INFORMATION SHEET

PRESIDING: Chair Mitchell, Presiding; Commissioners Brown-Bland, Gray, Clodfelter, Duffley, Hughes, McKissick
PLACE: Held Via Videoconference
DATE: Tuesday, June 1, 2021
TIME: 1:00 p.m. to 2:38 p.m.
DOCKET NOS.: E-7, Sub 1250
COMPANY: Duke Energy Carolinas, LLC
DESCRIPTION: In the Matter of Application of Duke Energy Carolinas, LLC, Pursuant to N.C.G.S. 63-133.2 and Commission Rule R8-55 Relating to Fuel and Fuel-Related Charge Adjustments for Electric Utilities

APPEARANCES
(See attached.)

WITNESSES
(See attached.)

EXHIBITS

(See attached.)

COPIES ORDERED: Email Confidential: Moore, Thompson, Creech, Little

REPORTED BY: Linda Garrett — TRANSCRIPT PAGES: 95
TRANSCRIBED BY: Linda Garrett — PREFILED PAGES: 148
DATE FILED: June 16, 2021 — TOTAL PAGES: 243

PLACE: Via Videoconference

DATE: Tuesday, June 1, 2021

DOCKET NO.: E-7, Sub 1250

TIME: 1:00 P.M. TO 2:38 P.M.

BEFORE: Chair Charlotte A. Mitchell, Presiding
Commissioner ToNola D. Brown-Bland
Commissioner Lyons Gray
Commissioner Daniel G. Clodfelter
Commissioner Kimberly W. Duffley
Commissioner Jeffrey A. Hughes
Commissioner Floyd B. McKissick, Jr.

IN THE MATTER OF:

Application of Duke Energy Carolinas, LLC, Pursuant to N.C.G.S. 62-133.2 and Commission Rule R8-55 Relating to Fuel and Fuel-Related Charge Adjustments for Electric Utilities

A P P E A R A N C E S:

FOR DUKE ENERGY CAROLINAS, LLC:
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Law Office of Robert W. Kaylor, P.A.
353 E. Six Forks Road, Suite 260
Raleigh, North Carolina 27609

FOR SIERRA CLUB:
Gudrun Thompson, Esq.
Tirrill Moore, Esq.
Southern Environmental Law Center
601 West Rosemary Street, Suite 220
Chapel Hill, North Carolina 27516

FOR CAROLINA INDUSTRIAL GROUP
FOR FAIR UTILITY RATES III:
Jeffrey P. Gray, Esq.
Bailey & Dixon, LLP
P.O. Box 1351
Raleigh, North Carolina 27602-1351

A P P E A R A N C E S (Cont'd.):

FOR THE USING AND CONSUMING PUBLIC:

William E.H. Creech, Esq.

John Little, Esq.

Public Staff - North Carolina Utilities

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Raleigh, North Carolina 27699-4300

T A B L E O F C O N T E N T S

E X A M I N A T I O N S

T A B L E O F C O N T E N T S

E X A M I N A T I O N S (Cont'd.)

T A B L E O F C O N T E N T S

E X H I B I T S

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EXHIBITS (Cont'd.)

Duke Energy Carolinas, LLC Fossil Fuel Procurement Practices

Coal

- Near and long-term coal consumption is forecasted based on inputs such as load projections, fleet maintenance and availability schedules, coal quality and cost, non-coal commodity and emission prices, environmental permit and emissions constraints, projected renewable energy production, and wholesale energy imports and exports.
- Station and system inventory targets are developed to provide generational reliability, insulation from short-term market volatility, and adaptability to evolving coal production and transportation conditions. Inventories are monitored continuously.
- On a continuous basis, existing purchase commitments are compared with consumption and inventory requirements to determine changes in supply needs.
- All qualified suppliers are invited to participate in Request for Proposals to satisfy additional supply needs.
- Spot market solicitations are conducted on an on-going basis to supplement existing purchase commitments.
- Contracts are awarded based on the highest customer value, considering factors such as price, quality, transportation, reliability and flexibility.
- Delivered coal volume and quality are monitored against contract commitments. Coal and freight payments are calculated based on certified scale weights and coal quality analysis meeting ASTM standards as established by ASTM International.

Gas

- Near and long-term natural gas consumption is forecasted based on inputs such as load projections, commodity and emission prices, projected renewable energy production, and fleet maintenance and availability schedules.
- Physical procurement targets are developed to procure a cost effective and reliable natural gas supply.
- Natural gas supply is contracted utilizing a portfolio of long term, short term, spot market and physical call option agreements
- Short-term and long-term Requests for Proposals and market solicitations are conducted with potential suppliers, as needed, to procure the cost competitive, secure, and reliable natural gas supply, firm transportation, and storage capacity needed to meet forecasted gas usage.
- Short-term and spot purchases are conducted on an on-going basis to supplement term natural gas supply.
- On a continuous basis, existing purchases are compared against forecasted gas usage to determine changes in supply and transportation needs.
- Natural gas transportation for the generation fleet is obtained through a mix of long-term firm transportation agreements, and shorter-term pipeline capacity purchases.
- A targeted percentage of the natural gas fuel price exposure is managed via a rolling 60-month structured financial natural gas hedging program.

- Through the Asset Management and Delivered Supply Agreement between Duke Energy Carolinas, LLC ("DEC") and Duke Energy Progress, LLC implemented on January 1, 2103, DEC serves as the designated Asset Manager that procures and manages the combined gas supply needs for the combined Carolinas gas fleet.

Fuel Oil

- No. 2 fuel oil is burned primarily for initiation of coal combustion (light-off at steam plants) and in combustion turbines (peaking assets).
- All No. 2 fuel oil is moved via pipeline to applicable terminals where it is then loaded on trucks for delivery into the Company's storage tanks. Because oil usage is highly variable, the Company relies on a combination of inventory, responsive suppliers with access to multiple terminals, and trucking agreements to manage its needs. Replenishment of No. 2 fuel oil inventories at the applicable plant facilities is done on an "as needed basis" and coordinated between fuel procurement and station personnel.
- Formal solicitations for supply may be conducted as needed with an emphasis on maintaining a network of reliable suppliers at a competitive market price in the region of our generating assets.

DUKE ENERGY CAROLINAS
Summary of Coal Purchases
Twelve Months Ended December 31, 2020 & 2019
Tons

Line No.	Month	Contract (Tons)	Net Spot Purchase and Sales(Tons)	Total (Tons)
1	January 2020	719,300	39,752	759,052
2	February	377,885	130,203	508,088
3	March	511,418	51,906	563,324
4	April	454,145	23,566	477,712
5	May	203,960	12,873	216,833
6	June	306,915	11,563	318,478
7	July	395,057	50,851	445,908
8	August	548,061	25,831	573,892
9	September	400,170	99,692	499,862
10	October	531,876	52,647	584,523
11	November	360,487	111,351	471,838
12	December	326,439	52,176	378,615
13	**Total** (Sum L1:L12)	**5,135,713**	**662,411**	**5,798,125**

Line No.	Month	Contract (Tons)	Net Spot Purchase and Sales(Tons)	Total (Tons)
14	January 2019	467,830	111,867	579,698
15	February	555,624	64,276	619,900
16	March	551,679	112,937	664,616
17	April	476,648	227,914	704,562
18	May	549,400	152,538	701,938
19	June	647,313	140,296	787,609
20	July	692,046	77,088	769,134
21	August	732,253	115,963	848,217
22	September	469,275	204,304	673,579
23	October	471,409	231,850	703,259
24	November	397,228	239,441	636,669
25	December	560,959	202,536	763,494
26	**Total (Sum L14:L25)**	**6,571,664**	**1,881,010**	**8,452,675**

DUKE ENERGY CAROLINAS
Summary of Gas Purchases
Twelve Months Ended December 31, 2020 & 2019
MBTUs

Line No.	Month	MBTUs
1	January 2020	13,098,158
2	February	13,151,481
3	March	13,043,284
4	April	6,893,840
5	May	10,414,617
6	June	9,651,972
7	July	13,975,803
8	August	12,871,773
9	September	11,262,855
10	October	11,076,024
11	November	9,927,112
12	December	10,055,686
13	**Total (Sum L1:L12)**	**135,422,605**

Line No.	Month	MBTUs
14	January 2019	11,540,233
15	February	11,895,973
16	March	8,829,116
17	April	7,309,473
18	May	12,448,810
19	June	10,195,827
20	July	12,505,061
21	August	12,104,186
22	September	12,459,839
23	October	8,409,940
24	November	5,772,711
25	December	10,423,250
26	**Total (Sum L14:L25)**	**123,894,419**

I/A

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-7, SUB 1250

In the Matter of	)
Application of Duke Energy Carolinas, LLC	)
Pursuant to G.S. 62-133.2 and NCUC Rule	)
R8-55 Relating to Fuel and Fuel-Related	)
Charge Adjustments for Electric Utilities	)

JOHN A. VERDERAME CONFIDENTIAL EXHIBIT 3

FILED UNDER SEAL

FEBRUARY 23, 2021

/A

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-7, SUB 1250

In the Matter of Application of Duke Energy Carolinas, LLC Pursuant to G.S. 62-133.2 and NCUC Rule R8-55 Relating to Fuel and Fuel-Related Charge Adjustments for Electric Utilities	)))))	**DUKE ENERGY CAROLINAS, LLC'S APPLICATION**

Duke Energy Carolinas, LLC ("DEC," "Company," or "Applicant"), pursuant to North Carolina General Statutes ("N.C. Gen. Stat.") § 62-133.2 and North Carolina Utilities Commission ("NCUC" or the "Commission") Rule R8-55, hereby makes this Application to adjust the fuel and fuel-related cost component of its electric rates. In support thereof, the Applicant respectfully shows the Commission the following:

1. The Applicant's general offices are located at 550 South Tryon Street, Charlotte, North Carolina, and its mailing address is:

Duke Energy Carolinas, LLC
P. O. Box 1006
Charlotte, North Carolina 28201-1006

2. The names and addresses of Applicant's attorneys are:

Jack E. Jirak
Associate General Counsel
Duke Energy Corporation
Post Office Box 1551/NCRH 20
Raleigh, North Carolina 27602
(919) 546-3257
Jack.jirak@duke-energy.com

Robert W. Kaylor
Law Office of Robert W. Kaylor, P.A.
353 Six Forks Road, Suite 260
Raleigh, North Carolina 27609
(919) 828-5250
bkaylor@rwkaylorlaw.com

Copies of all pleadings, testimony, orders and correspondence in this proceeding should be served upon the attorneys listed above.

3. NCUC Rule R8-55 provides that the Commission shall schedule annual hearings pursuant to N.C. Gen. Stat. § 62-133.2 in order to review changes in the cost of fuel and fuel-related costs since the last general rate case for each utility generating electric power by means of fossil and/or nuclear fuel for the purpose of furnishing North Carolina retail electric service. Rule R8-55 schedules an annual cost of fuel and fuel-related costs adjustment hearing for DEC and requires that DEC use a calendar year test period (12 months ended December 31). Therefore, the test period used in this Application for these proceedings is the calendar year 2020.

4. In Docket No. E-7, Sub 1228, DEC's last fuel case, the Commission approved the following base fuel and fuel-related costs factors (excluding gross receipts tax and regulatory fee):

Residential - 1.6391 ¢ per kWh
Commercial - 1.8249 ¢ per kWh
Industrial - 1.9310 ¢ per kWh

5. In this Application, DEC proposes base fuel and fuel-related costs factors (excluding gross receipts tax and regulatory fee) of:

Residential - 1.4755¢ per kWh
Commercial - 1.7254¢ per kWh
Industrial - 1.7589¢ per kWh

The base fuel and fuel-related cost factors should be adjusted for the Experience Modification Factor ("EMF") by an increment/(decrement) (excluding gross receipts tax and regulatory fee) of:

Residential - (0.0259)¢ per kWh
Commercial - (0.0207)¢ per kWh
Industrial - 0.0770¢ per kWh

The base fuel and fuel-related costs factors should also be adjusted for the EMF interest (decrement) (excluding gross receipts tax and regulatory fee) of:

Residential - (0.0040)¢ per kWh
Commercial - (0.0032)¢ per kWh
Industrial - 0.0000¢ per kWh

This results in composite fuel and fuel-related costs factors (excluding gross receipts tax and regulatory fee) of:

Residential - 1.4456¢ per kWh
Commercial - 1.7015¢ per kWh
Industrial - 1.8359¢ per kWh

The new fuel factors would have an effective date of September 1, 2021.

6. The information and data required to be filed by NCUC Rule R8-55 is contained in the testimony and exhibits of Bryan L. Sykes, Kevin Y. Houston, John A. Verderame, Steve Immel and Steven D. Capps which are being filed simultaneously with this Application and incorporated herein by reference.

7. For comparison, in accordance with Rule R8-55(d)(1) and R8-55(e)(3), base fuel and fuel-related costs factors were also calculated based on the most recent North American Electric Reliability Corporation ("NERC") five-year national weighted average nuclear capacity factor (91.95%) and projected period sales and the methodology used for fuel costs in DEC's last general rate case. These base fuel and fuel-related costs factors are:

	NERC Average	Last General Rate Case
Residential -	1.4613¢ per kWh	1.4459¢ per kWh
Commercial -	1.7115¢ per kWh	1.6872¢ per kWh
Industrial -	1.8437¢ per kWh	1.8254¢ per kWh

WHEREFORE, Duke Energy Carolinas requests that the Commission issue an order approving composite fuel and fuel-related costs factors (excluding gross receipts tax and regulatory fee) of:

Residential -	1.4456¢ per kWh
Commercial -	1.7015¢ per kWh
Industrial -	1.8359¢ per kWh

Respectfully submitted this 23rd day of February, 2021.

By: ____________________

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ATTORNEYS FOR DUKE ENERGY CAROLINAS, LLC

VERIFICATION

STATE OF NORTH CAROLINA	)	
	)	DOCKET NO. E-7, SUB 1250
COUNTY OF MECKLENBURG	)	

Byran L. Sykes, being first duly sworn, deposes and says:

That he is RATES MANAGER for DUKE ENERGY CAROLINAS, LLC, applicant in the above-titled action; that he has read the foregoing Application and knows the contents thereof; that the same is true except as to the matters stated therein on information and belief; and as to those matters, he believes it to be true.

Bryan L. Sykes

Signed and sworn to before me this day by Bryan L. Sykes
Name of principal

Date: 2-5-2021

Peggy Holton
Official Signature of Notary

Peggy Holton, Notary Public
Notary's printed or typed name

(Official Seal)

PEGGY HOLTON
NOTARY
PUBLIC
WAKE COUNTY, NC

My commission expires: 12/22/2021

I signed this notarial certificate on 2-5-2021 according to the emergency video notarization requirements contained in G.S. 10B-25.

Notary Public location during video notarization: Wake County

Stated physical location of principal during video notarization: Mecklenburg County

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-7, SUB 1250

In the Matter of	)
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Charge Adjustments for Electric Utilities	)

I /A

STEVEN D. CAPPS CONFIDENTIAL EXHIBIT 1

FILED UNDER SEAL

FEBRUARY 23, 2021

Synapse Energy Economics, Inc.

Devi Glick, Senior Associate

Synapse Energy Economics I 485 Massachusetts Avenue, Suite 3 I Cambridge, MA 02139 I 617-453-7050
dglick@synapse-energy.com

PROFESSIONAL EXPERIENCE

Synapse Energy Economics Inc., Cambridge, MA. *Senior Associate*, April 2019 – Present, *Associate*, January 2018 – March 2019

Conducts research and provides expert witness and consulting services on energy sector issues. Examples include:

- Modeling for resource planning using PLEXOS and Encompass utility planning software to evaluate the reasonableness of utility IRP modeling.
- Modeling for resource planning to explore alternative, lower-cost and lower-emission resource portfolio options.
- Providing expert testimony in rate cases on the prudence of continued investment in, and operation of, coal plants based on the economics of plant operations relative to market prices and alternative resource costs.
- Providing expert testimony and analysis on the reasonableness of utility coal plant commitment and dispatch practice in fuel and power cost adjustment dockets.
- Serving as an expert witness on avoided cost of distributed solar PV and submitting direct and surrebuttal testimony regarding the appropriate calculation of benefit categories associated with the value of solar calculations.
- Reviewing and assessing the reasonableness of methodologies and assumptions relied on in utility IRPs and other long-term planning documents in Arizona, Kentucky, New Mexico, Florida, South Carolina, North Carolina, South Africa, Newfoundland, and Nova Scotia for expert reports.
- Co-authoring public comments on the adequacy of utility coal ash disposal plans, and federal coal ash disposal rules and amendments.
- Analyzing system-level cost impacts of energy efficiency at the state and national level.

Rocky Mountain Institute, Basalt, CO. August 2012 – September 2017
Senior Associate

- Led technical analysis, modeling, training and capacity building work for utilities and governments in Sub-Saharan Africa around integrated resource planning for the central electricity grid energy. Identified over one billion dollars in savings based on improved resource-planning processes.
- Represented RMI as a content expert and presented materials on electricity pricing and rate design at conferences and events.
- Led a project to research and evaluate utility resource planning and spending processes, focusing specifically on integrated resource planning, to highlight systematic overspending on conventional resources and underinvestment and underutilization of distributed energy resources as a least-cost alternative.

Associate

- Led modeling analysis in collaboration with NextGen Climate America which identified a CO2 loophole in the Clean Power Plan of 250 million tons, or 41 percent of EPA projected abatement. Analysis was submitted as an official federal comment which led to a modification to address the loophole in the final rule.
- Led financial and economic modeling in collaboration with a major U.S. utility to quantify the impact that solar PV would have on their sales and helped identify alternative business models which would allow them to recapture a significant portion of this at-risk value.
- Supported the planning, content development, facilitation, and execution of numerous events and workshops with participants from across the electricity sector for RMI's Electricity Innovation Lab (eLab) initiative.
- Co-authored two studies reviewing valuation methodologies for solar PV and laying out new principles and recommendations around pricing and rate design for a distributed energy future in the United States. These studies have been highly cited by the industry and submitted as evidence in numerous Public Utility Commission rate cases.

The University of Michigan, Ann Arbor, MI. *Graduate Student Instructor*, September 2011 – July 2012

The Virginia Sea Grant at the Virginia Institute of Marine Science, Gloucester Point, VA. *Policy Intern*, Summer 2011

Managed a communication network analysis study of coastal resource management stakeholders on the Eastern Shore of the Delmarva Peninsula.

The Commission for Environmental Cooperation (NAFTA), Montreal, QC. *Short Term Educational Program/Intern*, Summer 2010

Researched energy and climate issues relevant to the NAFTA parties to assist the executive director in conducting a GAP analysis of emission monitoring, reporting, and verification systems in North America.

Congressman Tom Allen, Portland, ME. *Technology Systems and Outreach Coordinator*, August 2007 – December 2008

Directed Congressman Allen's technology operation, responded to constituent requests, and represented the Congressman at events throughout southern Maine.

EDUCATION

The University of Michigan, Ann Arbor, MI
Master of Public Policy, Gerald R. Ford School of Public Policy, 2012
Master of Science, School of Natural Resources and the Environment, 2012
Masters Project: *Climate Change Adaptation Planning in U.S. Cities*

Middlebury College, Middlebury, VT
Bachelor of Arts, 2007
Environmental Studies, Policy Focus; Minor in Spanish
Thesis: *Environmental Security in a Changing National Security Environment: Reconciling Divergent Policy Interests, Cold War to Present*

PUBLICATIONS

Eash-Gates, P., D. Glick, S. Kwok. R. Wilson. 2020. *Orlando's Renewable Energy Future: The Path to 100 Percent Renewable Energy by 2020.* Synapse Energy Economics for the First 50 Coalition.

Eash-Gates, P., B. Fagan, D. Glick. 2020. *Alternatives to the Surry-Skiffes Creek 500 kV Transmission Line.* Synapse Energy Economics for the National Parks Conservation Association.

Biewald, B., D. Glick, J. Hall, C. Odom, C. Roberto, R. Wilson. 2020. *Investing in Failure: How Large Power Companies are Undermining their Decarbonization Targets.* Synapse Energy Economics for Climate Majority Project.

Glick, D., D. Bhandari, C. Roberto, T. Woolf. 2020. *Review of benefit-cost analysis for the EPA's proposed revisions to the 2015 Steam Electric Effluent Limitations Guidelines.* Synapse Energy Economics for Earthjustice and Environmental Integrity Project.

Camp, E., B. Fagan, J. Frost, N. Garner, D. Glick, A. Hopkins, A. Napoleon, K. Takahashi, D. White, M. Whited, R. Wilson. 2019. *Phase 2 Report on Muskrat Falls Project Rate Mitigation, Revision 1 – September 25, 2019.* Synapse Energy Economics for the Board of Commissioners of Public Utilities, Province of Newfoundland and Labrador.

Camp, E., A. Hopkins, D. Bhandari, N. Garner, A. Allison, N. Peluso, B. Havumaki, D. Glick. 2019. *The Future of Energy Storage in Colorado: Opportunities, Barriers, Analysis, and Policy Recommendations.* Synapse Energy Office for the Colorado Energy Office.

Glick, D., B. Fagan, J. Frost, D. White. 2019. *Big Bend Analysis: Cleaner, Lower-Cost Alternatives to TECO's Billion-Dollar Gas Project*. Synapse Energy Economics for Sierra Club.

Glick, D., F. Ackerman, J. Frost. 2019. *Assessment of Duke Energy's Coal Ash Basin Closure Options Analysis in North Carolina.* Synapse Energy Economics for the Southern Environmental Law Center.

Glick, D., N. Peluso, R. Fagan. 2019. *San Juan Replacement Study: An alternative clean energy resource portfolio to meet Public Service Company of New Mexico's energy, capacity, and flexibility needs after the retirement of the San Juan Generating Station*. Synapse Energy Economics for Sierra Club.

Suphachalasai, S., M. Touati, F. Ackerman, P. Knight, D. Glick, A. Horowitz, J.A. Rogers, T. Amegroud. 2018. *Morocco – Energy Policy MRV: Emission Reductions from Energy Subsidies Reform and Renewable Energy Policy.* Prepared for the World Bank Group.

Camp, E., B. Fagan, J. Frost, D. Glick, A. Hopkins, A. Napoleon, N. Peluso, K. Takahashi, D. White, R. Wilson, T. Woolf. 2018. *Phase 1 Findings on Muskrat Falls Project Rate Mitigation.* Synapse Energy Economics for Board of Commissioners of Public Utilities, Province of Newfoundland and Labrador.

Allison, A., R. Wilson, D. Glick, J. Frost. 2018. *Comments on South Africa 2018 Integrated Resource Plan.* Synapse Energy Economics for Centre for Environmental Rights.

Hopkins, A. S., K. Takahashi, D. Glick, M. Whited. 2018. *Decarbonization of Heating Energy Use in California Buildings: Technology, Markets, Impacts, and Policy Solutions*. Synapse Energy Economics for the Natural Resources Defense Council.

Knight, P., E. Camp, D. Glick, M. Chang. 2018. *Analysis of the Avoided Costs of Compliance of the Massachusetts Global Warming Solutions Act*. Supplement to 2018 AESC Study. Synapse Energy Economics for Massachusetts Department of Energy Resources and Massachusetts Department of Environmental Protection.

Fagan, B., R. Wilson, S. Fields, D. Glick, D. White. 2018. *Nova Scotia Power Inc. Thermal Generation Utilization and Optimization: Economic Analysis of Retention of Fossil-Fueled Thermal Fleet to and Beyond 2030 – M08059*. Prepared for Board Counsel to the Nova Scotia Utility Review Board.

Ackerman, F., D. Glick, T. Vitolo. 2018. *Report on CCR proposed rule*. Prepared for Earthjustice.

Lashof, D. A., D. Weiskopf, D. Glick. 2014. *Potential Emission Leakage Under the Clean Power Plan and a Proposed Solution: A Comment to the US EP*A. NextGen Climate America.

Smith, O., M. Lehrman, D. Glick. 2014. *Rate Design for the Distribution Edge*. Rocky Mountain Institute.

Hansen, L., V. Lacy, D. Glick. 2013. *A Review of Solar PV Benefit & Cost Studies*. Rocky Mountain Institute.

TESTIMONY

Public Utility Commission of Texas (PUC Docket No. 51415): Direct Testimony of Devi Glick in the application of Southwestern Electric Power Company for authority to change rates. On behalf of Sierra Club. March 31, 2021.

Michigan Public Service Commission (Docket No. U-20804): Direct Testimony of Devi Glick in the application of Indiana Michigan Power Company for approval of a Power Supply Cost Recovery Plan and factors (2021). On behalf of Sierra Club. March 12, 2021.

Public Utility Commission of Texas (PUC Docket No. 50997): Direct Testimony of Devi Glick in the application of Southwestern Electric Power Company for authority to reconcile fuel costs for the period May 1, 2017- December 31, 2019. On behalf of Sierra Club. January 7, 2021.

Michigan Public Service Commission (Docket No. U-20224): Direct Testimony of Devi Glick in the application of Indiana Michigan Power Company for Reconciliation of its Power Supply Cost Recovery Plan (Case No. U-20223) for the 12-month period ending December 31, 2019. On behalf of Sierra Club. October 23, 2020.

Public Service Commission of Wisconsin (Docket No. 3270-UR-123): Surrebuttal Testimony of Devi Glick in the application of Madison Gas and Electric Company for authority to change electric and natural gas rates. On behalf of Sierra Club. September 29, 2020.

Public Service Commission of Wisconsin (Docket No. 6680-UR-122): Surrebuttal Testimony of Devi Glick in the application of Wisconsin Power and Light Company for approval to extend electric and natural gas rates into 2021 and for approval of its 2021 fuel cost plan. On behalf of Sierra Club. September 21, 2020.

Public Service Commission of Wisconsin (Docket No. 3270-UR-123): Direct Testimony and Exhibits of Devi Glick in the application of Madison Gas and Electric Company for authority to change electric and natural gas rates. On behalf of Sierra Club. September 18, 2020.

Public Service Commission of Wisconsin (Docket No. 6680-UR-122): Direct Testimony and Exhibits of Devi Glick in the application of Wisconsin Power and Light Company for approval to extend electric and natural gas rates into 2021 and for approval of its 2021 fuel cost plan. On behalf of Sierra Club. September 8, 2020.

Indiana Utility Regulatory Commission (Cause No. 38707-FAC125): Direct Testimony and Exhibits of Devi Glick in the application of Duke Energy Indiana, LLC for approval of a change in its fuel cost adjustment for electric service. On behalf of Sierra Club. September 4, 2020.

Indiana Utility Regulatory Commission (Cause No. 38707-FAC123 S1): Direct Testimony and Exhibits of Devi Glick in the Subdocket for review of Duke Energy Indian, LLC's Generation Unit Commitment Decisions. On behalf of Sierra Club. July 31, 2020.

Indiana Utility Regulatory Commission (Cause No. 38707-FAC124): Direct Testimony and Exhibits of Devi Glick in the application of Duke Energy Indiana, LLC for approval of a change in its fuel cost adjustment for electric service. On behalf of Sierra Club. June 4, 2020.

Arizona Corporation Commission (Docket No. E-01933A-19-0028): Rely to Late-filed ACC Staff Testimony of Devi Glick in the application of Tucson Electric Power Company for the establishment of just and reasonable rates. On behalf of Sierra Club. May 8, 2020.

Indiana Utility Regulatory Commission (Cause No. 38707-FAC123): Direct Testimony and Exhibits of Devi Glick in the application of Duke Energy Indiana, LLC for approval of a change in its fuel cost adjustment for electric service. On behalf of Sierra Club. March 6, 2020.

Texas Public Utility Commission (PUC Docket No. 49831): Direct Testimony of Devi Glick in the application of Southwestern Public Service Company for authority to change rates. On behalf of Sierra Club. February 10, 2020.

New Mexico Public Regulation Commission (Case No. 19-00170-UT): Testimony of Devi Glick in Support of Uncontested Comprehensive Stipulation. On behalf of Sierra Club. January 21, 2020.

Nova Scotia Utility and Review Board (Matter M09420): Expert Evidence of Fagan, B, D. Glick reviewing Nova Scotia Power's Application for Extra Large Industrial Active Demand Control Tariff for Port Hawkesbury Paper. Prepared for Nova Scotia Utility and Review Board Counsel. December 3, 2019.

New Mexico Public Regulation Commission (Case No. 19-00170-UT): Direct Testimony of Devi Glick regarding Southwestern Public Service Company's application for revision of its retail rates and authorization and approval to shorten the service life and abandon its Tolk generation station units. On behalf of Sierra Club. November 22, 2019.

North Carolina Utilities Commission (Docket No. E-100, Sub 158): Responsive testimony of Devi Glick regarding battery storage and PURPA avoided cost rates. On behalf of Southern Alliance for Clean Energy. July 3, 2019.

State Corporation Commission of Virginia (Case No. PUR-2018-00195): Direct testimony of Devi Glick regarding the economic performance of four of Virginia Electric and Power Company's coal-fired units and the Company's petition to recover costs incurred to company with state and federal environmental regulations. On behalf of Sierra Club. April 23, 2019.

Connecticut Siting Council (Docket No. 470B): Joint testimony of Robert Fagan and Devi Glick regarding NTE Connecticut's application for a Certificate of Environmental Compatibility and Public Need for the Killingly generating facility. On behalf of Not Another Power Plant and Sierra Club. April 11, 2019.

Public Service Commission of South Carolina (Docket No. 2018-3-E): Surrebuttal testimony of Devi Glick regarding annual review of base rates of fuel costs for Duke Energy Carolinas. On behalf of South Carolina Coastal Conservation League and Southern Alliance for Clean Energy. August 31, 2018.

Public Service Commission of South Carolina (Docket No. 2018-3-E): Direct testimony of Devi Glick regarding the annual review of base rates of fuel costs for Duke Energy Carolinas. On behalf of South Carolina Coastal Conservation League and Southern Alliance for Clean Energy. August 17, 2018.

Public Service Commission of South Carolina (Docket No. 2018-1-E): Surrebuttal testimony of Devi Glick regarding Duke Energy Progress' net energy metering methodology for valuing distributed energy resources system within South Carolina. On behalf of South Carolina Coastal Conservation League and Southern Alliance for Clean Energy. June 4, 2018.

Public Service Commission of South Carolina (Docket No. 2018-1-E): Direct testimony of Devi Glick regarding Duke Energy Progress' net energy metering methodology for valuing distributed energy resources system within South Carolina. On behalf of South Carolina Coastal Conservation League and Southern Alliance for Clean Energy. May 22, 2018.

