

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-7, SUB 1229

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)

**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 1205
4 regarding Duke Energy Progress' 2018 REPS compliance report and
5 application for approval of its REPS cost recovery rider, and in Docket No.
6 E-7, Sub 1191 regarding Duke Energy Carolinas' 2018 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, 2019 and ending on December
15 31, 2019 ("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, 2020 and ending on August 31, 2021 ("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, 2019. 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 2019 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*”).

23 On May 16, 2016, the Commission issued orders approving the
24 transfers of the certificates of public convenience and necessity to DEC for

1 both the Company’s Mocksville solar facility (“Mocksville,” Docket No. E-
2 7, Sub 1098) and the Company’s Monroe solar facility (“Monroe,” Docket
3 No. E-7, Sub 1079). On June 16, 2016, the Commission issued its Order
4 Granting Certificate of Public Convenience and Necessity (“*Woodleaf*
5 *Order*”) in Docket No. E-7, Sub 1101, approving the certificate of public
6 convenience and necessity (“CPCN”) for construction of Woodleaf.
7 Collectively, these orders are referred to herein as the “*DEC Solar PV*
8 *Orders*” and collectively, Mocksville, Monroe, and Woodleaf are referred
9 to herein as the “DEC Solar PV facilities”. In its *DEC Solar PV Orders*,
10 the Commission limited cost recovery for the DEC Solar PV facilities
11 through the Company’s REPS rider to the equivalent of the standard REC
12 offer price that DEC was offering to new renewable energy facilities at the
13 time the purchase agreements were executed for the facilities. The current
14 annual levelized total revenue requirement per megawatt hour (“MWh”) for
15 each facility, computed based on updated tax benefit assumptions and actual
16 completed project cost, is greater than the applicable levelized avoided cost
17 per MWh, as was the case when each project was submitted for approval in
18 the applicable CPCN proceeding. Accordingly, the Company is including
19 for cost recovery in this REPS rider only the percentage of annual levelized
20 total cost equivalent to the standard REC offer price as approved by the
21 Commission in its *DEC Solar PV Orders*.

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

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

1 In its August 15, 2019 *Order Approving REPS and REPS EMF*
2 *Rider and 2018 REPS Compliance Report*, the Commission concluded that
3 DEC appropriately complied with the applicable requirements of the
4 Commission’s DEC Solar PV Orders, and that DEC’s obligation related to
5 reporting the status of realizing tax benefits was complete, with respect to the
6 Company’s Monroe and Mocksville solar facilities.

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

11 A. The Company’s Woodleaf solar facility was placed in service in December
12 2018. Recovery of costs for this facility have been requested in the pending
13 DEC general rate case, Docket No. E-7, Sub 1214. In this current REPS
14 docket, the Company updated its revenue requirement calculation for
15 Woodleaf to reflect the actual net plant balance for the facility, and its
16 current assumptions regarding the availability of the following tax benefits
17 listed in the Woodleaf Order, and its estimates of the timing of realizing the
18 tax benefits:

- 19 (a) The federal Section 199 deduction;
20 (b) The federal Investment Tax Credit (“ITC”) of 30% of the cost
21 of eligible property;
22 (c) The five-year Modified Accelerated Cost Recovery System
23 (“MACRS”) tax depreciation; and
24 (d) A property tax abatement of 80% on solar property.

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

7 The Federal Tax Cuts and Jobs Act (the “Tax Act”) was enacted on
8 December 22, 2017. Among other provisions, it eliminated the federal
9 Section 199 manufacturing deduction. Accordingly, the associated
10 reduction is removed from the composite tax rate utilized in the updated
11 revenue requirement calculations. Federal ITC benefits were originally
12 assumed to be realized in 2021 for Woodleaf. However, DEC expects to
13 experience a delay in realizing the federal ITC benefits because it
14 anticipates lacking sufficient taxable income against which it can take the
15 tax credit. The Company currently estimates realizing the federal ITC
16 benefits at approximately tax year 2026. The Company’s ability to take
17 federal bonus depreciation related to many of its assets placed in service
18 prior to the bonus depreciation expiration deadline established by the Tax
19 Act, combined with the updated forecast timing of utilization of other tax
20 credits, contribute to the estimated lack of taxable income for utilization of
21 ITC¹.

