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May 5, 2021

VIA ELECTRONIC FILING

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

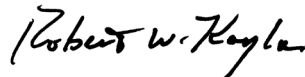
**Re: Duke Energy Carolinas, LLC's Supplemental Testimony and Exhibits
Docket No. E-7, Sub 1246**

Dear Ms. Campbell:

Enclosed for filing with the North Carolina Utilities Commission, please find Duke Energy Carolinas, LLC's Supplemental Testimony and Revised Exhibits of Megan W. Jennings and Veronica I. Williams in connection with the above-referenced matter. Portions of the supplemental testimony and certain information contained in Revised Jennings Exhibit Nos. 1 and 2 and Revised Williams Exhibit Nos. 1, 2, and 3 are confidential, proprietary, and commercially sensitive. For that reason, these documents are being filed under seal pursuant to N.C. Gen. Stat. § 132-1.2 and should be protected from public disclosure. Parties to the docket may contact the Company to obtain copies pursuant to an appropriate confidentiality agreement.

Please do not hesitate to contact me if you have any questions.

Sincerely,



Robert W. Kaylor

Enclosures

cc: Parties of Record

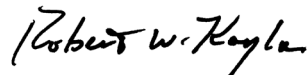
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May 05 2021

CERTIFICATE OF SERVICE

I certify that a copy of Duke Energy Carolinas, LLC's Supplemental Testimony and Revised Exhibits, in Docket No. E-7, Sub 1246, has been served by electronic mail, hand delivery, or by depositing a copy in the United States Mail, 1st Class Postage Prepaid, properly addressed to parties of record.

This the 5th day of May, 2021.



Robert W. Kaylor
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North Carolina State Bar No. 6237

ATTORNEY FOR DUKE ENERGY
CAROLINAS, LLC

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)

**SUPPLEMENTAL
TESTIMONY OF MEGAN
W. JENNINGS**

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

2 A. My name is Megan W. Jennings, and my business address is 400 South
3 Tryon Street, Charlotte, North Carolina.

4 **Q. DID YOU PREVIOUSLY FILE DIRECT TESTIMONY IN THIS**
5 **MATTER BEFORE THE NORTH CAROLINA UTILITIES**
6 **COMMISSION?**

7 A. Yes. I filed direct testimony on behalf of Duke Energy Carolinas, LLC (the
8 “Company”) in this matter on February 23, 2021.

9 **Q. WHAT IS THE PURPOSE OF YOUR SUPPLEMENTAL**
10 **TESTIMONY?**

11 A. The purpose of my supplemental testimony is to update the North Carolina
12 Utilities Commission (the “Commission”) on information presented in my
13 direct testimony and the exhibits filed with my direct testimony.

14 **Q. WHAT UPDATES NEED TO BE MADE TO YOUR DIRECT**
15 **TESTIMONY?**

16 A. When responding to data requests from the Public Staff, DEC determined
17 that an update is required to the calculation of average realization rate stated
18 for the 2020 net metering site visits. On page 12 of my direct testimony, I
19 stated, “For the net metering facilities included in the sample, the
20 PVWatts™ Solar Calculator produced an average generation estimate of
21 8.52 MWh/yr. The historical production data collected from inverter
22 readings during the site visits demonstrated an average production for the
23 sample group of 7.55 MWh/yr. This resulted in an overall average

1 realization rate of 95%, which is calculated by dividing the verified annual
2 production by the expected annual production for each customer and taking
3 the sample average.” Rather than averaging the individual realization rates
4 for each customer, the realization rate should instead be calculated by
5 dividing the average verified production for the sample group of 7.55
6 MWh/yr by the average generation estimate produced by the PV Watts™
7 Solar Calculator of 8.52 MWh/yr, resulting in a realization rate of 89% in
8 2020. Updating the calculation of the realization rate for the 2019 site visits
9 sample leads to a realization rate of 97%, rather than the 96% previously
10 reported in my direct testimony in Docket. No. E-7, Sub 1229. Looking at
11 the 2019 and 2020 site visit populations together, the overall realization rate
12 for the combined population is 93%. Therefore, the Company still believes
13 that the PVWatts™ production estimate methodology remains accurate for
14 predicting future production.

15 **Q. WHAT UPDATES NEED TO BE MADE TO THE EXHIBITS FILED**
16 **WITH YOUR DIRECT TESTIMONY?**

17 A. Line No. 5 on Confidential Jennings Exhibit No. 2, filed with my direct
18 testimony, provided the number of net metering non-time-of-use demand
19 (“NMNTD”) Renewable Energy Certificates (“RECs”) generated in 2020
20 and projected to be generated in the billing period. Since the filing of my
21 direct testimony, the Company has learned that there was an error in the
22 calculation of the number of net metering RECs in both the experience
23 modification factor (“EMF”) and Billing Periods. Confidential Revised

1 Jennings Exhibit No. 2 updates the Total Units for the EMF Period from
2 103,514 to 84,172 and the Total Units for the Billing Period from [BEGIN
3 CONFIDENTIAL] [REDACTED] [END CONFIDENTIAL] Please
4 see the Company's letter filed in Docket Nos. E-7, Subs 1113 and 1246,
5 included as Appendix A to my supplemental testimony, for additional
6 information on this correction.

7 As detailed in the Company's letter, the Company also updated the
8 calculations for NMNTD RECs generated since June 2016, which is when
9 the Company initially began claiming RECs from NMNTD facilities, per
10 the Commission *Order Approving Rider and Granting Waiver Request*
11 dated June 5, 2018 in Docket Nos. E-2, Sub 1106 and E-7, Sub 1113.
12 Updating the number of historical NMNTD RECs produced has led to the
13 need for the Company to retire an additional 42,031 RECs in total to replace
14 the ineligible NMNTD RECs retired, or selected for retirement, by the
15 Company to meet its annual REPS compliance obligations in 2018 - 2020.
16 Table 1 of the 2020 Compliance Report shows RECs retired to meet the
17 Company's 2020 compliance obligation, and originally included 145,905
18 NMNTD RECs, as part of the Solar – Photovoltaic – In State line,
19 comprising 68,174 vintage 2019 NMNTD RECs and 77,731 vintage 2020
20 NMNTD RECs. DEC determined 16,481 of the vintage 2019 NMNTD
21 RECs are related to TOU demand customers and are therefore ineligible.
22 DEC used these RECs to meet the general requirement, not the solar set-
23 aside. To correct for originally using these ineligible RECs for 2020

1 compliance, DEC replaced them by selecting for retirement [BEGIN
2 CONFIDENTIAL] [REDACTED]
3 [REDACTED] [END CONFIDENTIAL] and updating
4 Table I for this change. Table VII of the Compliance Report shows detail
5 by resource type of the Company's REC inventory carried over through
6 year-end 2020, and was updated to reflect the removal of any previously
7 included ineligible NMNTD RECs. Filed with this supplemental testimony
8 are Confidential Revised Page Nos. 4 and 9 of Jennings Exhibit No. 1, the
9 2020 Compliance Report, with updated Tables I and VII showing the
10 corrections described above.

