.00%	8,196,313	6.19%	507,564	8,221,689	10.30%	846,834
3	Total	$ 22,675,431	100.00%	$ 15,464,742 (b)		$ 835,370 (c)	$ 15,512,620 (b)		$ 1,175,655
4	Operating income before increase (Line 3, Column 5)								835,370
5	Additional operating income required (Line 3 minus Line 4)								340,285
6	Calculate income tax on incremental interest expense due to increase in cash working capital in proposed revenue								(237)
7	Regulatory fee (.12967%), uncollectibles rate (.2501%) and income taxes (23.3503%)								105,283
8	Additional revenue requirement								$ 445,331

Notes: (a) The equivalent of common equity for a limited liability company.
(b) From Page 1, Line 12, Column 4 and Column 6.
(c) From Page 1, Line 11, Column 4.

McManeus
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DUKE ENERGY CAROLINAS, LLC
DETAIL OF ACCOUNTING ADJUSTMENTS-NORTH CAROLINA RETAIL
Docket No. E-7, Sub 1214 FOR THE TEST PERIOD ENDED DECEMBER 31, 2018
(Thousands of Dollars)

Line No.		Description	Electric Operating Revenue (Col. 1)	Fuel Used in Electric Generation (Col. 2)	Purchased Power (Col. 3)	Other O&M Expense (Col. 4)	Depreciation and Amortization (Col. 5)	General Taxes (Col. 6)	Income Taxes 23.6619% (Col. 7)	Amortization of ITC (Col. 8)	Operating Income
1		Annualize retail revenues for current rates	$ (110,407)	$ -	$ -	$ (826)	$ -	$ -	$ (25,588)	$ -	(83,994)
2		Update fuel costs to proposed rate	-	209,105	(169,854)	(21,892)	(3,277)	-	(3,288)	-	(10,794)
3		Normalize for weather	(109,566)	(26,163)	-	(416)	-	-	(19,378)	-	(63,609)
4	*	Annualize revenues for customer growth	9,942	2,775	-	39	-	-	1,664	-	5,464
5		Eliminate unbilled revenues	26,204	-	-	-	-	-	6,119	-	20,085
6		Adjust for costs recovered through non-fuel riders	50,669	(16,862)	(1,082)	(117,348)	(3,071)	(10)	60,905	-	128,138
7		Adjust O&M for executive compensation	-	-	-	(3,301)	-	-	771	-	2,530
8		Annualize depreciation on year end plant balances	-	-	-	-	59,172	-	(13,817)	690	(46,045)
9		Annualize property taxes on year end plant balances	-	-	-	-	-	7,470	(1,744)	-	(5,725)
10	*	Adjust for post test year additions to plant in service	-	-	-	-	50,629	6,771	(13,403)	-	(43,998)
11	*	Amortize deferred environmental costs	-	-	-	-	95,913	-	(22,396)	-	(73,517)
12		Annualize O&M non-labor expenses	-	-	-	2,631	-	-	(614)	-	(2,017)
13	*	Normalize O&M labor expenses	-	-	-	(23,765)	-	(1,162)	5,820	-	19,106
14		Update benefits costs	-	-	-	(1,433)	-	-	335	-	1,099
15	*	Levelize nuclear refueling outage costs	-	-	-	(2,138)	-	-	499	-	1,639
16	*	Amortize rate case costs	-	-	-	801	-	-	(187)	-	(614)
17		Adjust aviation expenses	-	-	-	(1,986)	-	(27)	470	-	1,543
18		Adjust for approved regulatory assets and liabilities	-	-	-	1,408	62,706	56	(14,984)	-	(49,187)
19	*	Adjust for Merger Related Costs	-	-	-	(5,530)	(21)	(73)	1,313	-	4,311
20	*	Amortize Severance Costs	-	-	-	(46,208)	-	-	10,790	-	35,418
21		Adjust NC income taxes for rate change	-	-	-	-	-	-	(2,707)	-	2,707
22	*	Synchronize interest expense with end of period rate base	-	-	-	-	-	-	(2,580)	-	2,580

