Ladawn S. Toon
Associate General Counsel

NCRH 20 / P.O. Box 1551
Raleigh, NC 27602

o: 919.546.7971

Ladawn.Toon@duke-energy.com



May 9, 2022

**VIA ELECTRONIC FILING**

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

**RE: Duke Energy Carolinas, LLC's Supplemental Testimony and Exhibits, Direct Testimony and Proposed Second Public Notice**
**Docket No. E-7, Sub 1263**

Dear Ms. Dunston:

Please find enclosed Duke Energy Carolinas, LLC's ("DEC") Supplemental Testimony and Exhibits of Bryan L. Sykes and Proposed Second Public Notice, in the above-referenced proceeding. Also, enclosed herewith is the Direct Testimony of David B. Johnson. Duke inadvertently omitted testimony relating to its Solar Integration Services Charge reporting requirements. DEC respectfully seeks the Commission's permission to submit such reporting at this time.

If you have any questions, please do not hesitate to contact me. Thank you for your assistance with this matter.

Sincerely,

Ladawn S. Toon

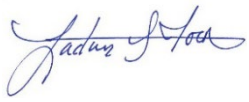
Enclosures

cc: Parties of Record

**CERTIFICATE OF SERVICE**

I certify that a copy of Duke Energy Carolinas, LLC's Supplemental Testimony and Exhibits, Direct Testimony and Proposed Second Public Notice, in Docket No. E-7, Sub 1263, has been served by electronic mail, hand delivery or by depositing a copy in the United States mail, postage prepaid to the parties of record.

This the 9th day of May, 2022.



Ladawn S. Toon
Associate General Counsel
Duke Energy Corporation
P.O. Box 1551/NCRH 20
Raleigh, North Carolina 27602
Tel: 919.546.7971
ladawn.toon@duke-energy.com

**STATE OF NORTH CAROLINA**
**UTILITIES COMMISSION**
**RALEIGH**

DOCKET NO. E-7, SUB 1263

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

| | | |
|---|---|---|
| In the Matter of<br>Application of Duke Energy Carolinas, LLC<br>Pursuant to G.S. 62-133.2 and NCUC Rule<br>R8-55 Relating to Fuel and Fuel-Related<br>Charge Adjustments for Electric Utilities | )<br>)<br>)<br>)<br>) | **SUPPLEMENTAL TESTIMONY OF BRYAN L. SYKES FOR DUKE ENERGY CAROLINAS, LLC** |

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

A. My name is Bryan L. Sykes. My business address is 526 South Church Street, Charlotte, North Carolina.

**Q. HAVE YOU PREVIOUSLY FILED TESTIMONY IN THIS PROCEEDING?**

A. Yes, on March 1, 2022, I caused to be pre-filed with the Commission my direct testimony and 6 exhibits and 13 supporting workpapers.

**Q. YOUR SUPPLEMENTAL TESTIMONY INCLUDES FOUR (4) REVISED EXHIBITS AND FOUR (4) REVISED SUPPORTING WORKPAPERS. WERE THESE SUPPLEMENTAL EXHIBITS AND WORKPAPERS PREPARED BY YOU OR AT YOUR DIRECTION AND UNDER YOUR SUPERVISION?**

A. Yes. These exhibits and workpapers were prepared by me and consist of the following:

Sykes Revised Exhibit 1: Summary Comparison of Fuel and Fuel-Related Costs Factors.

Sykes Revised Exhibit 2: Calculation of the Proposed Fuel and Fuel-Related Cost Factors.

Sykes Revised Exhibit 3: Calculation of the Proposed Experience Modification Factor ("EMF") rate.

Sykes Revised Exhibit 4: Sales, Fuel Revenue, Fuel Expense and System Peak

Sykes Revised Workpapers 7 and 7b: Calculation of Allocation Percentages Based on Projected Period Sales

Sykes Revised Workpaper 7a: Calculation of Allocation Percentages Based on Normalized Test Period Sales

Sykes Revised Workpaper 10: 2.5% Calculation Test

Sykes Revised Workpaper 12: Weather Normalization Adjustment

Sykes Revised Workpaper 13: Customer Growth Adjustment

**Q. WHAT IS THE PURPOSE OF YOUR SUPPLEMENTAL TESTIMONY IN THIS PROCEEDING?**

A. The purpose of my testimony is to present revised rates reflecting the impacts related to four updates to numbers presented in my direct exhibits.

The first update relates to the proposed EMF increment for the experienced under-recovery of fuel and fuel-related costs, pursuant to NCUC Rule R8-55(d)(3), which allows the Company to incorporate the fuel and fuel-related cost recovery balance up to thirty (30) days prior to the hearing. The Company elects this option and supplements the direct testimony and exhibits to include the fuel and fuel-related cost recovery balance as of the 11 months ended January 31, 2022.

The second update revises the production plant allocator used to allocate renewable and purchased power capacity costs to the North Carolina Retail jurisdiction. In my direct testimony, I indicated that the 2021 cost of service study was not available at the time of filing. Since then, the Company has prepared the cost of service study, and the 2021 production plant allocator has been

incorporated into this supplemental filing. The impact of this update, by itself, lowers customer rates.

The third update revises the coincidental peak data reported on Exhibit 4, which was not available in the Company's direct filing. The coincidental peak data is informational and has no impact on proposed rates.

The fourth update relates to a revision in the retail customer growth adjustment and the wholesale weather adjustment. The retail customer growth adjustment update was required to reflect the actual number of customers more accurately within the test period. This adjustment increases the EMF rate proposed on Exhibit 3, which uses normalized test period sales, while the wholesale weather adjustment does not impact proposed rates. In addition, the impact of this update revises one of the fuel rate scenarios presented in my direct filing. The scenario based on the proposed nuclear capacity factor and normalized test period sales is updated to reflect the retail customer growth and wholesale weather adjustments on Exhibit 2, Schedule 2.

**Q. HOW DID THE FUEL AND FUEL-RELATED COST RECOVERY BALANCE CHANGE IN THE ONE (1) MONTH BEING INCORPORATED?**

A. The Company experienced an under-collection of $81,987,600 in January 2022. As shown on Sykes Revised Exhibit 3, the incorporation of the update period under-collection balance resulted in an under-recovered balance of $326,974,214.

Incorporating the under-collection experienced in January 2022 will increase the EMF increment rate charged to all customer classes.

**Q. WHAT IS THE TOTAL RATE IMPACT OF THESE UPDATES?**

A. The NC Retail Total Fuel Costs were increased by $81,819,379 from the amounts filed in my direct Exhibit 2, Schedule 1, page 3. The components of the proposed fuel and fuel-related cost factors by customer class, as shown on Sykes Revised Exhibit 1, are as follows:

| Description | Residential cents/kWh | General cents/kWh | Industrial cents/kWh | Composite cents/kWh |
|---|---|---|---|---|
| Total adjusted Fuel and Fuel Related Costs | 2.0003 | 1.8217 | 1.8396 | 1.9010 |
| EMF Increment (Decrement) | 0.4863 | 0.6254 | 0.5726 | 0.5597 |
| EMF Interest Increment (Decrement) | - | - | - | - |
| Net Fuel and Fuel Related Costs Factors | 2.4866 | 2.4471 | 2.4122 | 2.4607 |

**Q. WHAT IS THE IMPACT TO CUSTOMERS' BILLS IF THE REVISED PROPOSED FUEL AND FUEL-RELATED COSTS FACTORS ARE APPROVED BY THE COMMISSION?**

A. The revised proposed fuel and fuel-related costs factors will result in a 9.94% increase on customers' bills, as compared to the previously filed increase of 8.16%.

**Q. DOES THIS CONCLUDE YOUR PRE-FILED SUPPLEMENTAL TESTIMONY?**

A. Yes, it does.

**Duke Energy Carolinas, LLC**
**North Carolina Annual Fuel and Fuel Related Expense**
**Summary Comparison of Fuel and Fuel Related Cost Factors**
**Test Period Ended December 31, 2021**
**Billing Period September 2022 - August 2023**
**Docket E-7, Sub 1263**

**Sykes Revised Exhibit 1**

| Line # | Description | Reference | Residential cents/kWh | General cents/kWh | Industrial cents/kWh | Composite cents/kWh |
|---|---|---|---|---|---|---|
| | **Current Fuel and Fuel Related Cost Factors (Approved Fuel Rider Docket No. E-7, Sub 1250)** | | | | | |
| 1 | Approved Fuel and Fuel Related Costs Factors | Input | 1.5337 | 1.6895 | 1.7243 | 1.6414 |
| 2 | EMF Increment (Decrement) cents/kWh | Input | (0.0282) | 0.0476 | 0.1391 | 0.0353 |
| 3 | EMF Interest Increment (Decrement) cents/kWh | Input | (0.0041) | 0.0000 | 0.0000 | 0.0000 |
| 4 | Approved Net Fuel and Fuel Related Costs Factors | Sum | **1.5014** | **1.7371** | **1.8634** | **1.6767** |
| | **Fuel and Fuel Related Cost Factors Required by Rule R8-55** | | | | | |
| 5 | Proposed Nuclear Capacity Factor of 93.94% and Normalized Test Period Sales | Exh 2 Sch 2 pg 2 | **2.4708** | **2.4401** | **2.4022** | **2.4497** |
| 6 | NERC 5 Year Average Nuclear Capacity Factor of 92.07% and Projected Period Sales | Exh 2 Sch 3 pg 2 | **2.5199** | **2.4711** | **2.4308** | **2.4872** |
| | **Proposed Fuel and Fuel Related Cost Factors using Proposed Nuclear Capacity Factor of 93.94%** | | | | | |
| 7 | Fuel and Fuel Related Costs excluding Purchased Capacity cents/kWh | Exh 2 Sch 1 pg 2 | 1.9686 | 1.7971 | 1.8197 | 1.8746 |
| 8 | REPS Compliance and QF Purchased Power - Capacity cents/kWh | Exh 2 Sch 1 pg 2 | 0.0317 | 0.0246 | 0.0199 | 0.0264 |
| 9 | Total adjusted Fuel and Fuel Related Costs cents/kWh | Sum | 2.0003 | 1.8217 | 1.8396 | 1.9010 |
| 10 | EMF Increment (Decrement) cents/kWh | Exh 3 pg 2, 3, 4 | 0.4863 | 0.6254 | 0.5726 | 0.5597 |
| 11 | EMF Interest Increment (Decrement) cents/kWh | Exh 3 pg 2, 3, 4 | - | - | - | - |
| 12 | Net Fuel and Fuel Related Costs Factors cents/kWh | Sum | **2.4866** | **2.4471** | **2.4122** | **2.4607** |

Note: Fuel factors exclude regulatory fee

**Duke Energy Carolinas, LLC**
**North Carolina Annual Fuel and Fuel Related Expense**
**Calculation of Fuel and Fuel Related Cost Factors Using:**
**Proposed Nuclear Capacity Factor of 93.94%**
**Test Period Ended December 31, 2021**
**Billing Period September 2022 - August 2023**
**Docket E-7, Sub 1263**



| Line # | Unit | Reference | Generation (MWh) | Unit Cost (cents/kWh) | Fuel Cost ($) |
|---|---|---|---|---|---|
| | | | D | E | D * E = F |
| 1 | Total Nuclear | Workpaper 1 | 59,085,520 | 0.5773 | 341,071,825 |
| 2 | Coal | Workpaper 3 & 4 | 9,117,091 | 3.2121 | 292,853,648 |
| 3 | Gas CT and CC | Workpaper 3 & 4 | 29,962,094 | 3.1108 | 932,067,312 |
| 4 | Reagents and Byproducts | Workpaper 9 | | | 9,519,806 |
| 5 | Total Fossil | Sum | 39,079,185 | | 1,234,440,766 |
| 6 | Hydro | Workpaper 3 | 4,980,701 | | |
| 7 | Net Pumped Storage | Workpaper 3 | (3,411,289) | | |
| 8 | Total Hydro | Sum | 1,569,412 | | - |
| 9 | Solar Distributed Generation | Workpaper 3 | 364,048 | | - |
| 10 | Total Generation | Line 1 + Line 5 + Line 8 + Line 9 | 100,098,166 | | 1,575,512,591 |
| 11 | Less Lee CC Joint Owners | Workpaper 3 & 4 | (876,000) | | (20,639,342) |
| 12 | Less Catawba Joint Owners | Workpaper 3 & 4 | (14,848,200) | | (85,734,604) |
| 13 | Fuel expense recovered through reimbursement | Workpaper 4 | | | (14,027,557) |
| 14 | Net Generation | Sum Lines 10-13 | 84,373,966 | | 1,455,111,088 |
| 15 | Purchased Power | Workpaper 3 & 4 | 9,440,360 | 2.7656 | 261,085,798 |
| 16 | JDA Savings Shared | Workpaper 5 | | | 20,748,035 |
| 17 | Total Purchased Power | | 9,440,360 | | 281,833,833 |
| 18 | Total Generation and Purchased Power | Line 14 + Line 17 | 93,814,326 | 1.8515 | 1,736,944,921 |
| 19 | Fuel expense recovered through intersystem sales | Workpaper 3 & 4 | (1,964,801) | 3.3757 | (66,325,343) |
| 20 | Line losses and Company use | Line 22-Line 18-Line 19 | (3,892,553) | | - |
| 21 | System Fuel Expense for Fuel Factor | Lines 18 + 19 + 20 | | | 1,670,619,578 |
| 22 | Projected System MWh Sales for Fuel Factor | Workpaper 7 | 87,956,972 | | 87,956,972 |
| 23 | Fuel and Fuel Related Costs cents/kWh | Line 21 / Line 22 / 10 | | | 1.8994 |

Note: Rounding differences may occur

**Duke Energy Carolinas, LLC**
**North Carolina Annual Fuel and Fuel Related Expense**
**Calculation of Fuel and Fuel Related Cost Factors Using:**
**Proposed Nuclear Capacity Factor of 93.94%**
**Test Period Ended December 31, 2021**
**Billing Period September 2022 - August 2023**
**Docket E-7, Sub 1263**



| Line # | Description | Reference | Residential | GS/Lighting | Industrial | Total |
|---|---|---|---|---|---|---|
| 1 | NC Projected Billing Period MWh Sales | Workpaper 7 | 22,809,193 | 23,222,537 | 12,202,704 | 58,234,434 |
| | **Calculation of Renewable and Cogeneration Purchased Power Capacity Rate by Class** | | | | | Amount |
| 2 | Purchased Power for REPS Compliance - Capacity | Workpaper 4 | | | | $ 14,610,064 |
| 3 | QF Purchased Power - Capacity | Workpaper 4 | | | | 8,445,498 |
| 4 | Total of Renewable and QF Purchased Power Capacity | Line 2 + Line 3 | | | | $ 23,055,563 |
| 5 | NC Portion - Jursidicational % based on 2021 Production Plant Allocator | Input | | | | 66.68% |
| 6 | NC Renewable and QF Purchased Power - Capacity | Line 4 * Line 5 | | | | $ 15,373,745 |
| 7 | 2021 Production Plant Allocation Factors | Input | 47.04% | 37.14% | 15.81% | 100.00% |
| 8 | Renewable and QF Purchased Power - Capacity allocated on 2021 Production Plant Allocator | Line 6 * Line 7 | $ 7,232,527 | $ 5,710,002 | $ 2,431,215 | $ 15,373,745 |
| 9 | Renewable and QF Purchased Power - Capacity cents/kWh based on Projected Billing Period Sales | Line 8 / Line 1 / 10 | 0.0317 | 0.0246 | 0.0199 | 0.0264 |
| | **Summary of Total Rate by Class** | | | | | |
| 10 | Fuel and Fuel Related Costs excluding Purchased Power for REPS Compliance and QF Purchased Capacity cents/kWh | Line 15 - Line 11 - Line 13 - Line 14 | 1.9686 | 1.7971 | 1.8197 | 1.8746 |
| 11 | REPS Compliance and QF Purchased Power - Capacity cents/kWh | Line 9 | 0.0317 | 0.0246 | 0.0199 | 0.0264 |
| 12 | Total adjusted Fuel and Fuel Related Costs cents/kWh | Line 10 + Line 11 | 2.0003 | 1.8217 | 1.8396 | 1.9010 |
| 13 | EMF Increment (Decrement) cents/kWh | Exh 3 pg 2, 3, 4 | 0.4863 | 0.6254 | 0.5726 | 0.5597 |
| 14 | EMF Interest Increment (Decrement) cents/kWh | Exh 3 pg 2, 3, 4 | - | - | - | - |
| 15 | Net Fuel and Fuel Related Costs Factors cents/kWh | Exh 2 Sch 1 Page 3 | 2.4866 | 2.4471 | 2.4122 | 2.4607 |

Note: Rounding differences may occur

**Duke Energy Carolinas, LLC**
**North Carolina Annual Fuel and Fuel Related Expense**
**Calculation of Uniform Percentage Average Bill Adjustment by Customer Class**
**Proposed Nuclear Capacity Factor of 93.94%**
**Test Period Ended December 31, 2021**
**Billing Period September 2022 - August 2023**
**Docket E-7, Sub 1263**



| Line # | Rate Class | Projected Billing Period MWh Sales | Annual Revenue at Current rates | Allocate Fuel Costs Increase/(Decrease) to Customer Class | Increase/(Decrease) as % of Annual Revenue at Current Rates | Total Fuel Rate Increase/(Decrease) | Current Total Fuel Rate (including Capacity and EMF) E-7, Sub 1250 | Proposed Total Fuel Rate (including Capacity and EMF) |
|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G |
| | | Workpaper 7 | Workpaper 8 | Line 25 as a % of Column B | C / B | If D=0 then 0 if not then (C*100)/(A*1000) | Sykes Exhibit 1 | E + F = G |
| 1 | Residential | 22,809,193 | $ 2,259,696,240 | $ 224,708,128 | 9.94% | 0.9852 | 1.5014 | 2.4866 |
| 2 | General Service/Lighting | 23,222,537 | 1,658,017,092 | 164,876,106 | 9.94% | 0.7100 | 1.7371 | 2.4471 |
| 3 | Industrial | 12,202,704 | 673,497,148 | 66,973,729 | 9.94% | 0.5488 | 1.8634 | 2.4122 |
| 4 | NC Retail | 58,234,434 | $ 4,591,210,481 | $ 456,557,963 | 9.94% | | | |

**Total Proposed Composite Fuel Rate:**

| | | | | |
|---|---|---|---|---|
| 5 | Total Fuel Costs for Allocation | Workpaper 7 | $ | 1,675,206,096 |
| 6 | Total of Renewable and QF Purchased Power Capacity | Exhibit 2 Sch 1, Page 2 | | 23,055,563 |
| 7 | System Other Fuel Costs | Line 5 - Line 6 | $ | 1,652,150,533 |
| 8 | Adjusted Projected System MWh Sales for Fuel Factor | Workpaper 7 | | 88,132,893 |
| 9 | NC Retail Projected Billing Period MWh Sales | Line 4 | | 58,234,434 |
| 10 | Allocation % | Line 9 / Line 8 | | 66.08% |
| 11 | NC Retail Other Fuel Costs | Line 7 * Line 10 | $ | 1,091,670,180 |
| 12 | NC Renewable and QF Purchased Power - Capacity | Exhibit 2 Sch 1, Page 2 | | 15,373,745 |
| 13 | NC Retail Total Fuel Costs | Line 11 + Line 12 | $ | 1,107,043,925 |
| 14 | NC Retail Projected Billing Period MWh Sales | Line 4 | | 58,234,434 |
| 15 | Calculated Fuel Rate cents/kWh | Line 13 / Line 14 / 10 | | 1.9010 |
| 16 | Proposed Composite EMF Rate cents/kWh | Exhibit 3 Page 1 | | 0.5597 |
| 17 | Proposed Composite EMF Rate Interest cents/kWh | Exhibit 3 Page 1 | | 0.0000 |
| 18 | Total Proposed Composite Fuel Rate | Sum | | 2.4607 |

**Total Current Composite Fuel Rate - Docket E-7 Sub 1250:**

| | | | |
|---|---|---|---|
| 19 | Current composite Fuel Rate cents/kWh | Sykes Exhibit 1 | 1.6414 |
| 20 | Current composite EMF Rate cents/kWh | Sykes Exhibit 1 | 0.0353 |
| 21 | Current composite EMF Interest Rate cents/kWh | Sykes Exhibit 1 | 0.0000 |
| 22 | Total Current Composite Fuel Rate | Sum | 1.6767 |
| 23 | Increase/(Decrease) in Composite Fuel rate cents/kWh | Line 18 - Line 22 | 0.7840 |
| 24 | NC Retail Projected Billing Period MWh Sales | Line 4 | 58,234,434 |
| 25 | Increase/(Decrease) in Fuel Costs | Line 23 * Line 24 * 10 | $ 456,557,963 |

Note: Rounding differences may occur

**Duke Energy Carolinas, LLC** — **Sykes Revised Exhibit 2**
**North Carolina Annual Fuel and Fuel Related Expense** — **Schedule 2**
**Calculation of Fuel and Fuel Related Cost Factors Using:** — **Page 1 of 3**
**Proposed Nuclear Capacity Factor of 93.94% and Normalized Test Period Sales**
**Test Period Ended December 31, 2021**
**Billing Period September 2022 - August 2023**
**Docket E-7, Sub 1263**

| Line # | Unit | Reference | Generation (MWh) | Unit Cost (cents/kWh) | Fuel Cost ($) |
|---|---|---|---|---|---|
| | | | D | E | D * E = F |
| 1 | Total Nuclear | Workpaper 1 | 59,085,520 | 0.5773 | 341,071,825 |
| 2 | Coal | Calculated | 8,399,051 | 3.2121 | 269,789,214 |
| 3 | Gas CT and CC | Workpaper 3 & 4 | 29,962,094 | 3.1108 | 932,067,312 |
| 4 | Reagents and Byproducts | Workpaper 9 | - | | 9,519,806 |
| 5 | Total Fossil | Sum | 38,361,146 | | 1,211,376,332 |
| 6 | Hydro | Workpaper 3 | 4,980,701 | | |
| 7 | Net Pumped Storage | Workpaper 3 | (3,411,289) | | |
| 8 | Total Hydro | Sum | 1,569,412 | | |
| 9 | Solar Distributed Generation | Workpaper 3 | 364,048 | | |
| 10 | Total Generation | Line 1 + Line 5 + Line 8 + Line 9 | 99,380,126 | | 1,552,448,157 |
| 11 | Less Lee CC Joint Owners | Workpaper 3 & 4 | (876,000) | | (20,639,342) |
| 12 | Less Catawba Joint Owners | Workpaper 3 & 4 | (14,848,200) | | (85,734,604) |
| 13 | Fuel expense recovered through reimbursement | Workpaper 4 | | | (14,027,557) |
| 14 | Net Generation | Sum | 83,655,926 | | 1,432,046,654 |
| 15 | Purchased Power | Workpaper 3 & 4 | 9,440,360 | | 261,085,798 |
| 16 | JDA Savings Shared | Workpaper 5 | - | | 20,748,035 |
| 17 | Total Purchased Power | Sum | 9,440,360 | | 281,833,833 |
| 18 | Total Generation and Purchased Power | Line 14 + Line 17 | 93,096,286 | | 1,713,880,487 |
| 19 | Fuel expense recovered through intersystem sales | Workpaper 3 & 4 | (1,964,801) | | (66,325,343) |
| 20 | Line losses and Company use | Line 22 - Line 19 - Line 18 | (3,892,553) | | - |
| 21 | System Fuel Expense for Fuel Factor | Lines 18 + 19 + 20 | | | 1,647,555,144 |
| 22 | Normalized Test Period MWh Sales | Exhibit 4 | 87,238,932 | | 87,238,932 |
| 23 | Fuel and Fuel Related Costs cents/kWh | Line 21 / Line 22 / 10 | | | 1.8886 |

Note: Rounding differences may occur

**Duke Energy Carolinas, LLC**
**North Carolina Annual Fuel and Fuel Related Expense**
**Calculation of Fuel and Fuel Related Cost Factors Using:**
**Proposed Nuclear Capacity Factor of 93.94% and Normalized Test Period Sales**
**Test Period Ended December 31, 2021**
**Billing Period September 2022 - August 2023**
**Docket E-7, Sub 1263**



| Line # | Description | Reference | Residential | GS/Lighting | Industrial | Total |
|---|---|---|---|---|---|---|
| 1 | NC Normalized Test Period MWh Sales | Exhibit 4 | 22,926,377 | 23,198,571 | 12,293,985 | 58,418,933 |
| | **Calculation of Renewable Purchased Power Capacity Rate by Class** | | | | | Amount |
| 2 | Purchased Power for REPS Compliance - Capacity | Workpaper 4 | | | | $ 14,610,064 |
| 3 | QF Purchased Power - Capacity | Workpaper 4 | | | | 8,445,498 |
| 4 | Total of Renewable and QF Purchased Power Capacity | Line 2 + Line 3 | | | | $ 23,055,563 |
| 5 | NC Portion - Jursidicational % based on 2021 Production Plant Allocator | Input | | | | 66.68% |
| 6 | NC Renewable and QF Purchased Power - Capacity | Line 4 * Line 5 | | | | $ 15,373,745 |
| 7 | 2021 Production Plant Allocation Factors | Input | 47.04% | 37.14% | 15.81% | 100.00% |
| 8 | Renewable and QF Purchased Power - Capacity allocated on 2021 Production Plant Allocator | Line 6 * Line 7 | $ 7,232,527 | $ 5,710,002 | $ 2,431,215 | $ 15,373,745 |
| 9 | Renewable and QF Purchased Power - Capacity cents/kWh based on Normalized Test Period Sales | Line 8 / Line 1 / 10 | 0.0315 | 0.0246 | 0.0198 | 0.0263 |
| | **Summary of Total Rate by Class** | | | | | |
| 10 | Fuel and Fuel Related Costs excluding Purchased Power for REPS Compliance and QF Purchased Capacity cents/kWh | Line 15 - Line 11 - Line 13 - Line 14 | 1.9530 | 1.7901 | 1.8098 | 1.8637 |
| 11 | REPS Compliance and QF Purchased Power - Capacity cents/kWh | Line 9 | 0.0315 | 0.0246 | 0.0198 | 0.0263 |
| 12 | Total adjusted Fuel and Fuel Related Costs cents/kWh | Line 10 + Line 11 | 1.9845 | 1.8147 | 1.8296 | 1.8900 |
| 13 | EMF Increment (Decrement) cents/kWh | Exh 3 pg 2, 3, 4 | 0.4863 | 0.6254 | 0.5726 | 0.5597 |
| 14 | EMF Interest Increment (Decrement) cents/kWh | Exh 3 pg 2, 3, 4 | - | - | - | - |
| 15 | Net Fuel and Fuel Related Costs Factors cents/kWh | Exh 2 Sch 2 Page 3 | 2.4708 | 2.4401 | 2.4022 | 2.4497 |