11 **Q. ARE THERE ANY OTHER UPDATES TO BE MADE TO THE**
12 **EXHIBITS FILED WITH YOUR DIRECT TESTIMONY?**

13 A. Yes. The projected number of RECs to be received in the billing period for
14 the Competitive Procurement of Renewable Energy ("CPRE") projects
15 have been modified due to a revised forecast and a change in commercial
16 operation dates for the Tranche 1 projects. Additional details related to these
17 updates can be found in Docket No. E-7, Sub 1247.

18 In addition, in preparing responses to a Public Staff data request, the
19 Company realized that the REC price forecasts for [BEGIN
20 CONFIDENTIAL] [REDACTED]
21 [REDACTED]
22 [REDACTED]

1

2

[REDACTED] [END CONFIDENTIAL]

3

Confidential Revised Jennings Exhibit No. 2 filed with this

4

supplemental testimony reflects corrections to amounts on Line Nos. 5-16,

5

128 and 143, and to the corresponding subtotals and totals shown on Line

6

Nos. 127, 141, 147, 148, 149 and 214.

7

The adjustments noted above are also identified in the supplemental

8

testimony of Veronica I. Williams and reflected in Revised Williams

9

Exhibit Nos. 1 through 5, filed in this docket.

10 **Q.**

DOES THIS CONCLUDE YOUR SUPPLEMENTAL TESTIMONY?

11 **A.**

Yes.

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May 4, 2021

VIA ELECTRONIC FILING

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

**RE: Duke Energy Carolinas, LLC and Duke Energy Progress, LLC's
Notification about Reporting of Net Metering RECs
Docket Nos. E-7, Subs 1113 and 1246 and E-2, Sub 1106**

Dear Ms. Campbell:

The purpose of this letter is to advise the North Carolina Utilities Commission ("Commission") that Duke Energy Carolinas, LLC ("DEC") and Duke Energy Progress, LLC ("DEP"), collectively "The Companies," have discovered an error in the amount of Renewable Energy Certificates ("RECs") from net metering facilities that each respective Company has been reporting to the North Carolina Renewable Energy Tracking System ("NC-RETS").

Under the current Net Metering for Renewable Energy Facilities Riders offered by DEC (Rider NM) and DEP (Rider NM-4B), a net metering customer receiving electric service under a schedule other than a time-of-use schedule with demand rates ("NMNTD") shall provide any RECs to DEC and DEP at no cost.

Per North Carolina Utilities Commission *Order Approving Rider and Granting Waiver Request* dated June 5, 2018 in Docket Nos. E-2, Sub 1106 and E-7, Sub 1113 ("NMNTD Order"), DEC and DEP are permitted to estimate the electric power generated by residential and nonresidential inverter-based solar PV systems on a NMNTD rate schedule with a nameplate capacity of 20 kW or less (residential) and 1,000 kW or less (non-residential) using generally accepted analytical tools. The NMNTD Order allows DEC and DEP to forego metering each generator individually and to use a scalable conversion factor based on the PVWattsTM Solar Calculator developed by the National Renewable Energy Laboratory ("NREL") for estimating the generation from NMNTD customers' solar facilities, as permitted in Commission Rule R8-67(g)(2).

DEC and DEP have complied with the NMNTD Order and have estimated the annual generation from NMNTD customers' solar facilities using the scalable conversion factor of 1.2 RECs per kilowatt DC, starting June 5, 2016, two years from the date of the NMNTD Order, or the date which the facility came online, whichever is later. DEC and

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May 05 2021

DEP have reported the total amount of estimated generation produced by the NMNTD facilities under the Riders directly into NC-RETS in a separately identified generation project, 'DE Carolinas Net Metering – NMNTD' and 'DE Progress Net Metering – NMNTD.'

The Companies have also provided a list of participating customers, including location and kW capacity of their installations, pulled from the Companies' billing and interconnection data systems, to NC-RETS monthly, as required by the NMNTD Order. To comply with this requirement, the Companies developed an automated report that runs on the first day of each month, capturing all connected NMNTD customers as of the last day of the prior month. One of the requirements for identifying customers to be included in this report was to filter by customers where "Service Agreement Price Name does not contain TOUD." The Companies thought this filter would eliminate all non-TOU demand customers and therefore only include customers for which the Companies have the rights to the RECs generated by their facilities. However, the Companies have recently learned that some TOU demand rate schedules have been inadvertently included in the monthly reports, as well as in the calculation of RECs reported to NC-RETS annually. Upon this realization, the Companies extensively researched the historical reports to determine the number of RECs that belong to the TOU demand customers and were incorrectly included in DEC's and DEP's totals previously provided to NC-RETS. This raises the possibility that these RECs that belong to TOU demand customers may have been double counted, if those TOU demand customers have registered those RECs in other registries or claimed them in corporate advertisements. The proposed solution outlined below will remove any potentially double-counted RECs from the Companies' inventories. The Companies have revised the criteria for the automated report to ensure all TOU demand rate schedules are excluded from the report going forward.

From June 5, 2016 through December 31, 2020, DEC reported a total of 269,455 net metering RECs to NC-RETS, of which 67,815 actually belong to TOU Demand customers, leaving a total of 201,640 RECs that belong to DEC. DEC has already retired, or selected for retirement, 243,671 net metering RECs for 2018-2020 REPS compliance, which means that DEC needs to retire an additional 42,031 RECs now in order to account for the difference. DEC had enough surplus general RECs in 2018 and 2019 to cover the RECs at issue. To make these corrections, DEC asks that the Commission direct the NC-RETS Administrator to adjust the following accounts:

- Transfer 42,031 DE Carolinas Net Metering – NMNTD RECs that were selected for retirement for DEC's 2020 compliance currently in sub-account Pending-2446 to the NC-RETS administrator account.
- Transfer 25,784 DE Carolinas Net Metering – NMNTD RECs from sub-account Active-320 to the NC-RETS administrator account.
- Retire all 67,815 DE Carolinas Net Metering – NMNTD RECs transferred to the NC-RETS administrator account to remove them from the system.

DEC will then select for retirement an additional 42,031 RECs in its inventory to meet its 2020 REPS Compliance Requirements and will move them into sub-account Pending-2446.

