

BEFORE

THE PUBLIC SERVICE COMMISSION OF

SOUTH CAROLINA

DOCKET NO. 2016-3-E - ORDER NO. 2016-687

SEPTEMBER 29, 2016

IN RE: Annual Review of Base Rates for Fuel Costs ) ORDER APPROVING  
of Duke Energy Carolinas, LLC ) AND ADOPTING  
 ) ADJUSTMENT IN FUEL  
 ) COST RECOVERY  
 ) FACTORS AND  
 ) ADOPTING  
 ) SETTLEMENT  
 ) AGREEMENT

## I. INTRODUCTION

This matter comes before the Public Service Commission of South Carolina (“Commission”) on the annual review of base rates for fuel costs of Duke Energy Carolinas, LLC (“DEC” or the “Company”). The procedure followed by the Commission is set forth in S.C. Code Ann. § 58-27-865 (2015), which provides for annual hearings to allow the Commission and all interested parties to review the prudence of fuel purchasing practices and policies of an electrical utility and for the Commission to determine if any adjustment in a utility’s fuel cost recovery mechanism is necessary and reasonable. Additionally, and pursuant to S.C. Code Ann. § 58-39-140 (2015), the Commission must determine in this proceeding whether an increase or decrease should be granted in the fuel cost component designed to recover certain costs incurred by the Company to implement the Distributed Energy Resource Program (“DERP”) previously approved by the Commission.

**A. Notice and Intervention**

By letter dated March 15, 2016, the Clerk’s Office of the Commission instructed the Company to publish a Notice of Hearing and Prefile Testimony Deadlines (“Notice”) in newspapers of general circulation and provide Proof of Publication on or before June 16, 2016. The letter also instructed the Company to furnish the Notice to each affected customer and provide a certification to the Commission on or before June 16, 2016, that notification has been furnished. The Notice indicated the nature of the proceeding and advised all interested parties who wished to participate in the scheduled proceeding of the manner and time in which to file appropriate pleadings. On March 23, 2016, the Commission issued a revised Notice of Hearing and Prefile Testimony Deadlines (“Revised Notice”). With these revisions, the Commission instructed the Company to publish the Revised Notice in newspapers of general circulation and provide Proof of Publication on or before July 5, 2016, and to furnish the Revised Notice to each affected customer and provide a certification to the Commission on or before July 5, 2016, that the notification has been furnished. On June 20, 2016, the Company filed with the Commission affidavits demonstrating that the Revised Notice was duly published, and a letter certifying that a copy of the Notice was furnished to the Company’s retail customers in South Carolina in accordance with the instructions set forth in the Clerk’s Office letter dated March 23, 2016.

Petitions to Intervene were received from South Carolina Energy Users Committee (“SCEUC”), the South Carolina Coastal Conservation League (“CCL”), Southern Alliance for Clean Energy (“SACE”), South Carolina Solar Development, LLC (“SC Solar”), Southern Current, LLC (“Southern”), and the South Carolina Solar Business Alliance, LLC

(“SBA”). The South Carolina Office of Regulatory Staff (“ORS”) is automatically a party pursuant to S.C. Code Ann. § 58-4-10(B) (2015).

There was no opposition to any of the Petitions to Intervene, and the Commission issued Orders granting each Petition to Intervene.<sup>1</sup>

**B. The Settlement Agreement**

On September 6, 2016, after the due dates for pre-filing direct, rebuttal and surrebuttal testimony by the parties had passed, and after all parties had been afforded a full opportunity to conduct discovery in this matter, ORS filed with the Commission a Settlement Agreement (“Settlement Agreement”) executed by all parties to this docket (collectively, referred to as the “Parties” or sometimes individually as a “Party”). In the Settlement Agreement, the Parties represented to the Commission that they discussed the issues presented in this case and determined that each Party’s interests and the public interest would be best served by settling all issues pending in this case in accordance with the terms and conditions contained in the Settlement Agreement. The Settlement Agreement is attached hereto as Order Exhibit 1 and is incorporated in and made part of this Order. The terms of the Settlement Agreement are summarized as follows:

- a) The Parties agree that, without prejudice to the position of any Party in future proceedings, the Parties accept all recommendations and adjustments in the testimony and exhibits of ORS witnesses.

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<sup>1</sup> See Order No. 2016-452, granting the Petition to Intervene filed on behalf of SCEUC; See Order No. 2016-505, granting the Petition to Intervene filed on behalf of Southern; See Order No. 2016-503, granting the Petition to Intervene filed on behalf of SC Solar; See Order No. 2016-502, granting the Petition to Intervene filed on behalf of SBA; and See Order No. 2016-504, granting the Petition to Intervene filed on behalf of SACE and CCL.

- b) The testimony supported the terms of the Settlement Agreement regarding the appropriate fuel factors for DEC to charge for the period beginning with the October 2016 billing cycle and extending through the last billing cycle of September 2017<sup>2</sup>, which are listed in the following table below:

Class of Service	Base Fuel Factor (¢/kWh)	Environmental Fuel Component (¢/kWh)	PURPA Avoided Capacity Component (¢/kWh)	DERP Avoided Cost Component (¢/kWh)	SC Combined Total Projected Fuel Factor (¢/kWh)
Residential	1.5877	0.0237	0.0797	(0.0021)	1.6890
General/Lighting	1.5877	0.0065	0.0330	(0.0011)	1.6261
Industrial	1.5877	0.0006	0.0223	(0.0013)	1.6093

- c) The Parties agree for purposes of settlement and without prejudice to the position of any Party in any future proceeding that the 2016 component values for the Net Energy Metering (“NEM”) Distributed Energy Resource (“DER”), as listed in the Components of NEM Distributed Energy Resource Value table (“Table”) below, comply with the NEM methodology approved by the Commission in Order No. 2015-194 and satisfy the requirements of S.C. Code Ann. § 58-40-10, *et seq* (2015).

<sup>2</sup> The Parties agree that the fuel factors will be adjusted for billing purposes to include gross receipt tax and regulatory fees.

Components of NEM Distributed Energy Resource Value	Component value (\$ per kWh) for Small PV <sup>2</sup>	Component value (\$ per kWh) for Large PV <sup>2</sup>
Avoided Energy	\$0.03662	\$0.03661
Avoided Capacity	\$0.01129	\$0.01125
Ancillary Services	\$0.00000	\$0.00000
Transmission and Distribution ("T&D") Capacity	\$0.00000	\$0.00000
Avoided Criteria Pollutants <sup>1</sup>	\$0.00000	\$0.00000
Avoided CO2 Emissions	\$0.00000	\$0.00000
Fuel Hedge	\$0.00000	\$0.00000
Utility Integration & Interconnection Cost	\$0.00000	\$0.00000
Utility Administrative Cost	\$0.00000	\$0.00000
Other Environmental	\$0.00000	\$0.00000
<b>Subtotal</b>	\$0.04791	\$0.04786
Avoided Line Losses	\$0.00219	\$0.00218
<b>Total Value of NEM Distributed Energy Resource</b>	\$0.05010	\$0.05004
<sup>1</sup> Avoided Criteria Pollutants are included in avoided energy. <sup>2</sup> "Small PV" refers to a load shape reflecting generation installed by a lower usage residential or small commercial/industrial customer. "Large PV" refers to a load shape characteristic of generation by a customer with higher consumption requirements and applies to all other non-residential rate schedules.		

d) The Company's revisions to the 2016 Renewable Net Metering Rider RNM tariff sheet, attached to the Settlement Agreement as Attachment A, are lawful, just and reasonable, and shall become effective with the October 2016 billing cycle.

e) The Parties agree that the appropriate fixed charges per account to recover DERP incremental costs ("DERP Charge") as set forth below are consistent with S.C. Code Ann. §§ 58-27-865, 58-39-140 and 58-39-150.<sup>3</sup>

	DERP Charge (\$/account)	
	Annual Charge	Monthly Charge
Residential	8.14	0.67
Commercial	22.07	1.83
Industrial	964.86	80.41

<sup>3</sup> The Parties agree that the numbers shown do not include regulatory fees and gross receipts tax and that the charges that will actually be billed will be adjusted to include those amounts.