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DUKE ENERGY CAROLINAS, LLC
DETAIL OF ACCOUNTING ADJUSTMENTS-NORTH CAROLINA RETAIL
Docket No. E-7, Sub 1214 FOR THE TEST PERIOD ENDED DECEMBER 31, 2018
(Thousands of Dollars)

Line No.		Description	Electric Operating Revenue (Col. 1)	Fuel Used in Electric Generation (Col. 2)	Purchased Power (Col. 3)	Other O&M Expense (Col. 4)	Depreciation and Amortization (Col. 5)	General Taxes (Col. 6)	Income Taxes 23.6619% (Col. 7)	Amortization of ITC (Col. 8)	Operating Income
23	*	Adjust cash working capital for present revenue annualized and proposed revenue	-	-	-	-	-	-	103	-	(103)
24		Adjust coal inventory	-	-	-	-	-	-	-	-	-
25	*	Adjust for credit card fees	-	-	-	8,774	-	-	(2,049)	-	(6,725)
26		Adjust Depreciation for new rates	-	-	-	-	72,133	-	(16,843)	-	(55,290)
27		Adjust vegetation management expenses	-	-	-	7,739	-	-	(1,807)	-	(5,932)
28		Adjust reserve for end of life nuclear costs	-	-	-	-	(1,808)	-	422	-	1,386
29		Update deferred balance and amortize storm costs	-	-	-	-	24,179	-	(5,646)	-	(18,533)
30		Adjust Other Revenue	(9,502)	-	-	(36)	-	-	(2,210)	-	(7,256)
31		Adjust for change in NCUC regulatory fee-DEC	-	-	-	(500)	-	-	117	-	383
32	*	Adjust for Hydro Stations Sale	-	-	-	(1,560)	1,773	(193)	(5)	-	(16)
33											
34											
35		Total adjustments	$ (142,660)	$ 168,854	$ (170,936)	$ (205,547)	$ 358,330	$ 12,832	$ (59,918)	$ 690	$ (246,966)

Notes: * Identification required by NCUC Rule R1-17(b)

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DUKE ENERGY CAROLINAS, LLC
DETAIL OF ACCOUNTING ADJUSTMENTS-NORTH CAROLINA RETAIL
Docket No. E-7, Sub 1214 FOR THE TEST PERIOD ENDED DECEMBER 31, 2018
(Thousands of Dollars)

Line No.		Description	EPIS	Accum Deprec	Materials & Supplies	Working Capital	ADIT	Operating Reserves	CWIP	Rate Base	Oper Inc Rev Req Impact	R/B Rev Req Impact	Total Rev Req Impact
1		Annualize retail revenues for current rates	-	-	-	-	-	-	-	-	109,581	-	109,581
2		Update fuel costs to proposed rate	-	-	-	-	-	-	-	-	14,082	-	14,082
3		Normalize for weather	-	-	-	-	-	-	-	-	82,987	-	82,987
4	*	Annualize revenues for customer growth	-	-	-	-	-	-	-	-	(7,128)	-	(7,128)
5		Eliminate unbilled revenues	-	-	-	-	-	-	-	-	(26,204)	-	(26,204)
6		Adjust for costs recovered through non-fuel riders	(18,328)	4,243	(42,354)	(19,404)	12,472	-	-	(63,371)	(167,173)	(5,857)	(173,030)
7		Adjust O&M for executive compensation	-	-	-	-	-	-	-	-	(3,301)	-	(3,301)
8		Annualize depreciation on year end plant balances	-	-	-	-	-	-	-	-	60,072	-	60,072
9		Annualize property taxes on year end plant balances	-	-	-	-	-	-	-	-	7,470	-	7,470
10	*	Adjust for post test year additions to plant in service	1,355,958	(619,363)	-	(4,945)	(17,144)	-	-	714,506	57,401	66,033	123,433
11	*	Amortize deferred environmental costs	-	-	-	383,653	(89,584)	-	-	294,069	95,913	27,177	123,090
12		Annualize O&M non-labor expenses	-	-	-	-	-	-	-	-	2,631	-	2,631
13	*	Normalize O&M labor expenses	-	-	-	-	-	-	-	-	(24,926)	-	(24,926)
14		Update benefits costs	-	-	-	-	-	-	-	-	(1,433)	-	(1,433)
15	*	Levelize nuclear refueling outage costs	-	-	-	-	-	-	-	-	(2,138)	-	(2,138)
16	*	Amortize rate case costs	-	-	-	3,080	(719)	-	-	2,361	801	218	1,019
17		Adjust aviation expenses	-	-	-	-	-	-	-	-	(2,013)	-	(2,013)
18		Adjust for approved regulatory assets and liabilities	-	-	-	(139,897)	32,666	-	-	(107,231)	64,171	(9,910)	54,261
19	*	Adjust for Merger Related Costs	-	338	-	-	-	-	-	338	(5,624)	31	(5,592)
20	*	Amortize Severance Costs	-	-	-	46,113	(10,767)	-	-	35,345	(46,208)	3,266	(42,941)
21		Adjust NC income taxes for rate change	-	-	-	-	-	-	-	-	(3,532)	-	(3,532)
22	*	Synchronize interest expense with end of period rate base	-	-	-	-	-	-	-	-	(3,366)	-	(3,366)