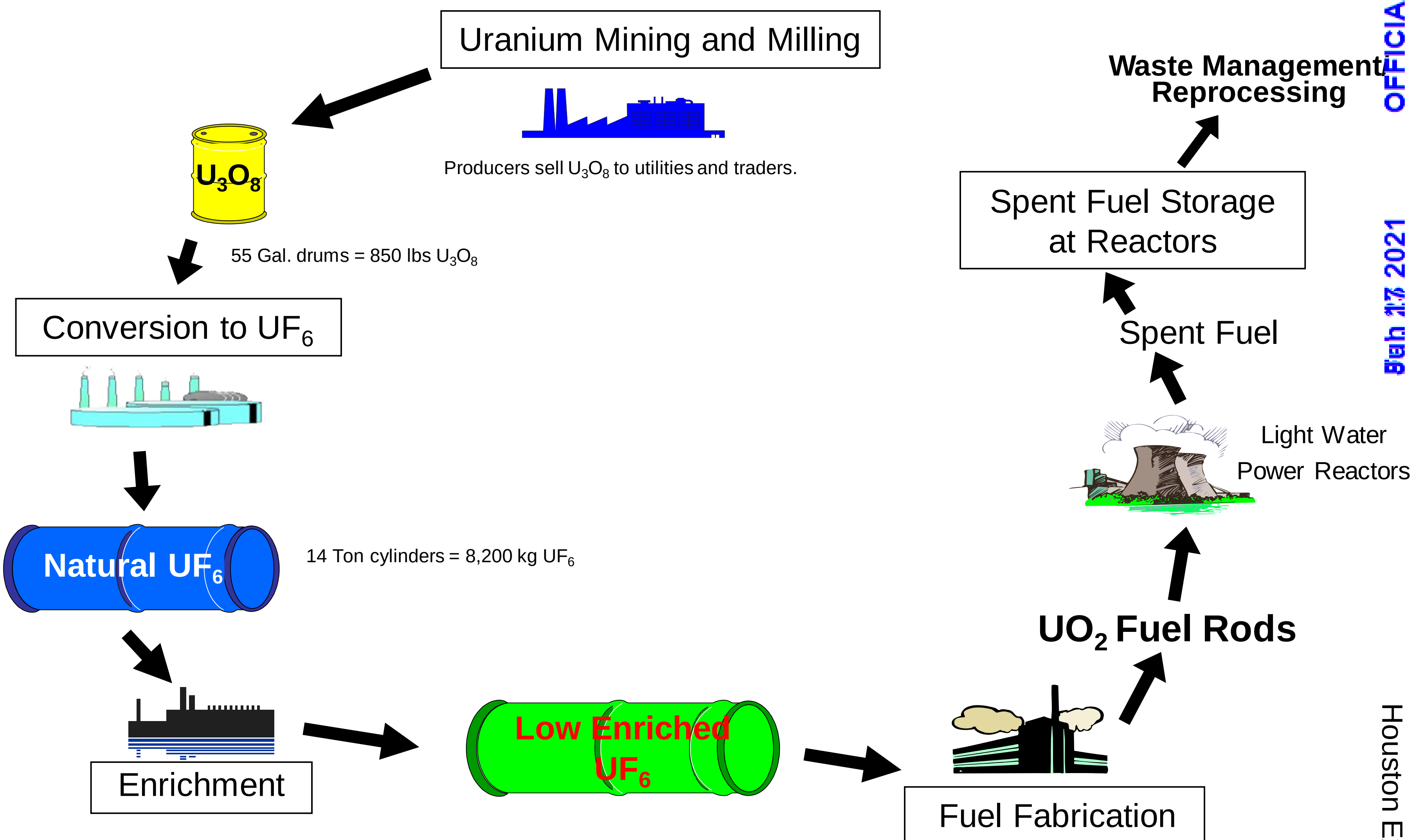
Public Service Commission of South Carolina (Docket No. 2018-2-E): Direct testimony of Devi Glick on avoided cost calculations and the costs and benefits of solar net energy metering for South Carolina Electric and Gas Company. On behalf of South Carolina Coastal Conservation League and Southern Alliance for Clean Energy. April 12, 2018.

Public Service Commission of South Carolina (Docket No. 2018-2-E): Surrebuttal testimony of Devi Glick on avoided cost calculations and the costs and benefits of solar net energy metering for South Carolina Electric and Gas Company. On behalf of South Carolina Coastal Conservation League and Southern Alliance for Clean Energy. April 4, 2018.

Resume updated May 2021

DEVI GLICK EXHIBIT DG-2 IS FILED AS CONFIDENTIAL

The Nuclear Fuel Cycle



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Duke Energy Carolinas, LLC Nuclear Fuel Procurement Practices

The Company's nuclear fuel procurement practices are summarized below:

- Near and long-term consumption forecasts are computed based on factors such as: nuclear system operational projections given fleet outage/maintenance schedules, adequate fuel cycle design margins to key safety licensing limitations, and economic tradeoffs between required volumes of uranium and enrichment necessary to produce the required volume of enriched uranium.
- Nuclear system inventory targets are determined and designed to provide: reliability, insulation from market volatility, and sensitivity to evolving market conditions. Inventories are monitored on an ongoing basis.
- On an ongoing basis, existing purchase commitments are compared with consumption and inventory requirements to ascertain additional needs.
- Qualified suppliers are invited to make proposals to satisfy additional or future contract needs.
- Contracts are awarded based on the most attractive evaluated offer, considering factors such as price, reliability, flexibility and supply source diversification/portfolio security of supply.
- For uranium concentrates, conversion and enrichment services, long term supply contracts are relied upon to fulfill the largest portion of forward requirements. By staggering long-term contracts over time, the Company's purchases within a given year consist of a blend of contract prices negotiated at many different periods in the markets, which has the effect of smoothing out the Company's exposure to price volatility. Due to the technical complexities of changing suppliers, fabrication services are generally sourced to a single domestic supplier on a plant-by-plant basis using multi-year contracts.
- Spot market opportunities are evaluated from time to time to supplement long-term contract supplies as appropriate based on comparison to other supply options.
- Delivered volumes of nuclear fuel products and services are monitored against contract commitments. The quality and volume of deliveries are confirmed by the delivery facility to which the Company has instructed delivery. Payments for such delivered volumes are made after the Company's receipt of such delivery facility confirmations.

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METZ EXHIBIT 1

<u>Proposed Fuel and Fuel-Related Cost Factors in cents per kWh</u>
<u>effective September 1, 2021</u>
(excludes regulatory fee)

<u>TABLE 1 – Company PROPOSED Fuel and Fuel-Related Cost Factors (¢ per kWh)</u>

Rate Class	Base & Prospective	EMF	EMF Interest	Total Fuel Factor
Residential	1.5337	(0.0282)	(0.0041)	1.5014
General Service/Lighting	1.6895	0.0476	0	1.7371
Industrial	1.7243	0.1391	0	1.8634

For comparison, Table 2 below provides the existing fuel and fuel-related cost factors (excluding the regulatory fee) approved in Docket No. E-7, Sub 1228:

<u>TABLE 2 – EXISTING Fuel and Fuel-Related Cost Factors (¢ per kWh)</u>

Rate Class	Base & Prospective	EMF	EMF Interest	Total Fuel Factor
Residential	1.6027	0.0364	0	1.6391
General Service/Lighting	1.7583	0.0666	0	1.8249
Industrial	1.6652	0.2658	0	1.9310

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, 2020
Billing Period September 2021 - August 2022
Docket E-7, Sub 1250

Sykes 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 1228)					
1	Approved Fuel and Fuel Related Costs Factors	Input	1.6027	1.7583	1.6652	1.6816
2	EMF Increment	Input	0.0364	0.0666	0.2658	0.0975
3	EMF Interest Decrement cents/kWh	Input	0.0000	0.0000	0.0000	0.0000
4	Approved Net Fuel and Fuel Related Costs Factors	Sum	**1.6391**	**1.8249**	**1.9310**	**1.7791**
	Fuel and Fuel Related Cost Factors Required by Rule R8-55					
5	Proposed Nuclear Capacity Factor of 93.21% and Normalized Test Period Sales	Exh 2 Sch 2 pg 2	**1.4459**	**1.6872**	**1.8254**	**1.6255**
6	NERC 5 Year Average Nuclear Capacity Factor of 91.95% and Projected Period Sales	Exh 2 Sch 3 pg 2	**1.4613**	**1.7115**	**1.8437**	**1.6469**
	Proposed Fuel and Fuel Related Cost Factors using Proposed Nuclear Capacity Factor of 93.21%					
7	Fuel and Fuel Related Costs excluding Purchased Capacity cents/kWh	Exh 2 Sch 1 pg 2	1.4394	1.6997	1.7368	1.6125
8	REPS Compliance and QF Purchased Power - Capacity cents/kWh	Exh 2 Sch 1 pg 2	0.0361	0.0257	0.0221	0.0289
9	Total adjusted Fuel and Fuel Related Costs cents/kWh	Sum	1.4755	1.7254	1.7589	1.6414
10	EMF Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	(0.0259)	(0.0207)	0.0770	(0.0033)
11	EMF Interest (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	(0.0040)	(0.0032)	0.0000	(0.0029)
12	Net Fuel and Fuel Related Costs Factors cents/kWh	Sum	**1.4456**	**1.7015**	**1.8359**	**1.6352**

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 93.21%
Test Period Ended December 31, 2020
Billing Period September 2021 - August 2022
Docket E-7, Sub 1250

Line #	Unit	Reference	Generation (MWh)	Unit Cost (cents/kWh)	Fuel Cost ($)
			D	E	D * E = F
1	Total Nuclear	Workpaper 1	58,622,085	0.6057	355,077,645
2	Coal	Workpaper 3 & 4	18,691,906	2.3444	438,222,003
3	Gas CT and CC	Workpaper 3 & 4	22,065,718	2.2833	503,828,581
4	Reagents and Byproducts	Workpaper 9			25,707,869
5	Total Fossil	Sum	40,757,624		967,758,453
6	Hydro	Workpaper 3	4,030,270		
7	Net Pumped Storage	Workpaper 3	(2,872,983)		
8	Total Hydro	Sum	1,157,287		-
9	Solar Distributed Generation	Workpaper 3	367,302		-
10	Total Generation	Line 1 + Line 5 + Line 8 + Line 9	100,904,299		1,322,836,098
11	Less Lee CC Joint Owners	Workpaper 3 & 4	(876,000)		(16,986,285)
12	Less Catawba Joint Owners	Workpaper 3 & 4	(14,848,200)		(89,940,492)
13	Fuel expense recovered through reimbursement	Workpaper 4			(6,522,205)
14	Net Generation	Sum Lines 10-13	85,180,099		1,209,387,117
15	Purchased Power	Workpaper 3 & 4	8,109,496	3.0679	248,794,545
16	JDA Savings Shared	Workpaper 5			7,856,711
17	Total Purchased Power		8,109,496		256,651,255
18	Total Generation and Purchased Power	Line 14 + Line 17	93,289,595	1.5715	1,466,038,372
19	Fuel expense recovered through intersystem sales	Workpaper 3 & 4	(1,789,852)	1.6030	(28,691,221)
20	Line losses and Company use	Line 22-Line 18-Line 19	(3,809,747)		-
21	System Fuel Expense for Fuel Factor	Lines 18 + 19 + 20			1,437,347,151
22	Projected System MWh Sales for Fuel Factor	Workpaper 7	87,689,996		87,689,996
23	Fuel and Fuel Related Costs cents/kWh	Line 21 / Line 22 / 10			1.6391

Note: Rounding differences may occur

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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 93.21%
Test Period Ended December 31, 2020
Billing Period September 2021 - August 2022
Docket E-7, Sub 1250

Line #	Description	Reference	Residential	GS/Lighting	Industrial	Total
1	NC Projected Billing Period MWh Sales	Workpaper 7	21,803,077	24,128,419	12,036,241	57,967,737
	Calculation of Renewable and Cogeneration Purchased Power Capacity Rate by Class					Amount
2	Purchased Power for REPS Compliance - Capacity	Workpaper 4				$ 13,866,978
3	QF Purchased Power - Capacity	Workpaper 4				11,169,971
4	Total of Renewable and QF Purchased Power Capacity	Line 2 + Line 3				$ 25,036,948
5	NC Portion - Jursidicational % based on Peak Demand Allocator	Input				66.90%
6	NC Renewable and QF Purchased Power - Capacity	Line 4 * Line 5				$ 16,749,046
7	Peak Demand Allocation Factors	Input	47.00%	37.09%	15.91%	100.00%
8	Renewable and QF Purchased Power - Capacity allocated on Peak Demand	Line 6 * Line 7	$ 7,872,063	$ 6,212,405	$ 2,664,577	$ 16,749,046
9	Renewable and QF Purchased Power - Capacity cents/kWh based on Projected Billing Period Sales	Line 8 / Line 1 / 10	0.0361	0.0257	0.0221	0.0289
	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	1.4394	1.6997	1.7368	1.6125
11	REPS Compliance and QF Purchased Power - Capacity cents/kWh	Line 9	0.0361	0.0257	0.0221	0.0289
12	Total adjusted Fuel and Fuel Related Costs cents/kWh	Line 10 + Line 11	1.4755	1.7254	1.7589	1.6414
13	EMF Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	(0.0259)	(0.0207)	0.0770	(0.0033)
14	EMF Interest (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	(0.0040)	(0.0032)	-	(0.0029)
15	Net Fuel and Fuel Related Costs Factors cents/kWh	Exh 2 Sch 1 Page 3	1.4456	1.7015	1.8359	1.6352

Note: Rounding differences may occur

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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 93.21%
Test Period Ended December 31, 2020
Billing Period September 2021 - August 2022
Docket E-7, Sub 1250

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 1228	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	21,803,077	$ 2,235,509,347	$ (42,192,996)	-1.89%	(0.1935)	1.6391	1.4456
2	General Service/Lighting	24,128,419	1,577,855,414	(29,780,438)	-1.89%	(0.1234)	1.8249	1.7015
3	Industrial	12,036,241	606,238,320	(11,442,140)	-1.89%	(0.0951)	1.9310	1.8359
4	NC Retail	57,967,737	$ 4,419,603,081	$ (83,415,574)	-1.89%			

Line #	Description	Source	Amount
	Total Proposed Composite Fuel Rate:		
5	Total Fuel Costs for Allocation	Workpaper 7	$ 1,441,525,237
6	Total of Renewable and QF Purchased Power Capacity	Exhibit 2 Sch 1, Page 2	25,036,948
7	System Other Fuel Costs	Line 5 - Line 6	$ 1,416,488,289
8	Adjusted Projected System MWh Sales for Fuel Factor	Workpaper 7	87,848,058
9	NC Retail Projected Billing Period MWh Sales	Line 4	57,967,737
10	Allocation %	Line 9 / Line 8	65.99%
11	NC Retail Other Fuel Costs	Line 7 * Line 10	$ 934,740,622
12	NC Renewable and QF Purchased Power - Capacity	Exhibit 2 Sch 1, Page 2	16,749,046
13	NC Retail Total Fuel Costs	Line 11 + Line 12	$ 951,489,668
14	NC Retail Projected Billing Period MWh Sales	Line 4	57,967,737
15	Calculated Fuel Rate cents/kWh	Line 13 / Line 14 / 10	1.6414
16	Proposed Composite EMF Rate cents/kWh	Exhibit 3 Page 1	(0.0033)
17	Proposed Composite EMF Rate Interest cents/kWh	Exhibit 3 Page 1	(0.0029)
18	Total Proposed Composite Fuel Rate	Sum	1.6352
	Total Current Composite Fuel Rate - Docket E-7 Sub 1228:		
19	Current composite Fuel Rate cents/kWh	Sykes Exhibit 1	1.6816
20	Current composite EMF Rate cents/kWh	Sykes Exhibit 1	0.0975
21	Current composite EMF Interest Rate cents/kWh	Sykes Exhibit 1	0.0000
22	Total Current Composite Fuel Rate	Sum	1.7791
23	Increase/(Decrease) in Composite Fuel rate cents/kWh	Line 18 - Line 22	(0.1439)
24	NC Retail Projected Billing Period MWh Sales	Line 4	57,967,737
25	Increase/(Decrease) in Fuel Costs	Line 23 * Line 24 * 10	$ (83,415,574)

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 93.21% and Normalized Test Period Sales
Test Period Ended December 31, 2020
Billing Period September 2021 - August 2022
Docket E-7, Sub 1250

Line #	Unit	Reference	Generation (MWh)	Unit Cost (cents/kWh)	Fuel Cost ($)
			D	E	D * E = F
1	Total Nuclear	Workpaper 1	58,622,085	0.6057	355,077,645
2	Coal	Calculated	17,565,881	2.3444	411,822,928
3	Gas CT and CC	Workpaper 3 & 4	22,065,718	2.2833	503,828,581
4	Reagents and Byproducts	Workpaper 9	-		25,707,869
5	Total Fossil	Sum	39,631,599		941,359,378
6	Hydro	Workpaper 3	4,030,270		
7	Net Pumped Storage	Workpaper 3	(2,872,983)		
8	Total Hydro	Sum	1,157,287		
9	Solar Distributed Generation		367,302		
10	Total Generation	Line 1 + Line 5 + Line 8 + Line 9	99,778,273		1,296,437,023
11	Less Lee CC Joint Owners	Workpaper 3 & 4	(876,000)		(16,986,285)
12	Less Catawba Joint Owners	Workpaper 3 & 4	(14,848,200)		(89,940,492)
13	Fuel expense recovered through reimbursement	Workpaper 4			(6,522,205)
14	Net Generation	Sum	84,054,073		1,182,988,041
15	Purchased Power	Workpaper 3 & 4	8,109,496		248,794,545
16	JDA Savings Shared	Workpaper 5	-		7,856,711
17	Total Purchased Power	Sum	8,109,496		256,651,255
18	Total Generation and Purchased Power	Line 14 + Line 17	92,163,570		1,439,639,297
19	Fuel expense recovered through intersystem sales	Workpaper 3 & 4	(1,789,852)		(28,691,221)
20	Line losses and Company use	Line 22 - Line 19 - Line 18	(3,809,747)		-
21	System Fuel Expense for Fuel Factor	Lines 18 + 19 + 20			1,410,948,076
22	Normalized Test Period MWh Sales	Exhibit 4	86,563,971		86,563,971
23	Fuel and Fuel Related Costs cents/kWh	Line 21 / Line 22 / 10			1.6299

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 93.21% and Normalized Test Period Sales
Test Period Ended December 31, 2020
Billing Period September 2021 - August 2022
Docket E-7, Sub 1250

Line #	Description	Reference	Residential	GS/Lighting	Industrial	Total
1	NC Normalized Test Period MWh Sales	Exhibit 4	23,329,575	23,102,975	11,570,060	58,002,609
	Calculation of Renewable Purchased Power Capacity Rate by Class					Amount
2	Purchased Power for REPS Compliance - Capacity	Workpaper 4				$ 13,866,978
3	QF Purchased Power - Capacity	Workpaper 4				11,169,971
4	Total of Renewable and QF Purchased Power Capacity	Line 2 + Line 3				$ 25,036,948
5	NC Portion - Jursidicational % based on Peak Demand Allocator	Input				66.90%
6	NC Renewable and QF Purchased Power - Capacity	Line 4 * Line 5				$ 16,749,046
7	Peak Demand Allocation Factors	Input	47.00%	37.09%	15.91%	100.00%
8	Renewable and QF Purchased Power - Capacity allocated on Peak Demand	Line 6 * Line 7	$ 7,872,063	$ 6,212,405	$ 2,664,577	$ 16,749,046
9	Renewable and QF Purchased Power - Capacity cents/kWh based on Projected Billing Period Sales	Line 8 / Line 1 / 10	0.0337	0.0269	0.0230	0.0289
	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	1.4421	1.6842	1.7254	1.6028
11	REPS Compliance and QF Purchased Power - Capacity cents/kWh	Line 9	0.0337	0.0269	0.0230	0.0289
12	Total adjusted Fuel and Fuel Related Costs cents/kWh	Line 10 + Line 11	1.4758	1.7111	1.7484	1.6317
13	EMF Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	(0.0259)	(0.0207)	0.0770	(0.0033)
14	EMF Interest (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	(0.0040)	(0.0032)	-	(0.0029)
15	Net Fuel and Fuel Related Costs Factors cents/kWh	Exh 2 Sch 2 Page 3	1.4459	1.6872	1.8254	1.6255

Note: Rounding differences may occur

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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 93.21% and Normalized Test Period Sales
Test Period Ended December 31, 2020
Billing Period September 2021 - August 2022
Docket E-7, Sub 1250

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 1228	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	23,329,575	$ 2,235,509,347	$ (45,064,232)	-2.02%	(0.1932)	1.6391	1.4459
2	General Service/Lighting	23,102,975	$ 1,577,855,414	(31,806,998)	-2.02%	(0.1377)	1.8249	1.6872
3	Industrial	11,570,060	$ 606,238,320	(12,220,778)	-2.02%	(0.1056)	1.9310	1.8254
4	NC Retail	58,002,609	$ 4,419,603,081	$ (89,092,008)				

Line #	Description	Source	Amount
	Total Proposed Composite Fuel Rate:		
5	Total Fuel Costs for Allocation	Workpaper 7a	$ 1,415,126,162
6	Total of Renewable and QF Purchased Power Capacity	Exhibit 2 Sch 2, Page 2	25,036,948
7	System Other Fuel Costs	Line 5 - Line 6	$ 1,390,089,213
8	Normalized Test Period System MWh Sales for Fuel Factor	Workpaper 7a	86,722,032
9	NC Retail Normalized Test Period MWh Sales	Exhibit 4	58,002,609
10	Allocation %	Line 9 / Line 8	66.88%
11	NC Retail Other Fuel Costs	Line 7 * Line 10	$ 929,691,666
12	NC Renewable and QF Purchased Power - Capacity	Exhibit 2 Sch 2, Page 2	16,749,046
13	NC Retail Total Fuel Costs	Line 11 + Line 12	$ 946,440,712
14	NC Retail Normalized Test Period MWh Sales	Line 9	58,002,609
15	Calculated Fuel Rate cents/kWh	Line 13 / Line 14 / 10	1.6317
16	Proposed Composite EMF Rate cents/kWh	Exhibit 3 Page 1	(0.0033)
17	Proposed Composite EMF Rate Interest cents/kWh	Exhibit 3 Page 1	(0.0029)
18	Total Proposed Composite Fuel Rate	Sum	1.6255
	Total Current Composite Fuel Rate - Docket E-7 Sub 1228:		
19	Current composite Fuel Rate cents/kWh	Sykes Exhibit 1	1.6816
20	Current composite EMF Rate cents/kWh	Sykes Exhibit 1	0.0975
21	Current composite EMF Interest Rate cents/kWh	Sykes Exhibit 1	0.0000
22	Total Current Composite Fuel Rate	Sum	1.7791
23	Increase/(Decrease) in Composite Fuel rate cents/kWh	Line 18 - Line 22	(0.1536)
24	NC Retail Normalized Test Period MWh Sales	Exhibit 4	58,002,609
25	Increase/(Decrease) in Fuel Costs	Line 23 * Line 24 * 10	$ (89,092,008)

Note: Rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
NERC 5 Year Average Nuclear Capacity Factor of 91.95% and Projected Period Sales
Test Period Ended December 31, 2020
Billing Period September 2021 - August 2022
Docket E-7, Sub 1250

Line #	Unit	Reference	Generation (MWh)	Unit Cost (cents/kWh)	Fuel Cost ($)
			D	E	D * E = F
1	Total Nuclear	Workpaper 2	57,831,714	0.6057	350,290,320
2	Coal	Calculated	19,282,087	2.3444	452,058,499
3	Gas CT and CC	Workpaper 3 & 4	22,065,718	2.2833	503,828,581
4	Reagents and Byproducts	Workpaper 9	-		25,707,869
5	Total Fossil	Sum	41,347,805		981,594,949
6	Hydro	Workpaper 3	4,030,270		
7	Net Pumped Storage	Workpaper 3	(2,872,983)		
8	Total Hydro	Sum	1,157,287		
9	Solar Distributed Generation	Workpaper 3	367,302		
10	Total Generation	Line 1 + Line 5 + Line 8 + Line 9	100,704,109		1,331,885,268
11	Less Lee CC Joint Owners	Workpaper 3 & 4	(876,000)		(16,986,285)
12	Less Catawba Joint Owners	Calculated	(14,648,010)		(88,727,875)
13	Fuel expense recovered through reimbursement	Workpaper 4			(6,522,205)
14	Net Generation	Sum	85,180,099		1,219,648,904
15	Purchased Power	Workpaper 3 & 4	8,109,496		248,794,545
16	JDA Savings Shared	Workpaper 5	-		7,856,711
17	Total Purchased Power	Sum	8,109,496		256,651,255
18	Total Generation and Purchased Power	Line 14 + Line 17	93,289,595		1,476,300,159
19	Fuel expense recovered through intersystem sales	Workpaper 3 & 4	(1,789,852)		(28,691,221)
20	Line losses and Company use	Line 22 - Line 19 - Line 18	(3,809,747)		-
21	System Fuel Expense for Fuel Factor	Lines 18 + 19 + 20			1,447,608,938
22	Projected System MWh Sales for Fuel Factor	Workpaper 7b	87,689,996		87,689,996
23	Fuel and Fuel Related Costs cents/kWh	Line 21 / Line 22 / 10			1.6508

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 91.95% and Projected Period Sales
Test Period Ended December 31, 2020
Billing Period September 2021 - August 2022
Docket E-7, Sub 1250

Line #	Description	Reference	Residential	GS/Lighting	Industrial	Total
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	Calculation of Renewable Purchased Power Capacity Rate by Class					Amount
2	Purchased Power for REPS Compliance - Capacity	Workpaper 4				$ 13,866,978
3	QF Purchased Power - Capacity	Workpaper 4				11,169,971
4	Total of Renewable and QF Purchased Power Capacity	Line 2 + Line 3				$ 25,036,948
5	NC Portion - Jursidicational % based on Peak Demand Allocator	Input				66.90%
6	NC Renewable and QF Purchased Power - Capacity	Line 4 * Line 5				$ 16,749,046
7	Peak Demand Allocation Factors	Input	47.00%	37.09%	15.91%	100.00%
8	Renewable and QF Purchased Power - Capacity allocated on Peak Demand	Line 6 * Line 7	$ 7,872,063	$ 6,212,405	$ 2,664,577	$ 16,749,046
9	Renewable and QF Purchased Power - Capacity cents/kWh based on Projected Billing Period Sales	Line 8 / Line 1 / 10	0.0361	0.0257	0.0221	0.0289
	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	1.4551	1.7097	1.7446	1.6242
11	REPS Compliance and QF Purchased Power - Capacity cents/kWh	Line 9	0.0361	0.0257	0.0221	0.0289
12	Total adjusted Fuel and Fuel Related Costs cents/kWh	Line 10 + Line 11	1.4912	1.7354	1.7667	1.6531
13	EMF Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	(0.0259)	(0.0207)	0.0770	(0.0033)
14	EMF Interest (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	(0.0040)	(0.0032)	-	(0.0029)
15	Net Fuel and Fuel Related Costs Factors cents/kWh	Exh 2 Sch 3 Page 3	1.4613	1.7115	1.8437	1.6469

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 91.95% and Projected Period Sales
Test Period Ended December 31, 2020
Billing Period September 2021 - August 2022
Docket E-7, Sub 1250

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 1228	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	21,803,077	$ 2,235,509,347	$ (38,762,432)	-1.73%	(0.1778)	1.6391	1.4613
2	General Service/Lighting	24,128,419	$ 1,577,855,414	$ (27,359,096)	-1.73%	(0.1134)	1.8249	1.7115
3	Industrial	12,036,241	$ 606,238,320	$ (10,511,820)	-1.73%	(0.0873)	1.9310	1.8437
4	NC Retail	57,967,737	$ 4,419,603,081	$ (76,633,348)				

	Total Proposed Composite Fuel Rate:		
5	Total Fuel Costs for Allocation	Workpaper 7b	$ 1,451,787,024
6	Total of Renewable and QF Purchased Power Capacity	Exhibit 2 Sch 3, Page 2	25,036,948
7	System Other Fuel Costs	Line 5 - Line 6	$ 1,426,750,076
8	Adjusted Projected System MWh Sales for Fuel Factor	Workpaper 7b	87,848,058
9	NC Retail Projected Billing Period MWh Sales	Line 4	57,967,737
10	Allocation %	Line 9 / Line 8	65.99%
11	NC Retail Other Fuel Costs	Line 7 * Line 10	$ 941,512,375
12	NC Renewable and QF Purchased Power - Capacity	Exhibit 2 Sch 3, Page 2	16,749,046
13	NC Retail Total Fuel Costs	Line 11 + Line 12	$ 958,261,421
14	NC Retail Projected Billing Period MWh Sales	Line 4	57,967,737
15	Calculated Fuel Rate cents/kWh	Line 13 / Line 14 / 10	1.6531
16	Proposed Composite EMF Rate cents/kWh	Exhibit 3 Page 1	(0.0033)
17	Proposed Composite EMF Rate Interest cents/kWh	Exhibit 3 Page 1	(0.0029)
18	Total Proposed Composite Fuel Rate	Sum	1.6469
	Total Current Composite Fuel Rate - Docket E-7 Sub 1228:		
19	Current composite Fuel Rate cents/kWh	Sykes Exhibit 1	1.6816
20	Current composite EMF Rate cents/kWh	Sykes Exhibit 1	0.0975
21	Current composite EMF Interest Rate cents/kWh	Sykes Exhibit 1	0.0000
22	Total Current Composite Fuel Rate	Sum	1.7791
23	Increase/(Decrease) in Composite Fuel rate cents/kWh	Line 18 - Line 22	(0.1322)
24	NC Retail Projected Billing Period MWh Sales	Line 4	57,967,737
25	Increase/(Decrease) in Fuel Costs	Line 23 * Line 24 * 10	$ (76,633,348)

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, 2020
Billing Period September 2021 - August 2022
Docket E-7, Sub 1250

Line No.	Month	Fuel Cost Incurred ¢/kWh (a)	Fuel Cost Billed ¢/kWh (b)	NC Retail MWh Sales (c)	Reported (Over)/ Under Recovery (d)
1	January 2020			4,799,050	$ (7,772,097)
2	February			4,852,515	$ (22,331,610)
3	March			4,419,005	$ (22,145,172)
4	April			4,009,531	$ (19,263,780)
5	May			3,737,498	$ (7,856,726)
6	June [1]			4,445,349	$ 3,557,928
7	July			5,381,134	$ 13,395,789
8	August			5,679,285	$ 8,998,515
9	September			5,143,265	$ (11,722,010)
10	October			4,161,109	$ 884,018
11	November			4,768,317	$ (13,335,325)
12	December [1]			4,115,807	$ 23,445,876
13	**Total Test Period**			**55,511,864**	**$ (54,144,594)**
14	Adjustment to remove (Over)/Under Recovery - January-March 2020[2]				$ (52,248,875)
15	**Adjusted (Over)/Under Recovery**				**$ (1,895,719)**
16	NC Retail Normalized Test Period MWh Sales			Exhibit 4	58,002,609
17	**Experience Modification Increment (Decrement) cents/kWh**				**(0.0033)**
18	Adjusted (Over)/Under Recovery				$ (1,895,719)
19	Adjustment to remove customer credits for purchased power contract terms[3]				$ 5,318
20	Amount of refund for interest computation				$ (1,890,402)
21	Annual Interest Rate				10%
22	Monthly Interest Rate				0.83%
23	Number of Months (August 15, 2020 - February 28, 2022)				18.5
24	Interest				$ (1,664,640)
25	**Experience Modification Increment (Decrement) cents/kWh**				**(0.0029)**

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

[2] January-March 2020 filed in fuel Docket E-7, Sub 1228 to update the EMF and included in current EMF rate.
Included for Commission review in accordance with NC Rule R8-55(d)(3) but deducted from total (Over)/Under on Line 16.