- f) The Parties agree that in the 2017 DEC Annual Fuel Review, DEC will break out the avoided criteria pollutant values for Small PV and Large PV and reflect said values in its Table.
- g) The Parties agree that, in the 2017 DEC Annual Fuel Review, to the extent a fuel hedge value exists as calculated in a manner consistent with the definition according to the Settlement Agreement in Docket No. 2015-246-E, Attachment A, DEC will reflect the fuel hedge value in its Table.
- h) The Parties further agree that, except as noted below, any challenges to DEC's historical fuel costs recovery and DERP incremental costs for the period ending May 31, 2016, are not subject to further review; however, the projected fuel costs for periods beginning June 1, 2016, and thereafter shall be open issues in future fuel cost proceedings held under the procedure and criteria established in S.C. Code Ann. § 58-27-865 (2015).
- i) With regard to plant outages not complete as of May 31, 2016, and plant outages where final reports (Company, contractor, government reports or otherwise) are not available, the Parties agree that ORS retains the right to review the reasonableness of plant outage(s) and associated costs in the review period during which the outage is completed or when the report(s) become available.
- j) The Parties agree that, in an effort to keep the Parties and DEC's customers informed of the over/(under)-recovery balances related to fuel costs and DERP incremental costs and of DEC's commercially reasonable efforts to forecast the expected fuel factors to be set at its next annual fuel proceeding,

DEC will provide to ORS, and where applicable, its customers the following information:

1. copies of the monthly fuel recovery reports currently filed with the Commission, modified to show the monthly over/(under)-recovery and cumulative balances through the end of the forecast period;
2. forecasts of the expected fuel factors to be set at its next annual fuel proceeding based upon DEC's historical over/(under)-recovery to date and DEC's forecast of prices for uranium, natural gas, coal, oil and other fuel required for generation of electricity. Such forecasts will be provided in the 4th quarter of the calendar year prior to the next annual fuel proceeding and in the 2nd quarter of the calendar year of the Company's next annual fuel proceeding. DEC will use commercially reasonable efforts in making these forecasts. To the extent that the forecast data required hereunder is confidential, any party or customer, other than ORS, that requests forecasted fuel data will have to sign a non-disclosure agreement agreeing to protect the data from public disclosure and to only disclose it to employees or agents with a need to be aware of this information; and,
3. forecasts of the expected DERP Charge to be set at its next annual fuel proceeding based upon DEC's historical over/(under)-recovery to date and DEC's forecast of DERP incremental and avoided costs. Forecasts will be provided in the same manner as j(2) above.

- k) The Parties agree that, during the Collaborative meeting scheduled to occur in the 4<sup>th</sup> quarter of 2016, the agenda will include:
1. the appropriateness of using variable rates for avoided energy and capacity costs;
  2. quantifying avoided transmission and distribution capacity values;
  3. quantifying avoided environmental costs;
  4. updating line loss values; and
  5. fuel hedge valuation.
- l) The Parties agree that they will attempt to reach consensus at the 4<sup>th</sup> quarter Collaborative meeting for quantifying the components of the value of DER methodology for the 2017 update.
- m) DEC agrees to continue to examine and make adjustments as necessary to its natural gas hedging program in light of the reduced volatility in the domestic natural gas market. DEP also agrees to provide monthly natural gas hedging reports to ORS.

## **II. JURISDICTION OF THE COMMISSION**

In accordance with S.C. Code Ann. § 58-27-140 (1) (2015), the Commission may, upon petition, “...ascertain and fix just and reasonable standards, classifications, regulations, practices or service to be furnished, imposed, observed, and followed by any or all electrical utilities.” Further, S.C. Code Ann. § 58-27-865(B) (2015) states, in pertinent part, that “[u]pon conducting public hearings in accordance with law, the commission shall direct each company to place in effect in its base rate an amount designed

to recover, during the succeeding twelve months, the fuel costs determined by the commission to be appropriate for that period, adjusted for the over-recovery or under-recovery from the preceding twelve-month period.”

Consistent with the requirements of S.C. Code Ann. § 58-27-865(B), the Commission convened an evidentiary hearing to determine the reasonableness of the Parties’ Settlement Agreement and whether acceptance of the Settlement Agreement is just, fair, and in the public interest. In carrying out these duties in relation to the Settlement Agreement, the Commission’s published “Settlement Policies and Procedures” (Revised 6/13/2006) are applicable to guide this proceeding. Specifically, Section II of the Settlement Policies and Procedures, titled “Consideration of Settlements,” states:

When a settlement is presented to the Commission, the Commission will prescribe procedures appropriate to the nature of the settlement for the Commission’s consideration of the settlement... [W]hen the settlement presents issues of significant implication for other utilities, customers or the public interest, the Commission will convene an evidentiary hearing to consider the reasonableness of the settlement and whether acceptance of the settlement is just, fair, and reasonable, in the public interest, or otherwise in accordance with law or regulatory policy. Approval of such settlements shall be based upon substantial evidence in the record.

### **III. DISCUSSION OF THE HEARING**

The public evidentiary hearing in this matter was held on September 13, 2016, before this Commission with the Honorable Swain E. Whitfield presiding as Chairman. Representing the Parties before the Commission in this Docket were Heather S. Smith, Esquire, and Bonnie D. Shealy, Esquire, for the Company; Scott Elliott, Esquire, for SCEUC; Lauren J. Bowen, Esquire, and J. Blanding Holman, IV, Esquire, for SACE and

CCL, Richard L. Whitt, Esquire, for Southern and SC Solar, Timothy F. Rogers, Esquire, for SBA and Shannon Bowyer Hudson, Esquire, and Andrew M. Bateman, Esquire, for ORS. At the outset of the hearing, the ORS counsel presented the Settlement Agreement, which was admitted into the record as Hearing Exhibit 1.

DEC, SACE and CCL, and ORS presented witnesses, or their verified testimony, regarding the annual review of base rates for fuel costs of DEC.

**A. DEC Testimony**

The Company presented the direct testimonies of David C. Culp, T. Preston Gillespie, Jr., Swati V. Daji, Kim H. Smith, Joseph A. Miller, Jr., Emily O. Felt, and the rebuttal testimony of Glen A. Snider via three (3) panels.<sup>4</sup> The pre-filed direct and rebuttal testimony of all Company witnesses was accepted into the record without objection or cross-examination by the Parties, and the Company witnesses' exhibits were marked as composite Hearing Exhibits 2 through 6 and were entered into the record of the case.<sup>5</sup>

Company witness Gillespie discussed the performance of Oconee Nuclear Station, McGuire Nuclear Station, and Catawba Nuclear Station during the period of June 1, 2015, through May 31, 2016 (the "review period").<sup>6</sup> He reported to the Commission that DEC

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<sup>4</sup> Prior to the hearing, and without objection from the Parties, the Commission granted DEC and ORS permission to utilize panels for the presentations of witnesses. DEC witnesses Gillespie and Miller were presented in the first panel; witnesses Daji and Culp were presented in the second panel; and witnesses Smith, Felt and Snider were presented in the third panel. ORS witnesses Smith, Lawyer and Seaman-Huynh also were presented via a panel.