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DUKE ENERGY CAROLINAS, LLC
DETAIL OF ACCOUNTING ADJUSTMENTS-NORTH CAROLINA RETAIL
Docket No. E-7, Sub 1214 FOR THE TEST PERIOD ENDED DECEMBER 31, 2018
(Thousands of Dollars)

Line No.		Description	EPIS	Accum Deprec	Materials & Supplies	Working Capital	ADIT	Operating Reserves	CWIP	Rate Base	Oper Inc Rev Req Impact	R/B Rev Req Impact	Total Rev Req Impact
23	*	Adjust cash working capital for present revenue annualized and proposed revenue	-	-	-	(20,794)	-	-	-	(20,794)	134	(1,922)	(1,787)
24		Adjust coal inventory	-	-	3,848	-	-	-	-	3,848	-	356	356
25	*	Adjust for credit card fees	-	-	-	-	-	-	-	-	8,774	-	8,774
26		Adjust Depreciation for new rates	-	(72,913)	-	-	-	-	-	(72,913)	72,133	(6,738)	65,395
27		Adjust vegetation management expenses	-	-	-	-	-	-	-	-	7,739	-	7,739
28		Adjust reserve for end of life nuclear costs	-	-	-	-	-	-	-	-	(1,808)	-	(1,808)
29		Update deferred balance and amortize storm costs	-	-	-	169,251	(39,520)	-	-	129,730	24,179	11,989	36,168
30		Adjust Other Revenue	-	-	-	-	-	-	-	-	9,466	-	9,466
31		Adjust for change in NCUC regulatory fee-DEC	-	-	-	-	-	-	-	-	(500)	-	(500)
32	*	Adjust for Hydro Stations Sale	(36,522)	14,093	(146)	19,280	(4,502)	-	-	(7,797)	20	(721)	(700)
33													
34													
35		Total adjustments	$ 1,301,107	$ (673,602)	$ (38,652)	$ 436,337	$ (117,099)	$ -	$ -	$ 908,092	$ 322,201	$ 83,923	$ 406,124
			-	-	-	-	-	-	-	-			

Notes: * Identification required by NCUC Rule R1-17(b)

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DUKE ENERGY CAROLINAS, LLC
ORIGINAL COST RATE BASE-ELECTRIC OPERATIONS
Docket No. E-7, Sub 1214 DECEMBER 31, 2018
(Thousands of Dollars)

