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August 5, 2020

VIA ELECTRONIC FILING

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

RE: Application of Duke Energy Progress, LLC for Adjustment of Rates and Charges Applicable to Electric Service in North Carolina, Request for an Accounting Order and to Consolidate Dockets
Docket No. E-2, Sub 1219

Dear Ms. Campbell:

Enclosed for filing in the above-referenced docket on behalf of Duke Energy Progress, LLC ("DEP or the "Company") are the joint testimony and exhibits of Jay W. Oliver and Kim H. Smith. The joint testimony and exhibits are being filed in response to the Grid Improvement Plan portion of the Commission's July 23, 2020 *Order Requiring Duke Energy Carolinas, LLC, and Duke Energy Progress, LLC, to File Additional Testimony on Grid Improvement Plans and Coal Combustion Residual Costs*.

If you have any questions, please let me know.

Sincerely,

Camal O. Robinson

Enclosures

cc: Parties of Record

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-2, SUB 1219

In the Matter of:		
Application of Duke Energy Progress, LLC for Adjustments of Rates and Charges Applicable to Electric Service in North Carolina	))))))	**JOINT TESTIMONY OF JAY W. OLIVER AND KIM H. SMITH IN COMPLIANCE WITH COMMISSION ORDER REQUESTING GIP INFORMATION**

I. INTRODUCTION AND PURPOSE

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

A. My name is Jay W. Oliver, and my business address is 400 South Tryon Street, Charlotte, North Carolina 28202. I am employed by Duke Energy Business Services, LLC ("DEBS") as General Manager, Grid Strategy and Asset Management Governance for Duke Energy Corporation ("Duke Energy"), the parent holding company for Duke Energy Progress, LLC ("DE Progress" or the "Company").

Q. HAVE YOU PREVIOUSLY FILED TESTIMONY IN THIS DOCKET?

A. Yes. I filed direct testimony and exhibits on October 30, 2019. I also filed rebuttal testimony and exhibits on May 4, 2020.

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

A. My name is Kim H. Smith, and my business address is 550 South Tryon Street, Charlotte, North Carolina 28202. I am a Director of Rates & Regulatory Planning, employed by Duke Energy Carolinas, LLC, testifying on behalf of DE Progress.

Q. HAVE YOU PREVIOUSLY FILED TESTIMONY IN THIS DOCKET?

A. Yes. I filed direct testimony and exhibits on October 30, 2019. I also filed supplemental direct testimony and exhibits on March 13, 2020, rebuttal testimony and exhibits on May 4, 2020, settlement testimony and exhibits on June 2, 2020, second supplemental direct testimony and exhibits on July 2, 2020 and corrections to the second supplemental direct testimony and exhibits on July 9, 2020, and second settlement testimony and exhibits on July 31, 2020.

Q. WHAT IS THE PURPOSE OF YOUR JOINT TESTIMONY?

A. The purpose of our joint testimony is to respond to the Grid Improvement Plan ("GIP") portion of the Commission's July 23, 2020 *Order Requiring Duke Energy Carolinas, LLC, and Duke Energy Progress, LLC, to File Additional Testimony on Grid Improvement Plans and Coal Combustion Residual Costs* ("Order") in Docket Nos. E-7, Sub 1214 and E-2, Sub 1219. That Order, in relevant part, directs DE Progress to file certain supplemental economic analyses regarding DE Progress's proposed Grid Improvement Plan ("GIP") programs assuming, alternatively, that deferral of GIP costs is granted in one instance and denied in another. Our testimony and exhibits address this requirement and the revenue requirements computations requested by the Commission.

We also provide GIP analysis reflecting the Second Settlement and Partial Stipulation the Company entered into with the Public Staff and filed with the Commission on July 31, 2020 ("Second Partial Settlement"). The Second Partial Settlement is relevant since it includes a provision for the Company to withdraw its request for deferral accounting for certain GIP programs. Our analysis under this scenario thus shows the impact of the deferral of a smaller subset of GIP programs.

Q. PLEASE BRIEFLY DESCRIBE THE COMMISSION'S REQUEST FOR INFORMATION RELATED TO THE GRID IMPROVEMENT PLAN.

A. In its Order, the Commission requested an estimate of the North Carolina annual revenue requirement impact of the Company's GIP expenditures under two scenarios: one assuming the Company's request for an accounting deferral is granted and another assuming the Company's request for an accounting deferral is denied. The Commission also requested information on customer rate impacts under the two scenarios. The Commission provided instruction regarding a number of assumptions that are necessary to produce the requested information. Details requested include "the full impacts of the 2020-2022 GIP spending, as well as incremental operating and maintenance (O&M) costs associated with that GIP spending." Finally, the Commission ordered that the information should be "provided in spreadsheet form, with formulas intact, showing each major line item and explaining how it was calculated for each impacted year (2023, 2024, 2025, etc.), going out ten years."

II. DESCRIPTION OF SCENARIOS

Q. WITNESS OLIVER, HAS THE COMPANY PREPARED THE ANALYSES UNDER THE TWO SCENARIOS REQUESTED BY THE COMMISSION?

A. Yes. The Company has performed the analyses to the best of its ability with the information it has readily available.

Q. PLEASE EXPLAIN WHAT YOU MEAN BY "TO THE BEST OF ITS ABILITY."

A. As previously summarized, the Commission asked the Company for a rate impact analysis under two scenarios. The first is if the requested deferral of GIP costs is granted by the Commission and DE Progress files a rate case in 2023. The Commission's Order also provides various other necessary assumptions to perform that calculation. The results of the calculation of this "Deferral Granted" scenario are reflected later in this joint testimony. In addition, as further explained by witness Smith, the Company has prepared another version of the "Deferral Granted" analysis to reflect DE Progress's Second Partial Settlement with the Public Staff.

The second analysis involves a "Deferral Denied" scenario and asks the Company to perform a similar rate impact analysis based upon any adjustment to the pace of GIP investment the Company might make based upon a denial of deferral treatment for GIP program costs. This scenario is problematic for the

Company because it would involve projecting the impacts of budget and capital management decisions that have not been made at this time and which would (and will) be influenced by a large number of factors that are not currently known.