[3] Purchased power contract term collections not considered a refund of amounts advanced by customers, therefore have been excluded from the computation of interest.

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, 2020
Billing Period September 2021 - August 2022
Docket E-7, Sub 1250

Line #	Month	Fuel Cost Incurred ¢/kWh (a)	Fuel Cost Billed ¢/kWh (b)	NC Retail MWH Sales (c)	Reported (Over)/ Under Recovery (d)
1	January 2020	1.4459	1.8127	2,021,126	$ (7,413,792)
2	February	1.2613	1.8127	1,940,656	$ (10,701,007)
3	March	1.2791	1.8127	1,693,572	$ (9,037,706)
4	April	1.3789	1.8127	1,450,861	$ (6,293,969)
5	May	1.6559	1.8127	1,342,790	$ (2,105,593)
6	June [1]	1.8232	1.8127	1,700,445	$ 165,111
7	July	1.8123	1.8127	2,257,762	$ (8,998)
8	August	1.7591	1.8127	2,353,392	$ (1,262,025)
9	September	1.4671	1.7118	1,961,816	$ (4,800,324)
10	October	1.8861	1.6027	1,361,181	$ 3,858,149
11	November	1.7168	1.6027	1,406,770	$ 1,604,755
12	December [1]	1.7373	1.6027	1,905,668	$ 2,811,210
13	**Total Test Period**			**21,396,039**	**$ (33,184,189)**
14	Test Period Wtd Avg. ¢/kWh	1.6014	1.7576		
15	Adjustment to remove (Over)/Under Recovery - January-March 2020[2]				$ (27,152,504)
16	**Adjusted (Over)/Under Recovery**				**$ (6,031,685)**
17	NC Retail Normalized Test Period MWh Sales			Exhibit 4	23,329,575
18	**Experience Modification Increment (Decrement) cents/kWh**				**(0.0259)**
19	Adjusted (Over)/Under Recovery				$ (6,031,685)
20	Adjustment to remove customer credits for purchased power contract terms[3]				$ 2,419
21	Amount of refund for interest computation				$ (6,029,266)
22	Annual Interest Rate				10%
23	Monthly Interest Rate				0.83%
24	Number of Months (August 15, 2020 - February 28, 2022)				18.5
25	Interest				$ (929,511)
26	**Experience Modification Increment (Decrement) cents/kWh**				**(0.0040)**

Notes:

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

[2] January-March 2020 filed in fuel Docket E-7, Sub 1228 to update the EMF and included in 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] Purchased power contract term collections not considered a refund of amounts advanced by customers, therefore have been excluded from the computation of interest.

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, 2020
Billing Period September 2021 - August 2022
Docket E-7, Sub 1250

Line #	Month	Fuel Cost Incurred ¢/kWh (a)	Fuel Cost Billed ¢/kWh (b)	NC Retail MWh Sales (c)		Reported (Over)/ Under Recovery (d)
1	January 2020	1.8136	1.9562	1,919,161	$	(2,736,820)
2	February	1.5188	1.9562	1,917,354	$	(8,385,934)
3	March	1.4558	1.9562	1,771,910	$	(8,865,883)
4	April	1.4000	1.9562	1,700,279	$	(9,457,058)
5	May	1.6578	1.9562	1,595,041	$	(4,759,228)
6	June [1]	1.9960	1.9562	1,845,527	$	724,468
7	July	2.2244	1.9562	2,167,855	$	5,814,650
8	August	2.1618	1.9562	2,253,716	$	4,633,072
9	September	1.6002	1.8611	2,126,565	$	(5,550,013)
10	October	1.6495	1.7583	1,844,555	$	(2,007,635)
11	November	1.3617	1.7583	2,116,483	$	(8,394,817)
12	December [1]	2.7101	1.7583	1,459,697	$	14,225,259
13	**Total Test Period**			**22,718,144**	**$**	**(24,759,939)**
14	Test Period Wtd Avg. ¢/kWh	1.7897	1.9001			
15	Adjustment to remove (Over)/Under Recovery - January-March 2020[2]					(19,988,636)
16	**Adjusted (Over)/Under Recovery**				**$**	**(4,771,302)**
17	NC Retail Normalized Test Period MWh Sales			Exhibit 4		23,102,975
18	**Experience Modification Increment (Decrement) cents/kWh**					**(0.0207)**
19	Adjusted (Over)/Under Recovery				$	(4,771,302)
20	Adjustment to remove customer credits for purchased power contract terms[3]				$	2,899
21	Amount of refund for interest computation				$	(4,768,404)
22	Annual Interest Rate					10%
23	Monthly Interest Rate					0.83%
24	Number of Months (August 15, 2020 - February 28, 2022)					18.5
25	Interest				$	(735,129)
26	**Experience Modification Increment (Decrement) cents/kWh**					**(0.0032)**

Notes:

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

[2] January-March 2020 filed in fuel Docket E-7, Sub 1228 to update the EMF and included in 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] Purchased power contract term collections not considered a refund of amounts advanced by customers, therefore have been excluded from the computation of interest.

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, 2020
Billing Period September 2021 - August 2022
Docket E-7, Sub 1250

Line #	Month	Fuel Cost Incurred ¢/kWh (a)	Fuel Cost Billed ¢/kWh (b)	NC Retail MWh Sales (c)		Reported (Over)/ Under Recovery (d)
1	January 2020	2.1705	1.8935	858,763	$	2,378,515
2	February	1.5672	1.8935	994,505	$	(3,244,669)
3	March	1.4487	1.8935	953,523	$	(4,241,584)
4	April	1.4843	1.8935	858,390	$	(3,512,753)
5	May	1.7695	1.8935	799,666	$	(991,906)
6	June (1)	2.1907	1.8935	899,377	$	2,668,350
7	July	2.6878	1.8935	955,517	$	7,590,138
8	August	2.4184	1.8935	1,072,177	$	5,627,469
9	September	1.6538	1.7838	1,054,884	$	(1,371,673)
10	October	1.5640	1.6652	955,373	$	(966,497)
11	November	1.1395	1.6652	1,245,063	$	(6,545,263)
12	December (1)	2.5964	1.6652	750,442	$	6,409,407
13	**Total Test Period**			**11,397,681**	**$**	**3,799,534**
14	Test Period Wtd Avg. ¢/kWh	1.8627	1.8242			
15	Adjustment to remove (Over)/Under Recovery - January-March 2020[2]				$	(5,107,737)
16	**Adjusted (Over)/Under Recovery**				**$**	**8,907,271**
17	NC Retail Normalized Test Period MWh Sales			Exhibit 4		11,570,060
18	**Experience Modification Increment (Decrement) cents/KWh**					**0.0770**

Notes:

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

[2] January-March 2020 filed in fuel Docket E-7, Sub 1228 to update the EMF and included in current EMF rate.
Included for Commission review in accordance with NC Rule R8-55(d)(3) but deducted from total (Over)/Under on Line 16.

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, 2020
Billing Period September 2021 - August 2022
Docket E-7, Sub 1250

Sykes 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)	82,983,046	55,511,864	21,396,039	22,718,144	11,397,681
2	Customer Growth MWh Adjustment	Workpaper 13 Pg 1	494,727	322,769	225,676	89,954	7,139
3	Weather MWh Adjustment	Workpaper 12	3,086,197	2,167,977	1,707,860	294,877	165,240
4	Total Normalized MWh Sales	Sum	86,563,971	58,002,609	23,329,575	23,102,975	11,570,060
5	Test Period Fuel and Fuel Related Revenue *		$ 1,571,170,278	$ 1,015,637,375			
6	Test Period Fuel and Fuel Related Expense *		$ 1,435,008,103	$ 961,492,783			
7	Test Period Unadjusted (Over)/Under Recovery		$ (136,162,175)	$ (54,144,594)			

		Summer Coincidental Peak (CP) kW
8	Total System Peak	17,438,327
9	NC Retail Peak	11,665,772
10	NC Residential Peak	5,482,921
11	NC General Service/Lighting Peak	4,326,963
12	NC Industrial Peak	1,855,888

* 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.

Duke Energy Carolinas, LLC **Sykes Exhibit 5**

North Carolina Annual Fuel and Fuel Related Expense

Nuclear Capacity Ratings

Test Period Ended December 31, 2020

Billing Period September 2021 - August 2022

Docket E-7, Sub 1250

Unit	Rate Case Docket E-7, Sub 1146	Fuel Docket E-7, Sub 1228	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	1,160.1
Catawba Unit 2	1,150.1	1,150.1	1,150.1
Total Company	7,179.8	7,179.8	7,179.8

I/A

Sykes Exhibit 6

DECEMBER 2020 MONTHLY FUEL FILING

DUKE ENERGY CAROLINAS
SUMMARY OF MONTHLY FUEL REPORT

Docket No. E-7, Sub 1234

Line No.		December 2020	12 Months Ended December 2020
1	Fuel and fuel-related costs	$ 139,993,351	$ 1,435,984,896
	MWH sales:		
2	Total system sales	6,362,066	84,193,171
3	Less intersystem sales	89,096	1,210,125
4	Total sales less intersystem sales	6,272,970	82,983,046
5	Total fuel and fuel-related costs (¢/KWH) (line 1/line 4)	2.2317	1.7305
6	Current fuel and fuel-related cost component (¢/KWH) (per Schedule 4, Line 7a Total)	1.6693	
	Generation Mix (MWH):		
	Fossil (by primary fuel type):		
7	Coal	1,371,448	14,738,937
8	Fuel Oil	8,702	64,807
9	Natural Gas - Combined Cycle	1,016,660	14,333,589
10	Natural Gas - Combined Heat and Power	39	5,300
11	Natural Gas - Combustion Turbine	97,325	775,879
12	Natural Gas - Steam	172,344	2,406,276
13	Biogas	2,622	25,709
14	Total fossil	2,669,140	32,350,497
15	Nuclear 100%	5,476,820	59,945,886
16	Hydro - Conventional	252,107	3,016,593
17	Hydro - Pumped storage	(48,524)	(505,461)
18	Total hydro	203,583	2,511,132
19	Solar Distributed Generation	10,105	148,719
20	Total MWH generation	8,359,648	94,956,234
21	Less joint owners' portion - Nuclear	1,413,968	15,631,285
22	Less joint owners' portion - Combined Cycle	82,982	1,319,907
23	Adjusted total MWH generation	6,862,698	78,005,042

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

DUKE ENERGY CAROLINAS
DETAILS OF FUEL AND FUEL-RELATED COSTS

Docket No. E-7, Sub 1234

Fuel and fuel-related costs:	December 2020	12 Months Ended December 2020
0501110 coal consumed - steam	$ 42,109,238	$ 509,419,250
0501310 fuel oil consumed - steam	181,852	3,355,663
0501330 fuel oil light-off - steam	305,196	3,287,490
Total Steam Generation - Account 501	42,596,286	516,062,403
Nuclear Generation - Account 518		
0518100 burnup of owned fuel	22,919,977	256,442,658
Other Generation - Account 547		
0547100, 0547124 - natural gas consumed - Combustion Turbine	3,854,899	26,580,246
0547100 - Combustion Turbine - credit for inefficient fuel cost	(45,980)	(100,388)
0547100 natural gas consumed - Steam	6,405,649	73,118,890
0547101 natural gas consumed - Combined Cycle	24,719,752	281,739,819
0547101 natural gas consumed - Combined Heat and Power	25,323	566,869
0547106 biogas consumed - Combined Cycle	141,294	1,388,864
0547200 fuel oil consumed - Combustion Turbine	876,617	2,063,581
Total Other Generation - Account 547	35,977,554	385,357,881
Reagents		
Reagents (lime, limestone, ammonia, urea, dibasic acid, and sorbents)	1,608,993	17,555,512
Total Reagents	1,608,993	17,555,512
By-products		
Net proceeds from sale of by-products	1,169,523	7,934,796
Total By-products	1,169,523	7,934,796
Total Fossil and Nuclear Fuel Expenses Included in Base Fuel Component	104,272,333	1,183,353,250
Purchased Power and Net Interchange - Account 555		
Capacity component of purchased power (economic)	215,310	10,765,481
Capacity component of purchased power (renewables)	615,486	14,501,806
Capacity component of purchased power (PURPA)	256,193	6,762,310
Fuel and fuel-related component of purchased power	37,895,970	248,287,490
Total Purchased Power and Net Interchange - Account 555	38,982,959	280,317,087
Less:		
Fuel and fuel-related costs recovered through intersystem sales	3,152,653	26,840,359
Fuel in loss compensation	85,032	755,898
Solar Integration Charge	-	3,864
Lincoln CT marginal fuel revenue	13,953	75,020
Miscellaneous Fees Collected	10,300	10,300
Total Fuel Credits - Accounts 447 /456	3,261,938	27,685,441
Total Fuel and Fuel-related Costs	$ 139,993,351	$ 1,435,984,896

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

DECEMBER 2020

Purchased Power	Total	Capacity	Non-capacity			
Economic	$	$	mWh	Fuel $	Fuel-related $	Not Fuel $ Not Fuel-related $
Carolina Power Partners, LLC	$ 978,100	-	33,440	$ 596,641	$ 381,459	
Cherokee County Cogeneration Partners	1,521,127	$ 215,310	39,774	1,122,180	183,637	
Cube Yadkin Generation LLC	123,723	-	7,709	75,471	48,252	
DE Progress - Native Load Transfer	19,491,334	-	738,327	17,470,858	2,027,149	$ (6,673)
DE Progress - Native Load Transfer (Prior Period Adjust)	734	-	-	-	734	
DE Progress - Native Load Transfer Benefit	2,139,555	-	-	2,139,555	-	
Haywood Electric - Economic	24,989	20,230	109	2,903	1,856	
Macquarie Energy, LLC	3,675,222	-	86,739	2,241,885	1,433,337	
NCEMC - Economic	42,120	-	810	25,693	16,427	
NCMPA Instantaneous - Economic	838,428	-	34,370	484,444	353,984	
Piedmont Municipal Power Agency	285,149	-	12,007	164,759	120,390	
PJM Interconnection, LLC.	230,674	-	6,200	140,711	89,963	
Southern Company Services, Inc.	63,004	-	2,688	38,432	24,572	
Tennesse Valley Authority	237,512	-	7,094	144,882	92,630	
Town of Dallas	584	584	-	-	-	
Town of Forest City	19,856	19,856	-	-	-	
	$ 29,672,111	**$ 255,980**	**969,267**	**$ 24,648,415**	**$ 4,774,389**	**$ (6,673)**
Renewable Energy						
REPS	$ 4,701,460	$ 610,344	84,946	$ -	$ 4,091,116	$ -
DERP - Purchased Power	54,261	5,142	910	-	37,283	11,836
	$ 4,755,721	**$ 615,486**	**85,856**	**$ -**	**$ 4,128,399**	**$ 11,836**
HB589 PURPA Purchases						
CPRE - Purchased Power	(10,000)	-	-			(10,000)
Qualifying Facilities	2,895,926	256,193	57,308		2,568,618	71,115
	$ 2,885,926	**$ 256,193**	**57,308**	**$ -**	**$ 2,568,618**	**$ 61,115**
Non-dispatchable / Other						
Blue Ridge Electric Membership Corp.	$ 1,020,170	$ 619,257	25,417	$ 244,557		$ 156,356
Carolina Power Partners, LLC	597,600	-	18,000	364,536		233,064
DE Progress - As Available Capacity	3,826	3,826	-	-		-
Exelon Generation Company, LLC.	38,430	-	1,098	23,442		14,988
Haywood Electric	227,559	116,898	5,409	67,503		43,158
Macquarie Energy, LLC	1,260,096	-	32,084	768,659		491,437
Morgan Stanley Capital Group	36,138	-	1,277	22,044		14,094
NCEMC - Other	4,021	4,021	-	-		-
Piedmont Electric Membership Corp.	461,013	267,253	11,904	118,193		75,566
Southern Company Services, Inc.	56,000	-	2,000	34,160		21,840
Generation Imbalance	141,567	-	3,780	55,654		85,913
Energy Imbalance - Purchases	12,166	-	(8,729)	10,443		1,723
Energy Imbalance - Sales	(288,704)	-	-	(278,165)		(10,539)
Other Purchases	356	-	14	-		356
	$ 3,570,237	**$ 1,011,255**	**92,254**	**$ 1,431,026**	**$ -**	**$ 1,127,956**
Total Purchased Power	**$ 40,883,995**	**$ 2,138,914**	**1,204,685**	**$ 26,079,441**	**$ 11,471,406**	**$ 1,194,234**
Interchanges In						
Other Catawba Joint Owners	7,508,569	-	711,873	4,285,824		3,222,745
WS Lee Joint Owner	1,210,914		42,903	1,034,072		176,842
Total Interchanges In	8,719,483	-	754,776	5,319,897	-	3,399,586
Interchanges Out						
Other Catawba Joint Owners	(7,361,777)	(134,209)	(693,224)	(4,174,593)		(3,052,975)
Catawba- Net Negative Generation	-	-	-	-		-
WS Lee Joint Owner	(957,875)		(33,340)	(800,181)		(157,694)
Total Interchanges Out	(8,319,652)	(134,209)	(726,564)	(4,974,774)	-	(3,210,669)
Net Purchases and Interchange Power	**$ 41,283,826**	**$ 2,004,705**	**1,232,897**	**$ 26,424,564**	**$ 11,471,406**	**$ 1,383,151**

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

DECEMBER 2020

Sales	Total $	Capacity $	Non-capacity mWh	Non-capacity Fuel $	Non-capacity Non-fuel $
Utilities:					
DE Progress - Emergency	$ 100,774	$ -	1,180	$ 92,137	$ 8,638
Market Based:					
Macquarie Energy, LLC	-	-	-	2,699	(2,699)
NCMPA	106,134	87,500	270	20,014	(1,381)
PJM Interconnection, LLC.	(3)	-	-	-	(3)
Other:					
DE Progress - Native Load Transfer Benefit	297,225	-	-	297,225	-
DE Progress - Native Load Transfer	2,809,592	-	85,741	2,691,167	118,425
Generation Imbalance	61,927	-	1,905	49,411	12,516
BPM Transmission	3,092	-			3,092
Total Intersystem Sales	**$ 3,378,741**	**$ 87,500**	**89,096**	**$ 3,152,653**	**$ 138,588**

* 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 DECEMBER 2020

Purchased Power	Total	Capacity	Non-capacity			
Economic	$	$	mWh	Fuel $	Fuel-related $	Not Fuel $ Not Fuel-related $
Carolina Power Partners, LLC	$ 2,224,380	-	86,400	$ 1,356,872	$ 867,508	
Cherokee County Cogeneration Partners	20,600,437	$ 10,765,481	351,406	8,109,001	1,725,955	
Cube Yadkin Generation LLC	123,723	-	7,709	75,471	48,252	
DE Progress - Native Load Transfer	100,976,135	-	5,911,217	92,233,427	8,497,582	$ 245,126
DE Progress - Native Load Transfer (Prior Period Adjust)	734	-	-	-	734	
DE Progress - Native Load Transfer Benefit	12,958,040	-	-	12,958,040	-	
DE Progress - Fees	6,036	-	-	-	6,036	
EDF Trading North America, LLC.	3,120	-	240	1,903	1,217	
Exelon Generation Company, LLC.	76,305	-	2,685	46,546	29,759	
Haywood Electric - Economic	274,796	256,136	607	11,383	7,277	
Macquarie Energy, LLC	6,590,892	-	196,775	4,020,444	2,570,448	
NCEMC	42,120	-	810	25,693	16,427	
NCMPA Load Following Economic	7,491,216	-	459,359	4,377,196	3,114,020	
NTE Carolinas LLC	820,801	-	37,325	500,688	320,113	
Piedmont Municipal Power Agency	2,978,297	-	193,184	1,751,386	1,226,911	
PJM Interconnection, LLC.	422,946	-	13,872	257,998	164,948	
Rainbow Energy Marketing Corporation	7,548	-	300	4,604	2,944	
South Carolina Electric & Gas Company / Dominion Energy	13,450	-	400	7,930	5,520	
Southern Company Services, Inc.	427,836	-	25,491	260,980	166,856	
Tennesse Valley Authority	559,698	-	23,066	341,416	218,281	
The Energy Authority	8,244	-	229	5,029	3,215	
Town of Dallas	7,008	7,008	-	-	-	
Town of Forest City	238,272	238,272	-	-	-	
	$ 156,852,034	**$ 11,266,897**	**7,311,075**	**$ 126,346,007**	**$ 18,994,003**	**$ 245,126**
Renewable Energy						
REPS	$ 70,245,371	$ 14,411,272	1,145,873	$ -	$ 55,834,100	$ -
DERP - Purchased Power	966,899	90,534	16,567	-	679,995	196,370
DERP - Net Metered Generation	56,012	10,243	1,297	-		45,769
	$ 71,268,282	**$ 14,512,049**	**1,163,736**	**$ -**	**$ 56,514,095**	**$ 242,139**
HB589 PURPA Purchases						
CPRE - Purchased Power	$ (2,244,000)	$ -	-			$ (2,244,000)
Qualifying Facilities	38,695,060	6,762,310	681,954		$ 30,908,248	1,024,502
	$ 36,451,060	**$ 6,762,310**	**681,954**	**$ -**	**$ 30,908,248**	**$ (1,219,498)**
Non-dispatchable / Other						
Carolina Power & Light (DE Progress) - Emergency	$ 49,412	$ -	569	$ 30,141		$ 19,271
Blue Ridge Electric Membership Corp.	13,522,047	7,488,673	305,808	3,680,359		2,353,015
Carolina Power Partners, LLC	1,509,240	-	46,800	920,636		588,604
DE Progress - As Available Capacity	149,077	149,077	-	-		-
Exelon Generation Company, LLC.	38,430	-	1,098	23,442		14,988
Haywood Electric	2,872,965	1,494,026	63,271	841,155		537,784
Macquarie Energy, LLC	5,754,063	-	146,648	3,509,979		2,244,084
Morgan Stanley Capital Group	36,138	-	1,277	22,044		14,094
NCEMC - Other	364,189	51,816	6,049	190,548		121,825
NCMPA - Reliability	57,240	-	1,080	34,916		22,324
Piedmont Electric Membership Corp.	6,391,828	3,524,179	140,544	1,749,265		1,118,383
PJM Interconnection, LLC - Other	3,744	-	175	2,284		1,460
Southern Company Services, Inc.	364,619	-	7,011	222,418		142,201
Generation Imbalance	1,307,904		56,424	565,036		742,868
Energy Imbalance - Purchases	668,581		(1,430)	518,790		149,791
Energy Imbalance - Sales	(1,008,321)		-	(948,806)		(59,515)
Other Purchases	8,268	-	258	-		8,268
	$ 32,089,423	**$ 12,707,771**	**775,582**	**$ 11,362,207**	**$ -**	**$ 8,019,445**
Total Purchased Power	**$ 296,660,799**	**$ 45,249,027**	**9,932,347**	**$ 137,708,214**	**$ 106,416,346**	**$ 7,287,211**
Interchanges In						
Other Catawba Joint Owners	74,998,623	-	7,867,637	43,384,153		31,614,472
WS Lee Joint Owner	11,295,227	-	500,924	9,242,716		2,052,512
Total Interchanges In	86,293,850	-	8,368,561	52,626,868	-	33,666,984
Interchanges Out						
Other Catawba Joint Owners	(71,597,673)	(1,584,537)	(7,454,361)	(41,125,471)		(28,887,665)
Catawba- Net Negative Generation	(188,590)	-	(9,707)	(129,579)		(59,011)
WS Lee Joint Owner	(9,029,429)	-	(395,030)	(7,208,892)		(1,820,537)
Total Interchanges Out	(80,815,692)	(1,584,537)	(7,859,098)	(48,463,942)	-	(30,767,213)
Net Purchases and Interchange Power	**$ 302,138,957**	**$ 43,664,490**	**10,441,810**	**$ 141,871,140**	**$ 106,416,346**	**$ 10,186,982**

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 DECEMBER 2020

Sales	Total $	Capacity $	Non-capacity mWh	Non-capacity Fuel $	Non-capacity Non-fuel $
Utilities:					
DE Progress - Emergency	$ 125,188	-	2,322	$ 113,626	$ 11,563
SC Public Service Authority - Emergency	11,678	-	456	9,389	2,289
SC Electric & Gas / Dominion Energy - Emergency	16,079	-	653	29,063	(12,984)
Market Based:					
Central Electric Power Cooperative, Inc.	5,546,611	$ 4,809,000	23,372	694,954	42,657
EDF Trading Company	64,800	-	2,050	40,370	24,430
Evergy Kansas Central (BPM)	83,610	-	2,664	49,921	33,689
Exelon Generation Company, LLC.	29,085	-	1,680	27,783	1,302
Macquarie Energy, LLC	1,479,310	-	51,940	1,030,403	448,907
NCMPA	1,201,597	1,050,003	5,572	170,190	(18,597)
PJM Interconnection, LLC.	181,650	-	8,552	182,675	(1,025)
SC Electric & Gas / Dominion Energy	391,427	-	12,300	235,047	156,380
Southern Company	54,834	-	6,730	95,407	(40,573)
Tennesse Valley Authority	22,500	-	450	15,720	6,780
The Energy Authority	260,242	-	10,148	161,253	98,989
Other:					
DE Progress - Native Load Transfer Benefit	3,387,778	-	-	3,387,778	-
DE Progress - Native Load Transfer	21,570,376	-	1,062,405	20,142,840	1,427,536
Generation Imbalance	411,383	-	18,831	453,940	(42,557)
BPM Transmission	(195,265)	-		-	(195,265)
Total Intersystem Sales	**$ 34,642,883**	**$ 5,859,003**	**1,210,125**	**$ 26,840,359**	**$ 1,943,521**

* 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
December 2020

Line No.			Residential	Commercial	Industrial	Total
1	Actual System kWh sales	Input				6,272,969,895
2	DERP Net Metered kWh generation	Input				10,483,803
3	Adjusted System kWh sales	L1 + L2				6,283,453,698
4	N.C. Retail kWh sales	Input	1,905,668,087	1,459,697,098	750,442,212	4,115,807,397
5	NC kWh sales % of actual system kWh sales	L4 T / L1				65.61%
6	NC kWh sales % of adjusted system kWh sales	L4 T / L3				65.50%
7	Approved fuel and fuel-related rates (¢/kWh)					
	7a Billed rates by class (¢/kWh)	Input Annually	1.6027	1.7583	1.6652	1.6693
	7b Billed fuel expense	L7b * L4 / 100	$30,542,142	$25,665,854	$12,496,364	$68,704,360
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	35.85%	42.97%	21.18%	
	8b System incurred expense	Input				$139,569,050
	8c Incurred base fuel and fuel-related expense	L8b * L6 * 8a	$32,774,892	$39,280,050	$19,366,012	$91,420,954
	8d Incurred base fuel rates by class (¢/kWh)	L8c / L4 * 100	1.7199	2.6910	2.5806	2.2212
9	Incurred renewable purchased power capacity rates by class (¢/kWh)					
	9a NC retail production plant %	Input				67.09%
	9b Production plant allocation factors	Input	45.45%	38.36%	16.20%	100.00%
	9c System incurred expense	Input				$1,086,989
	9d Incurred renewable capacity expense	L9a * L9b * 9c	$331,423	$279,724	$118,135	$729,282
	9e Incurred renewable capacity rates by class (¢/kWh)	(L9a * L9c) * L9b / L4 * 100	0.0174	0.0192	0.0157	0.0177
10	Total incurred rates by class (¢/kWh)	L8d + L9e	1.7373	2.7101	2.5964	2.2389
11	Difference in ¢/kWh (incurred - billed)	L7a - L10	0.1346	0.9518	0.9312	0.5697
12	(Over) / under recovery [See footnote]	(L4 * L11) / 100	$2,564,173	$13,893,920	$6,987,783	$23,445,876
13	Prior period adjustments	Input	247,037	331,339	(578,376)	0
14	Total (over) / under recovery [See footnote]	L12+ L13	$2,811,210	$14,225,259	$6,409,407	$23,445,876
15	Total system incurred expense	L8b + L9c				$140,656,039
16	Less: Jurisdictional allocation adjustment(s)	Input				662,688
17	Total Fuel and Fuel-related Costs per Schedule 2	L15 + L16				$139,993,351

Duke Energy Carolinas
(Over) / Under Recovery of Fuel Costs
December 2020

Line No.			(Over) / Under Recovery				
18	(Over) / under recovery for each month of the current calendar year [See footnote]						
	Year 2020	Total To Date	Residential	Commercial	Industrial	Total Company
	January	($7,772,097)	($7,413,792)	($2,736,820)	$2,378,515	($7,772,097)
	February	(30,103,707)	($10,701,007)	($8,385,934)	($3,244,669)	($22,331,610)
	March	(52,248,879)	($9,037,706)	($8,865,883)	($4,241,584)	($22,145,172)
	April	(71,512,659)	($6,293,969)	($9,457,058)	($3,512,753)	($19,263,780)
	May	(79,369,385)	($2,105,593)	($4,759,228)	($991,906)	($7,856,726)
_/1	June	(75,811,457)	$165,111	$724,468	$2,668,350	$3,557,928
	July	(62,415,668)	($8,998)	$5,814,650	$7,590,138	$13,395,789
	August	(53,417,153)	($1,262,025)	$4,633,072	$5,627,469	$8,998,515
_/2	September	(65,139,163)	($4,800,324)	($5,550,013)	($1,371,673)	($11,722,010)
_/2	October	(64,255,145)	$3,858,149	($2,007,635)	($966,497)	$884,018
	November	($77,590,470)	$1,604,755	($8,394,817)	($6,545,263)	($13,335,325)
_/1	December	($54,144,594)	$2,811,210	$14,225,259	$6,409,407	$23,445,876
			($33,184,189)	($24,759,939)	$3,799,534	($54,144,594)

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 prior period 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 2020

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	-	-	-		-	-	-	-	-
Gas - CC	$10,899,040	$4,337,175	$10,892,051						
Gas - CHP				$25,323					
Gas - CT					$33,260	$178,930	$373,904	$379,803	$2,843,021
Gas - Steam					264				
Biogas	395,748	(263)	-						
Total	$11,294,788	$4,336,912	$10,892,051	$25,323	$33,524	$178,930	$373,904	$379,803	$2,843,021
Average Cost of Fuel Purchased (¢/MBTU)									
Coal		-							
Oil					-	-	-	-	-
Gas - CC	359.39	363.23	364.04						
Gas - CHP				4,841.94					
Gas - CT					638.06	370.11	319.96	361.44	361.68
Gas - Steam					332.60				
Biogas	2,174.44	-	-						
Weighted Average	370.22	363.21	364.04	4,841.94	638.06	370.11	319.96	361.44	361.68
Cost of Fuel Burned ($)									
Coal		-	-		-				
Oil - CC	-	-	-						
Oil - Steam/CT					$0	4,736	-	694,987	176,893
Gas - CC	$10,899,040	$4,337,175	$10,892,051						
Gas - CHP				$25,323					
Gas - CT					33,260	$178,930	$373,904	$379,803	$2,843,021
Gas - Steam					264				
Biogas	395,748	(263)	-						
Nuclear									
Total	$11,294,788	$4,336,912	$10,892,051	$25,323	$33,524	$183,667	$373,904	$1,074,791	$3,019,914
Average Cost of Fuel Burned (¢/MBTU)									
Coal					-				
Oil - CC									
Oil - Steam/CT					-	1,518.09	-	1,794.07	1,552.24
Gas - CC	359.39	363.23	364.04						
Gas - CHP				4,841.94					
Gas - CT					638.06	370.11	319.96	361.44	361.68
Gas - Steam					332.60				
Biogas	2,174.44	-	-						
Nuclear									
Weighted Average	370.22	363.21	364.04	4,841.94	638.06	377.48	319.96	747.32	378.70
Average Cost of Generation (¢/kWh)									
Coal		-	-		-	-	-		
Oil - CC	-	-	-						
Oil - Steam/CT		-	-		-	16.67	-	23.46	16.67
Gas - CC	2.49	2.60	2.64						
Gas - CHP				65.60					
Gas - CT					8.34	5.90	3.41	4.63	3.81
Gas - Steam					-	-	-		
Biogas	15.10	-	-						
Nuclear									
Weighted Average	2.57	2.60	2.64	65.60	209.52	6.00	3.41	9.62	3.99
Burned MBTU's									
Coal					-				
Oil - CC									
Oil - Steam/CT					-	312	-	38,738	11,396
Gas - CC	3,032,651	1,194,065	2,991,957						
Gas - CHP				523					
Gas - CT					5,213	48,345	116,859	105,081	786,050
Gas - Steam					41				
Biogas	18,200	-	-						
Nuclear									
Total	3,050,851	1,194,065	2,991,957	523	5,254	48,657	116,859	143,819	797,446
Net Generation (mWh)									
Coal									
Oil - CC									
Oil - Steam/CT		-	-		-	28	-	2,963	1,061
Gas - CC	436,836	167,022	412,802		-				
Gas - CHP				39					
Gas - CT					399	3,031	10,971	8,208	74,717
Gas - Steam					(383)				
Biogas	2,622	-	-						
Nuclear 100%									
Hydro (Total System)									
Solar (Total System)									
Total	439,458	167,022	412,802	39	16	3,059	10,971	11,171	75,778
Cost of Reagents Consumed ($)									
Ammonia	$18,886	$5,818	$0						
Limestone									
Sorbents									
Urea									
Re-emission Chemical									
Dibasic Acid									
Activated Carbon									
Lime (water emissions)									
Total	$18,886	$5,818	$0						

Notes:

(A) Lincoln (Unit 17) fuel and fuel related costs represents pre-commercial generation during an extended testing and validation period.

