

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-7, SUB 1246

In the Matter of )  
)  
Application of Duke Energy Carolinas, LLC )  
for Approval of Renewable Energy and )  
Energy Efficiency Portfolio Standard (REPS) )  
Compliance Report and Cost Recovery Rider )  
Pursuant to N.C. Gen. Stat. § 62-133.8 and )  
Commission Rule R8-67 )

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**DIRECT TESTIMONY OF  
VERONICA I. WILLIAMS**

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Veronica I. Williams, and my business address is 550 South  
3 Tryon Street, Charlotte, North Carolina.

4 **Q. PLEASE STATE YOUR POSITION WITH DUKE ENERGY AND**  
5 **DESCRIBE YOUR CURRENT RESPONSIBILITIES.**

6 A. In my capacity as Rates and Regulatory Strategy Manager, I am responsible  
7 for providing regulatory support related to retail and wholesale rates,  
8 providing guidance on Renewable Energy and Energy Efficiency Portfolio  
9 Standard (“REPS”) compliance and cost recovery for Duke Energy  
10 Carolinas, LLC (“Duke Energy Carolinas,” “DEC,” or the “Company”) and  
11 Duke Energy Progress, LLC (“Duke Energy Progress” or “DEP”), and  
12 preparing and filing testimony and exhibits in annual DEC and DEP REPS  
13 rider proceedings.

14 **Q. PLEASE BRIEFLY SUMMARIZE YOUR EDUCATIONAL**  
15 **BACKGROUND, BUSINESS BACKGROUND AND**  
16 **PROFESSIONAL AFFILIATIONS.**

17 A. I received a Bachelor of Science degree in Business from the University of  
18 North Carolina at Charlotte. I am a certified public accountant licensed in  
19 the state of North Carolina. I began my career with Duke Power Company  
20 (now known as Duke Energy Carolinas) as an internal auditor and  
21 subsequently worked in various departments in the finance organization. I  
22 joined the Rates Department in 2001.

1 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE NORTH**  
2 **CAROLINA UTILITIES COMMISSION?**

3 A. Yes. I most recently provided testimony in Docket No. E-2, Sub 1251  
4 regarding Duke Energy Progress' 2019 REPS compliance report and  
5 application for approval of its REPS cost recovery rider, and in Docket No.  
6 E-7, Sub 1229 regarding Duke Energy Carolinas' 2019 REPS compliance  
7 report and application for approval of its REPS cost recovery rider.

8 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

9 A. The purpose of my testimony is to describe the calculation of and present  
10 the support for the REPS rider proposed by Duke Energy Carolinas under  
11 N.C. Gen. Stat. ("G.S.") § 62-133.8 and to present the information and data  
12 required by Commission Rule R8-67 as set forth in Williams Exhibit Nos.  
13 1 through 4. The test period used in supplying this information and data is  
14 the twelve months beginning on January 1, 2020 and ending on December  
15 31, 2020 ("Test Period" or "EMF Period"), and the billing period for the  
16 REPS rider requested in the Company's application is the twelve months  
17 beginning on September 1, 2021 and ending on August 31, 2022 ("Billing  
18 Period").

19 **Q. PLEASE DESCRIBE THE EXHIBITS TO YOUR TESTIMONY.**

20 A. Williams Confidential Exhibit No. 1 ("Williams Exhibit No. 1") identifies  
21 the total REPS compliance costs for which the Company seeks recovery  
22 from Duke Energy Carolinas' North Carolina Retail ("NC Retail")  
23 customers and from the Company's wholesale customers that receive REPS

1 compliance services from the Company (“Wholesale”). Williams  
2 Confidential Exhibit No. 2 (“Williams Exhibit No. 2”) shows the allocation  
3 of the total REPS compliance costs, identified in Williams Exhibit No. 1, to  
4 the Company’s NC Retail customers for the Test Period. Williams  
5 Confidential Exhibit No. 3 (“Williams Exhibit No. 3”) shows the allocation  
6 of the total expected REPS compliance costs, identified on Williams Exhibit  
7 No. 1, to the Company’s NC Retail customers for the Billing Period.  
8 Williams Exhibit No. 4 shows the total REPS rider amounts proposed,  
9 including the REPS Experience Modification Factor (“EMF”), by customer  
10 class, compared to the cost cap for each customer class. Williams Exhibit  
11 No. 5 is the tariff sheet for the proposed REPS Rider. Williams Exhibit No.  
12 6 is a worksheet detailing the Company’s energy efficiency certificate  
13 (“EEC”) inventory balance as of December 31, 2020. Finally, Williams  
14 Confidential Exhibit No. 7 (“Williams Exhibit No. 7”) is a summary cost  
15 recovery worksheet related to the Company’s Woodleaf solar facility  
16 (“Woodleaf”), placed into service in December 2018.