Line No.	Description	Page Reference	Total Company Per Books (Col. 1)	North Carolina Retail Operations: Per Books (Col. 2)	Accounting Adjustments (Col. 3)	As Adjusted (Col. 4)
1	Electric plant in service	4a	$ 41,057,320	$ 27,969,103	$ 1,301,107	$ 29,270,210
2	Less: Accumulated depreciation and amortization	4b	(15,830,487)	(10,810,668)	(673,602)	(11,484,270)
3	Net electric plant		25,226,833	17,158,435	627,506	17,785,940
4	Add: Materials and supplies	4c	994,443	678,077	(38,652)	639,426
5	Working capital investment	4d	(406,979)	(253,955)	436,337	182,381
6	Less: Accumulated deferred taxes		(3,824,449)	(2,601,854)	(117,099)	(2,718,952)
7	Operating reserves		(628,321)	(424,053)	-	(424,053)
8	Construction work in progress		-	-	-	-
9	Total		$ 21,361,527	$ 14,556,650	$ 908,092	$ 15,464,742

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DUKE ENERGY CAROLINAS, LLC
ELECTRIC PLANT IN SERVICE AT ORIGINAL COST
Docket No. E-7, Sub 1214 DECEMBER 31, 2018
(Thousands of Dollars)

Line No.	Description	Total Company Per Books (Col. 1)		North Carolina Retail Operations: Per Books (Col. 2)	Accounting Adjustments (b) (Col. 3)	As Adjusted (Col. 4)
1	Production Plant	$ 22,181,205		$ 14,978,527	$ 440,620	$ 15,419,147
2	Transmission Plant	4,052,747		2,179,775	160,056	2,339,831
3	Distribution Plant	12,085,804		8,938,158	550,071	9,488,229
4	General Plant	1,212,985		830,763	90,249	921,011
5	Intangible Plant	986,751		687,541	60,112	747,653
6	Subtotal	40,519,492	(a)	27,614,764	1,301,107	28,915,872
7	Nuclear Fuel (Net)	537,828		354,338	-	354,338
8	Total electric plant in service	$ 41,057,320		$ 27,969,103	$ 1,301,107	$ 29,270,210

Notes: (a) Excludes asset retirement obligations, electric plant held for future use, and electric plant acquisition adjustments totaling $642,372 thousand.
(b) Reflects certain plant in service additions/retirements through January 2020, and a reduction for solar electric plant recovered through the REPS rider.

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Page 4a

DUKE ENERGY CAROLINAS, LLC
ACCUMULATED DEPRECIATION AND AMORTIZATION - ELECTRIC PLANT IN SERVICE
Docket No. E-7, Sub 1214 DECEMBER 31, 2018
(Thousands of Dollars)

No.	Description	Total Company Per Books (Col. 1)	North Carolina Retail Operations Per Books (Col. 2)	Accounting Adjustments (b) (Col. 3)	As Adjusted (Col. 4)
1	Production Reserve	$ (8,604,490)	$ (5,795,067)	$ (457,776)	$ (6,252,844)
2	Transmission Reserve	(1,385,391)	(745,942)	(7,009)	(752,951)
3	Distribution Reserve	(4,816,028)	(3,561,642)	(111,855)	(3,673,497)
4	General Reserve	(414,681)	(285,334)	(45,259)	(330,594)
5	Intangible Reserve	(609,897)	(422,682)	(51,702)	(474,384)
6	Total	$ (15,830,487) (a)	$ (10,810,668)	$ (673,602)	$ (11,484,270)

7 The annual composite rates based on the new depreciation study for computing depreciation (straight-line method) are shown below:

8	Steam production plant	4.40%
9	Nuclear production plant	3.60%
10	Hydro production plant	2.00%
11	Other production plant	3.21%
12	Transmission plant	2.23%
13	Distribution plant	2.28%
14	General plant	Various
15	Intangible plant	20.00%

Notes: (a) Excludes accumulated amortization of electric plant acquisition adjustment and accumulated depreciation related to asset retirement obligations totaling ($107,345) thousand.
(b) Consists of adjustments to depreciation for year-end plant and certain plant additions/retirements through January 2020.