<sup>5</sup> Composite Hearing Exhibit 2 consists of the two non-confidential Direct Testimony Exhibits 1 and 2 of DEC witness Gillespie and the Confidential Direct Testimony Exhibit 3 of DEC witness Gillespie under seal; Composite Hearing Exhibit 3 consists of the Direct Testimony Exhibits 1 and 2 of DEC witness Daji; Composite Hearing Exhibit 4 consists of the Direct Testimony Exhibits 1 and 2 of DEC witness Culp; Composite Hearing Exhibit 5 consists of the Direct Testimony Exhibits 1 through 14 of DEC witness Smith; and Composite Hearing Exhibit 6 consists of the Direct Testimony Exhibits A and B of DEC witness Felt.

<sup>6</sup> Pursuant to the Company's request, the Commission granted the Motion of DEC to treat specific material filed in the present proceeding as confidential. Specifically, in Commission Order No. 2016-550, the Commission Ordered that Exhibit 3 of DEC witness Gillespie's direct testimony be treated as confidential.

achieved a net nuclear capacity factor, excluding reasonable outage time, of 101.5% for the review period, which is above the 92.5% set forth in S.C. Code Ann. § 58-27-865 (2015).

Company witness Culp testified regarding the Company's nuclear fuel purchasing practices and costs for the review period. He also described changes expected in the 2016-2017 billing period.

Company witness Miller testified regarding DEC's fossil/hydro generation portfolio and changes made since the prior year's filing, changes expected in the near term and the performance of DEC's fossil/hydro generation facilities during the review period.

Company witness Daji testified regarding DEC's fossil fuel purchasing practices and costs for the review period versus June 1, 2014, through May 31, 2015, described related changes forthcoming for the period October 1, 2016, through September 30, 2017, and gave an update on the guaranteed merger savings from the Joint Dispatch Agreement and fuel procurement activities pursuant to the merger between Duke Energy Corporation and Progress Energy, Inc.

Company witness Smith testified regarding the Company's procedures and accounting for actual fuel costs, Public Utility Regulatory Policies Act of 1978 ("PURPA") capacity costs, environmental costs and DERP costs incurred for the review period, the projected fuel, PURPA capacity, environmental and DERP costs for June 1, 2016, through September 30, 2016, and the Company's proposed fuel, PURPA capacity, environmental and DERP factors by customer class for October 1, 2016, through September 30, 2017.

Ms. Smith discussed certain impacts that the Distributed Energy Resource Program Act, Act No. 236 of 2014 ("Act 236"), has on this filing. According to witness Smith, Act

236 revised S.C. Code Ann. § 58-27-865(A), such that the avoided cost payments for purchases from qualifying facilities under PURPA are included in fuel recoverable from South Carolina retail customers. Act 236 also revised S.C. Code § 58-27-865(A)(1) to prescribe the methodology for allocating and recovering any capacity costs that are recovered under the fuel factors.

Ms. Smith discussed the Company's approved DERP, associated costs and the DERP Net Energy Metering ("NEM") Incentive. Company witness Smith testified regarding the Company's incurred PURPA and DERP avoided costs. Additionally, witness Smith testified that the Company seeks approval for DERP incremental costs as revised by the settlement amounting to a per-account monthly charge of \$0.67, \$1.83 and \$80.41 for South Carolina residential, commercial and industrial customers respectively, excluding gross receipts tax and regulatory fees. Witness Smith testified that, while the Company has made no changes to the methodology used to derive the DERP NEM, as approved in Commission Order No. 2015-194, the inputs were updated to reflect more current information.

Company witness Felt testified regarding DERP costs that are incorporated into the proposed fuel factors by witness Smith. Witness Felt also provided information on the nature of the costs filed as well as any changes made to the DERP portfolio since the 2015 fuel proceeding.<sup>7</sup>

Company witness Snider testified in rebuttal to the testimony of SACE and CCL witness, Thomas Vitolo (see discussion below). Witness Snider testified that the Company

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<sup>7</sup> The Company filed Revised Direct Testimony of witness Felt to correct the incidental omission of the Transmission and Distribution Capacity category, which is shown as having a value of \$0.00, on witness Felt's table 2.

included all appropriate avoided criteria pollutant costs in the avoided energy component within the derivation of the value of distributed energy resources. Witness Snider testified that the Company's line loss study from 2012 remains accurate and appropriate for the purpose of demonstrating the loss values on the Company's system.

### **B. SACE and CCL Testimony**

SACE and CCL presented the pre-filed and verified direct and surrebuttal testimony of Thomas Vitolo.<sup>8</sup> Witness Vitolo's direct and surrebuttal testimony was accepted into the record without objection or cross-examination by the Parties, and his exhibits were marked as composite Hearing Exhibit 7 and entered into the record of the case.<sup>9</sup> In his direct testimony, Mr. Vitolo testified regarding the 2016 Application of the NEM Methodology for valuing distributed energy resources on DEC's South Carolina system. Witness Vitolo's testimony offered input on assigning non-zero values to certain components of the Table. In particular, witness Vitolo's testimony focused on the value of avoided criteria pollutants, environmental costs, and transmission and distribution costs and the impact an updated line loss study could have on the NEM Methodology. In his surrebuttal testimony, Mr. Vitolo responded to DEC witness Snider by discussing certain ideological differences between witness Snider and witness Vitolo regarding DEC's valuation methodology and assigning non-zero values for certain components of the Table.

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<sup>8</sup> Witness Vitolo's testimony was previously verified. As a result, the Commission excused witness Vitolo from attending the hearing.

<sup>9</sup> Composite Hearing Exhibit 7 consists of the Direct Testimony Exhibits 1 and 2 and Surrebuttal Testimony Exhibit 1 of witness Vitolo.

### **C. ORS Testimony**

Following the presentation of the Company's witnesses and introduction of SACE and CCL's witness' verified testimony, ORS presented the direct testimonies of Ms. Gaby Smith, Mr. Robert A. Lawyer, and Mr. Michael L. Seaman-Huynh, via panel. The pre-filed direct testimony of all ORS witnesses was accepted into the record without objection or cross-examination by the Parties, and the ORS witnesses' exhibits were marked as composite Hearing Exhibits 8 through 10 and entered into the record of the case.

Ms. Smith presented direct testimony and exhibits which demonstrated the results of the ORS Audit Staff's examination of DEC's books and records pertaining to the Fuel Adjustment Clause operation for the actual period of June 2015 through May 2016.<sup>10</sup> The estimated months of June 2016 through September 2016 were also reflected in Ms. Smith's pre-filed testimony.

Mr. Lawyer presented direct testimony and one exhibit for ORS.<sup>11</sup> Mr. Lawyer testified regarding the ORS Utilities Rates and Services Division's findings and examinations of the Company's DERP expenses, both actual and forecasted for the period of June 2015 through September 2017. Specifically, witness Lawyer testified regarding the Company's avoided and incremental costs and the method by which the Company proposed to recover those costs. Additionally, witness Lawyer addressed the Company's modification to the Renewable Net Metering Rider. The Parties agreed to accept all adjustments as set forth in the testimony of ORS witness Lawyer.

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<sup>10</sup> Composite Hearing Exhibit 8 consists of the Direct Testimony Exhibits of ORS witness Smith (Exhibits 1-10).

<sup>11</sup> Hearing Exhibit 9 consists of the Direct Testimony Exhibit of ORS witness Lawyer (Exhibit 1).