Note: Rounding differences may occur

**Duke Energy Carolinas, LLC**
**North Carolina Annual Fuel and Fuel Related Expense**
**Calculation of Uniform Percentage Average Bill Adjustment by Customer Class**
**Proposed Nuclear Capacity Factor of 93.94% and Normalized Test Period Sales**
**Test Period Ended December 31, 2021**
**Billing Period September 2022 - August 2023**
**Docket E-7, Sub 1263**



| Line # | Rate Class | Normalized Test Period MWh Sales | Annual Revenue at Current rates | Allocate Fuel Costs Increase/(Decrease) to Customer Class | Increase/(Decrease) as % of Annual Revenue at Current Rates | Total Fuel Rate Increase/(Decrease) | Current Total Fuel Rate (including Capacity and EMF) E-7, Sub 1250 | Proposed Total Fuel Rate (including Capacity and EMF) |
|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G |
| | | Exhibit 4 | Workpaper 8 | Line 25 as a % of Column B | C / B | If D=0 then 0 if not then (C*100)/(A*1000) | Sykes Exhibit 1 | E + F = G |
| 1 | Residential | 22,926,377 | $ 2,259,696,240 | $ 222,257,268 | 9.84% | 0.9694 | 1.5014 | 2.4708 |
| 2 | General Service/Lighting | 23,198,571 | $ 1,658,017,092 | 163,077,825 | 9.84% | 0.7030 | 1.7371 | 2.4401 |
| 3 | Industrial | 12,293,985 | $ 673,497,148 | 66,243,256 | 9.84% | 0.5388 | 1.8634 | 2.4022 |
| 4 | NC Retail | 58,418,933 | $ 4,591,210,481 | $ 451,578,349 | | | | |

**Total Proposed Composite Fuel Rate:**

| | | | |
|---|---|---|---|
| 5 | Total Fuel Costs for Allocation | Workpaper 7a | $ 1,652,141,662 |
| 6 | Total of Renewable and QF Purchased Power Capacity | Exhibit 2 Sch 2, Page 2 | 23,055,563 |
| 7 | System Other Fuel Costs | Line 5 - Line 6 | $ 1,629,086,100 |
| 8 | Normalized Test Period System MWh Sales for Fuel Factor | Workpaper 7a | 87,414,853 |
| 9 | NC Retail Normalized Test Period MWh Sales | Exhibit 4 | 58,418,933 |
| 10 | Allocation % | Line 9 / Line 8 | 66.83% |
| 11 | NC Retail Other Fuel Costs | Line 7 * Line 10 | $ 1,088,718,240 |
| 12 | NC Renewable and QF Purchased Power - Capacity | Exhibit 2 Sch 2, Page 2 | 15,373,745 |
| 13 | NC Retail Total Fuel Costs | Line 11 + Line 12 | $ 1,104,091,985 |
| 14 | NC Retail Normalized Test Period MWh Sales | Line 9 | 58,418,933 |
| 15 | Calculated Fuel Rate cents/kWh | Line 13 / Line 14 / 10 | 1.8900 |
| 16 | Proposed Composite EMF Rate cents/kWh | Exhibit 3 Page 1 | 0.5597 |
| 17 | Proposed Composite EMF Rate Interest cents/kWh | Exhibit 3 Page 1 | 0.0000 |
| 18 | Total Proposed Composite Fuel Rate | Sum | 2.4497 |

**Total Current Composite Fuel Rate - Docket E-7 Sub 1250:**

| | | | |
|---|---|---|---|
| 19 | Current composite Fuel Rate cents/kWh | Sykes Exhibit 1 | 1.6414 |
| 20 | Current composite EMF Rate cents/kWh | Sykes Exhibit 1 | 0.0353 |
| 21 | Current composite EMF Interest Rate cents/kWh | Sykes Exhibit 1 | 0.0000 |
| 22 | Total Current Composite Fuel Rate | Sum | 1.6767 |
| 23 | Increase/(Decrease) in Composite Fuel rate cents/kWh | Line 18 - Line 22 | 0.7730 |
| 24 | NC Retail Normalized Test Period MWh Sales | Exhibit 4 | 58,418,933 |
| 25 | Increase/(Decrease) in Fuel Costs | Line 23 * Line 24 * 10 | $ 451,578,349 |

Note: Rounding differences may occur

**Duke Energy Carolinas, LLC** — **Sykes Revised Exhibit 2**
**North Carolina Annual Fuel and Fuel Related Expense** — **Schedule 3**
**NERC 5 Year Average Nuclear Capacity Factor of 92.07% and Projected Period Sales** — **Page 1 of 3**
**Test Period Ended December 31, 2021**
**Billing Period September 2022 - August 2023**
**Docket E-7, Sub 1263**

| Line # | Unit | Reference | Generation (MWh) | Unit Cost (cents/kWh) | Fuel Cost ($) |
|---|---|---|---|---|---|
| | | | D | E | D * E = F |
| 1 | Total Nuclear | Workpaper 2 | 57,909,218 | 0.5773 | 334,281,608 |
| 2 | Coal | Calculated | 9,997,788 | 3.2121 | 321,142,864 |
| 3 | Gas CT and CC | Workpaper 3 & 4 | 29,962,094 | 3.1108 | 932,067,312 |
| 4 | Reagents and Byproducts | Workpaper 9 | - | | 9,519,806 |
| 5 | Total Fossil | Sum | 39,959,882 | | 1,262,729,982 |
| 6 | Hydro | Workpaper 3 | 4,980,701 | | |
| 7 | Net Pumped Storage | Workpaper 3 | (3,411,289) | | |
| 8 | Total Hydro | Sum | 1,569,412 | | |
| 9 | Solar Distributed Generation | Workpaper 3 | 364,048 | | |
| 10 | Total Generation | Line 1 + Line 5 + Line 8 + Line 9 | 99,802,561 | | 1,597,011,590 |
| 11 | Less Lee CC Joint Owners | Workpaper 3 & 4 | (876,000) | | (20,639,342) |
| 12 | Less Catawba Joint Owners | Calculated | (14,552,595) | | (84,027,759) |
| 13 | Fuel expense recovered through reimbursement | Workpaper 4 | | | (14,027,557) |
| 14 | Net Generation | Sum | 84,373,966 | | 1,478,316,932 |
| 15 | Purchased Power | Workpaper 3 & 4 | 9,440,360 | | 261,085,798 |
| 16 | JDA Savings Shared | Workpaper 5 | - | | 20,748,035 |
| 17 | Total Purchased Power | Sum | 9,440,360 | | 281,833,833 |
| 18 | Total Generation and Purchased Power | Line 14 + Line 17 | 93,814,326 | | 1,760,150,766 |
| 19 | Fuel expense recovered through intersystem sales | Workpaper 3 & 4 | (1,964,801) | | (66,325,343) |
| 20 | Line losses and Company use | Line 22 - Line 19 - Line 18 | (3,892,553) | | - |
| 21 | System Fuel Expense for Fuel Factor | Lines 18 + 19 + 20 | | | 1,693,825,422 |
| 22 | Projected System MWh Sales for Fuel Factor | Workpaper 7b | 87,956,972 | | 87,956,972 |
| 23 | Fuel and Fuel Related Costs cents/kWh | Line 21 / Line 22 / 10 | | | 1.9257 |

Note: Rounding differences may occur

**Duke Energy Carolinas, LLC**
**North Carolina Annual Fuel and Fuel Related Expense**
**Calculation of Fuel and Fuel Related Cost Factors Using:**
**NERC 5 Year Average Nuclear Capacity Factor of 92.07% and Projected Period Sales**
**Test Period Ended December 31, 2021**
**Billing Period September 2022 - August 2023**
**Docket E-7, Sub 1263**



| Line # | Description | Reference | Residential | GS/Lighting | Industrial | Total |
|---|---|---|---|---|---|---|
| 1 | NC Projected Billing Period MWh Sales | Workpaper 7b | 22,809,193 | 23,222,537 | 12,202,704 | 58,234,434 |
| | **Calculation of Renewable Purchased Power Capacity Rate by Class** | | | | | Amount |
| 2 | Purchased Power for REPS Compliance - Capacity | Workpaper 4 | | | | $ 14,610,064 |
| 3 | QF Purchased Power - Capacity | Workpaper 4 | | | | 8,445,498 |
| 4 | Total of Renewable and QF Purchased Power Capacity | Line 2 + Line 3 | | | | $ 23,055,563 |
| 5 | NC Portion - Jursidicational % based on 2021 Production Plant Allocator | Input | | | | 66.68% |
| 6 | NC Renewable and QF Purchased Power - Capacity | Line 4 * Line 5 | | | | $ 15,373,745 |
| 7 | 2021 Production Plant Allocation Factors | Input | 47.04% | 37.14% | 15.81% | 100.00% |
| 8 | Renewable and QF Purchased Power - Capacity allocated on 2021 Production Plant Allocator | Line 6 * Line 7 | $ 7,232,527 | $ 5,710,002 | $ 2,431,215 | $ 15,373,745 |
| 9 | Renewable and QF Purchased Power - Capacity cents/kWh based on Projected Billing Period Sales | Line 8 / Line 1 / 10 | 0.0317 | 0.0246 | 0.0199 | 0.0264 |
| | **Summary of Total Rate by Class** | | | | | |
| 10 | Fuel and Fuel Related Costs excluding Purchased Power for REPS Compliance and QF Purchased Capacity cents/kWh | Line 15 - Line 11 - Line 13 - Line 14 | 2.0019 | 1.8211 | 1.8383 | 1.9011 |
| 11 | REPS Compliance and QF Purchased Power - Capacity cents/kWh | Line 9 | 0.0317 | 0.0246 | 0.0199 | 0.0264 |
| 12 | Total adjusted Fuel and Fuel Related Costs cents/kWh | Line 10 + Line 11 | 2.0336 | 1.8457 | 1.8582 | 1.9275 |
| 13 | EMF Increment (Decrement) cents/kWh | Exh 3 pg 2, 3, 4 | 0.4863 | 0.6254 | 0.5726 | 0.5597 |
| 14 | EMF Interest Increment (Decrement) cents/kWh | Exh 3 pg 2, 3, 4 | - | - | - | - |
| 15 | Net Fuel and Fuel Related Costs Factors cents/kWh | Exh 2 Sch 3 Page 3 | 2.5199 | 2.4711 | 2.4308 | 2.4872 |

Note: Rounding differences may occur

**Duke Energy Carolinas, LLC**
**North Carolina Annual Fuel and Fuel Related Expense**
**Calculation of Uniform Percentage Average Bill Adjustment by Customer Class**
**NERC 5 Year Average Nuclear Capacity Factor of 92.07% and Projected Period Sales**
**Test Period Ended December 31, 2021**
**Billing Period September 2022 - August 2023**
**Docket E-7, Sub 1263**



| Line # | Rate Class | Projected Billing Period MWh Sales | Annual Revenue at Current rates | Allocate Fuel Costs Increase/(Decrease) to Customer Class | Increase/Decrease as % of Annual Revenue at Current Rates | Total Fuel Rate Increase/(Decrease) | Current Total Fuel Rate (including Capacity and EMF) E-7, Sub 1250 | Proposed Total Fuel Rate (including Capacity and EMF) |
|---|---|---|---|---|---|---|---|---|
| | | A | B | C | C / B = D | E | F | G |
| | | Workpaper 7b | Workpaper 8 | Line 25 as a % of Column B | C / B | If D=0 then 0 if not then (C*100)/(A*1000) | Sykes Exhibit 1 | E + F = G |
| 1 | Residential | 22,809,193 | $ 2,259,696,240 | $ 232,303,492 | 10.28% | 1.0185 | 1.5014 | 2.5199 |
| 2 | General Service/Lighting | 23,222,537 | $ 1,658,017,092 | $ 170,449,087 | 10.28% | 0.7340 | 1.7371 | 2.4711 |
| 3 | Industrial | 12,202,704 | $ 673,497,148 | $ 69,237,509 | 10.28% | 0.5674 | 1.8634 | 2.4308 |
| 4 | NC Retail | 58,234,434 | $ 4,591,210,481 | $ 471,990,088 | | | | |

**Total Proposed Composite Fuel Rate:**

| | | | |
|---|---|---|---|
| 5 | Total Fuel Costs for Allocation | Workpaper 7b | $ 1,698,411,934 |
| 6 | Total of Renewable and QF Purchased Power Capacity | Exhibit 2 Sch 3, Page 2 | 23,055,563 |
| 7 | System Other Fuel Costs | Line 5 - Line 6 | $ 1,675,356,371 |
| 8 | Adjusted Projected System MWh Sales for Fuel Factor | Workpaper 7b | 88,132,893 |
| 9 | NC Retail Projected Billing Period MWh Sales | Line 4 | 58,234,434 |
| 10 | Allocation % | Line 9 / Line 8 | 66.08% |
| 11 | NC Retail Other Fuel Costs | Line 7 * Line 10 | $ 1,107,075,490 |
| 12 | NC Renewable and QF Purchased Power - Capacity | Exhibit 2 Sch 3, Page 2 | 15,373,745 |
| 13 | NC Retail Total Fuel Costs | Line 11 + Line 12 | $ 1,122,449,235 |
| 14 | NC Retail Projected Billing Period MWh Sales | Line 4 | 58,234,434 |
| 15 | Calculated Fuel Rate cents/kWh | Line 13 / Line 14 / 10 | 1.9275 |
| 16 | Proposed Composite EMF Rate cents/kWh | Exhibit 3 Page 1 | 0.5597 |
| 17 | Proposed Composite EMF Rate Interest cents/kWh | Exhibit 3 Page 1 | 0.0000 |
| 18 | Total Proposed Composite Fuel Rate | Sum | 2.4872 |

**Total Current Composite Fuel Rate - Docket E-7 Sub 1250:**

| | | | |
|---|---|---|---|
| 19 | Current composite Fuel Rate cents/kWh | Sykes Exhibit 1 | 1.6414 |
| 20 | Current composite EMF Rate cents/kWh | Sykes Exhibit 1 | 0.0353 |
| 21 | Current composite EMF Interest Rate cents/kWh | Sykes Exhibit 1 | 0.0000 |
| 22 | Total Current Composite Fuel Rate | Sum | 1.6767 |
| 23 | Increase/(Decrease) in Composite Fuel rate cents/kWh | Line 18 - Line 22 | 0.8105 |
| 24 | NC Retail Projected Billing Period MWh Sales | Line 4 | 58,234,434 |
| 25 | Increase/(Decrease) in Fuel Costs | Line 23 * Line 24 * 10 | $ 471,990,088 |

Note: Rounding differences may occur

**Duke Energy Carolinas, LLC**
**North Carolina Annual Fuel and Fuel Related Expense**
**Calculation of Experience Modification Factor - Proposed Composite**
**Test Period Ended December 31, 2021**
**Billing Period September 2022 - August 2023**
**Docket E-7, Sub 1263**

| Line No. | Month | Fuel Cost Incurred ¢/kWh (a) | Fuel Cost Billed ¢/kWh (b) | NC Retail MWh Sales (c) | Reported (Over)/ Under Recovery (d) | Correction JDA Purchased Power (e) | Revised (Over)/Under Recovery (f) |
|---|---|---|---|---|---|---|---|
| 1 | January 2021 | | | 5,785,767 | $ 1,309,433 | $ - | $ 1,309,433 |
| 2 | February | | | 4,705,197 | $ 24,172,571 | $ (1,105,173) | $ 23,067,398 |
| 3 | March [1] | | | 4,216,102 | $ (1,280,088) | $ - | $ (1,280,088) |
| 4 | April | | | 4,231,666 | $ (3,675,665) | $ - | $ (3,675,665) |
| 5 | May [1] | | | 3,784,760 | $ 9,106,398 | $ - | $ 9,106,398 |
| 6 | June | | | 4,813,118 | $ 15,273,578 | $ - | $ 15,273,578 |
| 7 | July | | | 5,540,576 | $ 32,252,591 | $ - | $ 32,252,591 |
| 8 | August | | | 5,890,179 | $ 37,907,835 | $ - | $ 37,907,835 |
| 9 | September | | | 5,517,651 | $ 13,769,502 | $ - | $ 13,769,502 |
| 10 | October [1] | | | 4,297,619 | $ 27,401,885 | $ - | $ 27,401,885 |
| 11 | November | | | 4,396,624 | $ 64,806,647 | $ - | $ 64,806,647 |
| 12 | December | | | 4,888,703 | $ 49,423,931 | $ - | $ 49,423,931 |
| 13 | **Total Test Period** | | | **58,067,962** | **$ 270,468,622** | **$ (1,105,173)** | **$ 269,363,445** |
| 14 | **Adjustment to remove (Over)/Under Recovery - January-February 2021 [2]** | | | | $ 25,482,004 | $ (1,105,173) | $ 24,376,831 |
| 15 | January 2022 | | | | $ 81,987,600 | $ - | $ 81,987,600 |
| 16 | **Total (Over)/Under Recovery - Update Period January 2022 [3]** | | | | **$ 81,987,600** | **$ -** | **$ 81,987,600** |
| 17 | **Adjusted (Over)/Under Recovery** | | | | | | **$ 326,974,214** |
| 18 | NC Retail Normalized Test Period MWh Sales | | | | | Exhibit 4 | 58,418,933 |
| 19 | **Experience Modification Increment (Decrement) cents/kWh** | | | | | | **0.5597** |

[1] Prior period corrections not included in rate incurred but are included in over/(under) recovery total

[2] January and February 2021 filed in Docket E-7, Sub 1250 to update the EMF and included in the current EMF rate. Included for Commission review in accordance with NC Rule R8-55(d)(3) but deducted from total (Over)/Under on Line 17.

[3] January 2022 is included for Commission review in accordance with NC Rule R8-55(d)(3). This period will be subject to review in the next annual fuel and fuel-related costs filing.

Rounding differences may occur

**Duke Energy Carolinas, LLC**
**North Carolina Annual Fuel and Fuel Related Expense**
**Calculation of Experience Modification Factor - Residential**
**Test Period Ended December 31, 2021**
**Billing Period September 2022 - August 2023**
**Docket E-7, Sub 1263**

| Line # | Month | Fuel Cost Incurred ¢/kWh (a) | Fuel Cost Billed ¢/kWh (b) | NC Retail MWh Sales (c) | Reported (Over)/ Under Recovery (d) | Correction JDA Purchased Power (e) | Revised (Over)/Under Recovery (f) |
|---|---|---|---|---|---|---|---|
| 1 | January 2021 | 1.4543 | 1.6027 | 2,427,681 | $ (3,602,217) | $ - | $ (3,602,217) |
| 2 | February | 1.8056 | 1.6027 | 2,047,050 | $ 4,154,380 | $ (396,210) | $ 3,758,170 |
| 3 | March [1] | 1.2642 | 1.6027 | 1,996,845 | $ (7,158,737) | $ - | $ (7,158,737) |
| 4 | April | 1.5283 | 1.6027 | 1,585,020 | $ (1,178,659) | $ - | $ (1,178,659) |
| 5 | May [1] | 2.0368 | 1.6027 | 1,288,098 | $ 5,643,932 | $ - | $ 5,643,932 |
| 6 | June | 1.9547 | 1.6027 | 1,774,699 | $ 6,246,872 | $ - | $ 6,246,872 |
| 7 | July | 2.1114 | 1.6027 | 2,146,583 | $ 10,918,699 | $ - | $ 10,918,699 |
| 8 | August | 2.2422 | 1.6027 | 2,212,544 | $ 14,149,173 | $ - | $ 14,149,173 |
| 9 | September | 1.7462 | 1.5655 | 2,129,356 | $ 3,848,250 | $ - | $ 3,848,250 |
| 10 | October [1] | 2.3928 | 1.5337 | 1,481,929 | $ 11,889,253 | $ - | $ 11,889,253 |
| 11 | November | 3.5580 | 1.5337 | 1,359,179 | $ 27,513,197 | $ - | $ 27,513,197 |
| 12 | December | 2.2952 | 1.5337 | 1,975,540 | $ 15,044,028 | $ - | $ 15,044,028 |
| 13 | **Total Test Period** | | | **22,424,524** | **$ 87,468,172** | **$ (396,210)** | **$ 87,071,961** |
| 14 | Test Period Wtd Avg. ¢/kWh | 1.9797 | 1.5843 | | | | |
| 15 | Adjustment to remove (Over)/Under Recovery - January-February 2021 [2] | | | | $ 552,163 | $ (396,210) | $ 155,953 |
| 16 | January 2022 | 2.6876 | 1.5337 | | $ 24,571,837 | $ - | $ 24,571,837 |
| 17 | **Total (Over)/Under Recovery - Update Period January 2022** [3] | | | | **$ 24,571,837** | **$ -** | **$ 24,571,837** |
| 18 | **Adjusted (Over)/Under Recovery** | | | | | | **$ 111,487,845** |
| 19 | NC Retail Normalized Test Period MWh Sales | | | | | Exhibit 4 | 22,926,377 |
| 20 | **Experience Modification Increment (Decrement) cents/kWh** | | | | | | **0.4863** |

**Notes:**

[1] Prior period corrections not included in rate incurred but are included in over/(under) recovery total

[2] January and February 2021 filed in Docket E-7, Sub 1250 to update the EMF and included in the current EMF rate. Included for Commission review in accordance with NC Rule R8-55(d)(3) but deducted from total (Over)/Under on Line 18.

[3] January 2022 is included for Commission review in accordance with NC Rule R8-55(d)(3). This period will be subject to review in the next annual fuel and fuel-related costs filing.

Rounding differences may occur

**Duke Energy Carolinas, LLC**
**North Carolina Annual Fuel and Fuel Related Expense**
**Calculation of Experience Modification Factor - GS/Lighting**
**Test Period Ended December 31, 2021**
**Billing Period September 2022 - August 2023**
**Docket E-7, Sub 1263**

| Line # | Month | Fuel Cost Incurred ¢/kWh (a) | Fuel Cost Billed ¢/kWh (b) | NC Retail MWh Sales (c) | Reported (Over)/ Under Recovery (d) | Correction JDA Purchased Power (e) | Revised (Over)/Under Recovery (f) |
|---|---|---|---|---|---|---|---|
| 1 | January 2021 | 1.8948 | 1.7583 | 2,224,452 | $ 3,036,294 | $ - | $ 3,036,294 |
| 2 | February | 2.5796 | 1.7583 | 1,711,092 | $ 14,053,467 | $ (474,850) | $ 13,578,617 |
| 3 | March [1] | 2.0380 | 1.7583 | 1,477,172 | $ 3,654,007 | $ - | $ 3,654,007 |
| 4 | April | 1.6824 | 1.7583 | 1,719,557 | $ (1,305,025) | $ - | $ (1,305,025) |
| 5 | May [1] | 1.8862 | 1.7583 | 1,656,907 | $ 2,072,505 | $ - | $ 2,072,505 |
| 6 | June | 2.0391 | 1.7583 | 2,021,651 | $ 5,677,153 | $ - | $ 5,677,153 |
| 7 | July | 2.3469 | 1.7583 | 2,284,951 | $ 13,448,970 | $ - | $ 13,448,970 |
| 8 | August | 2.5564 | 1.7583 | 2,286,069 | $ 18,244,441 | $ - | $ 18,244,441 |
| 9 | September | 1.9616 | 1.7212 | 2,297,610 | $ 5,524,126 | $ - | $ 5,524,126 |
| 10 | October [1] | 2.1455 | 1.6895 | 2,004,794 | $ 8,129,521 | $ - | $ 8,129,521 |
| 11 | November | 3.3527 | 1.6895 | 1,759,969 | $ 29,272,230 | $ - | $ 29,272,230 |
| 12 | December | 2.8474 | 1.6895 | 1,952,172 | $ 22,604,847 | $ - | $ 22,604,847 |
| 13 | **Total Test Period** | | | **23,396,396** | **$ 124,412,536** | **$ (474,850)** | **$ 123,937,686** |
| 14 | Test Period Wtd Avg. ¢/kWh | 2.2762 | 1.7378 | | | | |
| 15 | Adjustment to remove (Over)/Under Recovery - January-February 2021 [2] | | | | $ 17,089,761 | $ (474,850) | $ 16,614,911 |
| 16 | January 2022 | 3.6545 | 1.6895 | | $ 37,762,562 | $ - | $ 37,762,562 |
| 17 | **Total (Over)/Under Recovery - Update Period January 2022** [3] | | | | **$ 37,762,562** | **$ -** | **$ 37,762,562** |
| 18 | **Adjusted (Over)/Under Recovery** | | | | | | **$ 145,085,337** |
| 19 | NC Retail Normalized Test Period MWh Sales | | | | | Exhibit 4 | 23,198,571 |
| 20 | **Experience Modification Increment (Decrement) cents/kWh** | | | | | | **0.6254** |

**Notes:**

[1] Prior period corrections not included in rate incurred but are included in over/(under) recovery total

[2] January and February 2021 filed in Docket E-7, Sub 1250 to update the EMF and included in the current EMF rate. Included for Commission review in accordance with NC Rule R8-55(d)(3) but deducted from total (Over)/Under on Line 18.

[3] January 2022 is included for Commission review in accordance with NC Rule R8-55(d)(3). This period will be subject to review in the next annual fuel and fuel-related costs filing.

Rounding differences may occur

**Duke Energy Carolinas, LLC**
**North Carolina Annual Fuel and Fuel Related Expense**
**Calculation of Experience Modification Factor - Industrial**
**Test Period Ended December 31, 2021**
**Billing Period September 2022 - August 2023**
**Docket E-7, Sub 1263**

| Line # | Month | Fuel Cost Incurred ¢/kWh (a) | Fuel Cost Billed ¢/kWh (b) | NC Retail MWh Sales (c) | Reported (Over)/ Under Recovery (d) | Correction JDA Purchased Power (e) | Revised (Over)/Under Recovery (f) |
|---|---|---|---|---|---|---|---|
| 1 | January 2021 | 1.8306 | 1.6652 | 1,133,633 | $ 1,875,356 | $ - | $ 1,875,356 |
| 2 | February | 2.2950 | 1.6652 | 947,056 | $ 5,964,724 | $ (234,113) | $ 5,730,612 |
| 3 | March [1] | 1.9967 | 1.6652 | 742,085 | $ 2,224,644 | $ - | $ 2,224,644 |
| 4 | April | 1.5366 | 1.6652 | 927,089 | $ (1,191,979) | $ - | $ (1,191,979) |
| 5 | May [1] | 1.8321 | 1.6652 | 839,755 | $ 1,389,961 | $ - | $ 1,389,961 |
| 6 | June | 1.9946 | 1.6652 | 1,016,768 | $ 3,349,552 | $ - | $ 3,349,552 |
| 7 | July | 2.3762 | 1.6652 | 1,109,043 | $ 7,884,922 | $ - | $ 7,884,922 |
| 8 | August | 2.0615 | 1.6652 | 1,391,565 | $ 5,514,222 | $ - | $ 5,514,222 |
| 9 | September | 2.1003 | 1.6971 | 1,090,684 | $ 4,397,125 | $ - | $ 4,397,125 |
| 10 | October [1] | 2.6966 | 1.7243 | 810,897 | $ 7,383,110 | $ - | $ 7,383,110 |
| 11 | November | 2.3522 | 1.7243 | 1,277,476 | $ 8,021,220 | $ - | $ 8,021,220 |
| 12 | December | 2.9496 | 1.7243 | 960,991 | $ 11,775,057 | $ - | $ 11,775,057 |
| 13 | **Total Test Period** | | | **12,247,042** | **$ 58,587,915** | **$ (234,113)** | **$ 58,353,802** |
| 14 | Test Period Wtd Avg. ¢/kWh | 2.1672 | 1.6828 | | | | |
| 15 | Adjustment to remove (Over)/Under Recovery - January-February 2021 [2] | | | | $ 7,840,080 | $ (234,113) | $ 7,605,968 |
| 16 | January 2022 | 3.8201 | 1.7243 | | $ 19,653,201 | $ - | $ 19,653,201 |
| 17 | **Total (Over)/Under Recovery - Update Period January 2022** [3] | | | | **$ 19,653,201** | **$ -** | **$ 19,653,201** |
| 18 | **Adjusted (Over)/Under Recovery** | | | | | | **$ 70,401,036** |
| 19 | NC Retail Normalized Test Period MWh Sales | | | | | Exhibit 4 | 12,293,985 |
| 20 | **Experience Modification Increment (Decrement) cents/KWh** | | | | | | **0.5726** |

**Notes:**

[1] Prior period corrections not included in rate incurred but are included in over/(under) recovery total

[2] January and February 2021 filed in Docket E-7, Sub 1250 to update the EMF and included in the current EMF rate. Included for Commission review in accordance with NC Rule R8-55(d)(3) but deducted from total (Over)/Under on Line 18.