¹ 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.

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

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

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

4 A. The Woodleaf facility was placed in service in late December 2018, and the
5 Company's revenue requirement calculation reflects a beginning month of
6 January 2019. In compliance with the conditions included in the
7 Commission's Woodleaf Order, the Company limited the amount included
8 for recovery in the proposed REPS rider to the percentage of annual
9 levelized cost equivalent to the standard offer REC price established in that
10 CPCN 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
27 price 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), Duke
3 Energy Carolinas 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 avoided cost components of energy
8 and REC purchased power agreements effective during the prospective
9 billing period were estimated in the same manner.

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

18 **Q. DOES DUKE ENERGY CAROLINAS PROVIDE SERVICES TO**
19 **WHOLESALE CUSTOMERS TO MEET THEIR REPS**
20 **REQUIREMENTS?**

21 A. Yes. As part of its 2019 REPS Compliance Plan, Duke Energy Carolinas
22 continues to provide services to native load priority wholesale customers
23 that contract with the Company for REPS compliance services, including

1 delivery of renewable energy resources and compliance planning and
2 reporting. These wholesale customers, including distribution cooperatives
3 and municipalities, rely on Duke Energy Carolinas to provide this
4 renewable energy delivery service in accordance with G.S. § 62-
5 133.8(c)(2)e. For REPS compliance year 2019, the Company provided
6 renewable energy resources and compliance reporting services for the
7 following native load priority wholesale customers: Blue Ridge Electric
8 Membership Corporation (“Blue Ridge EMC”), Rutherford Electric
9 Membership Corporation (“Rutherford EMC”), Town of Dallas, Town of
10 Forest City, and Town of Highlands.

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

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

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

1 **Q. PLEASE ALSO DESCRIBE HOW DUKE ENERGY CAROLINAS**
2 **ALLOCATES ITS EE SAVINGS AMONG ITS CUSTOMER**
3 **CLASSES FOR REPS AND REPS EMF RIDER PURPOSES.**

4 A. Incremental costs assigned to Duke Energy Carolinas' NC Retail customers
5 are separated into two categories: costs related to solar, poultry and swine
6 compliance requirements, and research, other incremental and Solar Rebate
7 Program costs ("Set-Aside and Other Incremental Costs"); and costs related
8 to the General Requirement² ("General Incremental Costs"). This
9 separation is based on the percentage of Set-Aside and Other Incremental
10 Costs and General Incremental Costs calculated on Williams Exhibit No. 1.

11 Set-Aside and Other Incremental Costs are allocated among
12 customer classes based on per-account cost caps. General Incremental
13 Costs are allocated among customer classes in a manner that gives credit for
14 EE RECs (for which there are no General Incremental Costs) according to
15 the relative energy reduction contributed by each customer class. As a
16 result, General Incremental Costs are allocated among customer classes
17 based on each class' pro-rata share of requirements for non-EE general
18 RECs. The calculations for allocating General Incremental Costs are
19 updated to reflect the modifications recommended by the Public Staff, and
20 accepted by the Commission in its November 17, 2017 *Order Approving*
21 *REPS and REPS EMF Rider and Approving REPS Compliance Report*, in
22 DEP's 2017 REPS rider filing in Docket No. E-2, Sub 1144. The Company

² 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 notes that any deviation from allocating costs according to the statutory per-
2 account cost cap ratios creates the potential for the resulting charges
3 computed for one or more classes to exceed the per-account cost cap(s). If
4 that occurs, the Company would continue to reallocate the costs in excess
5 of the cap for the affected customer class to the other customer classes to
6 the extent required to produce charges for all classes that do not exceed the
7 respective caps.