Mr. Seaman-Huynh presented direct testimony and exhibits for the ORS Utilities Rates and Services Division.<sup>12</sup> Mr. Seaman-Huynh testified regarding the Company's fuel expenses and power plant operations. Additionally, Mr. Seaman-Huynh testified to ORS's examination of the Company's fossil and nuclear fuel procurement, fuel transportation, environmental reagent purchases, nuclear, fossil and hydro generation performance, plant dispatch, forecasting, and the Company's policies and procedures.

No other party filed testimony in this Docket.

In summary, through the testimony, exhibits and Settlement Agreement presented to the Commission in this proceeding, the Parties represent that settling all issues in this case in accordance with the terms and conditions contained in the Settlement Agreement is just, fair, reasonable, and in the public interest.<sup>13</sup>

#### **IV. FINDINGS OF FACT AND CONCLUSIONS OF LAW**

Having heard the testimony of the witnesses and representations of counsel and after careful review of the Settlement Agreement, the Commission finds that approval of the terms set out in the Settlement Agreement is consistent with the standards for fuel review proceedings conducted pursuant to S.C. Code Ann. § 58-27-865 (2015), and is supported by the substantial evidence in the record. The Settlement Agreement's terms allow recovery in a precise and prompt manner while assuring public confidence and minimizing abrupt changes in charges to customers. As such, approval of the Settlement Agreement is in the public interest as a reasonable resolution of the issues in this case. The

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<sup>12</sup> Composite Hearing Exhibit 10 consists of the Direct Testimony Exhibits of ORS witness Seaman-Huynh (Exhibits 1-10).

<sup>13</sup> While all of the Parties support the Settlement Agreement, certain testimonies assert alternate positions in the event that the Commission did not approve the Settlement Agreement.

Commission further finds that the Settlement Agreement's terms provide stabilization to the fuel factors, minimize fluctuations for the near future, and do not appear to inhibit economic development in South Carolina. Additionally, the Commission finds and concludes that the Settlement Agreement affords the Parties the opportunity to review costs and operational data in succeeding fuel review proceedings conducted pursuant to S.C. Code Ann. § 58-27-865 (2015).

The Commission finds that the methodology for determining the environmental cost component of the fuel factors and the methodology for allocation and recovery of the avoided capacity component used by DEC in this proceeding are consistent with the statutory requirements of S.C. Code Ann. § 58-27-865 (2015), and are just and reasonable.

The Commission finds that the 2016 component values for the NEM DER, as shown in Table 2 in the revised direct testimony of DEC witness Felt and included in paragraph B.3 of the Settlement Agreement, comply with the NEM methodology approved by the Commission in Order No. 2015-194 and satisfy the requirements of S.C. Code Ann. § 58-40-10 *et seq.* (2015).

The Commission finds that the revisions to the 2016 Renewable Net Metering Rider RNM tariff sheet are lawful, just and reasonable.

The DERP Charges, as indicated in the Settlement Agreement, are reasonable and comply with S.C. Code Ann. §§ 58-27-865, 58-39-140 and 58-39-150.

**IT IS THEREFORE ORDERED THAT:**

1. The Settlement Agreement, attached hereto as Order Exhibit 1, and the pre-filed testimony of ORS witnesses Gaby Smith, Robert A. Lawyer and Michael L. Seaman-Huynh, DEC witnesses David C. Culp, T. Preston Gillespie, Jr., Joseph A. Miller, Jr., Swati V. Daji, Kim H. Smith, Emily O. Felt, and Glen A. Snider, and SACE and CCL witness Thomas Vitolo, along with their respective exhibits entered into evidence as Hearing Exhibits 2-10, are accepted into the record in the above-captioned case without objection. Lastly, the oral testimony of the above witnesses, except witness Vitolo, presented at the hearing on September 13, 2016, are also incorporated into the record of this case. Witness Vitolo's testimony was verified and incorporated into the record without his appearance before the Commission and with prior approval of the Commission.

2. The fuel purchasing practices, plant operations, and fuel inventory management of DEC related to the historical fuel costs and revenues for the period ending May 31, 2016, are prudent.

3. The Settlement Agreement is incorporated into this present Order by reference and attachment and is found to be a reasonable resolution of the issues in this case and to be in the public interest, and is hereby adopted and approved.

4. The methodologies used by the Company to calculate its avoided energy and capacity costs under PURPA for the review and billing period are reasonable and prudent.

5. The Company's revisions to the 2016 Renewable Net Metering Rider RNM, attached hereto as Attachment A to Order Exhibit 1 (Settlement Agreement), are lawful, just and reasonable, and shall become effective with the October 2016 billing cycle.

6. The Company's calculation and method of accounting for avoided and incremental costs for NEM during the Review Period were reasonable and prudent, were consistent with the methodology approved in Commission Order 2015-194, and complied with S.C. Code Ann. § 58-40-10 *et seq.* (2015).

7. The 2016 component values for the NEM Distributed Energy Resource comply with the NEM methodology approved by the Commission in Order No. 2015-194 and satisfy the requirements of S.C. Code Ann. § 58-40-10 *et seq.* (2015).

8. In the 2017 DEC Annual Fuel Review, DEC will break out the avoided criteria pollutant values for Small PV and Large PV and reflect said values in its Table.

9. In the 2017 DEC Annual Fuel Review, to the extent a fuel hedge value exists as calculated in a manner consistent with the definition according to the Settlement Agreement in Docket No. 2015-246-E, Attachment A, DEC will reflect the fuel hedge value in its Table.

10. During the Collaborative meeting scheduled to occur in the 4<sup>th</sup> quarter of 2016, the agenda will include:

- a. the appropriateness of using variable rates for avoided energy and capacity costs;
- b. quantifying avoided transmission and distribution capacity values;
- c. quantifying avoided environmental costs;
- d. updating line loss values; and
- e. fuel hedge valuation.

11. The attending Parties will attempt to reach consensus at the 4<sup>th</sup> quarter Collaborative meeting for quantifying the components of the value of DER methodology for the 2017 update.

12. DEC shall set its Residential, General/Lighting and Industrial base fuel factor at 1.5877 cents per kWh (not including applicable Environmental Fuel, Avoided Capacity, and DERP Avoided Cost Components) effective for bills rendered in the first billing cycle in October 2016 extending through the last billing cycle of September 2017.<sup>14</sup>

13. DEC shall set its Environmental Fuel Component at 0.0237 cents per kWh for the Residential class, 0.0065 cents per kWh for the General/Lighting class, and 0.0006 cents per kW for the Industrial class for bills rendered in the first billing cycle in October 2016 extending through the last billing cycle of September 2017.

14. DEC shall set its Avoided Capacity Component at 0.0797 cents per kWh for the Residential class, 0.0330 cents per kWh for the General/Lighting) class, and 0.0223 cents per kW for the Industrial class for bills rendered in the first billing cycle in October 2016 extending through the last billing cycle of September 2017.

15. DEC shall set its DERP Avoided Cost Component at (0.0021) cents per kWh for the Residential class, (0.0011) cents per kWh for the General/Lighting) class, and (0.0013) cents per kW for the Industrial class for bills rendered in the first billing cycle in October 2016 extending through the last billing cycle of September 2017.

16. DEC shall set its DERP Charge at \$0.67/month for the Residential class, \$1.83/month for the Commercial class, and \$80.41/month for the Industrial class.

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<sup>14</sup> The base fuel factors, environmental fuel component, avoided capacity component, DERP avoided cost component, and DERP Charge will be adjusted for billing purposes to include gross receipt tax and regulatory fees.