[3] January 2022 is included for Commission review in accordance with NC Rule R8-55(d)(3). This period will be subject to review in the next annual fuel and fuel-related costs filing.

Rounding differences may occur

**Duke Energy Carolinas, LLC**
**North Carolina Annual Fuel and Fuel Related Expense**
**Sales, Fuel Revenue, Fuel Expense and System Peak**
**Test Period Ended December 31, 2021**
**Billing Period September 2022 - August 2023**
**Docket E-7, Sub 1263**

**Sykes Revised Exhibit 4**

| Line # | Description | Reference | Total Company | North Carolina Retail | North Carolina Residential | North Carolina General Service/Lighting | North Carolina Industrial |
|---|---|---|---|---|---|---|---|
| 1 | Test Period MWh Sales (excluding inter system sales) | Exhibit 6 Schedule 1 (Line 4) and Workpaper 11 (NC Retail) | 86,551,610 | 58,067,962 | 22,424,524 | 23,396,396 | 12,247,042 |
| 2 | Customer Growth MWh Adjustment | Workpaper 13 Pg 1 | 99,601 | (62,454) | 162,754 | (243,071) | 17,862 |
| 3 | Weather MWh Adjustment | Workpaper 12 Pg 1 | 587,721 | 413,425 | 339,099 | 45,245 | 29,081 |
| 4 | Total Normalized MWh Sales | Sum | 87,238,932 | 58,418,933 | 22,926,377 | 23,198,571 | 12,293,985 |
| 5 | Test Period Fuel and Fuel Related Revenue * | | $ 1,449,831,492 | $ 967,961,388 | | | |
| 6 | Test Period Fuel and Fuel Related Expense * | | $ 1,845,020,858 | $ 1,238,430,010 | | | |
| 7 | Test Period Unadjusted (Over)/Under Recovery | | $ 395,189,366 | $ 270,468,622 | | | |

| | | 2021 Summer Coincidental Peak (CP) kW |
|---|---|---|
| 8 | Total System Peak | 17,241,828 |
| 9 | NC Retail Peak | 11,480,608 |
| 10 | NC Residential Peak | 5,400,475 |
| 11 | NC General Service/Lighting Peak | 4,263,819 |
| 12 | NC Industrial Peak | 1,816,314 |

* Total Company Fuel and Fuel-Related Revenue and Fuel and Fuel-Related Expense are determined based upon the fuel and fuel-related cost recovery mechanism in each of the company's jurisdictions.

Rounding differences may occur

**Duke Energy Carolinas, LLC**
**North Carolina Annual Fuel and Fuel Related Expense**
**Nuclear Capacity Ratings**
**Test Period Ended December 31, 2021**
**Billing Period September 2022 - August 2023**
**Docket E-7, Sub 1263**

**Sykes Exhibit 5**



| Unit | Rate Case Docket E-7, Sub 1214 | Fuel Docket E-7, Sub 1250 | Proposed Capacity Rating MW |
|---|---|---|---|
| Oconee Unit 1 | 847.0 | 847.0 | 847.0 |
| Oconee Unit 2 | 848.0 | 848.0 | 848.0 |
| Oconee Unit 3 | 859.0 | 859.0 | 859.0 |
| McGuire Unit 1 | 1,158.0 | 1,158.0 | 1,158.0 |
| McGuire Unit 2 | 1,157.6 | 1,157.6 | 1,157.6 |
| Catawba Unit 1 | 1,160.1 | 1,160.1 | 1,160.0 |
| Catawba Unit 2 | 1,150.1 | 1,150.1 | 1,150.1 |
| Total Company | 7,179.8 | 7,179.8 | 7,179.7 |

Sykes Exhibit 6



# DECEMBER 2021 MONTHLY FUEL FILING

**Sykes Exhibit 6**
**Schedule 1**

DUKE ENERGY CAROLINAS
SUMMARY OF MONTHLY FUEL REPORT

Docket No. E-7, Sub 1248

| Line No. | | December 2021 | 12 Months Ended December 2021 |
|---|---|---|---|
| 1 | Fuel and fuel-related costs | $ 189,923,750 | $ 1,841,186,117 |
| | MWH sales: | | |
| 2 | Total system sales | 7,230,301 | 87,792,832 |
| 3 | Less intersystem sales | 48,877 | 1,241,222 |
| 4 | Total sales less intersystem sales | 7,181,424 | 86,551,610 |
| 5 | Total fuel and fuel-related costs (¢/KWH) (line 1/line 4) | 2.6447 | 2.1273 |
| 6 | Current fuel and fuel-related cost component (¢/KWH) (per Schedule 4, Line 7a Total) | 1.6334 | |
| | Generation Mix (MWH): | | |
| | Fossil (by primary fuel type): | | |
| 7 | Coal | 285,789 | 13,569,695 |
| 8 | Fuel Oil | 2,720 | 53,988 |
| 9 | Natural Gas - Combined Cycle | 1,298,695 | 14,542,974 |
| 10 | Natural Gas - Combined Heat and Power | 9,589 | 15,739 |
| 11 | Natural Gas - Combustion Turbine | 61,155 | 1,131,529 |
| 12 | Natural Gas - Steam | 973,777 | 7,231,653 |
| 13 | Biogas | 1,215 | 21,502 |
| 14 | Total fossil | 2,632,940 | 36,567,080 |
| 15 | Nuclear 100% | 5,245,391 | 60,454,296 |
| 16 | Hydro - Conventional | 65,561 | 1,950,233 |
| 17 | Hydro - Pumped storage | (77,236) | (610,077) |
| 18 | Total hydro | (11,675) | 1,340,156 |
| 19 | Solar Distributed Generation | 15,972 | 293,289 |
| 20 | Total MWH generation | 7,882,628 | 98,654,821 |
| 21 | Less joint owners' portion - Nuclear | 1,413,367 | 15,008,712 |
| 22 | Less joint owners' portion - Combined Cycle | 70,455 | 744,961 |
| 23 | Adjusted total MWH generation | 6,398,806 | 82,901,148 |

Note: Detail amounts may not add to totals shown due to rounding.

**Sykes Exhibit 6**
**Schedule 2**

**DUKE ENERGY CAROLINAS**
**DETAILS OF FUEL AND FUEL-RELATED COSTS**

Docket No. E-7, Sub 1248

| Fuel and fuel-related costs: | December 2021 | 12 Months Ended December 2021 |
|---|---|---|
| 0501110 coal consumed - steam | $ 9,829,322 | $ 428,535,150 |
| 0501310 fuel oil consumed - steam | 86,054 | 1,264,107 |
| 0501330 fuel oil light-off - steam | 10,457 | 1,119,252 |
| Total Steam Generation - Account 501 | 9,925,833 | 430,918,509 |
| Nuclear Generation - Account 518 | | |
| 0518100 burnup of owned fuel | 21,591,353 | 259,578,561 |
| Other Generation - Account 547 | | |
| 0547100, 0547124 - natural gas consumed - Combustion Turbine | 4,412,048 | 49,551,008 |
| 0547100 - Combustion Turbine - credit for inefficient fuel cost | (126,494) | (1,524,868) |
| 0547100 natural gas consumed - Steam | 61,810,549 | 331,328,622 |
| 0547101 natural gas consumed - Combined Cycle | 54,245,577 | 392,828,920 |
| 0547101 natural gas consumed - Combined Heat and Power | 817,949 | 1,710,128 |
| 0547106 biogas consumed - Combined Cycle | 65,711 | 1,161,456 |
| 0547200 fuel oil consumed - Combustion Turbine | 225,631 | 6,445,339 |
| Total Other Generation - Account 547 | 121,450,971 | 781,500,605 |
| Reagents | | |
| Reagents (lime, limestone, ammonia, urea, dibasic acid, and sorbents) | 851,596 | 18,393,982 |
| Total Reagents | 851,596 | 18,393,982 |
| By-products | | |
| Net proceeds from sale of by-products | 905,813 | 6,884,190 |
| Total By-products | 905,813 | 6,884,190 |
| Total Fossil and Nuclear Fuel Expenses | | |
| Included in Base Fuel Component | 154,725,566 | 1,497,275,847 |
| Purchased Power and Net Interchange - Account 555 | | |
| Capacity component of purchased power (economic) | 215,310 | 10,765,481 |
| Capacity component of purchased power (renewables) | 662,095 | 16,335,530 |
| Capacity component of purchased power (PURPA) | 281,956 | 8,934,137 |
| Fuel and fuel-related component of purchased power | 36,195,486 | 353,899,479 |
| Total Purchased Power and Net Interchange - Account 555 | 37,354,847 | 389,934,627 |
| Less: | | |
| Fuel and fuel-related costs recovered through intersystem sales | 2,010,944 | 44,191,701 |
| Fuel in loss compensation | 138,819 | 1,368,818 |
| Solar Integration Charge | (2,826) | (2,826) |
| Lincoln CT marginal fuel revenue | 39,124 | 246,896 |
| Miscellaneous Fees Collected | (29,400) | 219,768 |
| Total Fuel Credits - Accounts 447 /456 | 2,156,661 | 46,024,357 |
| Total Fuel and Fuel-related Costs | $ 189,923,750 | $ 1,841,186,117 |

Notes: Detail amounts may not add to totals shown due to rounding.
Report reflects net ownership costs of jointly owned facilities.

**DUKE ENERGY CAROLINAS**
**PURCHASED POWER AND INTERCHANGE**
**SYSTEM REPORT - NORTH CAROLINA VIEW**

**DEC 2021**

| Purchased Power | Total | Capacity | Non-capacity | | | |
|---|---|---|---|---|---|---|
| Economic | $ | $ | mWh | Fuel $ | Fuel-related $ | Not Fuel $<br>Not Fuel-related $ |
| Carolina Power Partners, LLC | $ 573,300 | - | 11,400 | $ 349,713 | $ 223,587 | |
| Cherokee County Cogeneration Partners | 1,980,350 | $ 215,310 | 32,635 | 1,605,083 | 159,957 | |
| DE Progress - Native Load Transfer | 20,239,048 | - | 573,789 | 19,367,526 | 861,570 | $ 9,952 |
| DE Progress - Native Load Transfer Benefit | 3,261,712 | - | - | 3,261,712 | - | |
| Haywood Electric - Economic | 38,342 | 19,790 | 332 | 11,317 | 7,235 | |
| Macquarie Energy, LLC | 357,584 | - | 7,413 | 218,126 | 139,458 | |
| NCMPA - Economic | 335,160 | - | 9,120 | 204,448 | 130,712 | |
| Piedmont Municipal Power Agency | 710,145 | - | 21,612 | 417,565 | 292,580 | |
| PJM Interconnection, LLC. | 12,874 | - | 300 | 7,853 | 5,021 | |
| Town of Dallas | 584 | 584 | - | - | - | |
| Town of Forest City | 19,856 | 19,856 | - | - | - | |
| | **$ 28,978,259** | **$ 255,540** | **698,740** | **$ 26,295,173** | **$ 2,417,594** | **$ 9,952** |
| **Renewable Energy** | | | | | | |
| REPS | $ 5,049,069 | $ 642,188 | 91,397 | $ - | $ 4,406,882 | |
| DERP - Purchased Power | 304,103 | 19,907 | 5,264 | - | 205,494 | 78,703 |
| DERP - Net Metered Generation | 553 | - | 20 | | | 553 |
| | **$ 5,353,725** | **$ 662,095** | **96,682** | **$ -** | **$ 4,612,376** | **$ 79,256** |
| **HB589 PURPA Purchases** | | | | | | |
| CPRE - Purchased Power | (20,000) | - | - | | | (20,000) |
| Qualifying Facilities | 2,710,938 | 281,956 | 49,804 | | 2,343,504 | 85,478 |
| | **$ 2,690,938** | **$ 281,956** | **49,804** | **$ -** | **$ 2,343,504** | **$ 65,478** |
| **Non-dispatchable / Other** | | | | | | |
| Blue Ridge Electric Membership Corp. | 1,100,555 | $ 617,591 | 25,631 | 294,608 | | 188,356 |
| Haywood Electric | 202,825 | 104,398 | 4,343 | 60,040 | | 38,386 |
| Macquarie Energy, LLC | 60,500 | - | 1,100 | 36,905 | | 23,595 |
| NCEMC - Other | 3,133 | 3,133 | - | - | | - |
| Piedmont Electric Membership Corp. | 523,997 | 293,984 | 11,904 | 140,308 | | 89,705 |
| Generation Imbalance | 683,926 | - | 20,622 | 412,075 | | 271,851 |
| Energy Imbalance - Purchases | 63,494 | - | 6,933 | 32,476 | | 31,018 |
| Energy Imbalance - Sales | 306,460 | - | - | (49,070) | | 355,530 |
| Other Purchases | 717 | - | 28 | - | | 717 |
| | **$ 2,945,607** | **$ 1,019,107** | **70,561** | **$ 927,342** | **$ -** | **$ 999,158** |
| | - | | | | | |
| **Total Purchased Power** | **$ 39,968,528** | **$ 2,218,697** | **915,787** | **$ 27,222,515** | **$ 9,373,473** | **$ 1,153,843** |
| Interchanges In | | | | | | |
| Other Catawba Joint Owners | 7,311,950 | - | 710,249 | 4,176,265 | | 3,135,685 |
| WS Lee Joint Owner | 1,557,572 | | 29,613 | 1,437,844 | | 119,728 |
| Total Interchanges In | 8,869,522 | - | 739,862 | 5,614,110 | - | 3,255,412 |
| Interchanges Out | | | | | | |
| Other Catawba Joint Owners | (7,168,642) | (134,209) | (693,456) | (4,077,519) | | (2,956,913) |
| Catawba- Net Negative Generation | - | - | - | - | | - |
| WS Lee Joint Owner | (2,094,784) | | (40,405) | (1,937,093) | | (157,691) |
| Total Interchanges Out | (9,263,426) | (134,209) | (733,861) | (6,014,612) | - | (3,114,604) |
| **Net Purchases and Interchange Power** | **$ 39,574,624** | **$ 2,084,488** | **921,788** | **$ 26,822,013** | **$ 9,373,473** | **$ 1,294,651** |

NOTE: Detail amounts may not add to totals shown due to rounding.
CPRE purchased power amounts are recovered through the CPRE Rider.

**DUKE ENERGY CAROLINAS**
**INTERSYSTEM SALES***
**SYSTEM REPORT - NORTH CAROLINA VIEW**

**DEC 2021**

| Sales | Total $ | Capacity $ | Non-capacity mWh | Non-capacity Fuel $ | Non-capacity Non-fuel $ |
|---|---|---|---|---|---|
| **Utilities:** | | | | | |
| SC Public Service Authority - Emergency | - | - | - | - | - |
| **Market Based:** | | | | | |
| Central Electric Power Cooperative, Inc. | - | $ - | - | - | - |
| Macquarie Energy, LLC | 46,500 | - | 1,400 | 36,695 | 9,805 |
| NCMPA | 91,919 | 87,500 | 81 | 5,027 | (608) |
| PJM Interconnection, LLC. | - | - | - | - | - |
| **Other:** | | | | | |
| DE Progress - Native Load Transfer Benefit | 274,561 | - | - | 274,561 | - |
| DE Progress - Native Load Transfer | 1,685,438 | - | 45,652 | 1,658,000 | 27,439 |
| Generation Imbalance | 42,056 | - | 1,744 | 36,660 | 5,396 |
| **Total Intersystem Sales** | **$ 2,139,006** | **$ 87,500** | **48,877** | **$ 2,010,944** | **$ 40,562** |

* Sales for resale other than native load priority.

NOTE: Detail amounts may not add to totals shown due to rounding.

**DUKE ENERGY CAROLINAS**
**PURCHASED POWER AND INTERCHANGE**
**SYSTEM REPORT - NORTH CAROLINA VIEW**

**Twelve Months Ended**
**DEC 2021**

| Purchased Power | Total | Capacity | Non-capacity | | | |
|---|---|---|---|---|---|---|
| **Economic** | $ | $ | mWh | Fuel $ | Fuel-related $ | Not Fuel $<br>Not Fuel-related $ |
| Carolina Power Partners, LLC | $ 1,787,160 | - | 42,160 | $ 1,090,168 | $ 696,992 | |
| Cherokee County Cogeneration Partners | 25,303,689 | $ 10,765,481 | 370,824 | 12,687,649 | 1,850,559 | |
| Cube Yadkin Generation LLC | 606,505 | - | 37,958 | 369,968 | 236,537 | |
| DE Progress - Native Load Transfer | 185,028,516 | - | 5,779,506 | 174,196,837 | 10,756,889 | $ 74,790 |
| DE Progress - Native Load Transfer (Prior Period Adjust) | - | - | - | - | - | |
| DE Progress - Native Load Transfer Benefit | 21,186,870 | - | - | 21,186,870 | - | |
| DE Progress - Fees | 3,126 | - | - | - | 3,126 | |
| EDF Trading North America, LLC. | - | - | - | - | - | |
| Exelon Generation Company, LLC. | 311,275 | - | 4,945 | 189,878 | 121,397 | |
| Florida Power & Light Company | - | - | - | - | - | |
| Haywood Electric - Economic | 337,984 | 235,484 | 1,819 | 62,525 | 39,975 | |
| Macquarie Energy, LLC | 4,176,326 | - | 90,110 | 2,547,559 | 1,628,767 | |
| NCEMC | - | - | - | - | - | |
| NCMPA | 1,794,926 | - | 48,595 | 1,050,744 | 744,183 | |
| NCMPA Load Following Economic | 12,832,732 | - | 405,883 | 7,389,860 | 5,442,872 | |
| Piedmont Municipal Power Agency | 3,474,337 | - | 120,036 | 2,007,947 | 1,466,390 | |
| PJM Interconnection, LLC. | 189,850 | - | 5,700 | 115,809 | 74,042 | |
| South Carolina Electric & Gas Company / Dominion Energy | 152,750 | - | 3,550 | 92,690 | 60,061 | |
| Southern Company Services, Inc. | 706,464 | - | 20,793 | 430,943 | 275,521 | |
| Tennesse Valley Authority | 280,504 | - | 7,231 | 171,107 | 109,397 | |
| The Energy Authority | 69,600 | - | 2,400 | 42,456 | 27,144 | |
| Town of Dallas | 7,008 | 7,008 | - | - | - | |
| Town of Forest City | 238,272 | 238,272 | - | - | - | |
| | **$ 258,487,895** | **$ 11,246,246** | **6,941,510** | **$ 223,633,007** | **$ 23,533,853** | **$ 74,790** |
| **Renewable Energy** | | | | | | |
| REPS | $ 73,398,098 | $ 16,092,597 | 1,192,575 | $ - | $ 57,305,502 | $ - |
| DERP - Purchased Power | 3,789,475 | 242,933 | 65,917 | - | 2,583,689 | 962,853 |
| DERP - Net Metered Generation | 52,349 | (56) | 1,943 | - | | 52,406 |
| | **$ 77,239,922** | **$ 16,335,474** | **1,260,435** | **$ -** | **$ 59,889,191** | **$ 1,015,259** |
| **HB589 PURPA Purchases** | | | | | | |
| CPRE - Purchased Power | $ (70,000) | $ - | - | | | $ (70,000) |
| Qualifying Facilities | 43,116,103 | 8,934,138 | 714,046 | | $ 33,167,413 | 1,014,555 |
| | **$ 43,046,103** | **$ 8,934,138** | **714,046** | **$ -** | **$ 33,167,413** | **$ 944,555** |

| **Non-dispatchable / Other** | | | | | | |
|---|---|---|---|---|---|---|
| Blue Ridge Electric Membership Corp. | 13,391,449 | 7,266,227 | 299,086 | 3,736,386 | | 2,388,837 |
| Carolina Power Partners, LLC | 1,101,300 | - | 26,310 | 671,793 | | 429,507 |
| DE Progress - As Available Capacity | 302,530 | 302,530 | - | - | | - |
| Exelon Generation Company, LLC. | 131,200 | - | 1,600 | 80,032 | | 51,168 |
| Haywood Electric | 2,619,594 | 1,317,250 | 55,640 | 794,430 | | 507,914 |
| Macquarie Energy, LLC | 10,866,055 | - | 182,317 | 6,628,294 | | 4,237,761 |
| NCEMC - Other | 724,944 | 30,315 | 8,941 | 423,724 | | 270,905 |
| NCMPA - Reliability | 316,144 | - | 3,496 | 192,848 | | 123,296 |
| Piedmont Electric Membership Corp. | 6,410,149 | 3,460,962 | 140,160 | 1,799,004 | | 1,150,182 |
| Southern Company Services, Inc. | 541,806 | - | 6,886 | 330,502 | | 211,304 |
| Generation Imbalance | 2,987,298 | | 75,257 | 1,636,681 | | 1,350,617 |
| Energy Imbalance - Purchases | 1,644,938 | | (77,146) | 1,358,681 | | 286,257 |
| Energy Imbalance - Sales | (4,528,599) | | - | (4,307,002) | | (221,597) |
| Other Purchases | 6,183 | - | 228 | - | | 6,183 |
| | **$ 36,514,991** | **$ 12,377,283** | **722,775** | **$ 13,345,372** | **$ -** | **$ 10,792,336** |
| **Total Purchased Power** | **$ 415,288,911** | **$ 48,893,141** | **9,638,766** | **$ 236,978,379** | **$ 116,590,457** | **$ 12,826,940** |
| | | | | | | (6) |
| Interchanges In | | | | | | |
| Other Catawba Joint Owners | 71,832,695 | - | 7,544,326 | 42,400,464 | | 29,432,231 |
| WS Lee Joint Owner | 15,839,014 | - | 462,339 | 13,941,298 | | 1,897,716 |
| Total Interchanges In | 87,671,709 | - | 8,006,664 | 56,341,761 | - | 31,329,947 |
| Interchanges Out | | | | | | |
| Other Catawba Joint Owners | (74,348,518) | (1,580,207) | (7,701,093) | (43,504,130) | | (29,264,180) |
| Catawba- Net Negative Generation | (258,387) | - | (13,290) | (214,466) | | (43,921) |
| WS Lee Joint Owner | (14,126,778) | - | (402,026) | (12,292,521) | | (1,834,257) |
| Total Interchanges Out | (88,733,683) | (1,580,207) | (8,116,409) | (56,011,117) | - | (31,142,358) |
| **Net Purchases and Interchange Power** | **$ 414,226,937** | **$ 47,312,934** | **9,529,021** | **$ 237,309,023** | **$ 116,590,457** | **$ 13,014,529** |

NOTES: Detail amounts may not add to totals shown due to rounding.
CPRE purchased power amounts are recovered through the CPRE Rider.

**DUKE ENERGY CAROLINAS**
**INTERSYSTEM SALES***
**SYSTEM REPORT - NORTH CAROLINA VIEW**

**Twelve Months Ended DEC 2021**

| Sales | Total $ | Capacity $ | Non-capacity mWh | Non-capacity Fuel $ | Non-capacity Non-fuel $ |
|---|---|---|---|---|---|
| **Utilities:** | | | | | |
| SC Public Service Authority - Emergency | 506,304 | - | 5,909 | 429,565 | 76,740 |
| SC Electric & Gas / Dominion Energy - Emergency | 49,990 | - | 1,091 | 52,118 | (2,128) |
| **Market Based:** | | | | | |
| Carolina Power Partners, LLC | 134,880 | - | 2,780 | 109,765 | 25,115 |
| Central Electric Power Cooperative, Inc. | 4,590,375 | $ 4,809,001 | (5,516) | (209,410) | (9,216) |
| Macquarie Energy, LLC | 3,477,999 | - | 97,200 | 3,350,868 | 127,130 |
| NCMPA | 1,376,522 | 1,050,000 | 6,271 | 337,204 | (10,682) |
| PJM Interconnection, LLC. | 219,886 | - | 8,198 | 207,112 | 12,773 |
| SC Electric & Gas / Dominion Energy | 191,976 | - | 3,925 | 151,852 | 40,123 |
| Southern Company | 18,750 | - | 1,250 | 22,085 | (3,335) |
| Tennesse Valley Authority | 1,800 | - | 50 | 1,674 | 126 |
| The Energy Authority | 246,025 | - | 3,875 | 211,674 | 34,351 |
| **Other:** | | | | | |
| DE Progress - Native Load Transfer Benefit | 5,711,116 | - | - | 5,711,116 | - |
| DE Progress - Native Load Transfer | 35,200,938 | - | 1,094,952 | 33,084,586 | 2,116,352 |
| Generation Imbalance | 740,062 | - | 21,237 | 731,493 | 8,569 |
| BPM Transmission | (635,177) | - | - | - | (635,177) |
| **Total Intersystem Sales** | **$ 51,831,446** | **$ 5,859,001** | **1,241,222** | **$ 44,191,701** | **$ 1,780,742** |

* Sales for resale other than native load priority.

NOTES: Detail amounts may not add to totals shown due to rounding.

