

Ladawn S. Toon Associate General Counsel

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May 19, 2023

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 Rebuttal Testimony-Clark Corrected

Exhibits and Workpapers Docket No. E-7, Sub 1282

Dear Ms. Dunston:

On May 18, 2023, Duke Energy Carolinas, LLC filed their Rebuttal Testimony of Jeffrey Flanagan and John Swez, as well as the Joint Rebuttal Testimony of Sigourney Clark and Chris Bauer, in the above-referenced proceeding. It has come to the Company's attention that the workpapers included for Sigourney Clark were incomplete; therefore, enclosed please find the corrected version of Clark Exhibits and Workpapers.

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

Sincerely,

Ladawn S. Toon

Enclosure

cc: Parties of Record

Clark Rebuttal Revision Exhibit 1

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, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

| 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 1263) | | | | | |
| 1 | Approved Fuel and Fuel Related Costs Factors | Input | 2.0003 | 1.8217 | 1.8396 | 1.9010 |
| 2 | EMF Increment (Decrement) cents/kWh | Input | 0.4863 | 0.6254 | 0.5726 | 0.5597 |
| 3 | EMF Interest Increment (Decrement) cents/kWh | Input | - | - | - | - |
| 4 | Approved Net Fuel and Fuel Related Costs Factors | Sum | 2.4866 | 2.4471 | 2.4122 | 2.4607 |
| | Fuel and Fuel Related Cost Factors Required by Rule R8-55 | | | | | |
| 5 | Proposed Nuclear Capacity Factor of 93.60% and Normalized Test Period Sales | Exh 2 Sch 2 pg 2 | 3.1722 | 2.9601 | 2.8067 | 3.9138 |
| 6 | NERC 5 Year Average Nuclear Capacity Factor of 91.87% and Projected Period Sales | Exh 2 Sch 3 pg 2 | 3.2462 | 3.0160 | 2.8598 | 3.9654 |
| | Proposed Fuel and Fuel Related Cost Factors using Proposed Nuclear Capacity Factor of 93.52% | | | | | |
| 7 | Fuel and Fuel Related Costs excluding Purchased Capacity cents/kWh | Exh 2 Sch 1 pg 2 | 1.5098 | 1.2979 | 1.0894 | 2.2294 |
| 8 | REPS Compliance and QF Purchased Power - Capacity cents/kWh | Exh 2 Sch 1 pg 2 | 0.0331 | 0.0245 | 0.0214 | 0.0272 |
| 9 | Total adjusted Fuel and Fuel Related Costs cents/kWh | Sum | 1.5429 | 1.3224 | 1.1108 | 2.2566 |
| 10 | EMF Increment (Decrement) cents/kWh | Exh 3 pg 2, 3, 4 | 1.6635 | 1.6638 | 1.7256 | 1.6764 |
| 11 | EMF Interest Increment (Decrement) cents/kWh | Exh 3 pg 2, 3, 4 | - | - | - | - |
| 12 | Net Fuel and Fuel Related Costs Factors cents/kWh | Sum | 3.2064 | 2.9862 | 2.8364 | 3.9330 |

Note: Fuel factors exclude regulatory fee

| Line # | Unit | Reference | Generation (MWh) | Unit Cost (cents/kWh) | Fuel Cost (\$) |
|--------|--|----------------------------|---------------------|--------------------------|-------------------|
| | | | D | E | D*E=F |
| 1 | Total Nuclear | Workpaper 1 | 58,871,920 | 0.5609 | 330,239,182 |
| 2 | Coal | Workpaper 3 & 4 | 10,197,068 | 3.9786 | 405,705,179 |
| 3 | Gas CT and CC | Workpaper 3 & 4 | 29,873,528 | 3.4985 | 1,045,125,311 |
| 4 | Reagents and Byproducts | Workpaper 9 | | | 25,288,082 |
| 5 | Total Fossil | Sum | 40,070,595 | _ | 1,476,118,572 |
| 6 | Hydro | Workpaper 3 | 5,280,351 | | |
| 7 | Net Pumped Storage | Workpaper 3 | (3,799,951) | | |
| 8 | Total Hydro | Sum | 1,480,401 | | - |
| 9 | Solar Distributed Generation | Workpaper 3 | 359,301 | | - |
| | | Line 1 + Line 5 + Line 8 + | | | |
| 10 | Total Generation | Line 9 | 100,782,217 | | 1,806,357,754 |
| 11 | Less Lee CC Joint Owners | Workpaper 3 & 4 | (878,400) | | (23,592,537) |
| 12 | Less Catawba Joint Owners | Workpaper 3 & 4 | (14,888,880) | | (160,254,288) |
| 13 | Fuel expense recovered through reimbursement | Workpaper 4 | | | (3,687,381) |
| 14 | Net Generation | Sum Lines 10-13 | 85,014,937 | | 1,618,823,548 |
| 15 | Purchased Power | Workpaper 3 & 4 | 10,963,165 | 3.0356 | 332,801,702 |
| 16 | JDA Savings Shared | Workpaper 5 | | _ | 115,585,534 |
| 17 | Total Purchased Power | | 10,963,165 | | 448,387,237 |
| 18 | Total Generation and Purchased Power | Line 14 + Line 17 | 95,978,101 | 2.1538 | 2,067,210,785 |
| 19 | Fuel expense recovered through intersystem sales | Workpaper 3 & 4 | (1,028,431) | 3.8382 | (39,473,663) |
| 20 | Line losses and Company use | Line 22-Line 18-Line 19 | (5,078,704) | | - |
| 21 | System Fuel Expense for Fuel Factor | Lines 18 + 19 + 20 | | | 2,027,737,121 |
| 22 | Projected System MWh Sales for Fuel Factor | Workpaper 7 | 89,870,966 | | 89,870,966 |
| 23 | Fuel and Fuel Related Costs cents/kWh | Line 21 / Line 22 / 10 | | | 2.2563 |

Clark Rebuttal Revised Exhibit 2

Schedule 1

Page 2 of 3

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 93.60%
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

| Line # | Description | Reference | Residential | GS/Lighting | Industrial | Total |
|----------------------------|--|--|------------------------|------------------------------------|-------------------------------|--|
| 1 | NC Projected Billing Period MWh Sales | Workpaper 7 | 23,311,388 | 24,873,076 | 12,148,800 | 60,333,264 |
| <u>Calcula</u> | tion of Renewable and Cogeneration Purchased Power Capacity Rate by Class | | | | | <u>Amount</u> |
| 2 | Purchased Power for REPS Compliance - Capacity | Workpaper 4 | | | | \$ 14,936,094 |
| 3 | QF Purchased Power - Capacity | Workpaper 4 | | | _ | 9,663,863 |
| 4 5 6 7 8 9 | Total of Renewable and QF Purchased Power Capacity NC Portion - Jursidicational % based on 2021 Production Plant Allocator NC Renewable and QF Purchased Power - Capacity 2021 Production Plant Allocation Factors Renewable and QF Purchased Power - Capacity allocated on 2021 Production Plant Allocator Renewable and QF Purchased Power - Capacity cents/kWh based on Projected Billing Period Sales | Line 2 + Line 3 Input Line 4 * Line 5 Input Line 6 * Line 7 Line 8 / Line 1 / 10 | \$ 7,717,004 \$ 0.0331 | 37.14% 6 6,092,491 \$ 0.0245 | 15.81% 2,594,072 0.0214 | \$ 24,599,957 66.68% \$ 16,403,567 100.00% \$ 16,403,567 0.0272 |
| Summa | ry 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 | 1.5098 | 1.2979 | 1.0894 | 2.2294 |
| 11 | REPS Compliance and QF Purchased Power - Capacity cents/kWh | Line 9 | 0.0331 | 0.0245 | 0.0214 | 0.0272 |
| 12 | Total adjusted Fuel and Fuel Related Costs cents/kWh | Line 10 + Line 11 | 1.5429 | 1.3224 | 1.1108 | 2.2566 |
| 13 | EMF Increment (Decrement) cents/kWh | Exh 3 pg 2, 3, 4 | 1.6635 | 1.6638 | 1.7256 | 1.6764 |
| 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 | 3.2064 | 2.9862 | 2.8364 | 3.9330 |

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 93.60%
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Note: Rounding differences may occur