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DUKE ENERGY CAROLINAS, LLC
MATERIALS AND SUPPLIES
Docket No. E-7, Sub 1214 DECEMBER 31, 2018
(Thousands of Dollars)

Line No.	Description	Total Company Per Books (Col. 1)	North Carolina Retail Operations Per Books (Col. 2)	Accounting Adjustments (Col. 3)	As Adjusted (Col. 4)
	Fuel Stock:				
1	Coal	$ 175,291	$ 115,487	$ 3,848 (a)	$ 119,336
2	Gas	45,470	29,957	-	29,957
3	Total fuel stock	220,761	145,444	3,848	149,293
4	Other electric materials and supplies and stores clearing	773,682	532,633	(42,500)	490,133
5	Total Materials and Supplies	$ 994,443	$ 678,077	$ (38,652)	$ 639,426

Notes: (a) Adjusts coal inventory to reflect the targeted inventory level of 35 days at full load.

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Page 4c

DUKE ENERGY CAROLINAS, LLC
WORKING CAPITAL INVESTMENT
Docket No. E-7, Sub 1214 DECEMBER 31, 2018
(Thousands of Dollars)

Line No.	Description	Total Company Per Books (Col. 1)	North Carolina Retail Operations Per Books (Col. 2)	Accounting Adjustments (Col. 3)	As Adjusted (Col. 4)	Impact of Rev Incr (Col. 5)	With Rev Incr (Col. 6)
1	Required bank balance	$ 300	$ 204	$ -	$ 204		$ 204
	Investor advanced funds:						
2	Operating funds per lead-lag study	260,829	177,740 (a)	(20,794) (b)	156,946	47,878 (C)	204,825
3	Unamortized Debt	114,911	78,306	-	78,306	-	78,306
4	Pension Funding	580,803	394,363	-	394,363	-	394,363
5	Injuries and Damages	705,912	477,557	-	477,557	-	477,557
6	Regulatory Asset and Liability - Tax	(3,338,909)	(2,208,434)	-	(2,208,434)	-	(2,208,434)
7	Other	1,395,759	922,916	457,131	1,380,047	-	1,380,047
8	Total investor advanced funds	(280,695)	(157,552)	436,337	278,785	47,878	326,663
9	Less: customer deposits	(126,585)	(96,608)	-	(96,608)	-	(96,608)
10	Total working capital investment	$ (406,979)	$ (253,955)	$ 436,337	$ 182,381	$ 47,878	$ 230,260

Notes: (a) From Speros Exhibit 2, Line 19.
(b) Reflects a decrease in 'operating funds per lead-lag study' for the adjusted total requirements in this rate case.
(C) Reflects an increase in 'operating funds per lead-lag study' for the impact of the revenue increase.

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Duke Energy Carolinas, LLC
Docket No. E-7, Sub 1214
Summary of Proposed Revenue Adjustments
For the test period ended December 31, 2018

McManeus
Exhibit 2

Line No.	Description	NC Retail
1		
2	Revenue Requirement from Exhibit 1	$ 445,331
3	EDIT Rider	(154,573)
4	Total Requested Increase	$ 290,757

Total cost data - DEC utility-owned solar project

Project:	**Woodleaf**
Project size:	6 MWac
CPCN docket No.	E-7, Sub 1101
CPCN filing date:	March 3, 2016
NCUC Order date:	June 16, 2016
Original CPCN estimate:	
Total capital expenditure ($000s)	$ 16,585
Total annual levelized revenue requirement ($000s)	$ 1,460
Updated tax benefit monetization estimates:	
Total capital expenditure ($000s)	$ 16,585
Total annual levelized revenue requirement ($000s)	$ 1,553
Updated tax benefit monetization and capital expenditure estimates:	
Total capital expenditure ($000s)	$ 15,200
Total annual levelized revenue requirement ($000s)	$ 1,387