# Duke Energy Carolinas
# (Over) / Under Recovery of Fuel Costs
# Dec 2021

| Line No. | | | Residential | Commercial | Industrial | Total |
|---|---|---|---|---|---|---|
| 1 | Actual System kWh sales | Input | | | | 7,181,424,304 |
| 2 | DERP Net Metered kWh generation | Input | | | | 10,166,360 |
| 3 | Adjusted System kWh sales | L1 + L2 | | | | 7,191,590,664 |
| 4 | N.C. Retail kWh sales | Input | 1,975,539,867 | 1,952,172,317 | 960,990,889 | 4,888,703,073 |
| 5 | NC kWh sales % of actual system kWh sales | L4 T / L1 | | | | 68.07% |
| 6 | NC kWh sales % of adjusted system kWh sales | L4 T / L3 | | | | 67.98% |
| 7 | Approved fuel and fuel-related rates (¢/kWh) | | | | | |
| | 7a Billed rates by class (¢/kWh) | Input Annually | 1.5337 | 1.6895 | 1.7243 | 1.6334 |
| | 7b Billed fuel expense | L7b * L4 / 100 | $30,298,855 | $32,981,951 | $16,570,366 | $79,851,172 |
| 8 | Incurred base fuel and fuel-related (less renewable purchased power capacity) rates by class (¢/kWh) | | | | | |
| | 8a Docket E-7, Sub 1228 allocation factor | Input | 35.00% | 43.03% | 21.96% | |
| | 8b System incurred expense | Input | | | | $189,029,546 |
| | 8c Incurred base fuel and fuel-related expense | L8b * L6 * 8a | $44,977,890 | $55,298,766 | $28,221,943 | $128,498,599 |
| | 8d Incurred base fuel rates by class (¢/kWh) | L8c / L4 * 100 | 2.2767 | 2.8327 | 2.9368 | 2.6285 |
| 9 | Incurred renewable purchased power capacity rates by class (¢/kWh) | | | | | |
| | 9a NC retail production plant % | Input | | | | 66.98% |
| | 9b Production plant allocation factors | Input | 47.00% | 37.09% | 15.90% | 100.00% |
| | 9c System incurred expense | Input | | | | $1,159,361 |
| | 9d Incurred renewable capacity expense | L9a * L9b * 9c | $364,993 | $288,032 | $123,480 | $776,505 |
| | 9e Incurred renewable capacity rates by class (¢/kWh) | (L9a * L9c) * L9b / L4 * 100 | 0.0185 | 0.0148 | 0.0128 | 0.0159 |
| 10 | Total incurred rates by class (¢/kWh) | L8d + L9e | 2.2952 | 2.8474 | 2.9496 | 2.6444 |
| 11 | Difference in ¢/kWh (incurred - billed) | L7a - L10 | 0.7615 | 1.1579 | 1.2253 | 1.0110 |
| 12 | (Over) / under recovery [See footnote] | (L4 * L11) / 100 | $15,044,028 | $22,604,847 | $11,775,057 | $49,423,931 |
| 13 | Adjustments | Input | | | | |
| 14 | Total (over) / under recovery [See footnote] | L12+ L13 | $15,044,028 | $22,604,847 | $11,775,057 | $49,423,931 |
| 15 | Total system incurred expense | L8b + L9c | | | | $190,188,907 |
| 16 | Less: Jurisdictional allocation adjustment(s) | Input | | | | 265,155 |
| 17 | Total Fuel and Fuel-related Costs per Schedule 2 | L15 + L16 + L17 | | | | $189,923,752 |
| 18 | (Over) / under recovery for each month of the current calendar year [See footnote] | | | | | |

| | | (Over) / Under Recovery | | | | |
|---|---|---|---|---|---|---|
| | Year 2021 | Total To Date | Residential | Commercial | Industrial | Total Company |
| | January | $1,309,433 | ($3,602,217) | $3,036,294 | $1,875,356 | $1,309,433 |
| | February | 25,482,004 | $4,154,380 | $14,053,467 | $5,964,724 | $24,172,571 |
| _/1 | March | 24,201,918 | ($7,158,737) | $3,654,007 | $2,224,644 | ($1,280,086) |
| | April | 20,526,255 | ($1,178,659) | ($1,305,025) | ($1,191,979) | ($3,675,663) |
| _/1 | May | 29,632,653 | $5,643,932 | $2,072,505 | $1,389,961 | $9,106,398 |
| | June | 44,906,231 | $6,246,872 | $5,677,153 | $3,349,552 | $15,273,578 |
| | July | 77,158,822 | $10,918,699 | $13,448,970 | $7,884,922 | $32,252,591 |
| | August | 115,066,658 | $14,149,173 | $18,244,441 | $5,514,222 | $37,907,836 |
| | September | 128,836,159 | $3,848,250 | $5,524,126 | $4,397,125 | $13,769,501 |
| | October | 156,238,043 | $11,889,253 | $8,129,521 | $7,383,110 | $27,401,884 |
| | November | $221,044,690 | $27,513,197 | $29,272,230 | $8,021,220 | $64,806,647 |
| | December | $270,468,622 | $15,044,028 | $22,604,847 | $11,775,057 | $49,423,932 |
| | | | $87,468,172 | $124,412,536 | $58,587,915 | $270,468,622 |

Notes:

Detail amounts may not recalculate due to percentages presented as rounded.

Presentation of over or under collected amounts reflects a regulatory asset or liability. Over collections, or regulatory liabilities, are shown as negative amounts.

Under collections, or regulatory assets, are shown as positive amounts.

_/1 Includes adjustments.

_/2 Reflects a prorated rate and prorated allocation factor for periods in which the approved rates changed.

**DUKE ENERGY CAROLINAS**
**FUEL AND FUEL RELATED COST REPORT**
**DECEMBER 2021**

| Description | Buck CC | Dan River CC | Lee CC | Clemson CHP | Lee Steam/CT | Lincoln CT | (A) Lincoln (Unit17) CT | Mill Creek CT | Rockingham CT |
|---|---|---|---|---|---|---|---|---|---|
| **Cost of Fuel Purchased ($)** | | | | | | | | | |
| Coal | | | | | | | | | |
| Oil | - | - | - | | - | - | - | 682,026 | 342,571 |
| Gas - CC | $18,337,524 | $14,701,746 | $24,724,237 | | | | | | |
| Gas - CHP | | | | $817,949 | | | | | |
| Gas - CT | | | | | $14,021 | $6,134 | ($127,461) | $293,036 | $4,099,824 |
| Gas - Steam | | | | | 3 | | | | |
| Biogas | - | 221,776 | - | | | | | | |
| Total | $18,337,524 | $14,923,522 | $24,724,237 | $817,949 | $14,024 | $6,134 | ($127,461) | $975,062 | $4,442,395 |
| **Average Cost of Fuel Purchased (¢/MBTU)** | | | | | | | | | |
| Coal | | - | | | | | | | |
| Oil | | | | | - | - | - | 1,672.86 | 1,655.96 |
| Gas - CC | 632.40 | 632.14 | 634.66 | | | | | | |
| Gas - CHP | | | | 715.93 | | | | | |
| Gas - CT | | | | | - | 1,792.50 | (1,005.99) | 653.43 | 636.17 |
| Gas - Steam | | | | | - | | | | |
| Biogas | - | 2,601.47 | - | | | | | | |
| Weighted Average | 632.40 | 639.34 | 634.66 | 715.93 | - | 1,792.50 | (1,005.99) | 1,138.88 | 667.89 |
| **Cost of Fuel Burned ($)** | | | | | | | | | |
| Coal | | - | - | | - | | | | |
| Oil - CC | - | - | - | | | | | | |
| Oil - Steam/CT | | | | | $49,924 | - | 154,413 | 21,294 | - |
| Gas - CC | $18,337,524 | $14,701,746 | $24,724,237 | | | | | | |
| Gas - CHP | | | | $817,949 | | | | | |
| Gas - CT | | | | | 14,021 | $6,134 | ($127,461) | $293,036 | $4,099,824 |
| Gas - Steam | | | | | 3 | | | | |
| Biogas | - | 221,776 | - | | | | | | |
| Nuclear | | | | | | | | | |
| Total | $18,337,524 | $14,923,522 | $24,724,237 | $817,949 | $63,949 | $6,134 | $26,952 | $314,330 | $4,099,824 |
| **Average Cost of Fuel Burned (¢/MBTU)** | | | | | | | | | |
| Coal | | | | | - | | | | |
| Oil - CC | | | | | | | | | |
| Oil - Steam/CT | | | | | 1,400.40 | - | 1,105.56 | 1,784.91 | - |
| Gas - CC | 632.40 | 632.14 | 634.66 | | | | | | |
| Gas - CHP | | | | 715.93 | | | | | |
| Gas - CT | | | | | - | 1,792.50 | (1,005.99) | 653.43 | 636.17 |
| Gas - Steam | | | | | - | | | | |
| Biogas | - | 2,601.47 | - | | | | | | |
| Nuclear | | | | | | | | | |
| Weighted Average | 632.40 | 639.34 | 634.66 | 715.93 | 1,793.79 | 1,792.50 | 101.18 | 682.75 | 636.17 |
| **Average Cost of Generation (¢/kWh)** | | | | | | | | | |
| Coal | | - | - | | - | - | - | | |
| Oil - CC | - | - | - | | | | | | |
| Oil - Steam/CT | | - | - | | - | - | 15.06 | 1.68 | - |
| Gas - CC | 4.44 | 4.43 | 4.47 | | | | | | |
| Gas - CHP | | | | 8.53 | | | | | |
| Gas - CT | | | | | - | - | - | 15.22 | 6.76 |
| Gas - Steam | | | | | - | - | - | - | - |
| Biogas | - | 18.25 | - | | | | | | |
| Nuclear | | | | | | | | | |
| Weighted Average | 4.44 | 4.48 | 4.47 | 8.53 | - | - | 5.90 | 9.84 | 6.76 |
| **Burned MBTU's** | | | | | | | | | |
| Coal | | | | | - | | | | |
| Oil - CC | | | | | | | | | |
| Oil - Steam/CT | | | | | 3,565 | - | 13,967 | 1,193 | - |
| Gas - CC | 2,899,674 | 2,325,698 | 3,895,675 | | | | | | |
| Gas - CHP | | | | 114,250 | | | | | |
| Gas - CT | | | | | - | 342 | 12,670 | 44,846 | 644,452 |
| Gas - Steam | | | | | - | | | | |
| Biogas | - | 8,525 | - | | | | | | |
| Nuclear | | | | | | | | | |
| Total | 2,899,674 | 2,334,223 | 3,895,675 | 114,250 | 3,565 | 342 | 26,637 | 46,039 | 644,452 |
| **Net Generation (mWh)** | | | | | | | | | |
| Coal | | | | | | | | | |
| Oil - CC | | | | | | | | | |
| Oil - Steam/CT | | - | - | | (34) | - | 1,025 | 1,269 | - |
| Gas - CC | 413,337 | 332,121 | 553,237 | | - | | | | |
| Gas - CHP | | | | 9,589 | | | | | |
| Gas - CT | | | | | (0) | (855) | (568) | 1,925 | 60,653 |
| Gas - Steam | | | | | (388) | | | | |
| Biogas | - | 1,215 | - | | | | | | |
| Nuclear 100% | | | | | | | | | |
| Hydro (Total System) | | | | | | | | | |
| Solar (Total System) | | | | | | | | | |
| Total | 413,337 | 333,336 | 553,237 | 9,589 | (422) | (855) | 457 | 3,194 | 60,653 |
| **Cost of Reagents Consumed ($)** | | | | | | | | | |
| Ammonia | $45,251 | $0 | $27,467 | | | | | | |
| Limestone | | | | | | | | | |
| Sorbents | | | | | | | | | |
| Urea | | | | | | | | | |
| Re-emission Chemical | | | | | | | | | |
| Dibasic Acid | | | | | | | | | |
| Activated Carbon | | | | | | | | | |
| Lime (water emissions) | | | | | | | | | |
| Total | $45,251 | $0 | $27,467 | | | | | | |

**Notes:**
(A) Lincoln (Unit 17) fuel and fuel related costs represents pre-commercial generation during an extended testing and validation period.
Detail amounts may not add to totals shown due to rounding.
Data is reflected at 100% ownership.
Schedule excludes in-transit and terminal activity.
Cents/MBTU and cents/kWh are not computed when costs and/or net generation is negative.
Re-emission chemical reagent expense is not recoverable in NC.
Lime (water emissions) expense is not recoverable in SC fuel clause.

**DUKE ENERGY CAROLINAS**
**FUEL AND FUEL RELATED COST REPORT**
**DECEMBER 2021**

| Description | Allen | Marshall | Belews Creek | Cliffside | Catawba | McGuire | Oconee | Current Month | Total 12 ME December 2021 |
|---|---|---|---|---|---|---|---|---|---|
| | Steam | Steam - Dual Fuel | Steam - Dual Fuel | Steam - Dual Fuel | Nuclear | Nuclear | Nuclear | | |
| **Cost of Fuel Purchased ($)** | | | | | | | | | |
| Coal | $9,147 | $13,307,577 | $3,448,822 | $4,617,247 | | | | 21,382,792 | $427,384,699 |
| Oil | 17,051 | - | - | 104,088 | | | | 1,145,737 | 8,620,241 |
| Gas - CC | | | | | | | | 57,763,507 | 416,957,828 |
| Gas - CHP | | | | | | | | 817,949 | 1,710,128 |
| Gas - CT | | | | | | | | 4,285,554 | 48,026,140 |
| Gas - Steam | | 19,910,055 | 20,938,211 | 20,962,280 | | | | 61,810,549 | 331,328,622 |
| Biogas | | | | | | | | 221,776 | 3,513,761 |
| Total | $26,198 | $33,217,632 | $24,387,033 | $25,683,615 | | | | $147,427,864 | $1,237,541,419 |
| **Average Cost of Fuel Purchased (¢/MBTU)** | | | | | | | | | |
| Coal | - | 341.95 | 388.15 | 353.46 | | | | 351.32 | 311.27 |
| Oil | 1,657.42 | - | - | 1,659.76 | | | | 1,666.35 | 1,557.24 |
| Gas - CC | | | | | | | | 633.30 | 406.84 |
| Gas - CHP | | | | | | | | 715.93 | 718.56 |
| Gas - CT | | | | | | | | 639.90 | 378.17 |
| Gas - Steam | | 632.16 | 632.96 | 644.19 | | | | 636.47 | 447.74 |
| Biogas | | | | . | | | | 2,601.47 | 2,304.35 |
| Weighted Average | 2,546.48 | 471.76 | 581.13 | 562.42 | | | | 571.14 | 377.95 |
| **Cost of Fuel Burned ($)** | | | | | | | | | |
| Coal | $65,756 | $5,862,319 | $2,100,615 | $1,800,631 | | | | $9,829,322 | $428,535,150 |
| Oil - CC | | | | | | | | - | - |
| Oil - Steam/CT | 29,766 | 10,457 | - | 56,288 | | | | 322,142 | 8,828,699 |
| Gas - CC | | | | | | | | 57,763,507 | 416,957,828 |
| Gas - CHP | | | | | | | | 817,949 | 1,710,128 |
| Gas - CT | | | | | | | | 4,285,554 | 48,026,140 |
| Gas - Steam | | 19,910,055 | 20,938,211 | 20,962,280 | | | | 61,810,549 | 331,328,622 |
| Biogas | | | | | | | | 221,776 | 3,513,761 |
| Nuclear | | | | | $10,271,789 | $9,549,235 | $10,065,209 | 29,886,234 | 346,155,577 |
| Total | $95,522 | $25,782,831 | $23,038,826 | $22,819,199 | $10,271,789 | $9,549,235 | $10,065,209 | $164,937,032 | $1,585,055,905 |
| **Average Cost of Fuel Burned (¢/MBTU)** | | | | | | | | | |
| Coal | 308.89 | 306.80 | 326.30 | 296.55 | | | | 308.80 | 323.27 |
| Oil - CC | | | | | | | | - | - |
| Oil - Steam/CT | 1,714.61 | 1,448.33 | - | 1,600.91 | | | | 1,304.27 | 1,513.70 |
| Gas - CC | | | | | | | | 633.30 | 406.84 |
| Gas - CHP | | | | | | | | 715.93 | 718.56 |
| Gas - CT | | | | | | | | 639.90 | 378.17 |
| Gas - Steam | | 632.16 | 632.96 | 644.19 | | | | 636.47 | 447.74 |
| Biogas | | | | | | | | 2,601.47 | 2,304.35 |
| Nuclear | | | | | 58.89 | 54.27 | 58.00 | 57.04 | 56.91 |
| Weighted Average | 414.88 | 509.44 | 583.01 | 590.45 | 58.89 | 54.27 | 58.00 | 219.17 | 170.26 |
| **Average Cost of Generation (¢/kWh)** | | | | | | | | | |
| Coal | - | 3.39 | 3.67 | 3.13 | | | | 3.44 | 3.16 |
| Oil - CC | | | | | | | | - | - |
| Oil - Steam/CT | 47.38 | 22.07 | - | 16.10 | | | | 11.84 | 16.35 |
| Gas - CC | | | | | | | | 4.45 | 2.87 |
| Gas - CHP | | | | | | | | 8.53 | 10.87 |
| Gas - CT | | | | | | | | 7.01 | 4.24 |
| Gas - Steam | | 5.99 | 6.50 | 6.56 | | | | 6.35 | 4.58 |
| Biogas | | | | | | | | 18.25 | 16.34 |
| Nuclear | | | | | 0.59 | 0.54 | 0.59 | 0.57 | 0.57 |
| Weighted Average | - | 5.10 | 6.07 | 6.04 | 0.59 | 0.54 | 0.59 | 2.09 | 1.61 |
| **Burned MBTU's** | | | | | | | | | |
| Coal | 21,288 | 1,910,774 | 643,767 | 607,196 | | | | 3,183,025 | 132,563,622 |
| Oil - CC | | | | | | | | - | - |
| Oil - Steam/CT | 1,736 | 722 | - | 3,516 | | | | 24,699 | 583,254 |
| Gas - CC | | | | | | | | 9,121,047 | 102,486,732 |
| Gas - CHP | | | | | | | | 114,250 | 237,993 |
| Gas - CT | | | | | | | | 702,310 | 12,699,459 |
| Gas - Steam | | 3,149,517 | 3,307,964 | 3,254,033 | | | | 9,711,513 | 74,000,255 |
| Biogas | | | | | | | | 8,525 | 152,484 |
| Nuclear | | | | | 17,441,318 | 17,596,089 | 17,353,876 | 52,391,283 | 608,224,167 |
| Total | 23,024 | 5,061,013 | 3,951,731 | 3,864,745 | 17,441,318 | 17,596,089 | 17,353,876 | 75,256,653 | 930,947,966 |
| **Net Generation (mWh)** | | | | | | | | | |
| Coal | (1,949) | 172,888 | 57,288 | 57,562 | | | | 285,789 | 13,569,695 |
| Oil - CC | | | | | | | | - | - |
| Oil - Steam/CT | 63 | 47 | - | 350 | | | | 2,720 | 53,988 |
| Gas - CC | | | | | | | | 1,298,695 | 14,542,974 |
| Gas - CHP | | | | | | | | 9,589 | 15,739 |
| Gas - CT | | | | | | | | 61,155 | 1,131,529 |
| Gas - Steam | | 332,208 | 322,315 | 319,641 | | | | 973,777 | 7,231,653 |
| Biogas | | | | | | | | 1,215 | 21,502 |
| Nuclear 100% | | | | | 1,750,213 | 1,777,245 | 1,717,933 | 5,245,391 | 60,454,296 |
| Hydro (Total System) | | | | | | | | (11,675) | 1,340,157 |
| Solar (Total System) | | | | | | | | 15,972 | 293,289 |
| Total | (1,886) | 505,143 | 379,603 | 377,553 | 1,750,213 | 1,777,245 | 1,717,933 | 7,882,628 | 98,654,822 |
| **Cost of Reagents Consumed ($)** | | | | | | | | | |
| Ammonia | | | $201,650 | $36,996 | | | | $311,364 | $3,138,382 |
| Limestone | $0 | $247,876 | 50,319 | 154,001 | | | | $452,195 | 12,981,466 |
| Sorbents | - | 31,875 | - | | | | | $31,875 | 1,514,963 |
| Urea | - | 51,650 | | | | | | $51,650 | 389,401 |
| Re-emission Chemical | - | - | - | - | | | | $0 | 316,690 |
| Dibasic Acid | - | | | | | | | $0 | - |
| Activated Carbon | - | - | | | | | | $0 | 358,930 |
| Lime (water emissions) | - | - | 8,010 | | | | | $8,010 | 39,411 |
| Total | - | 331,401 | $259,978 | $190,997 | | | | $855,094 | $18,739,243 |

**Notes:**

(A) Lincoln (Unit 17) fuel and fuel related costs represents pre-commercial generation during an extended testing and validation period.
Detail amounts may not add to totals shown due to rounding.
Data is reflected at 100% ownership.
Schedule excludes in-transit and terminal activity.
Cents/MBTU and cents/kWh are not computed when costs and/or net generation is negative.
Re-emission chemical reagent expense is not recoverable in NC.
Lime (water emissions) expense is not recoverable in SC fuel clause.

**Sykes Exhibit 6**
**Schedule 6**

**DUKE ENERGY CAROLINAS**
**FUEL AND FUEL RELATED CONSUMPTION AND INVENTORY REPORT**
**DECEMBER 2021**

| Description | Buck CC | Dan River CC | Lee CC | Clemson CHP | Lee Steam/CT | Lincoln CT | Lincoln (Unit17) (A) CT | Mill Creek CT | Rockingham CT | Allen Steam | Marshall Steam - Dual Fuel | Belews Creek Steam - Dual Fuel | Cliffside Steam - Dual Fuel | Current Month | Total 12 ME December 2021 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Coal Data:** | | | | | | | | | | | | | | | |
| Beginning balance | | | | | - | | | | | 110,834 | 714,068 | 709,231 | 600,419 | 2,134,553 | 2,088,546.52 |
| Tons received during period | | | | | | | | | | - | 154,113 | 36,234 | 50,335 | 240,682 | 5,535,629.00 |
| Inventory adjustments | | | | | - | | | | | - | 0 | (0) | 0 | 0 | (59,105.14) |
| Tons burned during period | | | | | - | | | | | 885 | 74,950 | 25,810 | 23,739 | 125,384 | 5,315,219.09 |
| Ending balance | | | | | - | | | | | 109,949 | 793,231 | 719,654 | 627,016 | 2,249,850 | 2,249,850.29 |
| MBTUs per ton burned | | | | | - | | | | | 144.00 | 25.49 | 24.94 | 25.58 | 26.23 | 24.94 |
| Cost of ending inventory ($/ton) | | | | | - | | | | | 74.30 | 78.22 | 81.39 | 75.85 | 78.38 | 78.38 |
| **Oil Data:** | | | | | | | | | | | | | | | |
| Beginning balance | - | - | - | | 644,737 | 8,458,109 | 1,345,366 | 3,435,783 | 2,760,864 | 74,474 | 297,507 | 95,645 | 190,014 | 17,302,499 | 18,142,757 |
| Gallons received during period | - | - | - | | - | - | - | 295,436 | 149,907 | 7,455 | - | - | 45,444 | 498,242 | 4,011,299 |
| Miscellaneous adjustments | - | - | - | | - | - | (24,834) | - | - | - | - | (5,273) | (4,237) | (34,099) | (274,028) |
| Gallons burned during period | | - | - | | 25,990 | - | 77,576 | 8,668 | - | 12,671 | 5,273 | - | 25,712 | 156,135 | 4,269,522 |
| Ending balance | - | - | - | | 618,747 | 8,458,109 | 1,242,955 | 3,722,551 | 2,910,771 | 69,258 | 292,234 | 90,372 | 205,509 | 17,610,506 | 17,610,506 |
| Cost of ending inventory ($/gal) | - | - | - | | 1.92 | 2.10 | 1.99 | 2.46 | 2.12 | 2.35 | 1.98 | 2.25 | 2.19 | 2.16 | 2.16 |
| **Natural Gas Data:** | | | | | | | | | | | | | | | |
| Beginning balance | | | | | | | | | | | | | | | |
| MCF received during period | 2,807,749 | 2,247,267 | 3,791,315 | 111,221 | - | 332 | (158) | 43,738 | 622,006 | | 3,060,068 | 3,194,905 | 3,155,140 | 19,033,584 | 183,335,760 |
| MCF burned during period | 2,807,749 | 2,247,267 | 3,791,315 | 111,221 | - | 332 | (158) | 43,738 | 622,006 | | 3,060,068 | 3,194,905 | 3,155,140 | 19,033,584 | 183,335,760 |
| Ending balance | | | | | | | | | | | | | | | |
| **Biogas Data:** | | | | | | | | | | | | | | | |
| Beginning balance | | | | | | | | | | | | | | | |
| MCF received during period | - | 8,237 | - | | | | | | | | | | | 8,237 | 147,532 |
| MCF burned during period | - | 8,237 | - | | | | | | | | | | | 8,237 | 147,532 |
| Ending balance | | | | | | | | | | | | | | | |
| **Limestone Data:** | | | | | | | | | | | | | | | |
| Beginning balance | | | | | | | | | | 24,210 | 45,035 | 45,723 | 29,962 | 144,930 | 154,428 |
| Tons received during period | | | | | | | | | | - | 12,544 | 1,676 | 8,277 | 22,498 | 281,447 |
| Inventory adjustments | | | | | | | | | | - | - | - | - | - | (1,837) |
| Tons consumed during period | | | | | | | | | | - | 5,699 | 1,074 | 1,915 | 8,688 | 275,299 |
| Ending balance | | | | | | | | | | 24,210 | 51,880 | 46,325 | 36,324 | 158,739 | 158,739 |
| Cost of ending inventory ($/ton) | | | | | | | | | | 49.08 | 43.49 | 46.83 | 42.16 | 45.02 | 45.02 |

| | | Qtr Ending December 2021 | Total 12 ME December 2021 |
|---|---|---|---|
| **Ammonia Data: (B)** | | | |
| Beginning balance | 2,650 | 2,650 | 1,822 |
| Tons received during period | 996 | 996 | 5,129 |
| Tons consumed during period | 885 | 885 | 4,190 |
| Ending balance | 2,761 | 2,761 | 2,761 |
| Cost of ending inventory ($/ton) | 843.38 | 843.38 | 843.38 |

**Notes:**
Detail amounts may not add to totals shown due to rounding.
Schedule excludes in-transit and terminal activity.
Gas is burned as received; therefore, inventory balances are not maintained.
(A) Lincoln (Unit 17) fuel and fuel related costs represents pre-commercial generation during an extended testing and validation period.
(B) Quarterly ammonia inventory amounts are revised to reflect a correction to June quantities, affecting the quarter ending September 2021 beginning balance. Revised amounts for quarter ending June 2021 are revised above.