Clark Rebuttal Revised Exhibit 2 Schedule 1 Page 3 of 3

| 2 General Service/Lighting 24,873,076 1,971,226,718 134,083,302 6.80% 0.5391 2.4471 | Line # | Rate Class | Projected Billing Period MWh Sales | nual 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 1263 | Proposed Total Fuel Rate (including Capacity and EMF) |
|--|--------|--|---------------------------------------|----------------------------------|---|--|--|--|---|
| Residential 2.3.311,388 \$ 2.466,691,215 \$ 1.07,126,713 \$ 1.43,081,012 \$ 6.80% \$ 0.3391 \$ 2.467 \$ 1.40,041,101 \$ 1.40,041,101 \$ 1.40,041,101 \$ 6.80% \$ 0.3391 \$ 2.4471 \$ 1.40,041,101 \$ 1.40,041,101 \$ 6.80% \$ 0.3391 \$ 2.4471 \$ 1.40,041,101 \$ 6.80% \$ 0.3391 \$ 2.4471 \$ 1.40,041,101 \$ 6.80% \$ 0.3391 \$ 2.4471 \$ 1.40,041,101 \$ 6.80% \$ 0.3391 \$ 2.4471 \$ 1.40,041,101 \$ 6.80% \$ 0.3391 \$ 2.4471 \$ 1.40,041,101 \$ 6.80% \$ 0.40,42 \$ 2.4472 \$ 1.40,041,101 \$ 1.40,0 | | | A | В | С | D | E | F | G |
| 2 General Service/Lighting | | | Workpaper 7 | Workpaper 8 | Line 25 as a % of Column B | C / B | | Clark Exhibit 1 | E + F = G |
| 12,148,800 737,602,036 51,532,267 6,80% 0,4242 2,4122 | 1 | Residential | 23,311,388 | \$ 2,466,691,215 | \$ 167,784,912 | 6.80% | 0.7198 | 2.4866 | 3.2064 |
| Total Proposed Composite Fuel Rate: | 2 | General Service/Lighting | 24,873,076 | 1,971,226,718 | 134,083,302 | 6.80% | 0.5391 | 2.4471 | 2.9862 |
| Total Proposed Composite Fuel Rate: | 3 | Industrial | 12,148,800 | 757,602,036 | 51,532,267 | 6.80% | 0.4242 | 2.4122 | 2.8364 |
| 5 Total Fuel Costs for Allocation Workpaper 7 \$ 2,032,333,337 6 Total of Renewable and QF Purchased Power Capacity Exhibit 2 Sch 1, Page 2 24,599,957 7 System Other Fuel Costs Line 5 - Line 6 \$ 2,007,533,380 8 Adjusted Projected System MWh Sales for Fuel Factor Workpaper 7 90,050,257 9 NC Retail Projected Billing Period MWh Sales Line 9 / Line 8 60,333,264 10 Allocation % Line 9 / Line 8 60,333,264 12 NC Retail Other Fuel Costs Line 7 * Line 10 \$ 1,345,047,364 12 NC Retail Other Fuel Costs Line 11 * Line 12 \$ 1,361,450,931 13 NC Retail Other Fuel Costs Line 4 60,333,264 14 NC Retail Projected Billing Period MWh Sales Line 4 60,333,264 16 Proposed Composite EMF Rate cents/kWh Line 13 / Line 14 / 10 2,2566 16 Proposed Composite EMF Rate interest cents/kWh Exhibit 3 Page 1 1,6764 17 Proposed Composite EMF Rate interest cents/kWh Exhibit 3 Page 1 0,0000 19 Current Composite Fuel Rate - Docket E7 Sub 1263: Cark Exhibit 1 0,5997 10 Current Composite EMF Rate cents/kWh Clark Exhibit 1 0,5997 | 4 | NC Retail | 60,333,264 | \$ 5,195,519,969 | \$ 353,400,481 | 6.80% | | | |
| Exhibit 2 Sch 1, Page 2 | | Total Proposed Composite Fuel Rate: | | | | | | | |
| 7 System Other Fuel Costs Line 5 - Line 6 \$ 2,007,533,380 8 Adjusted Projected System MWh Sales for Fuel Factor Workpaper 7 90,050,257 9 NC Retail Projected Billing Period MWh Sales Line 4 60,333,264 10 Allocation % Line 9 / Line 8 67,00% 11 NC Retail Other Fuel Costs Line 7 * Line 10 \$ 1,345,047,364 12 NC Retail Total Fuel Costs Line 7 * Line 10 \$ 1,345,047,364 13 NC Retail Total Fuel Costs Line 14 60,333,264 14 NC Retail Projected Billing Period MWh Sales Line 4 60,333,264 15 Calculated Fuel Rate cents/AWh Line 13 / Line 14 / 10 2,2566 16 Proposed Composite EMF Rate cents/AWh Exhibit 3 Page 1 1,0764 16 Proposed Composite EMF Rate cents/AWh Salibit 3 Page 1 1,0764 17 Proposed Composite EMF Rate cents/AWh Salibit 3 Page 1 1,0764 18 Total Current Composite Fuel Rate const/AWh Clark Exhibit 1 1,0000 20 Current composite Fuel Rate cents/AWh Clark Ex | 5 | Total Fuel Costs for Allocation | Workpaper 7 | \$ 2,032,133,337 | | | | | |
| Adjusted Projected System MWh Sales for Fuel Factor NC Retail Projected Billing Period MWh Sales Line 4 Allocation % NC Retail Other Fuel Costs NC Retail Total Fuel Costs NC Retail Total Fuel Costs Line 7 * Line 10 NC Retail Total Fuel Costs Line 11 * Line 12 NC Retail Total Fuel Costs Line 11 * Line 12 Allocation File Costs Line 11 * Line 12 Line 13 * Line 14 * Line 12 Calculated Fuel Rate cents/Wh Line 3 * Line 14 | 6 | Total of Renewable and QF Purchased Power Capacity | Exhibit 2 Sch 1, Page 2 | 24,599,957 | | | | | |
| 9 NC Retail Projected Billing Period MWh Sales Line 4 Line 9 Line 8 60,333,264 Line 9 Line 8 67,00% 11 NC Retail Other Fuel Costs Line 7 - Line 10 \$ 1,345,047,364 Line 10 Line 11 - Line 12 \$ 1,6403,567 Line 11 - Line 12 \$ 1,361,450,931 Line 12 Line 13 Line 14 \$ 60,333,264 Line 14 Line 12 \$ 1,361,450,931 Line 14 Line 12 \$ 1,361,450,931 Line 14 Line 13 Line 14 Line 12 \$ 1,361,450,931 Line 14 Line 13 Line 14 Line 12 \$ 1,361,450,931 Line 14 Line 13 Line 14 Line 13 Line 14 Line 12 \$ 1,361,450,931 Line 14 Line 13 Line 14 Line 12 Line 14 Line 14 Line 14 Line 14 Line 15 Line 14 Line 15 Line 14 Line 15 Line 15 Line 14 Line 15 Line | 7 | System Other Fuel Costs | Line 5 - Line 6 | \$ 2,007,533,380 | • | | | | |
| 10 Allocation % Line 9 / Line 8 67,00% | 8 | | Workpaper 7 | 90,050,257 | | | | | |
| 11 NC Retail Other Fuel Costs | | | | | | | | | |
| NC Renewable and QF Purchased Power - Capacity Exhibit 2 Sch 1, Page 2 16,403,567 Line 11 + Line 12 \$ 1,361,435,931 | 10 | Allocation % | Line 9 / Line 8 | 67.00% | | | | | |
| 13 NC Retail Total Fuel Costs Line 11 + Line 12 S 1,361,450,931 14 NC Retail Projected Billing Period MWh Sales Line 4 60,333,264 15 Calculated Fuel Rate cents/kWh Line 13 / Line 14 / 10 2,2566 16 Proposed Composite EMF Rate cents/kWh Exhibit 3 Page 1 1,6764 17 Proposed Composite EMF Rate interest cents/kWh Total Proposed Composite Fuel Rate Sum 3,9330 Total Current Composite Fuel Rate - Docket E-7 Sub 1263: 19 Current composite Fuel Rate cents/kWh Clark Exhibit 1 Current composite Fuel Rate cents/kWh Clark Exhibit 1 Current Composite Fuel Rate cents/kWh Clark Exhibit 1 Current Composite EMF Rate cents/kWh Clark Exhibit 1 Current Composite Fuel Rate Sum 2,4607 23 Increase/(Decrease) in Composite Fuel Rate Line 23 * Line 24 * 10 S 888,286,650 26 EDIT Mitigation S (534,886,169) | 11 | | | \$ 1,345,047,364 | | | | | |
| 14 NC Retail Projected Billing Period MWh Sales Line 4 60,333,264 15 Calculated Fuel Rate cents/kWh Proposed Composite EMF Rate cents/kWh Proposed Composite EMF Rate lenterest cents/kWh Proposed Composite EMF Rate lenterest cents/kWh Proposed Composite Fuel Rate Sum Sum 3,9330 16 Current Composite Fuel Rate - Docket E-7 Sub 1263: 17 Current Composite Fuel Rate - Docket E-7 Sub 1263: 18 Current composite Fuel Rate cents/kWh Clark Exhibit 1 1,9010 Current composite EMF Rate cents/kWh Clark Exhibit 1 0,5597 Current composite EMF Rate cents/kWh Clark Exhibit 1 0,0000 Total Current Composite Fuel Rate Sum 2,4607 20 Increase/(Decrease) in Composite Fuel rate cents/kWh Line 18 - Line 22 1,4723 NC Retail Projected Billing Period MWh Sales Line 4 60,333,264 EDIT Mitigation \$ (534,886,169) | | | . • | | | | | | |
| Calculated Fuel Rate cents/kWh Line 13 / Line 14 / 10 Proposed Composite EMF Rate cents/kWh Exhibit 3 Page 1 1.6764 Proposed Composite EMF Rate Interest cents/kWh Total Proposed Composite Fuel Rate Total Current Composite Fuel Rate - Docket E-7 Sub 1263: Current composite Fuel Rate cents/kWh Clark Exhibit 1 Current composite EMF Rate cents/kWh Line 18 - Line 22 Line 23 Increase/(Decrease) in Composite Fuel rate cents/kWh Line 23 * Line 24 * 10 S 888,286,650 EDIT Mitigation \$ (534,886,169) | 13 | NC Retail Total Fuel Costs | Line 11 + Line 12 | \$ 1,361,450,931 | | | | | |
| Proposed Composite EMF Rate cents/kWh Exhibit 3 Page 1 1.6764 Proposed Composite EMF Rate Interest cents/kWh Exhibit 3 Page 1 0.0000 Total Proposed Composite Fuel Rate Sum 3.9330 Total Current Composite Fuel Rate - Docket E-7 Sub 1263: Current composite Fuel Rate cents/kWh Clark Exhibit 1 1.9010 Current composite EMF Rate cents/kWh Clark Exhibit 1 0.5597 Current composite EMF Rate cents/kWh Clark Exhibit 1 0.0000 Total Current Composite Fuel Rate Sum 2.4607 Increase/(Decrease) in Composite Fuel rate cents/kWh Line 18 - Line 22 1.4723 NC Retail Projected Billing Period MWh Sales Line 4 60,333,264 EDIT Mitigation \$ (534,886,169) | 14 | NC Retail Projected Billing Period MWh Sales | Line 4 | 60,333,264 | | | | | |
| Proposed Composite EMF Rate Interest cents/kWh Total Proposed Composite Fuel Rate Sum 3.9330 Total Current Composite Fuel Rate - Docket E-7 Sub 1263: 19 Current composite Fuel Rate cents/kWh Current composite EMF Interest Rate cents/kWh Current composite EMF Interest Rate cents/kWh Line 18 - Line 22 1.4723 NC Retail Projected Billing Period MWh Sales Line 4 60,333,264 EDIT Mitigation \$ (534,886,169) | 15 | Calculated Fuel Rate cents/kWh | Line 13 / Line 14 / 10 | 2.2566 | | | | | |
| Total Current Composite Fuel Rate - Docket E-7 Sub 1263: 19 Current composite Fuel Rate cents/kWh Clark Exhibit 1 1.9010 Current composite EMF Rate cents/kWh Clark Exhibit 1 0.5597 Current composite EMF Interest Rate cents/kWh Clark Exhibit 1 0.0000 Total Current Composite Fuel Rate Total Current Composite Fuel Rate Line 18 - Line 22 1.4723 NC Retail Projected Billing Period MWh Sales Line 4 60,333,264 Line 23 * Line 24 * 10 \$888,286,650 EDIT Mitigation \$ (534,886,169) | 16 | Proposed Composite EMF Rate cents/kWh | Exhibit 3 Page 1 | 1.6764 | | | | | |
| Total Current Composite Fuel Rate - Docket E-7 Sub 1263: 19 Current composite Fuel Rate cents/kWh Clark Exhibit 1 1.9010 20 Current composite EMF Rate cents/kWh Clark Exhibit 1 0.5597 21 Current composite EMF Interest Rate cents/kWh Clark Exhibit 1 0.0000 22 Total Current Composite Fuel Rate Sum 2.4607 23 Increase/(Decrease) in Composite Fuel rate cents/kWh Line 18 - Line 22 1.4723 24 NC Retail Projected Billing Period MWh Sales Line 4 60,333,264 25 Increase/(Decrease) in Fuel Costs Line 23 * Line 24 * 10 \$ 888,286,650 26 EDIT Mitigation \$ (534,886,169) | 17 | Proposed Composite EMF Rate Interest cents/kWh | Exhibit 3 Page 1 | | | | | | |
| Current composite Fuel Rate cents/kWh Clark Exhibit 1 1.9010 Current composite EMF Rate cents/kWh Clark Exhibit 1 0.5597 Current composite EMF Interest Rate cents/kWh Clark Exhibit 1 0.0000 Current Composite Fuel Rate Cents/kWh Clark Exhibit 1 0.0000 Total Current Composite Fuel Rate Sum 2.4607 Increase/(Decrease) in Composite Fuel rate cents/kWh Line 18 - Line 22 1.4723 NC Retail Projected Billing Period MWh Sales Line 4 60,333,264 Increase/(Decrease) in Fuel Costs Line 23 * Line 24 * 10 \$ 888,286,650 EDIT Mitigation \$ (534,886,169) | 18 | Total Proposed Composite Fuel Rate | Sum | 3.9330 | | | | | |
| Current composite EMF Rate cents/kWh Clark Exhibit 1 0.0000 Total Current Composite FMF Interest Rate cents/kWh Clark Exhibit 1 0.0000 Total Current Composite Fuel Rate Sum 2.4607 Increase/(Decrease) in Composite Fuel rate cents/kWh Line 18 - Line 22 1.4723 NC Retail Projected Billing Period MWh Sales Line 4 60,333,264 Increase/(Decrease) in Fuel Costs Line 23 * Line 24 * 10 \$ 888,286,650 EDIT Mitigation \$ (534,886,169) | | Total Current Composite Fuel Rate - Docket E-7 Sub 1263: | | | | | | | |
| Current composite EMF Interest Rate cents/kWh Total Current Composite Fuel Rate Sum 2.4607 Increase/(Decrease) in Composite Fuel rate cents/kWh Line 18 - Line 22 1.4723 NC Retail Projected Billing Period MWh Sales Line 4 60,333,264 Increase/(Decrease) in Fuel Costs Line 23 * Line 24 * 10 \$ 888,286,650 EDIT Mitigation \$ (534,886,169) | 19 | Current composite Fuel Rate cents/kWh | | | | | | | |
| Total Current Composite Fuel Rate Sum 2.4607 Increase/(Decrease) in Composite Fuel rate cents/kWh Line 18 - Line 22 1.4723 NC Retail Projected Billing Period MWh Sales Line 4 60,333,264 Increase/(Decrease) in Fuel Costs Line 23 * Line 24 * 10 \$ 888,286,650 EDIT Mitigation \$ (534,886,169) | 20 | | | 0.5597 | | | | | |
| Increase/(Decrease) in Composite Fuel rate cents/kWh Line 18 - Line 22 1.4723 NC Retail Projected Billing Period MWh Sales Line 4 60,333,264 Increase/(Decrease) in Fuel Costs Line 23 * Line 24 * 10 \$ 888,286,650 EDIT Mitigation \$ (534,886,169) | | | | | • | | | | |
| 24 NC Retail Projected Billing Period MWh Sales Line 4 60,333,264 25 Increase/(Decrease) in Fuel Costs Line 23 * Line 24 * 10 \$ 888,286,650 26 EDIT Mitigation \$ (534,886,169) | 22 | Total Current Composite Fuel Rate | Sum | 2.4607 | | | | | |
| 25 Increase/(Decrease) in Fuel Costs Line 23 * Line 24 * 10 \$ 888,286,650 26 EDIT Mitigation \$ (534,886,169) | 23 | Increase/(Decrease) in Composite Fuel rate cents/kWh | Line 18 - Line 22 | 1.4723 | | | | | |
| 26 EDIT Mitigation \$ (534,886,169) | 24 | NC Retail Projected Billing Period MWh Sales | Line 4 | 60,333,264 | | | | | |
| | 25 | Increase/(Decrease) in Fuel Costs | Line 23 * Line 24 * 10 | \$ 888,286,650 | | | | | |
| 27 Net Increase/(Decrease) in Fuel Costs with EDIT Mitigation \$ 353,400,481 | 26 | EDIT Mitigation | | \$ (534,886,169) | | | | | |
| | 27 | Net Increase/(Decrease) in Fuel Costs with EDIT Mitigation | | \$ 353,400,481 | | | | | |