17 **Q. WERE THESE EXHIBITS PREPARED BY YOU OR AT YOUR**  
18 **DIRECTION AND UNDER YOUR SUPERVISION?**

19 A. Yes.

20 **Q. WHAT COSTS ARE INCLUDED IN DUKE ENERGY CAROLINAS’**  
21 **PROPOSED REPS RIDER?**

22 A. The proposed REPS rider intends to recover Duke Energy Carolinas’  
23 incremental costs of compliance with the renewable energy requirements

1           pursuant to G.S. § 62-133.8. The costs incurred by the Company to comply  
2           with its REPS compliance requirements are described comprehensively in  
3           the testimony of Company witness Jennings, and detailed in Jennings  
4           Confidential Exhibits Nos. 2 and 3, filed in this docket. The costs incurred  
5           during the Test Period are presented in this filing to demonstrate their  
6           reasonableness and prudence as provided in North Carolina Utilities  
7           Commission (“Commission”) Rule R8-67(e).

8           The rider includes the REPS EMF component to recover the  
9           difference between the compliance costs incurred and revenues realized  
10          during the Test Period. In addition to an EMF component, the proposed  
11          rider includes a component to recover the costs expected to be incurred for  
12          the Billing Period.

13       **Q. PLEASE DESCRIBE THE METHODOLOGY DUKE ENERGY**  
14       **CAROLINAS USED TO CALCULATE THE INCREMENTAL**  
15       **COSTS OF COMPLIANCE WITH THE REPS REQUIREMENTS.**

16       A. Company witness Jennings describes the costs Duke Energy Carolinas  
17       incurred during the Test Period and the costs the Company projects to incur  
18       during the Billing Period to comply with its REPS requirements. G.S. § 62-  
19       133.8(h)(1) provides that “incremental costs” means “all reasonable and  
20       prudent costs incurred by an electric power supplier” to comply with the  
21       REPS requirements “that are in excess of the electric power supplier’s  
22       avoided costs other than those costs recovered pursuant to G.S. § 62-133.9.”

1           For purchased power agreements with a renewable energy facility,  
2           the Company subtracted its avoided cost from the total cost associated with  
3           the renewable energy purchase to arrive at the incremental cost for the  
4           renewable energy purchase during the period in question. Consistent with  
5           Rule R8-67(e)(2), which provides that the cost of an unbundled renewable  
6           energy certificate (“REC”) “is an incremental cost and has no avoided cost  
7           component,” the total costs incurred during the Test Period for REC  
8           purchases are included in incremental costs. Further, the projected costs for  
9           REC purchases during the Billing Period are included as incremental costs.

10           With respect to the Company’s utility-owned solar generating  
11           facilities, an annual revenue requirement, including capital and operations  
12           and maintenance costs, was calculated for each facility for the period  
13           covering the expected service life of the project. The present value of the  
14           total facility revenue requirement was levelized over the asset life to  
15           produce a levelized annual revenue requirement that was compared to  
16           avoided cost to determine annual incremental cost subject to cost recovery  
17           through the REPS rider. For biogas purchases used to generate renewable  
18           energy at the Company’s generating stations, the incremental cost is  
19           calculated by subtracting the applicable avoided cost from the total biogas  
20           cost associated with the MWhs generated. Similar calculations are made to  
21           estimate the incremental biogas costs for the prospective Billing Period.

22           As described in detail by Company witness Jennings in her direct  
23           testimony filed in this docket, the REPS EMF and Billing Period

1 components of the proposed REPS rider also include compliance-related  
2 incremental administration costs, labor costs, and costs related to research  
3 incurred during the 2020 EMF Period and estimated to be incurred during  
4 the Billing Period, respectively. Additionally, as further detailed in the  
5 testimony of Company witness Jennings, amounts reflecting the  
6 amortization of Solar Rebate Program costs incurred pursuant to G.S. § 62-  
7 155(f) applicable to the EMF and Billing Periods are included for recovery in  
8 the proposed REPS rider.