8 **Q. PLEASE DESCRIBE HOW DUKE ENERGY CAROLINAS**
9 **CALCULATED THE PROJECTED PORTION OF THE REPS**
10 **RIDER THAT THE COMPANY PROPOSES FOR THE BILLING**
11 **PERIOD.**

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

1 **Q. PLEASE EXPLAIN THE CALCULATION OF THE PROPOSED**
2 **REPS EMF.**

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

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

21 A. In its December 15, 2010 *Order Approving REPS Riders*, in Docket No. E-
22 7, Sub 872, the Commission approved Duke Energy Carolinas' proposed
23 method of determining the number of customer accounts. The Company

1 defines “account” as an “agreement” or “tariff rate” between Duke Energy
2 Carolinas and a customer to determine the per-account REPS charge with
3 certain exceptions, which are listed below. The following service schedules
4 are not considered accounts for purposes of the per-account charge because
5 of the near certainty that customers served under these schedules already
6 will pay a per-account charge under another residential, general service, or
7 industrial service agreement and because they represent small auxiliary
8 service loads. The following agreements fall within this exception:

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

21
22 Within Wholesale, Blue Ridge EMC, Rutherford EMC, and Town
23 of Forest City have a methodology for determining Wholesale year-end
24 number of accounts that is generally consistent with that used by Duke
25 Energy Carolinas. The modifications and exclusions are similarly intended
26 to avoid charging customers twice, as in the case of customers with
27 additional lighting accounts, or to exclude small auxiliary service loads.
28 Town of Highlands and Town of Dallas define an account in the manner the
29 information is reported to the Energy Information Administration for annual
30 electric sales and revenue reporting.

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

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

12 **Q. HOW DOES DUKE ENERGY CAROLINAS PROPOSE TO**
13 **COLLECT THE REPS CHARGES FROM EACH CUSTOMER**
14 **CLASS?**

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

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

21 A. The Company proposes the following monthly REPS charges to be effective
22 September 1, 2020.

| 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 | \$0.78 | \$0.78 | \$9.36 | \$ 27.00 |
| General | \$3.84 | \$3.84 | \$46.08 | \$ 150.00 |
| Industrial | \$18.51 | \$18.53 | \$222.36 | \$ 1,000.00 |

1

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

4 Excluding the regulatory fee, the following table shows the EMF and rider
5 components of the proposed rider and the currently-effective riders
6 established in Docket No. E-7, Sub 1191:

7

| Customer class | <i>Proposed</i> | | | <i>Current</i> | | | <i>Change</i> | | |
|----------------|-----------------|----------------|----------------|----------------|---------|---------|---------------|----------|----------|
| | EMF | Rider | Total | EMF | Rider | Total | EMF | Rider | Total |
| Residential | \$(0.01) | \$0.79 | \$0.78 | \$(0.07) | \$0.94 | \$0.87 | \$0.06 | \$(0.15) | \$(0.09) |
| General | \$(0.15) | \$3.99 | \$3.84 | \$(0.18) | \$4.82 | \$4.64 | \$0.03 | \$(0.83) | \$(0.80) |
| Industrial | \$ 1.84 | \$16.67 | \$18.51 | \$ 0.71 | \$20.53 | \$21.24 | \$1.13 | \$(3.86) | \$(2.73) |

8

9 **Q. PLEASE DESCRIBE THE EEC INVENTORY DETAILS**
10 **PRESENTED IN WILLIAMS EXHIBIT NO. 6.**

11 A. Williams Exhibit No. 6 shows a reconciliation of the Company's EEC
12 inventory balance available for REPS compliance as of December 31, 2019,
13 as well as references to the evaluation, measurement and verification
14 ("EM&V") reports the results of which are incorporated into current EEC
15 balances. The Company annually determines the level of EECs generated
16 and available for REPS compliance, and this update includes the results of
17 any periodic EM&V performed to-date, adjustments identified during the

1 Company's ongoing analysis of energy efficiency program effectiveness, as
2 well as any other corrections. The updated cumulative level of EECs
3 generated to date is compared to the number of EECs previously reported
4 for compliance, less any EECs used for compliance, to determine the EECs
5 to be added to inventory for the most recent calendar year. Williams Exhibit
6 No. 6 shows the calculation for EECs added to inventory for 2019, including
7 details of the adjustments incorporated therein.

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

9 **A. Yes.**