(B) Solar Net Generation (mWh) for the month of December includes pre-commercial 225 mWh for Gaston Solar and 621 mWh for Maiden Creek Solar.

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 2020

Description	Allen Steam	Marshall Steam - Dual Fuel	Belews Creek Steam - Dual Fuel	Cliffside Steam - Dual Fuel	Catawba Nuclear	McGuire Nuclear	Oconee Nuclear	Current Month	Total 12 ME December 2020
Cost of Fuel Purchased ($)									
Coal	$1,577,477	$1,754,302	$11,470,966	$10,418,928				$25,221,674	$524,924,279
Oil	185,282	184,358	-	128,100				497,740	7,111,516
Gas - CC								26,128,266	296,014,769
Gas - CHP								25,323	566,869
Gas - CT								3,808,918	26,479,858
Gas - Steam		658,574	920,601	4,826,210				6,405,649	73,118,890
Biogas								395,485	3,886,168
Total	$1,762,760	$2,597,234	$12,391,568	$15,373,238				$62,483,056	$932,102,349
Average Cost of Fuel Purchased (¢/MBTU)									
Coal	146.33	120.66	387.31	248.05				260.18	363.32
Oil	1,111.33	1,114.19	-	1,123.87				1,115.60	964.95
Gas - CC								360.47	291.63
Gas - CHP								4,841.94	900.44
Gas - CT								363.61	293.34
Gas - Steam		361.83	356.40	366.63				364.63	296.70
Biogas				.				2,173.00	2,121.55
Weighted Average	161.03	157.17	384.83	278.09				315.66	332.14
Cost of Fuel Burned ($)									
Coal	3,571,288	$22,581,995	$1,720,310	$14,235,645				$42,109,238	$509,419,250
Oil - CC								-	-
Oil - Steam/CT	169,845	214,154	-	103,049				1,363,664	8,706,734
Gas - CC								26,128,266	296,014,769
Gas - CHP								25,323	566,869
Gas - CT								3,808,918	26,479,858
Gas - Steam		658,574	920,601	4,826,210				6,405,649	73,118,890
Biogas								395,485	3,886,168
Nuclear					$10,059,697	$9,693,332	$11,290,556	31,043,585	348,551,598
Total	$3,741,133	$23,454,723	$2,640,912	$19,164,904	$10,059,697	$9,693,332	$11,290,556	$111,280,130	$1,266,744,136
Average Cost of Fuel Burned (¢/MBTU)									
Coal	275.63	321.64	397.94	293.77				309.75	351.15
Oil - CC								-	-
Oil - Steam/CT	1,025.94	1,080.66	-	999.12				1,403.93	1,155.30
Gas - CC								360.47	291.63
Gas - CHP								4,841.94	900.44
Gas - CT								363.61	293.34
Gas - Steam		361.83	356.40	366.63				364.63	296.70
Biogas								2,173.00	2,121.55
Nuclear					57.67	55.09	57.72	56.86	57.73
Weighted Average	285.09	324.73	382.41	310.49	57.67	55.09	57.72	142.03	143.14
Average Cost of Generation (¢/kWh)									
Coal	3.00	3.21	7.14	2.72				3.07	3.46
Oil - CC								-	-
Oil - Steam/CT	11.13	10.78	-	9.05				15.67	13.43
Gas - CC								2.57	2.07
Gas - CHP								3.72	3.04
Gas - CT								3.91	3.41
Gas - Steam		3.36	3.44	3.82				3.72	3.04
Biogas								15.09	15.12
Nuclear					0.57	0.55	0.58	0.57	0.58
Weighted Average	3.11	3.23	5.19	2.94	0.57	0.55	0.58	1.33	1.33
Burned MBTU's									
Coal	1,295,699	7,020,964	432,300	4,845,845				13,594,808	145,073,739
Oil - CC								-	-
Oil - Steam/CT	16,555	19,817	-	10,314				97,132	753,636
Gas - CC								7,218,673	101,505,115
Gas - CHP								523	62,955
Gas - CT								1,061,547	9,026,942
Gas - Steam		182,011	258,305	1,316,385				1,756,742	24,644,417
Biogas								18,200	183,176
Nuclear					17,442,554	17,596,486	19,560,447	54,599,487	603,725,817
Total	1,312,254	7,222,792	690,605	6,172,544	17,442,554	17,596,486	19,560,447	78,347,113	884,975,797
Net Generation (mWh)									
Coal	118,909	704,337	24,083	524,119				1,371,448	14,738,937
Oil - CC								-	-
Oil - Steam/CT	1,526	1,986	-	1,138				8,702	64,807
Gas - CC								1,016,660	14,333,589
Gas - CHP								39	5,300
Gas - CT								97,325	775,879
Gas - Steam		19,579	26,799	126,349				172,344	2,406,276
Biogas								2,622	25,709
Nuclear 100%					1,750,957	1,771,352	1,954,511	5,476,820	59,945,886
Hydro (Total System)								203,583	2,511,132
Solar (Total System)								10,105 (B)	148,719 (B)
Total	120,435	725,902	50,882	651,606	1,750,957	1,771,352	1,954,511	8,359,648	94,956,234
Cost of Reagents Consumed ($)									
Ammonia			$12,439	$94,070				$131,214	$2,132,769
Limestone	$80,787	$492,369	23,042	645,650				1,241,849	13,486,306
Sorbents	-	182,384	-					182,384	1,346,201
Urea	(1)	50,675						50,674	492,740
Re-emission Chemical		-	-	-				-	345,138
Dibasic Acid	-							-	-
Activated Carbon	-	-						-	25,493
Lime (water emissions)	-	3,613	-					3,613	91,162
Total	80,785	729,042	$35,481	$739,721				$1,609,734	$17,919,809

Notes:
(A) Lincoln (Unit 17) fuel and fuel related costs represents pre-commercial generation during an extended testing and validation period.
(B) Solar Net Generation (mWh) for the month of December includes pre-commercial 225 mWh for Gaston Solar and 621 mWh for Maiden Creek Solar.
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.

Exhibit 6
Schedule 6

DUKE ENERGY CAROLINAS
FUEL AND FUEL RELATED CONSUMPTION AND INVENTORY REPORT
DECEMBER 2020

Description	Buck	Dan River	Lee	Clemson	Lee	Lincoln	(A) Lincoln (Unit17)	Mill Creek	Rockingham	Allen	Marshall	Belews Creek	Cliffside	Current Month	Total 12 ME December 2020
	CC	CC	CC	CHP	Steam/CT	CT	CT	CT	CT	Steam	Steam - Dual Fuel	Steam - Dual Fuel	Steam - Dual Fuel		
Coal Data:															
Beginning balance					-					186,382	960,652	674,515	423,558	2,245,107	2,127,823
Tons received during period										24,160	13,819	165,159	175,477	378,615	5,798,126
Inventory adjustments					-					25,626	47,206	(46,502)	(6,803)	19,527	18,845
Tons burned during period					-					54,063	281,367	17,310	201,962	554,702	5,856,247
Ending balance					-					182,105	740,309	775,862	390,270	2,088,547	2,088,547
MBTUs per ton burned					-					23.97	24.95	24.97	23.99	24.51	24.77
Cost of ending inventory ($/ton)					-					73.92	80.26	99.38	70.49	84.98	84.98
Oil Data:															
Beginning balance	-	-	-		725,202	9,685,581	401,963	4,200,018	2,936,025	100,642	234,223	92,835	164,992	18,541,481	18,531,066
Gallons received during period	-	-	-		-	-	-	-	-	120,812	119,901	-	82,595	323,308	5,340,477
Miscellaneous adjustments	-	-	-		-	-	-	-	0	489	-	(9,364)	(8,443)	(16,647)	(261,532)
Gallons burned during period		-	-		-	2,260	-	281,445	81,500	120,205	144,160	-	75,144	705,385	5,467,254
Ending balance	-	-	-		725,202	9,683,321	401,963	3,918,573	2,854,525	101,738	209,964	83,471	164,000	18,142,757	18,142,757
Cost of ending inventory ($/gal)	-	-	-		1.87	2.10	1.21	2.47	2.17	1.42	1.49	1.28	1.37	2.14	2.14
Natural Gas Data:															
Beginning balance															
MCF received during period	2,929,844	1,153,862	2,900,531	508	5,107	47,415	112,706	101,805	759,266		176,538	249,500	1,273,001	9,710,083	131,051,615
MCF burned during period	2,929,844	1,153,862	2,900,531	508	5,107	47,415	112,706	101,805	759,266		176,538	249,500	1,273,001	9,710,083	131,051,615
Ending balance															
Biogas Data:															
Beginning balance															—
MCF received during period	17,583	-	-											17,583	177,457
MCF burned during period	17,583	-	-											17,583	177,457
Ending balance															
Limestone Data:															
Beginning balance										27,056	77,766	48,347	30,212	183,382	175,919
Tons received during period										-	-	-	-	-	292,356
Inventory adjustments										1,771	(6,843)	4,700	(2,299)	(2,670)	(2,671)
Tons consumed during period										1,774	12,100	624	11,785	26,283	311,176
Ending balance										27,054	58,823	52,423	16,128	154,428	154,428
Cost of ending inventory ($/ton)										45.54	40.69	36.92	44.42	40.65	40.65

Description	Buck	Qtr Ending December 2020	Total 12 ME December 2020
Ammonia Data:			
Beginning balance	1,834	1,834	1,405
Tons received during period	-	-	2,738
Tons consumed during period	26	26	2,334
Ending balance	1,808	1,808	1,808
Cost of ending inventory ($/ton)	485.71	485.71	485.71

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.
Schedule excludes in-transit and terminal activity.
Gas is burned as received; therefore, inventory balances are not maintained.

DUKE ENERGY CAROLINAS
ANALYSIS OF COAL PURCHASED
DECEMBER 2020

STATION	TYPE	QUANTITY OF TONS DELIVERED	DELIVERED COST	DELIVERED COST PER TON
ALLEN	SPOT	-	$ -	$ -
	CONTRACT	24,160	1,516,810	62.78
	FIXED TRANSPORTATION / ADJUSTMENTS	-	0	-
	TOTAL	24,160	1,516,810	62.78
BELEWS CREEK	SPOT	38,357	2,540,568	66.23
	CONTRACT	126,802	8,274,865	65.26
	FIXED TRANSPORTATION / ADJUSTMENTS	-	2,209	-
	TOTAL	165,159	10,817,642	65.50
CLIFFSIDE	SPOT	-	24,564	-
	CONTRACT	175,477	9,973,775	56.84
	FIXED TRANSPORTATION / ADJUSTMENTS	-	0	-
	TOTAL	175,477	9,998,339	56.98
MARSHALL	SPOT	13,819	853,067	61.73
	CONTRACT	-	27,580	-
	FIXED TRANSPORTATION / ADJUSTMENTS	-	49,600	-
	TOTAL	13,819	930,247	67.32
ALL PLANTS	SPOT	52,176	3,418,199	65.51
	CONTRACT	326,439	19,793,030	60.63
	FIXED TRANSPORTATION / ADJUSTMENTS	-	51,809	-
	TOTAL	378,615	23,263,038	$ 61.44

DUKE ENERGY CAROLINAS

ANALYSIS OF COAL QUALITY RECEIVED

DECEMBER 2020

STATION	PERCENT MOISTURE	PERCENT ASH	HEAT VALUE	PERCENT SULFUR
ALLEN	6.26	12.74	12,212	0.91
BELEWS CREEK	7.13	9.90	12,480	1.26
CLIFFSIDE	9.20	7.48	12,451	1.78
MARSHALL	7.05	13.03	11,913	0.72

|

DUKE ENERGY CAROLINAS
ANALYSIS OF OIL PURCHASED
DECEMBER 2020

	ALLEN	CLIFFSIDE	MARSHALL
VENDOR	HighTowers	HighTowers	HighTowers
SPOT/CONTRACT	Contract	Contract	Contract
SULFUR CONTENT %	0	0	0
GALLONS RECEIVED	120,812	82,595	119,901
TOTAL DELIVERED COST	$ 185,282	$ 128,100	$ 184,358
DELIVERED COST/GALLON	$ 1.53	$ 1.55	$ 1.54
BTU/GALLON	138,000	138,000	138,000

Duke Energy Carolinas
Power Plant Performance Data
Twelve Month Summary
January, 2020 - December, 2020
Nuclear Units

Unit Name	Net Generation (mWh)	Capacity Rating (mW)	Capacity Factor (%)	Equivalent Availability (%)
Oconee 1	6,859,973	847	92.20	90.88
Oconee 2	7,670,158	848	102.97	99.99
Oconee 3	7,012,136	859	92.93	91.89
McGuire 1	9,434,118	1,158	92.75	90.65
McGuire 2	9,612,830	1,158	94.50	93.32
Catawba 1	9,235,519	1,160	90.64	89.94
Catawba 2	10,121,151	1,150	100.19	99.78

Duke Energy Carolinas
Power Plant Performance Data
Twelve Month Summary
January, 2020 through December, 2020
Combined Cycle Units

Unit Name		Net Generation (mWh)	Capacity Rating (mW)	Capacity Factor (%)	Equivalent Availability (%)
Buck CC	11	1,134,065	206	62.67	75.42
Buck CC	12	1,134,559	206	62.70	75.10
Buck CC	ST10	1,598,203	312	58.32	80.85
Buck CC	Block Total	3,866,827	724	60.80	77.67
Dan River CC	8	1,311,548	199	75.03	83.79
Dan River CC	9	1,297,690	199	74.24	83.04
Dan River CC	ST7	1,847,499	320	65.73	91.85
Dan River CC	Block Total	4,456,737	718	70.66	87.17
WS Lee CC	11	1,739,314	240	82.50	88.86
WS Lee CC	12	1,853,394	240	87.92	93.53
WS Lee CC	ST10	2,443,026	313	88.86	94.57
WS Lee CC	Block Total	6,035,734	793	86.65	92.53

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.

Duke Energy Carolinas
Power Plant Performance Data
Twelve Month Summary
January, 2020 through December, 2020

Baseload Steam Units

Unit Name	Net Generation (mWh)	Capacity Rating (mW)	Capacity Factor (%)	Equivalent Availability (%)
Belews Creek 1	2,691,806	1,110	27.61	58.99
Belews Creek 2	2,649,126	1,110	27.17	64.73
Marshall 3	2,074,332	658	35.89	61.51
Marshall 4	2,202,419	660	37.99	65.19

Notes:

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

Duke Energy Carolinas
Power Plant Performance Data
Twelve Month Summary
January, 2020 through December, 2020

Intermediate Steam Units

Unit Name	Net Generation (mWh)	Capacity Rating (mW)	Capacity Factor (%)	Equivalent Availability (%)
Cliffside 6	4,194,682	849	56.25	79.37
Marshall 1	852,998	380	25.55	89.00
Marshall 2	956,682	380	28.66	89.62

Notes:

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

Duke Energy Carolinas
Power Plant Performance Data
Twelve Month Summary
January, 2020 through December, 2020
Other Cycling Steam Units

Unit Name		Net Generation (mWh)	Capacity Rating (mW)	Capacity Factor (%)	Operating Availability (%)
Allen	1	7,133	167	0.49	81.63
Allen	2	11,024	167	0.75	94.17
Allen	3	57,542	270	2.43	95.94
Allen	4	238,290	267	10.16	95.80
Allen	5	205,583	259	9.04	88.47
Cliffside	5	1,064,746	546	22.20	69.22
Lee	3	-4,725	173	0.00	100.00

Notes:

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

Duke Energy Carolinas
Power Plant Performance Data
Twelve Month Summary
January, 2020 through December, 2020
Combustion Turbine Stations

Station Name	Net Generation (mWh)	Capacity Rating (mW)	Operating Availability (%)
Clemson CHP	5,300	16	39.33
Lee CT	1,711	96	95.49
Lincoln CT	15,767	1,565	95.96
Mill Creek CT	70,332	756	99.68
Rockingham CT	656,571	895	88.88

Notes:

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

Duke Energy Carolinas
Power Plant Performance Data

Twelve Month Summary
January, 2020 through December, 2020
Hydroelectric Stations

Station Name	Net Generation (mWh)	Capacity Rating (mW)	Operating Availability (%)
Conventional Hydroelectric Stations:			
Bear Creek	33,970	9.5	72.33
Bridgewater	101,362	31.5	98.91
Cedar Cliff	14,360	6.8	64.07
Cedar Creek	195,060	45.0	66.54
Cowans Ford	345,561	324.0	95.00
Dearborn	167,286	42.0	86.33
Fishing Creek	236,761	50.0	86.00
Great Falls	-71	12.0	0.00
Keowee	111,177	152.0	96.63
Lookout Shoals	174,141	27.0	98.63
Mountain Island	227,649	62.0	64.49
Nantahala	281,167	50.0	91.68
Ninety-Nine Islands	80,306	15.2	76.52
Oxford	183,279	40.0	86.37
Queens Creek	6,292	1.4	93.68
Rhodhiss	119,034	33.4	98.18
Tennessee Creek	-12	9.8	0.00
Thorpe	118,015	19.7	99.49
Tuckasegee	5,018	2.5	66.71
Wateree	401,240	85.0	81.19
Wylie	214,998	72.0	69.12
Total Conventional Hydroelectric Stations:	3,016,593		
Pumped Storage Hydroelectric Stations:			
Gross Generation			
Bad Creek	1,602,907	1,360.0	67.95
Jocassee	1,138,239	780.0	81.85
Energy for Pumping			
Bad Creek	-2,004,346		
Jocassee	-1,242,261		
Net Generation			
Bad Creek	-401,439		
Jocassee	-104,022		

Notes:

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

Duke Energy Carolinas
Power Plant Performance Data
Twelve Month Summary
January, 2020 through December, 2020
Pre-commercial Combustion Turbine Stations

Note: The Power Plant Performance Data reports are limited to capturing data beginning the first full month a station is in commercial operation. During the months identified, Lincoln Unit 17 produced pre-commercial generation.

Station Name	Net Generation (mWh)	Capacity Rating (mW)	Operating Availability (%)
December 2020			
Lincoln Unit 17	10,971	n/a	n/a
November 2020			
Lincoln Unit 17	8,337	n/a	n/a
October 2020			
Lincoln Unit 17	11,198	n/a	n/a
September 2020			
Lincoln Unit 17	8,471	n/a	n/a
August 2020			
Lincoln Unit 17	-221	n/a	n/a
July 2020			
Lincoln Unit 17	-24	n/a	n/a
June 2020			
Lincoln Unit 17	1,805	n/a	n/a
May 2020			
Lincoln Unit 17	-657	n/a	n/a
Total	39,880		

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
Summary Comparison of Fuel and Fuel Related Cost Factors
Test Period Ended December 31, 2020
Billing Period September 2021 - August 2022
Docket E-7, Sub 1250

I/A

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 1228)					
1	Approved Fuel and Fuel Related Costs Factors	Input	1.6027	1.7583	1.6652	1.6816
2	EMF Increment	Input	0.0364	0.0666	0.2658	0.0975
3	EMF Interest Decrement cents/kWh	Input	0.0000	0.0000	0.0000	0.0000
4	Approved Net Fuel and Fuel Related Costs Factors	Sum	**1.6391**	**1.8249**	**1.9310**	**1.7791**
	Fuel and Fuel Related Cost Factors Required by Rule R8-55					
5	Proposed Nuclear Capacity Factor of 93.21% and Normalized Test Period Sales	Exh 2 Sch 2 pg 2	**1.4984**	**1.7246**	**1.8541**	**1.6672**
6	NERC 5 Year Average Nuclear Capacity Factor of 91.95% and Projected Period Sales	Exh 2 Sch 3 pg 2	**1.5171**	**1.7471**	**1.8711**	**1.6884**
	Proposed Fuel and Fuel Related Cost Factors using Proposed Nuclear Capacity Factor of 93.21%					
7	Fuel and Fuel Related Costs excluding Purchased Capacity cents/kWh	Exh 2 Sch 1 pg 2	1.4976	1.6638	1.7022	1.6125
8	REPS Compliance and QF Purchased Power - Capacity cents/kWh	Exh 2 Sch 1 pg 2	0.0361	0.0257	0.0221	0.0289
9	Total adjusted Fuel and Fuel Related Costs cents/kWh	Sum	1.5337	1.6895	1.7243	1.6414
10	EMF Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	(0.0282)	0.0476	0.1391	0.0353
11	EMF Interest (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	(0.0041)	-	-	-
12	Net Fuel and Fuel Related Costs Factors cents/kWh	Sum	**1.5014**	**1.7371**	**1.8634**	**1.6767**

Note: Fuel factors exclude regulatory fee

(Revised pages throughout ... ktm)

I/A

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 93.21%
Test Period Ended December 31, 2020
Billing Period September 2021 - August 2022
Docket E-7, Sub 1250

Sykes Exhibit 2
Schedule 1

Line #	Unit	Reference	Generation (MWh)	Unit Cost (cents/kWh)	Fuel Cost ($)
			D	E	D * E = F
1	Total Nuclear	Workpaper 1	58,622,085	0.6057	355,077,645
2	Coal	Workpaper 3 & 4	18,691,906	2.3444	438,222,003
3	Gas CT and CC	Workpaper 3 & 4	22,065,718	2.2833	503,828,581
4	Reagents and Byproducts	Workpaper 9			25,707,869
5	Total Fossil	Sum	40,757,624		967,758,453
6	Hydro	Workpaper 3	4,030,270		
7	Net Pumped Storage	Workpaper 3	(2,872,983)		
8	Total Hydro	Sum	1,157,287		-
9	Solar Distributed Generation	Workpaper 3	367,302		-
10	Total Generation	Line 1 + Line 5 + Line 8 + Line 9	100,904,299		1,322,836,098
11	Less Lee CC Joint Owners	Workpaper 3 & 4	(876,000)		(16,986,285)
12	Less Catawba Joint Owners	Workpaper 3 & 4	(14,848,200)		(89,940,492)
13	Fuel expense recovered through reimbursement	Workpaper 4			(6,522,205)
14	Net Generation	Sum Lines 10-13	85,180,099		1,209,387,117
15	Purchased Power	Workpaper 3 & 4	8,109,496	3.0679	248,794,545
16	JDA Savings Shared	Workpaper 5			7,856,711
17	Total Purchased Power		8,109,496		256,651,255
18	Total Generation and Purchased Power	Line 14 + Line 17	93,289,595	1.5715	1,466,038,372
19	Fuel expense recovered through intersystem sales	Workpaper 3 & 4	(1,789,852)	1.6030	(28,691,221)
20	Line losses and Company use	Line 22-Line 18-Line 19	(3,809,747)		-
21	System Fuel Expense for Fuel Factor	Lines 18 + 19 + 20			1,437,347,151
22	Projected System MWh Sales for Fuel Factor	Workpaper 7	87,689,996		87,689,996
23	Fuel and Fuel Related Costs cents/kWh	Line 21 / Line 22 / 10			1.6391

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 93.21%
Test Period Ended December 31, 2020
Billing Period September 2021 - August 2022
Docket E-7, Sub 1250

Line #	Description	Reference	Residential	GS/Lighting	Industrial	Total
1	NC Projected Billing Period MWh Sales	Workpaper 7	21,803,077	24,128,419	12,036,241	57,967,737
	Calculation of Renewable and Cogeneration Purchased Power Capacity Rate by Class					Amount
2	Purchased Power for REPS Compliance - Capacity	Workpaper 4				$ 13,866,978
3	QF Purchased Power - Capacity	Workpaper 4				11,169,971
4	Total of Renewable and QF Purchased Power Capacity	Line 2 + Line 3				$ 25,036,948
5	NC Portion - Jursidicational % based on Peak Demand Allocator	Input				66.90%
6	NC Renewable and QF Purchased Power - Capacity	Line 4 * Line 5				$ 16,749,046
7	Peak Demand Allocation Factors	Input	47.00%	37.09%	15.91%	100.00%
8	Renewable and QF Purchased Power - Capacity allocated on Peak Demand	Line 6 * Line 7	$ 7,872,063	$ 6,212,405	$ 2,664,577	$ 16,749,046
9	Renewable and QF Purchased Power - Capacity cents/kWh based on Projected Billing Period Sales	Line 8 / Line 1 / 10	0.0361	0.0257	0.0221	0.0289
	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	1.4976	1.6638	1.7022	1.6125
11	REPS Compliance and QF Purchased Power - Capacity cents/kWh	Line 9	0.0361	0.0257	0.0221	0.0289
12	Total adjusted Fuel and Fuel Related Costs cents/kWh	Line 10 + Line 11	1.5337	1.6895	1.7243	1.6414
13	EMF Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	(0.0282)	0.0476	0.1391	0.0353
14	EMF Interest (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	(0.0041)	-	-	-
15	Net Fuel and Fuel Related Costs Factors cents/kWh	Exh 2 Sch 1 Page 3	1.5014	1.7371	1.8634	1.6767

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 93.21%
Test Period Ended December 31, 2020
Billing Period September 2021 - August 2022
Docket E-7, Sub 1250

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 1228	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	21,803,077	$	2,235,509,347	$	(30,024,759)	-1.34%	(0.1377)	1.6391	1.5014
2	General Service/Lighting	24,128,419		1,577,855,414		(21,191,917)	-1.34%	(0.0878)	1.8249	1.7371
3	Industrial	12,036,241		606,238,320		(8,142,287)	-1.34%	(0.0676)	1.9310	1.8634
4	NC Retail	57,967,737	$	4,419,603,081	$	(59,358,963)	-1.34%			

	Total Proposed Composite Fuel Rate:			
5	Total Fuel Costs for Allocation	Workpaper 7	$	1,441,525,237
6	Total of Renewable and QF Purchased Power Capacity	Exhibit 2 Sch 1, Page 2		25,036,948
7	System Other Fuel Costs	Line 5 - Line 6	$	1,416,488,289
8	Adjusted Projected System MWh Sales for Fuel Factor	Workpaper 7		87,848,058
9	NC Retail Projected Billing Period MWh Sales	Line 4		57,967,737
10	Allocation %	Line 9 / Line 8		65.99%
11	NC Retail Other Fuel Costs	Line 7 * Line 10	$	934,740,622
12	NC Renewable and QF Purchased Power - Capacity	Exhibit 2 Sch 1, Page 2		16,749,046
13	NC Retail Total Fuel Costs	Line 11 + Line 12	$	951,489,668
14	NC Retail Projected Billing Period MWh Sales	Line 4		57,967,737
15	Calculated Fuel Rate cents/kWh	Line 13 / Line 14 / 10		1.6414
16	Proposed Composite EMF Rate cents/kWh	Exhibit 3 Page 1		0.0353
17	Proposed Composite EMF Rate Interest cents/kWh	Exhibit 3 Page 1		0.0000
18	Total Proposed Composite Fuel Rate	Sum		1.6767
	Total Current Composite Fuel Rate - Docket E-7 Sub 1228:			
19	Current composite Fuel Rate cents/kWh	Sykes Exhibit 1		1.6816
20	Current composite EMF Rate cents/kWh	Sykes Exhibit 1		0.0975
21	Current composite EMF Interest Rate cents/kWh	Sykes Exhibit 1		0.0000
22	Total Current Composite Fuel Rate	Sum		1.7791
23	Increase/(Decrease) in Composite Fuel rate cents/kWh	Line 18 - Line 22		(0.1024)
24	NC Retail Projected Billing Period MWh Sales	Line 4		57,967,737
25	Increase/(Decrease) in Fuel Costs	Line 23 * Line 24 * 10	$	(59,358,963)