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 93.60% and Normalized Test Period Sales
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

| | | | Generation | Unit Cost | Fuel Cost |
|--------|--|---------------------------------|--------------|-------------|---------------|
| Line # | Unit | Reference | (MWh) | (cents/kWh) | (\$) |
| | | | D | E | D*E=F |
| 1 | Total Nuclear | Workpaper 1 | 58,871,920 | 0.5609 | 330,239,182 |
| | | | | | • |
| 2 | Coal | Calculated | 9,207,306 | 3.9786 | 366,326,086 |
| 3 | Gas CT and CC | Workpaper 3 & 4 | 29,873,528 | 3.4985 | 1,045,125,311 |
| 4 | Reagents and Byproducts | Workpaper 9 | | _ | 25,288,082 |
| 5 | Total Fossil | Sum | 39,080,834 | | 1,436,739,479 |
| | | | | | |
| 6 | Hydro | Workpaper 3 | 5,280,351 | | |
| 7 | Net Pumped Storage | Workpaper 3 | (3,799,951) | | |
| 8 | Total Hydro | Sum | 1,480,401 | | |
| _ | | | | | |
| 9 | Solar Distributed Generation | Workpaper 3 | 359,301 | | |
| | | Line 1 + Line 5 + Line 8 + Line | | | |
| 10 | Total Generation | 9 | 99,792,455 | | 1,766,978,661 |
| 11 | Less Lee CC Joint Owners | Workpaper 3 & 4 | (878,400) | | (23,592,537) |
| 12 | Less Catawba Joint Owners | Workpaper 3 & 4 | (14,888,880) | | (160,254,288) |
| 12 | Less catawba Joint Owners | Workpaper 3 & 4 | (14,000,000) | | (100,254,200) |
| 13 | Fuel expense recovered through reimbursement | Workpaper 4 | | | (3,687,381) |
| | | | | _ | |
| 14 | Net Generation | Sum | 84,025,175 | | 1,579,444,455 |
| | | | | | |
| 15 | Purchased Power | Workpaper 3 & 4 | 10,963,165 | | 332,801,702 |
| 16 | JDA Savings Shared | Workpaper 5 | - | | 115,585,534 |
| 17 | Total Purchased Power | Sum | 10,963,165 | _ | 448,387,237 |
| | | | | | |
| 18 | Total Generation and Purchased Power | Line 14 + Line 17 | 94,988,340 | | 2,027,831,691 |
| | | | | | |
| 19 | Fuel expense recovered through intersystem sales | Workpaper 3 & 4 | (1,028,431) | | (39,473,663) |
| | | | | | |
| 20 | Line losses and Company use | Line 22 - Line 19 - Line 18 | (5,078,704) | | - |
| | | | | | |
| 21 | System Fuel Expense for Fuel Factor | Lines 18 + 19 + 20 | | | 1,988,358,028 |
| | | | | | |
| 22 | Normalized Test Period MWh Sales | Exhibit 4 | 88,881,205 | | 88,881,205 |
| | | | | | |
| 23 | Fuel and Fuel Related Costs cents/kWh | Line 21 / Line 22 / 10 | | | 2.2371 |
| | | | | | |