17. The Parties shall abide by the terms of this Settlement Agreement.

18. DEC shall file with the Commission the South Carolina Retail Adjustment for Fuel, Variable Environmental, Avoided Capacity Costs and Distributed Energy Resource Program Costs, the Company's revisions to the 2016 Renewable Net Metering Rider RNM tariff sheet found in Tariff RNM, and all other retail Tariffs within ten (10) days of receipt of this Order, said filings incorporating our findings herein. The revised tariffs should be electronically filed in a text searchable PDF format using the Commission's DMS System (<http://dms.psc.sc.gov>). An additional copy should be sent via email to [etariff@psc.sc.gov](mailto:etariff@psc.sc.gov) to be included in the Commission's ETariff system (<http://etariff.psc.sc.gov>). DEC shall provide a reconciliation of each tariff rate change approved as a result of this order to each tariff rate revision filed in the ETariff system. Such reconciliation shall include an explanation of any differences and be submitted separately from the Company's ETariff filing.

19. DEC shall comply with the notice requirements set forth in S.C. Code Ann. § 58-27-865.

20. DEC shall continue to file the monthly reports as previously required.

21. DEC shall continue to examine and make adjustments as necessary to its natural gas hedging program in light of the reduced volatility in the domestic natural gas market. DEC shall also provide monthly natural gas hedging reports to ORS.

22. DEC shall, by rate class, account monthly to the Commission and ORS for the differences between the recovery of fuel costs through base rates and the actual fuel costs experienced by booking the difference to unbilled revenues with a corresponding deferred debit or credit.

23. DEC shall submit monthly reports to the Commission and ORS of fuel costs and scheduled and unscheduled outages of generating units with a capacity of 100 megawatts (“MW”) or greater.

24. This Order shall remain in full force and effect until further order of the Commission.

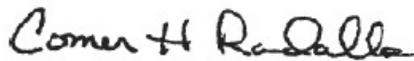
BY ORDER OF THE COMMISSION:



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Swain E. Whitfield, Chairman

ATTEST:



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Comer H. Randall, Vice Chairman



WHEREAS, following those discussions the Parties have each determined that their interests and the public interest would be best served by settling all issues pending in the above-captioned case under the terms and conditions set forth below:

**A. STIPULATION OF SETTLEMENT AGREEMENT, TESTIMONY AND WAIVER  
OF CROSS EXAMINATION**

A.1 The Parties agree to stipulate into the record before the Commission the testimony and exhibits of ORS witnesses Michael L. Seaman-Huynh, Robert A. Lawyer and Gaby Smith without objection or cross-examination by the Parties. The Parties also agree to stipulate into the record, without objection or cross-examination by the Parties, before the Commission pre-filed direct testimony and exhibits of DEC witnesses David C. Culp; T. Preston Gillespie, Jr. (includes redacted public and unredacted confidential version of Gillespie Exhibit 3); Kim H. Smith; Swati V. Daji; Emily O. Felt; the pre-filed direct testimony of Joseph A. Miller, Jr.; rebuttal testimony of Glen A. Snider; and, direct and surrebuttal testimony and exhibits of SACE and CCL witness Thomas Vitolo. No other party pre-filed testimony in this Docket. The Parties reserve the right to engage in re-direct of witnesses as may be necessary to respond to issues raised by the examination of their witnesses, if any, by non-parties, parties that are not signatories to this Settlement Agreement or the Commission.

A.2 The Parties agree that no other evidence will be offered in the proceeding by the Parties other than the stipulated testimony and exhibits and this Settlement Agreement unless the additional evidence is to support the Settlement Agreement, consists of changes comparable to that which would be presented via an errata sheet or through a witness noting a correction or clarification, or consists of a witness adopting the testimony of another if permitted by the

**Commission.** The Parties agree that nothing herein will preclude each party from advancing its respective positions in the event that the Commission does not approve the Settlement Agreement.

## **B. SETTLEMENT TERMS**

**B.1** As a compromise to positions advanced by the Parties, the Parties agree to the proposal set out immediately below, and this proposal is hereby adopted, accepted, and acknowledged as the agreement of the Parties.

**B.2** Without prejudice to the position of any Party in future proceedings, the Parties agree to accept all recommendations and adjustments in the testimony and exhibits of ORS witnesses.

### **Avoided and Incremental Costs, Net Energy Metering and Distributed Energy Resources**

**B.3** The Parties agree for purposes of settlement and without prejudice to the position of any Party in any future proceeding that the 2016 component values for the Net Energy Metering (“NEM”) Distributed Energy Resource, as listed below, comply with the NEM methodology approved by the Commission in Order No. 2015-194 and satisfy the requirements of S.C. Code Ann. § 58-40-10, *et seq* (2015).

<b>Components of NEM Distributed Energy Resource Value</b>	<b>Component value (\$ per kWh) for Small PV<sup>2</sup></b>	<b>Component value (\$ per kWh) for Large PV<sup>2</sup></b>
Avoided Energy	\$0.03662	\$0.03661
Avoided Capacity	\$0.01129	\$0.01125
Ancillary Services	\$0.00000	\$0.00000
Transmission and Distribution ("T&D") Capacity	\$0.00000	\$0.00000
Avoided Criteria Pollutants <sup>1</sup>	\$0.00000	\$0.00000
Avoided CO2 Emissions	\$0.00000	\$0.00000
Fuel Hedge	\$0.00000	\$0.00000
Utility Integration & Interconnection Cost	\$0.00000	\$0.00000
Utility Administrative Cost	\$0.00000	\$0.00000
Other Environmental	\$0.00000	\$0.00000
<b>Subtotal</b>	\$0.04791	\$0.04786
Avoided Line Losses	\$0.00219	\$0.00218
<b>Total Value of NEM Distributed Energy Resource</b>	<b>\$0.05010</b>	<b>\$0.05004</b>
<sup>1</sup> Avoided Criteria Pollutants are included in avoided energy. <sup>2</sup> "Small PV" refers to a load shape reflecting generation installed by a lower usage or residential or small commercial/industrial customer. "Large PV" refers to a load shape characteristic of generation by a customer with higher consumption requirements and applies to all other non-residential rate schedules.		

B.4 The Company's proposed revisions to the 2016 Renewable Net Metering Rider RNM, attached hereto as Attachment A, are lawful, just and reasonable, and, if approved by the Commission, shall become effective with the October 2016 billing cycle.

B.5 Distributed Energy Resource Program ("DERP") incremental and avoided costs are required by Act 236 to be allocated and recovered based on the same method used by the utility to allocate and recover variable environmental costs and under a separate DERP component of the overall fuel factor. Therefore, ORS analyzed the actual DERP incremental costs that DEC incurred for the period of June 1, 2015 through September 30, 2016 and the forecasted costs for the period October 1, 2016 through September 30, 2017. ORS agrees with and accepts DEC's reported cumulative over recovery balance for DERP incremental costs of \$1,911,757 through September 2016 and the Parties agree to ORS's recommendation for forecasted DERP Incremental costs through the September 2017 billing period. The Parties agree that the appropriate fixed charges

per account to recover DERP incremental costs (“DERP Charge”) for the period beginning with the first billing cycle in October 2016 and extending through the last billing cycle of September 2017 are listed below.

DERP Charge (\$/account)		
	Annual Charge	Monthly Charge
Residential	8.14	0.67
Commercial	22.07	1.83
Industrial	964.86	80.41

B.6 The Parties agree that the DERP Charges as set forth above are consistent with S.C. Code Ann. §§ 58-27-865, 58-39-140 and 58-39-150. The Parties agree that the numbers shown above do not include regulatory fees and gross receipts tax and that the charges that will actually be billed will be adjusted to include those amounts.