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 93.21% and Normalized Test Period Sales
Test Period Ended December 31, 2020
Billing Period September 2021 - August 2022
Docket E-7, Sub 1250

Line #	Unit	Reference	Generation (MWh)	Unit Cost (cents/kWh)	Fuel Cost ($)
			D	E	D * E = F
1	Total Nuclear	Workpaper 1	58,622,085	0.6057	355,077,645
2	Coal	Calculated	17,563,319	2.3444	411,762,861
3	Gas CT and CC	Workpaper 3 & 4	22,065,718	2.2833	503,828,581
4	Reagents and Byproducts	Workpaper 9	-		25,707,869
5	Total Fossil	Sum	39,629,037		941,299,312
6	Hydro	Workpaper 3	4,030,270		
7	Net Pumped Storage	Workpaper 3	(2,872,983)		
8	Total Hydro	Sum	1,157,287		
9	Solar Distributed Generation		367,302		
10	Total Generation	Line 1 + Line 5 + Line 8 + Line 9	99,775,711		1,296,376,956
11	Less Lee CC Joint Owners	Workpaper 3 & 4	(876,000)		(16,986,285)
12	Less Catawba Joint Owners	Workpaper 3 & 4	(14,848,200)		(89,940,492)
13	Fuel expense recovered through reimbursement	Workpaper 4			(6,522,205)
14	Net Generation	Sum	84,051,511		1,182,927,975
15	Purchased Power	Workpaper 3 & 4	8,109,496		248,794,545
16	JDA Savings Shared	Workpaper 5	-		7,856,711
17	Total Purchased Power	Sum	8,109,496		256,651,255
18	Total Generation and Purchased Power	Line 14 + Line 17	92,161,008		1,439,579,230
19	Fuel expense recovered through intersystem sales	Workpaper 3 & 4	(1,789,852)		(28,691,221)
20	Line losses and Company use	Line 22 - Line 19 - Line 18	(3,809,747)		-
21	System Fuel Expense for Fuel Factor	Lines 18 + 19 + 20			1,410,888,009
22	Normalized Test Period MWh Sales	Exhibit 4	86,561,409		86,561,409
23	Fuel and Fuel Related Costs cents/kWh	Line 21 / Line 22 / 10			1.6299

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 93.21% and Normalized Test Period Sales
Test Period Ended December 31, 2020
Billing Period September 2021 - August 2022
Docket E-7, Sub 1250

Line #	Description	Reference	Residential	GS/Lighting	Industrial	Total
1	NC Normalized Test Period MWh Sales	Exhibit 4	23,329,575	23,102,975	11,570,060	58,002,609
	Calculation of Renewable Purchased Power Capacity Rate by Class					Amount
2	Purchased Power for REPS Compliance - Capacity	Workpaper 4				$ 13,866,978
3	QF Purchased Power - Capacity	Workpaper 4				11,169,971
4	Total of Renewable and QF Purchased Power Capacity	Line 2 + Line 3				$ 25,036,948
5	NC Portion - Jursidicational % based on Peak Demand Allocator	Input				66.90%
6	NC Renewable and QF Purchased Power - Capacity	Line 4 * Line 5				$ 16,749,046
7	Peak Demand Allocation Factors	Input	47.00%	37.09%	15.91%	100.00%
8	Renewable and QF Purchased Power - Capacity allocated on Peak Demand	Line 6 * Line 7	$ 7,872,063	$ 6,212,405	$ 2,664,577	$ 16,749,046
9	Renewable and QF Purchased Power - Capacity cents/kWh based on Projected Billing Period Sales	Line 8 / Line 1 / 10	0.0337	0.0269	0.0230	0.0289
	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	1.4970	1.6501	1.6920	1.6030
11	REPS Compliance and QF Purchased Power - Capacity cents/kWh	Line 9	0.0337	0.0269	0.0230	0.0289
12	Total adjusted Fuel and Fuel Related Costs cents/kWh	Line 10 + Line 11	1.5307	1.6770	1.7150	1.6319
13	EMF Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	(0.0282)	0.0476	0.1391	0.0353
14	EMF Interest (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	(0.0041)	-	-	-
15	Net Fuel and Fuel Related Costs Factors cents/kWh	Exh 2 Sch 2 Page 3	1.4984	1.7246	1.8541	1.6672

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 93.21% and Normalized Test Period Sales
Test Period Ended December 31, 2020
Billing Period September 2021 - August 2022
Docket E-7, Sub 1250

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 1228	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	23,329,575	$ 2,235,509,347	$ (32,829,997)	-1.47%	(0.1407)	1.6391	1.4984
2	General Service/Lighting	23,102,975	$ 1,577,855,414	(23,171,895)	-1.47%	(0.1003)	1.8249	1.7246
3	Industrial	11,570,060	$ 606,238,320	(8,903,028)	-1.47%	(0.0769)	1.9310	1.8541
4	NC Retail	58,002,609	$ 4,419,603,081	$ (64,904,920)				

Total Proposed Composite Fuel Rate:

5	Total Fuel Costs for Allocation	Workpaper 7a	$ 1,415,066,095
6	Total of Renewable and QF Purchased Power Capacity	Exhibit 2 Sch 2, Page 2	25,036,948
7	System Other Fuel Costs	Line 5 - Line 6	$ 1,390,029,147
8	Normalized Test Period System MWh Sales for Fuel Factor	Workpaper 7a	86,719,470
9	NC Retail Normalized Test Period MWh Sales	Exhibit 4	58,002,609
10	Allocation %	Line 9 / Line 8	66.89%
11	NC Retail Other Fuel Costs	Line 7 * Line 10	$ 929,790,496
12	NC Renewable and QF Purchased Power - Capacity	Exhibit 2 Sch 2, Page 2	16,749,046
13	NC Retail Total Fuel Costs	Line 11 + Line 12	$ 946,539,542
14	NC Retail Normalized Test Period MWh Sales	Line 9	58,002,609
15	Calculated Fuel Rate cents/kWh	Line 13 / Line 14 / 10	1.6319
16	Proposed Composite EMF Rate cents/kWh	Exhibit 3 Page 1	0.0353
17	Proposed Composite EMF Rate Interest cents/kWh	Exhibit 3 Page 1	0.0000
18	Total Proposed Composite Fuel Rate	Sum	1.6672

Total Current Composite Fuel Rate - Docket E-7 Sub 1228:

19	Current composite Fuel Rate cents/kWh	Sykes Exhibit 1	1.6816
20	Current composite EMF Rate cents/kWh	Sykes Exhibit 1	0.0975
21	Current composite EMF Interest Rate cents/kWh	Sykes Exhibit 1	0.0000
22	Total Current Composite Fuel Rate	Sum	1.7791
23	Increase/(Decrease) in Composite Fuel rate cents/kWh	Line 18 - Line 22	(0.1119)
24	NC Retail Normalized Test Period MWh Sales	Exhibit 4	58,002,609
25	Increase/(Decrease) in Fuel Costs	Line 23 * Line 24 * 10	$ (64,904,920)

Note: Rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
NERC 5 Year Average Nuclear Capacity Factor of 91.95% and Projected Period Sales
Test Period Ended December 31, 2020
Billing Period September 2021 - August 2022
Docket E-7, Sub 1250

Sykes Exhibit 2
Schedule 3

Line #	Unit	Reference	Generation (MWh)	Unit Cost (cents/kWh)	Fuel Cost ($)
			D	E	D * E = F
1	Total Nuclear	Workpaper 2	57,831,714	0.6057	350,290,320
2	Coal	Calculated	19,282,087	2.3444	452,058,499
3	Gas CT and CC	Workpaper 3 & 4	22,065,718	2.2833	503,828,581
4	Reagents and Byproducts	Workpaper 9	-		25,707,869
5	Total Fossil	Sum	41,347,805		981,594,949
6	Hydro	Workpaper 3	4,030,270		
7	Net Pumped Storage	Workpaper 3	(2,872,983)		
8	Total Hydro	Sum	1,157,287		
9	Solar Distributed Generation	Workpaper 3	367,302		
10	Total Generation	Line 1 + Line 5 + Line 8 + Line 9	100,704,109		1,331,885,268
11	Less Lee CC Joint Owners	Workpaper 3 & 4	(876,000)		(16,986,285)
12	Less Catawba Joint Owners	Calculated	(14,648,010)		(88,727,875)
13	Fuel expense recovered through reimbursement	Workpaper 4			(6,522,205)
14	Net Generation	Sum	85,180,099		1,219,648,904
15	Purchased Power	Workpaper 3 & 4	8,109,496		248,794,545
16	JDA Savings Shared	Workpaper 5	-		7,856,711
17	Total Purchased Power	Sum	8,109,496		256,651,255
18	Total Generation and Purchased Power	Line 14 + Line 17	93,289,595		1,476,300,159
19	Fuel expense recovered through intersystem sales	Workpaper 3 & 4	(1,789,852)		(28,691,221)
20	Line losses and Company use	Line 22 - Line 19 - Line 18	(3,809,747)		-
21	System Fuel Expense for Fuel Factor	Lines 18 + 19 + 20			1,447,608,938
22	Projected System MWh Sales for Fuel Factor	Workpaper 7b	87,689,996		87,689,996
23	Fuel and Fuel Related Costs cents/kWh	Line 21 / Line 22 / 10			1.6508

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 91.95% and Projected Period Sales
Test Period Ended December 31, 2020
Billing Period September 2021 - August 2022
Docket E-7, Sub 1250

Line #	Description	Reference	Residential	GS/Lighting	Industrial	Total
1	NC Projected Billing Period MWh Sales	Workpaper 7b	21,803,077	24,128,419	12,036,241	57,967,737
	Calculation of Renewable Purchased Power Capacity Rate by Class					Amount
2	Purchased Power for REPS Compliance - Capacity	Workpaper 4				$ 13,866,978
3	QF Purchased Power - Capacity	Workpaper 4				11,169,971
4	Total of Renewable and QF Purchased Power Capacity	Line 2 + Line 3				$ 25,036,948
5	NC Portion - Jursidicational % based on Peak Demand Allocator	Input				66.90%
6	NC Renewable and QF Purchased Power - Capacity	Line 4 * Line 5				$ 16,749,046
7	Peak Demand Allocation Factors	Input	47.00%	37.09%	15.91%	100.00%
8	Renewable and QF Purchased Power - Capacity allocated on Peak Demand	Line 6 * Line 7	$ 7,872,063	$ 6,212,405	$ 2,664,577	$ 16,749,046
9	Renewable and QF Purchased Power - Capacity cents/kWh based on Projected Billing Period Sales	Line 8 / Line 1 / 10	0.0361	0.0257	0.0221	0.0289
	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	1.5133	1.6738	1.7099	1.6242
11	REPS Compliance and QF Purchased Power - Capacity cents/kWh	Line 9	0.0361	0.0257	0.0221	0.0289
12	Total adjusted Fuel and Fuel Related Costs cents/kWh	Line 10 + Line 11	1.5494	1.6995	1.7320	1.6531
13	EMF Increment (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	(0.0282)	0.0476	0.1391	0.0353
14	EMF Interest (Decrement) cents/kWh	Exh 3 pg 2, 3, 4	(0.0041)	-	-	-
15	Net Fuel and Fuel Related Costs Factors cents/kWh	Exh 2 Sch 3 Page 3	1.5171	1.7471	1.8711	1.6884

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 91.95% and Projected Period Sales
Test Period Ended December 31, 2020
Billing Period September 2021 - August 2022
Docket E-7, Sub 1250

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 1228	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	21,803,077	$ 2,235,509,347	$ (26,594,195)	-1.19%	(0.1220)	1.6391	1.5171
2	General Service/Lighting	24,128,419	$ 1,577,855,414	$ (18,770,575)	-1.19%	(0.0778)	1.8249	1.7471
3	Industrial	12,036,241	$ 606,238,320	$ (7,211,967)	-1.19%	(0.0599)	1.9310	1.8711
4	NC Retail	57,967,737	$ 4,419,603,081	$ (52,576,737)				

Total Proposed Composite Fuel Rate:

5	Total Fuel Costs for Allocation	Workpaper 7b	$ 1,451,787,024
6	Total of Renewable and QF Purchased Power Capacity	Exhibit 2 Sch 3, Page 2	25,036,948
7	System Other Fuel Costs	Line 5 - Line 6	$ 1,426,750,076
8	Adjusted Projected System MWh Sales for Fuel Factor	Workpaper 7b	87,848,058
9	NC Retail Projected Billing Period MWh Sales	Line 4	57,967,737
10	Allocation %	Line 9 / Line 8	65.99%
11	NC Retail Other Fuel Costs	Line 7 * Line 10	$ 941,512,375
12	NC Renewable and QF Purchased Power - Capacity	Exhibit 2 Sch 3, Page 2	16,749,046
13	NC Retail Total Fuel Costs	Line 11 + Line 12	$ 958,261,421
14	NC Retail Projected Billing Period MWh Sales	Line 4	57,967,737
15	Calculated Fuel Rate cents/kWh	Line 13 / Line 14 / 10	1.6531
16	Proposed Composite EMF Rate cents/kWh	Exhibit 3 Page 1	0.0353
17	Proposed Composite EMF Rate Interest cents/kWh	Exhibit 3 Page 1	0.0000
18	Total Proposed Composite Fuel Rate	Sum	1.6884

Total Current Composite Fuel Rate - Docket E-7 Sub 1228:

19	Current composite Fuel Rate cents/kWh	Sykes Exhibit 1	1.6816
20	Current composite EMF Rate cents/kWh	Sykes Exhibit 1	0.0975
21	Current composite EMF Interest Rate cents/kWh	Sykes Exhibit 1	0.0000
22	Total Current Composite Fuel Rate	Sum	1.7791
23	Increase/(Decrease) in Composite Fuel rate cents/kWh	Line 18 - Line 22	(0.0907)
24	NC Retail Projected Billing Period MWh Sales	Line 4	57,967,737
25	Increase/(Decrease) in Fuel Costs	Line 23 * Line 24 * 10	$ (52,576,737)

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, 2020
Billing Period September 2021 - August 2022
Docket E-7, Sub 1250

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 2020			4,799,050	$ (7,772,097)	$ -	$ (7,772,097)
2	February			4,852,515	$ (22,331,610)	$ -	$ (22,331,610)
3	March			4,419,005	$ (22,145,172)	$ -	$ (22,145,172)
4	April			4,009,531	$ (19,263,780)	$ -	$ (19,263,780)
5	May			3,737,498	$ (7,856,726)	$ -	$ (7,856,726)
6	June [1]			4,445,349	$ 3,557,928	$ -	$ 3,557,928
7	July			5,381,134	$ 13,395,789	$ -	$ 13,395,789
8	August			5,679,285	$ 8,998,515	$ -	$ 8,998,515
9	September			5,143,265	$ (11,722,010)	$ (335,066)	$ (12,057,076)
10	October			4,161,109	$ 884,018	$ (1,339,001)	$ (454,983)
11	November			4,768,317	$ (13,335,325)	$ (277,958)	$ (13,613,283)
12	December [1]			4,115,807	$ 23,445,876	$ (34,344)	$ 23,411,532
13	**Total Test Period**			**55,511,864**	**$ (54,144,594)**	**$ (1,986,369)**	**$ (56,130,962)**
14	Adjustment to remove (Over)/Under Recovery - January-March 2020[2]						$ (52,248,875)
15	January 2021				$ 1,309,433	$ -	$ 1,309,433
16	February 2021				$ 24,172,571	$ (1,105,038)	$ 23,067,534
17	**Total (Over)/Under Recovery - Update Period January - February 2021 [3]**				**$ 25,482,004**	**$ (1,105,038)**	**$ 24,376,967**
18	**Adjusted (Over)/Under Recovery**						**$ 20,494,879**
19	NC Retail Normalized Test Period MWh Sales					Exhibit 4	58,002,609
20	**Experience Modification Increment (Decrement) cents/kWh**						**0.0353**

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

[2] January-March 2020 filed in fuel Docket E-7, Sub 1228 to update the EMF and included in current EMF rate. Included for Commission review in accordance with NC Rule R8-55(d)(3) but deducted from total (Over)/Under on Line 16.

[3] January and February 2021 are included for Commission review in accordance with NC Rule R8-55(d)(3). These periods 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, 2020
Billing Period September 2021 - August 2022
Docket E-7, Sub 1250

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 2020	1.4459	1.8127	2,021,126	$ (7,413,792)	$ -	$ (7,413,792)
2	February	1.2613	1.8127	1,940,656	$ (10,701,007)	$ -	$ (10,701,007)
3	March	1.2791	1.8127	1,693,572	$ (9,037,706)	$ -	$ (9,037,706)
4	April	1.3789	1.8127	1,450,861	$ (6,293,969)	$ -	$ (6,293,969)
5	May	1.6559	1.8127	1,342,790	$ (2,105,593)	$ -	$ (2,105,593)
6	June [(1)]	1.8232	1.8127	1,700,445	$ 165,111	$ -	$ 165,111
7	July	1.8123	1.8127	2,257,762	$ (8,998)	$ -	$ (8,998)
8	August	1.7591	1.8127	2,353,392	$ (1,262,025)	$ -	$ (1,262,025)
9	September	1.4671	1.7118	1,961,816	$ (4,800,324)	$ (120,123)	$ (4,920,447)
10	October	1.8861	1.6027	1,361,181	$ 3,858,149	$ (480,039)	$ 3,378,110
11	November	1.7168	1.6027	1,406,770	$ 1,604,755	$ (99,649)	$ 1,505,106
12	December [(1)]	1.7373	1.6027	1,905,668	$ 2,811,210	$ (12,313)	$ 2,798,897
13	**Total Test Period**			**21,396,039**	**$ (33,184,189)**	**$ (712,124)**	**$ (33,896,314)**
14	Test Period Wtd Avg. ¢/kWh	1.6014	1.7576				
15	Adjustment to remove (Over)/Under Recovery - January-March 2020[(2)]						$ (27,152,504)
16	January 2021	1.4543	1.6027	2,427,681	$ (3,602,217)	$ -	$ (3,602,217)
17	February 2021	1.8056	1.6027	2,047,050	$ 4,154,380	$ (396,162)	$ 3,758,218
18	**Total (Over)/Under Recovery - Update Period January - February 2021 [(3)]**				**$ 552,163**	**$ (396,162)**	**$ 156,001**
19	**Adjusted (Over)/Under Recovery**						**$ (6,587,808)**
20	NC Retail Normalized Test Period MWh Sales					Exhibit 4	23,329,575
21	**Experience Modification Increment (Decrement) cents/kWh**						**(0.0282)**
22	**Adjusted (Over)/Under Recovery**						**$ (6,587,808)**
23	Adjustment to remove customer credits for purchased power contract terms[(4)]						$ 2,419
24	Amount of refund for interest computation						$ (6,585,390)
25	Annual Interest Rate						10%
26	Monthly Interest Rate						0.83%
27	Number of Months (September 15, 2020 - February 28, 2022)						17.5
28	Interest						$ (960,369)
29	**Experience Modification Increment (Decrement) cents/kWh**						**(0.0041)**

Notes:

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

[(2)] January-March 2020 filed in fuel Docket E-7, Sub 1228 to update the EMF and included in 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 and February 2021 are included for Commission review in accordance with NC Rule R8-55(d)(3). These periods will be subject to review in the next annual fuel and fuel-related costs filing.

[(4)] Purchased power contract term collections not considered a refund of amounts advanced by customers, therefore have been excluded from the computation of interest.

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, 2020
Billing Period September 2021 - August 2022
Docket E-7, Sub 1250

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 2020	1.8136	1.9562	1,919,161	$ (2,736,820)	$ -	$ (2,736,820)
2	February	1.5188	1.9562	1,917,354	$ (8,385,934)	$ -	$ (8,385,934)
3	March	1.4558	1.9562	1,771,910	$ (8,865,883)	$ -	$ (8,865,883)
4	April	1.4000	1.9562	1,700,279	$ (9,457,058)	$ -	$ (9,457,058)
5	May	1.6578	1.9562	1,595,041	$ (4,759,228)	$ -	$ (4,759,228)
6	June [1]	1.9960	1.9562	1,845,527	$ 724,468	$ -	$ 724,468
7	July	2.2244	1.9562	2,167,855	$ 5,814,650	$ -	$ 5,814,650
8	August	2.1618	1.9562	2,253,716	$ 4,633,072	$ -	$ 4,633,072
9	September	1.6002	1.8611	2,126,565	$ (5,550,013)	$ (143,965)	$ (5,693,978)
10	October	1.6495	1.7583	1,844,555	$ (2,007,635)	$ (575,317)	$ (2,582,952)
11	November	1.3617	1.7583	2,116,483	$ (8,394,817)	$ (119,428)	$ (8,514,244)
12	December [1]	2.7101	1.7583	1,459,697	$ 14,225,259	$ (14,756)	$ 14,210,503
13	**Total Test Period**			**22,718,144**	**$ (24,759,939)**	**$ (853,466)**	**$ (25,613,404)**
14	Test Period Wtd Avg. ¢/kWh	1.7897	1.9001				
15	Adjustment to remove (Over)/Under Recovery - January-March 2020[2]						$ (19,988,636)
16	January 2021	1.8948	1.7583	2,224,452	$ 3,036,294	$ -	$ 3,036,294
17	February 2021	2.5796	1.7583	1,711,092	$ 14,053,467	$ (474,792)	$ 13,578,675
18	**Total (Over)/Under Recovery - Update Period January - February 2021** [3]				**$ 17,089,761**	**$ (474,792)**	**$ 16,614,969**
19	**Adjusted (Over)/Under Recovery**						**$ 10,990,202**
20	NC Retail Normalized Test Period MWh Sales					Exhibit 4	23,102,975
21	**Experience Modification Increment (Decrement) cents/kWh**						**0.0476**

Notes:

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

[2] January-March 2020 filed in fuel Docket E-7, Sub 1228 to update the EMF and included in 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 and February 2021 are included for Commission review in accordance with NC Rule R8-55(d)(3). These periods 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, 2020
Billing Period September 2021 - August 2022
Docket E-7, Sub 1250

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 2020	2.1705	1.8935	858,763	$ 2,378,515	$ -	$ 2,378,515
2	February	1.5672	1.8935	994,505	$ (3,244,669)	$ -	$ (3,244,669)
3	March	1.4487	1.8935	953,523	$ (4,241,584)	$ -	$ (4,241,584)
4	April	1.4843	1.8935	858,390	$ (3,512,753)	$ -	$ (3,512,753)
5	May	1.7695	1.8935	799,666	$ (991,906)	$ -	$ (991,906)
6	June (1)	2.1907	1.8935	899,377	$ 2,668,350	$ -	$ 2,668,350
7	July	2.6878	1.8935	955,517	$ 7,590,138	$ -	$ 7,590,138
8	August	2.4184	1.8935	1,072,177	$ 5,627,469	$ -	$ 5,627,469
9	September	1.6538	1.7838	1,054,884	$ (1,371,673)	$ (70,978)	$ (1,442,651)
10	October	1.5640	1.6652	955,373	$ (966,497)	$ (283,645)	$ (1,250,142)
11	November	1.1395	1.6652	1,245,063	$ (6,545,263)	$ (58,881)	$ (6,604,143)
12	December (1)	2.5964	1.6652	750,442	$ 6,409,407	$ (7,275)	$ 6,402,132
13	**Total Test Period**			**11,397,681**	**$ 3,799,534**	**$ (420,779)**	**$ 3,378,757**
14	Test Period Wtd Avg. ¢/kWh	1.8627	1.8242				
15	Adjustment to remove (Over)/Under Recovery - January-March 2020[2]						$ (5,107,737)
16	January 2021	1.8306	1.6652	1,133,633	$ 1,875,356	$ -	$ 1,875,356
17	February 2021	2.2950	1.6652	947,056	$ 5,964,724	$ (234,084)	$ 5,730,641
18	**Total (Over)/Under Recovery - Update Period January - February 2021 [3]**				**$ 7,840,080**	**$ (234,084)**	**$ 7,605,996**
19	**Adjusted (Over)/Under Recovery**						**$ 16,092,490**
20	NC Retail Normalized Test Period MWh Sales					Exhibit 4	11,570,060
21	**Experience Modification Increment (Decrement) cents/KWh**						**0.1391**

Notes:

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

[2] January-March 2020 filed in fuel Docket E-7, Sub 1228 to update the EMF and included in current EMF rate.
Included for Commission review in accordance with NC Rule R8-55(d)(3) but deducted from total (Over)/Under on Line 16.

[3] January and February 2021 are included for Commission review in accordance with NC Rule R8-55(d)(3). These periods 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, 2020
Billing Period September 2021 - August 2022
Docket E-7, Sub 1250

I/A

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)	82,983,046	55,511,864	21,396,039	22,718,144	11,397,681
2	Customer Growth MWh Adjustment	Workpaper 13 Pg 1	494,727	322,769	225,676	89,954	7,139
3	Weather MWh Adjustment	Workpaper 12	3,083,635	2,167,977	1,707,860	294,877	165,240
4	Total Normalized MWh Sales	Sum	86,561,409	58,002,609	23,329,575	23,102,975	11,570,060
5	Test Period Fuel and Fuel Related Revenue *		$ 1,571,170,278	$ 1,015,637,375			
6	Test Period Fuel and Fuel Related Expense *		$ 1,435,008,103	$ 961,492,783			
7	Test Period Unadjusted (Over)/Under Recovery		$ (136,162,175)	$ (54,144,594)			

Line #	Description	Summer Coincidental Peak (CP) kW
8	Total System Peak	17,438,327
9	NC Retail Peak	11,665,772
10	NC Residential Peak	5,482,921
11	NC General Service/Lighting Peak	4,326,963
12	NC Industrial Peak	1,855,888

* 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.

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Nuclear Capacity Ratings
Test Period Ended December 31, 2020
Billing Period September 2021 - August 2022
Docket E-7, Sub 1250

Sykes Exhibit 5

Unit	Rate Case Docket E-7, Sub 1146	Fuel Docket E-7, Sub 1228	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	1,160.1
Catawba Unit 2	1,150.1	1,150.1	1,150.1
Total Company	7,179.8	7,179.8	7,179.8

I/A

Sykes Exhibit 6

DECEMBER 2020 MONTHLY FUEL FILING

DUKE ENERGY CAROLINAS
SUMMARY OF MONTHLY FUEL REPORT

Docket No. E-7, Sub 1234

Line No.		December 2020	12 Months Ended December 2020
1	Fuel and fuel-related costs	$ 139,993,351	$ 1,435,984,896
	MWH sales:		
2	Total system sales	6,362,066	84,193,171
3	Less intersystem sales	89,096	1,210,125
4	Total sales less intersystem sales	6,272,970	82,983,046
5	Total fuel and fuel-related costs (¢/KWH) (line 1/line 4)	2.2317	1.7305
6	Current fuel and fuel-related cost component (¢/KWH) (per Schedule 4, Line 7a Total)	1.6693	
	Generation Mix (MWH):		
	Fossil (by primary fuel type):		
7	Coal	1,371,448	14,738,937
8	Fuel Oil	8,702	64,807
9	Natural Gas - Combined Cycle	1,016,660	14,333,589
10	Natural Gas - Combined Heat and Power	39	5,300
11	Natural Gas - Combustion Turbine	97,325	775,879
12	Natural Gas - Steam	172,344	2,406,276
13	Biogas	2,622	25,709
14	Total fossil	2,669,140	32,350,497
15	Nuclear 100%	5,476,820	59,945,886
16	Hydro - Conventional	252,107	3,016,593
17	Hydro - Pumped storage	(48,524)	(505,461)
18	Total hydro	203,583	2,511,132
19	Solar Distributed Generation	10,105	148,719
20	Total MWH generation	8,359,648	94,956,234
21	Less joint owners' portion - Nuclear	1,413,968	15,631,285
22	Less joint owners' portion - Combined Cycle	82,982	1,319,907
23	Adjusted total MWH generation	6,862,698	78,005,042

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

DUKE ENERGY CAROLINAS
DETAILS OF FUEL AND FUEL-RELATED COSTS

Docket No. E-7, Sub 1234

Fuel and fuel-related costs:	December 2020	12 Months Ended December 2020
0501110 coal consumed - steam	$ 42,109,238	$ 509,419,250
0501310 fuel oil consumed - steam	181,852	3,355,663
0501330 fuel oil light-off - steam	305,196	3,287,490
Total Steam Generation - Account 501	42,596,286	516,062,403
Nuclear Generation - Account 518		
0518100 burnup of owned fuel	22,919,977	256,442,658
Other Generation - Account 547		
0547100, 0547124 - natural gas consumed - Combustion Turbine	3,854,899	26,580,246
0547100 - Combustion Turbine - credit for inefficient fuel cost	(45,980)	(100,388)
0547100 natural gas consumed - Steam	6,405,649	73,118,890
0547101 natural gas consumed - Combined Cycle	24,719,752	281,739,819
0547101 natural gas consumed - Combined Heat and Power	25,323	566,869
0547106 biogas consumed - Combined Cycle	141,294	1,388,864
0547200 fuel oil consumed - Combustion Turbine	876,617	2,063,581
Total Other Generation - Account 547	35,977,554	385,357,881
Reagents		
Reagents (lime, limestone, ammonia, urea, dibasic acid, and sorbents)	1,608,993	17,555,512
Total Reagents	1,608,993	17,555,512
By-products		
Net proceeds from sale of by-products	1,169,523	7,934,796
Total By-products	1,169,523	7,934,796
Total Fossil and Nuclear Fuel Expenses Included in Base Fuel Component	104,272,333	1,183,353,250
Purchased Power and Net Interchange - Account 555		
Capacity component of purchased power (economic)	215,310	10,765,481
Capacity component of purchased power (renewables)	615,486	14,501,806
Capacity component of purchased power (PURPA)	256,193	6,762,310
Fuel and fuel-related component of purchased power	37,895,970	248,287,490
Total Purchased Power and Net Interchange - Account 555	38,982,959	280,317,087
Less:		
Fuel and fuel-related costs recovered through intersystem sales	3,152,653	26,840,359
Fuel in loss compensation	85,032	755,898
Solar Integration Charge	-	3,864
Lincoln CT marginal fuel revenue	13,953	75,020
Miscellaneous Fees Collected	10,300	10,300
Total Fuel Credits - Accounts 447 /456	3,261,938	27,685,441
Total Fuel and Fuel-related Costs	$ 139,993,351	$ 1,435,984,896