Like any large business, Duke Energy and its subsidiary utilities go through a very involved, protracted, and iterative budgeting process on an annual basis to determine projected capital spending for the following year. This process involves the evaluation of many factors, including operational needs, customer requirements, projected revenues, projected costs, required capital expenses, cash-flows, accessibility to the debt and equity capital markets, the management of short-term and long-term borrowings and stock offerings, and maintenance of a desirable capital structure and debt ratings to name just a few. A major example of a variable that will significantly impact the Company's annual budget moving forward is the outcome of this rate case on DE Progress's financial stability and credit metrics, as explained in Company witnesses Young, Newlin and De May's testimony.

Q. HOW DOES THIS IMPACT THE COMPANY'S ABILITY TO CONDUCT THE ECONOMIC ANALYSES REQUESTED BY THE COMMISSION IN ITS ORDER FOR A "DEFERRAL DENIED" SCENARIO?

A. In multiple ways. For example, the Company has not performed a budget analysis for the "Deferral Denied" scenario requested by the Commission so it cannot predict with any degree of certainty how much it would scale back GIP spending if deferred asset treatment is denied in the pending rate case. Those decisions will ultimately be made by management on an annual basis following the normal budgeting process by the Company. Nevertheless, I can say that the Company will likely delay significant portions of its intended GIP spending if all or a portion of accounting deferral treatment is denied. Without a reasonable means of mitigating the negative impacts of regulatory lag associated with significant ongoing and incremental spending under the GIP, the Company would be required to reassess its ability to commit to the planned level of investment in this program given that the level of investment anticipated under the plan simply cannot be reasonably sustained in the absence of mitigation measures such as the deferral requested herein. As such, if the Commission determines not to grant the accounting deferral treatment for all or a portion of the Company's GIP investment sought in this proceeding, the Company will likely be in a scenario where its level of GIP investment will vary significantly from year to year as it prioritizes and reprioritizes work to meet its capital plan. In such a situation, the Company would have to perform smaller pieces of the GIP over a much longer timeframe with its existing revenues, which would delay important benefits for customers.

Simply put, to perform the work identified in the GIP at the pace and scope that provides the most benefit for customers, the Company needs new and modern ways to recover costs and avoid the regulatory lag that can harm the Company's financial metrics which, in turn, can harm customers. While critical to the modernization of the grid, without deferral (or some other alternative ratemaking treatment), the Company's GIP investments would need to compete annually for the same capital as base work, much of which is mandatory (*e.g.*, replacing failed equipment, providing service to new customers, or to meet a regulatory requirement). Because capital funding is dependent on multiple variables, some of which have been previously mentioned, the Company's ability to forecast future GIP investments without a deferral is limited.

Q. ARE THERE OTHER FACTORS THAT MAKE THE "DEFERRAL DENIED" RATE IMPACT ANALYSIS IMPOSSIBLE TO PROVIDE AT THIS POINT IN TIME?

A. Yes. For the reasons described in witnesses Young, Newlin and De May's rebuttal testimony, the Company cannot know what its revenues for the requested period will be because the determination of what those revenues will be for future periods is largely tied up in this case and will also be impacted by the economic environment, which is further exacerbated by the ongoing COVID-19 pandemic. Even a cursory examination of the differences in position of the Company and intervenors reveals a difference in proposed possible outcomes that varies by hundreds of millions of dollars. Without having a reasonable approximation of what our revenues will be for the designated period, it is literally impossible to calculate prospective cash-flows or available capital for investment in GIP programs. A similar situation persists with our costs for the designated period. The Company cannot be confident in its costs for 2021 or 2022 at this point in time and does not have enough contextual information (and will not have that information for some time) to project what funds will be available to support GIP investment in the last two years of the period specified.

Q. ARE YOU TELLING THE COMMISSION THAT YOU CANNOT PROVIDE THE SECOND "DEFERRAL DENIED" ECONOMIC ANALYSES THEY REQUESTED?

A. No. What I am saying is that we do not have the information necessary to provide the requested "Deferral Denied" analysis exactly as it would play out in reality because there are too many unknown variables. What we can and have provided, however, is a hypothetical analysis showing comparative rate impacts of the "Deferral Denied" scenario based upon an assumption that DE Progress would reduce its original projected GIP spending by a factor of 80 percent. In order to avoid overly complicated calculations, in a short period of time, that result from trying to adjust the hypothetical to the status of the pending case, our hypothetical assumes GIP spending reduced by 80 percent for a period of three years at the end of which DE Progress files a rate case. The Company selected 80 percent to represent the myriad of aforementioned variables impacting decisions to invest in GIP expenditures on an annual basis. This hypothetical corresponds to the timing involved in the "Deferral Granted" analysis.

Q. WHAT ASSUMPTIONS ARE BUILT INTO THE HYPOTHETICAL "DEFERRAL DENIED" SCENARIO?

A. The assumptions we used in conducting this analysis are explained later in this joint testimony and in the exhibits attached hereto.

Q. DO THESE ASSUMPTIONS REFLECT REALITY?

A. Probably not. For example, the rate impact analysis for the "Deferral Denied" scenario is based on a 10.3% return on common equity ("ROE") and a 53% equity to 47% debt ratio, as originally proposed in our Application, and as directed by the Commission. However, given the Company's settlements with several parties in this case, including the Public Staff, on issues including ROE and cap structure, the Company expects the final, authorized ROE by this Commission to be lower than 10.3%. Furthermore, there are simply too many factors that are unknown to the Company at this time that are likely to vary from our assumptions in the "Deferral Denied" analysis. For example, the Company has no definite plans to file a rate case in 2023. The Company may file before or after that timeframe, or both. So while the Company has conducted a "Deferral Denied" analyses for purposes of the Commission's Order, it is purely hypothetical in nature.