Clark Rebuttal Revised Exhibit 2

Schedule 2

Page 2 of 3

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 93.60% and Normalized Test Period Sales
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

| Line # | Description | Reference | Residential | GS/Lighting | Industrial | Total |
|----------------|---|-------------------------------|--------------|-------------|------------|---------------|
| 1 | NC Normalized Test Period MWh Sales | Exhibit 4 | 22,892,401 | 24,448,017 | 12,219,040 | 59,559,458 |
| <u>Calcula</u> | tion of Renewable Purchased Power Capacity Rate by Class | | | | | <u>Amount</u> |
| 2 | Purchased Power for REPS Compliance - Capacity | Workpaper 4 | | | | \$ 14,936,094 |
| 3 | QF Purchased Power - Capacity | Workpaper 4 | | | <u>-</u> | 9,663,863 |
| 4 | Total of Renewable and QF Purchased Power Capacity | Line 2 + Line 3 | | | _ | \$ 24,599,957 |
| 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 | | | _ | \$ 16,403,567 |
| 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 | \$ 7,717,004 | 6,092,491 | 2,594,072 | \$ 16,403,567 |
| 9 | Renewable and QF Purchased Power - Capacity cents/kWh based on Normalized Test Period Sales | Line 8 / Line 1 / 10 | 0.0337 | 0.0249 | 0.0212 | 0.0275 |
| Summa | ry 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 - | 1.4750 | 1.2714 | 1.0599 | 2.2099 |
| 11 | REPS Compliance and QF Purchased Power - Capacity cents/kWh | Line 9 | 0.0337 | 0.0249 | 0.0212 | 0.0275 |
| 12 | Total adjusted Fuel and Fuel Related Costs cents/kWh | Line 10 + Line 11 | 1.5087 | 1.2963 | 1.0811 | 2.2374 |
| 13 | EMF Increment (Decrement) cents/kWh | Exh 3 pg 2, 3, 4 | 1.6635 | 1.6638 | 1.7256 | 1.6764 |
| 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 | 3.1722 | 2.9601 | 2.8067 | 3.9138 |

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 93.60% and Normalized Test Period Sales
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Note: Rounding differences may occur

Clark Rebuttal Revised Exhibit 2 Schedule 2 Page 3 of 3

| Line # | Rate Class | Normalized Test Period MWh Sales | nual Revenue at Current rates | Incr | ocate Fuel Costs ease/(Decrease) 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 1263 | Proposed Total Fuel Rate (including Capacity and EMF) |
|--------|--|-------------------------------------|----------------------------------|--------|---|--|---|--|---|
| | | Α | В | | С | D | E | F | G |
| | | Exhibit 4 | Workpaper 8 | Line 2 | 25 as a % of Column B | C / B | If D=0 then 0 if not then (C*100)/(A*1000) | Clark Exhibit 1 | E + F = G |
| 1 | Residential | 22,892,401 | \$ 2,466,691,215 | \$ | 156,946,722 | 6.36% | 0.6856 | 2.4866 | 3.1722 |
| 2 | General Service/Lighting | 24,448,017 | \$ | | 125,422,091 | 6.36% | 0.5130 | 2.4471 | 2.9601 |
| 3 | Industrial | 12,219,040 | \$ 757,602,036 | | 48,203,502 | 6.36% | 0.3945 | 2.4122 | 2.8067 |
| 4 | NC Retail | 59,559,458 | \$ 5,195,519,969 | \$ | 330,572,315 | • | | | |
| | Total Proposed Composite Fuel Rate: | | | | | | | | |
| 5 | Total Fuel Costs for Allocation | Workpaper 7a | \$ 1,992,754,243 | | | | | | |
| 6 | Total of Renewable and QF Purchased Power Capacity | Exhibit 2 Sch 2, Page 2 | 24,599,957 | | | | | | |
| 7 | System Other Fuel Costs | Line 5 - Line 6 | \$ 1,968,154,286 | _ | | | | | |
| 8 | Normalized Test Period System MWh Sales for Fuel Factor | Workpaper 7a | 89,060,496 | | | | | | |
| 9 | NC Retail Normalized Test Period MWh Sales | Exhibit 4 | 59,559,458 | _ | | | | | |
| 10 | Allocation % | Line 9 / Line 8 | 66.88% | • | | | | | |
| 11 | NC Retail Other Fuel Costs | Line 7 * Line 10 | \$ 1,316,208,690 | | | | | | |
| 12 | NC Renewable and QF Purchased Power - Capacity | Exhibit 2 Sch 2, Page 2 | 16,403,567 | _ | | | | | |
| 13 | NC Retail Total Fuel Costs | Line 11 + Line 12 | \$ 1,332,612,257 | | | | | | |
| 14 | NC Retail Normalized Test Period MWh Sales | Line 9 | 59,559,458 | | | | | | |
| 15 | Calculated Fuel Rate cents/kWh | Line 13 / Line 14 / 10 | 2.2374 | | | | | | |
| 16 | Proposed Composite EMF Rate cents/kWh | Exhibit 3 Page 1 | 1.6764 | | | | | | |
| 17 | Proposed Composite EMF Rate Interest cents/kWh | Exhibit 3 Page 1 | 0.0000 | _ | | | | | |
| 18 | Total Proposed Composite Fuel Rate | Sum | 3.9138 | | | | | | |
| | Total Current Composite Fuel Rate - Docket E-7 Sub 1263: | | | | | | | | |
| 19 | Current composite Fuel Rate cents/kWh | Clark Exhibit 1 | 1.9010 | | | | | | |
| 20 | Current composite EMF Rate cents/kWh | Clark Exhibit 1 | 0.5597 | | | | | | |
| 21 | Current composite EMF Interest Rate cents/kWh | Clark Exhibit 1 | 0.0000 | _ | | | | | |
| 22 | Total Current Composite Fuel Rate | Sum | 2.4607 | | | | | | |
| 23 | Increase/(Decrease) in Composite Fuel rate cents/kWh | Line 18 - Line 22 | 1.4531 | | | | | | |
| 24 | NC Retail Normalized Test Period MWh Sales | Exhibit 4 | 59,559,458 | | | | | | |
| 25 | Increase/(Decrease) in Fuel Costs | Line 23 * Line 24 * 10 | \$ 865,458,484 | | | | | | |
| 26 | EDIT Mitigation | | \$ (534,886,169) |) | | | | | |
| 27 | Net Increase/(Decrease) in Fuel Costs with EDIT Mitigation | | \$ 330,572,315 | | | | | | |

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
NERC 5 Year Average Nuclear Capacity Factor of 91.87% and Projected Period Sales
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

Clark Rebuttal Revised Exhibit 2 Schedule 3 Page 1 of 3

| Line # | Unit | Reference | Generation (MWh) | Unit Cost (cents/kWh) | Fuel Cost (\$) |
|--------|--|-----------------------------|---------------------|--------------------------|-------------------|
| | | | D | E | D*E=F |
| 1 | Total Nuclear | Workpaper 2 | 57,782,460 | 0.5609 | 324,127,910 |
| 2 | Coal | Calculated | 11,010,999 | 3.9786 | 438,088,639 |
| 3 | Gas CT and CC | Workpaper 3 & 4 | 29,873,528 | 3.4985 | 1,045,125,311 |
| 4 | Reagents and Byproducts | Workpaper 9 | - | _ | 25,288,082 |
| 5 | Total Fossil | Sum | 40,884,527 | | 1,508,502,032 |
| 6 | Hydro | Workpaper 3 | 5,280,351 | | |
| 7 | Net Pumped Storage | Workpaper 3 | (3,799,951) | | |
| 8 | Total Hydro | Sum | 1,480,401 | | |
| 9 | Solar Distributed Generation | Workpaper 3 | 359,301 | | |
| | | Line 1 + Line 5 + Line 8 + | | | |
| 10 | Total Generation | Line 9 | 100,506,689 | | 1,832,629,942 |
| 11 | Less Lee CC Joint Owners | Workpaper 3 & 4 | (878,400) | | (23,592,537) |
| 12 | Less Catawba Joint Owners | Calculated | (14,613,352) | | (157,288,682) |
| 13 | Fuel expense recovered through reimbursement | Workpaper 4 | | | (3,687,381) |
| 14 | Net Generation | Sum | 85,014,937 | | 1,648,061,342 |
| 15 | Purchased Power | Workpaper 3 & 4 | 10,963,165 | | 332,801,702 |
| 16 | JDA Savings Shared | Workpaper 5 | - | <u>-</u> | 115,585,534 |
| 17 | Total Purchased Power | Sum | 10,963,165 | | 448,387,237 |
| 18 | Total Generation and Purchased Power | Line 14 + Line 17 | 95,978,101 | | 2,096,448,579 |
| 19 | Fuel expense recovered through intersystem sales | Workpaper 3 & 4 | (1,028,431) | | (39,473,663) |
| 20 | Line losses and Company use | Line 22 - Line 19 - Line 18 | (5,078,704) | | - |
| 21 | System Fuel Expense for Fuel Factor | Lines 18 + 19 + 20 | | | 2,056,974,915 |
| 22 | Projected System MWh Sales for Fuel Factor | Workpaper 7b | 89,870,966 | | 89,870,966 |
| 23 | Fuel and Fuel Related Costs cents/kWh | Line 21 / Line 22 / 10 | | | 2.2888 |