From June 5, 2016 through December 31, 2020, DEP reported a total of 210,268 net metering RECs to NC-RETS, of which 63,301 actually belong to TOU Demand customers, leaving a total of 146,967 RECs that belong to DEP. DEP has only retired 13,758 of these RECs for 2019 compliance and therefore no changes are needed to DEP's prior REC retirements. To correct the historical production of net metering RECs, DEP asks that the Commission direct the NC-RETS Administrator to adjust the following accounts:

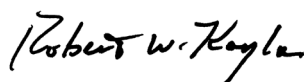
- Transfer 20,884¹ vintage 2017 DE Progress Net Metering – NMNTD RECs from sub-account Active 192 to the NC-RETS administrator account.
- Transfer 13,281 vintage 2018 DE Progress Net Metering – NMNTD RECs from sub-account Active 192 to the NC-RETS administrator account.
- Transfer 13,966 vintage 2019 DE Progress Net Metering – NMNTD RECs from sub-account Active 192 to the NC-RETS administrator account.
- Transfer 15,170 vintage 2020 DE Progress Net Metering – NMNTD RECs from sub-account Active 192 to the NC-RETS administrator account.
- Retire all 63,301 DE Progress Net Metering – NMNTD RECs transferred to the NC-RETS administrator account to remove them from the system.

The REC numbers detailed above are summarized in Table 1 in Appendix A of this letter.

In order to make the changes requested above, DEC and DEP ask the Commission for a waiver of Section 5.4 of the NC-RETS Operating Procedures, which allows for an account holder to apply for a prior period adjustment to adjust the meter data submitted to create RECs within a year of the generation of the energy that is associated with the REC.

Thank you for your attention in this matter. If you have any questions, please let me know.

Sincerely,



Robert W. Kaylor, P.A.

cc: Robert Josey, Staff Attorney

¹ DEP retired 7,599 incorrectly issued vintage 2016 RECs for 2019 compliance. To make up for these RECs, DEP will transfer 20,884 vintage 2017 RECs to the NC-RETS administrator account, 7,599 for the incorrectly issued 2016 RECs + 13,285 incorrectly issued vintage 2017 RECs.

DEC, DEP Net Metering REC Summary

DEC

	<u>June - Dec</u> <u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>Total 2016-2020 RECs</u>
NM RECs originally reported to NC-RETS	17,774	35,345	44,647	68,174	103,515	269,455
<i>TOUD RECs that should have been excluded</i>	6,756	12,212	13,023	16,481	19,343	67,815
Corrected Number of NM RECs	11,018	23,133	31,624	51,693	84,172	201,640
	Retired for 2018 compliance	Retired for 2019 compliance	Retired for 2020 compliance	Total DEC NM RECs already retired for REPS compliance		
RECs already retired for compliance	17,774	35,345	44,647	68,174	77,731	243,671
RECs remaining in inventory	-	-	-	-	25,784	
						Additional DEC RECs that need to be retired to account for updated NM RECs (42,031)

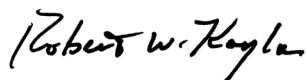
DEP

	<u>June - Dec</u> <u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>Total 2016-2020 RECs</u>
NM RECs originally reported to NC-RETS	13,758	26,783	34,222	54,668	80,837	210,268
<i>TOUD RECs that should have been excluded</i>	7,599	13,285	13,281	13,966	15,170	63,301
Corrected Number of NM RECs	6,159	13,498	20,941	40,702	65,667	146,967
	Retired for 2019 compliance					Total DEP NM RECs already retired for REPS compliance
RECs already retired for compliance	13,758	-	-	-	-	13,758
RECs remaining in inventory	-	26,783	34,222	54,668	80,837	
						Updated Number of DEP NM RECs in Inventory 133,209

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of Duke Energy Carolinas, LLC and Duke Energy Progress, LLC's Notification about Reporting of Net Metering RECs, in Docket Nos. E-7, Subs 1113 and 1246 and E-2, Sub 1106, has been served by electronic mail (e-mail), hand delivery or by depositing a copy in the United States Mail, first class postage prepaid, properly addressed to the parties of record.

This the 4th day of May, 2021.



Robert W. Kaylor
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ATTORNEY FOR DUKE ENERGY
CAROLINAS, LLC

I. RENEWABLE ENERGY CERTIFICATES

[BEGIN CONFIDENTIAL]

[illegible]

Docket No. E-7, Sub 1246
PAGE 4
REDACTED VERSION

that the Company has banked for use in compliance in

[illegible]

[END CONFIDENTIAL]

DUKE ENERGY CAROLINAS, LLC
Docket No. E-7, Sub 1246

REDACTED VERSION

Revised Jennings Exhibit No. 2
Page 1 of 9
May 5, 2021

Compliance Costs		EMF Period					Billing Period			
		January 1, 2020 - December 31, 2020					September 1, 2021 - August 31, 2022			
Line No.	Renewable Resource	RECs only	Total Units (A) (B)	Total Cost per Unit	Total Cost	RECs	Total Units (A) (B)	Total Cost per Unit	Total Cost	RECs

DUKE ENERGY CAROLINAS, LLC
Docket No. E-7, Sub 1246

REDACTED VERSION

Revised Jennings Exhibit No. 2
Page 2 of 9
May 5, 2021

Compliance Costs		EMF Period					Billing Period			
		January 1, 2020 - December 31, 2020					September 1, 2021 - August 31, 2022			
Line No.	Renewable Resource	RECs only	Total Units (A) (B)	Total Cost per Unit	Total Cost	RECs	Total Units (A) (B)	Total Cost per Unit	Total Cost	RECs

DUKE ENERGY CAROLINAS, LLC
Docket No. E-7, Sub 1246

REDACTED VERSION

Revised Jennings Exhibit No. 2
Page 3 of 9
May 5, 2021

Compliance Costs		EMF Period					Billing Period			
		January 1, 2020 - December 31, 2020					September 1, 2021 - August 31, 2022			
Line No.	Renewable Resource	RECs only	Total Units (A) (B)	Total Cost per Unit	Total Cost	RECs	Total Units (A) (B)	Total Cost per Unit	Total Cost	RECs

DUKE ENERGY CAROLINAS, LLC
Docket No. E-7, Sub 1246

REDACTED VERSION

Revised Jennings Exhibit No. 2
Page 4 of 9
May 5, 2021

Compliance Costs		EMF Period					Billing Period			
		January 1, 2020 - December 31, 2020					September 1, 2021 - August 31, 2022			
Line No.	Renewable Resource	RECs only	Total Units (A) (B)	Total Cost per Unit	Total Cost	RECs	Total Units (A) (B)	Total Cost per Unit	Total Cost	RECs