Q. DO YOU HAVE ANY OTHER THOUGHTS ABOUT THE HYPOTHETICAL ANALYSIS PROVIDED BY WITNESS SMITH?

A. Yes. The analyses presented by witness Smith represent a good faith attempt by the Company to provide comparative information that may be useful to the Commission in its evaluation of our GIP proposals, but I want to emphasize that a probative analysis would require a large and diverse set of assumptions about virtually every aspect of DE Progress's economic performance over the next several years. Accordingly, given so many economic uncertainties, we maintain that this analysis likely does not reflect decisions the Company will actually make during the period 2020-2023.

Q. IF DE PROGRESS DOES FILE A RATE CASE IN 2023, WOULD YOU EXPECT THE RESULTS OF THE "DEFERRAL DENIED" ANALYSIS TO REFLECT WHAT ACTUALLY HAPPENED BETWEEN NOW AND THAT RATE CASE?

A. No. Again, the Company cannot currently know what factors will influence its capital budgeting and investment practices over the next three years. And given that its hypothetical is just that, it is not reasonable or rational to believe it will be reflective of reality during the next three years. Most importantly, it is not designed to serve that function. We developed it solely to try to provide, as best we could, a basis for comparing the first scenario, where deferred accounting treatment is allowed, to a situation where deferral accounting was denied for GIP spending in accordance with the Commission's Order.

III. THE COMPANY'S ANALYSES

Q. MS. SMITH, CAN YOU PLEASE DESCRIBE THE EXHIBITS TO THE JOINT TESTIMONY?

A. We provide an exhibit for each scenario requested by the Commission: GIP Exhibit 1 – Deferral Granted and GIP Exhibit 2 – Deferral Denied. These exhibits are based on the Company's original request for deferral of GIP related costs pursuant to DE Progress's Application in this docket.

We have also provided additional analyses showing what the first scenario (Deferral Granted) would look like if the Commission were to approve the Second Partial Settlement: GIP Exhibit 3 – Deferral Granted (Settlement). This exhibit reflects the terms of the Second Partial Settlement, in which the Company has agreed to withdraw its request for deferral of costs related to certain GIP programs, resulting in a deferral request that is more limited than originally proposed.

Q. HOW ARE THE EXHIBITS ORGANIZED?

A. Each exhibit contains five pages, which show the results of the spreadsheet calculations performed to comply with the Commission Order. Each exhibit contains the following items:

Page 1 – Rate impacts by customer class

Page 2 – Income statement and rate base amounts – 10 years

Page 3 – Revenue requirements – 10 years

Page 4 – Assumptions

Page 5 – Summary of deferred amounts

The Excel spreadsheets provided, with formulas intact, include detail workpapers that support the filed exhibits.

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

A. Yes.

A. Deferral Request is Granted

Q. PLEASE DESCRIBE THE GENERAL APPROACH TO COMPUTING THE MONTHLY REVENUE REQUIREMENTS IF GRANTED DEFERRAL OF GIP COSTS.

A. The Company started with the estimated GIP program expenditures for years 2020, 2021, and 2022. The Company estimated when amounts spent would result in completed electric plant-in-service, *i.e.*, the length of the construction period. Monthly revenue requirements were computed for completed plant in service amounts, beginning the first month that the plant is in service. Revenue requirements include depreciation, return on net plant investment, installation O&M, and property taxes. The monthly revenue requirements were computed for electric plant in service added from January 2020 through December 2022. It was assumed that each month's revenue requirement was deferred as a regulatory asset, and a monthly return (*i.e.*, carrying cost) was accrued on the deferred asset balance.

Next, rate case timing was considered. As instructed by the Commission, we were to assume that a rate case would occur in 2023. Accordingly, we assumed that the test period would be calendar year 2022, and new rates would be effective January 1, 2024. During the period January through December 2023, before new rates would become effective, the Company assumed it would continue to defer the monthly revenue requirements on the completed plant in service as of December 31, 2022.

As a result, giving consideration to rate case timing, the deferred GIP amounts reflect the monthly revenue requirements for the period January 2020 through December 2023, for completed GIP plant in service as of December 31, 2022.

Q. PLEASE DESCRIBE HOW YOU DETERMINED THE RECOVERY OF THE DEFERRED AMOUNTS IN A GENERAL RATE CASE.

A. In an assumed 2023 general rate case, the Company would seek recovery of the balance of deferred costs, amortized over a period of time proposed by the Company. This deferred balance represents the revenue requirement amount associated with the GIP investments during the period January 1, 2020 through December 31, 2023, that has not yet been reflected in rates, and therefore funded by investors.

To comply with the Commission's request, the Company must assume an amortization period. In a traditional general rate case, the selection of an amortization period would be determined based on a number of factors. For purposes of providing the information requested by the Commission, the Company has assumed an amortization period of five years. A longer amortization period would produce a lower annual rate impact of the deferral and a short amortization period would result in a higher annual rate impact.

In addition, in the general rate case, the ongoing revenue requirements associated with the GIP investments would be incorporated into future rates, since the test period operating expenses and rate base would include the GIP investments in service at the end of test period. The calculations assume that at the end of the five-year amortization period, base rates are reset to remove the recovery of the deferred GIP costs, and the on-going revenue requirements remain in base rates.

Q. WHAT ASSUMPTIONS DID YOU USE FOR ROE, CAPITAL STRUCTURE, AND COST ALLOCATION?

A. For purposes of calculating revenue requirements under the two scenarios, the Commission asks the Company to "use the return on common equity, capital structure, and cost allocation methodology that each Company has advocated in the present rate case dockets." The Company interprets the Commission's request to mean that it should use the positions on these items as advocated in its Application. In order to simplify the analyses, we are using the ROE, capital structure, and cost allocations included in the Company's Application as a proxy for all periods included in the analyses. The ROE, capital structure, and cost allocations that will be approved in this case are not the same as the ROE, capital structure, and cost allocations currently approved nor are they necessarily going to be the same as the ROE, capital structure, and cost allocation methodology approved in a future rate case.