**Sykes Exhibit 6**
**Schedule 7**

**DUKE ENERGY CAROLINAS**
**ANALYSIS OF COAL PURCHASED**
**DECEMBER 2021**

| STATION | TYPE | QUANTITY OF TONS DELIVERED | DELIVERED COST | DELIVERED COST PER TON |
|---|---|---|---|---|
| **ALLEN** | SPOT | - | $ - | $ - |
| | CONTRACT | - | - | - |
| | FIXED TRANSPORTATION / ADJUSTMENTS | - | 9,147 | - |
| | TOTAL | - | 9,147 | - |
| **BELEWS CREEK** | SPOT | - | 111,089 | - |
| | CONTRACT | 36,234 | 2,920,743 | 80.61 |
| | FIXED TRANSPORTATION / ADJUSTMENTS | - | 416,990 | - |
| | TOTAL | 36,234 | 3,448,822 | 95.18 |
| **CLIFFSIDE** | SPOT | 13,034 | 1,151,180 | 88.32 |
| | CONTRACT | 37,301 | 3,111,563 | 83.42 |
| | FIXED TRANSPORTATION / ADJUSTMENTS | - | 354,504 | - |
| | TOTAL | 50,335 | 4,617,247 | 91.73 |
| **MARSHALL** | SPOT | 76,949 | 6,966,864 | 90.54 |
| | CONTRACT | 77,165 | 5,901,064 | 76.47 |
| | FIXED TRANSPORTATION / ADJUSTMENTS | - | 439,649 | - |
| | TOTAL | 154,114 | 13,307,577 | 86.35 |
| **ALL PLANTS** | SPOT | 89,983 | 8,229,133 | 91.45 |
| | CONTRACT | 150,700 | 11,933,370 | 79.19 |
| | FIXED TRANSPORTATION / ADJUSTMENTS | - | 1,220,290 | - |
| | TOTAL | 240,683 | 21,382,793 | $ 88.84 |

Sykes Exhibit 6
Schedule 8





**DUKE ENERGY CAROLINAS**
**ANALYSIS OF COAL QUALITY RECEIVED**
**DECEMBER 2021**

| STATION | PERCENT MOISTURE | PERCENT ASH | HEAT VALUE | PERCENT SULFUR |
|---|---|---|---|---|
| **ALLEN** | - | - | - | - |
| **BELEWS CREEK** | 7.48 | 10.95 | 12,261 | 1.47 |
| **CLIFFSIDE** | 6.18 | 8.77 | 12,976 | 2.99 |
| **LEE** | - | - | - | - |
| **MARSHALL** | 6.73 | 9.31 | 12,626 | 1.95 |

**Sykes Exhibit 6**
**Schedule 9**

**DUKE ENERGY CAROLINAS**
**ANALYSIS OF OIL PURCHASED**
**DECEMBER 2021**

| | ALLEN | BELEWS CREEK |
|---|---|---|
| **VENDOR** | HighTowers | HighTowers |
| **SPOT/CONTRACT** | Contract | Contract |
| **SULFUR CONTENT %** | - | - |
| **GALLONS RECEIVED** | 7,455 | - |
| **TOTAL DELIVERED COST** | $ 17,051 | $ - |
| **DELIVERED COST/GALLON** | $ 2.29 | $ - |
| **BTU/GALLON** | 138,000 | 138,000 |

| | CLIFFSIDE | MARSHALL |
|---|---|---|
| **VENDOR** | HighTowers | HighTowers |
| **SPOT/CONTRACT** | Contract | Contract |
| **SULFUR CONTENT %** | - | - |
| **GALLONS RECEIVED** | 45,444 | - |
| **TOTAL DELIVERED COST** | $ 104,088 | $ - |
| **DELIVERED COST/GALLON** | $ 2.29 | $ - |
| **BTU/GALLON** | 138,000 | 138,000 |

| | LEE | MILL CREEK | ROCKINGHAM |
|---|---|---|---|
| **VENDOR** | HighTowers | HighTowers | HighTowers |
| **SPOT/CONTRACT** | Contract | Contract | Contract |
| **SULFUR CONTENT %** | - | - | - |
| **GALLONS RECEIVED** | - | 295,436 | 149,907 |
| **TOTAL DELIVERED COST** | $ - | $ 682,026 | $ 342,571 |
| **DELIVERED COST/GALLON** | $ - | $ 2.31 | $ 2.29 |
| **BTU/GALLON** | 138,000 | 138,000 | 138,000 |

Sykes Exhibit 6
Schedule 10



**Duke Energy Carolinas Base Load Power Plant Performance Review Plan**
**Report Period: December 2021 - December 2021**

| Station | Unit | Date of Outage | Duration of Outage (Hours) | Scheduled / Unscheduled | Cause of Outage | Reason Outage Occurred | Remedial Actions Taken |
|---|---|---|---|---|---|---|---|
| Oconee | 1 | | | | | | |
| | 2 | 11/12/2021 - 12/07/2021 | 160.10 | Scheduled | Refueling outage O2R30 | Normal refueling outage | N/A - Normal refueling outage |
| | 2 | 12/10/2021 - 12/12/2021 | 60.35 | Unscheduled | Forced outage O2F30A due to spurious reactor protection system (RPS) relay actuation | Spurious reactor protection system (RPS) relay actuation | A failure investigation was started and the 2NI-5 linear amplifier was repaired |
| | 3 | | | | | | |
| McGuire | 1 | | | | | | |
| | 2 | | | | | | |
| Catawba | 1 | | | | | | |
| | 2 | | | | | | |

Sykes Exhibit 6
Schedule 10



# Duke Energy Carolinas
# Baseload Steam and CHP Units
# Performance Review Plan
## December 2021

## Belews Creek Station

| Unit | Duration of Outage | Type of Outage | Cause of Outage | | Reason Outage Occurred | Remedial Action Taken |
|---|---|---|---|---|---|---|
| 1 | 12/1/2021 11:30:00 AM To 12/3/2021 5:00:00 PM | Sch | 4899 | Other miscellaneous generator problems | Generator PT appears to have a loose connection causing issues with closing | |

## Buck Combined Cycle Station

| Unit | Duration of Outage | Type of Outage | Cause of Outage | | Reason Outage Occurred | Remedial Action Taken |
|---|---|---|---|---|---|---|
| 11 | 12/19/2021 10:42:00 AM To 12/19/2021 10:46:00 AM | Unsch | 6171 | IP Startup bypass system valves | 12 HRH BYPASS STICKING. WOULD NOT OPERATE BEYOND 35%. CAUSING UPSETS TO OPPOSING UNIT. | |
| 12 | 12/18/2021 2:00:00 PM To 12/18/2021 8:06:00 PM | Sch | 0680 | Feedwater valves (not feedwater regulating valve) | 12 ECONOMIZER VENT VALVE REPLACEMENT. VALVE PACKING BLOWN OUT AND VALVE WAS STUCK AND WOULD NOT OPERATE. | |
| ST10 | 12/19/2021 9:04:00 AM To 12/19/2021 9:47:00 AM | Unsch | 6171 | IP Startup bypass system valves | 12 HRH BYPASS STICKING. WOULD NOT OPERATE BEYOND 35%. CAUSING UPSET TO UNIT. | |
| ST10 | 12/19/2021 10:22:00 AM To 12/19/2021 11:04:00 AM | Unsch | 6171 | IP Startup bypass system valves | 12 HRH BYPASS STICKING. WOULD NOT OPERATE BEYOND 35%. CAUSING UPSET TO UNIT | |

## Clemson CHP

| Unit | Duration of Outage | Type of Outage | Cause of Outage | | Reason Outage Occurred | Remedial Action Taken |
|---|---|---|---|---|---|---|
| 1 | 11/24/2021 9:30:00 AM To 12/1/2021 9:00:00 AM | Sch | 4551 | Generator bearings | Planned outage to address generator bearing leaks. New seals installed. | |
| 1 | 12/8/2021 10:13:00 AM To 12/8/2021 5:28:00 PM | Sch | 4552 | Generator lube oil system | Short outage for generator oil leakage inspection. | |

## Dan River Combined Cycle Station

| Unit | Duration of Outage | Type of Outage | Cause of Outage | | Reason Outage Occurred | Remedial Action Taken |
|---|---|---|---|---|---|---|
| 8 | 12/8/2021 9:59:00 PM To 12/12/2021 1:27:00 PM | Sch | 5261 | Gas turbine/compressor washing | 1x1 Planned Outage for Water Wash of GT8 and minor maintenance | |

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- Data is reflected at 100% owne

Sykes Exhibit 6
Schedule 10



# Duke Energy Carolinas
# Baseload Steam and CHP Units
# Performance Review Plan
## December 2021

| | | | | | | |
|---|---|---|---|---|---|---|
| 9 | 12/4/2021 12:56:00 AM<br>To 12/8/2021 6:52:00 PM | Sch | 5261 | Gas turbine/compressor washing | GT9 is in Planned Outage for 1X1 outage for Water Wash and Minor Maintenance | |

## Marshall Station

| Unit | Duration of Outage | Type of Outage | Cause of Outage | | Reason Outage Occurred | Remedial Action Taken |
|---|---|---|---|---|---|---|
| 3 | 12/10/2021 2:29:00 AM<br>To 12/16/2021 2:30:00 PM | Sch | 0541 | Cold reheat steam piping up to boiler | Reheat Piping Leak Repairs | |
| 3 | 12/19/2021 12:44:00 PM<br>To 12/19/2021 2:51:00 PM | Unsch | 0530 | Other main steam system problems | Superheat steam temp issues | |
| 3 | 12/19/2021 2:51:00 PM<br>To 12/20/2021 3:00:00 PM | Unsch | 4240 | Bearings | Unit 3 bearing vibration on attempted start. | |
| 3 | 12/20/2021 3:00:00 PM<br>To 12/30/2021 7:00:00 PM | Unsch | 4240 | Bearings | Unit 3 bearing vibration on attempted start. Unit will go into outage to repair the issue. | |

## WS Lee Combined Cycle

No Outages at Baseload Units During the Month.



Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- Data is reflected at 100% ownership.

Sykes Exhibit 6
Schedule 10



**Duke Energy Carolinas Base Load Power Plant Performance Review Plan**
**Report Period: December 2021 - December 2021**

| | Oconee 1 | Oconee 2 | Oconee 3 | McGuire 1 | McGuire 2 | Catawba 1 | Catawba 2 |
|---|---|---|---|---|---|---|---|
| (A) MDC (MW) | 847 | 848 | 859 | 1158 | 1158 | 1160 | 1150 |
| (B) Period Hours | 744 | 744 | 744 | 744 | 744 | 744 | 744 |
| (C1) Net Gen (MWH) | 643,930 | 419,589 | 654,414 | 888,551 | 888,694 | 880,196 | 870,017 |
| (C2) Capacity Factor (%) | 102.18 | 66.51 | 102.40 | 103.13 | 103.15 | 101.99 | 101.69 |
| (D1) Net MWH Not Gen. Due to Full Schedule Outages | 0 | 135,765 | 0 | 0 | 0 | 0 | 0 |
| (D2) % Net MWH Not Gen. Due to Full Schedule Outages | 0.00 | 21.52 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| (E1) Net MWH Not Gen. Due to Partial Scheduled Outages | 0 | 18,509 | 0 | 0 | 0 | 0 | 0 |
| (E2) % Net MWH Not Gen. Due to Partial Scheduled Outages | 0.00 | 2.93 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| (F1) Net MWH Not Gen Due to Full Forced Outages | 0 | 51,177 | 0 | 0 | 0 | 0 | 0 |
| (F2) % Net MWH Not Gen Due to Full Forced Outages | 0.00 | 8.11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| (G1) Net MWH Not Gen due to Partial Forced Outages | -13,762 | 5,872 | -15,318 | -26,999 | -27,142 | -17,156 | -14,417 |
| (G2) % Net MWH Not Gen Due to Partial Forced Outages | -2.18 | 0.93 | -2.40 | -3.13 | -3.15 | -1.99 | -1.69 |
| (H1) Net MWH Not Gen Due to Economic Dispatch | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| (H2) %Net MWH Not Gen Due to Economic Dispatch | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| (I1) Core Conservation | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| (I2) % Core Conservation | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| (J1) Net MWH Possible in Period | 630,168 | 630,912 | 639,096 | 861,552 | 861,552 | 863,040 | 855,600 |
| (J2) % Net mwh Possible in Period | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% |
| (K) Equivalent Availability (%) | 100.00 | 65.78 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| (L) Output Factor (%) | 102.18 | 94.51 | 102.40 | 103.13 | 103.15 | 101.99 | 101.69 |
| (M) Heat Rate (BTU/Net KWH) | 10,130 | 10,277 | 9,961 | 9,901 | 9,901 | 9,991 | 9,939 |

Notes:
1) Fields (E1), (E2), (G1), (G2), (H1), (H2), (I1) and (I2) are estimates
2) Fields (D1), (D2), (F1) and (F2) include ramping losses
EAF is calculated using Standard NERC calculation and excludes OMC events

Sykes Exhibit 6
Schedule 10



# Duke Energy Carolinas
# Baseload Steam and CHP Units
# Performance Review Plan
## December 2021

### Belews Creek Station

| | Unit 1 | Unit 2 |
|---|---|---|
| **(A) MDC (mW)** | 1,110 | 1,110 |
| **(B) Period Hrs** | 744 | 744 |
| **(C) Net Generation (mWh)** | -1,362 | 380,965 |
| **(D) Capacity Factor (%)** | 0.00 | 46.13 |
| **(E) Net mWh Not Generated due to Full Scheduled Outages** | 59,385 | 0 |
| **(F) Scheduled Outages: percent of Period Hrs** | 7.19 | 0.00 |
| **(G) Net mWh Not Generated due to Partial Scheduled Outages** | 0 | 33,600 |
| **(H) Scheduled Derates: percent of Period Hrs** | 0.00 | 4.07 |
| **(I) Net mWh Not Generated due to Full Forced Outages** | 0 | 0 |
| **(J) Forced Outages: percent of Period Hrs** | 0.00 | 0.00 |
| **(K) Net mWh Not Generated due to Partial Forced Outages** | 0 | 770 |
| **(L) Forced Derates: percent of Period Hrs** | 0.00 | 0.09 |
| **(M) Net mWh Not Generated due to Economic Dispatch** | 766,455 | 410,505 |
| **(N) Economic Dispatch: percent of Period Hrs** | 92.81 | 49.71 |
| **(O) Net mWh Possible in Period** | 825,840 | 825,840 |
| **(P) Equivalent Availability (%)** | 92.81 | 95.84 |
| **(Q) Output Factor (%)** | 0.00 | 46.13 |
| **(R) Heat Rate (BTU/NkWh)** | 0 | 10,986 |

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's
- Data is reflected at 100% ownership.

Sykes Exhibit 6
Schedule 10



# Duke Energy Carolinas
# Baseload Steam and CHP Units
# Performance Review Plan
## December 2021

### Buck Combined Cycle Station

| | Unit 11 | Unit 12 | Unit ST10 | Block Total |
|---|---|---|---|---|
| **(A) MDC (mW)** | 206 | 206 | 306 | 718 |
| **(B) Period Hrs** | 744 | 744 | 744 | 744 |
| **(C) Net Generation (mWh)** | 127,292 | 114,031 | 172,014 | 413,337 |
| **(D) Capacity Factor (%)** | 83.05 | 74.40 | 75.56 | 77.38 |
| **(E) Net mWh Not Generated due to Full Scheduled Outages** | 0 | 1,257 | 0 | 1,257 |
| **(F) Scheduled Outages: percent of Period Hrs** | 0.00 | 0.82 | 0.00 | 0.24 |
| **(G) Net mWh Not Generated due to Partial Scheduled Outages** | 231 | 231 | 525 | 987 |
| **(H) Scheduled Derates: percent of Period Hrs** | 0.15 | 0.15 | 0.23 | 0.18 |
| **(I) Net mWh Not Generated due to Full Forced Outages** | 14 | 0 | 434 | 447 |
| **(J) Forced Outages: percent of Period Hrs** | 0.01 | 0.00 | 0.19 | 0.08 |
| **(K) Net mWh Not Generated due to Partial Forced Outages** | 0 | 0 | 383 | 383 |
| **(L) Forced Derates: percent of Period Hrs** | 0.00 | 0.00 | 0.17 | 0.07 |
| **(M) Net mWh Not Generated due to Economic Dispatch** | 25,727 | 37,745 | 54,308 | 117,781 |
| **(N) Economic Dispatch: percent of Period Hrs** | 16.79 | 24.63 | 23.85 | 22.05 |
| **(O) Net mWh Possible in Period** | 153,264 | 153,264 | 227,664 | 534,192 |
| **(P) Equivalent Availability (%)** | 99.84 | 99.03 | 99.41 | 99.42 |
| **(Q) Output Factor (%)** | 83.06 | 83.25 | 75.70 | 79.88 |
| **(R) Heat Rate (BTU/NkWh)** | 10,525 | 10,190 | 2,366 | 7,037 |

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's
- Data is reflected at 100% ownership.

Sykes Exhibit 6
Schedule 10



# Duke Energy Carolinas
# Baseload Steam and CHP Units
# Performance Review Plan
## December 2021

### Clemson CHP

| | Clemson CHP1 |
|---|---|
| **(A) MDC (mW)** | 16 |
| **(B) Period Hrs** | 744 |
| **(C) Net Generation (mWh)** | 9,589 |
| **(D) Capacity Factor (%)** | 83.15 |
| **(E) Net mWh Not Generated due to Full Scheduled Outages** | 252 |
| **(F) Scheduled Outages: percent of Period Hrs** | 2.18 |
| **(G) Net mWh Not Generated due to Partial Scheduled Outages** | 0 |
| **(H) Scheduled Derates: percent of Period Hrs** | 0.00 |
| **(I) Net mWh Not Generated due to Full Forced Outages** | 0 |
| **(J) Forced Outages: percent of Period Hrs** | 0.00 |
| **(K) Net mWh Not Generated due to Partial Forced Outages** | 0 |
| **(L) Forced Derates: percent of Period Hrs** | 0.00 |
| **(M) Net mWh Not Generated due to Economic Dispatch** | 1,691 |
| **(N) Economic Dispatch: percent of Period Hrs** | 14.66 |
| **(O) Net mWh Possible in Period** | 11,532 |
| **(P) Equivalent Availability (%)** | 97.82 |
| **(Q) Output Factor (%)** | 86.79 |
| **(R) Heat Rate (BTU/NkWh)** | 11,176 |

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's
- Data is reflected at 100% ownership.

Sykes Exhibit 6
Schedule 10



# Duke Energy Carolinas
# Baseload Steam and CHP Units
# Performance Review Plan
## December 2021

### Dan River Combined Cycle Station

| | Unit 8 | Unit 9 | Unit ST07 | Block Total |
|---|---|---|---|---|
| **(A) MDC (mW)** | 206 | 206 | 308 | 720 |
| **(B) Period Hrs** | 744 | 744 | 744 | 744 |
| **(C) Net Generation (mWh)** | 84,374 | 107,001 | 141,961 | 333,336 |
| **(D) Capacity Factor (%)** | 55.05 | 69.81 | 61.95 | 62.23 |
| **(E) Net mWh Not Generated due to Full Scheduled Outages** | 18,018 | 23,470 | 0 | 41,488 |
| **(F) Scheduled Outages: percent of Period Hrs** | 11.76 | 15.31 | 0.00 | 7.74 |
| **(G) Net mWh Not Generated due to Partial Scheduled Outages** | 0 | 0 | 0 | 0 |
| **(H) Scheduled Derates: percent of Period Hrs** | 0.00 | 0.00 | 0.00 | 0.00 |
| **(I) Net mWh Not Generated due to Full Forced Outages** | 0 | 0 | 0 | 0 |
| **(J) Forced Outages: percent of Period Hrs** | 0.00 | 0.00 | 0.00 | 0.00 |
| **(K) Net mWh Not Generated due to Partial Forced Outages** | 0 | 0 | 127 | 127 |
| **(L) Forced Derates: percent of Period Hrs** | 0.00 | 0.00 | 0.06 | 0.02 |
| **(M) Net mWh Not Generated due to Economic Dispatch** | 50,872 | 22,793 | 87,064 | 160,729 |
| **(N) Economic Dispatch: percent of Period Hrs** | 33.19 | 14.87 | 37.99 | 30.00 |
| **(O) Net mWh Possible in Period** | 153,264 | 153,264 | 229,152 | 535,680 |
| **(P) Equivalent Availability (%)** | 88.24 | 84.69 | 99.94 | 92.23 |
| **(Q) Output Factor (%)** | 82.25 | 82.44 | 61.95 | 72.22 |
| **(R) Heat Rate (BTU/NkWh)** | 11,217 | 10,612 | 2,470 | 7,297 |

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's
- Data is reflected at 100% ownership.

Sykes Exhibit 6
Schedule 10



# Duke Energy Carolinas
# Baseload Steam and CHP Units
# Performance Review Plan
## December 2021

### Marshall Station

| | Unit 3 | Unit 4 |
|---|---|---|
| **(A) MDC (mW)** | 658 | 660 |
| **(B) Period Hrs** | 744 | 744 |
| **(C) Net Generation (mWh)** | 77,447 | 297,472 |
| **(D) Capacity Factor (%)** | 15.82 | 60.58 |
| **(E) Net mWh Not Generated due to Full Scheduled Outages** | 102,659 | 0 |
| **(F) Scheduled Outages: percent of Period Hrs** | 20.97 | 0.00 |
| **(G) Net mWh Not Generated due to Partial Scheduled Outages** | 0 | 0 |
| **(H) Scheduled Derates: percent of Period Hrs** | 0.00 | 0.00 |
| **(I) Net mWh Not Generated due to Full Forced Outages** | 177,836 | 0 |
| **(J) Forced Outages: percent of Period Hrs** | 36.33 | 0.00 |
| **(K) Net mWh Not Generated due to Partial Forced Outages** | 0 | 0 |
| **(L) Forced Derates: percent of Period Hrs** | 0.00 | 0.00 |
| **(M) Net mWh Not Generated due to Economic Dispatch** | 131,610 | 193,568 |
| **(N) Economic Dispatch: percent of Period Hrs** | 26.88 | 39.42 |
| **(O) Net mWh Possible in Period** | 489,552 | 491,040 |
| **(P) Equivalent Availability (%)** | 42.70 | 100.00 |
| **(Q) Output Factor (%)** | 53.10 | 60.58 |
| **(R) Heat Rate (BTU/NkWh)** | 10,746 | 9,696 |

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's
- Data is reflected at 100% ownership.

Sykes Exhibit 6
Schedule 10



# Duke Energy Carolinas
# Baseload Steam and CHP Units
# Performance Review Plan
## December 2021

### WS Lee Combined Cycle

| | Unit 11 | Unit 12 | Unit ST10 | Block Total |
|---|---|---|---|---|
| **(A) MDC (mW)** | 248 | 248 | 313 | 809 |
| **(B) Period Hrs** | 744 | 744 | 744 | 744 |
| **(C) Net Generation (mWh)** | 158,470 | 164,031 | 230,736 | 553,237 |
| **(D) Capacity Factor (%)** | 85.89 | 88.90 | 99.08 | 91.92 |
| **(E) Net mWh Not Generated due to Full Scheduled Outages** | 0 | 0 | 0 | 0 |
| **(F) Scheduled Outages: percent of Period Hrs** | 0.00 | 0.00 | 0.00 | 0.00 |
| **(G) Net mWh Not Generated due to Partial Scheduled Outages** | 0 | 0 | 0 | 0 |
| **(H) Scheduled Derates: percent of Period Hrs** | 0.00 | 0.00 | 0.00 | 0.00 |
| **(I) Net mWh Not Generated due to Full Forced Outages** | 0 | 0 | 0 | 0 |
| **(J) Forced Outages: percent of Period Hrs** | 0.00 | 0.00 | 0.00 | 0.00 |
| **(K) Net mWh Not Generated due to Partial Forced Outages** | 0 | 0 | 0 | 0 |
| **(L) Forced Derates: percent of Period Hrs** | 0.00 | 0.00 | 0.00 | 0.00 |
| **(M) Net mWh Not Generated due to Economic Dispatch** | 26,042 | 20,481 | 2,136 | 48,659 |
| **(N) Economic Dispatch: percent of Period Hrs** | 14.11 | 11.10 | 0.92 | 8.08 |
| **(O) Net mWh Possible in Period** | 184,512 | 184,512 | 232,872 | 601,896 |
| **(P) Equivalent Availability (%)** | 100.00 | 100.00 | 100.00 | 100.00 |
| **(Q) Output Factor (%)** | 85.89 | 91.67 | 99.08 | 92.78 |
| **(R) Heat Rate (BTU/NkWh)** | 10,989 | 10,610 | 2,508 | 7,340 |

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's
- Data is reflected at 100% ownership.

Sykes Exhibit 6
Schedule 10



# Duke Energy Carolinas
# Intermediate Power Plant Performance Review Plan
## December 2021

| | | Cliffside Station<br>Cliffside 6 |
|---|---|---|
| **(A)** | **MDC (mW)** | 849 |
| **(B)** | **Period Hrs** | 744 |
| **(C)** | **Net Generation (mWh)** | 380,358 |
| **(D)** | **Net mWh Possible in Period** | 631,656 |
| **(E)** | **Equivalent Availability (%)** | 96.32 |
| **(F)** | **Output Factor (%)** | 60.22 |
| **(G)** | **Capacity Factor (%)** | 60.22 |

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

# Duke Energy Carolinas
# Peaking Power Plant Performance Review Plan
## December 2021

Sykes Exhibit 6
Schedule 10

| | | Cliffside Station Unit 5 |
|---|---|---|
| **(A)** | **MDC (mW)** | 546 |
| **(B)** | **Period Hrs** | 744 |
| **(C)** | **Net Generation (mWh)** | -2,805 |
| **(D)** | **Net mWh Possible in Period** | 406,224 |
| **(E)** | **Equivalent Availability (%)** | 0.00 |
| **(F)** | **Output Factor (%)** | 0.00 |
| **(G)** | **Capacity Factor (%)** | 0.00 |

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

Sykes Exhibit 6
Schedule 10



**Duke Energy Carolinas Base Load Power Plant Performance Review Plan**
**Report Period: January 2021 - December 2021**

| | Oconee 1 | Oconee 2 | Oconee 3 | McGuire 1 | McGuire 2 | Catawba 1 | Catawba 2 |
|---|---|---|---|---|---|---|---|
| (A) MDC (MW) | 847 | 848 | 859 | 1158 | 1158 | 1160 | 1150 |
| (B) Period Hours | 8,760 | 8,760 | 8,760 | 8,760 | 8,760 | 8,760 | 8,760 |
| (C1) Net Gen (MWH) | 7,579,868 | 6,981,796 | 7,644,799 | 10,361,236 | 9,300,878 | 9,571,297 | 9,014,422 |
| (C2) Capacity Factor (%) | 102.16 | 93.99 | 101.59 | 102.14 | 91.69 | 94.19 | 89.48 |
| (D1) Net MWH Not Gen. Due to Full Schedule Outages | 0 | 503,797 | 0 | 0 | 840,901 | 523,488 | 883,200 |
| (D2) % Net MWH Not Gen. Due to Full Schedule Outages | 0.00 | 6.78 | 0.00 | 0.00 | 8.29 | 5.15 | 8.77 |
| (E1) Net MWH Not Gen. Due to Partial Scheduled Outages | 141 | 39,112 | 252 | 403 | 26,161 | 47,272 | 90,598 |
| (E2) % Net MWH Not Gen. Due to Partial Scheduled Outages | 0.00 | 0.53 | 0.00 | 0.00 | 0.26 | 0.47 | 0.90 |
| (F1) Net MWH Not Gen Due to Full Forced Outages | 0 | 51,177 | 0 | 0 | 81,871 | 78,396 | 147,045 |
| (F2) % Net MWH Not Gen Due to Full Forced Outages | 0.00 | 0.69 | 0.00 | 0.00 | 0.81 | 0.77 | 1.46 |
| (G1) Net MWH Not Gen due to Partial Forced Outages | -160,289 | -147,402 | -120,211 | -217,559 | -105,731 | -58,853 | -61,265 |
| (G2) % Net MWH Not Gen Due to Partial Forced Outages | -2.16 | -1.99 | -1.59 | -2.14 | -1.05 | -0.58 | -0.61 |
| (H1) Net MWH Not Gen Due to Economic Dispatch | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| (H2) %Net MWH Not Gen Due to Economic Dispatch | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| (I1) Core Conservation | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| (I2) % Core Conservation | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| (J1) Net MWH Possible in Period | 7,419,720 | 7,428,480 | 7,524,840 | 10,144,080 | 10,144,080 | 10,161,600 | 10,074,000 |
| (J2) % Net mwh Possible in Period | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% |
| (K) Equivalent Availability (%) | 100.00 | 90.67 | 100.00 | 100.00 | 90.25 | 93.06 | 88.87 |
| (L) Output Factor (%) | 102.16 | 101.58 | 101.59 | 102.14 | 100.86 | 100.12 | 99.68 |
| (M) Heat Rate (BTU/Net KWH) | 10,129 | 10,085 | 10,042 | 9,996 | 10,073 | 10,090 | 10,026 |

Notes:
1) Fields (E1), (E2), (G1), (G2), (H1), (H2), (I1) and (I2) are estimates
2) Fields (D1), (D2), (F1) and (F2) include ramping losses
EAF is calculated using Standard NERC calculation and excludes OMC events