DUKE ENERGY CAROLINAS, LLC
Docket No. E-7, Sub 1246

REDACTED VERSION

Revised Jennings Exhibit No. 2
Page 5 of 9
May 5, 2021

Compliance Costs		EMF Period					Billing Period			
		January 1, 2020 - December 31, 2020					September 1, 2021 - August 31, 2022			
Line No.	Renewable Resource	RECs only	Total Units (A) (B)	Total Cost per Unit	Total Cost	RECs	Total Units (A) (B)	Total Cost per Unit	Total Cost	RECs

DUKE ENERGY CAROLINAS, LLC
Docket No. E-7, Sub 1246

REDACTED VERSION

Revised Jennings Exhibit No. 2
Page 6 of 9
May 5, 2021

Compliance Costs		EMF Period					Billing Period			
		January 1, 2020 - December 31, 2020					September 1, 2021 - August 31, 2022			
Line No.	Renewable Resource	RECs only	Total Units (A) (B)	Total Cost per Unit	Total Cost	RECs	Total Units (A) (B)	Total Cost per Unit	Total Cost	RECs

DUKE ENERGY CAROLINAS, LLC
Docket No. E-7, Sub 1246

REDACTED VERSION

Revised Jennings Exhibit No. 2
Page 7 of 9
May 5, 2021

Compliance Costs

EMF Period

Billing Period

January 1, 2020 - December 31, 2020

September 1, 2021 - August 31, 2022

Line No.	Renewable Resource	RECs only	Total Units (A) (B)	Total Cost per Unit	Total Cost	RECs	Total Units (A) (B)	Total Cost per Unit	Total Cost	RECs
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DUKE ENERGY CAROLINAS, LLC
Docket No. E-7, Sub 1246

REDACTED VERSION

Revised Jennings Exhibit No. 2
Page 8 of 9
May 5, 2021

Compliance Costs		EMF Period					Billing Period			
		January 1, 2020 - December 31, 2020					September 1, 2021 - August 31, 2022			
Line No.	Renewable Resource	RECs only	Total Units (A) (B)	Total Cost per Unit	Total Cost	RECs	Total Units (A) (B)	Total Cost per Unit	Total Cost	RECs

Compliance Costs		EMF Period					Billing Period			
		January 1, 2020 - December 31, 2020					September 1, 2021 - August 31, 2022			
Line No.	Renewable Resource	RECs only	Total Units (A) (B)	Total Cost per Unit	Total Cost	RECs	Total Units (A) (B)	Total Cost per Unit	Total Cost	RECs
215	Other Incremental (see Conf. Jennings Exhibit No. 3 for Incremental Cost worksheet)				\$ 1,385,663			\$ 1,436,600		
216	Billing Period estimated receipts related to contract performance					Note 1		\$ (1,000,000)	Note 1	
217	Solar Rebate Program (see Conf. Jennings Exhibit No. 3 for cost detail)				\$ 1,494,134			\$ 2,339,100		
218	Research (see Conf. Jennings Exhibit No. 3 for Research cost detail)				\$ 995,700			\$ 977,300		
219	Total Other Incremental and Research Cost				\$ 3,875,497			\$ 3,753,000		
221	EMF Period actual credits for receipts related to contracts - to Williams Exhibit No.4 - footnote (3)				\$ (62,500)	Note 1				

Note 1: EMF Period contract receipts are not included in the under/overcollection calculation on Revised Williams Exhibit No. 2, instead they are credited directly to customer class on Revised Williams Exhibit No. 4. Estimated contract receipts are included in Billing Period total other incremental cost as a reduction in REPS charges proposed for the Billing Period.

Footnotes:

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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)

**SUPPLEMENTAL
TESTIMONY OF
VERONICA I. WILLIAMS**

OFFICIAL COPY

May 05 2021

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. DID YOU PREVIOUSLY FILE DIRECT TESTIMONY IN THIS**
5 **MATTER BEFORE THE NORTH CAROLINA UTILITIES**
6 **COMMISSION?**

7 A. Yes. I filed direct testimony on behalf of Duke Energy Carolinas, LLC
8 ("DEC" or the "Company") in this matter on February 23, 2021.

9 **Q. WHAT IS THE PURPOSE OF YOUR SUPPLEMENTAL**
10 **TESTIMONY?**

11 A. The purpose of my supplemental testimony is to update the North Carolina
12 Utilities Commission on information presented in the exhibits filed with my
13 direct testimony. The Company determined that Confidential Jennings
14 Exhibit No. 2, filed in this docket on February 23, 2021, reflected line item
15 errors in the incremental cost forecasts for two listed suppliers, resulting in
16 the overstatement of estimated incremental REPS rider cost for the Billing
17 Period. This error affected the calculation of the prospective rider
18 component of the proposed monthly REPS charges. In addition, Jennings
19 Exhibit No. 2 included an error in the calculation of the number of net
20 metering renewable energy certificates ("RECs") generated during the
21 calendar-year 2020 test period as well as the prospective Billing Period.
22 The result was a reporting error requiring remediation related to the number
23 of ineligible RECs previously retired or selected for retirement, but with no

1 effect on the calculation of the proposed REPS riders. Additionally, the
2 Company updated estimated Competitive Procurement of Renewable
3 Energy (“CPRE”) RECs reported for the Billing Period, with no effect on
4 the proposed riders as it was a REC quantity-only change. Finally, at the
5 request of the Public Staff, the Company modified the calculations
6 allocating general requirement compliance cost that incorporate energy
7 efficiency (“EE”) savings contributed by customer class. This change
8 affects both the EMF and Billing Period components of the proposed REPS
9 riders. The updated information presented in my supplemental testimony
10 and revised exhibits incorporates the Company’s corrections of the errors
11 noted above, which are described in detail by Company witness Megan W.
12 Jennings in her supplemental testimony filed in this docket, as well as the
13 customer class cost allocation change.

14 **Q. PLEASE IDENTIFY THE CORRECTIONS INCORPORATED IN**
15 **THE REVISED EXHIBITS FILED WITH THIS SUPPLEMENTAL**
16 **TESTIMONY AND THE RESULTING DIFFERENCES WHEN**
17 **COMPARED TO THE SAME EXHIBITS FILED PREVIOUSLY**
18 **WITH YOUR DIRECT TESTIMONY.**

19 A. Confidential Revised Williams Exhibit No. 1, Page 2 incorporates the
20 decrease to incremental REPS rider cost of [BEGIN CONFIDENTIAL]
21 [REDACTED] [END CONFIDENTIAL] identified by witness Jennings in
22 her supplemental testimony. Confidential Revised Williams Exhibit No. 1,
23 Page 2 reflects the following adjustments to incremental cost: [BEGIN

1 **CONFIDENTIAL]** [REDACTED]
2 [REDACTED]
3 [REDACTED]
4 [REDACTED]
5 [REDACTED]
6 [REDACTED]
7 [REDACTED]
8 [REDACTED]

9 [REDACTED] **[END CONFIDENTIAL]**. Confidential Revised
10 Williams Exhibit No. 3, Page 1 shows the net decrease in incremental REPS
11 cost for the Billing Period of **[BEGIN CONFIDENTIAL]** [REDACTED]
12 [REDACTED] **[END CONFIDENTIAL]**

13 North Carolina retail portion of the decrease is reflected in the total on Line
14 No. 11, with cost category amounts shown on Line Nos. 9-10 updated
15 accordingly. These cost category totals carry forward to Confidential
16 Revised Williams Exhibit No. 3, Page 2, Line Nos. 4 and 8.