B. Deferral Request is Denied

Q. PLEASE DESCRIBE THE GENERAL APPROACH TO COMPUTING THE MONTHLY REVENUE REQUIREMENTS IF DENIED DEFERRAL OF GIP COSTS.

A. The calculations prepared by DE Progress in response to the scenario in which the Company's request for deferral accounting is denied are identical to the calculations for the scenario in which a deferral is granted except estimated GIP expenditures are reduced and no deferral is assumed. Under the denial scenario, the original GIP expenditures are reduced by 80%. This assumption is explained above by witness Oliver.

The exhibits presented are the same as for the "Deferral Granted" scenario. A separate Excel file with the exhibits and workpapers is provided.

C. Deferral is Granted and Second Partial Settlement is Approved

Q. PLEASE DESCRIBE THE ADDITIONAL SCENARIO PROVIDED BASED ON THE SECOND PARTIAL SETTLEMENT.

A. Subsequent to the Commission's Order in this docket requesting these calculations, the Company and the Public Staff filed their Second Partial Settlement with the Commission, in which the Company agreed to withdraw its request for an accounting deferral for certain GIP programs, but retain its deferral request for specific programs for which deferral is supported by the Public Staff and other intervenors. As a result, the Company is providing an additional scenario assuming deferral of the costs for only those programs for which the Company request an accounting deferral under the terms of the Second Partial Settlement. This scenario includes deferral of GIP costs related to completed plant in service beginning June 2020. Amounts related to GIP completed plant in service for January through May 2020 are incorporated in the Company's proposed revenue increase in this docket.

Q. ARE THE CALCULATIONS PREPARED UNDER THE SETTLEMENT SCENARIO THE SAME AS FOR THE SCENARIOS REQUESTED BY THE COMMISSION?

A. The data provided and the underlying computations are the same, but the amount of GIP expenditures subject to deferral is reduced from the Company's "Deferral Granted" scenario based on the terms of the Second Partial Settlement. In addition, this exhibit also reflects the 9.6% ROE and 52% equity and 48% debt capital structure included in the Second Partial Settlement. For purposes of this exhibit, we are using the settled ROE and capital structure as a proxy for all periods included in the analyses. The ROE and capital structure that will be approved in this rate case are not the same as the ROE and capital structure currently approved nor are they necessarily going to be the same as the ROE and capital structure approved in a future rate case.

Q. DO YOU HAVE ANY OTHER COMMENTS ON THE SCENARIOS?

A. Yes. These scenarios contain several assumptions and should not be interpreted as a guarantee of what future rate impacts will be under any of the scenarios. For example, in allocating the costs to the customer classes, an allocator was developed based on the test year distribution plant in this rate case, using the allocation methodologies proposed in this rate case. When the next rate case is filed, distribution investments in the new test period may vary from the allocations used in these scenarios. In addition, as discussed previously, assumptions were made around rate case timing, cost of capital, and in-service dates of capital spend. Any changes in these factors, or changes in other factors (tax rates, other rate changes, etc.), will impact the ultimate rates for customers.

IV. CONCLUSION

Q. DOES THIS CONCLUDE YOUR JOINT TESTIMONY?

A. Yes.

For Illustrative purposes only.

Dollars in thousands

	2018 Present Revenue Annualized	Years 1-5 Annual Revenue Requirement	Years 1-5 % Increase in Avg. Bill	Years 6-10 Annual Revenue Requirement	Years 6-10 % Decrease in Avg Bill from Year 5
Residential	1,879,740	116,711	6.2%	71,546	-2.3%
Small General Service	238,187	14,085	5.9%	8,635	-2.2%
Medium General Service	959,944	24,211	2.5%	14,933	-0.9%
Large General Service	575,133	9,166	1.6%	5,681	-0.6%
Seasonal & Intermittent	5,859	422	7.2%	258	-2.6%
Traffic Signal Service	563	35	6.2%	21	-2.3%
Outdoor lighting	92,941	4,062	4.4%	2,483	-1.6%
Total	3,752,367	168,692	4.5%	103,558	-1.7%

Rates assume the deferral is amortized over 5 years and removed deferral from revenue beginning in year 6.

Dollars in thousands

Total NC Retail

Line				New Rates Effective					New Rates Effective			
No.	Description	Reference	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
1												
2												
3	Electric operating revenue	Revenue Requirement		168,692	168,692	168,692	168,692	168,692	103,558	103,558	103,558	103,558
4												
5	Electric operating expenses:											
6	Operation and maintenance											
7	Fuel used in electric generation											
8	Regulatory Fee	(Revenue * Reg Fee rate)		219	219	219	219	219	134	134	134	134
9	Uncollectibles	(Revenue * Uncollectible rate)		404	404	404	404	404	248	248	248	248
10	Depreciation and amortization	Revenue Requirement	31,625	31,625	31,625	31,625	31,625	31,625	31,625	31,625	31,625	31,625
11	Amortization of Deferral	Revenue Requirement		64,894	64,894	64,894	64,894	64,894				
12	Deferral	Deferral until new rates	(31,628)									
13	General taxes	Revenue Requirement	3	3	3	3	3	3	3	3	3	3
14	Interest on customer deposits		-	-	-	-	-	-	-	-	-	-
15	Income taxes	Calculated	-	16,577	16,577	16,577	16,577	16,577	16,577	16,577	16,577	16,577
16	Amortization of investment tax credit		-	-	-	-	-	-	-	-	-	-
17												
18	Total electric operating expenses	Sum L8 through L15	0	113,722	113,722	113,722	113,722	113,722	48,588	48,588	48,588	48,588
19												
20	Operating income	L3- L18	$ (0)	54,970	54,970	54,970	54,970	54,970	54,970	54,970	54,970	54,970
21												
22	Notes:											
23	Revenue: positive number increases revenue / negative number decreases revenue											
24	Expense: positive number increases expense / negative number decreases expense											
25												
26												
27	**Rate Base Line Items**											
28												
29	Electric plant in service		$ 824,932	$ 824,932	$ 824,932	$ 824,932	$ 824,932	$ 824,932	$ 824,932	$ 824,932	$ 824,932	$ 824,932
30	Accumulated depreciation and amortization		(66,668)	(98,293)	(129,919)	(161,544)	(193,170)	(224,795)	(256,421)	(288,046)	(319,672)	(351,297)
31	Electric plant in service, net	Sum L29 through L30	758,264	726,638	695,013	663,387	631,762	600,136	568,511	536,885	505,260	473,634
32												

