

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)

**SUPPLEMENTAL
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. 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 25, 2020.

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 25, 2020, reflected a line
15 item error in the incremental cost component of the total cost shown,
16 resulting in an overstatement of incremental REPS rider cost. In addition,
17 Jennings Exhibit No. 2 included a minor error in the solar rebate
18 amortization cost total. Both errors affected cost for the January 1, 2019
19 through December 31, 2019 experience modification factor (“EMF”) period
20 only. The updated information presented in my supplemental testimony and
21 exhibits incorporates the Company’s corrections of these errors, which are
22 described in detail by Company witness Megan W. Jennings in her
23 supplemental testimony filed in this docket.

1 Q. PLEASE IDENTIFY THE CORRECTIONS INCORPORATED IN
2 THE REVISED EXHIBITS FILED WITH THIS SUPPLEMENTAL
3 TESTIMONY AND THE RESULTING DIFFERENCES WHEN
4 COMPARED TO THE SAME EXHIBITS FILED PREVIOUSLY
5 WITH YOUR DIRECT TESTIMONY.

6 A. Confidential Revised Williams Exhibit No. 1, Page 1 incorporates the
7 decrease to incremental REPS rider cost of \$(158,000) and the \$57 increase
8 to incremental REPS rider cost identified by witness Jennings in her
9 supplemental testimony. The following adjustments are reflected in the
10 appropriate cost components shown on Confidential Revised Williams
11 Exhibit No. 1, Page 1: **[BEGIN CONFIDENTIAL]** [REDACTED]
12 [REDACTED]
13 [REDACTED]
14 [REDACTED]
15 [REDACTED] **[END CONFIDENTIAL]**. The \$57 increase in
16 Solar Rebate costs is included in the revised total on Line No. 13, and the
17 net decrease of \$(157,943) for these adjustments is reflected in total
18 incremental cost on Line No. 15 on Confidential Revised Williams Exhibit
19 No. 1, Page 1. Confidential Revised Williams Exhibit No. 2, Page 1 shows
20 the net decrease in incremental REPS cost for the EMF period of \$(157,943)
21 on Line No. 4, and the associated \$(148,240) North Carolina retail portion
22 of the decrease is reflected in the total on Line No. 8, and amounts shown
23 on Line Nos. 9-12 are updated accordingly. These updated amounts carry

1 forward to, and are included in, totals shown on Confidential Revised
2 Williams Exhibit No. 2, Page 2 and Revised Williams Exhibit No. 2, Page
3 3. The result is a final decrease of \$148,240, from an original net total
4 \$427,425 undercollection for the EMF Period to an updated net total
5 undercollection of \$279,185 for the EMF Period, before the effect of
6 interest. The General service customer class shows an overcollection for
7 the EMF Period before and after the update, but the overcollection amount
8 is greater than originally calculated as shown on Confidential Revised
9 Williams Exhibit No. 2, Page 3, and the corresponding interest credit on the
10 overcollection increased by a total of \$(10,455) as well. Including the
11 change in overcollection interest, the updated EMF Period shows a net total
12 undercollection of \$263,703, compared to a net total undercollection in the
13 original February 25, 2020 rider filing of \$422,398, reflecting a final cost
14 decrease of \$158,695.

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

18 A. Yes. Per request of the Public Staff, the Company updated the “% of EE
19 RECs supplied by Class” included on Line Nos. 5 – 7 on Confidential
20 Revised Williams Exhibit No. 2, Page 2 and Confidential Revised Williams
21 Exhibit No. 3, Page 2. In order to be consistent with these amounts in prior
22 year filings, the Company extended the percentages to one-tenth of a
23 percent, rather than rounding to the percentage point as shown on

1 Confidential Williams Exhibit No. 2, Page 2 and Confidential Williams
2 Exhibit No. 3, Page 2, originally filed on February 25, 2020. These
3 adjustments resulted in no change to total incremental REPS cost for the
4 EMF or prospective billing periods but affected the allocation of
5 incremental REC costs among customer classes as calculated on
6 Confidential Revised Williams Exhibit No. 2, Page 2 and No. 3, Page 2.