9 **Q. PLEASE EXPLAIN FURTHER THE CALCULATION OF**  
10 **INCREMENTAL COST RELATED TO THE COMPANY'S SOLAR**  
11 **GENERATING FACILITIES PROPOSED FOR RECOVERY IN ITS**  
12 **REPS RIDER.**

13 A. The revenue requirements for recovery of capital and operating costs for the  
14 Duke Energy North Carolina Solar Photovoltaic Distributed Generation  
15 Program (“Duke Energy PV DG Program” or “Solar PVDG Program”) are  
16 levelized and then reduced by avoided cost to determine incremental cost.  
17 The incremental cost for which the Company seeks recovery through the  
18 REPS rider is limited, in compliance with the Commission’s May 6, 2009  
19 *Order on Reconsideration* in Docket No. E-7, Sub 856 and the  
20 Commission’s August 23, 2011 *Order Approving REPS and REPS EMF*  
21 *Riders and 2010 REPS Compliance* in Docket No. E-7, Sub 984 (“*2011*  
22 *REPS Order*”). As described by Company Witness Jennings in her direct  
23 testimony, one of the facilities included in the Solar PVDG Program and  
24 sited at the Company’s Marshall generating station was removed from

1 service in March 2020 and fully decommissioned in July 2020. The costs  
2 associated with this location were excluded from the revenue requirement  
3 calculation described above, effective beginning April 2020.

4 On May 16, 2016, the Commission issued orders approving the  
5 transfers of the certificates of public convenience and necessity to DEC for  
6 both the Company's Mocksville solar facility ("Mocksville," Docket No. E-  
7 7, Sub 1098) and the Company's Monroe solar facility ("Monroe," Docket  
8 No. E-7, Sub 1079). On June 16, 2016, the Commission issued its Order  
9 Granting Certificate of Public Convenience and Necessity ("*Woodleaf*  
10 *Order*") in Docket No. E-7, Sub 1101, approving the certificate of public  
11 convenience and necessity ("CPCN") for construction of Woodleaf. --  
12 Collectively, these orders are referred to herein as the "*DEC Solar PV*  
13 *Orders*" and collectively, Mocksville, Monroe, and Woodleaf are referred  
14 to herein as the "DEC Solar PV facilities". In its *DEC Solar PV Orders*,  
15 the Commission limited cost recovery for the DEC Solar PV facilities  
16 through the Company's REPS rider to the equivalent of the standard REC  
17 offer price that DEC was offering to new renewable energy facilities at the  
18 time the purchase agreements were executed for the facilities. The current  
19 annual levelized total revenue requirement per megawatt hour ("MWh") for  
20 each facility, computed based on updated tax benefit assumptions and actual  
21 completed project cost, is greater than the applicable levelized avoided cost  
22 per MWh, as was the case when each project was submitted for approval in  
23 the applicable CPCN proceeding. Accordingly, the Company is including



1 for cost recovery in this REPS rider only the percentage of annual levelized  
2 total cost equivalent to the standard REC offer price as approved by the  
3 Commission in its *DEC Solar PV Orders*.

4 **Q. WHAT CONDITIONS RELEVANT TO THIS PROCEEDING DID**  
5 **THE COMMISSION INCLUDE IN ITS APPROVAL OF THE CPCN**  
6 **FOR EACH OF THE DEC SOLAR PV FACILITIES?**

7 A. In its *DEC Solar PV Orders*, the Commission included two conditions  
8 related to cost recovery for the DEC Solar PV facilities that are relevant to  
9 this proceeding. First, the Company agreed to the condition noted above,  
10 limiting the cost recovery amount in REPS to the standard offer REC price.  
11 The second condition relates to DEC's ability to realize certain tax benefits  
12 included in the Company's revenue requirements analysis for each facility  
13 as presented during the CPCN proceedings. The condition provides that, in  
14 the appropriate REPS rider and general rate case proceedings, DEC will  
15 separately itemize the actual monetization of the tax benefits listed in the  
16 Commission's orders within its calculation of the levelized revenue  
17 requirement per MWh for each facility, so that it may be compared with the  
18 monetization of such tax benefits included in the Company's revenue  
19 requirement analysis of each facility presented during the CPCN  
20 proceedings. To the extent the Company fails to fully realize the tax  
21 benefits it originally assumed in its estimated revenue requirements, costs  
22 associated with the increased revenue requirements (with a limited  
23 exception) will be presumed to be imprudent and unreasonably incurred.

1 The condition further provides that DEC may rebut this presumption with  
2 evidence supporting the reasonableness and prudence of its actual  
3 monetization of the tax credits.

4 In its August 20, 2020 *Order Approving REPS and REPS EMF*  
5 *Riders and 2019 REPS Compliance Report*, the Commission concluded that  
6 DEC appropriately complied with the applicable requirements of the  
7 Commission's DEC Solar PV Orders with respect to the Company's Monroe  
8 and Mocksville solar facilities.