Clark Rebuttal Revised Exhibit 2

Schedule 3

Page 2 of 3

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 91.87% and Projected Period Sales
Test Period Ended December 31, 2022
Billing Period September 2023 - August 2024
Docket E-7, Sub 1282

| Line # | Description | Reference | Residential | GS/Lighting | Industrial | Total |
|----------------|---|--|--------------|--------------|------------|---------------|
| 1 | NC Projected Billing Period MWh Sales | Workpaper 7b | 23,311,388 | 24,873,076 | 12,148,800 | 60,333,264 |
| <u>Calcula</u> | tion of Renewable Purchased Power Capacity Rate by Class | | | | | <u>Amount</u> |
| 2 | Purchased Power for REPS Compliance - Capacity | Workpaper 4 | | | | \$ 14,936,094 |
| 3 | QF Purchased Power - Capacity | Workpaper 4 | | | _ | 9,663,863 |
| 4 | Total of Renewable and QF Purchased Power Capacity | Line 2 + Line 3 | | | <u>-</u> | \$ 24,599,957 |
| 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 | | | | \$ 16,403,567 |
| 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 | \$ 7,717,004 | 6,092,491 \$ | 2,594,072 | \$ 16,403,567 |
| 9 | Renewable and QF Purchased Power - Capacity cents/kWh based on Projected Billing Period Sales | Line 8 / Line 1 / 10 | 0.0331 | 0.0245 | 0.0214 | 0.0272 |
| Summa | ary 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 | 1.5496 | 1.3277 | 1.1128 | 2.2618 |
| 11 | REPS Compliance and QF Purchased Power - Capacity cents/kWh | Line 9 | 0.0331 | 0.0245 | 0.0214 | 0.0272 |
| 12 | Total adjusted Fuel and Fuel Related Costs cents/kWh | Line 10 + Line 11 | 1.5827 | 1.3522 | 1.1342 | 2.2890 |
| 13 | EMF Increment (Decrement) cents/kWh | Exh 3 pg 2, 3, 4 | 1.6635 | 1.6638 | 1.7256 | 1.6764 |
| 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 | 3.2462 | 3.0160 | 2.8598 | 3.9654 |

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 91.87% and Projected Period Sales
Test Period Ended December 31, 2022

Billing Period September 2023 - August 2024

Docket E-7, Sub 1282

Note: Rounding differences may occur

Clark Rebuttal Revised Exhibit 2 Schedule 3 Page 3 of 3

| Line # | Rate Class | Projected Billing Period MWh Sales | | nual Revenue at Current rates | Incr | ocate Fuel Costs ease/(Decrease) 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 1263 | Proposed Total Fuel Rate (including Capacity and EMF) |
|--------|--|---------------------------------------|----|----------------------------------|--------|---|---|---|--|---|
| | | А | | В | | С | C / B = D | E | F | G |
| | | Workpaper 7b | | Workpaper 8 | Line 2 | 25 as a % of Column B | C / B | If D=0 then 0 if not then (C*100)/(A*1000) | Clark Exhibit 1 | E + F = G |
| 1 | Residential | 23,311,388 | Ś | 2,466,691,215 | Ś | 177,065,759 | 7.18% | 0.7596 | 2.4866 | 3.2462 |
| 2 | General Service/Lighting | 24,873,076 | | 1,971,226,718 | | 141,499,979 | 7.18% | 0.5689 | 2.4471 | 3.0160 |
| 3 | Industrial | 12,148,800 | | 757,602,036 | | 54,382,721 | 7.18% | 0.4476 | 2.4122 | 2.8598 |
| 4 | NC Retail | 60,333,264 | \$ | 5,195,519,969 | \$ | 372,948,459 | • | | | |
| | Total Proposed Composite Fuel Rate: | | | | | | | | | |
| 5 | Total Fuel Costs for Allocation | Workpaper 7b | \$ | 2,061,371,131 | | | | | | |
| 6 | Total of Renewable and QF Purchased Power Capacity | Exhibit 2 Sch 3, Page 2 | | 24,599,957 | | | | | | |
| 7 | System Other Fuel Costs | Line 5 - Line 6 | \$ | 2,036,771,174 | | | | | | |
| 8 | Adjusted Projected System MWh Sales for Fuel Factor | Workpaper 7b | | 90,050,257 | | | | | | |
| 9 | NC Retail Projected Billing Period MWh Sales | Line 4 | _ | 60,333,264 | _ | | | | | |
| 10 | Allocation % | Line 9 / Line 8 | | 67.00% | | | | | | |
| 11 | NC Retail Other Fuel Costs | Line 7 * Line 10 | \$ | 1,364,636,686 | | | | | | |
| 12 | NC Renewable and QF Purchased Power - Capacity | Exhibit 2 Sch 3, Page 2 | | 16,403,567 | _ | | | | | |
| 13 | NC Retail Total Fuel Costs | Line 11 + Line 12 | \$ | 1,381,040,253 | | | | | | |
| 14 | NC Retail Projected Billing Period MWh Sales | Line 4 | | 60,333,264 | | | | | | |
| 15 | Calculated Fuel Rate cents/kWh | Line 13 / Line 14 / 10 | | 2.2890 | | | | | | |
| 16 | Proposed Composite EMF Rate cents/kWh | Exhibit 3 Page 1 | | 1.6764 | | | | | | |
| 17 | Proposed Composite EMF Rate Interest cents/kWh | Exhibit 3 Page 1 | | 0.0000 | _ | | | | | |
| 18 | Total Proposed Composite Fuel Rate | Sum | | 3.9654 | | | | | | |
| | Total Current Composite Fuel Rate - Docket E-7 Sub 1263: | | | | | | | | | |
| 19 | Current composite Fuel Rate cents/kWh | Clark Exhibit 1 | | 1.9010 | | | | | | |
| 20 | Current composite EMF Rate cents/kWh | Clark Exhibit 1 | | 0.5597 | | | | | | |
| 21 | Current composite EMF Interest Rate cents/kWh | Clark Exhibit 1 | | 0.0000 | _ | | | | | |
| 22 | Total Current Composite Fuel Rate | Sum | | 2.4607 | | | | | | |
| 23 | Increase/(Decrease) in Composite Fuel rate cents/kWh | Line 18 - Line 22 | | 1.5047 | | | | | | |
| 24 | NC Retail Projected Billing Period MWh Sales | Line 4 | | 60,333,264 | | | | | | |
| 25 | Increase/(Decrease) in Fuel Costs | Line 23 * Line 24 * 10 | \$ | 907,834,628 | | | | | | |
| 26 | EDIT Mitigation | | \$ | (534,886,169) | | | | | | |
| 27 | Net Increase/(Decrease) in Fuel Costs with EDIT Mitigation | | \$ | 372,948,459 | | | | | | |

Duke Energy Carolinas, LLC

North Carolina Annual Fuel and Fuel Related Expense

Proposed Nuclear Capacity Factor

Billing Period September 2023 through August 2024

Docket E-7, Sub 1282

| Clark Rebuttal Re | evised | Workpaper 1 | |
|-------------------|--------|-------------|--|
| | | | |

| | | Catawba 1 | | Catawba 2 | McGuire 1 | McGuire 2 | Oconee 1 | Oconee 2 | Oconee 3 | Total |
|------------------------------|-----|---------------|-------|----------------|----------------------------|-----------|-----------|---------------|---------------|-------------------|
| MWhs | | 9,980,344 | | 9,191,590 | 8,868,313 | 9,887,079 | 7,345,341 | 6,787,188 | 6,812,066 | 58,871,920 |
| Cost (Gross of Joint Owners) | \$ | 62,084,118 | \$ | 50,530,499 | | | \$ | \$ 34,678,076 | \$ 40,295,868 | \$ 330,239,182 |
| | | | | | | | | | | |
| \$/MWh | | 6.2206 | | 5.4975 | 5.2879 | 5.4413 | 5.7121 | 5.1093 | 5.9154 | |
| Avg \$/MWh | | | | 5.6095 | | | | | | |
| Cents per kWh | | | | 0.5609 | | | | | | |
| | | | | | | | | | | |
| | | | | | Sept 2023 - August 2024 | | | | | |
| MDC | | | | | August 2024 | | | | | |
| CATA_UN01 | Cat | awba | | MW | 1,160.0 | | | | | |
| CATA_UN02 | | awba awba | | MW | 1,150.1 | | | | | |
| MCGU_UN01 | | Guire | | MW | 1,158.0 | | | | | |
| MCGU_UN02 | | Guire | | MW | 1,157.6 | | | | | |
| OCON_UN01 | | nee | | MW | 847.0 | | | | | |
| OCON_UN02 | | nee | | MW | 848.0 | | | | | |
| OCON_UN03 | | nee | | MW | 859.0 | | | | | |
| 00011_01103 | Occ | nicc | | 10100 | 7,179.7 | - | | | | |
| | | | | | 7,175.7 | | | | | |
| Hours In Year | | | | | 8,760 | | | | | |
| Generation GWhs | | | | | | | | | | |
| CATA_UN01 | Cat | awba | | GWh | 9,980 | | | | | |
| CATA_UN02 | Cat | awba | | GWh | 9,192 | | | | | |
| MCGU_UN01 | | Guire | | GWh | 8,868 | | | | | |
| MCGU_UN02 | Mc | Guire | | GWh | 9,887 | | | | | |
| OCON_UN01 | Occ | nee | | GWh | 7,345 | | | | | |
| OCON_UN02 | Occ | nee | | GWh | 6,787 | | | | | |
| OCON_UN03 | Occ | nee | | GWh | 6,812 | _ | | | | |
| | | | | | 58,872 | = | | | | |
| | | | | | | | | | | |
| | P | roposed Nucle | ear C | apacity Factor | 93.60% | | | | | |

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
NERC 5 Year Average Nuclear Capacity Factor
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Clark Rebuttal Revised Workpaper 2

| | Catawba | 1 | Catawba 2 | wba 2 McGuire 1 | | McGuire 2 | | Oconee 1 | Oconee 2 | | Oconee 3 | Total |
|------------------------|-----------|--------|------------|-----------------|----|------------|----|---------------|------------|----|------------|----------------|
| | | | | | | | | | | | | |
| MWhs with NERC applied | 9,272 | 460 | 9,193,324 | 9,256,473 | | 9,253,276 | | 6,900,340 | 6,908,486 | | 6,998,101 | 57,782,460 |
| Hours | 8 | 760 | 8,760 | 8,760 | | 8,760 | | 8,760 | 8,760 | | 8,760 | 8,760 |
| MDC | 1,1 | 50.0 | 1,150.1 | 1,158.0 | | 1,157.6 | | 847.0 | 848.0 | | 859.0 | 7,179.7 |
| Capacity factor | 91 | .25% | 91.25% | 91.25% | 6 | 91.25% | | 93.00% | 93.00% | 6 | 93.00% | 91.87% |
| Cost | \$ 52,013 | 415 \$ | 51,569,507 | 51,923,737 | \$ | 51,905,801 | \$ | 38,707,121 \$ | 38,752,820 | \$ | 39,255,510 | \$ 324,127,910 |