17 **Q. ARE THERE OTHER ADJUSTMENTS INCORPORATED IN THE**
18 **REVISED EXHIBITS FILED WITH THIS SUPPLEMENTAL**
19 **TESTIMONY?**

20 **A.** Yes. As noted in my direct testimony filed in this docket, incremental costs
21 incurred to meet the Company's general REPS compliance requirement are
22 allocated among customer classes in a manner that gives credit for EE RECs
23 (for which there are no incremental REPS costs) according to the relative

1 energy reduction contributed by each customer class. As a result, general
2 REPS compliance requirement costs are allocated among customer classes
3 based on each class' pro-rata share of requirements for non-EE general
4 requirement RECs. (The Company commonly refers to its general
5 requirement as its overall total REPS requirement set forth in G.S. § 62-
6 133.8(b), net of the three set-asides.) The calculations incorporated in the
7 exhibits filed with my direct testimony reflect the customer class allocation
8 method recommended by the Public Staff, and accepted by the Commission
9 in its November 17, 2017 *Order Approving REPS and REPS EMF Rider*
10 *and Approving REPS Compliance Report*, in Duke Energy Progress, LLC's
11 2017 REPS rider filing in Docket No. E-2, Sub 1144.

12 At the request of the Public Staff, in the current docket the Company
13 is making an adjustment to the customer class allocation of general
14 requirement REPS costs that calculates the EE RECs contribution of each
15 class as a percentage of the Company's total REPS compliance requirement.
16 This modification designated by the Public Staff recognizes that the limit
17 for use of EE savings to meet the Company's REPS requirements is a
18 percentage of the Company's total requirement including the amount that
19 can be met with EE RECs. The customer class allocations calculations are
20 further simplified by incorporating the actual and projected total
21 compliance requirements rather than deriving total requirements using the
22 EMF and Billing Period actual and forecast levels of general RECs
23 procured.

1 The updated calculations are shown on Confidential Revised
2 Williams Exhibit No. 2, page 2 and No. 3, page 2, Line Nos. 5-8 on each
3 page. The changes affect the allocation of general requirement incremental
4 costs for both the experience modification factor (“EMF”) and Billing
5 Periods, and are reflected in Revised Williams Exhibit No. 2, page 3,
6 Exhibit No. 3, page 3, and Exhibit Nos 4 and 5, all filed with this
7 supplemental testimony.

8 The Company notes that any deviation from allocating costs
9 according to the statutory per-account cost cap ratios creates the potential
10 for the resulting charges computed for one or more classes to exceed the
11 per-account cost cap(s). If that occurs, the Company would continue to
12 reallocate the costs in excess of the cap for the affected customer class to
13 the other customer classes to the extent required to produce charges for all
14 classes that do not exceed the respective caps.

15 Finally, the REC quantity adjustments for net-metering and CPRE
16 RECs described by Company witness Jennings in her supplemental
17 testimony are reflected in the appropriate columns in Confidential Revised
18 Williams Exhibit No. 1, with no effects on the revised proposed riders.

19 **Q. INCORPORATING THE CORRECTIONS AND ADJUSTMENTS**
20 **IDENTIFIED ABOVE, WHAT ARE THE REVISED PROPOSED**
21 **RIDERS AND WHAT ARE THE DIFFERENCES BETWEEN THE**
22 **UPDATED PROPOSED RIDERS AND THOSE PREVIOUSLY**

1 **PROPOSED IN THIS DOCKET, AS WELL AS THE RIDERS**
 2 **CURRENTLY IN EFFECT?**

3 A. The reduction in estimated Billing Period cost to correct the forecast REC
 4 cost error for two suppliers noted at the beginning of this testimony resulted
 5 in a reduction in costs allocated to all customer classes. However, the
 6 modification to the calculation allocating general requirement compliance
 7 costs among customer classes, including credits for EE RECs contributions
 8 by customer class, resulted in a redistribution of the general requirement
 9 cost component among customer classes for both the EMF and Billing
 10 Periods. Revised Williams Exhibit No. 4 includes the cost changes by
 11 customer class for the EMF and Billing Periods discussed above. The
 12 revised proposed monthly REPS charges and the REPS charges originally
 13 proposed are compared below. The rates proposed are also reflected in
 14 Revised Williams Exhibit No. 5, filed with this testimony.

Customer class	Monthly EMF Rider	Monthly REPS rider	Combined Monthly Rider – excl. regulatory fee	Combined Monthly Rider – incl. regulatory fee
Revised – filed May 5, 2021				
Residential	\$ 0.10	\$ 0.84	\$ 0.94	\$ 0.94
General	\$ 0.78	\$ 4.35	\$ 5.13	\$ 5.14
Industrial	\$10.99	\$18.00	\$ 28.99	\$ 29.03
Original – filed February 23, 2021				
Residential	\$0.11	\$ 0.99	\$1.10	\$1.10
General	\$0.76	\$ 4.24	\$5.00	\$5.01
Industrial	\$7.60	\$(13.62)	\$(6.02)	\$(6.03)
Change – increase/(decrease)				
Residential	\$(0.01)	\$ (0.15)	\$ (0.16)	\$ (0.16)
General	\$ 0.02	\$ 0.11	\$ 0.13	\$ 0.13
Industrial	\$ 3.39	\$ 31.62	\$ 35.01	\$ 35.06

The following tables show the currently-proposed revised monthly combined REPS rider charges, and a comparison to the monthly combined REPS rider charges proposed and filed with my direct testimony on February 23, 2021, as well as a comparison to the combined monthly REPS rider charges currently in effect through September 30, 2021 - with and without the regulatory fee applied.