9 **Q. DISCUSS THE COMPANY'S COMPLIANCE WITH THE TWO**  
10 **CONDITIONS OUTLINED ABOVE IN THE APPROPRIATE REPS**  
11 **RIDER AND GENERAL RATE CASE PROCEEDINGS WITH**  
12 **RESPECT TO ITS WOODLEAF SOLAR FACILITY.**

13 A. The Company's Woodleaf solar facility was placed in service in December  
14 2018. Recovery of costs for this facility have been requested in the pending  
15 DEC general rate case, Docket No. E-7, Sub 1214. In this current REPS  
16 docket, the Company updated its revenue requirement calculation for  
17 Woodleaf to reflect the actual net plant balance for the facility, and its  
18 current assumptions regarding the availability of the following tax benefits  
19 listed in the Woodleaf Order, and its estimates of the timing of realizing the  
20 tax benefits:

- 21 (a) The federal Section 199 deduction;  
22 (b) The federal Investment Tax Credit ("ITC") of 30% of the cost  
23 of eligible property;  
24 (c) The five-year Modified Accelerated Cost Recovery System  
25 ("MACRS") tax depreciation; and

1 (d) A property tax abatement of 80% on solar property.

2 The Company's current assumptions regarding tax benefits continue  
3 to reflect Woodleaf qualifying for MACRS tax depreciation, and that it will  
4 realize the benefit of 80% property tax abatement on the facility. The  
5 assumptions related to realizing the tax benefits of MACRS tax depreciation  
6 and 80% property tax abatement are the same as those presented as part of  
7 the original Woodleaf CPCN proceeding.

8 The Federal Tax Cuts and Jobs Act (the "Tax Act") was enacted on  
9 December 22, 2017. Among other provisions, it eliminated the federal  
10 Section 199 manufacturing deduction. Accordingly, the associated  
11 reduction is removed from the composite tax rate utilized in the updated  
12 revenue requirement calculations. Federal ITC benefits were originally  
13 assumed to be realized in 2021 for Woodleaf. However, DEC expects to  
14 experience a delay in realizing the federal ITC benefits because it  
15 anticipates lacking sufficient taxable income against which it can take the  
16 tax credit. The Company currently estimates realizing the federal ITC  
17 benefits at approximately tax year 2027. The Company's ability to take  
18 federal bonus depreciation related to many of its assets placed in service  
19 prior to the bonus depreciation expiration deadline established by the Tax  
20 Act, combined with the updated forecast timing of utilization of other tax  
21 credits, contribute to the estimated lack of taxable income for utilization of  
22 ITC<sup>1</sup>.

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<sup>1</sup> Woodleaf is not eligible for bonus depreciation based on its construction start date in 2018.

1           In addition to the tax benefits discussed above, the Tax Act reduced  
2           the corporate federal income tax rate to 21% from 35%, which affects the  
3           revenue requirement calculation for Woodleaf as well. The return on equity  
4           (“ROE”), debt rate, and capital ratios were also updated in the revenue  
5           requirement model to reflect amounts approved by the Commission in its  
6           June 22, 2018 *Order Accepting Stipulation, Deciding Contested Issues, and*  
7           *Requiring Revenue Reduction* in Docket No. E-7, Sub 1146, as well as  
8           amounts estimated to be authorized in the Company’s pending rate case in  
9           Docket No. E-7, sub 1214.

10   **Q.   HOW DOES THE COMPANY INTERPRET THESE RESULTS IN**  
11   **TERMS OF AMOUNTS TO BE RECOVERED THROUGH THE**  
12   **REPS RIDER FOR WOODLEAF?**

13   A.   In summary, although DEC expects to experience some delay in realizing  
14   the ITC benefit, the accelerated benefits of bonus depreciation to Duke  
15   Energy Corporation, and the overall benefit of a lower federal tax rate  
16   mitigate the effect of the delay. Updating the tax benefit estimates only  
17   resulted in a calculated annual revenue requirement that is somewhat higher  
18   than that presented during the original Woodleaf CPCN proceeding.  
19   Incorporating actual facility capital expenditures, the federal income tax  
20   rate reduction, and updating the ROE, debt rate, and capital structure to  
21   reflect approved and pending base rates, resulted in a calculated annual  
22   revenue requirement slightly above the original CPCN estimate. Williams  
23   Exhibit No. 7 summarizes levelized cost recovery amounts reflecting

1 original assumptions, as well as updated tax monetization estimates, and  
2 actual project capital expenditures and other updates.

3 **Q. DOES THE COMPANY SEEK RECOVERY OF COSTS FOR THE**  
4 **WOODLEAF SOLAR FACILITY IN ITS PROPOSED REPS**  
5 **RIDER?**

6 A. Yes. In compliance with the conditions included in the Commission's  
7 Woodleaf Order, the Company limited the amount included for recovery in  
8 the proposed REPS rider to the percentage of annual levelized cost  
9 equivalent to the standard offer REC price established in that CPCN  
10 proceeding.