 Avg \$/MWh
 5.6095

 Cents per kWh
 0.5609

| | Capacity | NCF | Weighted |
|-----------|----------|--------|----------|
| 2017-2021 | Rating | Rating | Average |
| Oconee 1 | 847.0 | 93.00 | 10.97% |
| Oconee 2 | 848.0 | 93.00 | 10.98% |
| Oconee 3 | 859.0 | 93.00 | 11.13% |
| McGuire 1 | 1,158.0 | 91.25 | 14.72% |
| McGuire 2 | 1,157.6 | 91.25 | 14.71% |
| Catawba 1 | 1,160.0 | 91.25 | 14.74% |
| Catawba 2 | 1,150.1 | 91.25 | 14.62% |
| | 7,179.7 | • | 91.87% |

6 Wtd Avg on Capacity Rating

rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
North Carolina Generation and Purchased Power in MWhs
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Clark Rebuttal Revised Workpaper 3

| 23 - August 2024 | |
|---|-------------|
| 58,871,920 | |
| 10,197,068 29,873,528 | |
| 5,280,351 (3,799,951) 1,480,401 | |
| 14,888,880) (878,400) | |
| 359,301 | 85,014,9 |
| 1,436,977 1,788,429 166,722 504,389 7,066,647 10,963,165 | |
| (4.000.404) | 95,978,1 |
| | (1,028,431) |

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Projected Fuel and Fuel Related Costs
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Clark Rebuttal Revised Workpaper 4

\$ 2,027,737,121

| Resource Type | Sept 2023 - August 2024 | |
|---|----------------------------|-------------|
| Nuclear Total (Gross) | \$ 330,239,182 | |
| COAL Total | 405,705,179 | |
| Gas CT and CC total (Gross) | 1,045,125,311 | |
| Catawba Joint Owner costs | (160,254,288) | |
| CC Joint Owner costs | (23,592,537) | |
| Non-Economic Fuel Expense Recovered through Reimbursement | (3,687,381) | |
| Reagents and gain/loss on sale of By-Products | 25,288,082 | Workpaper 9 |
| Purchases for REPS Compliance - Energy | 68,804,621 | |
| Purchases for REPS Compliance - Capacity | 14,936,094 | |
| Purchases of Qualifying Facilities - Energy | 46,784,121 | |
| Purchases of Qualifying Facilities - Capacity | 9,663,863 | |
| Other Purchases | 442,692 | |
| JDA Savings Shared | 115,585,534 | Workpaper 5 |
| Allocated Economic Purchase cost | 22,007,503 | Workpaper 5 |
| Joint Dispatch purchases | 170,162,808 | Workpaper 6 |
| Total Purchases | 448,387,237 | |
| Fuel Expense recovered through intersystem sales | (39,473,663) | Workpaper 5 |

rounding differences may occur

Total System Fuel and Fuel Related Costs

Duke Energy Carolinas, LLC North Carolina Annual Fuel and Fuel Related Expense **Projected Joint Dispatch Fuel Impacts** Billing Period September 2023 through August 2024 Docket E-7, Sub 1282

rounding differences may occur

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

| | Allocated Economic Purchase Cost | | | | Economic Sales Cost | | | | Fuel Transf | ayment | | JDA Savings Payment | | | |
|-----------|----------------------------------|---|--------------|----|---------------------|----|-------------|----|--------------|--------|------------|---------------------|--------------|----|------------|
| | DEP | | DEC | | DEP | | DEC | | DEP | | DEC | DEP | | | DEC |
| 9/1/2023 | \$ 647,87 | 3 | \$ 978,148 | \$ | (1,013,222) | \$ | (210,902) | \$ | (19,424,084) | \$ | 19,424,084 | \$ | (14,054,141) | \$ | 14,054,141 |
| 10/1/2023 | \$ 1,013,99 | 0 | \$ 431,348 | \$ | (417,155) | \$ | (186,378) | \$ | (15,815,993) | \$ | 15,815,993 | \$ | (5,353,793) | \$ | 5,353,793 |
| 11/1/2023 | \$ 3,199,14 | 9 | \$ 2,357,689 | \$ | (553,353) | \$ | (161,351) | \$ | (13,137,037) | \$ | 13,137,037 | \$ | (7,464,228) | \$ | 7,464,228 |
| 12/1/2023 | \$ 1,234,63 | 7 | \$ 1,823,317 | \$ | (6,565,637) | \$ | (1,577,591) | \$ | (17,362,556) | \$ | 17,362,556 | \$ | (3,700,688) | \$ | 3,700,688 |
| 1/1/2024 | \$ 2,710,39 | 4 | \$ 3,918,202 | \$ | (8,902,259) | \$ | (9,199,451) | \$ | (13,075,319) | \$ | 13,075,319 | \$ | (12,308,043) | \$ | 12,308,043 |
| 2/1/2024 | \$ 461,52 | 8 | \$ 678,216 | \$ | (9,119,170) | \$ | (9,695,477) | \$ | (10,474,496) | \$ | 10,474,496 | \$ | (3,083,001) | \$ | 3,083,001 |
| 3/1/2024 | \$ 702,14 | 7 | \$ 1,012,669 | \$ | (1,229,751) | \$ | (615,762) | \$ | (3,371,359) | \$ | 3,371,359 | \$ | 449,444 | \$ | (449,444) |
| 4/1/2024 | \$ 3,424,15 | 2 | \$ 3,700,357 | \$ | (1,189,893) | \$ | (487,140) | \$ | (7,303,371) | \$ | 7,303,371 | \$ | (5,056,429) | \$ | 5,056,429 |
| 5/1/2024 | \$ 635,82 | 5 | \$ 962,431 | \$ | (1,571,140) | \$ | (465,036) | \$ | (11,184,244) | \$ | 11,184,244 | \$ | (3,536,847) | \$ | 3,536,847 |
| 6/1/2024 | \$ 2,825,70 | 7 | \$ 4,022,008 | \$ | (1,028,743) | \$ | (521,349) | \$ | (14,844,982) | \$ | 14,844,982 | \$ | (12,855,914) | \$ | 12,855,914 |
| 7/1/2024 | \$ 1,281,57 | 4 | \$ 928,342 | \$ | (3,381,926) | \$ | (2,371,343) | \$ | (16,781,326) | \$ | 16,781,326 | \$ | (35,473,683) | \$ | 35,473,683 |
| 8/1/2024 | \$ 829,72 | 6 | \$ 1,194,776 | \$ | (2,611,213) | \$ | (1,983,996) | \$ | (15,390,154) | \$ | 15,390,154 | \$ | (13,148,211) | \$ | 13,148,211 |

Sept 23 - Aug 24 22,007,503 \$ (27,475,776) \$ 158,164,920 \$ 115,585,534

> \$ 170,162,808 Workpaper 6 - Transfer - Purchases \$ (11,997,888) Workpaper 6 - Transfer - Sales

\$ 158,164,920 Sept 22-Aug 23 Net Fuel Transfer Payment

\$ (11,997,888) Workpaper 6 - Transfer - Sales

\$ (27,475,776) Sept 23-Aug 24 Economic Sales Cost

\$ (39,473,663) 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 2023 through August 2024
Docket E-7, Sub 1282

Clark Rebuttal Revised Workpaper 6

| _ | | | | | Purchase | Sale | | | Sale | Purchase |
|------------------|------------|-----------|---------------------------|-----------|--------------|----------|------------|-------|---------------|----------------|
| | Transfer P | rojection | Purchase Allocation Delta | | Adjusted Tra | ansfer | Fossil Ger | Cost | Pre-Net Pa | yments |
| | PECtoDEC | DECtoPEC | PEC | DEC | PECtoDEC | DECtoPEC | PEC | DEC | PECtoDEC | DECtoPEC |
| 9/1/2023 | 888,206 | 6,167 | 12,746 | (12,746) | 900,952 | 6,167 | 21.69 | 19.50 | 120,285 | 19,544,370 |
| 10/1/2023 | 759,078 | 22,356 | 24,443 | (24,443) | 783,521 | 22,356 | 20.73 | 19.03 | 425,482 | 16,241,475 |
| 11/1/2023 | 707,022 | 10,465 | 36,802 | (36,802) | 743,824 | 10,465 | 17.98 | 22.78 | 238,408 | 13,375,445 |
| 12/1/2023 | 668,931 | 8,104 | (1,330) | 1,330 | 668,931 | 9,435 | 26.35 | 28.09 | 265,028 | 17,627,583 |
| 1/1/2024 | 440,541 | 10,654 | 7,184 | (7,184) | 447,724 | 10,654 | 29.99 | 32.85 | 350,028 | 13,425,347 |
| 2/1/2024 | 372,757 | 14,658 | (2,015) | 2,015 | 372,757 | 16,673 | 29.44 | 29.98 | 499,850 | 10,974,346 |
| 3/1/2024 | 320,748 | 229,436 | (1,388) | 1,388 | 320,748 | 230,824 | 28.06 | 24.38 | 5,627,246 | 8,998,605 |
| 4/1/2024 | 368,059 | 68,107 | 26,423 | (26,423) | 394,482 | 68,107 | 22.61 | 23.72 | 1,615,378 | 8,918,750 |
| 5/1/2024 | 599,170 | 44,714 | 3,506 | (3,506) | 602,676 | 44,714 | 20.39 | 24.74 | 1,106,424 | 12,290,668 |
| 6/1/2024 | 565,913 | 29,299 | 58,422 | (58,422) | 624,334 | 29,299 | 24.95 | 24.99 | 732,110 | 15,577,092 |
| 7/1/2024 | 613,464 | 22,701 | 16,901 | (16,901) | 630,366 | 22,701 | 27.59 | 26.81 | 608,571 | 17,389,897 |
| 8/1/2024 | 552,420 | 15,664 | 23,912 | (23,912) | 576,332 | 15,664 | 27.41 | 26.11 | 409,076 | 15,799,230 |
| Sept 23 - Aug 24 | 6,856,310 | 482,326 | 205,604 | (205,604) | 7,066,647 | 487,060 | | | \$ 11,997,888 | \$ 170,162,808 |