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

I/A

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

DECEMBER 2020

Purchased Power	Total	Capacity	Non-capacity			
Economic	$	$	mWh	Fuel $	Fuel-related $	Not Fuel $ Not Fuel-related $
Carolina Power Partners, LLC	$ 978,100	-	33,440	$ 596,641	$ 381,459	
Cherokee County Cogeneration Partners	1,521,127	$ 215,310	39,774	1,122,180	183,637	
Cube Yadkin Generation LLC	123,723	-	7,709	75,471	48,252	
DE Progress - Native Load Transfer	19,491,334	-	738,327	17,470,858	2,027,149	$ (6,673)
DE Progress - Native Load Transfer (Prior Period Adjust)	734	-	-	-	734	
DE Progress - Native Load Transfer Benefit	2,139,555	-	-	2,139,555	-	
Haywood Electric - Economic	24,989	20,230	109	2,903	1,856	
Macquarie Energy, LLC	3,675,222	-	86,739	2,241,885	1,433,337	
NCEMC - Economic	42,120	-	810	25,693	16,427	
NCMPA Instantaneous - Economic	838,428	-	34,370	484,444	353,984	
Piedmont Municipal Power Agency	285,149	-	12,007	164,759	120,390	
PJM Interconnection, LLC.	230,674	-	6,200	140,711	89,963	
Southern Company Services, Inc.	63,004	-	2,688	38,432	24,572	
Tennesse Valley Authority	237,512	-	7,094	144,882	92,630	
Town of Dallas	584	584	-	-	-	
Town of Forest City	19,856	19,856	-	-	-	
	$ 29,672,111	**$ 255,980**	**969,267**	**$ 24,648,415**	**$ 4,774,389**	**$ (6,673)**
Renewable Energy						
REPS	$ 4,701,460	$ 610,344	84,946	$ -	$ 4,091,116	$ -
DERP - Purchased Power	54,261	5,142	910	-	37,283	11,836
	$ 4,755,721	**$ 615,486**	**85,856**	**$ -**	**$ 4,128,399**	**$ 11,836**
HB589 PURPA Purchases						
CPRE - Purchased Power	(10,000)	-	-			(10,000)
Qualifying Facilities	2,895,926	256,193	57,308		2,568,618	71,115
	$ 2,885,926	**$ 256,193**	**57,308**	**$ -**	**$ 2,568,618**	**$ 61,115**
Non-dispatchable / Other						
Blue Ridge Electric Membership Corp.	$ 1,020,170	$ 619,257	25,417	$ 244,557		$ 156,356
Carolina Power Partners, LLC	597,600	-	18,000	364,536		233,064
DE Progress - As Available Capacity	3,826	3,826	-	-		-
Exelon Generation Company, LLC.	38,430	-	1,098	23,442		14,988
Haywood Electric	227,559	116,898	5,409	67,503		43,158
Macquarie Energy, LLC	1,260,096	-	32,084	768,659		491,437
Morgan Stanley Capital Group	36,138	-	1,277	22,044		14,094
NCEMC - Other	4,021	4,021	-	-		-
Piedmont Electric Membership Corp.	461,013	267,253	11,904	118,193		75,566
Southern Company Services, Inc.	56,000	-	2,000	34,160		21,840
Generation Imbalance	141,567	-	3,780	55,654		85,913
Energy Imbalance - Purchases	12,166	-	(8,729)	10,443		1,723
Energy Imbalance - Sales	(288,704)	-	-	(278,165)		(10,539)
Other Purchases	356	-	14	-		356
	$ 3,570,237	**$ 1,011,255**	**92,254**	**$ 1,431,026**	**$ -**	**$ 1,127,956**
Total Purchased Power	**$ 40,883,995**	**$ 2,138,914**	**1,204,685**	**$ 26,079,441**	**$ 11,471,406**	**$ 1,194,234**
Interchanges In						
Other Catawba Joint Owners	7,508,569	-	711,873	4,285,824		3,222,745
WS Lee Joint Owner	1,210,914		42,903	1,034,072		176,842
Total Interchanges In	8,719,483	-	754,776	5,319,897	-	3,399,586
Interchanges Out						
Other Catawba Joint Owners	(7,361,777)	(134,209)	(693,224)	(4,174,593)		(3,052,975)
Catawba- Net Negative Generation	-	-	-	-		-
WS Lee Joint Owner	(957,875)		(33,340)	(800,181)		(157,694)
Total Interchanges Out	(8,319,652)	(134,209)	(726,564)	(4,974,774)	-	(3,210,669)
Net Purchases and Interchange Power	**$ 41,283,826**	**$ 2,004,705**	**1,232,897**	**$ 26,424,564**	**$ 11,471,406**	**$ 1,383,151**

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

I/A

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

DECEMBER 2020

Sales	Total $	Capacity $	Non-capacity mWh	Non-capacity Fuel $	Non-capacity Non-fuel $
Utilities:					
DE Progress - Emergency	$ 100,774	$ -	1,180	$ 92,137	$ 8,638
Market Based:					
Macquarie Energy, LLC	-	-	-	2,699	(2,699)
NCMPA	106,134	87,500	270	20,014	(1,381)
PJM Interconnection, LLC.	(3)	-	-	-	(3)
Other:					
DE Progress - Native Load Transfer Benefit	297,225	-	-	297,225	-
DE Progress - Native Load Transfer	2,809,592	-	85,741	2,691,167	118,425
Generation Imbalance	61,927	-	1,905	49,411	12,516
BPM Transmission	3,092	-			3,092
Total Intersystem Sales	**$ 3,378,741**	**$ 87,500**	**89,096**	**$ 3,152,653**	**$ 138,588**

* 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 DECEMBER 2020

Purchased Power	Total	Capacity	Non-capacity			
Economic	$	$	mWh	Fuel $	Fuel-related $	Not Fuel $ Not Fuel-related $
Carolina Power Partners, LLC	$ 2,224,380	-	86,400	$ 1,356,872	$ 867,508	
Cherokee County Cogeneration Partners	20,600,437	$ 10,765,481	351,406	8,109,001	1,725,955	
Cube Yadkin Generation LLC	123,723	-	7,709	75,471	48,252	
DE Progress - Native Load Transfer	100,976,135	-	5,911,217	92,233,427	8,497,582	$ 245,126
DE Progress - Native Load Transfer (Prior Period Adjust)	734	-	-	-	734	
DE Progress - Native Load Transfer Benefit	12,958,040	-	-	12,958,040	-	
DE Progress - Fees	6,036	-	-	-	6,036	
EDF Trading North America, LLC.	3,120	-	240	1,903	1,217	
Exelon Generation Company, LLC.	76,305	-	2,685	46,546	29,759	
Haywood Electric - Economic	274,796	256,136	607	11,383	7,277	
Macquarie Energy, LLC	6,590,892	-	196,775	4,020,444	2,570,448	
NCEMC	42,120	-	810	25,693	16,427	
NCMPA Load Following Economic	7,491,216	-	459,359	4,377,196	3,114,020	
NTE Carolinas LLC	820,801	-	37,325	500,688	320,113	
Piedmont Municipal Power Agency	2,978,297	-	193,184	1,751,386	1,226,911	
PJM Interconnection, LLC.	422,946	-	13,872	257,998	164,948	
Rainbow Energy Marketing Corporation	7,548	-	300	4,604	2,944	
South Carolina Electric & Gas Company / Dominion Energy	13,450	-	400	7,930	5,520	
Southern Company Services, Inc.	427,836	-	25,491	260,980	166,856	
Tennesse Valley Authority	559,698	-	23,066	341,416	218,281	
The Energy Authority	8,244	-	229	5,029	3,215	
Town of Dallas	7,008	7,008	-	-	-	
Town of Forest City	238,272	238,272	-	-	-	
	$ 156,852,034	**$ 11,266,897**	**7,311,075**	**$ 126,346,007**	**$ 18,994,003**	**$ 245,126**
Renewable Energy						
REPS	$ 70,245,371	$ 14,411,272	1,145,873	$ -	$ 55,834,100	$ -
DERP - Purchased Power	966,899	90,534	16,567	-	679,995	196,370
DERP - Net Metered Generation	56,012	10,243	1,297	-		45,769
	$ 71,268,282	**$ 14,512,049**	**1,163,736**	**$ -**	**$ 56,514,095**	**$ 242,139**
HB589 PURPA Purchases						
CPRE - Purchased Power	$ (2,244,000)	$ -	-			$ (2,244,000)
Qualifying Facilities	38,695,060	6,762,310	681,954		$ 30,908,248	1,024,502
	$ 36,451,060	**$ 6,762,310**	**681,954**	**$ -**	**$ 30,908,248**	**$ (1,219,498)**
Non-dispatchable / Other						
Carolina Power & Light (DE Progress) - Emergency	$ 49,412	$ -	569	$ 30,141		$ 19,271
Blue Ridge Electric Membership Corp.	13,522,047	7,488,673	305,808	3,680,359		2,353,015
Carolina Power Partners, LLC	1,509,240	-	46,800	920,636		588,604
DE Progress - As Available Capacity	149,077	149,077	-	-		-
Exelon Generation Company, LLC.	38,430	-	1,098	23,442		14,988
Haywood Electric	2,872,965	1,494,026	63,271	841,155		537,784
Macquarie Energy, LLC	5,754,063	-	146,648	3,509,979		2,244,084
Morgan Stanley Capital Group	36,138	-	1,277	22,044		14,094
NCEMC - Other	364,189	51,816	6,049	190,548		121,825
NCMPA - Reliability	57,240	-	1,080	34,916		22,324
Piedmont Electric Membership Corp.	6,391,828	3,524,179	140,544	1,749,265		1,118,383
PJM Interconnection, LLC - Other	3,744	-	175	2,284		1,460
Southern Company Services, Inc.	364,619	-	7,011	222,418		142,201
Generation Imbalance	1,307,904		56,424	565,036		742,868
Energy Imbalance - Purchases	668,581		(1,430)	518,790		149,791
Energy Imbalance - Sales	(1,008,321)		-	(948,806)		(59,515)
Other Purchases	8,268	-	258	-		8,268
	$ 32,089,423	**$ 12,707,771**	**775,582**	**$ 11,362,207**	**$ -**	**$ 8,019,445**
Total Purchased Power	**$ 296,660,799**	**$ 45,249,027**	**9,932,347**	**$ 137,708,214**	**$ 106,416,346**	**$ 7,287,211**
Interchanges In						
Other Catawba Joint Owners	74,998,623	-	7,867,637	43,384,153		31,614,472
WS Lee Joint Owner	11,295,227	-	500,924	9,242,716		2,052,512
Total Interchanges In	86,293,850	-	8,368,561	52,626,868	-	33,666,984
Interchanges Out						
Other Catawba Joint Owners	(71,597,673)	(1,584,537)	(7,454,361)	(41,125,471)		(28,887,665)
Catawba- Net Negative Generation	(188,590)	-	(9,707)	(129,579)		(59,011)
WS Lee Joint Owner	(9,029,429)	-	(395,030)	(7,208,892)		(1,820,537)
Total Interchanges Out	(80,815,692)	(1,584,537)	(7,859,098)	(48,463,942)	-	(30,767,213)
Net Purchases and Interchange Power	**$ 302,138,957**	**$ 43,664,490**	**10,441,810**	**$ 141,871,140**	**$ 106,416,346**	**$ 10,186,982**

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

I/A

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

Twelve Months Ended DECEMBER 2020

	Total	Capacity	Non-capacity		
Sales	**$**	**$**	**mWh**	**Fuel $**	**Non-fuel $**
Utilities:					
DE Progress - Emergency	$ 125,188	-	2,322	$ 113,626	$ 11,563
SC Public Service Authority - Emergency	11,678	-	456	9,389	2,289
SC Electric & Gas / Dominion Energy - Emergency	16,079	-	653	29,063	(12,984)
Market Based:					
Central Electric Power Cooperative, Inc.	5,546,611	$ 4,809,000	23,372	694,954	42,657
EDF Trading Company	64,800	-	2,050	40,370	24,430
Evergy Kansas Central (BPM)	83,610	-	2,664	49,921	33,689
Exelon Generation Company, LLC.	29,085	-	1,680	27,783	1,302
Macquarie Energy, LLC	1,479,310	-	51,940	1,030,403	448,907
NCMPA	1,201,597	1,050,003	5,572	170,190	(18,597)
PJM Interconnection, LLC.	181,650	-	8,552	182,675	(1,025)
SC Electric & Gas / Dominion Energy	391,427	-	12,300	235,047	156,380
Southern Company	54,834	-	6,730	95,407	(40,573)
Tennesse Valley Authority	22,500	-	450	15,720	6,780
The Energy Authority	260,242	-	10,148	161,253	98,989
Other:					
DE Progress - Native Load Transfer Benefit	3,387,778	-	-	3,387,778	-
DE Progress - Native Load Transfer	21,570,376	-	1,062,405	20,142,840	1,427,536
Generation Imbalance	411,383	-	18,831	453,940	(42,557)
BPM Transmission	(195,265)	-		-	(195,265)
Total Intersystem Sales	**$ 34,642,883**	**$ 5,859,003**	**1,210,125**	**$ 26,840,359**	**$ 1,943,521**

* Sales for resale other than native load priority.

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

I/A

Duke Energy Carolinas
(Over) / Under Recovery of Fuel Costs
December 2020

Line No.			Residential	Commercial	Industrial	Total
1	Actual System kWh sales	Input				6,272,969,895
2	DERP Net Metered kWh generation	Input				10,483,803
3	Adjusted System kWh sales	L1 + L2				6,283,453,698
4	N.C. Retail kWh sales	Input	1,905,668,087	1,459,697,098	750,442,212	4,115,807,397
5	NC kWh sales % of actual system kWh sales	L4 T / L1				65.61%
6	NC kWh sales % of adjusted system kWh sales	L4 T / L3				65.50%
7	Approved fuel and fuel-related rates (¢/kWh)					
	7a Billed rates by class (¢/kWh)	Input Annually	1.6027	1.7583	1.6652	1.6693
	7b Billed fuel expense	L7b * L4 / 100	$30,542,142	$25,665,854	$12,496,364	$68,704,360
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	35.85%	42.97%	21.18%	
	8b System incurred expense	Input				$139,569,050
	8c Incurred base fuel and fuel-related expense	L8b * L6 * 8a	$32,774,892	$39,280,050	$19,366,012	$91,420,954
	8d Incurred base fuel rates by class (¢/kWh)	L8c / L4 * 100	1.7199	2.6910	2.5806	2.2212
9	Incurred renewable purchased power capacity rates by class (¢/kWh)					
	9a NC retail production plant %	Input				67.09%
	9b Production plant allocation factors	Input	45.45%	38.36%	16.20%	100.00%
	9c System incurred expense	Input				$1,086,989
	9d Incurred renewable capacity expense	L9a * L9b * 9c	$331,423	$279,724	$118,135	$729,282
	9e Incurred renewable capacity rates by class (¢/kWh)	(L9a * L9c) * L9b / L4 * 100	0.0174	0.0192	0.0157	0.0177
10	Total incurred rates by class (¢/kWh)	L8d + L9e	1.7373	2.7101	2.5964	2.2389
11	Difference in ¢/kWh (incurred - billed)	L7a - L10	0.1346	0.9518	0.9312	0.5697
12	(Over) / under recovery [See footnote]	(L4 * L11) / 100	$2,564,173	$13,893,920	$6,987,783	$23,445,876
13	Prior period adjustments	Input	247,037	331,339	(578,376)	0
14	Total (over) / under recovery [See footnote]	L12+ L13	$2,811,210	$14,225,259	$6,409,407	$23,445,876
15	Total system incurred expense	L8b + L9c				$140,656,039
16	Less: Jurisdictional allocation adjustment(s)	Input				662,688
17	Total Fuel and Fuel-related Costs per Schedule 2	L15 + L16				$139,993,351

Duke Energy Carolinas
(Over) / Under Recovery of Fuel Costs
December 2020

Line No.			(Over) / Under Recovery			
18	(Over) / under recovery for each month of the current calendar year [See footnote]					
	Year 2020	Total To Date	Residential	Commercial	Industrial	Total Company
	January	($7,772,097)	($7,413,792)	($2,736,820)	$2,378,515	($7,772,097)
	February	(30,103,707)	($10,701,007)	($8,385,934)	($3,244,669)	($22,331,610)
	March	(52,248,879)	($9,037,706)	($8,865,883)	($4,241,584)	($22,145,172)
	April	(71,512,659)	($6,293,969)	($9,457,058)	($3,512,753)	($19,263,780)
	May	(79,369,385)	($2,105,593)	($4,759,228)	($991,906)	($7,856,726)
_/1	June	(75,811,457)	$165,111	$724,468	$2,668,350	$3,557,928
	July	(62,415,668)	($8,998)	$5,814,650	$7,590,138	$13,395,789
	August	(53,417,153)	($1,262,025)	$4,633,072	$5,627,469	$8,998,515
_/2	September	(65,139,163)	($4,800,324)	($5,550,013)	($1,371,673)	($11,722,010)
_/2	October	(64,255,145)	$3,858,149	($2,007,635)	($966,497)	$884,018
	November	($77,590,470)	$1,604,755	($8,394,817)	($6,545,263)	($13,335,325)
_/1	December	($54,144,594)	$2,811,210	$14,225,259	$6,409,407	$23,445,876
			($33,184,189)	($24,759,939)	$3,799,534	($54,144,594)

I/A

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 prior period 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 2020

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	-	-	-		-	-	-	-	-
Gas - CC	$10,899,040	$4,337,175	$10,892,051						
Gas - CHP				$25,323					
Gas - CT					$33,260	$178,930	$373,904	$379,803	$2,843,021
Gas - Steam					264				
Biogas	395,748	(263)	-						
Total	$11,294,788	$4,336,912	$10,892,051	$25,323	$33,524	$178,930	$373,904	$379,803	$2,843,021
Average Cost of Fuel Purchased (¢/MBTU)									
Coal		-							
Oil					-	-	-	-	-
Gas - CC	359.39	363.23	364.04						
Gas - CHP				4,841.94					
Gas - CT					638.06	370.11	319.96	361.44	361.68
Gas - Steam					332.60				
Biogas	2,174.44	-	-						
Weighted Average	370.22	363.21	364.04	4,841.94	638.06	370.11	319.96	361.44	361.68
Cost of Fuel Burned ($)									
Coal		-	-		-				
Oil - CC	-	-	-						
Oil - Steam/CT					$0	4,736	-	694,987	176,893
Gas - CC	$10,899,040	$4,337,175	$10,892,051						
Gas - CHP				$25,323					
Gas - CT					33,260	$178,930	$373,904	$379,803	$2,843,021
Gas - Steam					264				
Biogas	395,748	(263)	-						
Nuclear									
Total	$11,294,788	$4,336,912	$10,892,051	$25,323	$33,524	$183,667	$373,904	$1,074,791	$3,019,914
Average Cost of Fuel Burned (¢/MBTU)									
Coal					-				
Oil - CC									
Oil - Steam/CT					-	1,518.09	-	1,794.07	1,552.24
Gas - CC	359.39	363.23	364.04						
Gas - CHP				4,841.94					
Gas - CT					638.06	370.11	319.96	361.44	361.68
Gas - Steam					332.60				
Biogas	2,174.44	-	-						
Nuclear									
Weighted Average	370.22	363.21	364.04	4,841.94	638.06	377.48	319.96	747.32	378.70
Average Cost of Generation (¢/kWh)									
Coal		-	-		-	-	-		
Oil - CC	-	-	-						
Oil - Steam/CT		-	-		-	16.67	-	23.46	16.67
Gas - CC	2.49	2.60	2.64						
Gas - CHP				65.60					
Gas - CT					8.34	5.90	3.41	4.63	3.81
Gas - Steam					-	-	-		
Biogas	15.10	-	-						
Nuclear									
Weighted Average	2.57	2.60	2.64	65.60	209.52	6.00	3.41	9.62	3.99
Burned MBTU's									
Coal					-				
Oil - CC									
Oil - Steam/CT					-	312	-	38,738	11,396
Gas - CC	3,032,651	1,194,065	2,991,957						
Gas - CHP				523					
Gas - CT					5,213	48,345	116,859	105,081	786,050
Gas - Steam					41				
Biogas	18,200	-	-						
Nuclear									
Total	3,050,851	1,194,065	2,991,957	523	5,254	48,657	116,859	143,819	797,446
Net Generation (mWh)									
Coal									
Oil - CC									
Oil - Steam/CT		-	-		-	28	-	2,963	1,061
Gas - CC	436,836	167,022	412,802		-				
Gas - CHP				39					
Gas - CT					399	3,031	10,971	8,208	74,717
Gas - Steam					(383)				
Biogas	2,622	-	-						
Nuclear 100%									
Hydro (Total System)									
Solar (Total System)									
Total	439,458	167,022	412,802	39	16	3,059	10,971	11,171	75,778
Cost of Reagents Consumed ($)									
Ammonia	$18,886	$5,818	$0						
Limestone									
Sorbents									
Urea									
Re-emission Chemical									
Dibasic Acid									
Activated Carbon									
Lime (water emissions)									
Total	$18,886	$5,818	$0						

Notes:
(A) Lincoln (Unit 17) fuel and fuel related costs represents pre-commercial generation during an extended testing and validation period.
(B) Solar Net Generation (mWh) for the month of December includes pre-commercial 225 mWh for Gaston Solar and 621 mWh for Maiden Creek Solar.
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
I/A
DECEMBER 2020

Description	Allen Steam	Marshall Steam - Dual Fuel	Belews Creek Steam - Dual Fuel	Cliffside Steam - Dual Fuel	Catawba Nuclear	McGuire Nuclear	Oconee Nuclear	Current Month	Total 12 ME December 2020
Cost of Fuel Purchased ($)									
Coal	$1,577,477	$1,754,302	$11,470,966	$10,418,928				$25,221,674	$524,924,279
Oil	185,282	184,358	-	128,100				497,740	7,111,516
Gas - CC								26,128,266	296,014,769
Gas - CHP								25,323	566,869
Gas - CT								3,808,918	26,479,858
Gas - Steam		658,574	920,601	4,826,210				6,405,649	73,118,890
Biogas								395,485	3,886,168
Total	$1,762,760	$2,597,234	$12,391,568	$15,373,238				$62,483,056	$932,102,349
Average Cost of Fuel Purchased (¢/MBTU)									
Coal	146.33	120.66	387.31	248.05				260.18	363.32
Oil	1,111.33	1,114.19	-	1,123.87				1,115.60	964.95
Gas - CC								360.47	291.63
Gas - CHP								4,841.94	900.44
Gas - CT								363.61	293.34
Gas - Steam		361.83	356.40	366.63				364.63	296.70
Biogas				.				2,173.00	2,121.55
Weighted Average	161.03	157.17	384.83	278.09				315.66	332.14
Cost of Fuel Burned ($)									
Coal	3,571,288	$22,581,995	$1,720,310	$14,235,645				$42,109,238	$509,419,250
Oil - CC								-	-
Oil - Steam/CT	169,845	214,154	-	103,049				1,363,664	8,706,734
Gas - CC								26,128,266	296,014,769
Gas - CHP								25,323	566,869
Gas - CT								3,808,918	26,479,858
Gas - Steam		658,574	920,601	4,826,210				6,405,649	73,118,890
Biogas								395,485	3,886,168
Nuclear					$10,059,697	$9,693,332	$11,290,556	31,043,585	348,551,598
Total	$3,741,133	$23,454,723	$2,640,912	$19,164,904	$10,059,697	$9,693,332	$11,290,556	$111,280,130	$1,266,744,136
Average Cost of Fuel Burned (¢/MBTU)									
Coal	275.63	321.64	397.94	293.77				309.75	351.15
Oil - CC								-	-
Oil - Steam/CT	1,025.94	1,080.66	-	999.12				1,403.93	1,155.30
Gas - CC								360.47	291.63
Gas - CHP								4,841.94	900.44
Gas - CT								363.61	293.34
Gas - Steam		361.83	356.40	366.63				364.63	296.70
Biogas								2,173.00	2,121.55
Nuclear					57.67	55.09	57.72	56.86	57.73
Weighted Average	285.09	324.73	382.41	310.49	57.67	55.09	57.72	142.03	143.14
Average Cost of Generation (¢/kWh)									
Coal	3.00	3.21	7.14	2.72				3.07	3.46
Oil - CC								-	-
Oil - Steam/CT	11.13	10.78	-	9.05				15.67	13.43
Gas - CC								2.57	2.07
Gas - CHP								3.72	3.04
Gas - CT								3.91	3.41
Gas - Steam		3.36	3.44	3.82				3.72	3.04
Biogas								15.09	15.12
Nuclear					0.57	0.55	0.58	0.57	0.58
Weighted Average	3.11	3.23	5.19	2.94	0.57	0.55	0.58	1.33	1.33
Burned MBTU's									
Coal	1,295,699	7,020,964	432,300	4,845,845				13,594,808	145,073,739
Oil - CC								-	-
Oil - Steam/CT	16,555	19,817	-	10,314				97,132	753,636
Gas - CC								7,218,673	101,505,115
Gas - CHP								523	62,955
Gas - CT								1,061,547	9,026,942
Gas - Steam		182,011	258,305	1,316,385				1,756,742	24,644,417
Biogas								18,200	183,176
Nuclear					17,442,554	17,596,486	19,560,447	54,599,487	603,725,817
Total	1,312,254	7,222,792	690,605	6,172,544	17,442,554	17,596,486	19,560,447	78,347,113	884,975,797
Net Generation (mWh)									
Coal	118,909	704,337	24,083	524,119				1,371,448	14,738,937
Oil - CC								-	-
Oil - Steam/CT	1,526	1,986	-	1,138				8,702	64,807
Gas - CC								1,016,660	14,333,589
Gas - CHP								39	5,300
Gas - CT								97,325	775,879
Gas - Steam		19,579	26,799	126,349				172,344	2,406,276
Biogas								2,622	25,709
Nuclear 100%					1,750,957	1,771,352	1,954,511	5,476,820	59,945,886
Hydro (Total System)								203,583	2,511,132
Solar (Total System)								10,105 (B)	148,719 (B)
Total	120,435	725,902	50,882	651,606	1,750,957	1,771,352	1,954,511	8,359,648	94,956,234
Cost of Reagents Consumed ($)									
Ammonia			$12,439	$94,070				$131,214	$2,132,769
Limestone	$80,787	$492,369	23,042	645,650				1,241,849	13,486,306
Sorbents	-	182,384	-					182,384	1,346,201
Urea	(1)	50,675						50,674	492,740
Re-emission Chemical		-	-	-				-	345,138
Dibasic Acid	-							-	-
Activated Carbon	-	-						-	25,493
Lime (water emissions)	-	3,613	-					3,613	91,162
Total	80,785	729,042	$35,481	$739,721				$1,609,734	$17,919,809

Notes:
(A) Lincoln (Unit 17) fuel and fuel related costs represents pre-commercial generation during an extended testing and validation period.
(B) Solar Net Generation (mWh) for the month of December includes pre-commercial 225 mWh for Gaston Solar and 621 mWh for Maiden Creek Solar.
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 CONSUMPTION AND INVENTORY REPORT
DECEMBER 2020

Description	Buck	Dan River	Lee	Clemson	Lee	Lincoln	(A) Lincoln (Unit17)	Mill Creek	Rockingham	Allen	Marshall	Belews Creek	Cliffside	Current Month	Total 12 ME December 2020
	CC	CC	CC	CHP	Steam/CT	CT	CT	CT	CT	Steam	Steam - Dual Fuel	Steam - Dual Fuel	Steam - Dual Fuel		
Coal Data:															
Beginning balance					-					186,382	960,652	674,515	423,558	2,245,107	2,127,823
Tons received during period										24,160	13,819	165,159	175,477	378,615	5,798,126
Inventory adjustments					-					25,626	47,206	(46,502)	(6,803)	19,527	18,845
Tons burned during period					-					54,063	281,367	17,310	201,962	554,702	5,856,247
Ending balance					-					182,105	740,309	775,862	390,270	2,088,547	2,088,547
MBTUs per ton burned					-					23.97	24.95	24.97	23.99	24.51	24.77
Cost of ending inventory ($/ton)					-					73.92	80.26	99.38	70.49	84.98	84.98
Oil Data:															
Beginning balance	-	-	-		725,202	9,685,581	401,963	4,200,018	2,936,025	100,642	234,223	92,835	164,992	18,541,481	18,531,066
Gallons received during period	-	-	-		-	-	-	-	-	120,812	119,901	-	82,595	323,308	5,340,477
Miscellaneous adjustments	-	-	-		-	-	-	-	0	489	-	(9,364)	(8,443)	(16,647)	(261,532)
Gallons burned during period		-	-		-	2,260	-	281,445	81,500	120,205	144,160	-	75,144	705,385	5,467,254
Ending balance	-	-	-		725,202	9,683,321	401,963	3,918,573	2,854,525	101,738	209,964	83,471	164,000	18,142,757	18,142,757
Cost of ending inventory ($/gal)	-	-	-		1.87	2.10	1.21	2.47	2.17	1.42	1.49	1.28	1.37	2.14	2.14
Natural Gas Data:															
Beginning balance															
MCF received during period	2,929,844	1,153,862	2,900,531	508	5,107	47,415	112,706	101,805	759,266		176,538	249,500	1,273,001	9,710,083	131,051,615
MCF burned during period	2,929,844	1,153,862	2,900,531	508	5,107	47,415	112,706	101,805	759,266		176,538	249,500	1,273,001	9,710,083	131,051,615
Ending balance															
Biogas Data:															
Beginning balance															
MCF received during period	17,583	-	-											17,583	177,457
MCF burned during period	17,583	-	-											17,583	177,457
Ending balance															
Limestone Data:															
Beginning balance										27,056	77,766	48,347	30,212	183,382	175,919
Tons received during period										-	-	-	-	-	292,356
Inventory adjustments										1,771	(6,843)	4,700	(2,299)	(2,670)	(2,671)
Tons consumed during period										1,774	12,100	624	11,785	26,283	311,176
Ending balance										27,054	58,823	52,423	16,128	154,428	154,428
Cost of ending inventory ($/ton)										45.54	40.69	36.92	44.42	40.65	40.65
														Qtr Ending December 2020	Total 12 ME December 2020
Ammonia Data:															
Beginning balance	1,834													1,834	1,405
Tons received during period	-													-	2,738
Tons consumed during period	26													26	2,334
Ending balance	1,808													1,808	1,808
Cost of ending inventory ($/ton)	485.71													485.71	485.71

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.
Schedule excludes in-transit and terminal activity.
Gas is burned as received; therefore, inventory balances are not maintained.