B.7 ORS also analyzed the actual DERP avoided costs that DEC incurred for the period of June 1, 2015 through September 30, 2016 and the forecasted costs for the period October 1, 2016 through September 30, 2017. ORS agrees with and accepts DEC’s reported cumulative over-recovery balance for DERP avoided costs of \$468,826 through September 2016 and forecasted DERP avoided costs of \$141,663 through the September 2017 billing period.

B.8 The Parties agree that in the 2017 DEC Annual Fuel Review, DEC will break out the avoided criteria pollutant values for small and large PV and reflect said values in its NEM Distributed Energy Resource table.

B.9 The Parties agree that in the 2017 DEC Annual Fuel Review, to the extent a fuel hedge value exists as calculated in a manner consistent with the definition according to the Settlement Agreement in Docket No. 2015-246-E, Attachment A, DEC will reflect the fuel hedge value in its NEM Distributed Energy Resource table.

**Fuel Expenses and Power Plant Operations**

B.10 PURPA capacity costs are required by Act 236 to be passed through the fuel statute and allocated to customers in the same manner as environmental costs. Therefore, ORS analyzed the cumulative PURPA capacity cost (under)-recovery balance of (\$2,992,802) that DEC reported through September 2016. The ORS calculation of the estimated cumulative PURPA capacity (under)-recovery balance was (\$2,992,880) through September 2016. The difference is due to rounding.

B.11 ORS analyzed the cumulative over-recovery of environmental costs that Duke incurred for the period June 2015 through May 2016 totaling \$4,759,509 and \$5,560,225 through September 2016. The Company's cumulative over-recovery for environmental costs, per its testimony in this Docket, as of May 2016 totals \$4,759,504 and through September 2016 the cumulative over-recovery balance totals \$5,560,155. The difference between DEC's and ORS's cumulative over-recoveries as of actual May 2016 and estimated September 2016, are due to rounding.

B.12 ORS analyzed the cumulative over-recovery of base fuel costs that DEC incurred for the period June 2015 through May 2016 totaling \$35,017,408 and \$49,738,842 through September 2016. DEC's cumulative over-recovery for base fuel costs, per its testimony in this Docket, as of May 2016 totals \$35,017,066, and through September 2016 the estimated cumulative over-recovery totals \$49,738,574. The differences between DEC's and ORS's cumulative over-recoveries as of actual May 2016 and estimated September 2016 totals are due to rounding.

B.13 Adding the September 2016 base fuel over-recovery of \$49,738,574, PURPA (under)-recovery capacity costs of (\$2,992,802), the DERP avoided cost over-recovery of

\$468,826, and the environmental over-recovery of \$5,560,155 results in a total over-recovery of \$52,774,753.

B.14 ORS thoroughly reviewed and investigated DEC's nuclear operations during the review period. As shown in ORS witness Seaman-Huynh's Exhibit MSH-1, DEC's nuclear fleet achieved an average system capacity factor during the review period of 94.67%. DEC achieved this capacity factor notwithstanding the fact that it experienced five (5) scheduled refueling outages and five (5) forced outages from June 2015 through May 2016. S.C. Code Ann. § 58-27-865 states that:

There shall be a rebuttable presumption that an electrical utility made every reasonable effort to minimize cost associated with the operation of its nuclear generation facility or system, as applicable, if the utility achieved a net capacity factor of ninety-two and one-half percent or higher during the period under review. The calculation of the net capacity factor shall exclude reasonable outage time associated with reasonable refueling, reasonable maintenance, reasonable repair, and reasonable equipment replacement outages; the reasonable reduced power generation experienced by nuclear units as they approach a refueling outage; the reasonable reduced power generation experienced by nuclear units associated with bringing a unit back to full power after an outage; Nuclear Regulatory Commission required testing outages unless due to the unreasonable acts of the utility; outages found by the commission not to be within the reasonable control of the utility; and acts of God. The calculation also shall exclude reasonable reduced power operations resulting from the demand for electricity being less than the full power output of the utility's nuclear generation system.

Excluding all reasonable outage time pursuant to S.C. Code Ann. §58-27-865(F), DEC's net capacity factor for the review period was 101.5%.

#### **Fuel Factors**

B.15 The appropriate fuel factors for DEC to charge for the period beginning with the first billing cycle in October 2016 extending through the last billing cycle of September 2017 are

listed below. These factors include the South Carolina base fuel costs, environmental costs, avoided capacity and the DERP avoided cost, but do not include the gross receipts tax and regulatory fees. The Parties agree that the fuel factors will be adjusted for billing purposes to include those amounts. The South Carolina Combined Projected Fuel Factor represents a decrease from the current combined fuel factor.

Class of Service	Base Fuel Factor (¢/kWh)	Environmental Fuel Component (¢/kWh)	PURPA Avoided Capacity Component (¢/kWh)	DERP Avoided Cost Component (¢/kWh)	SC Combined Total Projected Fuel Factor (¢/kWh)
Residential	1.5877	0.0237	0.0797	(0.0021)	1.6890
General/Lighting	1.5877	0.0065	0.0330	(0.0011)	1.6261
Industrial	1.5877	0.0006	0.0223	(0.0013)	1.6093

B.16 The Parties agree that the fuel factors set forth above are consistent with S.C. Code Ann. § 58-27-865.

**Other**

B.17 The Parties further agree that, except as noted herein, any challenges to Duke’s historical fuel costs recovery and DERP incremental costs for the period ending May 31, 2016, are not subject to further review; however, the projected fuel costs for periods beginning June 1, 2016, and thereafter shall be open issues in future fuel cost proceedings held under the procedure and criteria established in S.C. Code Ann. § 58-27-865 (2015).

B.18 With regard to plant outages not complete as of May 31, 2016, and plant outages where final reports (Company, contractor, government reports or otherwise) are not available, the Parties agree that ORS retains the right to review the reasonableness of plant outage(s) and associated costs at such time as the outage is complete or when the report(s) become available.

**B.19 The Parties agree that in an effort to keep the Parties and DEC's customers informed of the over/(under)- recovery balances related to fuel costs and DERP incremental costs and of DEC's commercially reasonable efforts to forecast the expected fuel factor to be set at its next annual fuel proceeding, DEC will provide to ORS, and where applicable, its customers the following information:**

- a. copies of the monthly fuel recovery reports currently filed with the Commission, modified to show the monthly over/(under)-recovery and cumulative balances through the end of the forecast period;**
- b. forecasts of the expected fuel factor to be set at its next annual fuel proceeding based upon DEC's historical over/(under)-recovery to date and DEC's forecast of prices for uranium, natural gas, coal, oil and other fuel required for generation of electricity. Such forecasts will be provided in the 4th quarter of the calendar year prior to the next annual fuel proceeding and in the 2nd quarter of the calendar year of the Company's next annual fuel proceeding. DEC will use commercially reasonable efforts in making these forecasts. To the extent that the forecast data required hereunder is confidential, any party or customer, other than ORS, that requests forecasted fuel data will have to sign a non-disclosure agreement agreeing to protect the data from public disclosure and to only disclose it to employees or agents with a need to be aware of this information; and,**
- c. forecasts of the expected DERP Charge to be set at its next annual fuel proceeding based upon DEC's historical over/(under)-recovery to date and DEC's forecast of DERP incremental and avoided costs. Forecasts will be provided in the same manner as B.19(b) above.**

**B.20** The Parties agree that during the Collaborative meeting scheduled to occur in the 4<sup>th</sup> quarter of 2016, the agenda will include:

- d. The appropriateness of using variable rates for avoided energy and capacity costs;
- e. Quantifying avoided transmission and distribution capacity values;
- f. Quantifying avoided environmental costs;
- g. Updating line loss values; and
- h. Fuel Hedge valuation.