Net Pre-Net Payments \$ 158,164,920

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 93.60%
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Spring 2023 Forecast Billed Sales Forecast Sales Forecast - MWhs (000)

| | | Projected sales for the Billing | Remove impact of SC DERP Net Metered | |
|--------------------|---|------------------------------------|---|--------------------------------------|
| | | Period | Generation | Adjusted Sales |
| | | | | |
| North Carolina: | | | | |
| | Residential | 23,311,388 | | 23,311,388 |
| | General | 24,631,092 | | 24,631,092 |
| | Industrial | 12,148,800 | | 12,148,800 |
| | Lighting | 241,984 | | 241,984 |
| | NC RETAIL | 60,333,264 | = | 60,333,264 |
| South Carolina: | | | | |
| | Residential | 7,175,070 | 136,278 | 7,311,348 |
| | General | 5,591,750 | 42,584 | 5,634,334 |
| | Industrial | 8,402,177 | 429 | 8,402,606 |
| | Lighting | 49,483 | - | 49,483 |
| | SC RETAIL | 21,218,481 | 179,291 | 21,397,771 |
| Total Retail Sales | | | | |
| Total Netall Sales | Residential | 30,486,458 | 136,278 | 30,622,736 |
| | General | 30,222,842 | 42,584 | 30,265,426 |
| | Industrial | 20,550,977 | 429 | 20,551,406 |
| | Lighting | 291,467 | - | 291,467 |
| | Retail Sales | 81,551,744 | 179,291 | 81,731,035 |
| | Wholesale | 8,319,222 | - | 8,319,222 |
| | Projected System MWH Sales for Fuel Factor | 89,870,966 | 179,291 | 90,050,257 |
| | NC as a percentage of total | 67.13% | | 67.00% |
| | SC as a percentage of total | 23.61% | | 23.76% |
| | Wholesale as a percentage of total | 9.26% | | 9.24% |
| | · | 100.00% | | 100.00% |
| | SC Net Metering allocation adjustment | | | |
| | Total projected SC NEM MWhs | | 179,291 | |
| | Marginal fuel rate per MWh for SC NEM | | \$ 24.52 | |
| | Fuel benefit to be directly assigned to SC Retail | - | \$ 4,396,215 | = |
| | . Sc. Schene to be directly assigned to Sc Netall | | 7 4,550,213 | |
| | System Fuel Expense | | \$ 2,027,737,121 | Clark Exhibit 2 Schedule 1 Page 1 c |
| | Fuel benefit to be directly assigned to SC Retail | | \$ 4,396,215 | Con a Exhibit 2 Deficuois 1 Fage 1 t |
| | Total Fuel Costs for Allocation | | | Clark Exhibit 2 Schedule 1 Page 3 c |
| | Total ruel Costs for Allocation | | φ 2,032,133,337 | Clark Exhibit 2 Schedule 1 Page 3 C |

| | | NC Retail | | | Sou | uth Carolina |
|--|---------------------|----------------------|--------|-------------|-----|--------------|
| Reconciliation | System | Customers | V | Vholesale | | Retail |
| Total system fuel expense from Clark Exhibit 2 Schedule 1 Page 1 | \$ 2,027,737,121 | | | | | |
| QF and REPS Compliance Purchased Power - Capacity | \$ 24,599,957 | | | | | |
| Other fuel costs | \$ 2,003,137,164 | | | | | |
| SC Net Metering Fuel Allocation adjustment | \$ 4,396,215 | | | | | |
| Jurisdictional fuel costs after adj. | \$ 2,007,533,380 | | | | | |
| Allocation to states/classes | | 67.00% | | 9.24% | | 23.76% |
| Jurisdictional fuel costs | \$ 2,007,533,380 | \$ 1,345,047,364 | \$ | 185,496,084 | \$ | 476,989,931 |
| Direct Assignment of Fuel benefit to SC Retail | \$ (4,396,215) | | \$ | - | \$ | (4,396,215) |
| Total system actual fuel costs | \$ 2,003,137,164 | \$ 1,345,047,364 | \$ | 185,496,084 | \$ | 472,593,716 |
| QF and REPS Compliance Purchased Power - Capacity | 24,599,957 | 16,403,567 | | | | |
| Total system fuel expense from Clark Exhibit 2 Schedule 1 Page 1 | \$ 2,027,737,121 | \$ 1,361,450,931 | | | | |
| | | Exh.2, Sch. 1 page 3 | , Line | 13 | | |

Clark Rebuttal Revised Workpaper 7

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Projected and Adjusted Projected Sales and Costs
Proposed Nuclear Capacity Factor of 93.60% and Normalized Test Period Sales
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Spring 2023 Forecast

Billed Sales Forecast - Normalized Test Period Sales

Sales Forecast - MWhs (000)

| | | Customer Growth | Remove impact of SC DERP Net Metered | Normalized Test | |
|---|-------------------|------------------|---|-----------------|--------------|
| | Test Period Sales | Adjustment | Weather Adjustment | generation | Period Sales |
| | | | | | |
| NC RETAIL | 59,059,117 | 162,487 | 337,854 | - | 59,559,458 |
| SC RETAIL | 20,955,111 | (8,320) | 99,613 | 179,291 | 21,225,695 |
| Wholesale | 8,269,814 | 5,836 | (306) | - | 8,275,343 |
| Normalized System MWH Sales for Fuel Factor | 88,284,042 | 160,003 | 437,160 | 179,291 | 89,060,496 |
| NC as a percentage of total | 66.90% | | | | 66.88% |
| SC as a percentage of total | 23.74% | | | | 23.83% |
| Wholesale as a percentage of total | 9.37% | | | _ | 9.29% |
| | 100.00% | | | | 100.00% |
| SC Net Metering allocation adjustment | | | | | |
| Total projected SC NEM MWhs | | 179,291 | | | |
| Marginal fuel rate per MWh for SC NEM | | \$ 24.52 | | | |
| Fuel benefit to be directly assigned to SC Retail | _ | \$ 4,396,215 | | | |
| System Fuel Expense | 1 | \$ 1.988.358.028 | Clark Exhibit 2 Schedule 2 | Page 1 of 3 | |
| Fuel benefit to be directly assigned to SC Retai | | \$ 4,396,215 | | Ü | |

Total Fuel Costs for Allocation

Clark Rebuttal Revised Workpaper 7a

| Reconciliation | System I | | Retail Customers | Wholesale | Sout | South Carolina Retail | |
|--|------------------|-----|-------------------------|-------------|------|-----------------------|--|
| Total system fuel expense from Clark Exhibit 2 Schedule 2 Page 1 | \$ 1,988,358,028 | | | | | | |
| QF and REPS Compliance Purchased Power - Capacity | \$ 24,599,957 | | | | | | |
| Other fuel costs | \$ 1,963,758,071 | | | | | | |
| SC Net Metering Fuel Allocation adjustment | \$ 4,396,215 | _ | | | | | |
| Jurisdictional fuel costs after adj. | \$ 1,968,154,286 | - | | | | | |
| Allocation to states/classes | | | 66.88% | 9.29% | | 23.83% | |
| Jurisdictional fuel costs | \$ 1,968,154,275 | \$ | 1,316,208,690 \$ | 182,877,409 | \$ | 469,068,167 | |
| Direct Assignment of Fuel benefit to SC Retail | \$ (4,396,215 |) | \$ | - | \$ | (4,396,215) | |
| Total system actual fuel costs | \$ 1,963,758,060 | \$ | 1,316,208,690 \$ | 182,877,409 | \$ | 464,671,952 | |
| QF and REPS Compliance Purchased Power - Capacity | 24,599,957 | | 16,403,567 | | | | |
| Total system fuel expense from Clark Exhibit 2 Schedule 2 Page 1 | \$ 1,988,358,017 | \$ | 1,332,612,257 | | | | |
| | | Exh | . 2, Sch 2 page 3, Line | 13 | | | |

\$ 1,992,754,243 Clark Exhibit 2 Schedule 2 Page 3 of 3, L5

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Projected and Adjusted Projected Sales and Costs
NERC 5 Year Average Nuclear Capacity Factor of 91.87% and Projected Period Sales
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Spring 2023 Forecast Billed Sales Forecast Sales Forecast - MWhs (000)