I/A

Exhibit 6
Schedule 6

DUKE ENERGY CAROLINAS
ANALYSIS OF COAL PURCHASED
DECEMBER 2020

STATION	TYPE	QUANTITY OF TONS DELIVERED	DELIVERED COST	DELIVERED COST PER TON
ALLEN	SPOT	-	$ -	$ -
	CONTRACT	24,160	1,516,810	62.78
	FIXED TRANSPORTATION / ADJUSTMENTS	-	0	-
	TOTAL	24,160	1,516,810	62.78
BELEWS CREEK	SPOT	38,357	2,540,568	66.23
	CONTRACT	126,802	8,274,865	65.26
	FIXED TRANSPORTATION / ADJUSTMENTS	-	2,209	-
	TOTAL	165,159	10,817,642	65.50
CLIFFSIDE	SPOT	-	24,564	-
	CONTRACT	175,477	9,973,775	56.84
	FIXED TRANSPORTATION / ADJUSTMENTS	-	0	-
	TOTAL	175,477	9,998,339	56.98
MARSHALL	SPOT	13,819	853,067	61.73
	CONTRACT	-	27,580	-
	FIXED TRANSPORTATION / ADJUSTMENTS	-	49,600	-
	TOTAL	13,819	930,247	67.32
ALL PLANTS	SPOT	52,176	3,418,199	65.51
	CONTRACT	326,439	19,793,030	60.63
	FIXED TRANSPORTATION / ADJUSTMENTS	-	51,809	-
	TOTAL	378,615	23,263,038	$ 61.44

Exhibit 6
Schedule 8

DUKE ENERGY CAROLINAS
ANALYSIS OF COAL QUALITY RECEIVED
DECEMBER 2020

STATION	PERCENT MOISTURE	PERCENT ASH	HEAT VALUE	PERCENT SULFUR
ALLEN	6.26	12.74	12,212	0.91
BELEWS CREEK	7.13	9.90	12,480	1.26
CLIFFSIDE	9.20	7.48	12,451	1.78
MARSHALL	7.05	13.03	11,913	0.72

DUKE ENERGY CAROLINAS

ANALYSIS OF OIL PURCHASED

DECEMBER 2020

	ALLEN	CLIFFSIDE	MARSHALL
VENDOR	HighTowers	HighTowers	HighTowers
SPOT/CONTRACT	Contract	Contract	Contract
SULFUR CONTENT %	0	0	0
GALLONS RECEIVED	120,812	82,595	119,901
TOTAL DELIVERED COST	$ 185,282	$ 128,100	$ 184,358
DELIVERED COST/GALLON	$ 1.53	$ 1.55	$ 1.54
BTU/GALLON	138,000	138,000	138,000

Duke Energy Carolinas
Power Plant Performance Data
Twelve Month Summary
January, 2020 - December, 2020
Nuclear Units

Unit Name	Net Generation (mWh)	Capacity Rating (mW)	Capacity Factor (%)	Equivalent Availability (%)
Oconee 1	6,859,973	847	92.20	90.88
Oconee 2	7,670,158	848	102.97	99.99
Oconee 3	7,012,136	859	92.93	91.89
McGuire 1	9,434,118	1,158	92.75	90.65
McGuire 2	9,612,830	1,158	94.50	93.32
Catawba 1	9,235,519	1,160	90.64	89.94
Catawba 2	10,121,151	1,150	100.19	99.78

I/A

Duke Energy Carolinas
Power Plant Performance Data
Twelve Month Summary
January, 2020 through December, 2020
Combined Cycle Units

Unit Name		Net Generation (mWh)	Capacity Rating (mW)	Capacity Factor (%)	Equivalent Availability (%)
Buck CC	11	1,134,065	206	62.67	75.42
Buck CC	12	1,134,559	206	62.70	75.10
Buck CC	ST10	1,598,203	312	58.32	80.85
Buck CC	Block Total	3,866,827	724	60.80	77.67
Dan River CC	8	1,311,548	199	75.03	83.79
Dan River CC	9	1,297,690	199	74.24	83.04
Dan River CC	ST7	1,847,499	320	65.73	91.85
Dan River CC	Block Total	4,456,737	718	70.66	87.17
WS Lee CC	11	1,739,314	240	82.50	88.86
WS Lee CC	12	1,853,394	240	87.92	93.53
WS Lee CC	ST10	2,443,026	313	88.86	94.57
WS Lee CC	Block Total	6,035,734	793	86.65	92.53

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.

I/A

Duke Energy Carolinas
Power Plant Performance Data
Twelve Month Summary
January, 2020 through December, 2020

Baseload Steam Units

Unit Name	Net Generation (mWh)	Capacity Rating (mW)	Capacity Factor (%)	Equivalent Availability (%)
Belews Creek 1	2,691,806	1,110	27.61	58.99
Belews Creek 2	2,649,126	1,110	27.17	64.73
Marshall 3	2,074,332	658	35.89	61.51
Marshall 4	2,202,419	660	37.99	65.19

Notes:

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

I/A

Duke Energy Carolinas
Power Plant Performance Data
Twelve Month Summary
January, 2020 through December, 2020

Intermediate Steam Units

Unit Name	Net Generation (mWh)	Capacity Rating (mW)	Capacity Factor (%)	Equivalent Availability (%)
Cliffside 6	4,194,682	849	56.25	79.37
Marshall 1	852,998	380	25.55	89.00
Marshall 2	956,682	380	28.66	89.62

Notes:

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

I/A

Duke Energy Carolinas
Power Plant Performance Data
Twelve Month Summary
January, 2020 through December, 2020
Other Cycling Steam Units

Unit Name		Net Generation (mWh)	Capacity Rating (mW)	Capacity Factor (%)	Operating Availability (%)
Allen	1	7,133	167	0.49	81.63
Allen	2	11,024	167	0.75	94.17
Allen	3	57,542	270	2.43	95.94
Allen	4	238,290	267	10.16	95.80
Allen	5	205,583	259	9.04	88.47
Cliffside	5	1,064,746	546	22.20	69.22
Lee	3	-4,725	173	0.00	100.00

Notes:

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

I/A

Duke Energy Carolinas
Power Plant Performance Data
Twelve Month Summary
January, 2020 through December, 2020
Combustion Turbine Stations

Station Name	Net Generation (mWh)	Capacity Rating (mW)	Operating Availability (%)
Clemson CHP	5,300	16	39.33
Lee CT	1,711	96	95.49
Lincoln CT	15,767	1,565	95.96
Mill Creek CT	70,332	756	99.68
Rockingham CT	656,571	895	88.88

Notes:

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

Duke Energy Carolinas
Power Plant Performance Data
I/A
Twelve Month Summary
January, 2020 through December, 2020
Hydroelectric Stations

Station Name	Net Generation (mWh)	Capacity Rating (mW)	Operating Availability (%)
Conventional Hydroelectric Stations:			
Bear Creek	33,970	9.5	72.33
Bridgewater	101,362	31.5	98.91
Cedar Cliff	14,360	6.8	64.07
Cedar Creek	195,060	45.0	66.54
Cowans Ford	345,561	324.0	95.00
Dearborn	167,286	42.0	86.33
Fishing Creek	236,761	50.0	86.00
Great Falls	-71	12.0	0.00
Keowee	111,177	152.0	96.63
Lookout Shoals	174,141	27.0	98.63
Mountain Island	227,649	62.0	64.49
Nantahala	281,167	50.0	91.68
Ninety-Nine Islands	80,306	15.2	76.52
Oxford	183,279	40.0	86.37
Queens Creek	6,292	1.4	93.68
Rhodhiss	119,034	33.4	98.18
Tennessee Creek	-12	9.8	0.00
Thorpe	118,015	19.7	99.49
Tuckasegee	5,018	2.5	66.71
Wateree	401,240	85.0	81.19
Wylie	214,998	72.0	69.12
Total Conventional Hydroelectric Stations:	3,016,593		
Pumped Storage Hydroelectric Stations:			
Gross Generation			
Bad Creek	1,602,907	1,360.0	67.95
Jocassee	1,138,239	780.0	81.85
Energy for Pumping			
Bad Creek	-2,004,346		
Jocassee	-1,242,261		
Net Generation			
Bad Creek	-401,439		
Jocassee	-104,022		

Notes:

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

I/A

Duke Energy Carolinas
Power Plant Performance Data
Twelve Month Summary
January, 2020 through December, 2020
Pre-commercial Combustion Turbine Stations

Note: The Power Plant Performance Data reports are limited to capturing data beginning the first full month a station is in commercial operation. During the months identified, Lincoln Unit 17 produced pre-commercial generation.

Station Name	Net Generation (mWh)	Capacity Rating (mW)	Operating Availability (%)
December 2020			
Lincoln Unit 17	10,971	n/a	n/a
November 2020			
Lincoln Unit 17	8,337	n/a	n/a
October 2020			
Lincoln Unit 17	11,198	n/a	n/a
September 2020			
Lincoln Unit 17	8,471	n/a	n/a
August 2020			
Lincoln Unit 17	-221	n/a	n/a
July 2020			
Lincoln Unit 17	-24	n/a	n/a
June 2020			
Lincoln Unit 17	1,805	n/a	n/a
May 2020			
Lincoln Unit 17	-657	n/a	n/a
Total	39,880		

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 2021 through August 2022
Docket E-7, Sub 1250

Sykes Workpaper 1

	Catawba 1	Catawba 2	McGuire 1	McGuire 2	Oconee 1	Oconee 2	Oconee 3	Total
MWhs	9,330,730	9,921,566	9,278,272	9,189,043	7,233,820	6,758,803	6,909,851	58,622,085
Cost (Gross of Joint Owners)	$ 56,313,089	$ 62,379,795	$ 53,463,594	$ 53,190,353	$ 48,378,152	$ 40,167,441	$ 41,185,222	$ 355,077,645
$/MWh	6.0352	6.2873	5.7622	5.7885	6.6878	5.9430	5.9604	
Avg $/MWh		**6.0571**						
Cents per kWh		**0.6057**						

			Sept 2021 - August 2022
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	9,331
CATA_UN02	Catawba	GWh	9,922
MCGU_UN01	McGuire	GWh	9,278
MCGU_UN02	McGuire	GWh	9,189
OCON_UN01	Oconee	GWh	7,234
OCON_UN02	Oconee	GWh	6,759
OCON_UN03	Oconee	GWh	6,910
			58,622
	Proposed Nuclear Capacity Factor		93.21%

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
NERC 5 Year Average Nuclear Capacity Factor
Billing Period September 2021 through August 2022
Docket E-7, Sub 1250

Sykes Workpaper 2

	Catawba 1	Catawba 2	McGuire 1	McGuire 2	Oconee 1	Oconee 2	Oconee 3	Total
MWhs with NERC applied	9,296,633	9,216,497	9,279,804	9,276,599	6,885,500	6,893,629	6,983,052	57,831,714
Hours	8760	8760	8760	8760	8760	8760	8760	8760
MDC	1160.1	1150.1	1158.0	1157.6	847.0	848.0	859.0	7179.8
Capacity factor	91.48%	91.48%	91.48%	91.48%	92.80%	92.80%	92.80%	91.95%
Cost	$ 56,310,290	$ 55,824,898	$ 56,208,357	$ 56,188,942	$ 41,705,906	$ 41,755,146	$ 42,296,781	$ 350,290,320

Avg $/MWh	**6.0571**
Cents per kWh	**0.6057**

2015-2019	Capacity Rating	NCF Rating	Weighted Average	
Oconee 1	847.0	92.80	10.95%	
Oconee 2	848.0	92.80	10.96%	
Oconee 3	859.0	92.80	11.10%	
McGuire 1	1158.0	91.48	14.75%	
McGuire 2	1157.6	91.48	14.75%	
Catawba 1	1160.1	91.48	14.78%	
Catawba 2	1150.1	91.48	14.65%	
	7179.8		**91.95%**	Wtd Avg on Capacity Rating

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
North Carolina Generation and Purchased Power in MWhs
Billing Period September 2021 through August 2022
Docket E-7, Sub 1250

Sykes Workpaper 3

Resource Type	Sept 2021 - August 2022	
NUC Total (Gross)	58,622,085	
COAL Total	18,691,906	
Gas CT and CC total (Gross)	22,065,718	
Run of River	4,030,270	
Net pumped Storage	(2,872,983)	
Total Hydro	1,157,287	
Catawba Joint Owners	(14,848,200)	
Lee CC Joint Owners	(876,000)	
DEC owned solar	367,302	
Total Generation		85,180,099
Purchases for REPS Compliance	1,259,059	
Qualifying Facility Purchases - Non-REPS compliance	2,257,343	
Other Purchases	36,100	
Allocated Economic Purchases	371,115	
Joint Dispatch Purchases	4,185,880	
	8,109,496	
Total Generation and Purchased Power		93,289,595
Fuel Recovered Through Intersystem Sales	(1,789,852)	

rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Projected Fuel and Fuel Related Costs
Billing Period September 2021 through August 2022
Docket E-7, Sub 1250

Sykes Workpaper 4

Resource Type	**Sept 2021 - August 2022**	
Nuclear Total (Gross)	$ 355,077,645	
COAL Total	438,222,003	
Gas CT and CC total (Gross)	503,828,581	
Catawba Joint Owner costs	(89,940,492)	
CC Joint Owner costs	(16,986,285)	
Non-Economic Fuel Expense Recovered through Reimbursement	(6,522,205)	
Reagents and gain/loss on sale of By-Products	25,707,869	Workpaper 9
Purchases for REPS Compliance - Energy	62,808,851	
Purchases for REPS Compliance - Capacity	13,866,978	
Purchases of Qualifying Facilities - Energy	53,822,291	
Purchases of Qualifying Facilities - Capacity	11,169,971	
Other Purchases	2,586,674	
JDA Savings Shared	7,856,711	Workpaper 5
Allocated Economic Purchase cost	11,091,651	Workpaper 5
Joint Dispatch purchases	93,448,130	Workpaper 6
Total Purchases	256,651,255	
Fuel Expense recovered through intersystem sales	(28,691,221)	Workpaper 5
Total System Fuel and Fuel Related Costs	**$ 1,437,347,151**	

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Projected Joint Dispatch Fuel Impacts
Billing Period September 2021 through August 2022
Docket E-7, Sub 1250

Sykes Workpaper 5

Positive numbers represent costs to Rate Payers, 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**
9/1/2021	$ 1,054,985	$ 1,489,274	$ (122,675)	$ (197,587)	$ (3,762,312)	$ 3,762,312	$ (217,149)	$ 217,149
10/1/2021	$ 812,687	$ 1,199,637	$ (74,159)	$ (94,918)	$ (7,376,689)	$ 7,376,689	$ (1,612,598)	$ 1,612,598
11/1/2021	$ 968,558	$ 721,584	$ (159,041)	$ (93,475)	$ (14,155,044)	$ 14,155,044	$ (3,467,413)	$ 3,467,413
12/1/2021	$ 944,127	$ 232,432	$ (406,595)	$ (267,257)	$ (9,163,715)	$ 9,163,715	$ (625,497)	$ 625,497
1/1/2022	$ 1,900,927	$ 2,723,940	$ (1,113,145)	$ (1,836,243)	$ 68,261	$ (68,261)	$ 2,086,357	$ (2,086,357)
2/1/2022	$ 938,420	$ 1,350,167	$ (608,729)	$ (802,795)	$ (499,296)	$ 499,296	$ 1,440,906	$ (1,440,906)
3/1/2022	$ 358,236	$ 246,158	$ (286,289)	$ (322,285)	$ (5,264,225)	$ 5,264,225	$ (508,772)	$ 508,772
4/1/2022	$ 451,814	$ 346,300	$ (220,333)	$ (19,608)	$ (8,735,414)	$ 8,735,414	$ (1,848,386)	$ 1,848,386
5/1/2022	$ 386,367	$ 562,877	$ (194,707)	$ (94,039)	$ (6,413,312)	$ 6,413,312	$ (1,011,472)	$ 1,011,472
6/1/2022	$ 1,606,722	$ 448,861	$ (172,585)	$ (147,466)	$ (5,686,849)	$ 5,686,849	$ (731,894)	$ 731,894
7/1/2022	$ 935,253	$ 647,767	$ (218,665)	$ (213,920)	$ (5,407,444)	$ 5,407,444	$ (1,418,613)	$ 1,418,613
8/1/2022	$ 783,070	$ 1,122,655	$ (114,647)	$ (199,370)	$ (2,649,832)	$ 2,649,832	$ 57,821	$ (57,821)
Sept 21 - Aug 22		$ 11,091,651		$ (4,288,963)		$ 69,045,871		$ 7,856,711

$ 93,448,130	Workpaper 6 - Transfer - Purchases
$ (24,402,258)	Workpaper 6 - Transfer - Sales
$ 69,045,871	Sept 21-Aug 22 Net Fuel Transfer Payment
$ (24,402,258)	Workpaper 6 - Transfer - Sales
$ (4,288,963)	Sept 21-Aug 22 Economic Sales Cost
$ (28,691,221)	**Total Fuel expense recovered through intersystem sales**

rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Projected Merger Payments
Billing Period September 2021 through August 2022
Docket E-7, Sub 1250

Sykes Workpaper 6

	Transfer Projection		Purchase Allocation Delta		Adjusted Transfer		Fossil Gen Cost		Pre-Net Payments	
					Purchase	Sale			Sale	Purchase
	PECtoDEC	DECtoPEC	PEC	DEC	PECtoDEC	DECtoPEC	PEC	DEC	PECtoDEC	DECtoPEC
9/1/2021	251,617	116,444	(16,971)	16,971	251,617	133,415	$ 23.22	$ 15.60	$ 2,081,261	$ 5,843,573
10/1/2021	376,590	63,669	(3,893)	3,893	376,590	67,563	$ 22.20	$ 14.58	$ 984,937	$ 8,361,626
11/1/2021	600,895	7,749	18,605	(18,605)	619,500	7,749	$ 23.00	$ 12.20	$ 94,541	$ 14,249,585
12/1/2021	415,829	156,683	14,190	(14,190)	430,020	156,683	$ 25.97	$ 12.79	$ 2,003,858	$ 11,167,572
1/1/2022	150,297	279,321	(23,059)	23,059	150,297	302,380	$ 27.95	$ 14.12	$ 4,268,785	$ 4,200,524
2/1/2022	147,663	241,402	(22,785)	22,785	147,663	264,187	$ 26.96	$ 13.18	$ 3,481,557	$ 3,980,853
3/1/2022	335,731	129,422	(1,475)	1,475	335,731	130,897	$ 21.25	$ 14.28	$ 1,868,782	$ 7,133,007
4/1/2022	515,174	84,533	(4,391)	4,391	515,174	88,924	$ 19.71	$ 15.96	$ 1,419,191	$ 10,154,604
5/1/2022	402,086	90,810	(9,503)	9,503	402,086	100,312	$ 19.77	$ 15.31	$ 1,535,300	$ 7,948,612
6/1/2022	327,890	81,463	13,381	(13,381)	341,270	81,463	$ 20.42	$ 15.73	$ 1,281,202	$ 6,968,052
7/1/2022	352,486	138,198	(4,362)	4,362	352,486	142,559	$ 22.01	$ 16.50	$ 2,352,080	$ 7,759,524
8/1/2022	263,445	162,770	(18,986)	18,986	263,445	181,756	$ 21.56	$ 16.67	$ 3,030,764	$ 5,680,597
Sept 21 - Aug 22	4,139,703	1,552,465	(59,249)	59,249	4,185,880	1,657,890			$ 24,402,258	$ 93,448,130
									Net Pre-Net Payments	$ 69,045,871

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 93.21%
Billing Period September 2021 through August 2022
Docket E-7, Sub 1250

Sykes Workpaper 7

Fall 2020 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	21,803,077		21,803,077
	General	23,889,192		23,889,192
	Industrial	12,036,241		12,036,241
	Lighting	239,227		239,227
	NC RETAIL	57,967,737	-	57,967,737
South Carolina:				
	Residential	6,549,429	102,353	6,651,782
	General	5,992,271	55,281	6,047,552
	Industrial	8,837,609	428	8,838,037
	Lighting	39,918	-	39,918
	SC RETAIL	21,419,227	158,062	21,577,289
Total Retail Sales				
	Residential	28,352,506	102,353	28,454,859
	General	29,881,464	55,281	29,936,744
	Industrial	20,873,850	428	20,874,278
	Lighting	279,145	-	279,145
	Retail Sales	79,386,965	158,062	79,545,026
	Wholesale	8,303,032	-	8,303,032
	Projected System MWH Sales for Fuel Factor	87,689,996	158,062	87,848,058
	NC as a percentage of total	**66.11%**		**65.99%**
	SC as a percentage of total	24.43%		24.56%
	Wholesale as a percentage of total	9.47%		9.45%
		100.00%		100.00%

SC Net Metering allocation adjustment

Total projected SC NEM MWhs		158,062
Marginal fuel rate per MWh for SC NEM	$	26.43
Fuel benefit to be directly assigned to SC Retail	$	4,178,086

System Fuel Expense	$ 1,437,347,151	Sykes Exhibit 2 Schedule 1 Page 1 of 3
Fuel benefit to be directly assigned to SC Retail	$ 4,178,086	
Total Fuel Costs for Allocation	$ 1,441,525,237	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	$ 1,437,347,151				
QF and REPS Compliance Purchased Power - Capacity	$ 25,036,948				
Other fuel costs	$ 1,412,310,202				
SC Net Metering Fuel Allocation adjustment	$ 4,178,086				
Jurisdictional fuel costs after adj.	$ 1,416,488,289				
Allocation to states/classes		65.99%	9.45%	24.56%	
Jurisdictional fuel costs	$ 1,416,488,289	$ 934,740,622	$ 133,858,143	$ 347,889,524	66.90%
Direct Assignment of Fuel benefit to SC Retail	$ (4,178,086)		$ -	$ (4,178,086)	
Total system actual fuel costs	$ 1,412,310,202	$ 934,740,622	$ 133,858,143	$ 343,711,437	
QF and REPS Compliance Purchased Power - Capacity	25,036,948	16,749,046			
Total system fuel expense from Sykes Exhibit 2 Schedule 1 Page 1	$ 1,437,347,151	**$ 951,489,668**			
		Exh.2, Sch. 1 page 3, Line 13			

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Projected and Adjusted Projected Sales and Costs
Proposed Nuclear Capacity Factor of 93.21% and Normalized Test Period Sales
Billing Period September 2021 through August 2022
Docket E-7, Sub 1250

Sykes Revised Workpaper 7a

Fall 2020 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	55,511,864	322,769	2,167,977	-	58,002,610
SC RETAIL	19,994,535	92,599	710,925	158,062	20,956,121
Wholesale	7,476,647	79,360	204,733	-	7,760,740
Normalized System MWH Sales for Fuel Factor	82,983,046	494,727	3,083,635	158,062	86,719,470
NC as a percentage of total	**66.90%**				**66.89%**
SC as a percentage of total	24.09%				24.17%
Wholesale as a percentage of total	9.01%				8.95%
	100.00%				100.00%

SC Net Metering allocation adjustment

Total projected SC NEM MWhs		158,062
Marginal fuel rate per MWh for SC NEM	$	26.43
Fuel benefit to be directly assigned to SC Retail	$	4,178,086

System Fuel Expense	$ 1,410,888,009	Sykes Exhibit 2 Schedule 2 Page 1 of 3
Fuel benefit to be directly assigned to SC Retail	$ 4,178,086	
Total Fuel Costs for Allocation	$ 1,415,066,095	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	$ 1,410,888,009			
QF and REPS Compliance Purchased Power - Capacity	$ 25,036,948			
Other fuel costs	$ 1,385,851,061			
SC Net Metering Fuel Allocation adjustment	$ 4,178,086			
Jurisdictional fuel costs after adj.	$ 1,390,029,147			
Allocation to states/classes		66.89%	8.95%	24.17%
Jurisdictional fuel costs	$ 1,390,029,147	$ 929,790,496	$ 124,407,609	$ 335,970,045
Direct Assignment of Fuel benefit to SC Retail	$ (4,178,086)		$ -	$ (4,178,086)
Total system actual fuel costs	$ 1,385,851,061	$ 929,790,496	$ 124,407,609	$ 331,791,958
QF and REPS Compliance Purchased Power - Capacity	25,036,948	16,749,046		
Total system fuel expense from Sykes Exhibit 2 Schedule 2 Page 1	$ 1,410,888,009	**$ 946,539,542**		
		Exh. 2, Sch 2 page 3, Line 13		

rounding differences may occur

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 91.95%
Billing Period September 2021 through August 2022
Docket E-7, Sub 1250

Sykes Workpaper 7b

Fall 2020 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	21,803,077		21,803,077
	General	23,889,192		23,889,192
	Industrial	12,036,241		12,036,241
	Lighting	239,227		239,227
	NC RETAIL	57,967,737	-	57,967,737
South Carolina:				
	Residential	6,549,429	102,353	6,651,782
	General	5,992,271	55,281	6,047,552
	Industrial	8,837,609	428	8,838,037
	Lighting	39,918	0	39,918
	SC RETAIL	21,419,227	158,062	21,577,289
Total Retail Sales				
	Residential	28,352,506	102,353	28,454,859
	General	29,881,464	55,281	29,936,745
	Industrial	20,873,850	428	20,874,278
	Lighting	279,145	-	279,145
	Retail Sales	79,386,964	158,062	79,545,026
	Wholesale	8,303,032	-	8,303,032
	Projected System MWh Sales for Fuel Factor	87,689,996	158,062	87,848,058
	NC as a percentage of total	**66.11%**		**65.99%**
	SC as a percentage of total	24.43%		24.56%
	Wholesale as a percentage of total	9.47%		9.45%
		100.01%		100.00%

SC Net Metering allocation adjustment

Total projected SC NEM MWhs	158,062	
Marginal fuel rate per MWh for SC NEM	$ 26.43	
Fuel benefit to be directly assigned to SC Retail	$ 4,178,086	
System Fuel Expense	$ 1,447,608,938	Sykes Exhibit 2 Schedule 3 Page 1 of 3
Fuel benefit to be directly assigned to SC Retail	$ 4,178,086	
Total Fuel Costs for Allocation	$ 1,451,787,024	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	$ 1,447,608,938			
QF and REPS Compliance Purchased Power - Capacity	$ 25,036,948			
Other fuel costs	$ 1,422,571,989			
SC Net Metering Fuel Allocation adjustment	$ 4,178,086			
Jurisdictional fuel costs after adj.	$ 1,426,750,076			
Allocation to states/classes		65.99%	9.45%	24.56%
Jurisdictional fuel costs	$ 1,426,750,076	$ 941,512,375	$ 134,827,882	$ 350,409,819
Direct Assignment of Fuel benefit to SC Retail	$ (4,178,086)		$ -	$ (4,178,086)
Total system actual fuel costs	$ 1,422,571,989	$ 941,512,375	$ 134,827,882	$ 346,231,732
QF and REPS Compliance Purchased Power - Capacity	25,036,948	16,749,046		
Total system fuel expense from Sykes Exhibit 2 Schedule 3 Page 1	$ 1,447,608,938	**$ 958,261,421**		
		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 2021 through August 2022
Docket E-7, Sub 1250

Sykes Workpaper 8

	January 2021 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	$ 232,627,628.37	2,427,681,062	9.5823	23,329,575	$ 2,235,509,347
General	$ 151,922,584.38	2,224,452,001	6.8297	23,102,975	$ 1,577,855,414
Industrial	$ 59,399,180.48	1,133,633,489	5.2397	11,570,060	$ 606,238,320
Total	$ 443,949,393.23	5,785,766,552		58,002,609	$ 4,419,603,081

rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Projected Reagents and ByProducts
Billing Period September 2021 through August 2022
Docket E-7, Sub 1250

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**
9/1/2021	$ 254,001	$ 58,683	$ 1,606,144	$ 153,447	$ 92,068	$ 71,486	**$ 2,235,829**	$ 439,597	$ (39,130)	$ (180,111)	**$ 220,355**
10/1/2021	$ 175,836	$ 40,624	$ 1,111,877	$ 111,351	$ 66,811	$ 71,486	**$ 1,577,984**	$ 290,188	$ (5,710)	$ (177,793)	**$ 106,685**
11/1/2021	$ 221,414	$ 51,154	$ 1,400,085	$ 126,904	$ 76,142	$ 71,486	**$ 1,947,185**	$ 406,119	$ (79,173)	$ (175,470)	**$ 151,477**
12/1/2021	$ 280,366	$ 64,774	$ 1,772,861	$ 151,011	$ 90,607	$ 71,486	**$ 2,431,105**	$ 523,636	$ (101,577)	$ (173,288)	**$ 248,772**
1/1/2022	$ 401,963	$ 92,867	$ 2,541,766	$ 202,788	$ 121,673	$ 71,486	**$ 3,432,543**	$ 770,470	$ (161,638)	$ (171,363)	**$ 437,470**
2/1/2022	$ 383,066	$ 88,501	$ 2,422,272	$ 193,244	$ 115,947	$ 71,486	**$ 3,274,516**	$ 746,552	$ (176,072)	$ (169,522)	**$ 400,957**
3/1/2022	$ 188,873	$ 43,636	$ 1,194,314	$ 112,076	$ 67,246	$ 71,486	**$ 1,677,631**	$ 358,963	$ (71,356)	$ (167,765)	**$ 119,842**
4/1/2022	$ 107,105	$ 24,745	$ 677,266	$ 36,643	$ 21,986	$ 71,486	**$ 939,231**	$ 202,655	$ (10,545)	$ (166,307)	**$ 25,802**
5/1/2022	$ 102,555	$ 23,694	$ 648,496	$ 36,188	$ 21,713	$ 71,486	**$ 904,131**	$ 193,396	$ (11,011)	$ (165,442)	**$ 16,943**
6/1/2022	$ 159,812	$ 36,922	$ 1,010,553	$ 63,671	$ 38,203	$ 71,486	**$ 1,380,647**	$ 303,841	$ (29,602)	$ (164,681)	**$ 109,558**
7/1/2022	$ 218,501	$ 50,481	$ 1,381,667	$ 90,984	$ 54,590	$ 71,486	**$ 1,867,709**	$ 431,038	$ (63,783)	$ (163,942)	**$ 203,314**
8/1/2022	$ 211,283	$ 48,813	$ 1,336,022	$ 84,644	$ 50,786	$ 71,486	**$ 1,803,034**	$ 415,929	$ (57,573)	$ (163,207)	**$ 195,149**
	$ 2,704,776	$ 624,892	$ 17,103,321	$ 1,362,953	$ 817,772	$ 857,831	**$ 23,471,545**	$ 5,082,384	$ (807,169)	$ (2,038,892)	**$ 2,236,324**

Total Reagent cost and Sale of By-products **$ 25,707,869**

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
Billing Period September 2021 through August 2022
Docket E-7, Sub 1250

Sykes Workpaper 10

Line No.	Description	Forecast $	(over)/under Collection $	Total $
1	Amount in current docket	102,740,263	(4,999,624)	97,740,638
2	Amount in Sub 1228, prior year docket	101,750,258	1,617,020	103,367,278
3	Increase/(Decrease)	990,005	(6,616,645)	(5,626,640)
4	2.5% of 2020 NC retail revenue of $4,632,028,605			115,800,715
	Excess of purchased power growth over 2.5% of revenue			0