Revenue Requirement
For the test period ended December 31, 2022 - Plant Update Period through December 2022, New Rates January 2024

Revenue Requirement ($ in thousands)

		NC Retail		
		Asset Balance	Accumulated Depreciation	Net
1	**Plant**	as of 12/31/2022	As of 12/31/2022	Plant
2	Distribution	531,319	(14,670)	516,649
3	Transmission	157,167	(3,766)	153,401
4	General Plant	136,446	(16,606)	119,839
5	Total	824,932	(35,042)	789,889
6				
7	WACC - Pre Tax	9.09%		
8	Capital Revenue Requirement (Net Plant * WACC)			
9	Distribution	46,971		
10	Transmission	13,946		
11	General Plant	10,895		
12	Total	71,812		
13				
14	**Impact to Income Statement Line Items**			
15	Depreciation and amortization:	Years 1-5	Years 6-10	
16	Distribution depreciation expense	$ 12,433	$ 12,433	
17	Transmission depreciation expense	3,505	3,505	
18	General Plant depreciation expense	15,688	15,688	
19	Impact to deprec. and amortization (Sum L16 through L18)	$ 31,625	$ 31,625	
20				
21	Amortization of 2022 deferral:			
22	Distribution depreciation expense	$ 37,759		
23	Transmission depreciation expense	10,259		
24	General Plant depreciation expense	16,876		
25	Impact to deprec. and amortization (Sum L22 through L24)	64,894		
26				
27	General taxes:			
28	Property tax rate	0.36%		
29				
30	Property tax (December 2022 Plant Balance * Property tax rate)			
31	Distribution property tax expense	$ 2	$ 2	
32	Transmission property tax expense	1	1	
33	General Plant property tax expense	0	0	
34	Impact to general taxes (Sum L70 through L74)	$ 3	$ 3	
35				
36	Total Operating Expenses (Depreciation + Amortization + Property Taxes)			
37	Distribution	$ 50,193	$ 12,435	
38	Transmission	13,765	3,505	
39	General Plant	32,564	15,688	
40	Total income taxes	$ 96,522	$ 31,628	
41				
42	Taxes	23.17%	23.17%	
43	Distribution	$ (11,629)	$ (2,881)	
44	Transmission	(3,189)	(812)	
45	General Plant	(7,545)	(3,635)	
46	Total income statement impact	$ (22,364)	$ (7,328)	
47				
48	Income Statement Impact (Operating expenses + Taxes)			
49	Distribution	$ 38,564	$ 9,554	
50	Transmission	10,576	2,693	
51	General Plant	25,019	12,053	
52	Total income statement Requirement	$ 74,159	$ 24,300	
53				
54	Retention Factor	76.55%	76.55%	
55				
56	Total Revenue Requirement (Capital Revenue Requirement + Income Statement impact/ Retention factor)			
57	Distribution	$ 97,350	$ 59,452	
58	Transmission	27,762	17,465	
59	General Plant	43,580	26,642	
60	Total Revenue Requirement	$ 168,692	$ 103,558	
61				

<u>Grid Deferral Assumptions</u>

CWIP spend is spent evenly throughout the year

Timing of assets going in service
Distribution - Assumed 1 month delay from time of CWIP spend to asset placed in service.
Transmission - Assumed 6 month delay from time of CWIP spend to asset placed in service.
Communications - Assumed 3 month delay from time of CWIP spend to asset placed in service.
Advance DMS and Enterprise applications - assumed CWIP spend placed in service annually in December.

Depreciation rates
Distribution - applied a total distribution depreciation rate excluding meters.
Transmission - applied a total transmission rate
Communication - applied a total communications depreciation rate
Advanced DMS - assumed a 10 year asset life
Enterprise application - assumed a 5 year life

Returns
Assumed the weighted average cost of capital as reflected in the company's application.

O&M
Reflected estimated installation O&M expenses.
Assumed no incremental on going O&M expenses.
Assumed new depreciation rates effective 9/1/2020.

Property Taxes
Property taxes begin the next calendar year after the asset is placed in service.

Deferral
Assumed deferral begins 1/1/2020, and with assets placed in service beginning 3/1/2020.
Assumed plant additions stopped being eligible for deferral 1/1/2023.
Deferral of return, depreciation, property tax continued until 12/31/2023 on electric plant in service balances as of 12/31/2022.

Deferral recovery
Assumed a 5 year levelized amortization of the deferral.

Revenue Requirement
Assumes the test period was twelve months ended December 2022.
Assumed there was no additional update period after the test period.
Assumed rates were effective 1/1/2024.
Assumed rates were adjusted after the 5 year amortization of the deferral expired

Rate impacts
Allocations are based on 2018 cost of service study as presented in the current rate case.
For modeling purposes, forecasted distribution costs were allocated using a composite distribution plant allocator, excluding extra facilities and FERC accounts 370, 371 and 373.
In actuals, distribution costs will be allocated more specifically based on the individual FERC accounts they are booked to.
Does not include any savings that might be realized in the base rate cases as a result of the investments.
Percent increases shown based on present revenues annualized with riders as presented in current case

NORTH CAROLINA RETAIL GRID IMPROVEMENT PLAN
SUMMARY OF DEFERRAL

DEP NC Grid Work Plan

Dollars in thousands (000s)	2020	2021	2022	2023
System CWIP Spend	275,836	408,479	507,192	
NC Retail CWIP Spend	208,643	302,061	394,784	
Cumulative In Service (Beg Mar 2020)	164,236	447,623	824,932	
Accum Depr	(1,712)	(12,451)	(35,042)	
Total Rate Base	162,523	435,173	789,889	
O&M (Beg Jan 2020)	4,729	7,207	9,880	
Depreciation (Beg Mar 2020)	1,712	10,738	22,592	31,625
Property Tax	-	596	1,623	2,991
Debt Return - Capital Asset	1,180	5,626	11,727	15,115
Debt Return - Deferred Balance	56	477	1,523	3,200
Equity Return - Capital Asset	4,293	20,473	42,674	55,000
Equity Return - Deferred Balance	204	1,737	5,540	11,644
Annual Deferral	12,174	46,854	95,559	119,576
Cumulative Deferral Balance	12,174	59,028	154,587	274,163

For Illustrative purposes only.