Levelized cost recovery summary

	Annual $/MWh	Annual Levelized Cost ($000s)
Total cost - original estimate	$94.49	$ 1,460
Avoided cost	$75.00	$ 1,159
Incremental cost	$ 19.49	$ 301
Total cost - updated tax benefit monetization estimates only (1)	$100.54	$ 1,553
Avoided cost	$75.00	$ 1,159
Incremental cost	$ 25.54	$ 394
Total cost - updated tax benefit monetization and capital expenditure estimates (2)	$89.76	$ 1,387
Avoided cost	$75.00	$ 1,159
Incremental cost	$ 14.76	$ 228

(1) Reflects original project cost estimates with updated assumptions regarding tax benefits per Commission's May 10, 2016 **Order Granting Certificate of Public Convenience and Necessity** ("Woodleaf Order") issued in Docket No. E-7, Sub 1101.

(2) DEC filed its **Final Cost Accounting Report** showing actual project cost incurred**,** as required by the Woodleaf Order, on June 20, 2019 in Docket No. E-7, Sub 1101. The total cost stated above reflects the actual cost incurred included in the **Final Cost Accounting Report**; current estimated remaining project cost; updated assumptions regarding tax benefits as required by the Woodleaf Order; federal income tax rate changes since the original revenue requirement calculation; and cost of capital components authorized by the Commission in its June 22, 2018 **Order Accepting Stipulation, Deciding Contested Issues, and Requiring Revenue Reduction** in Docket No. E-7, Sub 1146.

Duke Energy Carolinas, LLC
Docket No. E-7, Sub 1214 FOR THE TEST PERIOD ENDED December 31, 2018
NORTH CAROLINA RETAIL
McManeus Exhibit 4

<u>Excess Deferred Income Tax Rider Calculation</u>
(Dollars in thousands)

			Federal EDIT - Protected NC Retail	Federal EDIT - Unprotected, PP&E related NC Retail	Federal EDIT - Unprotected, non PP&E related NC Retail	NC EDIT NC Retail	Deferred Revenue NC Retail	Total NC Retail
			(A)	(B)	(C)	(D)	(E)	(F)
1	Regulatory Federal EDIT liability including gross up on the books as of 12/31/2018, based on 2017 tax returns	[1]	$ (1,224,087)	$ (783,045)	$ (166,964)	$ (34,339)		(2,208,434)
2	Adjustment to implement ASU 2018-02	[1]			$ (1,344)	$ -		(1,344)
3	Estimated transition of Protected to Unprotected Regulatory liability 1/1/2018-12/31/2018	[1]	$ 31,021		$ (31,021)	$ -		-
4	Regulatory Federal EDIT liability including gross up as of 12/31/2018, adjusted for the implementation of ASU 2018-02	[1]	$ (1,193,066)	$ (783,045)	$ (199,329)	$ (34,339)	$ -	(2,209,778)
5	Estimated transition of Protected to Unprotected Regulatory liability 1/1/2019-7/31/2020	[1]	$ 49,116		$ (49,116)	$ -		-
6	Deferred revenues related to 2017 Federal Tax Rate Change as of 12/31/2018	[1]					$ (112,661)	(112,661)
7	Other projected updates through 1/31/2020	[2]				$ (2)	$ (8,392)	(8,394)
8	Regulatory liability for federal tax change including gross up for NC Retail, for Year 1 rider calculation (Sum of L4 to L7)		$ (1,143,950)	$ (783,045)	$ (248,445)	$ (34,341)	$ (121,053)	(2,330,834)
9	Annual Amortization percentage		2.53%	5.00%	20.00%	20.00%	20.00%	6.48%
10	Liability for Annual amortization amount (Col A: L1 , Col B to E: L8)		(1,224,087)	(783,045)	(248,445)	(34,341)	(121,053)	(2,410,971)
11	Annual amortization amount (L9 x L10)	[3]	(31,021)	(39,152)	(49,689)	(6,868)	(24,211)	(150,941)
12	Years of rider amortization		39.46	20	5	5	5	15

[1] Excess deferred tax liability (EDIT) on the books as of 12/31/2018 by jurisdiction, and forecast transition to new rates effective date between categories based on Tax Dept. analysis of ADIT.
Federal EDIT related to the federal tax changes booked to the 0254036 and 0254038 accounts is included in other Working Capital in the per books cost of service.
NC EDIT related to the NC state tax reduction deferred to the 0254150 account not included for recovery in NC EDIT rider approved in prior DEC NC rate case.
This NC EDIT is included in other Working Capital in the per books cost of service study.
Revenues deferred for federal tax changes with accrued returns in the 0229010 account, are currently excluded from rate base in the per books cost of service study.