	E-7 Sub 1250			
WP 4	Purchases for REPS Compliance - Energy	62,808,851	65.99%	41,447,561
WP 4	Purchases for REPS Compliance - Capacity	13,866,978	66.90%	9,276,635
WP 4	Purchases	2,586,674	65.99%	1,706,946
WP 4	QF Energy	53,822,291	65.99%	35,517,330
WP 4	QF Capacity	11,169,971	66.90%	7,472,410
WP 4	Allocated Economic Purchase cost	11,091,651	65.99%	7,319,380
		155,346,415		102,740,263

E-7 Sub 1228			
Purchases for REPS Compliance	63,001,495	66.02%	41,593,587
Purchases for REPS Compliance Capacity	13,122,631	67.55%	8,863,980
Purchases	1,628,569	66.02%	1,075,181
QF Energy	56,445,045	66.02%	37,265,019
QF Capacity	12,285,396	67.55%	8,298,450
Allocated Economic Purchase cost	7,049,441	66.02%	4,654,041
	153,532,577		101,750,258

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 1250

Sykes Workpaper 10a

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
North Carolina Annual Fuel and Fuel Related Expense
2.5% Calculation Test
Twelve Months Ended December 31, 2019
Docket E-7, Sub 1250

Sykes Workpaper 10b

2019	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	12 ME
System KWH Sales - Sch 4, Adjusted	7,570,888,821	7,430,788,664	6,521,808,145	6,367,436,322	6,726,545,218	7,552,455,357	8,316,260,504	8,548,800,472	8,292,133,918	7,019,132,212	6,533,297,016	7,161,497,356	88,041,044,005
NC Retail KWH Sales - Sch 4	5,021,049,922	5,026,972,376	4,366,363,694	4,263,829,687	4,421,389,704	5,029,188,554	5,524,188,997	5,710,820,956	5,512,226,874	4,692,561,973	4,299,808,753	4,774,119,609	58,642,521,099
NC Retail % of Sales, Adjusted (Calc)	66.32%	67.65%	66.95%	66.96%	65.73%	66.59%	66.43%	66.80%	66.48%	66.85%	65.81%	66.66%	66.61%
NC retail production plant %	67.56%	67.56%	67.56%	67.56%	67.75%	67.75%	67.75%	67.75%	67.75%	67.75%	67.75%	67.75%	67.72%
Fuel and Fuel related component of purchased power													
System Actual $ - Sch 3 Fuel$:	$ 23,687,311	$ 57,492,154	$ 14,514,026	$ 14,125,368	$ 6,227,781	$ 7,986,019	$ 9,392,534	$ 7,209,102	$ 18,620,321	$ 13,793,051	$ 15,085,734	$ 17,891,442	$ 206,024,843
System Actual $ - Sch 3 Fuel-related$; Economic Purchases	10,050,079	26,532,896	2,706,430	4,264,779	908,542	640,701	1,230,088	1,129,642	1,974,692	1,539,252	2,340,043	2,634,380	$ 55,951,524
System Actual $ - Sch 3 Fuel-related$; Purchased Power for REPS Compliance	3,283,437	4,116,642	3,779,240	5,137,202	5,251,425	5,598,653	5,193,633	5,586,738	5,216,879	4,899,454	4,069,122	3,963,969	$ 56,096,394
System Actual$ - Sch 3 Fuel-related$; SC DERP	102	14,377	8,659	21,097	25,363	30,158	22,270	26,481	26,351	26,014	17,072	15,590	$ 233,534
System Acutal $ - Sch 3 Fuel-related$; HB589 purpa Purchases	1,367,422	1,711,969	1,557,910	2,135,075	2,259,422	2,837,912	2,660,982	2,749,375	2,583,768	2,605,902	2,204,650	2,090,407	$ 26,764,794
Total System Economic & QF$	38,388,351	89,868,038	22,566,265	25,683,521	14,672,533	17,093,443	18,499,507	16,701,338	28,422,011	22,863,673	23,716,621	26,595,788	345,071,089
Less:													
Native Load Transfers, Native Load Transfer Benefit & DE - Progress fees	$ 11,884,171	$ 71,766,352	$ 8,909,559	$ 10,043,093	$ 3,969,493	$ 6,657,925	$ 7,676,184	$ 5,446,589	$ 17,997,075	$ 13,185,756	$ 12,864,226	$ 15,502,723	$ 185,903,146
Total System Economic $ without Native Load Transfers	$ 26,504,180	$ 18,101,686	$ 13,656,706	$ 15,640,428	$ 10,703,040	$ 10,435,518	$ 10,823,323	$ 11,254,749	$ 10,424,936	$ 9,677,917	$ 10,852,395	$ 11,093,065	$ 159,167,943
NC Actual $ (Calc)	$ 17,577,699	$ 12,245,897	$ 9,143,192	$ 10,473,308	$ 7,035,158	$ 6,949,023	$ 7,189,539	$ 7,518,465	$ 6,930,015	$ 6,470,063	$ 7,142,370	$ 7,395,049	$ 106,069,779
Billed rate (¢/kWh):	0.1922	0.1922	0.1922	0.1922	0.1922	0.1922	0.1922	0.1922	0.1759	0.1535	0.1533	0.1533	
Billed $:	$ 9,650,458	$ 9,661,841	$ 8,392,151	$ 8,195,081	$ 8,497,911	$ 9,666,100	$ 10,617,491	$ 10,976,198	$ 9,696,007	$ 7,203,083	$ 6,591,607	$ 7,318,725	$ 106,466,653
(Over)/ Under $:	$ 7,927,242	$ 2,584,056	$ 751,041	$ 2,278,227	$ (1,462,753)	$ (2,717,077)	$ (3,427,952)	$ (3,457,733)	$ (2,765,992)	$ (733,020)	$ 550,763	$ 76,323	$ (396,874)
Capacity component of purchased power													
System Actual $ - Capacity component of Cherokee County Cogen Purchases	$ 426,732	$ 426,732	$ 213,366	$ 213,366	$ 320,050	$ 1,386,879	$ 3,200,490	$ 3,200,490	$ 640,098	$ 213,366	$ 213,366	$ 213,366	$ 10,668,301
System Actual $ - Capacity component of Purchased Power for REPS Compliance	608,844	738,655	747,764	827,415	781,129	817,587	2,308,343	2,605,889	2,449,375	2,179,103	611,944	591,922	$ 15,267,970
System Actual $ - Capacity component of HB589 Purpa QF purchases	240,541	314,914	229,175	301,405	216,488	298,037	1,151,852	1,312,758	1,272,900	1,184,456	259,220	187,603	$ 6,969,349
System Actual $ - Capacity component of SC DERP	32	4,343	4,209	5,850	3,530	4,199	3,177	3,738	3,716	3,670	2,375	2,168	$ 41,006
System Actual $ - Sch 2 pg 1 ANNUAL VIEW	$ 1,276,149	$ 1,484,644	$ 1,194,514	$ 1,348,036	$ 1,321,197	$ 2,506,702	$ 6,663,862	$ 7,122,875	$ 4,366,089	$ 3,580,594	$ 1,086,905	$ 995,058	$ 32,946,626
NC Actual $ (Calc) (1)	$ 862,169	$ 1,003,029	$ 807,016	$ 910,736	$ 895,069	$ 1,698,211	$ 4,514,555	$ 4,825,522	$ 2,957,887	$ 2,425,739	$ 736,343	$ 674,120	$ 22,310,397
Billed rate (¢/kWh):	0.0353	0.0353	0.0353	0.0353	0.0353	0.0353	0.0353	0.0353	0.0342	0.0327	0.0327	0.0327	
Billed $:	$ 1,773,631	$ 1,775,723	$ 1,542,370	$ 1,506,151	$ 1,561,807	$ 1,776,506	$ 1,951,359	$ 2,017,285	$ 1,886,955	$ 1,535,934	$ 1,406,799	$ 1,561,982	$ 20,296,502
(Over)/Under $:	$ (911,461)	$ (772,694)	$ (735,354)	$ (595,415)	$ (666,739)	$ (78,295)	$ 2,563,196	$ 2,808,237	$ 1,070,932	$ 889,805	$ (670,455)	$ (887,863)	$ 2,013,895
TOTAL (Over)/ Under $:	**$ 7,015,780**	**$ 1,811,363**	**$ 15,688**	**$ 1,682,813**	**$ (2,129,491)**	**$ (2,795,372)**	**$ (864,756)**	**$ (649,496)**	**$ (1,695,060)**	**$ 156,785**	**$ (119,692)**	**$ (811,539)**	**$ 1,617,020**

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 2018 production plant allocation factor. Actual true-up related to allocator was made as prior period adjustment in May 2019 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 Jursidication - Subject to Weather
Twelve Months Ended December 31, 2020
Docket E-7, Sub 1250

Line #	Description	Reference	MWhs NORTH CAROLINA	SOUTH CAROLINA	TOTAL COMPANY	% NC	% SC
1	Residential	Company Records	21,396,039	6,566,946	27,962,984	76.52	23.48
2	Total General Service	Company Records	22,718,144	5,231,956	27,950,100		
3	less Lighting and Traffic Signals		262,966	50,594	313,560		
4	General Service subject to weather		22,455,178	5,181,362	27,636,541	81.25	18.75
5	Industrial	Company Records	11,397,681	8,195,633	19,593,314	58.17	41.83
6	Total Retail Sales	1+2+5	55,511,864	19,994,535	75,506,399		
7	Total Retail Sales subject to weather	1+4+5	55,248,898	19,943,941	75,192,839	73.48	26.52

This does not exclude Greenwood and includes the impact of SC DERP net metering generation

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Weather Normalization Adjustment
Twelve Months Ended December 31, 2020
Docket E-7, Sub 1250

Sykes Revised Workpaper 12
Page 1

Line #	Description	REFERENCE	Total Company MWh	NC RETAIL % To Total	NC RETAIL MWh	SC RETAIL % To Total	SC RETAIL MWh
	Residential						
1	Total Residential		2,231,913	76.52	1,707,860	23.48	524,053
	General Service						
2	Total General Service		362,925	81.25	294,877	18.75	68,048
	Industrial						
3	Total Industrial		284,064	58.17	165,240	41.83	118,824
4	Total Retail	L1+ L2+ L3	2,878,902		2,167,977		710,925
5	Wholesale		204,733				
6	Total Company	L4 + L5	3,083,635		2,167,977		710,925

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Weather Normalization Adjustment by Class by Month
Twelve Months Ended December 31, 2020
Docket E-7, Sub 1250

Sykes Revised Workpaper 12
Page 2

2020	Residential TOTAL MWH ADJUSTMENT	Commercial TOTAL MWH ADJUSTMENT	Industrial TOTAL MWH ADJUSTMENT	
JAN	372,371	57,492	-	
FEB	481,279	42,012	32,140	
MAR	50,667	-	-	
APR	58,532	-	-	
MAY	182,541	35,968	51,277	
JUN	352,469	129,088	70,502	
JUL	241,887	90,967	28,531	
AUG	(64,182)	(25,605)	(12,663)	
SEP	(101,503)	(50,296)	(24,943)	
OCT	40,044	16,706	10,880	
NOV	299,438	50,431	128,339	
DEC	318,368	16,162	-	
Total	**2,231,913**	**362,925**	**284,064**	**2,878,902**

Wholesale

2020	TOTAL MWH ADJUSTMENT
JAN	34,960
FEB	25,697
MAR	3,305
APR	10,669
MAY	14,866
JUN	18,097
JUL	15,510
AUG	5,389
SEP	(2,542)
OCT	(748)
NOV	49,006
DEC	30,524
Total	**204,733**

Note:	**The Resale customers include:**
1	Concord[1]
2	Dallas
3	Forest City
4	Kings Mountain[1]
5	Due West
6	Prosperity[2]
7	Lockhart
8	Western Carolina University
9	City of Highlands
10	Haywood
11	Piedmont
12	Rutherford
13	Blue Ridge
14	Greenwood[1]

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Customer Growth Adjustment to kWh Sales
Twelve Months Ended December 31, 2020
Docket E-7, Sub 1250

Sykes Workpaper 13
Page 1

Line	Estimation Method [1]	Rate Schedule	NC Proposed KWH [1] Adjustment	SC Proposed KWH Adjustment	Wholesale Proposed KWH Adjustment	Total Company
1	*Regression*	Residential	225,676,100	64,516,912		
2						
3		**General Service (excluding lighting):**				
4	*Customer*	General Service Small and Large	86,782,288	12,388,860		
5	*Regression*	Miscellaneous	535,920	517,444		
6		Total General	87,318,208	12,906,304		
7						
8		**Lighting:**				
9	*Regression*	T & T2 (GL/FL/PL/OL)2	2,624,981	1,258,859		
10	*Regression*	TS	10,497	(100,713)		
11		Total Lighting	2,635,478	1,158,146		
12						
13		**Industrial:**				
14	*Customer*	I - Textile	3,467,746	-		
15	*Customer*	I - Nontextile	3,671,273	14,017,455		
16		Total Industrial	7,139,019	14,017,455		
17						
18						
19		Total	322,768,805	92,598,817	79,359,686	494,727,308
					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 during the 12 month period.
rounding differences may occur

Duke Energy Carolinas, LLC
North Carolina Annual Fuel and Fuel Related Expense
Customer Growth Adjustment to kWh Sales-Wholesale
Twelve Months Ended December 31, 2020
Docket E-7, Sub 1250

Calculation of Customer Growth Adjustment to kWh Sales - Wholesale

Line No.		Reference	
1	Total System Resale (kWh Sales)	Company Records	8,857,220,265
2	Less Intersystem Sales	Schedule 1	1,210,124,770
3	Total kWh Sales Excluding Intersystem Sales	L1 - L2	7,647,095,495
4	Residential Growth Factor	Line 8	1.0378
5	Adjustment to kWhs - Wholesale	L3 * L4 / 100	79,359,686
6	Total System Retail Residential kWh Sales	Company Records	27,962,984,454
7	2020 Proposed Adjustment kWh - Residential (NC+SC)	WP 13 1	290,193,012
8	Percent Adjustment	L7 / L6 * 100	1.0378

"RAC001": CarolinasOperating Revenue Report

OFFICIAL COPY

Jun 17 2021

NORTH CAROLINA UTILITIES COMMISSION

APPEARANCE SLIP

DATE: June 1, 2021 DOCKET NO.: E-7, Sub 1246 E-7 Sub 1250

ATTORNEY NAME and TITLE: Robert W. Kaylor

FIRM NAME: Law Office of Robert W. Kaylor, P.A.

ADDRESS: 353 E. Six Forks Rd., Ste. 260

CITY: Raleigh STATE: N.C. ZIP CODE: 27609

APPEARANCE ON BEHALF OF: Duke Energy Carolinas, LLC

APPLICANT: ✓ COMPLAINANT: ___ INTERVENOR: ___

PROTESTANT: ___ RESPONDENT: ___ DEFENDANT: ___

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SIGNATURE: ______________________________

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NORTH CAROLINA UTILITIES COMMISSION

APPEARANCE SLIP

DATE: _5/13/2021_ DOCKET NO.: E-7, Subs 1246, 1247, 1249, 1250

ATTORNEY NAME and TITLE:__Jeffrey P. Gray, Of Counsel______

FIRM NAME: _Bailey & Dixon, LLP________________________________

ADDRESS: _PO Box 1351__________ CITY: __Raleigh_____________

STATE: _NC_________ ZIP CODE: __27602_________

APPEARING FOR:____CIGFUR III_____________________________________

APPLICANT: ___ COMPLAINANT: ___ INTERVENOR: X

PROTESTANT: ___ RESPONDENT: ___ DEFENDANT: ___

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SIGNATURE: __/s/ Christina D. Cress_______________________

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NORTH CAROLINA UTILITIES COMMISSION

APPEARANCE SLIP

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Jun 17 2021

DATE: ___June 1, 2021 DOCKET NOs.: E-7 Subs 1247, 1250_______

ATTORNEY NAME and TITLE: __Jack E. Jirak, Deputy General Counsel

____

FIRM NAME: ______Duke Energy Corporation___________________

ADDRESS: ___P.O. Box 1551_________ CITY: __Raleigh_____________

STATE: __NC________ ZIP CODE: ___27602__________

APPEARANCE ON BEHALF OF: _Duke Energy Carolinas, LLC__________

____

APPLICANT: _X__ COMPLAINANT: ___ INTERVENOR: ___

PROTESTANT: ___ RESPONDENT: ___ DEFENDANT: ___

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Email: _jack.jirak@duke-energy.com________________________

SIGNATURE: __Jack Jirak_______________________________________

(Required for distribution of CONFIDENTIAL transcript)

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Jun 17 2021

NORTH CAROLINA UTILITIES COMMISSION

APPEARANCE SLIP

DATE: ____May 27, 2021___ **DOCKET NO.:** ____E-7, Sub 1250________

ATTORNEY NAME and TITLE: _____Tirrill Moore, Attorney______________

____

FIRM NAME: ___Southern Environmental Law Center____________________

ADDRESS: ___601 W. Rosemary Street, Suite 220_____________________

CITY: __Chapel Hill____ **STATE:** __NC_____ **ZIP CODE:** ___27516____

APPEARANCE ON BEHALF OF: ___Sierra Club___________________________

____

APPLICANT: ___ **COMPLAINANT:** ___ **INTERVENOR:** _XX

PROTESTANT: ___ **RESPONDENT:** ___ **DEFENDANT:** ___

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Email: ____tmoore@selcnc.org_______________________________________

SIGNATURE: _____s/Tirrill Moore____________________________________

(Required for distribution of CONFIDENTIAL transcript)

NORTH CAROLINA UTILITIES COMMISSION
PUBLIC STAFF - APPEARANCE SLIP

DATE June 1, 2021 DOCKET #: E-7, Sub 1250________________

PUBLIC STAFF ATTORNEYS William E.H. Creech & John Little______

TO REQUEST A **CONFIDENTIAL** TRANSCRIPT, PLEASE PROVIDE YOUR EMAIL ADDRESS BELOW:

ACCOUNTING____
CONSUMER SERVICES_____________________________________
COMMUNICATIONS____
ENERGY ____
ECONOMICS____
LEGAL zeke.creech@psncuc.nc.gov; and john.little@psncuc.nc.gov
TRANSPORTATION____
WATER____

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COUNSEL/MEMBER(s) REQUESTING A **CONFIDENTIAL** TRANSCRIPT WHO HAS SIGNED A CONFIDENTIALITY AGREEMENT WILL NEED TO SIGN BELOW.

/s/ Zeke Creech
/s/ John Little

NORTH CAROLINA UTILITIES COMMISSION

APPEARANCE SLIP

DATE: 6/1/21 DOCKET NO.: E-7, Subs 1246, 1247, 1249, 1250

ATTORNEY NAME and TITLE: Craig D Schauer

FIRM NAME: Brooks Pierce

ADDRESS: 150 Fayetteville St, Suite 1700

CITY: Raleigh STATE: NC ZIP CODE: ____________

APPEARANCE ON BEHALF OF: Carolina Utility Customers Association

APPLICANT: ___ COMPLAINANT: ___ INTERVENOR: x

PROTESTANT: ___ RESPONDENT: ___ DEFENDANT: ___

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Email: cschauer@brookspierce.com

SIGNATURE: [signature]

(Required for distribution of CONFIDENTIAL transcript)

NORTH CAROLINA UTILITIES COMMISSION
APPEARANCE SLIP

DATE: ___May 27, 2021___ **DOCKET NO.:** ___E-7, Sub 1250_________

ATTORNEY NAME and TITLE: ___Gudrun Thompson, Attorney_________

____

FIRM NAME: ___Southern Environmental Law Center_______________

ADDRESS: __601 W. Rosemary Street, Suite 220_____________________

CITY: __Chapel Hill_____ **STATE:** ___NC____ **ZIP CODE:** ___27516_____

APPEARANCE ON BEHALF OF: ___Sierra Club_______________________

____

APPLICANT: ___ **COMPLAINANT:** ___ **INTERVENOR:** __X

PROTESTANT: ___ **RESPONDENT:** ___ **DEFENDANT:** ___

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To receive an electronic **CONFIDENTIAL** transcript, please complete the following:

☒ **Yes, I have signed the Confidentiality Agreement.**

Email: ___gthompson@selcnc.org_______________________________

SIGNATURE: ___s/Gudrun Thompson______________________________

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~~CONFIDENTIAL~~

Duke Energy Carolinas, LLC
Docket No. E-7, Sub 1250
Fuel and Fuel-Related Cost Proceeding
Test Year Ended December 31, 2020
SIERRA CLUB Data Request No. 1-8

REQUEST:

Regarding the development of the Company's hourly unit commitment and dispatch decisions):

a. Indicate which production costs are considered variable on a short-term basis by the Company for the purposes of deciding generator commitment status at each coal unit (e.g., fuel costs, variable operations and maintenance costs, emission costs, effluent costs, etc.)
b. Indicate which production costs are considered fixed on short-term basis by the Company for the purposes of deciding generator commitment status at each coal unit (e.g., fuel costs, variable operations and maintenance costs, emissions costs, effluent costs, etc.).
c. Identify if there are any fuel costs for DEC's coal units that the Company considers fixed for the purposes of commitment, dispatch, or both. Provide a detailed explanation of how the fixed component is determined and provide a workpaper demonstrating the fixed and variable breakdown.
d. Please explain how unit start-up and shut-down times and costs are incorporated into DEC's unit commitment and dispatch decision-making.

CONFIDENTIAL RESPONSE:

a. The production costs considered variable, regardless of term, for the purpose of modeling the Company's unit commitment plan for each of the Company's coal units are: 1) fuel, which is the market price of fuel plus variable transportation costs; 2) reagents/byproduct costs, 3) emissions; and, 4) variable O&M.

b. The production costs considered fixed, regardless of term, for each of the Company's coal units are fixed transportation costs. Fixed costs are not a factor in the Company's generator commitment decisions.

c. Fixed costs are not a factor in the Company's generator commitment decisions.

d. Start up and shut down times are inputs to the unit commitment modeling software (GenTrader) and act as a constraint when minimizing total anticipated production cost over a 7 day study period. Only fast start (generally 30 minutes or less) units are a factor in dispatch decision making.

Duke Energy Carolinas, LLC
Docket No. E-7, Sub 1250
Fuel and Fuel-Related Cost Proceeding
Test Year Ended December 31, 2020
SIERRA CLUB Data Request No. 1-4

REQUEST:

Refer to the response to 1.3, above. For each hour in which DEC's coal units were committed, indicate if this commitment was for purposes of maintaining reliability. Provide this information hourly for both 2019 and the 2020 test year, for each of DEC's coal units.

a. Produce any documentation or workpapers that supports the determination that the unit was necessary for purposes of reliability.

RESPONSE:

The Company objects to the request for data from 2019 as it is outside of the period dates for the Fuels Hearing. In addition, the Company objects to the request for data for 2020 as it seeks information that is confidential, competitive or proprietary information. Notwithstanding and without waiving that objection, see response to request 1.3c, which provides a spreadsheet showing designation of commitment status for DEC's coal units.

(Confidentiality waived) I/A

Sierra Club Cross Exhibit 3

~~CONFIDENTIAL~~

Duke Energy Carolinas, LLC
Docket No. E-7, Sub 1250
Fuel and Fuel-Related Cost Proceeding
Test Year Ended December 31, 2020
SIERRA CLUB Data Request No. 1-9

REQUEST:

Regarding DEC's unit commitment decision process for its coal units during the test year 2020:

a. Describe, in detail, the process used by DEC to determine commitment status of long-lead time units, including considerations, if any, of fuel cost, variable O&M cost, emissions cost, system lambda forward projections, startup / shutdown cost(s), and other considerations.
b. Indicate whether the Company performs economic analysis to inform the unit commitment decision for its coal units (i.e., decision whether to operate and commit a unit or take it offline).
   i. If not, explain why not.
   ii. If so, provide all such analysis conducted during the test year 2020 in native, machine readable format.
c. To the extent that the Company uses a spreadsheet or calculation to determine commitment status of long-lead time units, provide all spreadsheets for the test year 2020.
   i. Identify all category of costs and revenues accounted for in such analysis.
   ii. Identify whether such analyses are conducted differently for periods immediately preceding or following unit outages, and explain any differences.
   iii. Indicate the timeframe over which the Company evaluates whether a unit's commitment decision maximizes a unit's economic value to customers.
d. Please provide all internal documents and reports created for, or during, the time period January 1, 2020 – December 31, 2020 that discuss the Company's unit commitment and dispatch practices, strategies, and outcomes.
e. If the Company does not use a spreadsheet mechanism, provide an example of the process used with as much granular detail as possible.
f. To the extent that it differs from the answers above, also provide this information for the year 2019.

<u>CONFIDENTIAL SUPPLEMENTAL RESPONSE for 1-9b:</u>

See attached file "1-9b 2020 Unit Loading Report CONFIDENTIAL.zip". These are Unit Loading Forecasts. These are the result of our GenTrader unit commitment and dispatch planning studies.

<u>CONFIDENTIAL RESPONSE</u>:

a. The Company performs a detailed daily process to determine the unit commitment plan that economically and reliably meets its projected system needs. To do this, the Company utilizes a production cost model called GenTrader to determine an optimal unit commitment plan to economically and reliably meet system requirements. Inputs to the model include, but are not limited to, the following: 1) forecasted customer energy demand; 2) fuel commodity and emission allowance market prices; 3) contractual obligations including power market purchases and sales; 4) generating unit parameters such as, but not limited to, minimum load, maximum load, heat rate, ramp rate, variable O&M, start-up costs and shut-down costs, and 5) planned unit outages and unit de-rates. The production cost model output provides a unit commitment plan that is utilized to dispatch the generation fleet to minimize production costs while ensuring reliability over the 7-day forecast period. The unit commitment plan is prepared daily and adjusted, as needed, throughout any given day to respond to changing real time system conditions as outlined in Section 4.3 of the CONFIDENTIAL attachment referenced in 1-9d.

b. As described above in 1-9a, the Company performs a detailed daily process, that includes its coal units, to determine the unit commitment plan that economically and reliably meets its projected system needs.
i. N/A
ii. The Company objects to this request as it is vague, overly broad and unduly burdensome, and not reasonably calculated to lead to the discovery of relevant or admissible evidence.

c. As described above in 1-9a, the Company utilizes a proprietary third-party model called GenTrader which was purchased by Duke Energy for use in production cost modeling, including modeling its unit commitment plan to economically and reliably meet system requirements over the 7-day forecast period.
i. See 1-8a and 1-9a
ii. As described above in 1-9a the unit commitment model includes planned unit outages and unit de-rates as part of the daily model run.
iii. As described above in 1-9a the unit commitment plan is prepared daily for the next 7-day period and adjusted, as needed, throughout any given day to respond to changing real time system conditions.

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d. See attached CONFIDENTIAL Carolinas Economic Dispatch Procedure.

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e. DEC cannot provide the requested model due to the proprietary and commercially sensitive nature of the proprietary third-party model purchased by Duke Energy for use in production cost modeling. DEC therefore objects to this request as it seeks information that is confidential, competitive or proprietary information, is outside the scope of the proceeding and is not reasonably calculated to lead to the discovery of relevant or admissible evidence.

Notwithstanding and without waiving that objection, see the response to request 1.9a above.

f. N/A

(Confidentiality waived) I/A

Sierra Club Cross Exhibit 4

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Duke Energy Carolinas, LLC
Docket No. E-7, Sub 1250
Fuel and Fuel-Related Cost Proceeding
Test Year Ended December 31, 2020
SIERRA CLUB Data Request No. 1-3

REQUEST:

For each of Duke Energy Carolina's coal-fired generating units at Allen, Marshall, Cliffside, and Belews Creek, please provide the following hourly information for the year 2019 and the test year 2020. If not available at an hourly scale, explain why not and provide at the most temporally granular scale available.

a. Net generation (MWh)
b. System lambda ($/MWh)
c. Designation of commitment status for each of DEC's thermal steam unit (i.e. economically committed, must run, testing, emergency, etc. or whatever designations are used by DEC)
d. Marginal (variable) fuel costs ($/MWh)
e. Marginal variable costs of production ($/MWh), including fuel, variable O&M, and any other variable operating costs used for the purposes of unit commitment and dispatch.
f. Accounting fuel costs ($/MWh)
g. Accounting variable costs of production ($/MWh), including fuel, variable O&M, and any other variable operating costs as used for the purposes of cost recovery.
h. Heat rate (Btu/kWh)
i. Economic minimum level (MW)
j. Fuel Burned

~~CONFIDENTIAL~~ RESPONSE:

The Company objects to the request for data from 2019 as it is outside of the period dates for the Fuels Hearing.

a. Please see file CONFIDENTIAL 2021 SCDR 1.3a_d_e_j DEC Coal Unit Fuel Detail

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b. Please see file CONFIDENTIAL 2021 SCDR 1.3b DEC INCDEC Prices

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c. Please see file CONFIDENTIAL 2021 SCDR 1.3c DEC Coal Unit Constraints Final

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d. Please see file CONFIDENTIAL 2021 SCDR 1.3a_d_e_j DEC Coal Unit Fuel Detail

e. Please see file CONFIDENTIAL 2021 SCDR 1.3a_d_e_j DEC Coal Unit Fuel Detail

f. The request seeks an analysis, calculation, or compilation which has not already been performed. Instead please see attached CONFIDENTIAL monthly average cost of generation ($/MWh) of the Company's coal-fired generating units for the test period January 2020 through December 2020.

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g. Object as the request seeks an analysis, calculation, or compilation which has not already been performed and is not reasonably calculated to lead to the discovery of relevant or admissible evidence.

h. Please see file CONFIDENTIAL 2021 SCDR 1.3h DEC Coal Unit Heat Rates

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i. See answer to 1.6i

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j. Please see file CONFIDENTIAL 2021 SCDR 1.3a_d_e_j DEC Coal Unit Fuel Detail

Duke Energy Carolinas, LLC
Docket No. E-7, Sub 1250
Fuel and Fuel-Related Cost Proceeding
Test Year Ended December 31, 2020
SIERRA CLUB Data Request No. 1-11

REQUEST:

Regarding DEC's operation of its system under the Joint Dispatch Agreement with DEP.

a. Provide the hourly production costs used for purposes of unit commitment and dispatch for each DEC and DEP unit dispatched under the Joint Dispatch Agreement for year 2019 and the 2020 test year.

RESPONSE:

DEC objects to this request as it is overly broad and unduly burdensome, and not reasonably calculated to lead to the discovery of relevant or admissible evidence. Additionally, the Company objects to the request for data from 2019 as it is outside of the period dates for the Fuels Hearing.