7 **Q. INCORPORATING THE CORRECTIONS AND ADJUSTMENTS**
8 **IDENTIFIED ABOVE, WHAT ARE THE REVISED PROPOSED**
9 **RIDERS AND WHAT ARE THE DIFFERENCES BETWEEN THE**
10 **UPDATED PROPOSED RIDERS AND THOSE PREVIOUSLY**
11 **PROPOSED IN THIS DOCKET, AS WELL AS THE RIDERS**
12 **CURRENTLY IN EFFECT?**

13 A. Revised Williams Exhibit No. 4 includes the cost changes by customer class
14 for the EMF and billing periods discussed above. The revised proposed
15 monthly REPS charges and the REPS charges originally proposed are
16 compared below. The rates proposed are also reflected in Revised Williams
17 Exhibit No. 5, filed with this testimony.

1

Customer class	Monthly EMF Rider	Monthly REPS rider	Combined Monthly Rider – excl. regulatory fee	Combined Monthly Rider – incl. regulatory fee
Revised – filed May 15, 2020				
Residential	\$ (0.02)	\$ 0.80	\$ 0.78	\$ 0.78
General	\$ (0.18)	\$ 3.99	\$ 3.81	\$ 3.81
Industrial	\$ 1.37	\$16.18	\$ 17.55	\$ 17.57
Original – filed February 25, 2020				
Residential	\$(0.01)	\$ 0.79	\$0.78	\$0.78
General	\$(0.15)	\$ 3.99	\$3.84	\$3.84
Industrial	\$1.84	\$16.67	\$18.51	\$18.53
Change – increase/(decrease)				
Residential	\$ (0.01)	\$ 0.01	\$ 0.00	\$ 0.00
General	\$ (0.03)	\$ 0.00	\$ (0.03)	\$ (0.03)
Industrial	\$ (0.47)	\$ (0.49)	\$ (0.96)	\$ (0.96)

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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 25, 2020, as well as a comparison to the combined monthly REPS rider charges currently in effect through September 30, 2020 - with and without the regulatory fee applied.

Excluding regulatory fee:

Customer class	REVISED proposed REPS rider filed May 15, 2020	Proposed REPS rider filed Feb 25, 2020	Difference – increase/ (decrease)	Rider currently in effect through Sep 30, 2020	Difference – increase/ (decrease)
	(a)	(b)	(c) = (a) – (b)	(d)	(e) = (a) – (d)
Residential	\$ 0.78	\$ 0.78	\$ 0.00	\$ 0.87	\$ (0.09)
General	\$ 3.81	\$ 3.84	\$ (0.03)	\$ 4.64	\$ (0.83)
Industrial	\$17.55	\$18.51	\$ (0.96)	\$ 21.24	\$ (3.69)

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1 Including regulatory fee:

Customer class	REVISED proposed REPS rider filed May 15, 2020	Proposed REPS rider filed Feb 25, 2020	Difference – increase/ (decrease)	Rider currently in effect through Sep 30, 2020	Difference – increase/ (decrease)
	(a)	(b)	(c) = (a) – (b)	(d)	(e) = (a) – (d)
Residential	\$ 0.78	\$0.78	\$ 0.00	\$ 0.87	\$ (0.09)
General	\$ 3.81	\$3.84	\$ (0.03)	\$ 4.65	\$ (0.84)
Industrial	\$17.57	\$18.53	\$ (0.96)	\$ 21.27	\$ (3.70)

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3 In summary, the Company’s revised proposed monthly combined
4 REPS and REPS EMF riders by class, including regulatory fee are: \$0.78
5 residential, \$3.81 general service, and \$17.57 industrial. The proposed
6 monthly rider decreases by customer class, including regulatory fee are:
7 \$(0.09) residential, \$(0.84) general service, and \$(3.70) industrial.

8 **Q. PLEASE EXPLAIN THE COMPANY’S RATEMAKING**
9 **TREATMENT OF AN AMOUNT HELD IN ABEYANCE FROM**
10 **DEC’S 2019 ANNUAL REPS RIDER FILING IN DOCKET NO. E-7,**
11 **SUB 1191.**

12 A. The Company sold poultry renewable energy certificates (“RECs”) to other
13 North Carolina electric power suppliers during the test period applicable to
14 Docket No. E-7, Sub 1191 (“2019 Docket”), to enable the state’s electric
15 power suppliers to comply with the aggregate poultry waste set-aside
16 requirement. Proceeds were credited back to the Company’s North
17 Carolina retail customers and to the Company’s wholesale customers to
18 which it provides REPS compliance services. In its *Order Approving REPS*
19 *and REPS EMF Rider and 2018 REPS Compliance Report* (“2019 Order”),