| wns (000) | | | Remove impact of | |
|--------------------|---|-----------------|------------------|-----------------------------------|
| | | Projected sales | SC DERP Net | |
| | | for the Billing | Metered | |
| | | Period | generation | Adjusted Sales |
| North Carolina: | | | | |
| | Residential | 23,311,388 | | 23,311,388 |
| | General | 24,631,092 | | 24,631,092 |
| | Industrial | 12,148,800 | | 12,148,800 |
| | Lighting | 241,984 | | 241,984 |
| | NC RETAIL | 60,333,264 | - | 60,333,264 |
| South Carolina: | | | | |
| | Residential | 7,175,070 | 136,278 | 7,311,348 |
| | General | 5,591,750 | 42,584 | 5,634,334 |
| | Industrial | 8,402,177 | 429 | 8,402,606 |
| | Lighting | 49,483 | 0 | 49,483 |
| | SC RETAIL | 21,218,481 | 179,291 | 21,397,772 |
| Total Retail Sales | | | | |
| | Residential | 30,486,458 | 136,278 | 30,622,736 |
| | General | 30,222,842 | 42,584 | 30,265,426 |
| | Industrial | 20,550,977 | 429 | 20,551,406 |
| | Lighting | 291,467 | - | 291,467 |
| | Retail Sales | 81,551,745 | 179,291 | 81,731,036 |
| | Wholesale | 8,319,222 | - | 8,319,222 |
| | Projected System MWh Sales for Fuel Factor | 89,870,966 | 179,291 | 90,050,257 |
| | NC as a percentage of total | 67.13% | | 67.00% |
| | SC as a percentage of total | 23.61% | | 23.76% |
| | Wholesale as a percentage of total | 9.26% | | 9.24% |
| | | 100.00% | - | 100.00% |
| | SC Net Metering allocation adjustment | | | |
| | Total projected SC NEM MWhs | | 179,291 | |
| | Marginal fuel rate per MWh for SC NEM | <u>_</u> | \$ 24.52 | |
| | Fuel benefit to be directly assigned to SC Retail | | \$ 4,396,215 | |
| | System Fuel Expense | | | Clark Exhibit 2 Schedule 3 Page 1 |
| | Fuel benefit to be directly assigned to SC Retail | _ | \$ 4,396,215 | |
| | Total Fuel Costs for Allocation | | \$ 2,061,371,131 | Clark Exhibit 2 Schedule 3 Page 3 |

| Reconciliation | System | NC F | Retail Customers | | Wholesale | Sout | h Carolina Retail |
|--|---------------------|------|---------------------|-------|-------------|------|-------------------|
| Total system fuel expense from Clark Exhibit 2 Schedule 3 Page 1 | \$ 2,056,974,915 | | | | | | |
| QF and REPS Compliance Purchased Power - Capacity | \$ 24,599,957 | | | | | | |
| Other fuel costs | \$ 2,032,374,958 | | | | | | |
| SC Net Metering Fuel Allocation adjustment | \$ 4,396,215 | | | | | | |
| Jurisdictional fuel costs after adj. | \$ 2,036,771,174 | | | | | | |
| Allocation to states/classes | | | 67.00% | | 9.24% | | 23.76% |
| Jurisdictional fuel costs | \$ 2,036,771,174 | \$ | 1,364,636,686 | \$ | 188,197,656 | \$ | 483,936,831 |
| Direct Assignment of Fuel benefit to SC Retail | \$ (4,396,215) | | | \$ | - | \$ | (4,396,215) |
| Total system actual fuel costs | \$ 2,032,374,958 | \$ | 1,364,636,686 | \$ | 188,197,656 | \$ | 479,540,616 |
| QF and REPS Compliance Purchased Power - Capacity | 24,599,957 | | 16,403,567 | | | _ | |
| Total system fuel expense from Clark Exhibit 2 Schedule 3 Page 1 | \$ 2,056,974,915 | \$ | 1,381,040,253 | | | | |
| | | Exh. | 2, Sch.3 page 3, Li | ne 13 | | | |

Clark Rebuttal Revised Workpaper 7b

Clark Rebuttal Revised Workpaper 9

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Projected Reagents and ByProducts
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

Reagent and ByProduct projections

| | | | | Magnesium | | | | G | ypsum (Gain)/ | | Sa | ale of By-Products |
|--------------|---------------|------------|------------|------------|-------------------|------|--------|---------------|---------------|-----------------|-------------------|--------------------|
| Date | Ammonia | Urea | Limestone | Hydroxide | Calcium Carbonate | Lime | | Reagent Cost | Loss | Ash (Gain)/Loss | Steam (Gain)/Loss | (Gain)/Loss |
| 9/1/2022 \$ | 187,067 \$ | 17,823 \$ | 224,474 | \$ 34,843 | \$ 21,125 | \$ | 13,158 | 498,490 | 60,002 | \$ (7,251) | \$ (188,430) \$ | (135,678) |
| 10/1/2022 \$ | 77,713 \$ | 7,404 \$ | 93,252 | \$ 15,002 | \$ 9,096 | \$ | 13,158 | 215,624 | 25,001 | \$ (2,374) | \$ (188,430) \$ | (165,802) |
| 11/1/2022 \$ | 722,011 \$ | 68,791 \$ | 866,389 | \$ 64,517 | \$ 39,117 | \$ | 13,158 | 1,773,984 | 249,743 | \$ (79,195) | \$ (188,430) \$ | (17,881) |
| 12/1/2022 \$ | 1,605,806 \$ | 152,997 \$ | 1,926,913 | \$ 118,263 | \$ 71,702 | \$ | 13,158 | 3,888,839 | 669,682 | \$ (187,273) | \$ (188,430) \$ | 293,979 |
| 1/1/2023 \$ | 2,375,310 \$ | 226,313 \$ | 2,850,292 | \$ 160,896 | \$ 97,551 | \$ | 13,158 | 5,723,520 | 1,050,918 | \$ (243,517) | \$ (188,430) \$ | 618,972 |
| 2/1/2023 \$ | 1,859,654 \$ | 177,183 \$ | 2,231,522 | \$ 141,074 | \$ 85,533 | \$ | 13,158 | 4,508,124 | 751,057 | \$ (195,534) | \$ (188,430) \$ | 367,093 |
| 3/1/2023 \$ | 659,731 \$ | 62,857 \$ | 791,655 | \$ 47,064 | \$ 28,535 | \$ | 13,158 | 1,603,000 | 204,428 | \$ (67,657) | \$ (188,430) \$ | (51,659) |
| 4/1/2023 \$ | 335,275 \$ | 31,944 \$ | 402,319 | \$ 34,846 | \$ 21,127 | \$ | 13,158 | 838,668 | 80,541 | \$ (18,937) | \$ (188,430) \$ | (126,826) |
| 5/1/2023 \$ | 289,085 \$ | 27,543 \$ | 346,892 | \$ 37,815 | \$ 22,927 | \$ | 13,158 | 737,420 | 85,062 | \$ (19,979) | \$ (188,430) \$ | (123,347) |
| 6/1/2023 \$ | 583,585 \$ | 55,602 \$ | 700,283 | \$ 59,048 | \$ 35,801 | \$ | 13,158 | 1,447,477 | 204,383 | \$ (67,998) | \$ (188,430) \$ | (52,044) |
| 7/1/2023 \$ | 765,121 \$ | 72,899 \$ | 918,120 | \$ 69,159 | \$ 41,931 | \$ | 13,158 | 1,880,387 | 295,936 | \$ (96,985) | \$ (236,498) \$ | (37,547) |
| 8/1/2023 \$ | 673,991 \$ | 64,216 \$ | 808,766 | \$ 66,344 | \$ 40,224 | \$ | 13,158 | 1,666,699 | 253,476 | \$ (80,390) | \$ (236,498) \$ | (63,411) |
| \$ | 10,134,349 \$ | 965,573 \$ | 12,160,878 | \$ 848,869 | \$ 514,668 | \$ 1 | 57,896 | \$ 24,782,233 | \$ 3,930,230 | \$ (1,067,089) | \$ (2,357,293) \$ | 505,848 |

Total Reagent cost and Sale of By-products \$ 25,288,082

Clark Rebuttal Revised Workpaper 10

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
2.5% Calculation Test
Twelve Months Ended December 31, 2022
Billing Period September 2023 through August 2024
Docket E-7, Sub 1282

| Line | | (Over)/Under | | | | | | | |
|------|---|--------------|---------------|-------------|--|--|--|--|--|
| No. | Description | Forecast \$ | Collection \$ | Total \$ | | | | | |
| | 1 Amount in current docket | 108,889,655 | 70,794,129 | 179,683,784 | | | | | |
| | 2 Amount in Sub 1263, prior year docket | 100,735,755 | 13,526,437 | 114,262,192 | | | | | |
| | 3 Increase/(Decrease) | 8,153,900 | 57,267,693 | 65,421,592 | | | | | |
| | 4 2.5% of 2022 NC retail revenue of \$4,944,339,147 | | | 123,608,479 | | | | | |
| | Excess of purchased power growth over 2.5% of revenue | | | 0 | | | | | |
| | E-7, Sub 1282 | | | | | | | | |
| WP 4 | Purchases for REPS Compliance - Energy | 68,804,621 | 67.00% | 46,099,096 | | | | | |
| WP 4 | Purchases for REPS Compliance - Capacity | 14,936,094 | 66.68% | 9,959,579 | | | | | |
| WP 4 | Purchases | 442,692 | 67.00% | 296,604 | | | | | |
| WP 4 | QF Energy | 46,784,121 | 67.00% | 31,345,361 | | | | | |
| WP 4 | QF Capacity | 9,663,863 | 66.68% | 6,443,988 | | | | | |
| WP 4 | Allocated Economic Purchase cost | 22,007,503 | 67.00% | 14,745,027 | | | | | |
| | | 162,638,895 | | 108,889,655 | | | | | |
| | E-7, Sub 1263 | | | | | | | | |
| | Purchases for REPS Compliance | 66,782,210 | 66.08% | 44,126,819 | | | | | |
| | Purchases for REPS Compliance Capacity | 14,610,064 | 66.68% | 9,742,178 | | | | | |
| | Purchases | 7,489,994 | 66.08% | 4,949,066 | | | | | |
| | QF Energy | 40,652,503 | 66.08% | 26,861,429 | | | | | |
| | QF Capacity | 8,445,498 | 66.68% | 5,631,567 | | | | | |
| | Allocated Economic Purchase cost | 14,263,480 | 66.08% | 9,424,695 | | | | | |
| | | 152,243,749 | | 100,735,755 | | | | | |

rounding differences may occur

CERTIFICATE OF SERVICE

I certify that a copy of Duke Energy Carolinas, LLC's Corrected Exhibits and Workpapers, in Docket No. E-7, Sub 1282, 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 19th day of May, 2023.

Ladawn S. Toon

Associate General Counsel Duke Energy Corporation P.O. Box 1551/NCRH 20 Raleigh, North Carolina 27602

Jadun Stow

Tel: 919.546.7971

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