**B.21** The Parties agree that they will attempt to reach consensus at the 4<sup>th</sup> quarter Collaborative meeting for quantifying the components of the value of DER methodology for the 2017 update.

**B.22** DEC agrees that it will provide a synopsis of the 2016 4<sup>th</sup> quarter Collaborative meeting and the discussion of the agenda items set forth in Paragraph B.20 in its direct testimony in the 2017 DEC Annual Fuel Review.

**B.23** DEC agrees to examine and make adjustments as necessary to its natural gas hedging program in light of the potentially reduced volatility in the domestic natural gas market. DEC also agrees to provide monthly natural gas hedging reports to the ORS.

### **C. REMAINING SETTLEMENT TERMS AND CONDITIONS**

**C.1** ORS is charged with the duty to represent the public interest of South Carolina pursuant to S.C. Code § 58-4-10(B) (2015). S.C. Code § 58-4-10(B)(1) through (3) reads in part as follows:

... 'public interest' means a balancing of the following:

- (1) concerns of the using and consuming public with respect to public utility services, regardless of the class of customer;
- (2) economic development and job attraction and retention in South Carolina; and
- (3) preservation of the financial integrity of the state's public utilities and continued investment in and maintenance of utility facilities so as to provide reliable and high quality utility services

C.2 The Parties agree that this Settlement Agreement is reasonable, is in the public interest, and is in accordance with law and regulatory policy. This Settlement Agreement in no way constitutes a waiver or acceptance of the position of any Settling Party concerning the requirements of S.C. Code Ann. § 58-27-865 (2015), S.C. Code Ann. § 58-40-10, *et seq.* (2015), and S.C. Public Service Commission Order No. 2015-194 in any future proceeding. This Settlement Agreement does not establish any precedent with respect to the issues resolved herein and in no way precludes any Party herein from advocating an alternative methodology under S.C. Code Ann. § 58-27-865 (2015), S.C. Code Ann. § 58-40-10, *et seq.* (2015), and S.C. Public Service Commission Order No. 2015-194 in any future proceeding.

C.3 The Parties agree to cooperate in good faith with one another in recommending to the Commission that this Settlement Agreement be accepted and approved by the Commission as a fair, reasonable and full resolution of all issues currently pending in the above-captioned proceeding. The Parties agree to use reasonable efforts to defend and support any Commission order issued approving this Settlement Agreement and the terms and conditions contained herein.

C.4 This written Settlement Agreement contains the complete agreement of the Parties. There are no other terms or conditions to which the Parties have agreed. This Settlement Agreement integrates all discussions among the Parties into the terms of this written document. The Parties agree that by signing this Settlement Agreement, it will not constrain, inhibit or impair

their arguments or positions held in future proceedings. If the Commission declines to approve the agreement in its entirety, then any Party desiring to do so may withdraw from the agreement without penalty.

C.5 This Settlement Agreement shall be effective upon execution of the Parties and shall be interpreted according to South Carolina law.

C.6 This Settlement Agreement shall bind and inure to the benefit of each of the signatories hereto and their representatives, predecessors, successors, assigns, agents, shareholders, officers, directors (in their individual and representative capacities), subsidiaries, affiliates, parent corporations, if any, joint ventures, heirs, executors, administrators, trustees, and attorneys.

C.7 The above terms and conditions fully represent the agreement of the Parties hereto. Therefore, each Party acknowledges its consent and agreement to this Settlement Agreement by authorizing its counsel to affix his or her signature to this document where indicated below. Counsel's signature represents his or her representation that his or her client has authorized the execution of the Settlement Agreement. Facsimile signatures and e-mail signatures shall be as effective as original signatures to bind any Party. This document may be signed in counterparts, with the various signature pages combined with the body of the document constituting an original and provable copy of this Settlement Agreement.

**[PARTY SIGNATURES TO FOLLOW ON SEPARATE PAGES]**

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**Representing the South Carolina Office of Regulatory Staff**



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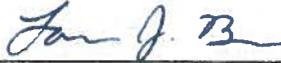
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**Representing and binding the Southern Alliance for Clean Energy**



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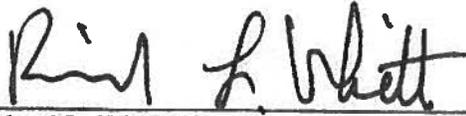
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**[Attachment A]**

Duke Energy Carolinas, LLC

Felt Exhibit A  
Electricity No. 4  
South Carolina First (Proposed) Revised Leaf No. 119<sup>1</sup>  
Superseding South Carolina Original Leaf No. 119

RIDER RNM (SC)  
RENEWABLE NET METERING

**AVAILABILITY**

Available to residential and nonresidential Customers receiving concurrent service from the Company, on a metered rate schedule, except as indicated under General Provisions. The renewable net energy metered (NEM) generation, which includes a solar photovoltaic; solar thermal; wind powered; hydroelectric; geothermal; tidal or wave energy; recycling resource; hydrogen fueled or combined heat and power derived from renewable resources; or biomass fueled generation source of energy, is installed on the Customer's side of the delivery point, for the Customer's own use, interconnected with and operated in parallel with the Company's system. The generation must be located at a single premises owned, operated, leased or otherwise controlled by the Customer.

Service under this Rider is closed to new participants on and after January 1, 2021, or when the statutory minimum system capacities described in S.C. Code § 58-39-130 have been reached, whichever occurs first. Customers requesting NEM service after January 1, 2021, will receive service in accordance with the NEM tariff in effect at that time. This Rider shall expire and no longer be available for NEM service on and after January 1, 2026.

**GENERAL PROVISIONS**

1. To qualify for service under this Rider, the Customer must comply with all applicable interconnection standards and must provide, in writing, the Nameplate Capacity of the Customer's installed renewable generation system. Any subsequent change to the Nameplate Capacity must be provided by the Customer to the Company in writing by no later than 60 days following the change.
2. To qualify for service under this Rider, a residential Customer may be served on an approved residential rate schedule, but may not be served under Schedule WC or Rider NM. The Nameplate Capacity of Customer's installed generation system and equipment must not exceed 20 kW AC.
3. To qualify for service under this Rider, a nonresidential Customer may be served on an approved general service or industrial rate schedule, but may not be served on Schedules TS, BC, HP, PG, MP or Rider NM. The Nameplate Capacity of Customer's installed renewable generation system and equipment must not exceed 1,000 kW AC or 100% of the Customer's contract demand which shall approximate the Customer's maximum expected demand.
4. If the Customer is not the owner of the premises receiving electric service from the Company, the Company shall have the right to require that the owner of the premises give satisfactory written approval of the Customer's request for service under this Rider.
5. Customers served under this Rider are not eligible to receive payment from Palmetto Clean Energy (PaCE) for energy generated by the Customer's renewable generation system. All environmental attributes, including but not limited to "renewable energy certificates" (RECs), "renewable energy credits" or "green tags", associated with the generation system shall be conveyed to the Company until billing of a Distributed Energy Resource Program Rider DERP Charge is discontinued on all customer bills. The Customer certifies that the environmental attributes have not, and will not, be remarketed or otherwise resold for any purpose, including another distributed energy resource standard or voluntary purchase of renewable energy certificates in South Carolina or in any other state or country for the Contract Period and any successive contract periods thereto.
6. If the electricity supplied to the Customer by the Company exceeds the electricity delivered to the grid by the customer-generator during a monthly billing period, the customer-generator shall be billed for the net electricity in kilowatt hours (kWh) supplied by the Company plus any demand or other charges under the applicable rate schedule or riders. If the electricity delivered to the grid by the customer-generator exceeds the electricity in kWh supplied by the utility during a monthly billing period, the Customer-Generator shall be credited for the excess kWh generated during that billing period.
7. Electricity delivered to the grid by the Customer's renewable generation that exceeds the electricity delivered by the Company is defined as Excess Energy. When used in conjunction with a time of use schedule, the TOU periods shall be specified in the applicable schedule and any Excess Energy shall apply first with the Excess Energy generated On-Peak kWh offsetting On-peak usage and then offsetting Off-peak usage. Any excess

South Carolina First (Proposed) Revised Leaf No. 119<sup>1</sup>  
Effective with October 2016 billing cycles  
PSCSC Docket No. 2016-3-E, Order No.