11 **Q. HOW DID DUKE ENERGY CAROLINAS DETERMINE THE**  
12 **AVOIDED COST ASSOCIATED WITH REPS COMPLIANCE**  
13 **COSTS?**

14 A. In all cases where Duke Energy Carolinas determined incremental  
15 compliance costs as the excess amount above avoided cost, the Company  
16 applied an avoided cost rate in cents per kilowatt-hour ("kWh") to the  
17 expected kWh of renewable energy for each compliance initiative. In  
18 determining the avoided costs associated with purchased power agreements,  
19 Rule R8-67(a)(2) provides that:

20 "Avoided cost rates" mean an electric power supplier's most  
21 recently approved or established avoided cost rates in this  
22 state, as of the date the contract is executed, for purchases of  
23 electricity from qualifying facilities pursuant to Section 210  
24 of the Public Utility Regulatory Policies Act of 1978. If the  
25 Commission has approved an avoided cost rate for the  
26 electric power supplier for the year when the contract is  
27 executed, applicable to contracts of the same nature and

1 duration as the contract between the electric power supplier  
2 and the seller, that rate shall be used as the avoided cost.  
3 Therefore, for example, for a contract by an electric public  
4 utility with a term of 15 years, the avoided cost rate  
5 applicable to that contract would be the comparable,  
6 Commission-approved, 15-year, long-term, levelized rate in  
7 effect at the time the contract was executed. In all other  
8 cases, the avoided cost shall be a good faith estimate of the  
9 electric power supplier's avoided cost, levelized over the  
10 duration of the contract, determined as of the date the  
11 contract is executed, taking into consideration the avoided  
12 cost rates then in effect as established by the Commission.  
13 In any event, when found by the Commission to be  
14 appropriate and in the public interest, a good faith estimate  
15 of an electric public utility's avoided cost, levelized over the  
16 duration of the contract, determined as of the date the  
17 contract is executed, may be used in a particular REPS cost  
18 recovery proceeding. Determinations of avoided costs,  
19 including estimates thereof, shall be subject to continuing  
20 Commission oversight and, if necessary, modification  
21 should circumstances so require.  
22

23 Duke Energy Carolinas' approved avoided cost rates are set forth in  
24 its Purchased Power Non-Hydroelectric, Schedule PP-N, Purchased Power  
25 Hydroelectric, Schedule PP-H, and Schedule PP rate schedules (collectively  
26 "Schedule PP"). For executed purchased power agreements where the price  
27 of the REC and energy are bundled, the Company used (or will use)  
28 annualized combined capacity and energy rates as shown on the Company's  
29 Exhibit No. 3, filed in Docket No. E-100, Sub 106; Exhibit No. 3 in Docket  
30 No. E-100, Sub 117; Exhibit No. 3 in Docket No. E-100, Sub 127; Exhibit  
31 No. 3 in Docket No. E-100, Sub 136; Exhibit No. 3 in Docket No. E-100,  
32 Sub 140; Attachment H in Docket No. E-100, Sub 148; or Attachment G in  
33 Docket No. E-100, Sub 158 (depending on the execution date of the  
34 contract). For those purchased power agreements with terms that did not

1 correspond with the durational terms for which rates were established in the  
2 avoided cost proceeding (i.e., two, five, ten, or fifteen year durations), the  
3 Company computed avoided cost rates for the particular term of the  
4 purchased power agreements using the same inputs and methodology used  
5 for the Schedule PP rates approved in Docket Nos. E-100, Sub 106, E-100,  
6 Sub 117, E-100, Sub 127, E-100, Sub 136, E-100, Sub 140, E-100, Sub 148,  
7 or E-100, Sub 158 respectively. The same method applies for determining  
8 avoided cost related to biogas purchases used to generate renewable energy  
9 at the Company's generating stations. The avoided cost components of  
10 energy and REC purchased power agreements and biogas purchases,  
11 effective during the prospective billing period, were estimated in the same  
12 manner.

13 For the Duke Energy PV DG Program, the Company determined the  
14 avoided cost using a process like that described above for a purchased  
15 power agreement with a non-standard duration. The inputs and  
16 methodology used for the Schedule PP rates approved in Docket No. E-100,  
17 Sub 117 were used to determine the annualized combined capacity and  
18 energy rates for a twenty-year term, corresponding to the expected life of  
19 the solar facilities. The Company calculated its avoided cost and  
20 incremental cost in a similar fashion for its DEC Solar PV facilities.