Sykes Exhibit 6
Schedule 10



# Duke Energy Carolinas
# Baseload Steam and CHP Units
# Performance Review Plan
## January, 2021 through December, 2021

### Belews Creek Station

| | Unit 1 | Unit 2 |
|---|---|---|
| **(A) MDC (mW)** | 1,110 | 1,110 |
| **(B) Period Hrs** | 8,760 | 8,760 |
| **(C) Net Generation (mWh)** | 4,275,170 | 4,734,846 |
| **(D) Capacity Factor (%)** | 43.97 | 48.69 |
| **(E) Net mWh Not Generated due to Full Scheduled Outages** | 1,696,635 | 1,108,465 |
| **(F) Scheduled Outages: percent of Period Hrs** | 17.45 | 11.40 |
| **(G) Net mWh Not Generated due to Partial Scheduled Outages** | 13,357 | 54,149 |
| **(H) Scheduled Derates: percent of Period Hrs** | 0.14 | 0.56 |
| **(I) Net mWh Not Generated due to Full Forced Outages** | 157,731 | 277,075 |
| **(J) Forced Outages: percent of Period Hrs** | 1.62 | 2.85 |
| **(K) Net mWh Not Generated due to Partial Forced Outages** | 188,070 | 72,653 |
| **(L) Forced Derates: percent of Period Hrs** | 1.93 | 0.75 |
| **(M) Net mWh Not Generated due to Economic Dispatch** | 3,392,638 | 3,476,412 |
| **(N) Economic Dispatch: percent of Period Hrs** | 34.81 | 35.75 |
| **(O) Net mWh Possible in Period** | 9,723,600 | 9,723,600 |
| **(P) Equivalent Availability (%)** | 78.86 | 84.45 |
| **(Q) Output Factor (%)** | 66.62 | 59.52 |
| **(R) Heat Rate (BTU/NkWh)** | 9,382 | 9,959 |

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- Data is reflected at 100% ownership.
- Footnote: (R) Includes Light Off BTU's

Sykes Exhibit 6
Schedule 10



# Duke Energy Carolinas
# Baseload Steam and CHP Units
# Performance Review Plan
## January, 2021 through December, 2021

### Buck Combined Cycle Station

| | Unit 11 | Unit 12 | Unit ST10 | Block Total |
|---|---|---|---|---|
| **(A) MDC (mW)** | 206 | 206 | 306 | 718 |
| **(B) Period Hrs** | 8,760 | 8,760 | 8,760 | 8,760 |
| **(C) Net Generation (mWh)** | 1,350,380 | 1,370,919 | 1,814,076 | 4,535,375 |
| **(D) Capacity Factor (%)** | 74.83 | 75.97 | 67.68 | 72.11 |
| **(E) Net mWh Not Generated due to Full Scheduled Outages** | 106,389 | 81,507 | 123,379 | 311,276 |
| **(F) Scheduled Outages: percent of Period Hrs** | 5.90 | 4.52 | 4.60 | 4.95 |
| **(G) Net mWh Not Generated due to Partial Scheduled Outages** | 114,711 | 117,301 | 11,070 | 243,082 |
| **(H) Scheduled Derates: percent of Period Hrs** | 6.36 | 6.50 | 0.41 | 3.86 |
| **(I) Net mWh Not Generated due to Full Forced Outages** | 14 | 1,507 | 434 | 1,955 |
| **(J) Forced Outages: percent of Period Hrs** | 0.00 | 0.08 | 0.02 | 0.03 |
| **(K) Net mWh Not Generated due to Partial Forced Outages** | 0 | 0 | 3,024 | 3,024 |
| **(L) Forced Derates: percent of Period Hrs** | 0.00 | 0.00 | 0.11 | 0.05 |
| **(M) Net mWh Not Generated due to Economic Dispatch** | 233,066 | 233,325 | 728,577 | 1,194,969 |
| **(N) Economic Dispatch: percent of Period Hrs** | 12.92 | 12.93 | 27.18 | 19.00 |
| **(O) Net mWh Possible in Period** | 1,804,560 | 1,804,560 | 2,680,560 | 6,289,680 |
| **(P) Equivalent Availability (%)** | 87.75 | 88.90 | 94.86 | 91.11 |
| **(Q) Output Factor (%)** | 82.76 | 82.91 | 72.45 | 78.35 |
| **(R) Heat Rate (BTU/NkWh)** | 9,691 | 10,236 | 1,616 | 6,626 |

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- Data is reflected at 100% ownership.
- Footnote: (R) Includes Light Off BTU's

Sykes Exhibit 6
Schedule 10



# Duke Energy Carolinas
# Baseload Steam and CHP Units
# Performance Review Plan
## January, 2021 through December, 2021

### Clemson CHP

| | Clemson CHP1 |
|---|---|
| **(A) MDC (mW)** | 16 |
| **(B) Period Hrs** | 8,760 |
| **(C) Net Generation (mWh)** | 15,739 |
| **(D) Capacity Factor (%)** | 11.59 |
| **(E) Net mWh Not Generated due to Full Scheduled Outages** | 24,977 |
| **(F) Scheduled Outages: percent of Period Hrs** | 18.40 |
| **(G) Net mWh Not Generated due to Partial Scheduled Outages** | 11,069 |
| **(H) Scheduled Derates: percent of Period Hrs** | 8.15 |
| **(I) Net mWh Not Generated due to Full Forced Outages** | 10,258 |
| **(J) Forced Outages: percent of Period Hrs** | 7.55 |
| **(K) Net mWh Not Generated due to Partial Forced Outages** | 0 |
| **(L) Forced Derates: percent of Period Hrs** | 0.00 |
| **(M) Net mWh Not Generated due to Economic Dispatch** | 73,736 |
| **(N) Economic Dispatch: percent of Period Hrs** | 54.13 |
| **(O) Net mWh Possible in Period** | 135,780 |
| **(P) Equivalent Availability (%)** | 65.90 |
| **(Q) Output Factor (%)** | 80.91 |
| **(R) Heat Rate (BTU/NkWh)** | 11,851 |

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- Data is reflected at 100% ownership.
- Footnote: (R) Includes Light Off BTU's

Sykes Exhibit 6
Schedule 10



# Duke Energy Carolinas
# Baseload Steam and CHP Units
# Performance Review Plan
## January, 2021 through December, 2021

### Dan River Combined Cycle Station

| | Unit 8 | Unit 9 | Unit ST07 | Block Total |
|---|---|---|---|---|
| **(A) MDC (mW)** | 206 | 206 | 308 | 720 |
| **(B) Period Hrs** | 8,760 | 8,760 | 8,760 | 8,760 |
| **(C) Net Generation (mWh)** | 1,228,210 | 1,262,306 | 1,682,928 | 4,173,444 |
| **(D) Capacity Factor (%)** | 68.06 | 69.95 | 62.38 | 66.17 |
| **(E) Net mWh Not Generated due to Full Scheduled Outages** | 157,624 | 164,209 | 208,321 | 530,155 |
| **(F) Scheduled Outages: percent of Period Hrs** | 8.73 | 9.10 | 7.72 | 8.41 |
| **(G) Net mWh Not Generated due to Partial Scheduled Outages** | 138,404 | 138,401 | 283,369 | 560,174 |
| **(H) Scheduled Derates: percent of Period Hrs** | 7.67 | 7.67 | 10.50 | 8.88 |
| **(I) Net mWh Not Generated due to Full Forced Outages** | 11,268 | 8,992 | 13,003 | 33,263 |
| **(J) Forced Outages: percent of Period Hrs** | 0.62 | 0.50 | 0.48 | 0.53 |
| **(K) Net mWh Not Generated due to Partial Forced Outages** | 524 | 524 | 1,751 | 2,799 |
| **(L) Forced Derates: percent of Period Hrs** | 0.03 | 0.03 | 0.06 | 0.04 |
| **(M) Net mWh Not Generated due to Economic Dispatch** | 268,530 | 230,128 | 508,708 | 1,007,366 |
| **(N) Economic Dispatch: percent of Period Hrs** | 14.88 | 12.75 | 18.85 | 15.97 |
| **(O) Net mWh Possible in Period** | 1,804,560 | 1,804,560 | 2,698,080 | 6,307,200 |
| **(P) Equivalent Availability (%)** | 82.94 | 82.70 | 81.23 | 82.14 |
| **(Q) Output Factor (%)** | 80.86 | 81.25 | 70.26 | 76.33 |
| **(R) Heat Rate (BTU/NkWh)** | 10,791 | 10,678 | 1,695 | 7,089 |

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- Data is reflected at 100% ownership.
- Footnote: (R) Includes Light Off BTU's

Sykes Exhibit 6
Schedule 10



# Duke Energy Carolinas
# Baseload Steam and CHP Units
# Performance Review Plan
## January, 2021 through December, 2021

### Marshall Station

| | Unit 3 | Unit 4 |
|---|---|---|
| **(A) MDC (mW)** | 658 | 660 |
| **(B) Period Hrs** | 8,760 | 8,760 |
| **(C) Net Generation (mWh)** | 1,592,995 | 3,404,773 |
| **(D) Capacity Factor (%)** | 27.64 | 58.89 |
| **(E) Net mWh Not Generated due to Full Scheduled Outages** | 2,776,058 | 686,268 |
| **(F) Scheduled Outages: percent of Period Hrs** | 48.16 | 11.87 |
| **(G) Net mWh Not Generated due to Partial Scheduled Outages** | 0 | 0 |
| **(H) Scheduled Derates: percent of Period Hrs** | 0.00 | 0.00 |
| **(I) Net mWh Not Generated due to Full Forced Outages** | 309,786 | 223,256 |
| **(J) Forced Outages: percent of Period Hrs** | 5.37 | 3.86 |
| **(K) Net mWh Not Generated due to Partial Forced Outages** | 240,971 | 118,342 |
| **(L) Forced Derates: percent of Period Hrs** | 4.18 | 2.05 |
| **(M) Net mWh Not Generated due to Economic Dispatch** | 844,270 | 1,348,961 |
| **(N) Economic Dispatch: percent of Period Hrs** | 14.56 | 23.33 |
| **(O) Net mWh Possible in Period** | 5,764,080 | 5,781,600 |
| **(P) Equivalent Availability (%)** | 42.28 | 82.22 |
| **(Q) Output Factor (%)** | 64.91 | 71.49 |
| **(R) Heat Rate (BTU/NkWh)** | 10,324 | 9,746 |

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- Data is reflected at 100% ownership.
- Footnote: (R) Includes Light Off BTU's

# Duke Energy Carolinas
# Baseload Steam and CHP Units
# Performance Review Plan
## January, 2021 through December, 2021

Sykes Exhibit 6
Schedule 10

### WS Lee Combined Cycle

| | Unit 11 | Unit 12 | Unit ST10 | Block Total |
|---|---|---|---|---|
| **(A) MDC (mW)** | 248 | 248 | 313 | 809 |
| **(B) Period Hrs** | 8,760 | 8,760 | 8,760 | 8,760 |
| **(C) Net Generation (mWh)** | 1,739,729 | 1,714,227 | 2,401,701 | 5,855,657 |
| **(D) Capacity Factor (%)** | 80.08 | 78.91 | 87.59 | 82.63 |
| **(E) Net mWh Not Generated due to Full Scheduled Outages** | 188,306 | 237,257 | 244,781 | 670,345 |
| **(F) Scheduled Outages: percent of Period Hrs** | 8.67 | 10.92 | 8.93 | 9.46 |
| **(G) Net mWh Not Generated due to Partial Scheduled Outages** | 51,608 | 54,497 | 0 | 106,105 |
| **(H) Scheduled Derates: percent of Period Hrs** | 2.38 | 2.51 | 0.00 | 1.50 |
| **(I) Net mWh Not Generated due to Full Forced Outages** | 9,507 | 0 | 1,951 | 11,458 |
| **(J) Forced Outages: percent of Period Hrs** | 0.44 | 0.00 | 0.07 | 0.16 |
| **(K) Net mWh Not Generated due to Partial Forced Outages** | 139 | 0 | 0 | 139 |
| **(L) Forced Derates: percent of Period Hrs** | 0.01 | 0.00 | 0.00 | 0.00 |
| **(M) Net mWh Not Generated due to Economic Dispatch** | 183,191 | 166,498 | 93,446 | 443,136 |
| **(N) Economic Dispatch: percent of Period Hrs** | 8.43 | 7.66 | 3.41 | 6.25 |
| **(O) Net mWh Possible in Period** | 2,172,480 | 2,172,480 | 2,741,880 | 7,086,840 |
| **(P) Equivalent Availability (%)** | 88.51 | 86.57 | 91.00 | 88.88 |
| **(Q) Output Factor (%)** | 88.72 | 89.14 | 96.57 | 91.91 |
| **(R) Heat Rate (BTU/NkWh)** | 10,545 | 10,515 | 2,312 | 7,160 |

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- Data is reflected at 100% ownership.
- Footnote: (R) Includes Light Off BTU's

Sykes Exhibit 6
Schedule 10



# Duke Energy Carolinas
# Intermediate Power Plant
# Performance Review Plan
## January, 2021 through December, 2021

**Cliffside Station**

| Units | Unit 6 |
|---|---|
| **(A) MDC (mW)** | 849 |
| **(B) Period Hrs** | 8,760 |
| **(C) Net Generation (mWh)** | 4,021,882 |
| **(D) Net mWh Possible in Period** | 7,437,240 |
| **(E) Equivalent Availability (%)** | 74.43 |
| **(F) Output Factor (%)** | 72.44 |
| **(G) Capacity Factor (%)** | 54.08 |

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

Sykes Exhibit 6
Schedule 10



# Duke Energy Carolinas
# Peaking Power Plant
# Performance Review Plan
## January, 2021 through December, 2021

**Cliffside Station**

| Units | Unit 5 |
|---|---|
| **(A) MDC (mW)** | 546 |
| **(B) Period Hrs** | 8,760 |
| **(C) Net Generation (mWh)** | 729,303 |
| **(D) Net mWh Possible in Period** | 4,782,960 |
| **(E) Equivalent Availability (%)** | 42.38 |
| **(F) Output Factor (%)** | 37.28 |
| **(G) Capacity Factor (%)** | 15.25 |

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

**Duke Energy Carolinas, LLC**
**North Carolina Annual Fuel and Fuel Related Expense**
**Proposed Nuclear Capacity Factor**
**Billing Period September 2022 through August 2023**
**Docket E-7, Sub 1263**

**Sykes Workpaper 1**

| | Catawba 1 | Catawba 2 | McGuire 1 | McGuire 2 | Oconee 1 | Oconee 2 | Oconee 3 | Total |
|---|---|---|---|---|---|---|---|---|
| MWhs | 9,185,657 | 9,129,849 | 9,990,936 | 9,257,839 | 6,686,733 | 7,360,722 | 7,473,786 | 59,085,520 |
| Cost (Gross of Joint Owners) | $ 56,075,776 | $ 52,811,775 | $ 55,286,006 | $ 50,528,496 | $ 38,964,977 | $ 42,478,337 | $ 44,926,459 | $ 341,071,825 |
| $/MWh | 6.1047 | 5.7845 | 5.5336 | 5.4579 | 5.8272 | 5.7709 | 6.0112 | |
| **Avg $/MWh** | | **5.7725** | | | | | | |
| **Cents per kWh** | | **0.5773** | | | | | | |

| | | | **Sept 2022 - August 2023** |
|---|---|---|---|
| **MDC** | | | |
| CATA_UN01 | Catawba | MW | 1,160.0 |
| CATA_UN02 | Catawba | MW | 1,150.1 |
| MCGU_UN01 | McGuire | MW | 1,158.0 |
| MCGU_UN02 | McGuire | MW | 1,157.6 |
| OCON_UN01 | Oconee | MW | 847.0 |
| OCON_UN02 | Oconee | MW | 848.0 |
| OCON_UN03 | Oconee | MW | 859.0 |
| | | | 7,179.7 |
| **Hours In Year** | | | 8,760 |
| **Generation GWhs** | | | |
| CATA_UN01 | Catawba | GWh | 9,186 |
| CATA_UN02 | Catawba | GWh | 9,130 |
| MCGU_UN01 | McGuire | GWh | 9,991 |
| MCGU_UN02 | McGuire | GWh | 9,258 |
| OCON_UN01 | Oconee | GWh | 6,687 |
| OCON_UN02 | Oconee | GWh | 7,361 |
| OCON_UN03 | Oconee | GWh | 7,474 |
| | | | 59,086 |
| | | **Proposed Nuclear Capacity Factor** | 93.94% |

rounding differences may occur

**Duke Energy Carolinas, LLC** **Sykes Workpaper 2**
**North Carolina Annual Fuel and Fuel Related Expense**
**NERC 5 Year Average Nuclear Capacity Factor**
**Billing Period September 2022 through August 2023**
**Docket E-7, Sub 1263**



| | Catawba 1 | Catawba 2 | McGuire 1 | McGuire 2 | Oconee 1 | Oconee 2 | Oconee 3 | Total |
|---|---|---|---|---|---|---|---|---|
| MWhs with NERC applied | 9,295,832 | 9,216,497 | 9,279,804 | 9,276,599 | 6,911,469 | 6,919,629 | 7,009,388 | 57,909,218 |
| Hours | 8,760 | 8,760 | 8,760 | 8,760 | 8,760 | 8,760 | 8,760 | 8,760 |
| MDC | 1,160.0 | 1,150.1 | 1,158.0 | 1,157.6 | 847.0 | 848.0 | 859.0 | 7,179.7 |
| Capacity factor | 91.48% | 91.48% | 91.48% | 91.48% | 93.15% | 93.15% | 93.15% | 92.07% |
| Cost | $ 53,660,292 | $ 53,202,329 | $ 53,567,774 | $ 53,549,271 | $ 39,896,533 | $ 39,943,636 | $ 40,461,773 | $ 334,281,608 |

**Avg $/MWh** **5.7725**
**Cents per kWh** **0.5773**

| 2016-2020 | Capacity Rating | NCF Rating | Weighted Average |
|---|---|---|---|
| Oconee 1 | 847.0 | 93.15 | 10.99% |
| Oconee 2 | 848.0 | 93.15 | 11.00% |
| Oconee 3 | 859.0 | 93.15 | 11.14% |
| McGuire 1 | 1,158.0 | 91.48 | 14.75% |
| McGuire 2 | 1,157.6 | 91.48 | 14.75% |
| Catawba 1 | 1,160.0 | 91.48 | 14.78% |
| Catawba 2 | 1,150.1 | 91.48 | 14.65% |
| | 7,179.7 | | **92.07%** Wtd Avg on Capacity Rating |

rounding differences may occur

**Duke Energy Carolinas, LLC** **Sykes Workpaper 3**
**North Carolina Annual Fuel and Fuel Related Expense**
**North Carolina Generation and Purchased Power in MWhs**
**Billing Period September 2022 through August 2023**
**Docket E-7, Sub 1263**

| Resource Type | Sept 2022 - August 2023 | |
|---|---|---|
| NUC Total (Gross) | 59,085,520 | |
| COAL Total | 9,117,091 | |
| Gas CT and CC total (Gross) | 29,962,094 | |
| Run of River | 4,980,701 | |
| Net pumped Storage | (3,411,289) | |
| Total Hydro | 1,569,412 | |
| Catawba Joint Owners | (14,848,200) | |
| Lee CC Joint Owners | (876,000) | |
| DEC owned solar | 364,048 | |
| Total Generation | | 84,373,966 |
| Purchases for REPS Compliance | 1,376,121 | |
| Qualifying Facility Purchases - Non-REPS compliance | 2,705,790 | |
| Other Purchases | 11,994 | |
| Allocated Economic Purchases | 610,715 | |
| Joint Dispatch Purchases | 4,735,740 | |
| | 9,440,360 | |
| Total Generation and Purchased Power | | 93,814,326 |
| Fuel Recovered Through Intersystem Sales | (1,964,801) | |

rounding differences may occur

**Duke Energy Carolinas, LLC** **Sykes Workpaper 4**
**North Carolina Annual Fuel and Fuel Related Expense**
**Projected Fuel and Fuel Related Costs**
**Billing Period September 2022 through August 2023**
**Docket E-7, Sub 1263**

| Resource Type | Sept 2022 - August 2023 | |
|---|---|---|
| Nuclear Total (Gross) | $ 341,071,825 | |
| COAL Total | 292,853,648 | |
| Gas CT and CC total (Gross) | 932,067,312 | |
| Catawba Joint Owner costs | (85,734,604) | |
| CC Joint Owner costs | (20,639,342) | |
| Non-Economic Fuel Expense Recovered through Reimbursement | (14,027,557) | |
| Reagents and gain/loss on sale of By-Products | 9,519,806 | Workpaper 9 |
| Purchases for REPS Compliance - Energy | 66,782,210 | |
| Purchases for REPS Compliance - Capacity | 14,610,064 | |
| Purchases of Qualifying Facilities - Energy | 40,652,503 | |
| Purchases of Qualifying Facilities - Capacity | 8,445,498 | |
| Other Purchases | 7,489,994 | |
| JDA Savings Shared | 20,748,035 | Workpaper 5 |
| Allocated Economic Purchase cost | 14,263,480 | Workpaper 5 |
| Joint Dispatch purchases | 108,842,049 | Workpaper 6 |
| **Total Purchases** | 281,833,833 | |
| **Fuel Expense recovered through intersystem sales** | (66,325,343) | Workpaper 5 |
| **Total System Fuel and Fuel Related Costs** | **$ 1,670,619,578** | |

rounding differences may occur

**Duke Energy Carolinas, LLC**
**North Carolina Annual Fuel and Fuel Related Expense**
**Projected Joint Dispatch Fuel Impacts**
**Billing Period September 2022 through August 2023**
**Docket E-7, Sub 1263**

**Sykes Workpaper 5**

**Positive numbers represent costs to ratepayers, Negative numbers represent removal of costs to ratepayers**

| | Allocated Economic Purchase Cost | | Economic Sales Cost | | Fuel Transfer Payment | | JDA Savings Payment | |
|---|---|---|---|---|---|---|---|---|
| | DEP | DEC | DEP | DEC | DEP | DEC | DEP | DEC |
| 9/1/2022 | $ 2,677,577 | $ 3,781,762 | $ (395,675) | $ (452,046) | $ (1,193,008) | $ 1,193,008 | $ 136,476 | $ (136,476) |
| 10/1/2022 | $ 542,827 | $ 803,362 | $ (661,032) | $ (762,575) | $ 3,557,663 | $ (3,557,663) | $ 1,505,004 | $ (1,505,004) |
| 11/1/2022 | $ 695,591 | $ 1,037,984 | $ (1,296,867) | $ (557,594) | $ (13,651,324) | $ 13,651,324 | $ (2,905,662) | $ 2,905,662 |
| 12/1/2022 | $ 569,647 | $ 813,687 | $ (4,426,520) | $ (2,671,233) | $ (8,969,486) | $ 8,969,486 | $ (1,818,339) | $ 1,818,339 |
| 1/1/2023 | $ 717,874 | $ 1,045,814 | $ (9,234,760) | $ (8,881,053) | $ (10,170,634) | $ 10,170,634 | $ (3,592,449) | $ 3,592,449 |
| 2/1/2023 | $ 158,723 | $ 222,173 | $ (7,642,791) | $ (9,248,399) | $ (5,978,839) | $ 5,978,839 | $ (1,638,766) | $ 1,638,766 |
| 3/1/2023 | $ 159,011 | $ 226,144 | $ (2,542,480) | $ (1,638,517) | $ (11,192,203) | $ 11,192,203 | $ (2,501,768) | $ 2,501,768 |
| 4/1/2023 | $ 956,508 | $ 1,344,592 | $ (1,195,044) | $ (315,259) | $ (3,210,699) | $ 3,210,699 | $ (1,096,821) | $ 1,096,821 |
| 5/1/2023 | $ 270,733 | $ 388,566 | $ (1,797,811) | $ (767,211) | $ (5,555,240) | $ 5,555,240 | $ (2,753,841) | $ 2,753,841 |
| 6/1/2023 | $ 1,051,586 | $ 1,467,004 | $ (701,390) | $ (742,280) | $ (2,897,748) | $ 2,897,748 | $ (1,195,439) | $ 1,195,439 |
| 7/1/2023 | $ 867,969 | $ 1,183,718 | $ (953,263) | $ (1,239,118) | $ (5,539,686) | $ 5,539,686 | $ (3,293,157) | $ 3,293,157 |
| 8/1/2023 | $ 1,368,896 | $ 1,948,674 | $ (968,553) | $ (940,559) | $ (5,931,346) | $ 5,931,346 | $ (1,593,273) | $ 1,593,273 |
| Sept 22 - Aug 23 | | $ 14,263,480 | | $ (28,215,845) | | $ 70,732,550 | | $ 20,748,035 |

rounding differences may occur

| | | |
|---|---|---|
| $ | 108,842,049 | Workpaper 6 - Transfer - Purchases |
| $ | (38,109,498) | Workpaper 6 - Transfer - Sales |
| $ | 70,732,550 | Sept 22-Aug 23 Net Fuel Transfer Payment |
| | | |
| $ | (38,109,498) | Workpaper 6 - Transfer - Sales |
| $ | (28,215,845) | Sept 22-Aug 23 Economic Sales Cost |
| **$** | **(66,325,343)** | **Total Fuel expense recovered through intersystem sales** |

**Duke Energy Carolinas, LLC**
**North Carolina Annual Fuel and Fuel Related Expense**
**Projected Merger Payments**
**Billing Period September 2022 through August 2023**
**Docket E-7, Sub 1263**

**Sykes Workpaper 6**



| | Transfer Projection | | Purchase Allocation Delta | | Purchase Adjusted Transfer | Sale Adjusted Transfer | Fossil Gen Cost | | Sale Pre-Net Payments | Purchase Pre-Net Payments |
|---|---|---|---|---|---|---|---|---|---|---|
| | PECtoDEC | DECtoPEC | PEC | DEC | PECtoDEC | DECtoPEC | PEC | DEC | PECtoDEC | DECtoPEC |
| 9/1/2022 | 253,674 | 164,537 | (35,758) | 35,758 | 253,674 | 200,295 | $ 29.07 | $ 30.86 | $ 6,180,396 | $ 7,373,404 |
| 10/1/2022 | 212,025 | 305,749 | (12,976) | 12,976 | 212,025 | 318,726 | $ 27.42 | $ 29.40 | $ 9,371,770 | $ 5,814,107 |
| 11/1/2022 | 637,224 | 24,450 | (141) | 141 | 637,224 | 24,591 | $ 22.69 | $ 32.95 | $ 810,289 | $ 14,461,612 |
| 12/1/2022 | 387,962 | 37,723 | (4,500) | 4,500 | 387,962 | 42,223 | $ 26.82 | $ 34.00 | $ 1,435,605 | $ 10,405,091 |
| 1/1/2023 | 392,052 | 31,019 | (2,330) | 2,330 | 392,052 | 33,350 | $ 28.90 | $ 34.73 | $ 1,158,324 | $ 11,328,958 |
| 2/1/2023 | 268,628 | 41,858 | (177) | 177 | 268,628 | 42,035 | $ 27.60 | $ 34.15 | $ 1,435,273 | $ 7,414,112 |
| 3/1/2023 | 574,004 | 66,898 | (447) | 447 | 574,004 | 67,344 | $ 23.22 | $ 31.75 | $ 2,137,998 | $ 13,330,201 |
| 4/1/2023 | 385,453 | 158,440 | (17,432) | 17,432 | 385,453 | 175,872 | $ 19.76 | $ 25.05 | $ 4,405,256 | $ 7,615,955 |
| 5/1/2023 | 492,081 | 72,823 | (5,284) | 5,284 | 492,081 | 78,107 | $ 15.12 | $ 24.14 | $ 1,885,732 | $ 7,440,972 |
| 6/1/2023 | 343,644 | 136,582 | 3,192 | (3,192) | 346,836 | 136,582 | $ 18.88 | $ 26.73 | $ 3,650,423 | $ 6,548,171 |
| 7/1/2023 | 369,531 | 98,967 | 7,217 | (7,217) | 376,748 | 98,967 | $ 22.05 | $ 27.97 | $ 2,768,573 | $ 8,308,259 |
| 8/1/2023 | 393,768 | 106,684 | 15,285 | (15,285) | 409,053 | 106,684 | $ 21.52 | $ 26.90 | $ 2,869,860 | $ 8,801,206 |
| Sept 22 - Aug 23 | 4,710,046 | 1,245,731 | (53,351) | 53,351 | 4,735,740 | 1,324,776 | | | $ 38,109,498 | $ 108,842,049 |
| | | | | | | | | | Net Pre-Net Payments | $ 70,732,550 |

rounding differences may occur

**Duke Energy Carolinas, LLC**
**North Carolina Annual Fuel and Fuel Related Expense**
**Projected and Adjusted Projected Sales and Costs**
**Proposed Nuclear Capacity Factor of 93.94%**
**Billing Period September 2022 through August 2023**
**Docket E-7, Sub 1263**