<sup>1</sup> Duke Energy Carolinas has a pending request to revise Rider RNM in Docket No. 2015-203-E. If the proposal is Docket No. 2015-203-E is approved, the Rider approved in Docket No. 2016-3-E, would become Second Revised Leaf No. 119.

Duke Energy Carolinas, LLC

Felt Exhibit A  
Electricity No. 4  
South Carolina First (Proposed) Revised Leaf No. 119<sup>1</sup>  
Superseding South Carolina Original Leaf No. 119

**RIDER RNM (SC)**  
**RENEWABLE NET METERING**

- Off-Peak kWh shall only apply against Off-peak kWh usage. Any Excess Energy not used in the current month to offset usage shall carry forward to the next billing month.
8. Excess Energy shall be used to reduce electricity delivered and billed by the Company during the current or a future month, except that for the March billing period any carry-over shall be compensated as described in the RATE paragraph below.
  9. In the event the Company determines that it is necessary to increase the capacity of facilities beyond those required to serve the Customer's electrical requirement or to install a dedicated transformer or other equipment to protect the safety and adequacy of electric service provided to other customers, the Customer shall pay the estimated cost of the required transformer or other equipment above the estimated cost which Company would otherwise have normally incurred to serve the Customer's electrical requirement, in advance of receiving service under this Rider.
  10. The rates set forth herein are subject to Commission Order No. 2015-194, issued in Docket No. 2014-246-E pursuant to the terms of S.C. Code § 58-40-20(F)(4). Eligibility for this rate will terminate as set forth in that Order, and otherwise as specified above. The value of NEM generation eligible for this Rider shall be computed using the methodology contained in Commission Order No. 2015-194, in Docket No. 2014-246-E, and shall be updated annually by the Company. The value of NEM generation for 2016 is \$0.05010 per kWh for Schedules RS, RE, ES, RT and SGS and \$0.05004 for all other schedules.

**RATE**

All provisions of the applicable schedule and other applicable riders will apply to service supplied under this Rider, except as modified herein. For any bill month during which the Energy Charges are a net credit, the respective Energy Charges for the month shall be zero. Credits shall not offset the Basic Facilities Charge or the Demand Charge (if applicable). In addition to all charges in the applicable rate schedule for the Customer's net electrical usage, the following credit may be applicable annually:

**Annual Credit for Excess Generation**

If the Customer has Excess Energy after offsetting usage as of the date of the March billing, the Company shall pay the Customer for the amount of the accumulated Excess Energy times a rate of \$0.0432 per kWh, after which the amount of Excess Energy shall be set to zero.

**MINIMUM BILL**

The monthly minimum bill for customers receiving service under this Rider shall be no less than Basic Facilities Charge from the applicable rate schedule and riders plus, if applicable, any of the following Charges: the Demand Charge, the Economy Demand Charge, Excess Demand Charge and the Extra Facilities Charge.

**METERING REQUIREMENTS**

The Customer must provide access and designate a location on the load side of the billing meter for the Company to furnish, install, own and maintain metering with 30-minute interval capability to record 100% of the Customer's generator output. At the Company's sole option, the generator meter requirement may be waived for customers served under a net metering rider on or before December 31, 2015. The Company will also furnish, install, own and maintain a billing meter to measure the kWh delivered by the Company to the Customer, and to measure the net kWh purchased by the Customer or delivered to the Company. For renewable generation capacity of 20 kW AC or less, the billing meter will be a single, bi-directional meter which records independently the net flow of electricity in each direction through the meter, unless the Customer's overall electrical requirement merits a different meter. For larger renewable generation capacities, the Company may elect to require two meters with 30-minute interval capabilities to separately record the Customer's electrical consumption and the total generator output, which will be electronically netted for billing. All metering shall be at a location that is readily accessible by the Company.

South Carolina First (Proposed) Revised Leaf No. 119<sup>1</sup>  
Effective with October 2016 billing cycles  
PSCSC Docket No. 2016-3-E, Order No.

<sup>1</sup> Duke Energy Carolinas has a pending request to revise Rider RNM in Docket No. 2015-203-E. If the proposal in Docket No. 2015-203-E is approved, the Rider approved in Docket No. 2016-3-E, would become Second Revised Leaf No. 119.

**Duke Energy Carolinas, LLC**

**Felt Exhibit A**  
**Electricity No. 4**  
**South Carolina First (Proposed) Revised Leaf No. 119<sup>1</sup>**  
**Superseding South Carolina Original Leaf No. 119**

**RIDER RNM (SC)**  
**RENEWABLE NET METERING**

**SAFETY, INTERCONNECTION AND INSPECTION REQUIREMENTS**

This Rider is only applicable for installed renewable generation systems and equipment that complies with and meets all safety, performance, interconnection, and reliability standards established by the Commission, the National Electric Code, the National Electrical Safety Code, the Institute of Electrical and electronic Engineers, Underwriter's Laboratories, the Federal Energy Regulatory Commission and any local governing authorities. The Customer must comply with all liability insurance requirements of the Interconnection Standard.

**POWER FACTOR**

The Customer's renewable generation must be operated to maintain a 100% power factor, unless otherwise specified by Company. When the average monthly power factor of the power supplied by the Customer to the Company is other than 100%, the Company may correct the energy in kWh, as appropriate. The Company reserves the right to install facilities necessary for the measurement of power factor. The Company will not install such equipment, nor make a power factor correction if the renewable generation system is less than 20 kW and uses an inverter.

**CONTRACT PERIOD**

The Customer shall enter into a contract for service under this Rider for a minimum original term of one (1) year, and the contract shall automatically renew thereafter, except that either party may terminate the contract after one year by giving at least sixty (60) days prior notice of such termination in writing.

The Company reserves the right to terminate the Customer's contract under this Rider at any time upon written notice to the Customer in the event that the Customer violates any of the terms or conditions of this Rider, or operates the renewable generation system and equipment in a manner which is detrimental to the Company or any of its customers. In the event of early termination of a contract under this Rider, the Customer will be required to pay the Company for the costs due to such early termination, in accordance with the Company's South Carolina Service Regulations.

South Carolina First (Proposed) Revised Leaf No. 119<sup>1</sup>  
Effective with October 2016 billing cycles  
PSCSC Docket No. 2016-3-E, Order No.

<sup>1</sup> Duke Energy Carolinas has a pending request to revise Rider RNM in Docket No. 2015-203-E. If the proposal in Docket No. 2015-203-E is approved, the Rider approved in Docket No. 2016-3-E, would become Second Revised Leaf No. 119.