[2] Projected updates to the NC tax EDIT during 2019 by Tax Dept.
McManeus Exhibit 4, Page 3, Line 1 return accruals on deferred revenues in the 0229010 account projected through 1/31/2020.

[3] Annual amortization for Federal EDIT-Protected from Tax Dept., estimated based on ARAM method.

Duke Energy Carolinas, LLC
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NORTH CAROLINA RETAIL
McManeus Exhibit 4

Cost of Capital per McManeus Exhibit 1	Ratio	Rate	After Tax Weighted Average Cost of Capital (WACC)
Debt	47.00%	4.51%	1.62%
Equity	53.00%	10.30%	5.46%
			7.08%
Statutory Tax Rate			23.35%
Retention factor for NCUC Fee, Uncollectibles			99.62%

Annual Rider Calculation

		Amortization - From Page 1, L11												
Year	Beginning Balance, Page 1, L8	Federal EDIT - Protected	Federal EDIT - Unprotected, PP&E related	Federal EDIT - Unprotected, non PP&E related	NC EDIT	Deferred Revenue	Total Amortization	Ending Balance before Return	Average of Beginning and Ending Balance	EDIT Balance in Base Rates, Page 1, L1	Change in Regulatory Liability for Rider Return	Return for Rider	Rider Revenues	Rider Revenues incl. NCUC Fee, Uncollectibles
	(A)	(B)	(C)	(D)	(E)	(F)	(G) =(B)+(C)+(D)+[E]+[F]	(H) = (A) - (G)	(I) = ((A) + (H))/2	(J)	(K) = (I) - (J)	(L) = (K) x After Tax WACC	(M) = (G) + (L)	(N) = (M) / Retention Factor
Aug 1	(2,330,834)	(31,021)	(39,152)	(49,689)	(6,868)	(24,211)	(150,941)	(2,179,893)	($2,255,364)	(2,208,434)	($46,930)	($3,046)	(153,986)	(154,573)
Jul 2	(2,179,893)	(31,021)	(39,152)	(49,689)	(6,868)	(24,211)	(150,941)	(2,028,953)	($2,104,423)	(2,208,434)	$104,011	$7,364	(143,577)	(144,124) [1]
Jul 3	(2,028,953)	(31,021)	(39,152)	(49,689)	(6,868)	(24,211)	(150,941)	(1,878,012)	($1,953,482)	(2,208,434)	$254,952	$18,051	(132,890)	(133,397) [1]
Jul 4	(1,878,012)	(31,021)	(39,152)	(49,689)	(6,868)	(24,211)	(150,941)	(1,727,071)	($1,802,541)	(2,208,434)	$405,893	$28,737	(122,204)	(122,669) [1]
Jul 5	(1,727,071)	(31,021)	(39,152)	(49,689)	(6,868)	(24,211)	(150,941)	(1,576,130)	($1,651,601)	(2,208,434)	$556,833	$39,424	(111,517)	(111,942) [1]

[1] The rider amounts for years 2 through 5 are shown for illustrative purposes only. Actual rider amounts will be filed each year with updates discussed in my testimony by April 30th for Commission approval.

Duke Energy Carolinas, LLC
Docket No. E-7, Sub 1214 FOR THE TEST PERIOD ENDED December 31, 2018
NORTH CAROLINA RETAIL
McManeus Exhibit 4

	Deferred Revenue for Federal Tax Rate Change in account 0229010	NC Retail
1	Projected Changes in Deferred Revenue for Federal Tax Rate Change through Jan 2020	($8,392,119)