21 **Q. DOES DUKE ENERGY CAROLINAS PROVIDE SERVICES TO**  
22 **WHOLESALE CUSTOMERS TO MEET THEIR REPS**  
23 **REQUIREMENTS?**

1 A. Yes. As part of its 2020 REPS Compliance Plan, Duke Energy Carolinas  
2 continues to provide services to native load priority wholesale customers  
3 that contract with the Company for REPS compliance services, including  
4 delivery of renewable energy resources and compliance planning and  
5 reporting. These wholesale customers, including distribution cooperatives  
6 and municipalities, rely on the Company to provide this renewable energy  
7 delivery service in accordance with G.S. § 62-133.8(c)(2)e. For REPS  
8 compliance year 2020, the Company provided renewable energy resources  
9 and compliance reporting services for the following native load priority  
10 wholesale customers: Blue Ridge Electric Membership Corporation (“Blue  
11 Ridge EMC”), Rutherford Electric Membership Corporation (“Rutherford  
12 EMC”), Town of Dallas, Town of Forest City, and Town of Highlands.

13 **Q. PLEASE EXPLAIN HOW THE COMPANY ALLOCATES**  
14 **INCREMENTAL REPS COSTS BETWEEN ITS RETAIL**  
15 **CUSTOMERS AND ITS WHOLESALE CUSTOMERS RECEIVING**  
16 **THIS SERVICE.**

17 A. The incremental cost of REPS compliance represents the cost to meet the  
18 combined total MWh requirement for native load customers, based on the  
19 sum of Duke Energy Carolinas’ NC Retail sales and Wholesale NC retail  
20 sales. To properly allocate incremental costs between Duke Energy  
21 Carolinas and its Wholesale customers, the class allocation methodology  
22 was performed using a combined aggregate cost cap as shown in Williams  
23 Exhibit Nos. 2 and 3 for the EMF Period and the Billing Period,



1           respectively. The class allocation methodology combines the number of  
2           accounts subject to a REPS charge by customer class for both Duke Energy  
3           NC Retail accounts and Wholesale NC retail accounts. In the cases where  
4           a Wholesale customer self-supplied a portion of its annual REPS  
5           requirement (for example, using its Southeastern Power Administration  
6           allocation to partially meet the requirement as provided in G.S. § 62-  
7           133.8(c)), or where the Company met its compliance requirement by  
8           reduced energy consumption through implementation of energy efficiency  
9           (“EE”) measures, the combined total number of accounts on which the cost  
10          allocation is based was adjusted on a pro-rata basis. This adjustment  
11          recognizes that a portion of the compliance requirement was not supplied  
12          by RECs generated or acquired by Duke Energy Carolinas as part of the  
13          combined total requirements. The adjusted totals by class were multiplied  
14          by the per-account cost caps to determine the combined total cost cap dollar  
15          amounts by customer class and in total. Each customer class is allocated its  
16          share of the incremental costs based on its pro-rata share of the customer  
17          cost cap dollar amounts. The cost allocated to each customer class is  
18          divided by the total adjusted number of accounts within each customer class  
19          to arrive at an annual per-account charge. The annual per-account charge  
20          for each customer class is multiplied by the Company’s NC Retail adjusted  
21          number of accounts within each customer class and totaled to arrive at the  
22          incremental cost to be allocated to Duke Energy Carolinas’ NC Retail  
23          customers. Costs related to the Company’s Solar Rebate Program,

1 described in detail in Company witness Jennings' direct testimony, are not  
2 related to the Company's provision of REPS compliance services to its  
3 Wholesale customers, and are allocated in total to DEC's NC Retail  
4 customers.

5 **Q. PLEASE ALSO DESCRIBE HOW DUKE ENERGY CAROLINAS**  
6 **ALLOCATES ITS EE SAVINGS AMONG ITS CUSTOMER**  
7 **CLASSES FOR REPS AND REPS EMF RIDER PURPOSES.**

8 A. Incremental costs assigned to Duke Energy Carolinas' NC Retail customers  
9 are separated into two categories: costs related to solar, poultry and swine  
10 compliance requirements, and research, other incremental and Solar Rebate  
11 Program costs ("Set-Aside and Other Incremental Costs"); and costs related  
12 to the General Requirement<sup>2</sup> ("General Incremental Costs"). This  
13 separation is based on the percentage of Set-Aside and Other Incremental  
14 Costs and General Incremental Costs calculated on Williams Exhibit No. 1.

15 Set-Aside and Other Incremental Costs are allocated among  
16 customer classes based on per-account cost caps. General Incremental  
17 Costs are allocated among customer classes in a manner that gives credit for  
18 EE RECs (for which there are no General Incremental Costs) according to  
19 the relative energy reduction contributed by each customer class. As a  
20 result, General Incremental Costs are allocated among customer classes  
21 based on each class' pro-rata share of requirements for non-EE general  
22 RECs. The calculations for allocating General Incremental Costs are

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<sup>2</sup> The Company generally refers to the "General Requirement" as its overall REPS requirement, set forth in G.S. § 62-133.8(b), net of the three set-asides.