**Sykes Revised Workpaper 7**

**Fall 2021 Forecast**
**Billed Sales Forecast**
**Sales Forecast - MWhs (000)**

| | | Projected sales for the Billing Period | Remove impact of SC DERP Net Metered Generation | Adjusted Sales |
|---|---|---|---|---|
| North Carolina: | | | | |
| | Residential | 22,809,193 | | 22,809,193 |
| | General | 22,983,240 | | 22,983,240 |
| | Industrial | 12,202,704 | | 12,202,704 |
| | Lighting | 239,297 | | 239,297 |
| | NC RETAIL | 58,234,434 | - | 58,234,434 |
| South Carolina: | | | | |
| | Residential | 6,851,656 | 133,318 | 6,984,975 |
| | General | 5,765,026 | 42,173 | 5,807,199 |
| | Industrial | 8,959,835 | 429 | 8,960,264 |
| | Lighting | 39,929 | - | 39,929 |
| | SC RETAIL | 21,616,446 | 175,921 | 21,792,367 |
| Total Retail Sales | | | | |
| | Residential | 29,660,849 | 133,318 | 29,794,168 |
| | General | 28,748,266 | 42,173 | 28,790,439 |
| | Industrial | 21,162,539 | 429 | 21,162,968 |
| | Lighting | 279,226 | - | 279,226 |
| | Retail Sales | 79,850,880 | 175,921 | 80,026,801 |
| | Wholesale | 8,106,092 | - | 8,106,092 |
| Projected System MWH Sales for Fuel Factor | | 87,956,972 | 175,921 | 88,132,893 |
| NC as a percentage of total | | **66.21%** | | **66.08%** |
| SC as a percentage of total | | 24.58% | | 24.73% |
| Wholesale as a percentage of total | | 9.22% | | 9.20% |
| | | 100.00% | | 100.00% |

**SC Net Metering allocation adjustment**

| | | |
|---|---|---|
| Total projected SC NEM MWhs | 175,921 | |
| Marginal fuel rate per MWh for SC NEM | $ 26.07 | |
| Fuel benefit to be directly assigned to SC Retail | $ 4,586,518 | |

| | | |
|---|---|---|
| System Fuel Expense | $ 1,670,619,578 | Sykes Exhibit 2 Schedule 1 Page 1 of 3 |
| Fuel benefit to be directly assigned to SC Retail | $ 4,586,518 | |
| Total Fuel Costs for Allocation | $ 1,675,206,096 | Sykes Exhibit 2 Schedule 1 Page 3 of 3, L5 |

| **Reconciliation** | **System** | **NC Retail Customers** | **Wholesale** | **South Carolina Retail** | |
|---|---|---|---|---|---|
| Total system fuel expense from Sykes Exhibit 2 Schedule 1 Page 1 | $ 1,670,619,578 | | | | |
| QF and REPS Compliance Purchased Power - Capacity | $ 23,055,563 | | | | |
| Other fuel costs | $ 1,647,564,015 | | | | |
| SC Net Metering Fuel Allocation adjustment | $ 4,586,518 | | | | |
| Jurisdictional fuel costs after adj. | $ 1,652,150,533 | | | | |
| **Allocation to states/classes** | | 66.08% | 9.20% | 24.73% | |
| Jurisdictional fuel costs | $ 1,652,150,533 | $ 1,091,670,180 | $ 151,957,842 | $ 408,522,511 | 66.68% |
| Direct Assignment of Fuel benefit to SC Retail | $ (4,586,518) | | $ - | $ (4,586,518) | |
| Total system actual fuel costs | $ 1,647,564,015 | $ 1,091,670,180 | $ 151,957,842 | $ 403,935,993 | |
| QF and REPS Compliance Purchased Power - Capacity | 23,055,563 | 15,373,745 | | | |
| Total system fuel expense from Sykes Exhibit 2 Schedule 1 Page 1 | $ 1,670,619,578 | **$ 1,107,043,925** | | | |
| | | **Exh.2, Sch. 1 page 3, Line 13** | | | |

rounding differences may occur

**Duke Energy Carolinas, LLC** **Sykes Revised Workpaper 7a**
**North Carolina Annual Fuel and Fuel Related Expense**
**Projected and Adjusted Projected Sales and Costs**
**Proposed Nuclear Capacity Factor of 93.94% and Normalized Test Period Sales**
**Billing Period September 2022 through August 2023**
**Docket E-7, Sub 1263**

**Fall 2021 Forecast**
**Billed Sales Forecast - Normalized Test Period Sales**
**Sales Forecast - MWhs (000)**

| | Test Period Sales | Customer Growth Adjustment | Weather Adjustment | Remove impact of SC DERP Net Metered generation | Normalized Test Period Sales |
|---|---|---|---|---|---|
| **NC RETAIL** | 58,067,962 | (62,454) | 413,425 | - | 58,418,933 |
| **SC RETAIL** | 20,481,464 | 93,667 | 133,245 | 175,921 | 20,884,297 |
| **Wholesale** | 8,002,184 | 68,388 | 41,052 | - | 8,111,624 |
| **Normalized System MWH Sales for Fuel Factor** | 86,551,610 | 99,601 | 587,721 | 175,921 | 87,414,853 |
| **NC as a percentage of total** | **67.09%** | | | | **66.83%** |
| SC as a percentage of total | 23.66% | | | | 23.89% |
| Wholesale as a percentage of total | 9.25% | | | | 9.28% |
| | 100.00% | | | | 100.00% |

**SC Net Metering allocation adjustment**

| | | |
|---|---|---|
| Total projected SC NEM MWhs | 175,921 | |
| Marginal fuel rate per MWh for SC NEM | $ 26.07 | |
| Fuel benefit to be directly assigned to SC Retail | $ 4,586,518 | |
| | | |
| System Fuel Expense | $ 1,647,555,144 | Sykes Exhibit 2 Schedule 2 Page 1 of 3 |
| Fuel benefit to be directly assigned to SC Retail | $ 4,586,518 | |
| Total Fuel Costs for Allocation | $ 1,652,141,662 | Sykes Exhibit 2 Schedule 2 Page 3 of 3, L5 |

| **Reconciliation** | **System** | **NC Retail Customers** | **Wholesale** | **South Carolina Retail** |
|---|---|---|---|---|
| Total system fuel expense from Sykes Exhibit 2 Schedule 2 Page 1 | $ 1,647,555,144 | | | |
| QF and REPS Compliance Purchased Power - Capacity | $ 23,055,563 | | | |
| Other fuel costs | $ 1,624,499,581 | | | |
| SC Net Metering Fuel Allocation adjustment | $ 4,586,518 | | | |
| Jurisdictional fuel costs after adj. | $ 1,629,086,100 | | | |
| Allocation to states/classes | | 66.83% | 9.28% | 23.89% |
| Jurisdictional fuel costs | $ 1,629,086,100 | $ 1,088,718,240 | $ 151,179,190 | $ 389,188,669 |
| Direct Assignment of Fuel benefit to SC Retail | $ (4,586,518) | | $ - | $ (4,586,518) |
| Total system actual fuel costs | $ 1,624,499,581 | $ 1,088,718,240 | $ 151,179,190 | $ 384,602,151 |
| QF and REPS Compliance Purchased Power - Capacity | 23,055,563 | 15,373,745 | | |
| Total system fuel expense from Sykes Exhibit 2 Schedule 2 Page 1 | $ 1,647,555,144 | **$ 1,104,091,985** | | |
| | | **Exh. 2, Sch 2 page 3, Line 13** | | |

rounding differences may occur

**Duke Energy Carolinas, LLC** **Sykes Revised Workpaper 7b**
**North Carolina Annual Fuel and Fuel Related Expense**
**Projected and Adjusted Projected Sales and Costs**
**NERC 5 Year Average Nuclear Capacity Factor of 92.07%**
**Billing Period September 2022 through August 2023**
**Docket E-7, Sub 1263**

**Fall 2021 Forecast**
**Billed Sales Forecast**
**Sales Forecast - MWhs (000)**

| | | Projected sales for the Billing Period | Remove impact of SC DERP Net Metered generation | Adjusted Sales |
|---|---|---|---|---|
| North Carolina: | | | | |
| | Residential | 22,809,193 | | 22,809,193 |
| | General | 22,983,240 | | 22,983,240 |
| | Industrial | 12,202,704 | | 12,202,704 |
| | Lighting | 239,297 | | 239,297 |
| | NC RETAIL | 58,234,434 | - | 58,234,434 |
| South Carolina: | | | | |
| | Residential | 6,851,656 | 133,318 | 6,984,975 |
| | General | 5,765,026 | 42,173 | 5,807,199 |
| | Industrial | 8,959,835 | 429 | 8,960,264 |
| | Lighting | 39,929 | 0 | 39,929 |
| | SC RETAIL | 21,616,446 | 175,921 | 21,792,367 |
| Total Retail Sales | | | | |
| | Residential | 29,660,849 | 133,318 | 29,794,167 |
| | General | 28,748,266 | 42,173 | 28,790,440 |
| | Industrial | 21,162,539 | 429 | 21,162,968 |
| | Lighting | 279,226 | - | 279,226 |
| | Retail Sales | 79,850,880 | 175,921 | 80,026,801 |
| | Wholesale | 8,106,092 | - | 8,106,092 |
| **Projected System MWh Sales for Fuel Factor** | | 87,956,972 | 175,921 | 88,132,893 |
| NC as a percentage of total | | **66.21%** | | **66.08%** |
| SC as a percentage of total | | 24.58% | | 24.73% |
| Wholesale as a percentage of total | | 9.22% | | 9.20% |
| | | 100.01% | | 100.00% |

**SC Net Metering allocation adjustment**

| | | |
|---|---|---|
| Total projected SC NEM MWhs | 175,921 | |
| Marginal fuel rate per MWh for SC NEM | $ 26.07 | |
| Fuel benefit to be directly assigned to SC Retail | $ 4,586,511 | |
| System Fuel Expense | $ 1,693,825,422 | Sykes Exhibit 2 Schedule 3 Page 1 of 3 |
| Fuel benefit to be directly assigned to SC Retail | $ 4,586,511 | |
| Total Fuel Costs for Allocation | $ 1,698,411,934 | Sykes Exhibit 2 Schedule 3 Page 3 of 3, Line 5 |

| **Reconciliation** | **System** | **NC Retail Customers** | **Wholesale** | **South Carolina Retail** |
|---|---|---|---|---|
| Total system fuel expense from Sykes Exhibit 2 Schedule 3 Page 1 | $ 1,693,825,422 | | | |
| QF and REPS Compliance Purchased Power - Capacity | $ 23,055,563 | | | |
| Other fuel costs | $ 1,670,769,860 | | | |
| SC Net Metering Fuel Allocation adjustment | $ 4,586,511 | | | |
| Jurisdictional fuel costs after adj. | $ 1,675,356,371 | | | |
| Allocation to states/classes | | 66.08% | 9.20% | 24.73% |
| Jurisdictional fuel costs | $ 1,675,523,907 | $ 1,107,075,490 | $ 154,132,786 | $ 414,315,631 |
| Direct Assignment of Fuel benefit to SC Retail | $ (4,586,511) | | $ - | $ (4,586,511) |
| Total system actual fuel costs | $ 1,670,937,395 | $ 1,107,075,490 | $ 154,132,786 | $ 409,729,119 |
| QF and REPS Compliance Purchased Power - Capacity | 23,055,563 | 15,373,745 | | |
| Total system fuel expense from Sykes Exhibit 2 Schedule 3 Page 1 | $ 1,693,992,958 | **$ 1,122,449,235** | | |
| | | **Exh. 2, Sch.3 page 3, Line 13** | | |

rounding differences may occur

**Duke Energy Carolinas, LLC**
**North Carolina Annual Fuel and Fuel Related Expense**
**Annualized Revenue**
**Billing Period September 2022 through August 2023**
**Docket E-7, Sub 1263**

**Sykes Workpaper 8**

| | January 2022 Actuals | | | Normalized Sales | |
|---|---|---|---|---|---|
| | Revenue | kWh Sales | Cents/ kWh | Sykes Exhibit 4 | Total Annualized Revenues |
| | (a) | (b) | (a)/(b) *100 = (c) | (d) | (c) * (d) * 10 |
| Residential | $ 209,556,609 | 2,129,408,268 | 9.8411 | 22,961,890 | $ 2,259,696,240 |
| General | $ 137,324,675 | 1,921,732,056 | 7.1459 | 23,202,419 | $ 1,658,017,092 |
| Industrial | $ 51,372,485 | 937,750,891 | 5.4783 | 12,293,985 | $ 673,497,148 |
| Total | $ 398,253,769 | 4,988,891,215 | | 58,458,294 | $ 4,591,210,481 |

rounding differences may occur

**Duke Energy Carolinas, LLC**
**North Carolina Annual Fuel and Fuel Related Expense**
**Projected Reagents and ByProducts**
**Billing Period September 2022 through August 2023**
**Docket E-7, Sub 1263**

**Sykes Workpaper 9**

**Reagent and ByProduct projections**

| Date | Ammonia | Urea | Limestone | Magnesium Hydroxide | Calcium Carbonate | Lime | **Reagent Cost** | **Gypsum (Gain)/ Loss** | **Ash (Gain)/Loss** | **Steam (Gain)/Loss** | **Sale of By-Products (Gain)/Loss** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 9/1/2022 | $ 108,717 | $ 13,489 | $ 449,691 | $ 48,393 | $ 29,036 | $ 34,615 | **$ 683,941** | $ 128,362 | $ (74,398) | $ (226,533) | **$ (172,570)** |
| 10/1/2022 | $ 51,960 | $ 6,447 | $ 214,926 | $ 26,942 | $ 16,165 | $ 34,615 | **$ 351,056** | $ 61,400 | $ (31,726) | $ (223,486) | **$ (193,812)** |
| 11/1/2022 | $ 79,604 | $ 9,877 | $ 329,272 | $ 36,588 | $ 21,953 | $ 34,615 | **$ 511,909** | $ 84,600 | $ (43,313) | $ (220,444) | **$ (179,157)** |
| 12/1/2022 | $ 314,933 | $ 39,076 | $ 1,302,676 | $ 112,128 | $ 67,277 | $ 34,615 | **$ 1,870,705** | $ 386,006 | $ (232,116) | $ (217,449) | **$ (63,559)** |
| 1/1/2023 | $ 413,327 | $ 51,284 | $ 1,709,669 | $ 144,939 | $ 86,964 | $ 34,615 | **$ 2,440,799** | $ 512,709 | $ (261,016) | $ (214,680) | **$ 37,013** |
| 2/1/2023 | $ 337,638 | $ 41,893 | $ 1,396,591 | $ 110,882 | $ 66,529 | $ 34,615 | **$ 1,988,148** | $ 415,640 | $ (237,071) | $ (211,979) | **$ (33,410)** |
| 3/1/2023 | $ 106,399 | $ 13,202 | $ 440,102 | $ 49,926 | $ 29,955 | $ 34,615 | **$ 674,199** | $ 115,952 | $ (59,337) | $ (209,446) | **$ (152,831)** |
| 4/1/2023 | $ 55,930 | $ 6,940 | $ 231,348 | $ 31,061 | $ 18,637 | $ 34,615 | **$ 378,532** | $ 53,252 | $ (22,526) | $ (207,253) | **$ (176,528)** |
| 5/1/2023 | $ 33,535 | $ 4,161 | $ 138,712 | $ 24,580 | $ 14,748 | $ 34,615 | **$ 250,351** | $ 32,046 | $ (8,814) | $ (206,220) | **$ (182,988)** |
| 6/1/2023 | $ 81,768 | $ 10,146 | $ 338,222 | $ 42,487 | $ 25,492 | $ 34,615 | **$ 532,731** | $ 91,664 | $ (49,255) | $ (205,355) | **$ (162,945)** |
| 7/1/2023 | $ 115,903 | $ 14,381 | $ 479,414 | $ 54,842 | $ 32,905 | $ 34,615 | **$ 732,059** | $ 132,485 | $ (71,586) | $ (204,536) | **$ (143,637)** |
| 8/1/2023 | $ 108,411 | $ 13,451 | $ 448,427 | $ 49,538 | $ 29,723 | $ 34,615 | **$ 684,165** | $ 112,582 | $ (63,166) | $ (203,781) | **$ (154,364)** |
| | $ 1,808,126 | $ 224,347 | $ 7,479,051 | $ 732,305 | $ 439,383 | $ 415,382 | **$ 11,098,593** | $ 2,126,699 | $ (1,154,325) | $ (2,551,161) | **$ (1,578,787)** |

Total Reagent cost and Sale of By-products **$ 9,519,806**

rounding differences may occur

**Duke Energy Carolinas, LLC** **Sykes Revised Workpaper 10**
**North Carolina Annual Fuel and Fuel Related Expense**
**2.5% Calculation Test**
**Twelve Months Ended December 31, 2021**
**Billing Period September 2022 through August 2023**
**Docket E-7, Sub 1263**

| Line No. | Description | Forecast $ | (Over)/Under Collection $ | Total $ |
|---|---|---|---|---|
| 1 | Amount in current docket | 100,735,755 | 13,526,437 | 114,262,192 |
| 2 | Amount in Sub 1250, prior year docket | 102,740,263 | (4,999,624) | 97,740,638 |
| 3 | Increase/(Decrease) | (2,004,507) | 18,526,061 | 16,521,554 |
| 4 | 2.5% of 2021 NC retail revenue of $4,720,136,851 | | | 118,003,421 |
| | Excess of purchased power growth over 2.5% of revenue | | | 0 |

| | | | | |
|---|---|---|---|---|
| | **E-7, Sub 1263** | | | |
| WP 4 | Purchases for REPS Compliance - Energy | 66,782,210 | 66.08% | 44,126,819 |
| WP 4 | Purchases for REPS Compliance - Capacity | 14,610,064 | 66.68% | 9,742,178 |
| WP 4 | Purchases | 7,489,994 | 66.08% | 4,949,066 |
| WP 4 | QF Energy | 40,652,503 | 66.08% | 26,861,429 |
| WP 4 | QF Capacity | 8,445,498 | 66.68% | 5,631,567 |
| WP 4 | Allocated Economic Purchase cost | 14,263,480 | 66.08% | 9,424,695 |
| | | 152,243,749 | | 100,735,755 |
| | **E-7, Sub 1250** | | | |
| | Purchases for REPS Compliance | 62,808,851 | 65.99% | 41,447,561 |
| | Purchases for REPS Compliance Capacity | 13,866,978 | 66.90% | 9,276,635 |
| | Purchases | 2,586,674 | 65.99% | 1,706,946 |
| | QF Energy | 53,822,291 | 65.99% | 35,517,330 |
| | QF Capacity | 11,169,971 | 66.90% | 7,472,410 |
| | Allocated Economic Purchase cost | 11,091,651 | 65.99% | 7,319,380 |
| | | 155,346,415 | | 102,740,263 |

rounding differences may occur

**Duke Energy Carolinas, LLC**
**North Carolina Annual Fuel and Fuel Related Expense**
**2.5% Calculation Test**
**Twelve Months Ended December 31, 2021**
**Docket E-7, Sub 1263**

**Sykes Workpaper 10a**

| **2021** | **Jan-21** | **Feb-21** | **Mar-21** | **Apr-21** | **May-21** | **Jun-21** | **Jul-21** | **Aug-21** | **Sep-21** | **Oct-21** | **Nov-21** | **Dec-21** | **12 ME** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| System KWH Sales - Sch 4, Adjusted | 8,623,321,816 | 7,033,781,083 | 6,170,273,584 | 6,357,924,869 | 5,750,592,351 | 7,218,972,840 | 8,473,666,049 | 8,688,276,000 | 8,107,525,420 | 6,609,883,548 | 6,537,708,709 | 7,191,590,664 | 86,763,516,933 |
| NC Retail KWH Sales - Sch 4 | 5,785,766,552 | 4,705,197,397 | 4,216,101,608 | 4,307,482,408 | 3,784,759,966 | 4,813,117,777 | 5,540,576,171 | 5,890,178,638 | 5,517,650,819 | 4,297,619,492 | 4,396,624,370 | 4,888,703,073 | 58,143,778,271 |
| NC Retail % of Sales, Adjusted (Calc) | 67.09% | 66.89% | 68.33% | 67.75% | 65.82% | 66.67% | 65.39% | 67.79% | 68.06% | 65.02% | 67.25% | 67.98% | 67.01% |
| NC retail production plant % | 66.98% | 66.98% | 66.98% | 66.98% | 66.98% | 66.98% | 66.98% | 66.98% | 66.98% | 66.98% | 66.98% | 66.98% | 66.98% |
| **Fuel and Fuel related component of purchased power** | | | | | | | | | | | | | |
| System Actual $ - Sch 3 Fuel$: | $ 14,110,987 | $ 21,997,962 | $ 7,288,155 | $ 1,159,999 | $ 6,909,766 | $ 19,650,947 | $ 27,256,372 | $ 22,941,922 | $ 20,301,410 | $ 27,877,777 | $ 27,842,536 | $ 26,295,173 | $ 223,633,006 |
| System Actual $ - Sch 3 Fuel-related$; Economic Purchases | 1,908,455 | 2,653,190 | 897,843 | 1,159,946 | 1,043,015 | 1,716,177 | 3,233,998 | 2,658,287 | 1,580,193 | 2,101,644 | 2,163,509 | 2,417,594 | $ 23,533,851 |
| System Actual $ - Sch 3 Fuel-related$; Purchased Power for REPS Compliance | 3,836,471 | 3,851,010 | 3,578,469 | 1,634,328 | 5,557,142 | 6,244,501 | 5,777,306 | 6,144,771 | 5,617,037 | 5,684,750 | 4,972,836 | 4,406,882 | $ 57,305,503 |
| System Actual$ - Sch 3 Fuel-related$; SC DERP | 148,221 | 63,773 | 117,353 | 217,851 | 155,453 | 263,492 | 427,484 | 260,031 | 242,117 | 236,248 | 246,176 | 205,494 | $ 2,583,692 |
| System Acutal $ - Sch 3 Fuel-related$; HB589 purpa Purchases | 2,756,782 | 2,455,383 | 2,198,548 | 2,656,105 | 2,051,181 | 3,609,263 | 3,393,224 | 3,761,968 | 2,668,737 | 2,679,082 | 2,593,637 | 2,343,504 | $ 33,167,413 |
| Total System Economic & QF$ | 22,760,916 | 31,021,318 | 14,080,368 | 6,828,229 | 15,716,557 | 31,484,380 | 40,088,384 | 35,766,979 | 30,409,494 | 38,579,500 | 37,818,693 | 35,668,647 | 340,223,465 |
| Less: | | | | | | | | | | | | | |
| Native Load Transfers, Native Load Transfer Benefit & DE - Progress fees | $ 13,085,320 | $ 20,311,355 | $ 6,186,575 | $ 12,225 | $ 6,203,819 | $ 19,379,239 | $ 26,072,774 | $ 21,770,863 | $ 19,434,801 | $ 26,816,502 | $ 23,378,784 | $ 23,491,467 | $ 206,143,723 |
| Total System Economic $ without Native Load Transfers | $ 9,675,596 | $ 10,709,964 | $ 7,893,793 | $ 6,816,004 | $ 7,306,104 | $ 8,232,386 | $ 14,015,610 | $ 13,996,116 | $ 10,974,693 | $ 11,762,998 | $ 14,439,909 | $ 12,177,179 | $ 128,000,354 |
| NC Actual $ (Calc) | $ 6,491,783 | $ 7,164,353 | $ 5,393,769 | $ 4,617,830 | $ 4,808,522 | $ 5,488,793 | $ 9,164,222 | $ 9,488,606 | $ 7,468,928 | $ 7,648,076 | $ 9,710,873 | $ 8,277,809 | $ 85,723,565 |
| Billed rate (¢/kWh): | 0.1367 | 0.1367 | 0.1367 | 0.1367 | 0.1367 | 0.1367 | 0.1367 | 0.1367 | 0.1363 | 0.1357 | 0.1357 | 0.1357 | |
| Billed $: | $ 7,911,008 | $ 6,433,522 | $ 5,764,770 | $ 5,889,717 | $ 5,174,987 | $ 6,581,084 | $ 7,575,754 | $ 8,053,773 | $ 7,518,618 | $ 5,832,583 | $ 5,966,949 | $ 6,634,781 | $ 79,337,545 |
| (Over)/ Under $: | $ (1,419,225) | $ 730,832 | $ (371,001) | $ (1,271,887) | $ (366,465) | $ (1,092,291) | $ 1,588,468 | $ 1,434,833 | $ (49,690) | $ 1,815,493 | $ 3,743,924 | $ 1,643,028 | $ 6,386,020 |
| **Capacity component of purchased power** | | | | | | | | | | | | | |
| System Actual $ - Capacity component of Cherokee County Cogen Purchases | $ 430,619 | $ 430,619 | $ 215,311 | $ 215,310 | $ 322,964 | $ 1,399,512 | $ 3,229,644 | $ 3,229,644 | $ 645,929 | $ 215,310 | $ 215,310 | $ 215,310 | $ 10,765,481 |
| System Actual $ - Capacity component of Purchased Power for REPS Compliance | 679,198 | 657,904 | 611,495 | 370,864 | 1,021,112 | 874,770 | 880,403 | 2,930,150 | 2,610,093 | 2,651,828 | 2,162,592 | 642,188 | $ 16,092,597 |
| System Actual $ - Capacity component of HB589 Purpa QF purchases | 401,588 | 376,607 | 536,828 | 347,396 | 110,548 | 427,589 | 1,222,705 | 1,697,840 | 1,371,802 | 1,324,805 | 834,474 | 281,956 | $ 8,934,138 |
| System Actual $ - Capacity component of SC DERP | 14,999 | 7,491 | 12,697 | 15,442 | 14,837 | 24,880 | 38,885 | 24,278 | 22,766 | 22,049 | 24,646 | 19,907 | $ 242,878 |
| System Actual $ - Sch 2 pg 1 ANNUAL VIEW | $ 1,526,405 | $ 1,472,621 | $ 1,376,331 | $ 949,012 | $ 1,469,461 | $ 2,726,751 | $ 5,371,637 | $ 7,881,912 | $ 4,650,590 | $ 4,213,992 | $ 3,237,022 | $ 1,159,361 | $ 36,035,094 |
| NC Actual $ (Calc) (1) | $ 1,022,340 | $ 986,317 | $ 921,825 | $ 635,619 | $ 984,201 | $ 1,826,295 | $ 3,597,760 | $ 5,279,066 | $ 3,114,825 | $ 2,822,404 | $ 2,168,059 | $ 776,505 | $ 24,135,215 |
| Billed rate (¢/kWh): | 0.0294 | 0.0294 | 0.0294 | 0.0294 | 0.0294 | 0.0294 | 0.0294 | 0.0294 | 0.0291 | 0.0289 | 0.0289 | 0.0289 | |
| Billed $: | $ 1,698,557 | $ 1,381,329 | $ 1,237,743 | $ 1,264,570 | $ 1,111,112 | $ 1,413,012 | $ 1,626,576 | $ 1,729,210 | $ 1,608,069 | $ 1,241,743 | $ 1,270,349 | $ 1,412,529 | $ 16,994,798 |
| (Over)/Under $: | $ (676,218) | $ (395,012) | $ (315,918) | $ (628,950) | $ (126,911) | $ 413,283 | $ 1,971,184 | $ 3,549,856 | $ 1,506,756 | $ 1,580,661 | $ 897,710 | $ (636,024) | $ 7,140,417 |
| **TOTAL (Over)/ Under $:** | **$ (2,095,442)** | **$ 335,820** | **$ (686,918)** | **$ (1,900,837)** | **$ (493,375)** | **$ (679,008)** | **$ 3,559,653** | **$ 4,984,689** | **$ 1,457,065** | **$ 3,396,154** | **$ 4,641,634** | **$ 1,007,004** | **$ 13,526,437** |