Dollars in thousands

		Years 1-10	
	2018 Present Revenue Annualized	Annual Revenue Requirement	% Increase in Avg. Bill
Residential	1,879,740	14,588	0.8%
Small General Service	238,187	1,761	0.7%
Medium General Service	959,944	3,103	0.3%
Large General Service	575,133	1,198	0.2%
Seasonal & Intermittent	5,859	52	0.9%
Traffic Signal Service	563	4	0.8%
Outdoor lighting	92,941	512	0.6%
Total	3,752,367	21,219	0.6%

Duke Energy Progress
Docket No. E-2, Sub 1219
10 Year Impact
Dollars in thousands

Total NC Retail

Line No.	Description	Reference	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
				New Rates Effective					New Rates			
1												
2												
3	Electric operating revenue	Revenue Requirement		21,219	21,219	21,219	21,219	21,219	21,219	21,219	21,219	21,219
4												
5	Electric operating expenses:											
6	Operation and maintenance											
7	Fuel used in electric generation											
8	Regulatory Fee	(Revenue * Reg Fee rate)		28	28	28	28	28	28	28	28	28
9	Uncollectibles	(Revenue * Uncollectible rate)		51	51	51	51	51	51	51	51	51
10	Depreciation and amortization	Revenue Requirement	6,501	6,501	6,501	6,501	6,501	6,501	6,501	6,501	6,501	6,501
11	Amortization of Deferral	Revenue Requirement		-	-	-	-	-				
12	Deferral	Deferral until new rates										
13	General taxes	Revenue Requirement	1	1	1	1	1	1	1	1	1	1
14	Interest on customer deposits		-	-	-	-	-	-	-	-	-	-
15	Income taxes	Calculated	(1,506)	3,392	3,392	3,392	3,392	3,392	3,392	3,392	3,392	3,392
16	Amortization of investment tax credit		-	-	-	-	-	-	-	-	-	-
17												
18	Total electric operating expenses	Sum L8 through L15	4,995	9,972	9,972	9,972	9,972	9,972	9,972	9,972	9,972	9,972
19												
20	Operating income	L3 - L18	$ (4,995)	11,247	11,247	11,247	11,247	11,247	11,247	11,247	11,247	11,247
21												
22	Notes:											
23	Revenue: positive number increases revenue / negative number decreases revenue											
24	Expense: positive number increases expense / negative number decreases expense											
25												
26												
27	**Rate Base Line Items**											
28												
29	Electric plant in service		$ 169,071	$ 169,071	$ 169,071	$ 169,071	$ 169,071	$ 169,071	$ 169,071	$ 169,071	$ 169,071	$ 169,071
30	Accumulated depreciation and amortization		(13,960)	(20,461)	(26,962)	(33,464)	(39,965)	(46,466)	(52,967)	(59,468)	(65,970)	(72,471)
31	Electric plant in service, net	Sum L29 through L30	155,111	148,609	142,108	135,607	129,106	122,605	116,103	109,602	103,101	96,600
32												

Revenue Requirement

For the test period ended December 31, 2022 - Plant Update Period through December 2022, New Rates January 2024

Revenue Requirement ($ in thousands)

Line		NC Retail		
		Asset Balance	Accumulated Depreciation	Net
1	**Plant**	as of 12/31/2022	As of 12/31/2022	Plant
2	Distribution	106,264	(2,934)	103,330
3	Transmission	34,423	(925)	33,498
4	General Plant	28,383	(3,599)	24,784
5	Total	169,071	(7,459)	161,612
6				
7	WACC - Pre Tax	9.09%		
8	Capital Revenue Requirement (Net Plant * WACC)			
9	Distribution	9,394		
10	Transmission	3,045		
11	General Plant	2,253		
12	Total	14,693		
13				
14	**Impact to Income Statement Line Items**			
15	Depreciation and amortization:	Years 1-5	Years 6-10	
16	Distribution depreciation expense	$ 2,487	$ 2,487	
17	Transmission depreciation expense	768	768	
18	General Plant depreciation expense	3,247	3,247	
19	Impact to deprec. and amortization (Sum L16 through L18)	$ 6,501	$ 6,501	
20				
21	Amortization of 2022 deferral:			
22	Distribution depreciation expense			
23	Transmission depreciation expense			
24	General Plant depreciation expense			
25	Impact to deprec. and amortization (Sum L22 through L24)	-		
26				
27	General taxes:			
28	Property tax rate	0.36%		
29				
30	Property tax (December 2022 Plant Balance * Property tax rate)			
31	Distribution property tax expense	$ 0	$ 0	
32	Transmission property tax expense	0	0	
33	General Plant property tax expense	0	0	
34	Impact to general taxes (Sum L70 through L74)	$ 1	$ 1	
35				
36	Total Operating Expenses (Depreciation + Amortization + Property Taxes)			
37	Distribution	$ 2,487	$ 2,487	
38	Transmission	768	768	
39	General Plant	3,247	3,247	
40	Total income taxes	$ 6,502	$ 6,502	
41				
42	Taxes	23.17%	23.17%	
43	Distribution	$ (576)	$ (576)	
44	Transmission	(178)	(178)	
45	General Plant	(752)	(752)	
46	Total income statement impact	$ (1,506)	$ (1,506)	
47				
48	Income Statement Impact (Operating expenses + Taxes)			
49	Distribution	$ 1,911	$ 1,911	
50	Transmission	590	590	
51	General Plant	2,495	2,495	
52	Total income statement Requirement	$ 4,995	$ 4,995	
53				
54	Retention Factor	76.55%	76.55%	
55				
56	Total Revenue Requirement (Capital Revenue Requirement + Income Statement impact/ Retention factor)			
57	Distribution	$ 11,890	$ 11,890	
58	Transmission	3,816	3,816	
59	General Plant	5,512	5,512	
60	Total Revenue Requirement	$ 21,219	$ 21,219	
61				

Grid Deferral Assumptions

CWIP spend is spent evenly throughout the year
Assumed only 20% of original Grid plan would be spent without deferral.