1 updated to reflect the modifications recommended by the Public Staff, and  
2 accepted by the Commission in its November 17, 2017 *Order Approving*  
3 *REPS and REPS EMF Rider and Approving REPS Compliance Report*, in  
4 DEP's 2017 REPS rider filing in Docket No. E-2, Sub 1144. The Company  
5 notes that any deviation from allocating costs according to the statutory per-  
6 account cost cap ratios creates the potential for the resulting charges  
7 computed for one or more classes to exceed the per-account cost cap(s). If  
8 that occurs, the Company would continue to reallocate the costs in excess  
9 of the cap for the affected customer class to the other customer classes to  
10 the extent required to produce charges for all classes that do not exceed the  
11 respective caps.

12 **Q. PLEASE DESCRIBE HOW DUKE ENERGY CAROLINAS**  
13 **CALCULATED THE PROJECTED PORTION OF THE REPS**  
14 **RIDER THAT THE COMPANY PROPOSES FOR THE BILLING**  
15 **PERIOD.**

16 A. Using the allocation methods described above, and as shown on Williams  
17 Exhibit No. 3, the Set-Aside and Other Incremental Costs and the General  
18 Incremental Costs are calculated by customer class for the Company's NC  
19 Retail customers. The Set-Aside and Other Incremental Costs and General  
20 Incremental Costs are summed for the Billing Period by customer class to  
21 arrive at a total REPS cost to be collected from the Company's NC Retail  
22 customers. On Williams Exhibit No. 4, the cost allocated to each customer  
23 class is then divided by the total projected number of Duke Energy

1 Carolinas NC Retail accounts within each customer class to arrive at the  
2 total annual cost to be recovered from each account over the Billing Period.  
3 The monthly NC Retail REPS rider for each customer class is one-twelfth  
4 of the total annual cost.

5 **Q. PLEASE EXPLAIN THE CALCULATION OF THE PROPOSED**  
6 **REPS EMF.**

7 A. Using the allocation methods described above, and as shown on Williams  
8 Exhibit No. 2, the Set-Aside and Other Incremental Costs and the General  
9 Incremental Costs are calculated by customer class for the Company's NC  
10 Retail customers. The Set-Aside and Other Incremental Costs and General  
11 Incremental Costs are summed for the Test Period by customer class to  
12 illustrate the total REPS costs assigned to the Company's NC Retail  
13 customers. The actual NC Retail revenues realized during the Test Period  
14 by customer class are then subtracted from the total REPS costs by customer  
15 class to arrive at the EMF for each class. On Williams Exhibit No. 4, the  
16 total EMF over/under collection to be recovered from each customer class  
17 is adjusted to include any credits to customers not considered a refund of  
18 amounts advanced by customers, and then divided by the total projected  
19 number of Duke Energy Carolinas' NC Retail accounts within each  
20 customer class to arrive at the total EMF to be recovered from each account  
21 over the Billing Period. The monthly EMF for each customer class is one-  
22 twelfth of the total EMF.

1 **Q. HOW DOES DUKE ENERGY CAROLINAS DEFINE A**  
2 **CUSTOMER ACCOUNT FOR PURPOSES OF REPS BILLING?**

3 A. In its December 15, 2010 *Order Approving REPS Riders*, in Docket No. E-  
4 7, Sub 872, the Commission approved Duke Energy Carolinas' proposed  
5 method of determining the number of customer accounts. The Company  
6 defines "account" as an "agreement" or "tariff rate" between Duke Energy  
7 Carolinas and a customer to determine the per-account REPS charge with  
8 certain exceptions, which are listed below. The following service schedules  
9 are not considered accounts for purposes of the per-account charge because  
10 of the near certainty that customers served under these schedules already  
11 will pay a per-account charge under another residential, general service, or  
12 industrial service agreement and because they represent small auxiliary  
13 service loads. The following agreements fall within this exception:

- 14 • Outdoor Lighting Service (Schedule OL)
- 15 • Floodlighting Service (Schedule FL and FL-N)
- 16 • Street and Public Lighting Service (Schedule PL)
- 17 • Yard Lighting (Schedule YL)
- 18 • Governmental Lighting (Schedule GL)
- 19 • Nonstandard Lighting (Schedule NL)
- 20 • Off-Peak Water Heating (Schedule WC is a sub-metered  
21 service)
- 22 • Non-demand metered, nonresidential service, provided on  
23 Schedule SGS, at the same premises, with the same service  
24 address, and with the same account name as an agreement for  
25 which a monthly REPS charge has been applied.