Note: The billed rate for September and October are pro-rated based on number of billing days in cycle on new rate schedules.
(1) January - May NC actual capacity shown herein is adjusted to reflect use of 2020 production plant allocation factor. Actual true-up related to allocator was made as prior period adjustment in May 2021 of Schedule 4.

rounding differences may occur

**Duke Energy Carolinas, LLC**
**North Carolina Annual Fuel and Fuel Related Expense**
**2.5% Calculation Test**
**Twelve Months Ended December 31, 2020**
**Docket E-7, Sub 1263**

**Sykes Workpaper 10b**

| **2020** | **Jan-20** | **Feb-20** | **Mar-20** | **Apr-20** | **May-20** | **Jun-20** | **Jul-20** | **Aug-20** | **Sep-20** | **Oct-20** | **Nov-20** | **Dec-20** | **12 ME** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| System KWH Sales - Sch 4, Adjusted | 7,193,812,943 | 7,229,160,762 | 6,557,632,220 | 5,948,571,625 | 5,649,816,171 | 6,745,745,153 | 8,113,658,335 | 8,454,195,025 | 7,632,668,505 | 6,227,418,819 | 7,077,137,814 | 6,283,453,698 | 83,113,271,070 |
| NC Retail KWH Sales - Sch 4 | 4,799,050,153 | 4,852,514,770 | 4,419,004,658 | 4,009,530,882 | 3,737,497,506 | 4,445,349,080 | 5,381,133,760 | 5,679,285,065 | 5,143,265,080 | 4,161,108,724 | 4,768,316,561 | 4,115,807,397 | 55,511,863,636 |
| NC Retail % of Sales, Adjusted (Calc) | 66.71% | 67.12% | 67.39% | 67.40% | 66.15% | 65.90% | 66.32% | 67.18% | 67.38% | 66.82% | 67.38% | 65.50% | 66.79% |
| | | | | | | | | | | | | | |
| NC retail production plant % | 67.55% | 67.55% | 67.55% | 67.55% | 67.55% | 67.75% | 67.75% | 67.75% | 67.75% | 67.75% | 67.75% | 67.75% | 67.71% |
| **Fuel and Fuel related component of purchased power** | | | | | | | | | | | | | |
| System Actual $ - Sch 3 Fuel$: | $ 11,218,315 | $ 12,607,762 | $ 5,300,111 | $ 6,352,200 | $ 8,395,303 | $ 6,771,661 | $ 12,440,459 | $ 7,247,711 | $ 9,073,495 | $ 15,331,837 | $ 6,958,738 | $ 24,648,415 | $ 126,346,007 |
| System Actual $ - Sch 3 Fuel-related$; Economic Purchases | 1,491,771 | 1,826,422 | 990,649 | 729,743 | 909,315 | 1,057,292 | 2,012,867 | 1,346,379 | 1,036,893 | 1,743,448 | 1,074,835 | 4,774,389 | $ 18,994,003 |
| System Actual $ - Sch 3 Fuel-related$; Purchased Power for REPS Compliance | 3,745,116 | 4,068,302 | 3,681,838 | 4,276,231 | 5,491,472 | 4,795,757 | 5,305,337 | 6,084,262 | 5,064,982 | 4,676,649 | 4,553,039 | 4,091,116 | $ 55,834,101 |
| System Actual$ - Sch 3 Fuel-related$; SC DERP | 13,291 | 13,282 | 28,563 | 39,932 | 44,069 | 110,923 | 38,018 | 129,601 | 69,181 | 87,074 | 68,782 | 37,283 | $ 679,999 |
| System Acutal $ - Sch 3 Fuel-related$; HB589 purpa Purchases | 2,051,485 | 2,097,916 | 2,123,359 | 2,681,961 | 3,213,134 | 2,547,168 | 2,552,543 | 2,889,199 | 2,519,264 | 2,799,837 | 2,863,763 | 2,568,618 | $ 30,908,248 |
| Total System Economic & QF$ | 18,519,978 | 20,613,684 | 12,124,520 | 14,080,067 | 18,053,293 | 15,282,801 | 22,349,224 | 17,697,152 | 17,763,815 | 24,638,845 | 15,519,157 | 36,119,821 | 232,762,358 |
| Less: | | | | | | | | | | | | | |
| Native Load Transfers, Native Load Transfer Benefit & DE - Progress fees | $ 9,403,952 | $ 10,746,417 | $ 3,681,146 | $ 5,959,074 | $ 8,211,008 | $ 5,694,556 | $ 12,728,156 | $ 6,086,984 | $ 8,789,272 | $ 15,071,913 | $ 5,685,045 | $ 21,638,297 | $ 113,695,820 |
| Total System Economic $ without Native Load Transfers | $ 9,116,026 | $ 9,867,267 | $ 8,443,374 | $ 8,120,993 | $ 9,842,285 | $ 9,588,245 | $ 9,621,068 | $ 11,610,168 | $ 8,974,543 | $ 9,566,932 | $ 9,834,112 | $ 14,481,524 | $ 119,066,539 |
| NC Actual $ (Calc) | $ 6,081,374 | $ 6,623,322 | $ 5,689,753 | $ 5,473,813 | $ 6,510,923 | $ 6,318,516 | $ 6,380,877 | $ 7,799,377 | $ 6,047,486 | $ 6,392,544 | $ 6,625,865 | $ 9,485,733 | $ 79,429,582 |
| Billed rate (¢/kWh): | 0.1533 | 0.1533 | 0.1533 | 0.1533 | 0.1533 | 0.1533 | 0.1533 | 0.1533 | 0.1689 | 0.1689 | 0.1689 | 0.1689 | |
| Billed $: | $ 7,356,944 | $ 7,438,905 | $ 6,774,334 | $ 6,146,611 | $ 5,729,584 | $ 6,814,720 | $ 8,249,278 | $ 8,706,344 | $ 8,689,317 | $ 7,030,008 | $ 8,055,859 | $ 6,953,473 | $ 87,945,377 |
| (Over)/ Under $: | $ (1,275,570) | $ (815,583) | $ (1,084,581) | $ (672,798) | $ 781,339 | $ (496,204) | $ (1,868,401) | $ (906,967) | $ (2,641,831) | $ (637,464) | $ (1,429,993) | $ 2,532,260 | $ (8,515,795) |
| **Capacity component of purchased power** | | | | | | | | | | | | | |
| System Actual $ - Capacity component of Cherokee County Cogen Purchases | $ 430,619 | $ 430,619 | $ 215,310 | $ 215,310 | $ 322,964 | $ 1,399,512 | $ 3,229,644 | $ 3,229,644 | $ 645,929 | $ 215,310 | $ 215,310 | $ 215,310 | $ 10,765,481 |
| System Actual $ - Capacity component of Purchased Power for REPS Compliance | 645,345 | 680,159 | 573,260 | 641,154 | 778,381 | 625,715 | 2,302,254 | 2,743,308 | 2,223,872 | 1,950,062 | 637,418 | 610,344 | $ 14,411,272 |
| System Actual $ - Capacity component of HB589 Purpa QF purchases | 264,275 | 306,973 | 236,219 | 277,976 | 283,502 | 204,320 | 1,125,235 | 1,384,219 | 1,116,138 | 1,010,084 | 297,176 | 256,193 | $ 6,762,310 |
| System Actual $ - Capacity component of SC DERP | 1,869 | 1,868 | 12,351 | 6,569 | 4,675 | 15,765 | 4,866 | 18,466 | 9,471 | 10,816 | 8,919 | 5,142 | $ 100,777 |
| System Actual $ - Sch 2 pg 1 ANNUAL VIEW | $ 1,342,109 | $ 1,419,619 | $ 1,037,140 | $ 1,141,008 | $ 1,389,523 | $ 2,245,312 | $ 6,661,999 | $ 7,375,637 | $ 3,995,410 | $ 3,186,272 | $ 1,158,823 | $ 1,086,989 | $ 32,039,840 |
| NC Actual $ (Calc) (1) | $ 906,558 | $ 958,914 | $ 700,560 | $ 770,720 | $ 938,585 | $ 1,521,128 | $ 4,513,293 | $ 4,996,760 | $ 2,706,763 | $ 2,158,598 | $ 785,065 | $ 736,399 | $ 21,693,343 |
| Billed rate (¢/kWh): | 0.0327 | 0.0327 | 0.0327 | 0.0327 | 0.0327 | 0.0327 | 0.0327 | 0.0327 | 0.0328 | 0.0328 | 0.0328 | 0.0328 | |
| Billed $: | $ 1,570,139 | $ 1,587,631 | $ 1,445,797 | $ 1,311,826 | $ 1,222,823 | $ 1,454,416 | $ 1,760,583 | $ 1,858,131 | $ 1,686,991 | $ 1,364,844 | $ 1,564,008 | $ 1,349,985 | $ 18,177,174 |
| (Over)/Under $: | $ (663,581) | $ (628,718) | $ (745,237) | $ (541,106) | $ (284,239) | $ 66,712 | $ 2,752,710 | $ 3,138,628 | $ 1,019,773 | $ 793,755 | $ (778,942) | $ (613,586) | $ 3,516,169 |
| **TOTAL (Over)/ Under $:** | **$ (1,939,151)** | **$ (1,444,300)** | **$ (1,829,818)** | **$ (1,213,904)** | **$ 497,100** | **$ (429,492)** | **$ 884,309** | **$ 2,231,661** | **$ (1,622,059)** | **$ 156,290** | **$ (2,208,936)** | **$ 1,918,674** | **$ (4,999,624)** |

Note: The billed rate for September and October are pro-rated based on number of billing days in cycle on new rate schedules.
(1) January - May NC actual capacity shown herein is adjusted to reflect use of 2019 production plant allocation factor. Actual true-up related to allocator was made as prior period adjustment in June 2020 of Schedule 4.

rounding differences may occur

**Duke Energy Carolinas, LLC** **Sykes Workpaper 11**
**North Carolina Annual Fuel and Fuel Related Expense**
**Actual Sales by Jursidiction - Subject to Weather**
**Twelve Months Ended December 31, 2021**
**Docket E-7, Sub 1263**

| | | | MWhs | | | | |
|---|---|---|---|---|---|---|---|
| Line # | Description | Reference | NORTH CAROLINA | SOUTH CAROLINA | TOTAL COMPANY | % NC | % SC |
| 1 | Residential | Company Records | 22,424,524 | 6,819,677 | 29,244,200 | 76.68 | 23.32 |
| 2 | Total General Service | Company Records | 23,396,396 | 5,297,993 | 28,694,389 | | |
| 3 | less Lighting and Traffic Signals | | 249,725 | 50,082 | 299,807 | | |
| 4 | General Service subject to weather | | 23,146,672 | 5,247,911 | 28,394,582 | 81.52 | 18.48 |
| 5 | Industrial | Company Records | 12,247,042 | 8,363,794 | 20,610,836 | 59.42 | 40.58 |
| 6 | Total Retail Sales | 1+2+5 | 58,067,962 | 20,481,464 | 78,549,426 | | |
| 7 | Total Retail Sales subject to weather | 1+4+5 | 57,818,237 | 20,431,382 | 78,249,619 | 73.89 | 26.11 |

This does not exclude Greenwood and includes the impact of SC DERP net metering generation
rounding differences may occur

**Duke Energy Carolinas, LLC**
**North Carolina Annual Fuel and Fuel Related Expense**
**Weather Normalization Adjustment**
**Twelve Months Ended December 31, 2021**
**Docket E-7, Sub 1263**



| Line # | Description | REFERENCE | Total Company MWh | NC RETAIL % To Total | NC RETAIL MWh | SC RETAIL % To Total | SC RETAIL MWh |
|---|---|---|---|---|---|---|---|
| | Residential | | | | | | |
| 1 | Total Residential | | 442,226 | 76.68 | 339,099 | 23.32 | 103,127 |
| | General Service | | | | | | |
| 2 | Total General Service | | 55,501 | 81.52 | 45,245 | 18.48 | 10,257 |
| | Industrial | | | | | | |
| 3 | Total Industrial | | 48,942 | 59.42 | 29,081 | 40.58 | 19,861 |
| 4 | Total Retail | L1+ L2+ L3 | 546,669 | | 413,425 | | 133,245 |
| 5 | Wholesale | | 41,052 | | | | |
| 6 | Total Company | L4 + L5 | 587,721 | | 413,425 | | 133,245 |

rounding differences may occur

**Duke Energy Carolinas, LLC**
**North Carolina Annual Fuel and Fuel Related Expense**
**Weather Normalization Adjustment by Class by Month**
**Twelve Months Ended December 31, 2021**
**Docket E-7, Sub 1263**



| | Residential | Commercial | Industrial | |
|---|---|---|---|---|
| **2021** | **TOTAL MWH ADJUSTMENT** | **TOTAL MWH ADJUSTMENT** | **TOTAL MWH ADJUSTMENT** | |
| JAN | (32,231) | (6,216) | - | |
| FEB | 76,342 | 6,207 | 5,074 | |
| MAR | (28,114) | - | - | |
| APR | 87,225 | - | - | |
| MAY | 22,994 | 7,646 | 8,603 | |
| JUN | 5,003 | 2,379 | 1,202 | |
| JUL | 132,023 | 60,904 | 22,835 | |
| AUG | 115,041 | 51,399 | 31,162 | |
| SEP | (100,540) | (54,870) | (24,544) | |
| OCT | (63,328) | (35,264) | (17,356) | |
| NOV | 37,621 | 7,905 | 21,965 | |
| DEC | 190,190 | 15,412 | - | |
| Total | **442,226** | **55,501** | **48,942** | **546,669** |

| | Wholesale | | |
|---|---|---|---|
| **2021** | **TOTAL MWH ADJUSTMENT** | Note: | **The Resale customers include:** |
| JAN | (3,069) | 1 | Concord[1] |
| FEB | 4,989 | 2 | Dallas |
| MAR | (935) | 3 | Forest City |
| APR | - | 4 | Kings Mountain[1] |
| MAY | (242) | 5 | Due West |
| JUN | 333 | 6 | Prosperity[2] |
| JUL | 10,240 | 7 | Lockhart |
| AUG | 7,544 | 8 | Western Carolina University |
| SEP | (3,038) | 9 | City of Highlands |
| OCT | (194) | 10 | Haywood |
| NOV | 7,750 | 11 | Piedmont |
| DEC | 17,674 | 12 | Rutherford |
| | | 13 | Blue Ridge |
| Total | **41,052** | 14 | Greenwood[1] |

[1]Wholesale load is no longer being served by Duke as of December 2018.

[2]Wholesale load is no longer being served by Duke as of December 2019.

rounding differences may occur

**Duke Energy Carolinas, LLC**
**North Carolina Annual Fuel and Fuel Related Expense**
**Customer Growth Adjustment to kWh Sales**
**Twelve Months Ended December 31, 2021**
**Docket E-7, Sub 1263**



| Line | Estimation Method [1] | Rate Schedule | NC Proposed kWh [1] Adjustment | SC Proposed kWh Adjustment | Wholesale Proposed kWh Adjustment | Total Company |
|---|---|---|---|---|---|---|
| 1 | *Regression* | Residential | 162,754,384 | 82,196,305 | | |
| 2 | | | | | | |
| 3 | | **General Service (Excluding Lighting):** | | | | |
| 4 | *Customer* | General Service Small and Large | (239,177,414) | (13,727,966) | | |
| 5 | *Regression* | Miscellaneous | (212,139) | 117,569 | | |
| 6 | | Total General | (239,389,552) | (13,610,396) | | |
| 7 | | | | | | |
| 8 | | **Lighting:** | | | | |
| 9 | *Regression* | T & T2 (GL/FL/PL/OL)[2] | (3,686,189) | (1,600,396) | | |
| 10 | *Regression* | TS | 5,186 | (3,988) | | |
| 11 | | Total Lighting | (3,681,003) | (1,604,384) | | |
| 12 | | | | | | |
| 13 | | **Industrial:** | | | | |
| 14 | *Customer* | I - Textile | 675,995 | 3,411,534 | | |
| 15 | *Customer* | I - Nontextile | 17,186,010 | 23,274,269 | | |
| 16 | | Total Industrial | 17,862,005 | 26,685,803 | | |
| 17 | | | | | | |
| 18 | | | | | | |
| 19 | | Total | (62,454,166) | 93,667,327 | 68,388,286 | 99,601,448 |
| | | | | | WP 13-2 | |

Notes:
[1] Two approved methods are used for estimating the growth adjustment depending on the class/schedule:
"Regression" refers to the use of Ordinary Least Squares Regression
"Customer" refers to the use of the Customer by Customer approach.
[2] T and T2 were combined due to North Carolina's FL & GL schedules being merged into OL & PL.
rounding differences may occur

Calculation of Customer Growth Adjustment to kWh Sales - Wholesale

| Line No. | | Reference | |
|---|---|---|---|
| 1 | Total System Resale (kWh Sales) | Company Records | 9,405,969,890 |
| 2 | Less Intersystem Sales | Exhibit 6, Sch 1 | 1,241,221,539 |
| 3 | Total kWh Sales Excluding Intersystem Sales | L1 - L2 | 8,164,748,350 |
| 4 | Residential Growth Factor | Line 8 | 0.8376 |
| 5 | Adjustment to kWhs - Wholesale | L3 * L4 / 100 | 68,388,286 |
| 6 | Total System Retail Residential kWh Sales | Company Records | 29,244,200,232 |
| 7 | 2021 Proposed Adjustment kWh - Residential (NC+SC) | WP 13-1 | 244,950,689 |
| 8 | Percent Adjustment | L7 / L6 * 100 | 0.8376 |

rounding differences may occur

**STATE OF NORTH CAROLINA**
**UTILITIES COMMISSION**
**RALEIGH**

DOCKET NO. E-7, SUB 1263

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

| | | |
|---|---|---|
| In the Matter of<br>Application of Duke Energy Carolinas, LLC<br>Pursuant to G.S. 62-133.2 and NCUC Rule<br>R8-55 Relating to Fuel and Fuel-Related<br>Charge Adjustments for Electric Utilities | )<br>)<br>)<br>)<br>) | **DIRECT TESTIMONY OF DAVID B. JOHNSON FOR DUKE ENERGY CAROLINAS, LLC** |

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

A. My name is David B. Johnson. My business address is 400 South Tryon Street, Charlotte, North Carolina 28202.

**Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

A. I am employed by Duke Energy Corporation ("Duke Energy") as Director of Business Development and Compliance.

**Q. PLEASE SUMMARIZE YOUR EDUCATION AND PROFESSIONAL QUALIFICATIONS.**

A. My educational background includes a Bachelor of Science in Civil Engineering from the University of Tennessee. With respect to professional experience, I have been in the utility industry for over 38 years. I started as an associate Design Engineer in the Design Engineering Department at Duke Power in 1980. From 1991-1995, I worked for Duke Energy's affiliate companies Duke/Fluor Daniel and Duke Engineering & Services, Inc. In 1996, I worked in the initial Duke Power Trading Group in Charlotte, North Carolina, where I focused on marketing and business development and management until 2006. From 2006 to 2017, I worked as a Business Development Manager and Director in the Duke Energy wholesale and renewable energy areas. I began my current role in late 2017.

**Q. PLEASE DESCRIBE YOUR CURRENT RESPONSIBILITIES IN YOUR POSITION WITH DUKE ENERGY**

A. I am responsible for wholesale Power Purchase Agreements ("PPA") that Duke Energy enters into with third party suppliers. These include PPAs that Duke

Energy Carolinas, LLC ("DEC") and Duke Energy Progress ("DEP") enter into with Qualifying Facilities ("QFs"), renewable PPAs to comply with North Carolina's Renewable Energy Efficiency Portfolio ("REPS") standard, Competitive Procurement of Renewable Energy ("CPRE") PPAs, and conventional (non-renewable) PPAs. I have responsibility for the negotiation and execution of these PPAs, as well as the on-going management of all executed PPAs. In addition, I am responsible for Duke Energy's compliance with the REPS and the CPRE Program.

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

A. Yes. I most recently provided testimony in the 2018 Avoided Cost proceeding (NCUC Docket No. E-100, Sub 158) for DEC and DEP.

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

A. The purpose of my testimony is to present information and data required by the NCUC in accordance with the "Order Approving SISC Avoidance Requirements and Addressing Solar-Plus-Storage Qualifying Facility Installations (Docket No. E-100, Sub 101 and E-100, Sub 158 – dated August 17, 2021). In this Order, the Commission directed DEC and DEP, in future fuel and fuel-related charge adjustment proceedings conducted pursuant to N.C. Gen. Stat. 62-133.2, to address the SISC avoidance process in their prefiled direct testimony, identify the specific facility(ies) and amount of SISC avoided in supporting exhibits and work papers, and the results of any audits performed on QFs seeking to avoid the SISC.

**Q. DO YOU HAVE ANY INFORMATION TO REPORT AT THIS TIME?**

A. No. There are currently no operating solar QF facilities at this time that contain energy storage systems. There are also currently no executed PPAs that contain SISC (sub 158 and later) that also include an energy storage system.

Duke will continue to monitor future solar QF PPAs with SISC and energy storage that provide notice to Duke that they intend to avoid some or all of the SISC. Duke will provide any data on the ability of these future QF facilities to avoid the SISC in future fuel proceedings for DEC and DEP.

**Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?**

A. Yes, it does.

**STATE OF NORTH CAROLINA**
**UTILITIES COMMISSION**
**RALEIGH**

DOCKET NO. E-7, SUB 1263

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

| | |
|---|---|
| In the Matter of<br>Application of Duke Energy Carolinas, LLC, Pursuant to G.S. 62-133.2 and Commission Rule R8-55 Relating to Fuel and Fuel-Related Costs Adjustments for Electric Utilities | SECOND<br>PUBLIC NOTICE |

NOTICE IS HEREBY GIVEN that the North Carolina Utilities Commission has scheduled a public hearing in the annual fuel and fuel-related adjustment charge proceeding for Duke Energy Carolinas, LLC (DEC). The public hearing will be held immediately following the hearing in Docket No. E-7, Sub 1262, which is scheduled to begin at 10:00 a.m. on Tuesday, June 7, 2022, in Commission Hearing Room 2115, Dobbs Building, 430 North Salisbury Street, Raleigh, North Carolina. This proceeding is being held pursuant to the provisions of N.C. Gen. Stat. § 62-133.2 and Commission Rule R8-55 for the purpose of determining whether an increment or decrement rider is required to reflect changes in fuel and fuel-related costs over or under the base fuel rate established for DEC in its last general rate case. Public witness testimony will be received in accordance with Commission Rule R1-21(g).

DEC filed an application and testimony relative to its fuel rider adjustment on March 1, 2022. According to DEC's initial application, the proposed changes in fuel rates would result in increases of the current fuel rates of all customer classes, with the amount of the increase varying for different customer classes. The net effect of DEC's request as filed in

its application would increase the monthly bill of a typical residential customer using 1,000 kilowatt hours per month by $8.09, excluding the regulatory fee.

On March 14, 2022, the Commission issued an Order Scheduling Hearing, Requiring Filing of Testimony, Establishing Discovery Guidelines and Requiring Public Notice (Fuel Scheduling Order). The Fuel Scheduling Order, among other things, required DEC to publish a Public Notice of the public hearing and of the proposed changes in monthly fuel rates.

Through supplemental testimony and exhibits filed on May 9, 2022, after the Public Notice of the original proposed fuel charges had been published by DEC pursuant to the Commission's Fuel Scheduling Order, DEC revised its proposed monthly fuel rates. The revisions, if approved by the Commission, would result in fuel charges higher than the charges stated in the original Public Notice published by DEC. In the case of the monthly bill of a typical residential customer using 1,000 kilowatt hours per month, DEC revised its proposed increase to $9.85, excluding the regulatory fee. The proposed changes in all customers' fuel rates would be effective for service rendered on and after September 1, 2022.

The Public Staff is authorized by statute to represent consumers in proceedings before the Commission. Written statements to the Public Staff should include any information that the writers wish to be considered by the Public Staff in its investigation of the matter. Such statements should be addressed to Mr. Christopher J. Ayers, Executive Director, Public Staff 4326 Mail Service Center, Raleigh, North Carolina 27699-4300.

The Attorney General is also authorized by statute to represent consumers in proceedings before the Commission. Statements to the Attorney General should be addressed to The Honorable Josh Stein, Attorney General, c/o Consumer Protection-Utilities, 9001 Mail Service Center, Raleigh, North Carolina, 27699-9001. Written statements may be emailed to utilityAGO@ncdoj.gov.

Written statements are not evidence unless persons appear at a public hearing and testify concerning the information contained in their written statements.

Any person desiring to intervene in the proceeding as a formal party of record should file a petition under North Carolina Utilities Commission Rules R1-5 and R1-19 on or before Tuesday, May 17, 2022. Such petitions should be filed with the Chief Clerk of the North Carolina Utilities Commission, 4325 Mail Service Center, Raleigh, North Carolina 27699-4300. The direct testimony and exhibits of expert witnesses to be presented by intervenors should also be filed with the Commission on or before Tuesday, May 17, 2022.

ISSUED BY ORDER OF THE COMMISSION.

This the ___ day of May, 2022.

NORTH CAROLINA UTILITIES COMMISSION

A. Shonta Dunston, Chief Clerk