1 the Commission concluded that the REC sales were properly accounted for
2 and reflected for cost recovery purposes in the REPS rider
3 calculations. Public Staff witness Boswell provided direct testimony in the
4 2019 Docket recommending the Company and the Public Staff work
5 together to review and evaluate the sales prices of set-aside RECs,
6 enumerating a number of considerations to be addressed, and
7 recommending any resolution of issues be addressed by DEC in this current
8 docket. Witness Boswell's testimony also indicated the Public Staff
9 disagreed with one assumption of the Company's calculation applicable to
10 the REC sales reflected in the 2019 Docket and stated that the component
11 of the sales price in question resulted in no adjustment to REPS compliance
12 costs included in the computation of the REPS riders calculated in the 2019
13 Docket. Witness Boswell further recommended that the amount in question
14 be held in abeyance until the determination of appropriate pricing for RECs
15 is resolved. The Commission accepted Public Staff witness Boswell's
16 recommendations in its 2019 Order.

17 In the current docket, Company witness Jennings describes the
18 Company's compliance with the Commission's 2019 Order with respect to
19 the Public Staff's recommendations pertaining to REC sales
20 prices. Witness Jennings' direct testimony details the Company's proposed
21 method for determining REC sales prices, and specifically addresses each
22 one of the considerations outlined in witness Boswell's testimony in the
23 2019 Docket. Witness Jennings' direct testimony further states that the

1 Company's recommendations were also submitted to the Public
2 Staff. Witness Jennings' supplemental testimony filed in this docket
3 describes modifications to the proposed REC sales price calculation method
4 resulting from additional discussions with the Public Staff since the
5 Company filed direct testimony. The Company and the Public Staff are in
6 agreement regarding the revised REC sales price method proposal.

7 The amount held in abeyance from the 2019 Docket is not included in
8 the calculation of REPS compliance costs used to compute the REPS riders
9 in the current docket. This ratemaking treatment is consistent with DEC's
10 proposed method for calculating REC sales prices described in the Witness
11 Jennings' direct and supplemental testimony, that were agreed upon by the
12 Company and the Public Staff. The Company submits that this treatment
13 of the amount held in abeyance should be considered appropriate and final,
14 upon acceptance by the Commission of the REC pricing method proposed
15 by the Company.

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

17 A. Yes.

Line No.	Renewable Resource	RECs	MWh (Energy)	Total Cost	Avoided Cost	Incremental Cost	Avoided Cost Recovered in Fuel Cost Adjustment Rider
[REDACTED]							

[REDACTED]						\$ 29,350,739	
9	Other Incremental			\$ 1,406,748		\$ 1,406,748	(g)
10	Solar Rebate Program			\$ 886,071	Revised Jennings Exhibit No. 2	\$ 886,071	(h)
11	Research			\$ 822,933		\$ 822,933	(i)
12	Total			[REDACTED]		<u>\$ 32,466,491</u> (below)	

Revised Jennings Exhibit No. 2

<u>Incremental cost category</u>				<u>Incremental Cost</u>	<u>Percent of Total Incremental Cost</u>
[REDACTED]					
15	Total			<u>\$ 32,466,491</u> (above)	

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

16	[REDACTED]						
17	[REDACTED]						
18	[REDACTED]						
19	[REDACTED]						
20	[REDACTED]						
21	[REDACTED]						

Compliance Costs - EMF Period January 1, 2019 - December 31, 2019

Allocate Incremental Cost per Customer Class - EMF Period January 1, 2019 to December 31, 2019

Combined 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 Rider Cap per Customer Class Account	Annual Adjusted Revenue Cap	Cost Cap Allocation Factor	Actual Incremental Costs for REPS Recovery	Annual Per Account Charge ⁽²⁾
1	Residential	1,881,579	468,546	1,413,033	\$ 27	\$ 38,151,891	53.2%	\$ 17,278,667	\$ 12.23
2	General	264,560	65,775	198,785	\$ 150	\$ 29,817,750	41.6%	\$ 13,502,814	\$ 67.93
3	Industrial	4,958	1,234	3,724	\$ 1,000	\$ 3,724,000	5.2%	\$ 1,685,011	\$ 452.47
4	Total	2,151,097	535,555	1,615,542		\$ 71,693,641	100.0%	\$ 32,466,491	(b)

Revised Williams
Exhibit No. 1, page 1
Line No. 12

Calculate NC Retail-only annual REPS cost per Customer Class - adjusted EMF Period:

North Carolina Retail Only

Line No.	Customer Class	Total Adjusted Number of Accounts - DEC Retail ⁽¹⁾	Annual Per Account Charge ⁽²⁾	Incremental Costs Allocated to DEC Retail	Percent of Incremental Cost	NC Retail Percent of Total Incremental Cost
5	Residential	1,310,205	\$ 12.23	\$ 16,023,807		
6	General	187,154	\$ 67.93	\$ 12,713,371		
7	Industrial	3,576	\$ 452.47	\$ 1,618,033		
8	Total	1,500,935		30,355,211	(a)	93.50% (a) / (b)
9	Set-aside, Other Incremental, Solar Rebate, and Research			\$ 19,700,532	64.9%	
10	General RECs			\$ 10,654,679	35.1%	
11	Total Incremental Cost for Retail			30,355,211		

Revised Williams
Exhibit No. 1, page 1
Line Nos. 13,14

Notes:

- (1) Average number of accounts subject to REPS charge during 2018.
- (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 Revised Williams Exhibit No. 4.

Compliance Costs - EMF Period January 1, 2019 - December 31, 2019

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

North Carolina Retail Only

Line No.	Customer Class	Total Unadjusted Number of Accounts ⁽¹⁾	Annual Rider Cap per Customer Class Account	Calculated Annual Revenue Cap	Cost Cap Allocation Factor	Allocated Annual Set-aside, Other Incremental, Solar Rebate Program, and Research Cost
1	Residential	1,746,940	\$ 27	47,167,380	52.78%	\$ 10,397,915
2	General	249,539	\$ 150	37,430,850	41.88%	\$ 8,251,525
3	Industrial	4,768	\$ 1,000	4,768,000	5.34%	\$ 1,051,092
4	Total	2,001,247		89,366,230	100.00%	\$ 19,700,532

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

Calculate General Requirement incremental costs per customer class:

North Carolina Retail Only

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 = (c) / (d)	(e)	Allocated Annual General Incremental Costs
5	Residential		37.5%			62.78%	\$	6,689,007
6	General		48.1%			37.82%	\$	4,029,600
7	Industrial		14.4%			-0.60%	\$	(63,928)
8	Total		100.0%			100.00%	\$	10,654,679

(d)

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

Total cost allocation by customer class - EMF Period:

	Total Incremental REPS cost by class	% Incremental REPS cost by class
9 Residential	\$ 17,086,922	56.29%
10 General	\$ 12,281,125	40.46%
11 Industrial	\$ 987,164	3.25%
12 Total	\$ 30,355,211	100.00%

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

- (1) Average number of accounts subject to REPS charge during 2019.
- (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.



Compliance Costs - EMF Period January 1, 2019 - December 31, 2019

Calculate Incremental Cost Under/(Over) Collection per Customer Class - EMF Period

North Carolina Retail Only

Line No.	Account Type	Allocated Annual Set-aside, Other Incremental, Solar Rebate Program, and Research Cost	Allocated Annual General Incremental Costs	Total Incremental Costs Incurred January through December 2019	Actual NC Retail REPS Revenues Realized - January through December 2019	REPS EMF - Under/(Over)-Collection, before Interest	Interest on Over-collection ⁽¹⁾	REPS EMF - Under/(Over)-Collection
1	Residential	\$ 10,397,915	\$ 6,689,007	\$ 17,086,922	\$ 16,826,582	\$ 260,340	\$ -	\$ 260,340
2	General	\$ 8,251,525	\$ 4,029,600	\$ 12,281,125	\$ 12,374,018	\$ (92,893)	\$ (15,482)	\$ (108,375)
3	Industrial	\$ 1,051,092	\$ (63,928)	\$ 987,164	\$ 875,426	\$ 111,738	\$ -	\$ 111,738
4	Total	\$ 19,700,532	\$ 10,654,679	\$ 30,355,211	\$ 30,076,026	\$ 279,185	\$ (15,482)	\$ 263,703

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
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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

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

North Carolina Retail Only

Line No.	Customer Class	Total Unadjusted Number of Accounts ⁽¹⁾	Annual Rider Cap per Customer Class Account	Calculated Annual Revenue Cap	Cost Cap Allocation Factor	Allocated Annual Set-aside, Other Incremental, Solar Rebate Program, and Research Cost
1	Residential	1,769,590	\$ 27	47,778,930	52.98%	\$ 10,083,233
2	General	251,109	\$ 150	37,666,350	41.77%	\$ 7,949,081
3	Industrial	4,737	\$ 1,000	4,737,000	5.25%	\$ 999,693
4	Total	2,025,436		90,182,280	100.00%	\$ 19,032,007

Williams Ex. No. 3 Pg 1
Line 9

Calculate General costs per customer class - Billing Period:

North Carolina Retail Only - Billing Period

Customer Class	Number of RECs for General compliance ^(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		37.5%			63.12%	\$ 6,816,155
6 General		48.1%			37.62%	\$ 4,062,480
7 Industrial		14.4%			-0.74%	\$ (79,911)
8 Total		100.0%			100.00%	\$ 10,798,725

Williams Ex. No. 3 Pg 1
Line 10

Total cost allocation by customer class - Billing Period:

	Total Incremental REPS cost by class	% Incremental REPS cost by class
9 Residential	\$ 16,899,388	56.65%
10 General	\$ 12,011,561	40.27%
11 Industrial	\$ 919,782	3.08%
12 Total	\$ 29,830,731	100.00%

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.



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

Calculate Incremental Cost to Collect by Customer Class - Billing Period:

North Carolina Retail Annual Rider Cost by Account Type

Line No.	Customer Class	Allocated Annual Set-aside and Other Incremental costs	Allocated Annual General Incremental Costs	Total Incremental Costs
1	Residential	\$ 10,083,233	\$ 6,816,155	\$ 16,899,388
2	General	\$ 7,949,081	\$ 4,062,480	\$ 12,011,561
3	Industrial	\$ 999,693	\$ (79,911)	\$ 919,782
4	Total	\$ 19,032,007	\$ 10,798,724	\$ 29,830,731
		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

Calculate DEC NC Retail monthly REPS rider components:

North Carolina Retail								
Line No.	Customer Class	Total Projected Number of Accounts -Duke 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 Costs	Monthly REPS Rider ⁽²⁾
1	Residential	1,769,590	\$ 260,340	\$ (588,889)	\$ (328,549)	\$ (0.02)	\$ 16,899,388	\$ 0.80
2	General	251,109	\$ (108,375)	\$ (423,261)	\$ (531,636)	\$ (0.18)	\$ 12,011,561	\$ 3.99
3	Industrial	4,737	\$ 111,738	\$ (34,022)	\$ 77,716	\$ 1.37	\$ 919,782	\$ 16.18
4		<u>2,025,436</u>	<u>\$ 263,703</u>	<u>\$ (1,046,172)</u>	<u>\$ (782,469)</u>		<u>\$ 29,830,731</u>	
			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:

North Carolina Retail									Information only:
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	Total Annual REPS Charge excluding solar rebate cost - for per-account cap comparison only
5	Residential	\$ (0.02)	\$ 0.80	\$ 0.78	1.001302	\$ 0.78	\$ 9.36	\$ 27.00	\$ 8.88
6	General	\$ (0.18)	\$ 3.99	\$ 3.81	1.001302	\$ 3.81	\$ 45.72	\$ 150.00	\$ 43.08
7	Industrial	\$ 1.37	\$ 16.18	\$ 17.55	1.001302	\$ 17.57	\$ 210.84	\$ 1,000.00	\$ 191.88

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 2019 - Dec 2019	NC retail percentage of EMF Period costs - Revised Williams Exhibit No. 2, Pg 1	Allocation to customer class - Revised Williams Exhibit No. 2, Pg 2	Receipts for contract amendments, penalties, change-of-control, etc.
Residential			56.29%	\$ (588,889)
General			40.46%	\$ (423,261)
Industrial			3.25%	\$ (34,022)
Total contract payments received	<u>\$ (1,118,900)</u>	<u>\$ (1,046,172)</u>	<u>100.00%</u>	<u>\$ (1,046,172)</u>
	(a)		93.50%	

REPS (NC)
RENEWABLE ENERGY PORTFOLIO STANDARD RIDERAPPLICABILITY (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	\$ 0.80
Experience Modification Factor	(\$ 0.02)
Net REPS Monthly Charge	\$ 0.78
Regulatory Fee Multiplier	<u>1.001302</u>
Total REPS Monthly Charge per agreement per month	\$ 0.78

GENERAL SERVICE AGREEMENTS

REPS Monthly Charge	\$ 3.99
Experience Modification Factor	(\$ 0.18)
Net REPS Monthly Charge	\$ 3.81
Regulatory Fee Multiplier	<u>1.001302</u>
Total REPS Monthly Charge per agreement per month	\$ 3.81

INDUSTRIAL SERVICE AGREEMENTS

REPS Monthly Charge	\$ 16.18
Experience Modification Factor	\$ 1.37
Net REPS Monthly Charge	\$ 17.55
Regulatory Fee Multiplier	<u>1.001302</u>
Total REPS Monthly Charge per agreement per month	\$ 17.57

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.