26  
27 Within Wholesale, Blue Ridge EMC, Rutherford EMC, and Town  
28 of Forest City have a methodology for determining Wholesale year-end  
29 number of accounts that is generally consistent with that used by Duke  
30 Energy Carolinas. The modifications and exclusions are similarly intended

1 to avoid charging customers twice, as in the case of customers with  
2 additional lighting accounts, or to exclude small auxiliary service loads.  
3 Town of Highlands and Town of Dallas define an account in the manner the  
4 information is reported to the Energy Information Administration for annual  
5 electric sales and revenue reporting.

6 **Q. DOES DUKE ENERGY CAROLINAS PROJECT THE REPS**  
7 **CHARGE TO EACH CUSTOMER ACCOUNT FOR THE BILLING**  
8 **PERIOD TO BE WITHIN THE ANNUAL COST CAPS DEFINED IN**  
9 **G.S. § 62-133.8?**

10 A. Yes. The annual total of the monthly REPS and REPS EMF charges  
11 proposed by the Company for each customer class are shown on Williams  
12 Exhibit No. 4. For purposes of comparing the annual charges for REPS  
13 compliance costs to the per-account caps defined in G.S. § 62-133.8(h)(4),  
14 the exhibit also presents annual charges calculated to exclude Solar Rebate  
15 Program costs. This calculation demonstrates that REPS compliance costs  
16 to be collected from customers are within the per-account cost caps.

17 **Q. HOW DOES DUKE ENERGY CAROLINAS PROPOSE TO**  
18 **COLLECT THE REPS CHARGES FROM EACH CUSTOMER**  
19 **CLASS?**

20 A. Duke Energy Carolinas proposed Renewable Energy Portfolio Standard  
21 Rider (“REPS-NC”) is attached as Williams Exhibit No. 5. As shown on  
22 the rider, Duke Energy Carolinas proposes that a fixed monthly charge be  
23 added to the bill for each class of customer.

1 **Q. WHAT IS THE MONTHLY REPS CHARGE PROPOSED BY THE**  
 2 **COMPANY FOR EACH CUSTOMER CLASS?**

3 A. The Company proposes the following monthly REPS charges to be effective  
 4 September 1, 2021.

Customer class	Per Month – excluding regulatory fee	Per Month – including regulatory fee	Total annual REPS charge – including regulatory fee	Annual per-account cost cap
Residential	\$1.10	\$1.10	\$13.20	\$ 27.00
General	\$5.00	\$5.01	\$60.12	\$ 150.00
Industrial	\$(6.02)	\$(6.03)	\$(72.36)	\$ 1,000.00

5

6 **Q. WHAT IS THE MONTHLY CHANGE IN REPS CHARGE**  
 7 **PROPOSED BY THE COMPANY FOR EACH CUSTOMER CLASS?**

8 Excluding the regulatory fee, the following table shows the EMF and rider  
 9 components of the proposed rider and the currently-effective riders  
 10 established in Docket No. E-7, Sub 1229:

11

Customer class	<i>Proposed</i>			<i>Current</i>			<i>Change</i>		
	EMF	Rider	Total	EMF	Rider	Total	EMF	Rider	Total
Residential	<b>\$0.11</b>	<b>\$0.99</b>	<b>\$1.10</b>	\$(0.02)	\$0.80	\$0.78	\$0.13	\$0.19	\$0.32
General	<b>\$0.76</b>	<b>\$4.24</b>	<b>\$5.00</b>	\$(0.18)	\$3.99	\$3.81	\$0.94	\$0.25	\$1.19
Industrial	<b>\$7.60</b>	<b>\$(13.62)</b>	<b>\$(6.02)</b>	\$ 1.37	\$16.18	\$17.55	\$6.23	\$(29.80)	\$(23.57)

12

13 **Q. PLEASE DESCRIBE THE EEC INVENTORY DETAILS**  
 14 **PRESENTED IN WILLIAMS EXHIBIT NO. 6.**

15 A. Williams Exhibit No. 6 shows a reconciliation of the Company's EEC  
 16 inventory balance available for REPS compliance as of December 31, 2020  
 17 as well as references to the evaluation, measurement and verification

1 (“EM&V”) reports the results of which are incorporated into current EEC  
2 balances. The Company annually determines the level of EECs generated  
3 and available for REPS compliance, and this update includes the results of  
4 any periodic EM&V performed to-date, adjustments identified during the  
5 Company’s ongoing analysis of energy efficiency program effectiveness, as  
6 well as any other corrections. The updated cumulative level of EECs  
7 generated to date is compared to the number of EECs previously reported  
8 for compliance, less any EECs used for compliance, to determine the EECs  
9 to be added to inventory for the most recent calendar year. Williams Exhibit  
10 No. 6 shows the calculation for EECs added to inventory for 2020, including  
11 details of the adjustments incorporated therein.

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

13 **A. Yes.**