Excluding regulatory fee:

Customer class	REVISED proposed REPS rider filed May 5, 2021	Proposed REPS rider filed Feb 23, 2021	Difference – increase/ (decrease)	Rider currently in effect through Sep 30, 2021	Difference – increase/ (decrease)
	(a)	(b)	(c) = (a) – (b)	(d)	(e) = (a) – (d)
Residential	\$ 0.94	\$ 1.10	\$ (0.16)	\$ 0.78	\$ 0.16
General	\$ 5.13	\$ 5.00	\$ 0.13	\$ 3.81	\$ 1.32
Industrial	\$28.99	\$ (6.02)	\$ 35.01	\$ 17.55	\$ 11.44

Including regulatory fee:

Customer class	REVISED proposed REPS rider filed May 5, 2021	Proposed REPS rider filed Feb 23, 2021	Difference – increase/ (decrease)	Rider currently in effect through Sep 30, 2021	Difference – increase/ (decrease)
	(a)	(b)	(c) = (a) – (b)	(d)	(e) = (a) – (d)
Residential	\$ 0.94	\$1.10	\$ (0.16)	\$ 0.78	\$ 0.16
General	\$ 5.14	\$5.01	\$ 0.13	\$ 3.81	\$ 1.33
Industrial	\$29.03	\$(6.03)	\$ 35.06	\$ 17.57	\$ 11.46

In summary, the Company's revised proposed monthly combined REPS and REPS EMF riders by class, including regulatory fee are: \$0.94 residential, \$5.14 general service, and \$29.03 industrial. The proposed

1 monthly rider increases by customer class, including regulatory fee are:

2 \$0.16 residential, \$1.33 general service, and \$11.46 industrial.

3 **Q. DOES THIS CONCLUDE YOUR SUPPLEMENTAL TESTIMONY?**

4 **A. Yes.**

DUKE ENERGY CAROLINAS, LLC

Docket No. E-7, Sub 1246

Compliance Costs for the EMF Period January 1, 2020 to December 31, 2020

REDACTED VERSION

Revised Williams Exhibit No. 1

Page 1 of 2

May 5, 2021

Line No.	Renewable Resource	RECs	MWh (Energy)	Total Cost	Avoided Cost	Incremental Cost	Avoided Cost Recovered in Fuel Cost Adjustment Rider
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\$ 37,991,060

9	Other Incremental		\$	1,385,663		\$	1,385,663	(g)
10	Solar Rebate Program		\$	1,494,134	Jennings Exhibit No. 2	\$	1,494,134	(h)
11	Research		\$	995,700		\$	995,700	(i)

12 Total **\$ 41,866,557** (below)

Revised Jennings Exhibit No. 2

Incremental cost category - excluding Solar Rebate Program cost (allocated to DEC NC retail only)	Incremental Cost	Percent of Total Incremental Cost
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15 Total combined DEC retail and wholesale customer REPS compliance cost **\$ 40,372,423**

17 Total - subject to allocation to DEC NC retail **\$ 41,866,557** (above)

Allocate incremental cost of solar resources between solar compliance requirement and general compliance requirement:

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DUKE ENERGY CAROLINAS, LLC
Docket No. E-7, Sub 1246
Projected Compliance Costs for the Billing Period September 1, 2021 to August 31, 2022

REDACTED VERSION

Revised Williams Exhibit No. 1
Page 2 of 2
May 5, 2021

Line No.	Renewable Resource	RECs	MWh (Energy)	Total Cost	Avoided Cost	Incremental Cost	Avoided Cost Recovered in Fuel Cost Adjustment Rider
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					\$	31,273,434	
10	Other Incremental		\$	1,436,600		\$	1,436,600 (g)
11	Estimated receipts related to contract performance		\$	(1,000,000)	Jennings Exhibit No. 2	\$	(1,000,000) (q)
12	Solar Rebate Program		\$	2,339,100		\$	2,339,100 (h)
13	Research		\$	977,300		\$	977,300 (i)
14	Total					\$	35,026,434 (below)

Jennings Exhibit No. 2

Incremental cost category - excluding Solar Rebate Program cost (allocated to DEC NC retail only)	Incremental Cost	Percent of Total Incremental Cost
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17	Total combined DEC retail and wholesale customer REPS compliance cost	\$	32,687,334	
19	Total - subject to allocation to DEC NC retail	\$	35,026,434	(above)

Allocate estimated incremental cost of solar resources between solar compliance requirement and general compliance requirement:

18		
19		
20		
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22		
23		

Compliance Costs - EMF Period January 1, 2020 - December 31, 2020

DEC North Carolina Retail Only

Calculate Set-aside and other incremental costs per customer class:

Line No.	Customer class	Total unadjusted number of accounts ⁽¹⁾	Annual per account cost cap	Calculated annual revenue cap	Cost cap allocation factor	Allocated annual Set-aside, Other Incremental, Solar Rebate Program, and Research Cost
1	Residential	1,778,011	\$ 27	48,006,297	52.82%	\$ 14,421,524
2	General	254,372	\$ 150	38,155,800	41.98%	\$ 11,462,346
3	Industrial	4,724	\$ 1,000	4,724,000	5.20%	\$ 1,419,132
4	Total	2,037,107		90,886,097	100.00%	\$ 27,303,002

Williams Ex. No. 2 Pg 1
Line No. 9

Calculate General Requirement incremental costs per customer class:

Line No.	Customer class	Number of RECs for General compliance ⁽³⁾ (a)	% of EE RECs supplied by class ⁽²⁾	REC requirement supplied by EE by class ^(b)	Number of General RECs net of EE (c) = (a) - (b)	General cost allocation factor (e) = (c) / (d)	Allocated annual General incremental costs
5	Residential		42.3167%			56.73%	\$ 6,826,915
6	General		45.0355%			40.85%	\$ 4,915,908
7	Industrial		12.6478%			2.42%	\$ 291,224
8	Total		100.0000%			100.00%	\$ 12,034,047

(d)

Williams Ex. No. 2 Pg 1
Line No. 10

Total cost allocation by customer class:

		Total Incremental REPS cost by class	% Incremental REPS cost by class
9	Residential	\$ 21,248,439	54.02%
10	General	\$ 16,378,254	41.64%
11	Industrial	\$ 1,710,356	4.35%
12	Total	\$ 39,337,049	100.00%

Williams Ex. No. 2 Pg 1
Line No. 11

- (1) Average number of accounts subject to REPS charge during 2020.
- (2) EE allocated to account type according to actual relative contribution by customer class of EE RECs.
- (3) Total General RECs per note (4) * "Cost Cap Allocation Factor" by class per line Nos. 1-3 above.
- (4) General REC requirement for EMF Period (total requirement net of solar, poultry, and swine set-asides)
- (5) Total REC requirement met with EE savings - capped at 25% total - allocated by class according to contribution by class

Total compliance requirement - EMF period	5,864,253
Maximum allowed to be met with EE savings	25%
REC requirement supplied by EE savings	1,466,063

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Revised Williams Exhibit No. 2
Page 3 of 3
May 5, 2021

Compliance Costs - EMF Period January 1, 2020 - December 31, 2020

Calculate incremental cost under/(over) collection per customer class:

DEC North Carolina Retail Only								
Line No.	Customer class	Allocated annual Set-aside, Other Incremental, Solar Rebate Program, and Research cost	Allocated annual General incremental costs	Total incremental costs incurred January - December 2020	Actual DEC NC retail REPS revenues realized January - December 2020	REPS EMF - under/(over)-collection, before interest	Interest on over-collection ⁽¹⁾	REPS EMF - under/(over)-collection
1	Residential	\$ 14,421,524	\$ 6,826,915	\$ 21,248,439	\$ 19,163,075	\$ 2,085,364	\$ -	\$ 2,085,364
2	General	\$ 11,462,346	\$ 4,915,908	\$ 16,378,254	\$ 13,974,775	\$ 2,403,479	\$ -	\$ 2,403,479
3	Industrial	\$ 1,419,132	\$ 291,224	\$ 1,710,356	\$ 1,092,916	\$ 617,440	\$ -	\$ 617,440
4	Total	\$ 27,303,002	\$ 12,034,047	\$ 39,337,049	\$ 34,230,766	\$ 5,106,283	\$ -	\$ 5,106,283
		Revised Williams Ex. No. 2 Pg 2 Line No. 4	Revised Williams Ex. No. 2 Pg 2 Line No. 8	Revised Williams Ex. No. 2 Pg 2 Line No. 12				

Note:

- (1) Interest calculated at annual rate of 10% for number of months from mid-point of EMF period to mid-point of prospective rider billing period.

Projected Compliance Costs - Billing Period September 1, 2020 - August 31, 2021

Allocate incremental cost per customer class:

Combined DEC North Carolina Retail and Wholesale									
Line No.	Customer class	Total unadjusted number of accounts ⁽¹⁾	Adjustment for self-supplied requirements ⁽¹⁾	Total adjusted number of accounts ⁽¹⁾	Annual per account cost cap	Annual adjusted revenue cap	Cost cap allocation factor	Combined incremental REPS compliance cost for DEC NC retail / wholesale	Annual per account charge ⁽²⁾
1	Residential	1,928,005	745,868	1,182,137	\$ 27	\$ 31,917,699	53.7%	\$ 17,546,561	\$ 14.84
2	General	268,041	104,161	163,880	\$ 150	\$ 24,582,000	41.4%	\$ 13,516,213	\$ 82.48
3	Industrial	4,854	1,901	2,953	\$ 1,000	\$ 2,953,000	5.0%	\$ 1,624,560	\$ 550.14
4	Total	2,200,900	851,930	1,348,970		\$ 59,452,699	100.0%	\$ 32,687,334	
Revised Williams Exhibit No. 1, page 2 Line No. 14									

DEC North Carolina Retail Only				
Line No.	Customer class	Total adjusted number of accounts - DEC NC retail ⁽¹⁾	Annual per account charge ⁽²⁾	Incremental REPS compliance cost allocated to DEC NC retail
5	Residential	1,075,106	\$ 14.84	\$ 15,954,573
6	General	151,658	\$ 82.48	\$ 12,508,752
7	Industrial	2,798	\$ 550.14	\$ 1,539,292
8	Total	1,229,562		30,002,617
(a)				

Percent allocated to DEC NC retail
91.79% (a) / (b)

DEC NC retail components for cost allocation to customer class				
		Incremental REPS compliance cost by type	DEC NC retail incremental REPS compliance cost by type	Add: Solar Rebate Program cost
9	Set-aside, Other Incremental, and Research, + Solar Rebate Program	62.5%	\$ 18,751,636	\$ 2,339,100
10	General RECs	37.5%	\$ 11,250,981	\$ -
11	Total incremental REPS compliance cost for DEC NC retail		30,002,617	2,339,100
Notes:		Revised Williams Exhibit No. 1, page 2 Line Nos. 15, 16	(a)	32,341,717

- (1) Projected number of accounts subject to REPS charge during the billing period.
- (2) Annual per account charges are the result of the allocation of REPS costs between Duke Energy Carolinas retail customers and the Company's wholesale REPS customers, and are used only for calculating the total cost obligations of Duke Energy Carolinas retail customers and the wholesale REPS customers, respectively. Proposed REPS rider charges per account are instead calculated using unadjusted REPS account totals by class - see Williams Ex. No. 4.

Projected Compliance Costs - Billing Period September 1, 2020 - August 31, 2021

DEC North Carolina Retail Only

Calculate Set-aside and other incremental costs per customer class:

Line No.	Customer class	Total unadjusted number of accounts ⁽¹⁾	Annual per account cost cap	Calculated annual revenue cap	Cost cap allocation factor	Allocated annual Set-aside, Other Incremental, Solar Rebate Program, and Research Cost
1	Residential	1,791,844	\$ 27	48,379,788	53.19%	\$ 11,218,078
2	General	252,763	\$ 150	37,914,450	41.68%	\$ 8,791,424
3	Industrial	4,663	\$ 1,000	4,663,000	5.13%	\$ 1,081,234
4	Total	2,049,270		90,957,238	100.00%	\$ 21,090,736

Revised Williams Ex.
No. 3 Pg 1 Line 9

Calculate General Requirement incremental costs per customer class:

Line No.	Customer class	Number of RECs for General compliance ⁽¹⁾ (a)	% of EE RECs supplied by class ⁽²⁾	REC requirement supplied by EE by class ⁽³⁾ (b)	Number of General RECs net of EE (c) = (a) - (b)	General cost allocation factor (e) = (c) / (d)	Allocated annual General incremental costs
5	Residential		42.3%			61.55%	\$ 6,924,978
6	General		45.0%			39.11%	\$ 4,400,259
7	Industrial		12.6%			-0.66%	\$ (74,256)
8	Total		100.0%			100.00%	\$ 11,250,981

(d)

Revised Williams Ex.
No. 3 Pg 1 Line 10

Total cost allocation by customer class:

		Total Incremental REPS cost by class	% Incremental REPS cost by class
9	Residential	\$ 18,143,056	56.10%
10	General	\$ 13,191,683	40.79%
11	Industrial	\$ 1,006,978	3.11%
12	Total	\$ 32,341,717	100.00%

Revised Williams Ex. No.
3 Pg 1 Line 11

- (1) Projected number of accounts subject to REPS charge during the billing period.
- (2) EE allocated to account type according to actual projected contribution by customer class of EE RECs.
- (3) Total General RECs per note (4) * "Cost Cap Allocation Factor" by class per line Nos. 1-3 above.
- (4) Forecast general REC requirement for Billing Period (Total requirement net of solar, poultry, and swine set-asides)
- (5) Total REC requirement projected to be met with EE savings - capped at 40% total - allocated by class according to contribution by class

Forecast total compliance requirement - billing period	7,119,168
Maximum allowed to be met with EE savings	40%
Forecast REC requirement supplied by EE savings	2,847,667