Timing of assets going in service
Distribution - Assumed 1 month delay from time of CWIP spend to asset placed in service.
Transmission - Assumed 6 month delay from time of CWIP spend to asset placed in service.
Communications - Assumed 3 month delay from time of CWIP spend to asset placed in service.
Advance DMS and Enterprise applications - assumed CWIP spend placed in service annually in December.

Depreciation rates
Distribution - applied a total distribution depreciation rate excluding meters.
Transmission - applied a total transmission rate
Communication - applied a total communications depreciation rate
Advanced DMS - assumed a 10 year asset life
Enterprise application - assumed a 5 year life

Returns
Assumed the weighted average cost of capital as reflected in the company's application.

O&M
Reflected estimated installation O&M expenses.
Assumed no incremental on going O&M expenses.
Assumed new depreciation rates effective 9/1/2020.

Property Taxes
Property taxes begin the next calendar year after the asset is placed in service.

Deferral
Assumed no deferral

Revenue Requirement
Assumes the test period was twelve months ended December 2022.
Assumed there was no additional update period after the test period.
Assumed rates were effective 1/1/2024.

Rate impacts
Allocations are based on 2018 cost of service study as presented in the current rate case.
For modeling purposes, forecasted distribution costs were allocated using a composite distribution plant allocator, excluding extra facilities and FERC accounts 370, 371 and 373.
In actuals, distribution costs will be allocated more specifically based on the individual FERC accounts they are booked to.
Does not include any savings that might be realized in the base rate cases as a result of the investments.
Percent increases shown based on present revenues annualized with riders as presented in current case

SUMMARY OF DEFERRAL

Not Applicable

Duke Energy Progress
Docket No. E-2, Sub 1219
Estimated Rate Impacts of the deferral

GIP Exhibit 3 – Deferral Granted (Settlement)
Page 1

For Illustrative purposes only.

Dollars in thousands

	2018 Present Revenue Annualized	Years 1-5 Annual Revenue Requirement	Years 1-5 % Increase in Avg. Bill	Years 6-10 Annual Revenue Requirement	Years 6-10 % Decrease in Avg Bill from Year 5
Residential	1,879,740	51,780	2.8%	32,478	-1.0%
Small General Service	238,187	6,221	2.6%	3,902	-0.9%
Medium General Service	959,944	8,255	0.9%	5,150	-0.3%
Large General Service	575,133	2,356	0.4%	1,458	-0.2%
Seasonal & Intermittent	5,859	202	3.4%	127	-1.2%
Traffic Signal Service	563	17	2.9%	10	-1.1%
Outdoor lighting	92,941	1,075	1.2%	630	-0.5%
Total	3,752,367	69,906	1.9%	43,755	-0.7%

Rates assume the deferral is amortized over 5 years and removed deferral from revenue beginning in year 6.

Dollars in thousands

Total NC Retail

Line No.	Description	Reference	2023	New Rates Effective 2024	2025	2026	2027	2028	New Rates Effective 2029	2030	2031	2032
1												
2												
3	Electric operating revenue	Revenue Requirement		69,906	69,906	69,906	69,906	69,906	43,755	43,755	43,755	43,755
4												
5	Electric operating expenses:											
6	Operation and maintenance											
7	Fuel used in electric generation											
8	Regulatory Fee	(Revenue * Reg Fee rate)		91	91	91	91	91	57	57	57	57
9	Uncollectibles	(Revenue * Uncollectible rate)		167	167	167	167	167	105	105	105	105
10	Depreciation and amortization	Revenue Requirement	12,164	12,164	12,164	12,164	12,164	12,164	12,164	12,164	12,164	12,164
11	Amortization of Deferral	Revenue Requirement		26,054	26,054	26,054	26,054	26,054				
12	Deferral	Deferral until new rates	(12,165)									
13	General taxes	Revenue Requirement	1	1	1	1	1	1	1	1	1	1
14	Interest on customer deposits		-	-	-	-	-	-	-	-	-	-
15	Income taxes	Calculated	-	7,282	7,282	7,282	7,282	7,282	7,282	7,282	7,282	7,282
16	Amortization of investment tax credit		-	-	-	-	-	-	-	-	-	-
17												
18	Total electric operating expenses	Sum L8 through L15	(0)	45,759	45,759	45,759	45,759	45,759	19,608	19,608	19,608	19,608
19												
20	Operating income	L3- L18	$ 0	24,147	24,147	24,147	24,147	24,147	24,147	24,147	24,147	24,147
21												
22	Notes:											
23	Revenue: positive number increases revenue / negative number decreases revenue											
24	Expense: positive number increases expense / negative number decreases expense											
25												
26												
27	**Rate Base Line Items**											
28												
29	Electric plant in service		$ 385,418	$ 385,418	$ 385,418	$ 385,418	$ 385,418	$ 385,418	$ 385,418	$ 385,418	$ 385,418	$ 385,418
30	Accumulated depreciation and amortization		(25,058)	(37,222)	(49,386)	(61,549)	(73,713)	(85,877)	(98,040)	(110,204)	(122,368)	(134,531)
31	Electric plant in service, net	Sum L29 through L30	360,360	348,196	336,033	323,869	311,705	299,542	287,378	275,214	263,051	250,887
32												

Duke Energy Progress | GIP Exhibit 3 – Deferral Granted (Settlement)
Docket No. E-2, Sub 1219 | Page 3
Revenue Requirement
For the test period ended December 31, 2022 - Plant Update Period through December 2022, New Rates January 2024

Revenue Requirement ($ in thousands)

		NC Retail		
		Asset Balance	Accumulated Depreciation	Net
1	**Plant**	as of 12/31/2022	As of 12/31/2022	Plant
2	Distribution	340,904	(8,164)	332,740
3	Transmission	15,801	(418)	15,383
4	General Plant	28,714	(4,313)	24,400
5	Total	385,418	(12,895)	372,524
6				
7	WACC - Pre Tax	8.47%		
8	Capital Revenue Requirement (Net Plant * WACC)			
9	Distribution	28,176		
10	Transmission	1,303		
11	General Plant	2,066		
12	Total	31,545		
13				
14	**Impact to Income Statement Line Items**			
15	Depreciation and amortization:	Years 1-5	Years 6-10	
16	Distribution depreciation expense	$ 7,977	$ 7,977	
17	Transmission depreciation expense	352	352	
18	General Plant depreciation expense	3,834	3,834	
19	Impact to deprec. and amortization (Sum L16 through L18)	$ 12,164	$ 12,164	
20				
21	Amortization of 2022 deferral:			
22	Distribution depreciation expense	$ 20,705		
23	Transmission depreciation expense	996		
24	General Plant depreciation expense	4,353		
25	Impact to deprec. and amortization (Sum L22 through L24)	26,054		
26				
27	General taxes:			
28	Property tax rate	0.36%		
29				
30	Property tax (December 2022 Plant Balance * Property tax rate)			
31	Distribution property tax expense	$ 1	$ 1	
32	Transmission property tax expense	0	0	
33	General Plant property tax expense	0	0	
34	Impact to general taxes (Sum L70 through L74)	$ 1	$ 1	
35				
36	Total Operating Expenses (Depreciation + Amortization + Property Taxes)			
37	Distribution	$ 28,683	$ 7,978	
38	Transmission	1,349	352	
39	General Plant	8,187	3,834	
40	Total income taxes	$ 38,220	$ 12,165	
41				
42	Taxes	23.17%	23.17%	
43	Distribution	$ (6,646)	$ (1,849)	
44	Transmission	(313)	(82)	
45	General Plant	(1,897)	(888)	
46	Total income statement impact	$ (8,855)	$ (2,819)	
47				
48	Income Statement Impact (Operating expenses + Taxes)			
49	Distribution	$ 22,038	$ 6,130	
50	Transmission	1,036	271	
51	General Plant	6,290	2,946	
52	Total income statement Requirement	$ 29,364	$ 9,347	
53				
54	Retention Factor	76.55%	76.55%	
55				
56	Total Revenue Requirement (Capital Revenue Requirement + Income Statement impact/ Retention factor)			
57	Distribution	$ 56,966	$ 36,184	
58	Transmission	2,657	1,656	
59	General Plant	10,284	5,915	
60	Total Revenue Requirement	$ 69,906	$ 43,755	
61				

Grid Deferral Assumptions

CWIP spend is spent evenly throughout the year
Amount of CWIP spend has been adjusted to amounts reflected in the settlement agreement.

Timing of assets going in service
Distribution - Assumed 1 month delay from time of CWIP spend to asset placed in service.
Transmission - Assumed 6 month delay from time of CWIP spend to asset placed in service.
Communications - Assumed 3 month delay from time of CWIP spend to asset placed in service.
Advance DMS and Enterprise applications - assumed CWIP spend placed in service annually in December.
Deferral begins with Plant additions starting in June 2020.

Depreciation rates
Distribution - applied a total distribution depreciation rate excluding meters.
Transmission - applied a total transmission rate
Communication - applied a total communications depreciation rate
Advanced DMS - assumed a 10 year asset life
Enterprise application - assumed a 5 year life

Returns
Assumed the weighted average cost of capital as reflected in the company's settlement agreement.

O&M
Reflected estimated installation O&M expenses beginning June 2020.
Assumed no incremental on going O&M expenses.
Assumed new depreciation rates effective 9/1/2020.

Property Taxes
Property taxes begin the next calendar year after the asset is placed in service.

Deferral
Assumed deferral begins 6/1/2020.
Assumed plant additions stopped being eligible for deferral 1/1/2023.
Deferral of return, depreciation, property tax continued until 12/31/2023 on electric plant in service balances as of 12/31/2022.

Deferral recovery
Assumed a 5 year levelized amortization of the deferral.

Revenue Requirement
Assumes the test period was twelve months ended December 2022.
Assumed there was no additional update period after the test period.
Assumed rates were effective 1/1/2024.
Assumed rates were adjusted after the 5 year amortization of the deferral expired

Rate impacts
Allocations are based on 2018 cost of service study as presented in the current rate case.
For modeling purposes, forecasted distribution costs were allocated using a composite distribution plant allocator,
excluding extra facilities and FERC accounts 370, 371 and 373.
In actuals, distribution costs will be allocated more specifically based on the individual FERC accounts they are booked to.
Does not include any savings that might be realized in the base rate cases as a result of the investments.
Percent increases shown based on present revenues annualized with riders as presented in current case

NORTH CAROLINA RETAIL GRID IMPROVEMENT PLAN
SUMMARY OF DEFERRAL

DEP NC Grid Work Plan

Dollars in thousands (000s)	2020	2021	2022	2023
System CWIP Spend	106,873	163,678	215,201	
NC Retail CWIP Spend	91,967	138,356	197,877	
Cumulative In Service (Beg Mar 2020)	57,747	190,650	385,418	
Accum Depr	(272)	(4,218)	(12,895)	
Total Rate Base	57,475	186,432	372,524	
O&M (Beg Jan 2020)	1,873	3,951	4,225	
Depreciation (Beg Mar 2020)	272	3,946	8,677	12,164
Property Tax	-	209	691	1,397
Debt Return - Capital Asset	271	2,251	5,309	7,106
Debt Return - Deferred Balance	12	170	591	1,280
Equity Return - Capital Asset	908	7,542	17,787	23,809
Equity Return - Deferred Balance	40	569	1,979	4,287
Annual Deferral	3,376	18,639	39,258	50,043
Cumulative Deferral Balance	3,376	22,014	61,272	111,315