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Revised Williams Exhibit No. 3
Page 3 of 3
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Projected Compliance Costs - Billing Period September 1, 2020 - August 31, 2021

Calculate incremental cost to collect per customer class - Billing Period:

DEC North Carolina Retail Only

Line No.	Customer class	Allocated annual Set-aside, Other Incremental, Solar Rebate Program, and Research cost	Allocated annual General incremental costs	Total incremental cost - September 1, 2020 - August 31, 2122
1	Residential	\$ 11,218,078	\$ 6,924,978	\$ 18,143,056
2	General	\$ 8,791,424	\$ 4,400,259	\$ 13,191,683
3	Industrial	\$ 1,081,234	\$ (74,256)	\$ 1,006,978
4	Total	\$ 21,090,736	\$ 11,250,981	\$ 32,341,717
		Revised Williams Exhibit No. 3, Pg 2, line 4	Revised Williams Exhibit No. 3, Pg 2, line 8	Revised Williams Exhibit No. 3, Pg 2, line 12

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Revised Williams Exhibit No. 4
Page 1 of 1
May 5, 2021

Calculate DEC NC Retail monthly REPS rider components:

Line No.	Customer class	Total projected number of accounts -DEC NC retail ⁽¹⁾	Annual REPS EMF under/(over)-collection	Receipts for contract amendments, penalties, change-of-control, etc. ⁽³⁾	Total EMF costs/(credits)	Monthly EMF Rider ⁽²⁾	Projected total incremental REPS costs	Monthly REPS Rider ⁽²⁾
1	Residential	1,791,844	\$ 2,085,364	\$ (31,643)	\$ 2,053,721	\$ 0.10	\$ 18,143,056	\$ 0.84
2	General	252,763	\$ 2,403,479	\$ (24,391)	\$ 2,379,088	\$ 0.78	\$ 13,191,683	\$ 4.35
3	Industrial	4,663	\$ 617,440	\$ (2,547)	\$ 614,893	\$ 10.99	\$ 1,006,978	\$ 18.00
4		2,049,270	\$ 5,106,283	\$ (58,581)	\$ 5,047,702		\$ 32,341,717	
			Revised Williams Ex. No. 2 Pg 3 Line No. 4		Revised Williams Ex. No. 3 Pg 3 Line No. 4			

Compare total annual REPS charges per account to per-account cost caps:

Line No.	Customer class	Monthly EMF Rider ⁽²⁾	Monthly REPS Rider ⁽²⁾	Combined Monthly Rider ⁽²⁾	Regulatory Fee Multiplier	Total monthly REPS charge including regulatory fee	Total annual REPS charge including regulatory fee	Annual per account cost cap	Information only: Total annual REPS charge excluding solar rebate cost - for per-account cap comparison only
5	Residential	\$ 0.10	\$ 0.84	\$ 0.94	1.001302	\$ 0.94	\$ 11.28	\$ 27.00	\$ 10.45
6	General	\$ 0.78	\$ 4.35	\$ 5.13	1.001302	\$ 5.14	\$ 61.68	\$ 150.00	\$ 57.55
7	Industrial	\$ 10.99	\$ 18.00	\$ 28.99	1.001302	\$ 29.03	\$ 348.36	\$ 1,000.00	\$ 327.55

Notes:

- (1) Projected number of accounts subject to REPS charge during the billing period.
- (2) Per account rate calculations apply to Duke Energy Carolinas NC Retail customers only.
- (3) Credit for receipts for contract amendments, penalties, change-of-control, etc

Customer Class	Total contract receipts - EMF period Jan 2020 - Dec 2020	DEC NC retail percentage of EMF period costs - Williams Exhibit No. 2, Pg 1	Allocation to customer class - Revised Williams Exhibit No. 2, Pg 2	DEC NC retail - Receipts for contract amendments, penalties, change-of-control, etc.
Residential			54.02%	\$ (31,643)
General			41.64%	\$ (24,391)
Industrial			4.35%	\$ (2,547)
Total contract payments received	\$ (62,500)	\$ (58,581)	100.00%	\$ (58,581)
(a)		93.73%		

REPS (NC)
RENEWABLE ENERGY PORTFOLIO STANDARD RIDER

APPLICABILITY (North Carolina Only)

Service supplied to the Company's retail customer agreements is subject to a REPS Monthly Charge. This charge is adjusted annually, pursuant to North Carolina General Statute 62-133.8 and North Carolina Utilities Commission Rule R8-67 as ordered by the North Carolina Utilities Commission. This Rider is not applicable to agreements for the Company's outdoor lighting rate schedules, OL, PL, NL, nor for services defined as auxiliary to another agreement. An auxiliary service is defined as a non-demand metered, nonresidential service, provided on Schedule SGS, at the same premises, with the same service address, and with the same account name as an agreement for which a monthly REPS charge has been applied.

APPROVED REPS MONTHLY CHARGE

The Commission has ordered that a REPS Monthly Charge, which includes an Experience Modification Factor (EMF), be included in the customers' bills as follows:

RESIDENTIAL SERVICE AGREEMENTS

REPS Monthly Charge		0.84	\$/month
Experience Modification Factor	+	0.10	\$/month
Net REPS Monthly Charge		0.94	\$/month
Regulatory Fee Multiplier	×	1.001302	
Total REPS Monthly Charge per agreement per month		0.94	\$/month

GENERAL SERVICE AGREEMENTS

REPS Monthly Charge		4.35	\$/month
Experience Modification Factor	+	0.78	\$/month
Net REPS Monthly Charge		5.13	\$/month
Regulatory Fee Multiplier	×	1.001302	
Total REPS Monthly Charge per agreement per month		5.14	\$/month

INDUSTRIAL SERVICE AGREEMENTS

REPS Monthly Charge		18.00	\$/month
Experience Modification Factor	+	10.99	\$/month
Net REPS Monthly Charge		28.99	\$/month
Regulatory Fee Multiplier	×	1.001302	
Total REPS Monthly Charge per agreement per month		29.03	\$/month

USE OF RIDER

The REPS Billing Factor is not included in the Company's current rate schedules and will apply as a separate charge to each agreement for service covered under this Rider as described above, unless the service qualifies for a waiver of the REPS Billing Factor for an auxiliary service. An auxiliary service is a non-demand metered, nonresidential service on Schedule SGS for the same customer at the same service location.

To qualify for an auxiliary service, not subject to this Rider, the Customer must notify the Company, and the Company must verify that such agreement is considered an auxiliary service, after which the REPS Billing Factor will not be applied to qualifying auxiliary service agreements. The Customer shall also be responsible for notifying the Company of any change in service that would no longer qualify the service as auxiliary.